Paula Maccabee

Dear Commissioner Kessler,

Attached please find WaterLegacy's Comments on the Minnesota Pollution Control Agency's Clean Water Act Section 303(d) Draft 2024 Impaired Waters List and Related Materials, along with Exhibits 1-23.

Sincerely yours,

Paula G. Maccabee
WaterLegacy Advocacy Director and Counsel
1961 Selby Avenue
St. Paul, MN 55104
Office: (651) 646-8890
Mobile: (651)775-7128
paula@waterlegacy.org or pmaccabee@justchangelaw.com

Paula Goodman Maccabee, Advocacy Director and Counsel
1961 Selby Ave., St. Paul, MN 55104 (651-646-8890)
paula@waterlegacy.org or pmaccabee@justchangelaw.com

January 12, 2024

Also submitted via online portal (https://mpca.commentinput.com/?id=ZPmRDdtNH)

Minnesota Pollution Control Agency
Commissioner Katrina Kessler (katrina.kessler@state.mn.us)
520 Lafayette Road
Saint Paul, MN 55155

RE: Minnesota Clean Water Act Section 303(d) Draft 2024 Impaired Waters List

Dear Commissioner Kessler,

Below, please find WaterLegacy's comments on the Minnesota Pollution Control Agency (MPCA) Draft 2024 Impaired Waters List submitted pursuant to Clean Water Act Section 303(d) and related materials. Our comments can be summarized as follows:

1. MPCA should maintain its identification of 2,395 Minnesota wild rice producing waters and include additional wild rice waters as they are identified.

2. MPCA should add the 20 wild rice producing waters impaired due to sulfate exceedance in its 2024 Draft List to MPCA's Final 2024 Impaired Waters List.

3. MPCA should add Dark Lake to Minnesota's 2024 list of wild rice producing waters impaired due to exceedance of Minnesota's sulfate standard.

4. MPCA should prioritize sulfate waste load allocations and NPDES effluent limits to attain compliance with Minnesota's wild rice standard through discharge permits.

5. MPCA should prioritize mercury reassessment as well as initial assessment and commit to control sulfate, among other factors, to reduce mercury impairments.

1. MPCA Should Maintain its Identification of 2,395 Minnesota Wild Rice Producing Waters and Include Additional Wild Rice Waters as They Are Identified.

WaterLegacy supports MPCA's identification of 2,395 Minnesota wild rice producing waters.[1] MPCA's journey to this point has been complicated. In the past, MPCA has taken a variety of positions to deny or constrain the identification of wild rice producing waters. At times, MPCA argued that only 24 Minnesota waters are identified as wild rice producing waters.[2] In 2016,

[1] MPCA, Wild Rice Producing Waters, Exhibit 1, last visited Dec. 26, 2023, available at https://public.tableau.com/app/profile/mpca.data.services/viz/wild_rice_v4/Information

[2] MPCA, Responses to Draft 2012 TMDL Public Comments, Sept. 7, 2012 (excerpt), Exhibit 2.

MPCA staff produced a database with more than 2,300 identified wild rice waters.[3] Yet, MPCA only admitted in 2018 rulemaking that there were at least 1,300 wild rice producing waters in Minnesota.[4]

MPCA also adhered to a Minnesota 2015 session law purporting to preclude the agency from listing waters as impaired for the wild rice sulfate standard.[5] Responding to questions from the U.S. Environmental Protection Agency (EPA), MPCA finally acknowledged in March 2021 that at least a few waters not already specified in Minnesota rules (Minn. R. 7050.0470) "demonstrate the beneficial use" for wild rice "under any reasonable assessment methodology."[6] Later in 2021, EPA reversed MPCA's decision not to list any wild rice waters impaired for sulfate in 2020 and identified 33 waters impaired for the wild rice sulfate standard.[7] In so doing, EPA also stated that any Minnesota law preventing listing of impaired waters conflicted with and "does not abrogate a state's obligation to complete a list of impaired waters" under the Clean Water Act.[8]

In addition to breaking the logjam in listing wild rice impaired waters, EPA's 2021 decision listing Minnesota waters impaired due to exceedance of the wild rice sulfate standard freed MPCA to identify wild rice producing waters based on evidence and tribal consultation. MPCA's wild rice producing waters list now includes 2,395 wild rice waters.[9] Consistent with Clean Water Act regulations, MPCA's listings include "waterbodies that support an existing wild rice beneficial use as well as those that demonstrate the potential to attain the beneficial use in the future."[10] In each case where WaterLegacy reviewed listed wild rice producing waters, MPCA's designation of wild rice waters was appropriate and evidence based.

WaterLegacy requests that MPCA

---

[3] MPCA, Wild Rice Waters Database, July 19, 2016, Exhibit 3.

[4] Report, *In the Matter of the Proposed Rules of the Pollution Control Agency Amending the Sulfate Water Quality Standard* (Minn. Off. Admin. Hr'gs Jan. 19, 2018) OAH 80-9003-34519 at ¶¶ 85, 88, 89, 110, 114, 134, 180, 234, 259, available at https://mn.gov/oah/assets/9003-34519-pca-sulfate-water-quality-standards-wild-rice-rules-report_tcm19-323507.pdf

[5] MPCA, Responses to 2020 Draft Impaired Waters List Public Comments, Feb. 25, 2021 at 2 (excerpt), Exhibit 4 (citing 1st Special Session, Chapter 4, Article 4, Section 136).

[6] Letter of MPCA Commissioner Katrina Kessler to EPA Region 5 Water Division Director Tera Fong, Mar. 15, 2021, at 4, Exhibit 5.

[7] EPA's Additions to Minnesota's 2020 Impaired Waters List, Nov. 5, 2021, available at https://www.epa.gov/tmdl/epas-additions-minnesotas-2020-impaired-waters-list

[8] *Id.*, Attachment 2: EPA Additions to the Minnesota's 2020 Impaired Waters List - Response to Public Comments at 17 (citing 33 U.S.C. § 1313(d), 40 C.F.R. § 130.7).

[9] MPCA Wild Rice Producing Waters, *supra*, Exhibit 1.

[10] MPCA, Framework for Developing and Evaluating Site-Specific Sulfate Standards for the Protection of Wild Rice, Dec. 2023 ("MPCA Site-Specific Standards Framework"), at 6 (citing 40 C.F.R. §§ 131.2 and 131.3(f)), available at https://www.pca.state.mn.us/sites/default/files/wq-s6-66a.pdf

- Maintain the 2,395 Minnesota wild rice producing waters identified through 2023 and include additional wild rice waters as they are identified.
- Prepare an updated map of Minnesota wild rice producing waters on a user-friendly online platform, preferably with layers that identify upstream sulfate dischargers.

2. MPCA Should Add the 20 Wild Rice Producing Waters Impaired Due to Sulfate Exceedance in its 2024 Draft List to MPCA's Final 2024 Impaired Waters List.

WaterLegacy supports MPCA's proposal to add the following wild rice producing lakes and stream segments impaired due to exceedance of Minnesota's sulfate standard to the 2024 impaired waters list:[11]

Bear Lake (24-0028-00)	Little Rabbit Lake (18-0139-00)
Birch Lake (69-0003-00)	North Twin Lake (31-0190-00)
Buffalo River (09020106-594)	Orwell Lake (56-0945-00)
Cannon River (07040002-501)	Pearl Lake (73-0037-00)
Clearwater River (86-0252-02)	Poplar River (09020305-518)
Dunka River (09030001-987)	Rice Lake (Minnesota R.) (10-0078-00)
Elizabeth Lake (34-0022-02)	Rice Lake (Crow R.) (73-0196-00)
Embarrass River (04010201-B00)	Sturgeon River (09030005-527)
Green Lake (34-0079-00)	Tilde Lake (14-0004-00)
Hill River (09020305-539)	Trout Lake (31-0216-00)

WaterLegacy requests that MPCA:

- Add the 20 wild rice producing waters listed in MPCA's Draft 2024 Impaired Waters List (above) as impaired due to exceedance of Minnesota's sulfate standard to Minnesota's Final 2024 Impaired Waters List.

3. MPCA Should add Dark Lake to Minnesota's 2024 List of Wild Rice Producing Waters Impaired Due to Exceedance of Minnesota's Sulfate Standard.

MPCA has recently identified Dark Lake in the Little Fork River watershed (69-0790-000) as a wild rice producing water.[12] The evidence supporting this listing is unequivocal. Despite a long record of degradation and pollution of Dark Lake due to construction and operation of the U.S. Steel Corp. Minntac tailings basin since 1966,[13] wild rice has persisted in Dark Lake.

---

[11] MPCA Draft 2024 Impaired Waters List, available at https://www.pca.state.mn.us/air-water-land-climate/minnesotas-impaired-waters-list, excerpt with all Wild Rice Producing Waters Impaired for Sulfate (2024 Draft) provided in Exhibit 6 (2024 additions highlighted green).

[12] MPCA Wild Rice Producing Waters, Exhibit 1, *supra* at 109.

[13] *See e.g.*, MPCA Site-Specific Standards Framework, *supra* at 20-21.

Under contract with MPCA to conduct field surveys, the University of Minnesota LacCore Limnological Research Center found wild rice in Dark Lake in 2013.[14] Results were as follows:

> The rice observed at this location is just adjacent to the dock. Plants were fully mature, and most seed heads were still holding kernels. While the stand was small in abundance, plants appeared healthy, emerging . . . [15]

MPCA staff also documented the findings of wild rice in Dark Lake by Minnesota Department of Natural Resources (DNR) quoting botanist Karen Myhre in 2012, as follows:

> I conduct rare aquatic plant searches for the Minnesota Biological Survey of the MNDNR. . . I conducted a rare aquatic plant search in the northeast bay of Dark Lake on 7/30/2012 and recorded that I observed wild rice in the course of the survey. The northeast bay has extensive emergent borders with wild rice as a component of these borders. . .Wild rice was one of the first species that I recorded (looking at the field data), which would indicate to me that it was immediately noticeable at the lake.[16]

Barr Engineering also found wild rice characterized as "three single-point locations" in its December 2013 survey of Dark Lake, as illustrated below:[17]

Photo 1: Dark Lake – Wild Rice Stand (Density = 1)
(Wild Rice Point: MT_BRB_WR-1_20130819)

Photo 2: Dark Lake – Wild Rice Stand (Density = 1)
(Wild Rice Point: MT_BRB_WR-3_20130819)

[14] MPCA, Statement of Need and Reasonableness for Sulfate Standard, July 2017, at 43-44 (summarizing that in the LacCore surveys Dark Lake "had sparse or limited wild rice plants observed"), available at https://www.leg.mn.gov/archive/sonar/SONAR-04324.pdf.

[15] MPCA, Gerald Blaha Emails June 20, 2013 and Sept. 6, 2013 regarding Dark Lake, Exhibit 7 at 1.

[16] *Id*. at 2.

[17] Barr Engineering, 2013 Wild Rice and Water Quality Sampling Report Dark River and Dark Lake prepared for U.S. Steel Corp., Dec. 2013, at 1, 7, C-1, excerpt in Exhibit 8.

Photographs taken for the Great Lakes Indian Fish and Wildlife Commission (GLIFWC) in 2016 also clearly show that wild rice has been present in Dark Lake.[18]

The evidence is overwhelming that Dark Lake is impaired for wild rice beneficial use due to sulfate exceeding Minnesota's wild rice sulfate standard. MPCA's online surface water data for Dark Lake[19] can be summarized as follows:

WID	Sample	Sample #	# >10 mg/L	% >10 mg/L	% Detect	Min Value	Max Value	Mean mg/L
69-0790-00	All samples	12	11	92	100	8.81	396	144.5
69-0790-00	Highest per date	7	7	100	100	41.1	396	188.7

Confirmation of sulfate concentrations in Dark Lake exceeding Minnesota's wild rice sulfate standard is provided by U.S. Steel Minntac tailings basin discharge monitoring data at SW003 on the Dark River CR668 between the tailings basin and Dark Lake and at SW004, on the Dark River at CH65.[20] In summary,[21] U.S. Steel's discharge monitoring at SW003 included 10 sets of

[18] 1854 Treaty Authority, Darren Vogt Email and Dark Lake photos by Scott Cardiff for GLIFWC, Nov. 29, 2016, Exhibit 9.

[19] MPCA, Dark Lake Sulfate Data, Exhibit 10 from all Surface Water Data available at https://webapp.pca.state.mn.us/surface-water/search?searchBy=Assessment&auid=19-0006-51

[20] Location Maps for U.S. Steel Minntac Dark River monitoring sites SW003 and SW004, Exhibit 11.

[21] U.S. Steel Minntac Permit MN0057207 Sulfate Data for Dark River Sites SW003 and SW004 (2013-2023), Exhibit 12, from MPCA Wastewater Data Browser available at https://public.tableau.com/app/profile/mpca.data.services/viz/WastewaterDataBrowser/FrontPage

sulfate data reported for 2018 and 2019. The minimum value reported at SW003 was 196 mg/L, the maximum value reported was 853 mg/L, and the mean was 607.6 mg/L. For monitoring station SW004, downstream of Dark Lake and farther away from the Minntac tailings basin than Dark Lake, 10 sets of data were reported for unique dates in 2018 and 2019. For SW004, the minimum sulfate value reported was 127 mg/L, the maximum value reported was 420 mg/L, and the mean was 280.7 mg/L.

There is no reasonable way to interpret MPCA's surface water data for Dark Lake and discharge monitoring from U.S. Steel both upstream and downstream of Dark Lake other than to conclude that sulfate in Dark Lake exceeds Minnesota's wild rice sulfate standard by at least an order of magnitude. There is no justification for MPCA's failure to list Dark Lake in 2024 as a wild rice producing water impaired due to sulfate exceeding Minnesota's sulfate standard.

In fact, the listing of Dark Lake should have been one of MPCA's highest priorities. The U.S. Steel Minntac tailings basin is the source of the sulfate pollution of Dark Lake, and the Minnesota courts have reversed MPCA's National Pollutant Discharge Elimination System (NPDES) permit for the Minntac tailings basin, ruling that Minnesota's wild rice sulfate standard applies to any surface seepage from the basin[22] and to any seepage through groundwater to surface waters that is the functional equivalent of direct discharge.[23] The possible sale of U.S. Steel Corp.[24] increases the imperative for regulatory rigor in identifying the impairments resulting from its mine facility pollution.

WaterLegacy requests that MPCA:

- Add Dark Lake (69-0790-000) to Minnesota's Final 2024 list of wild rice producing waters impaired due to exceedance of the sulfate standard.

4. MPCA Should Prioritize Sulfate Waste Load Allocations and NPDES Effluent Limits to Attain Compliance with Minnesota's Wild Rice Standard through Discharge Permits.

All wild rice producing waters identified by MPCA as impaired due to sulfate exceeding Minnesota's standard are identified as EPA Consolidated Assessment and Listing Methodology (CALM) Category 5 and MPCA "Commitment Group 2."[25] EPA's CALM Category 5 means:

---

[22] *In re Reissuance of NPDES/SDS Permit to U.S. Steel Corp*., 937 N.W.2d 770, 787-89 (Minn. App. 2019) *rev'd on other gro*unds, 954 N.W.2d 572 (Minn. 2021) (reversal and remand to determine if seepage collection systems prevented *all* discharge to surface water and, if not, to require water quality-based effluent limits–WQBELs–applying the wild rice rule).

[23] *In re Reissuance of NPDES/SDS Permit to U.S. Steel Corp*., 954 N.W.2d 572, 574 n.1, 583 (Minn. 2021) (remand to MPCA to determine if Minntac seepage through groundwater is equivalent to direct discharge to surface water under the Clean Water Act).

[24] *See e.g*., Isadore, C. (2023, Dec. 18) US Steel, once the world's largest corporation, agrees to sell itself to a Japanese company, *CNN*, Exhibit 13.

[25] Wild Rice Producing Waters Impaired for Sulfate (2024 Draft), *supra*, Exhibit 6.

"Impaired and TMDL study has not been approved by USEPA."[26] Other EPA categories allow a state to forego performing a TMDL study either because a TMDL study has been completed or because one is not required. Category 5 has no such exemption.

All wild rice producing waters identified by MPCA as impaired due to sulfate exceeding Minnesota's standard are classified by MPCA as "Commitment Group 2."[27] This terminology is a misnomer. It does not mean that MPCA has committed to a less imminent date for a TMDL study and implementation, but rather that MPCA has set no TMDL deadline, but intends to re-evaluate the impairment in the future and determine when and if MPCA should move to a TMDL commitment.[28]

The Clean Water Act requires that states identify impaired waters and the "priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters." 33 U.S.C. § 1313(d)(1)(A). The state must then establish the total maximum daily load (TMDL) "in accordance with the priority ranking." *Id*. at § 1313(d)(1)(C). Regulations implementing the Act clarify that states must plan for all impaired waters still requiring wasteload allocations (WLAs), load allocations (LAs) and total maximum daily loads (TMDLs). 40 C.F.R. § 130.7(a). States must "include a priority ranking for all listed water quality-limited segments still requiring TMDLs" based on the "severity of the pollution and the uses to be made of such waters" and must establish TMDLs "in accordance with the priority ranking." 40 C.F.R. § 130.7(b)(4) and (c)(1). This "priority ranking including waters targeted for TMDL development within the next two years" must be submitted to EPA. 40 C.F.R. § 130.7(d).

MPCA has placed no priority on TMDLs for any wild rice producing waters impaired due to sulfate and has proposed no target year for development of any applicable TMDL. MPCA has applied scientific evidence to describe the problem, but has deferred any commitment to complete sulfate load allocations, let alone reduce sulfate loadings. Without a commitment to develop and implement sulfate reduction to attain Minnesota's 10 mg/L wild rice sulfate standard, MPCA's draft 2024 impaired waters submittal is inadequate to protect wild rice and inconsistent with the Clean Water Act.

MPCA's TMDL Prioritization Framework rationalizes the failure to establish sulfate maximum loadings that will restore compliance with Minnesota's wild rice sulfate standard by stating: "Sulfate impairments are predominantly point source driven, and the MPCA is primarily addressing these impairments through discharge permits."[29] The first part of this statement is correct; but the second is at best aspirational, if not misleading.

---

[26] MPCA Draft 2024 Impaired Waters List, *supra,* EPA Categories tab.

[27] Wild Rice Producing Waters Impaired for Sulfate (2024 Draft), *supra*, Exhibit 6.

[28] MPCA Draft 2024 Impaired Waters List, *supra,* General Notes tab.

[29] MPCA, Minnesota's TMDL Prioritization Framework 2022-2032, October 2023 Draft ("TMDL Prioritization Framework") at 12, Exhibit 14.

Minnesota's 55 draft sulfate impaired wild rice producing waters are not just "point source" driven. It is likely that discharges controlled by three mining companies—all of which are regulated by NPDES permits—are the primary if not sole sulfate sources for approximately half of Minnesota's identified wild rice producing waters impaired due to sulfate.[30]

MPCA has recognized: "Sulfate concentrations in the Northern Lakes and Forest ecoregion are nearly always below 10 mg/L, except for waters flowing from the Iron Range, where taconite mines and tailings basins contribute substantial sulfate loads."[31] Even in the St. Louis River Estuary, where there might be other sources of sulfate, MPCA has determined that mining point sources are the primary sources of sulfate pollution, as recently summarized:

> Sulfate in the St. Louis River Estuary is dominated by loading from mining-influenced water, with upwards of 95% of sulfate loading to the estuary coming from areas containing the mining activity. There are municipal wastewater dischargers in this watershed, but their cumulative effect on sulfate loading is small, making up less than 2% of the total sulfate load. In this watershed, if all loading from point sources was eliminated, the estuary would have a sulfate level of less than 10 mg/L, approximately in alignment with regional baseline sulfate levels.[32]

It would be practical, feasible, and plain common sense to prioritize restoration of Minnesota wild rice producing waters impaired due to sulfate exceedances by issuing and enforcing NPDES permits with sulfate limits based on sulfate waste load allocations that attain compliance with Minnesota's sulfate standard. However, MPCA's actual conduct has been just the opposite.

MPCA has neither enforced sulfate water quality-based effluent limits (WQBELs) in existing NPDES permits nor reissued NPDES permits to include sulfate WQBELs. In October 2011, the MPCA approved NPDES permits for the U.S. Steel Keetac mine (MN0031879) and the Keetac tailings basin (MN0055948).[33] After interim periods where only monitoring was required, the Keetac mine permit and the Keetac tailings basin permit set a 14 mg/L average monthly limit for sulfate and a 24 mg/L maximum limit for sulfate.[34] U.S. Steel was required to comply with these numeric effluent limits for sulfate by August 17, 2018 for the mine site and by August 17, 2019 for the tailings basin site.[35]

---

[30] Wild Rice Producing Waters Impaired for Sulfate – Potential Sources. Exhibit 15.

[31] MPCA Site-Specific Standards Framework, *supra*, at 21.

[32] *Id*. at 23.

[33] MPCA Citizens' Board Materials for Authorization to Issue NPDES/SDS Permits for U.S. Steel Keetac Mine and Tailings Basin MN0031879 and MN0055948, Oct. 14, 2011, Exhibit 16.

[34] *Id.*, Permit MN0031879 at 7-12; Permit MN0055948 at 7-10.

[35] *Id*., Findings of Fact for Permit MN0031879 at 6, ¶¶39-40; Findings of Fact for Permit MN0055948 at 7, ¶¶39-40.

U.S. Steel filed no administrative appeal challenging these sulfate effluent limits. As shown by MPCA's wastewater discharge monitoring records for the Keetac mine since August 2018 and for the Keetac tailings basin since August 2019, neither the U.S. Steel Keetac mine nor tailings basin have complied with their sulfate permit limits since the dates that those limits became effective.[36] Yet, no information suggests that MPCA has penalized or taken enforcement action due to these permit violations.

Apart from the Keetac mine sources, no other MPCA NPDES permits for taconite or other metallic mining facilities contain WQBELs for sulfate to comply with Minnesota's wild rice sulfate standard. The Minnesota Supreme Court reversed MPCA's NPDES permit for the U.S. Steel Minntac tailings basin and its NPDES permit for the proposed PolyMet NorthMet mine.[37] Neither permit contained any WQBELs limiting sulfate to comply with the wild rice sulfate standard. Since the Minntac tailings basin permit was reversed by the Minnesota Supreme Court in 2021, MPCA has not reissued a notice for the permit addressing the Court's concerns or the need to protect wild rice.

Despite various agreements with the EPA for more than a decade to jointly prioritize reissuance of taconite mining permits that are long expired and administratively extended, MPCA has failed to do so.[38] Although MPCA authorized transfer of the Cliffs Erie Hoyt Lakes permit (MN0054089) to PolyMet in 2018, MPCA did not update permit provisions or establish WQBELs limiting sulfate to comply with the wild rice sulfate standard. MPCA has not updated or issued a notice attempting to update any of the taconite mining permits identified with EPA as joint priorities. Other than the Keetac permits, the terms of which have been violated for several years with no apparent consequences, no taconite mine permits contain effluent limits for sulfate to comply with the wild rice sulfate standard. MPCA has developed no waste load allocations to attain Minnesota's 10 mg/L wild rice sulfate standard whether in waters downstream of existing taconite mine permitted facilities or for the proposed PolyMet copper-nickel mine.

Its poor track record demonstrates that MPCA has not "addressed" sulfate impairments in wild rice waters. It has ignored, neglected, or passively observed them. However, MPCA now has the opportunity to make a different choice consistent with the Clean Water Act, the effective protection of wild rice, and the use of wild rice producing waters for exercise of treaty-reserved rights as well as for fishing, recreation, and wildlife.

MPCA should revise its Draft 2024 Impaired Waters List and TMDL submittal to prioritize sulfate waste load allocations and NPDES effluent limits driven by mining point source sulfate discharge. WaterLegacy requests that MPCA:

---

[36] U. S. Steel – Keetac (MN0031879) and U.S. Steel Keetac Tailings Basin (MN0055948) Sulfate Data downloaded from MPCA Wastewater Data Browser, Exhibit 17.

[37] *See* fn. 23, *supra* and *Matter of Denial of Contested Case Hearing Requests*, 993 N.W.2d 627, 635 (Minn. 2023) (reversal of NorthMet NPDES permit approval as "arbitrary and capricious).

[38] MPCA and EPA Mining Permits [Schedule] Oct. 1, 2012- Sept. 30, 2016 and FFY 2014 Report on the 2012-2016 Mining Permits [Schedule], Exhibit 18, also available at https://www.epa.gov/mn/npdes-petition-program-withdrawal-minnesota

- Commit to prompt and effective enforcement of the sulfate effluent limits in the U.S. Steel Corp. Keetac mine and tailings basin NPDES permits.

- Categorize all sulfate impaired wild rice producing waters where a mining NPDES point source is the predominant or sole source of sulfate pollution as Commitment Group 1A.

- Commit to determine between 2024 and 2026 the waste load allocation for sulfate that will achieve compliance with Minnesota's wild rice standard[39] for each Group 1A sulfate impaired waterbody.

- Commit that no new NPDES mining permit predicting sulfate discharge upstream of any Group 1A sulfate impaired waterbody will be issued without a sulfate load allocation and sulfate WQBELs for concentration and load to attain compliance with Minnesota's wild rice standard.

- Commit to reissue from 2024 through 2028 every existing NPDES mining permit causing or contributing to a Group 1A wild rice waters sulfate impairment, with Clean Water Act limits including sulfate WQBELs for concentration and load to attain compliance with Minnesota's wild rice standard.

5. MPCA Should Prioritize Mercury Reassessment as well as Initial Assessment and Commit to Control Sulfate, Among Other Factors, to Reduce Mercury Impairments.

WaterLegacy's review of MPCA's Draft 2024 Impaired Waters list and supporting narrative materials revealed inadequacies in each of the following areas: A) MPCA's insufficient commitment to complete mercury TMDL studies to remove aquatic consumption impairments due to mercury exceeding Minnesota standards; B) MPCA's insufficient reassessment as well as assessment of mercury impairments; and C) MPCA's failure to address the relationship between sulfate and mercury impairments.

A. <u>MPCA's Insufficient Commitments to Mercury TMDL Study Completion.</u>

MPCA's Draft 2024 Impaired Waters has 425 waterbodies impaired for aquatic consumption due to mercury in the water column or in fish exceeding Minnesota's water quality standards on its "TMDL List."[40] Each of these waterbodies are in EPA CALM Category 5, meaning that the water body is impaired and no TMDL study has been approved by EPA. Of these 425, there are 75 waterbodies that the MPCA identifies as Commitment Group 1 priority, which MPCA

[39] MPCA commitments should be made in tabbed notes to the Final 2024 Minnesota Impaired Waters List and detailed in a revised final TMDL Prioritization Framework.

[40] MPCA Draft 2024 Impaired Waters List, *supra*, all Mercury Impaired Waters on MPCA's "2024 TMDL List" ("Mercury TMDL Waters"), Exhibit 19.

explains means that "MPCA commits to having in-progress TMDLs during the next two-year period (October 1, 2024–September 30, 2026)."[41]

MPCA's General Notes make no commitment as to when these TMDL studies will be completed. The document MPCA cites in these General Notes only states the following for each "TMDL Commitment": "In development."[42] WaterLegacy reviewed MPCA's Impaired Waters Lists from 2016 through 2022; each had a column for the proposed "TMDL completion year." MPCA's Draft 2024 Impaired Waters List has no column with completion dates for any TMDL.

Clean Water Act regulations require states to provide the priority ranking for TMDLs "including waters targeted for TMDL development within the next two years." 40 C.F.R. § 130.7(b)(4). In Section 130.7, paragraph (c) is entitled "Development of TMDLs and individual water quality based effluent limitations." This paragraph entails *establishment* of TMDLs "at levels necessary to attain and maintain applicable narrative and numerical WQS with seasonal variations and a margin of safety." 40 C.F.R. § 130.7(c) (emphasis added). "Development" in Clean Water Act regulations doesn't mean just *starting* a TMDL process.

The difference between starting and completing a TMDL is not academic. A St. Louis River mercury TMDL study was funded and well underway by 2011 with the participation of EPA, Minnesota, Wisconsin, and Fond du Lac Band of Lake Superior Chippewa regulators, but was terminated by MPCA in 2013 due to a disagreement about modeling. Even if the MPCA now has sole control of upcoming mercury TMDLs, there is still a risk of delay or termination if controversy arises.

If MPCA intended that its Commitment Group 1 language be interpreted to require completion of the listed TMDLs by September 30, 2026, the text needs to be clarified; otherwise target completion dates should be provided. WaterLegacy requests that MPCA:

- Clarify in its General Notes that 2026 is MPCA's targeted TMDL completion date for all of its Group 1 priority waters, or

- Revise MPCA's Draft 2024 Impaired Waters List to include specific prompt TMDL completion target dates for Group 1 priority mercury impaired waters.

The second gap in MPCA's commitment to mercury TMDL completion is that 82% (350 out of 425) of Minnesota mercury impaired waters on MPCA's draft TMDL list are in "Commitment Group 2."[43] As explained *supra* at page 7, "Group 2" means that MPCA has committed to nothing more than that a potential TMDL process will be considered in the future. All mercury TMDLs in the following watersheds are Group 2, so MPCA has set neither a start date nor a target completion date for *any* mercury TMDL in the following major watersheds:

[41] MPCA Draft 2024 Impaired Waters List, *supra*, General Notes tab.

[42] Minnesota's TMDL Commitments October 2023 Draft Federal Fiscal Year 2025-2026, available at https://www.pca.state.mn.us/sites/default/files/wq-iw1-83.pdf

[43] Mercury TMDL Waters, Exhibit 19.

Minnesota River	Red River of the North	Upper Mississippi River
Rainy River	St. Croix River	

Waters in these watersheds that are threatened by proposed new sulfide mining and discharge of sulfate should be prioritized for a mercury TMDL. These include Round Lake (01-0070-00) in the Upper Mississippi River basin and Birch Lake (69-0003-00) in the Rainy River basin. Both of these lakes have been listed as impaired due to mercury in fish tissue since 1998 and are threatened by proposed sulfide ore mining.

WaterLegacy requests that MPCA:

- Add both Round Lake (01-0070-00) in the Upper Mississippi River and Birch Lake (69-0003-00) in the Rainy River basin to MPCA's TMDL Group 1 priority mercury impaired waters.

- Set a target date no later than 2026 for mercury TMDL completion for Round Lake (01-0070-00) and Birch Lake (69-0003-00).

B. MPCA's Insufficient Reassessment and Assessment of Mercury Impairments.

WaterLegacy is concerned that MPCA's Draft 2024 Impaired Waters List reflects insufficient reassessment as well as insufficient mercury assessment to protect public health and environmental justice.

MPCA's Draft 2024 Impaired Waters List identifies 1,274 mercury-impaired waters categorized under EPA's CALM Category 4A, so that no TMDL specific to that waterbody is required.[44] This exclusion is based on a prediction by MPCA and EPA based on fish tissue mercury at the time of assessment that compliance with Minnesota's statewide mercury air emissions TMDL will result in attainment of mercury standards for fish tissue in that waterbody by 2025.[45] More than half (649) of Minnesota's Category 4A waters for which no waterbody-specific TMDL needs to be done were first listed in 1998, a quarter of a century ago.[46]

---

[44] Draft 2024 Impaired Waters List, *supra*, EPA Categories tab (EPA CALM Category 4A means that no TMDL is required because "a TMDL has been approved by USEPA") and worksheet in 2024 Mercury TMDL App A ("Mercury 4A Waters"), Exhibit 20.

[45] Draft 2024 Impaired Waters List, *supra*, General Notes tab. If average fish tissue mercury exceeded 0.2 mg/kg and was equal to or less than 0.572 mg/kg when the fish was tested, a waterbody would require no mercury TMDL other than the statewide air emissions TMDL. The prediction for mercury compliance in these waters is stated in the MPCA TMDL Prioritization Framework, Exhibit 14 at 11 and MPCA's Assessment Manual Guidance for Assessing the Quality of Minnesota Surface Waters for Determination of Impairment ("MPCA Assessment Manual") Nov. 2023, available at 46, https://www.pca.state.mn.us/sites/default/files/wq-iw1-04m.pdf.

[46] Mercury 4A Waters, sorted by date listed as impaired, at 14-27, Exhibit 20.

WaterLegacy reviewed several mercury impaired waters in the Tamarack region seeking information on recent mercury fish tissue assessments. For Mille Lacs, Lake Minnewawa, and Big Sandy Lake, MPCA's online Surface Water Data provided a single year when Aquatic Consumption assessment was done—1998.[47] No public record suggests that these lakes or other lakes listed as impaired 25 years ago have been reassessed since then. No publicly available data verifies the assumption that Minnesota's statewide air emissions TMDL will result in compliance with fish tissue mercury standards in all Category 4A mercury impaired waterbodies by 2025. MPCA's lack of reassessment data for mercury in fish tissue undermines the premise for exemption of 1,274 mercury-impaired waters from a waterbody specific TMDL.

The current TMDL status of identified mercury impaired waterbodies is summarized below:

Category or Description	Mercury Impaired Waterbodies	No Waterbody Specific TMDL	Yes Waterbody Specific TMDL	Commitment to Begin a Waterbody TMDL	No Date Even to Begin a Waterbody TMDL
EPA Category 4A	1274	1274	0	0	1274
EPA Category 5	425	0	425	75	350
TOTAL Number	1699	1274	425	75	1624
Percent	**100%**	**75%**	**25%**	**4%**	**96%**

In addition, it is often assumed that the Impaired Waters List is a comprehensive analysis of all mercury impairments. But that is not the case. MPCA's Assessment Manual explains that the list only includes "water bodies from which the fish have been tested and found to exceed the impairment thresholds." [48] The Manual provides an "important caveat" that "one cannot assume, because a particular water body does not appear on the IWL [Impaired Waters List], the fish in that water body are safe for unlimited consumption. Most likely, it means the fish from that water body have not been tested."[49]

WaterLegacy reviewed MPCA data for the water bodies into which Talon Metals has proposed to discharge wastewater from its sulfide ore mine, should it be permitted: the Tamarack River between the Little Tamarack and the Prairie River (07010103-758) and the Unnamed Creek tributary to this Tamarack River segment (07010103-735). MPCA's Surface Water Data contain no sampling for mercury at any time for either this Tamarack River segment or its Unnamed Creek tributary.[50] MPCA's Assessment Data indicate both the 7.25 mile Tamarack River

[47] MPCA Surface Water Data, *supra*.

[48] MPCA Assessment Manual, *supra*, at 50.

[49] *Id*.

[50] MPCA Surface Water Data, *supra*, for Tamarack R. (07010103-758) and Unnamed Creek (07010103-735).

segment and the 3.5 mile Unnamed Creek have "a thriving community of fish and other aquatic organisms," but aquatic consumption use was "not assessed" for either waterbody.[51]

The importance of mercury assessment cannot be overstated. As MPCA explained in its Assessment Manual:

> ***Why is it important to assess for mercury?***
> Mercury is the classic example of a bioaccumulative element; it never degrades and it can bioaccumulate through the food chain to reach toxic levels in many fish species, which if eaten in high amounts, can lead to serious health effects. Neurodevelopmental effects to children exposed during gestation are of most concern.[52]

Mercury reassessment is needed to determine if individual waterbody specific TMDLs are required, particularly where there is a likelihood that waterbodies have natural or anthropogenic factors that could exacerbate the impacts of mercury air deposition. New mercury assessments should prioritize watersheds where existing or proposed sources of sulfate could cause or contribute to mercury impairments.

WaterLegacy requests that MPCA:

- Conduct a reassessment of mercury in fish tissue in Category 4A mercury impaired waters by 2025: 1) selecting waters with likely exacerbating factors, including sulfate, and also 2) randomly sampling to test the assumption that the statewide air deposition TMDL will result in mercury standard compliance by 2025.

- Assess the Tamarack River segment (07010103-758) and its tributary Unnamed Creek (07010103-735) for mercury in fish tissue and mercury in the water column in 2024 and subsequent years.

C) <u>MPCA's Failure to Address Relationships Between Sulfate and Mercury Impairments</u>.

WaterLegacy is not only concerned that MPCA's Draft 2024 Impaired Waters List excludes the vast majority of mercury impaired waters from an individual waterbody specific TMDL. It is also problematic that MPCA's TMDL Prioritization Framework attributes mercury in fish tissue solely to mercury "emitted into the atmosphere [that] deposits in lakes and streams and accumulates in fish" and assumes that limiting mercury air emissions without addressing other exacerbating factors will result in mercury water quality standards attainment by 2025.[53]

---

[51] MPCA Surface Water Data, *supra*, Tamarack River segment and tributary assessment, Exhibit 21. (Note that the Tamarack River segment is impaired for E. coli bacteria).

[52] MPCA Assessment Manual, *supra*, at 45.

[53] MPCA TMDL Prioritization Framework, Exhibit 14 at 11.

The weight of scientific evidence demonstrates that other factors, including sulfate pollution, must also be controlled to prevent mercury bioaccumulation in fish. Sulfate discharge increases both mercury release from sediments and wetlands and the methylation that allows for bioaccumulation. In 2006, MPCA recognized the need to minimize sulfate to reduce impairments due to methylmercury in fish tissue:

> It is important to minimize the effect of sulfate on MeHg [methylmercury] and P [phosphorus] because Minnesota's water quality is threatened by these chemicals state-wide. Federal NPDES permitting regulations prohibit the authorization of wastewater discharges that may cause or contribute to water quality impairments. Numerous water bodies in the state are listed as impaired because the MeHg concentrations in fish tissues make the fish unsuitable for frequent human consumption. Similarly, numerous water bodies are impaired because of excess P concentrations.[54]

Since 2006, the strength of the scientific evidence that sulfate increases mercury release from wetlands and sediments and mercury methylation has only increased.[55] In 2022, EPA cited scientific evidence of the relationship between sulfate and mercury exceedances of water quality standards in determining that the proposed PolyMet NorthMet Clean Water Act Section 404 permit would contribute to violations of mercury water quality standards. EPA explained that "wetland alterations, in addition to the loading of sulfates from the construction and operation of the NorthMet project, will both enhance methylation of mercury already present in the wetlands affected by the proposed mine and mobilize both total and methylmercury" resulting in export and exceedance of downstream mercury standards.[56]

MPCA's failure to address the relationship between sulfate loading and impairment of aquatic consumption due to mercury has understated the need for individual waterbody specific TMDLs for mercury impairments. Failure to recognize this relationship will undermine the scientific validity of any mercury TMDL that reflects this bias and prevent development of implementation plans that attain compliance with Minnesota water quality standards.

WaterLegacy requests that MPCA:

- Revise MPCA's TMDL Prioritization Framework to explicitly recognize that mercury impairments result from mercury air deposition exacerbated by other factors, including sulfate pollution.

---

[54] MPCA Strategy to Address Indirect Effects of Elevated Sulfate on Methylmercury Production and Phosphorus Availability, Final, Oct. 19, 2006 at 1, Exhibit 22.

[55] *See e.g.,* Peer-reviewed Articles in Exhibit 23.

[56] EPA Clean Water Act Section 401(a)(2) Evaluation and Recommendations with respect to the Fond du Lac Band's Objection to the Proposed Clean Water Act Section 404 Permit for the NorthMet Mine Project, Apr. 29, 2022, at 16, available at https://www.epa.gov/mn/polymet-northmet-mine#materials.

- Model, study, and implement controls on sulfate loading among other contributing factors to attain compliance with mercury water quality standards in any TMDL study or implementation plan developed by MPCA in a watershed affected by sulfate discharge.

CONCLUSION

Based on the cited and attached references, WaterLegacy requests that MPCA take the following actions in connection with Minnesota's Draft 2024 Impaired Waters List and related documents:

- Maintain the 2,395 Minnesota wild rice producing waters identified through 2023 and include additional waters as they are identified.

- Prepare an updated map of Minnesota wild rice producing waters on a user-friendly online platform, preferably with layers that identify upstream sulfate dischargers.

- Add the 20 wild rice producing waters listed in MPCA's Draft 2024 Impaired Waters List as impaired due to exceedance of Minnesota's sulfate standard to Minnesota's Final 2024 Impaired Waters List.

- Add Dark Lake (69-0790-000) to Minnesota's Final 2024 List of wild rice producing waters impaired due to exceedance of the sulfate standard.

- Commit to prompt and effective enforcement of the sulfate effluent limits in the U.S. Steel Corp. Keetac mine and tailings basin NPDES permits.

- Categorize all sulfate impaired wild rice producing waters where a mining NPDES point source is the predominant or sole source of sulfate pollution as Commitment Group 1A.

- Commit to determine between 2024 and 2026 the waste load allocation for sulfate that will achieve compliance with Minnesota's wild rice standard[57] for each Group 1A sulfate impaired waterbody.

- Commit that no new NPDES mining permit predicting sulfate discharge upstream of any Group 1A sulfate impaired waterbody will be issued without a sulfate load allocation and sulfate WQBELs for concentration and load to attain compliance with Minnesota's wild rice standard.

- Commit to reissue from 2024 through 2028 every existing NPDES mining permit causing or contributing to a Group 1A wild rice waters sulfate impairment, with

[57] MPCA commitments should be made in tabbed notes to the Final 2024 Minnesota Impaired Waters List and detailed in a revised final TMDL Prioritization Framework.

Clean Water Act limits including sulfate WQBELs for concentration and load to attain compliance with Minnesota's wild rice standard.

- Clarify in its General Notes that 2026 is MPCA's targeted TMDL completion date for all of its Group 1 priority waters, or revise MPCA's Draft 2024 Impaired Waters List to include specific prompt TMDL completion target dates for Group 1 priority mercury impaired waters.

- Add both Round Lake (01-0070-00) in the Upper Mississippi River and Birch Lake (69-0003-00) in the Rainy River basin to MPCA's TMDL Group 1 priority mercury impaired waters.

- Set a target date for mercury TMDL completion for Round Lake and Birch Lake no later than 2026.

- Conduct a reassessment of mercury in fish tissue in Category 4A mercury impaired waters by 2025: 1) selecting waters with likely exacerbating factors, including sulfate, and also 2) randomly sampling to test the assumption that the statewide air deposition TMDL will result in mercury standard compliance by 2025.

- Assess the Tamarack River segment (07010103-758) and its tributary Unnamed Creek (07010103-735) for mercury in fish tissue and mercury in the water column in 2024 and subsequent years.

- Revise MPCA's TMDL Prioritization Framework to explicitly recognize that mercury impairments result from mercury air deposition exacerbated by other factors, including sulfate pollution.

- Model, study, and implement controls on sulfate loading among other contributing factors to attain compliance with mercury water quality standards in any TMDL study or implementation plan developed by MPCA in a watershed affected by sulfate discharge.

Thank you for the opportunity to provide our comments. Please contact us if you have any questions or would like additional information.

Sincerely yours,

Paula G. Maccabee
WaterLegacy Advocacy Director and Counsel

cc: Paul Proto Proto.paul@epa.gov (with Exhibits 1-23)
Donna Keclik Donna.keclik@epa.gov (with Exhibits 1-23)
Barbara Wester Wester.barbara@epa.gov (with Exhibits 1-23)

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBITS 1-23

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 1

MPCA Wild Rice Producing Waters (2023)

MPCA Wild Rice Producing Waters (2023)

	A	B	C	D	E	F	G	H	I	J
1	WID	Water unit name	Type	Primary watershed	Primary HU08 code	All watersheds (if multiple)	All HU08 codes (if multiple)	Use class full	Primary county	All counties (if multiple)
2	01-0001-00	Pine	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Aitkin	Aitkin
3	01-0002-00	Split Rock	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Aitkin	Aitkin
4	01-0005-00	Rice	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
5	01-0009-00	Douglas	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
6	01-0010-00	Nelson	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
7	01-0014-00	Savanna	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
8	01-0016-00	Little Prairie	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
9	01-0017-00	Stony	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
10	01-0019-00	Wolf	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Aitkin	Aitkin
11	01-0020-00	Unnamed	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Aitkin	Aitkin
12	01-0023-00	Round	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
13	01-0029-00	Mud	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
14	01-0031-00	Anderson	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
15	01-0033-00	Minnewawa	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
16	01-0034-00	Horseshoe	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
17	01-0035-00	Mud	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin

	A	B	C	D	E	F	G	H	I	J
18	01-0040-00	Aitkin	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
19	01-0042-00	Glacier	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
20	01-0046-00	Ball Bluff	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
21	01-0052-00	Little Red Horse	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
22	01-0053-00	Rat House	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
23	01-0055-00	Boot	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
24	01-0058-00	Vanduse	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
25	01-0059-00	Hay	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
26	01-0060-00	Sandy River	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
27	01-0061-00	Flowage	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
28	01-0062-00	Big Sandy	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
29	01-0064-00	Bear	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Aitkin	Aitkin
30	01-0065-00	Cedar	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Aitkin	Aitkin
31	01-0067-00	Rice	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
32	01-0068-00	Mandy	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
33	01-0069-00	Portage	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
34	01-0070-00	Round	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
35	01-0071-01	Davis (Main Bay)	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin

	A	B	C	D	E	F	G	H	I	J
36	01-0071-02	Steamboat	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
37	01-0072-00	Rock	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
38	01-0074-00	Turner	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
39	01-0076-00	Sanders	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
40	01-0077-00	Rat	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
41	01-0078-00	Brown	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
42	01-0084-00	Sugar	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
43	01-0085-00	Twenty	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Aitkin	Aitkin
44	01-0086-00	Deer	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Aitkin	Aitkin
45	01-0087-00	Sugar	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
46	01-0088-00	Lily	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
47	01-0089-00	Long	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
48	01-0092-00	Swamp	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
49	01-0093-00	Clear	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
50	01-0096-00	Dam	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
51	01-0097-00	Newstrom	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
52	01-0098-00	Camp	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
53	01-0099-00	Gun	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin

	A	B	C	D	E	F	G	H	I	J
54	01-0100-00	Jenkins	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
55	01-0101-00	Long	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
56	01-0102-00	Wilkins	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
57	01-0105-00	Fleming	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
58	01-0106-00	Clear	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
59	01-0107-00	Red	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
60	01-0110-00	Studhorse	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
61	01-0111-00	Washburn	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
62	01-0115-00	Section Ten	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
63	01-0120-00	Section Twelve	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
64	01-0123-00	Elm Island	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
65	01-0124-00	Sixteen	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
66	01-0126-00	Monson	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
67	01-0127-00	Section 25	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
68	01-0129-00	Sissabagamah	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
69	01-0131-00	Johnson	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
70	01-0134-00	Sitas	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
71	01-0136-00	Waukenabo	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin

	A	B	C	D	E	F	G	H	I	J
72	01-0137-00	Round	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
73	01-0138-00	Kingsley Pothole	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
74	01-0140-00	Moose	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
75	01-0146-00	Ripple	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
76	01-0148-00	White Elk	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
77	01-0149-00	Mallard	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
78	01-0151-00	Spruce	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
79	01-0154-00	Horseshoe	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
80	01-0156-00	Spectacle	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
81	01-0159-00	Farm Island	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
82	01-0161-00	Hammal	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
83	01-0170-00	Hanging Kettle	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
84	01-0171-00	Diamond	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
85	01-0174-00	Thornton	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
86	01-0176-00	Little Pine	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
87	01-0178-00	Spirit	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
88	01-0179-00	Hickory	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
89	01-0188-00	Blind	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin

	A	B	C	D	E	F	G	H	I	J
90	01-0189-00	Cartie	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin; Crow
91	01-0194-00	Mud	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
92	01-0197-00	Little McKinney	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
93	01-0199-00	McKinney	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
94	01-0200-00	Shovel	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
95	01-0204-00	Round	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Aitkin	Aitkin; Crow
96	01-0206-00	Birch	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin; Crow
97	01-0209-01	Cedar (Main Basin)	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin; Crow
98	01-0209-02	Cedar (N.E. Arm)	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
99	01-0209-03	Cedar (West Bay)	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
100	01-0212-00	Moulton	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Aitkin	Aitkin; Crow
101	01-0238-00	Killroy	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
102	01-0262-00	Unnamed	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
103	01-0283-00	Krilwitz	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
104	01-0285-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
105	01-0287-00	West	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
106	01-0314-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
107	01-0316-00	Sjodin	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin

	A	B	C	D	E	F	G	H	I	J
108	01-0331-00	Upper Blind	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
109	01-0332-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
110	01-0358-00	Moose River Pool	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
111	01-0372-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
112	01-0383-00	Jewett WMA Impoundment	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
113	01-0410-00	Kimberly WMA Impound.	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
114	01-0411-00	Kimberly WMA Impound.	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
115	01-0413-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
116	01-0415-00	Salo WMA Impoundment	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
117	01-0419-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
118	01-0420-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
119	01-0427-00	Cornish Impoundment	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
120	01-0431-00	Unnamed	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
121	01-0433-00	Little Hill Impound.	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Aitkin	Aitkin
122	01-0450-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Aitkin	Aitkin
123	02-0008-00	Rice	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Anoka	Anoka
124	02-0014-00	Amelia	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Anoka	Anoka
125	02-0015-00	Rondeau	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Anoka	Anoka

	A	B	C	D	E	F	G	H	I	J
126	02-0020-00	East Twin	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
127	02-0028-00	Boot	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
128	02-0029-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
129	02-0030-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
130	02-0031-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
131	02-0032-00	Little Coon	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
132	02-0033-00	West Twin	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
133	02-0043-00	Rice	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
134	02-0059-00	Deer	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
135	02-0065-00	Fish	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
136	02-0092-00	Grass	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
137	02-0096-00	Hickey	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
138	02-0098-00	Swan	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
139	02-0101-00	Unnamed	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
140	02-0106-00	Norris	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
141	02-0113-00	Grass	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
142	02-0130-00	Pickerel	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Anoka	Anoka
143	02-0493-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka; Chi

	A	B	C	D	E	F	G	H	I	J
144	02-0496-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
145	02-0497-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
146	02-0504-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
147	02-0505-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
148	02-0508-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka
149	02-0520-00	Unnamed	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities,	07010206,	2B, 3, 4A,	Anoka	Anoka
150	02-0529-00	Unnamed	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Anoka	Anoka
151	03-0004-00	Knutson	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
152	03-0005-00	Shipman	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
153	03-0007-00	Blueberry	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
154	03-0008-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
155	03-0009-00	Little Long	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
156	03-0016-00	Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
157	03-0017-00	Two Inlets	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
158	03-0022-00	Little Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
159	03-0023-00	Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
160	03-0032-00	Hernando DeSoto	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Becker	Becker
161	03-0033-00	Twin Island	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker

	A	B	C	D	E	F	G	H	I	J
162	03-0039-00	Abners	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
163	03-0042-00	Kane	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
164	03-0044-00	Dinner	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
165	03-0045-00	Little Dinner	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
166	03-0065-00	Elbow	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
167	03-0066-00	Gyles	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
168	03-0067-00	Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
169	03-0082-00	Wahbegon	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
170	03-0085-00	Bad Medicine	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
171	03-0087-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
172	03-0088-00	Bass	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
173	03-0090-00	Kneebone	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
174	03-0092-00	Basswood	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
175	03-0096-00	Big Basswood	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
176	03-0101-00	Wolf	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Becker	Becker
177	03-0102-00	Shell	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
178	03-0103-00	Big Rush	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
179	03-0104-00	Aspinwall	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker

	A	B	C	D	E	F	G	H	I	J
180	03-0107-00	Toad	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
181	03-0108-00	Sieverson	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
182	03-0120-00	Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
183	03-0123-00	Jones	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
184	03-0124-00	Dumbbell	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
185	03-0127-00	Bass	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
186	03-0136-00	Juggler	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
187	03-0140-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
188	03-0151-00	Camp Seven	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
189	03-0153-00	Island	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
190	03-0155-00	Round	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
191	03-0157-00	Tea Cracker	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
192	03-0158-00	Many Point	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
193	03-0159-00	Elbow	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
194	03-0160-00	Dead	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker; Ott
195	03-0166-00	Hungry	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
196	03-0173-00	Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
197	03-0175-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker

	A	B	C	D	E	F	G	H	I	J
198	03-0176-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
199	03-0177-00	Hanson	Lake	Otter Tail River	09020103	Otter Tail River	09020103	1B, 2A, 3,	Becker	Becker
200	03-0184-00	Alvin	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
201	03-0185-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
202	03-0187-00	Mud	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
203	03-0188-00	Little Mud	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
204	03-0189-00	Little Toad	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
205	03-0195-00	Height of Land	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
206	03-0196-00	Chippewa	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
207	03-0197-00	Blackbird	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
208	03-0198-00	Booth	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
209	03-0199-00	Johnson	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
210	03-0200-00	Pine	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
211	03-0201-00	Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
212	03-0206-00	Upper Egg	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
213	03-0209-00	Carman	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
214	03-0210-00	Lower Egg	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
215	03-0212-00	Bush	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker

	A	B	C	D	E	F	G	H	I	J
216	03-0213-00	Waboose	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
217	03-0214-00	Spindler	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
218	03-0216-00	Winter	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
219	03-0217-00	Little Flat	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
220	03-0219-00	Equay	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
221	03-0239-00	Little Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
222	03-0240-00	Hubbel Pond	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
223	03-0241-01	South Tamarack	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
224	03-0241-02	North Tamarack	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
225	03-0242-00	Flat	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
226	03-0243-00	Mary Yellowhead	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
227	03-0246-00	Big Rat	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Becker	Becker
228	03-0258-00	Acorn	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
229	03-0263-00	Trieglaff	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
230	03-0264-00	Town	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
231	03-0266-00	Albertson	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
232	03-0268-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
233	03-0277-00	St. Patrick	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker

	A	B	C	D	E	F	G	H	I	J
234	03-0278-00	Schultz	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
235	03-0285-00	Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
236	03-0286-00	Cotton	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
237	03-0291-00	Rice	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
238	03-0292-00	Balsam	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
239	03-0293-00	Rock	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
240	03-0302-00	Little Round	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
241	03-0304-00	Big Sugar Bush	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
242	03-0312-00	Bullhead	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
243	03-0313-00	Little Sugar Bush	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
244	03-0318-00	Eagen	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
245	03-0323-00	Strawberry	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Becker	Becker
246	03-0328-00	White Earth	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Becker	Becker; Ma
247	03-0332-00	Bass	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Becker	Becker
248	03-0334-00	Net	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Becker	Becker
249	03-0337-00	Little Bass	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Becker	Becker
250	03-0346-00	Cabin	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Becker	Becker
251	03-0350-00	Buffalo	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker

	A	B	C	D	E	F	G	H	I	J
252	03-0359-00	Sallie	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
253	03-0365-00	Senical	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
254	03-0371-00	Meadow	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
255	03-0374-01	Johnson	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
256	03-0374-02	Reeves	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
257	03-0381-00	Detroit	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
258	03-0383-00	Long	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
259	03-0386-00	Little Floyd	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
260	03-0387-01	Mud	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
261	03-0387-02	Floyd (south bay)	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
262	03-0388-00	Tamarack	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
263	03-0411-00	Bean	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
264	03-0412-00	Halverson	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
265	03-0419-00	Campbell	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
266	03-0430-00	St. Clair	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
267	03-0434-00	Unnamed	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker
268	03-0475-00	Melissa	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
269	03-0480-00	Bass	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker

	A	B	C	D	E	F	G	H	I	J
270	03-0486-00	Pearl	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
271	03-0489-00	Loon	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
272	03-0500-00	Maud	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
273	03-0503-00	Eunice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
274	03-0575-00	Leif	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
275	03-0576-00	Big Cormorant	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
276	03-0577-00	Dahlberg	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
277	03-0582-00	Ida	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker; Ott
278	03-0588-00	Upper Cormorant	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
279	03-0598-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
280	03-0599-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
281	03-0600-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
282	03-0638-00	Bijou	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
283	03-0659-00	Sand	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker; Cla
284	03-0660-01	Axberg(Main Basin)	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Becker	Becker; Cla
285	03-0660-02	Axberg(West Basin)	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Clay	Clay
286	03-0716-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
287	03-0776-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker

	A	B	C	D	E	F	G	H	I	J
288	03-0786-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
289	03-1093-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
290	03-1284-00	Unnamed - Osprey Pond	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
291	03-1285-00	Unnamed - Myrel's Pond	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
292	03-1286-00	Unnamed - Trout Pond	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Becker	Becker
293	03-1287-00	Sexton	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Becker	Becker
294	04-0001-00	Burns	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami; It
295	04-0002-00	Bullhead	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
296	04-0007-00	Kitchi	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
297	04-0009-00	Preston	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
298	04-0010-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
299	04-0011-00	Moose	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
300	04-0015-00	Little Rice	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
301	04-0016-00	Little Gilstad	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
302	04-0017-00	Chinaman	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
303	04-0020-00	Gimmer	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
304	04-0021-00	Baumgartner	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
305	04-0023-00	Holland	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami

	A	B	C	D	E	F	G	H	I	J
306	04-0024-00	Gilstad	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
307	04-0027-00	Borden	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
308	04-0029-00	Norman	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
309	04-0030-00	Cass	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami; C
310	04-0031-00	Big Rice	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
311	04-0032-00	Pimushe	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
312	04-0033-00	Benjamin	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	1B, 2A, 3,	Beltrami	Beltrami
313	04-0034-00	Rabideau	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
314	04-0035-01	RED (UPPER RED)	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
315	04-0035-02	RED (LOWER RED)	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami; C
316	04-0038-00	Andrusia	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
317	04-0042-00	Buck	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
318	04-0049-00	Big	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
319	04-0050-00	Meadow	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
320	04-0051-00	Flora	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
321	04-0052-00	Jessie	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
322	04-0054-00	Muskrat	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
323	04-0056-00	Carter	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami

	A	B	C	D	E	F	G	H	I	J
324	04-0057-00	Nelson	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
325	04-0058-00	Carla	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
326	04-0059-00	Rice Pond	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
327	04-0060-00	Fagen	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
328	04-0064-00	Gull	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
329	04-0067-00	Dutchman	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
330	04-0068-01	Erickson (NW Portion)	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
331	04-0068-02	Erickson (SE Portion)	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
332	04-0069-00	Blackduck	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
333	04-0070-00	Crandall	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
334	04-0073-00	Funk	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
335	04-0075-00	Roadside	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
336	04-0079-00	Wolf	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami; H
337	04-0080-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
338	04-0085-00	Swenson	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
339	04-0089-00	Ose	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
340	04-0090-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
341	04-0100-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami

	A	B	C	D	E	F	G	H	I	J
342	04-0103-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
343	04-0106-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
344	04-0111-00	Turtle River	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
345	04-0112-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
346	04-0114-00	School	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
347	04-0117-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
348	04-0119-00	Peterson	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
349	04-0120-00	Gull	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
350	04-0121-00	Rice	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
351	04-0122-00	Medicine	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
352	04-0123-00	Cranberry	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
353	04-0130-01	Stump	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
354	04-0130-02	Bemidji (main lake)	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
355	04-0131-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
356	04-0134-00	Three Island	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
357	04-0135-00	Beltrami	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
358	04-0140-00	Irving	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
359	04-0141-00	Carr	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami

	A	B	C	D	E	F	G	H	I	J
360	04-0142-00	Marquette	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
361	04-0144-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
362	04-0146-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
363	04-0151-00	Alice	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
364	04-0152-00	Movil	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
365	04-0153-00	Lindgren	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
366	04-0155-00	Little Turtle	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
367	04-0159-00	Turtle	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
368	04-0162-00	Fox	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
369	04-0166-00	Julia	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
370	04-0168-00	Polly Wog	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
371	04-0170-00	Little Rice	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
372	04-0174-00	Rice	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
373	04-0175-00	George	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
374	04-0177-00	Peterson	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
375	04-0179-00	Upper Lindgren	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
376	04-0191-00	Bass	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
377	04-0196-00	Campbell	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami

	A	B	C	D	E	F	G	H	I	J
378	04-0197-00	Little Puposky	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
379	04-0198-00	Puposky	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
380	04-0202-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
381	04-0203-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
382	04-0211-00	Bootleg	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
383	04-0216-00	Grass	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
384	04-0217-00	Grant	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
385	04-0220-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
386	04-0227-00	Long	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
387	04-0229-00	Erick	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
388	04-0230-00	Deer	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
389	04-0232-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
390	04-0235-00	Peterson	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
391	04-0240-00	Muskrat	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
392	04-0241-00	Grenn	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
393	04-0250-00	Rice	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
394	04-0253-00	Unnamed	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
395	04-0265-00	Island	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami

	A	B	C	D	E	F	G	H	I	J
396	04-0267-00	Ten Mile	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
397	04-0271-00	Heart	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
398	04-0286-00	Manomin	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
399	04-0300-00	Whitefish	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Beltrami	Beltrami
400	04-0301-00	Unnamed	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Beltrami	Beltrami
401	04-0309-00	Whitefish	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
402	04-0327-00	Barr	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
403	04-0329-00	Balm	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
404	04-0331-00	Dellwater	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Beltrami	Beltrami
405	04-0342-00	Moose	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami; C
406	04-0343-00	Clearwater	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Beltrami	Beltrami; C
407	04-0359-00	Little Rabideau	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
408	04-0370-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
409	04-0460-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
410	04-0657-00	Unnamed (Twin Pothole South)	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Beltrami	Beltrami
411	05-0009-00	Pularskis	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Benton	Benton
412	06-0001-00	Marsh	Lake	Minnesota River - Headwaters	07020001	Minnesota River - Headwaters	07020001	2B, 3, 4A,	Big Stone	Big Stone;
413	06-0029-00	Long Tom	Lake	Minnesota River - Headwaters	07020001	Minnesota River - Headwaters	07020001	2B, 3, 4A,	Big Stone	Big Stone

	A	B	C	D	E	F	G	H	I	J
414	06-0147-00	North Rothwell	Lake	Mustinka River	09020102	Mustinka River	09020102	2B, 3, 4A,	Big Stone	Big Stone
415	06-0152-00	Big Stone	Lake	Minnesota River - Headwaters	07020001	Minnesota River - Headwaters	07020001	2B, 3, 4A,	Big Stone	Big Stone
416	07-0059-00	Rice	Lake	Le Sueur River	07020011	Le Sueur River	07020011	2B, 3, 4A,	Blue Earth	Blue Earth
417	08-0035-00	Gilman	Lake	Minnesota River - Mankato	07020007	Minnesota River - Mankato	07020007	2B, 3, 4A,	Brown	Brown
418	08-0054-00	Altermatt	Lake	Cottonwood River	07020008	Cottonwood River	07020008	2B, 3, 4A,	Brown	Brown
419	09-0009-00	Venoah	Lake	Nemadji River	04010301	Nemadji River	04010301	2B, 3, 4A,	Carlton	Carlton
420	09-0010-00	Hay	Lake	Nemadji River	04010301	Nemadji River	04010301	2B, 3, 4A,	Carlton	Carlton
421	09-0023-00	Wild Rice	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
422	09-0026-00	Bob	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
423	09-0027-00	Unnamed	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
424	09-0030-00	Hardwood	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton
425	09-0031-00	Cedar	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton
426	09-0036-00	Perch	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton
427	09-0037-00	Rice Portage	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton
428	09-0041-00	Moosehead	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
429	09-0043-00	Moose	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
430	09-0046-00	Bang	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton
431	09-0049-00	Kettle	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton

	A	B	C	D	E	F	G	H	I	J
432	09-0050-00	Jaskari	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton
433	09-0051-00	Dead Fish	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton
434	09-0053-00	Miller	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton
435	09-0057-00	Eagle	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
436	09-0058-00	Merwin	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
437	09-0060-01	Upper (North) Island	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
438	09-0060-02	Lower (South) Island	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
439	09-0062-00	Cross	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
440	09-0063-00	Woodbury	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
441	09-0064-00	Flower	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
442	09-0066-00	Long	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
443	09-0067-00	Tamarack	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
444	09-0071-00	Walli	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
445	09-0074-00	Kettle	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton; Ait
446	09-0077-00	Little Kettle	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
447	09-0145-00	Unnamed	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
448	09-0174-00	Railroad	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Carlton	Carlton
449	09-0178-00	Unnamed	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Carlton	Carlton

	A	B	C	D	E	F	G	H	I	J
450	09-0187-00	Sterly Pool	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton
451	10-0001-00	Rice Marsh	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Hennepin	Hennepin;
452	10-0078-00	Rice	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Carver	Carver
453	11-0001-00	Third Guide	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass; Aitkir
454	11-0002-00	Little Reservoir	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
455	11-0003-00	Reservoir	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
456	11-0004-00	Schafer	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
457	11-0009-01	Little Thunder (West Bay)	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
458	11-0009-02	Little Thunder (East Bay)	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
459	11-0016-00	White Oak	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
460	11-0017-00	Birch	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
461	11-0018-00	Little Birch	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
462	11-0019-00	Sailor	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
463	11-0020-00	Thiebault	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
464	11-0022-00	Spring	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Cass	Cass
465	11-0023-00	Long	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Cass	Cass
466	11-0027-00	Skunk	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Cass	Cass
467	11-0029-00	Vermillion	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
468	11-0030-00	Little Vermillion	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Cass	Cass
469	11-0059-00	Washburn	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
470	11-0062-00	Thunder	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
471	11-0073-00	Big Rice	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
472	11-0074-00	Ododikossi	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
473	11-0075-00	Oxbow	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
474	11-0077-00	Big Sand	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
475	11-0078-00	Moon	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
476	11-0080-00	Lower Milton	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
477	11-0081-00	Upper Milton	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
478	11-0082-00	Cedar	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
479	11-0090-00	Grass	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
480	11-0096-00	Goose	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
481	11-0100-00	Mud	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
482	11-0101-00	George	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
483	11-0102-00	Island	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
484	11-0104-00	Laura	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
485	11-0105-00	Upper Trelipe	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
486	11-0120-01	INGUADONA (N. BAY)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
487	11-0120-02	INGUADONA (S. BAY)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
488	11-0123-00	Twin	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
489	11-0124-00	Wax	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
490	11-0125-00	West Twin	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
491	11-0129-00	Lower Trelipe	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
492	11-0131-00	Little Swift	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
493	11-0132-00	Tobique	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
494	11-0133-00	Swift	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
495	11-0134-00	Portage	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
496	11-0135-00	Rabbit	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
497	11-0136-00	Lomish	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
498	11-0137-00	Nushka	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
499	11-0138-00	Rice	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
500	11-0142-01	Long (South of Main)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
501	11-0142-02	LONG (MAIN BASIN)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
502	11-0142-03	Long (North of Main)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
503	11-0142-04	Long (South West Bay)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
504	11-0143-00	Boy	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
505	11-0144-00	Blacksmith	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
506	11-0145-00	Drumbeater	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
507	11-0146-00	Six Mile	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
508	11-0147-00	Winnibigoshish	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Cass	Cass; Itasc
509	11-0149-00	Potshot	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
510	11-0154-00	Peterson	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
511	11-0162-00	Rice	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
512	11-0167-00	Little Boy	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
513	11-0168-00	McCarthey	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
514	11-0170-00	Hunter	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
515	11-0171-01	Wabedo (North East Bay)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
516	11-0171-02	Wabedo (South West Bay)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
517	11-0173-00	Thirty-Six	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
518	11-0174-00	Girl	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
519	11-0177-00	Three Island	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
520	11-0184-00	Bullhead	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
521	11-0185-00	Gijik	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
522	11-0189-00	Tamarack	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
523	11-0193-00	Mad Dog	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
524	11-0194-00	Iverson	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
525	11-0197-00	Hole-In-Bog	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
526	11-0199-00	Hay	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
527	11-0201-01	Broadwater Bay	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
528	11-0201-02	Woman (main lake)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
529	11-0202-00	Silver	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
530	11-0203-01	LEECH (MAIN BASIN)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
531	11-0203-02	LEECH (KABEKONA BAY)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass; Hubb
532	11-0203-03	Leech (Ah-Gwah-Chin)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
533	11-0203-04	LEECH (SHINGOBEE BAY)	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
534	11-0204-00	Portage	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
535	11-0207-00	Mile	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass; Crow
536	11-0209-00	Hardy	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass; Crow
537	11-0213-00	Stephens	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
538	11-0214-00	Dade	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
539	11-0218-00	Upper Gull	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
540	11-0220-00	Ray	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass; Crow
541	11-0221-00	Spider	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
542	11-0222-00	Margaret	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
543	11-0225-00	Upper Loon	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
544	11-0226-00	Loon	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
545	11-0227-00	Rice	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass; Crow
546	11-0231-00	Lizotte	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
547	11-0232-00	Hattie	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
548	11-0232-01	Little Hattie	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
549	11-0242-00	Hand	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
550	11-0250-00	Ada	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
551	11-0251-00	Hand	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
552	11-0257-00	Island	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
553	11-0258-00	Long	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
554	11-0261-00	McKeown	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
555	11-0262-00	Kid	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
556	11-0263-00	Child	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
557	11-0265-00	Little Woman	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
558	11-0267-00	Pick	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
559	11-0268-00	Kerr	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
560	11-0270-00	Trillium	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
561	11-0273-00	Widow	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
562	11-0274-00	Blackwater	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
563	11-0275-00	Sand	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
564	11-0277-00	Big Deep	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
565	11-0279-00	Sand	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
566	11-0280-00	Donkey	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
567	11-0281-00	Barnum	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
568	11-0283-00	Baby	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
569	11-0284-00	Horseshoe	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
570	11-0285-00	Rat	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
571	11-0289-00	Cedar	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
572	11-0292-00	Pine	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
573	11-0304-01	Sylvan (Southwest Bay)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
574	11-0304-02	Sylvan (Northeast Bay)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
575	11-0305-00	Gull	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass; Crow
576	11-0307-00	Norway	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
577	11-0308-01	Big Portage (West Bay)	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
578	11-0308-02	Big Portage (East Bay)	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
579	11-0309-00	Mud	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
580	11-0311-00	Webb	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
581	11-0313-00	Lower Sucker	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
582	11-0315-00	Grass	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
583	11-0317-00	Middle Sucker	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
584	11-0320-00	Pillager	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
585	11-0321-00	Rice	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
586	11-0323-00	Little Long	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
587	11-0324-00	Rock	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
588	11-0332-00	Hardy	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
589	11-0347-00	Tamarack	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
590	11-0350-00	Bowen	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
591	11-0351-00	Five Point	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
592	11-0352-00	Pickerel	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
593	11-0353-00	Beuber	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
594	11-0355-00	Ox Yoke	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
595	11-0356-00	Rainy	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
596	11-0358-00	Horseshoe	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
597	11-0360-00	Island	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
598	11-0361-00	Sanborn	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
599	11-0363-00	Johnson	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
600	11-0366-00	Brockway	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
601	11-0367-00	Lind	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
602	11-0369-00	Little Boy	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
603	11-0371-00	Stony	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
604	11-0383-00	Pleasant	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
605	11-0394-00	Hovde	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
606	11-0397-00	Bluebill	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
607	11-0400-00	Jack	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
608	11-0402-00	Rice	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
609	11-0403-00	Wabegon	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
610	11-0406-00	Life Raft	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
611	11-0411-00	Pine Mountain	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
612	11-0412-00	Birch	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
613	11-0413-00	Ten Mile	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
614	11-0424-00	Moose	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
615	11-0428-00	Kelly	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
616	11-0441-00	Scribner	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
617	11-0444-00	Cedar	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
618	11-0447-00	Bergkeller	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
619	11-0467-00	Ten	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
620	11-0474-00	Bass	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
621	11-0476-00	Portage	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
622	11-0480-00	Long	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
623	11-0481-00	Cedar	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
624	11-0483-00	Swamp	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
625	11-0484-00	Twin	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
626	11-0487-00	Little Twin	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
627	11-0489-00	Little Moss	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
628	11-0490-00	Portage	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
629	11-0491-00	Steamboat Bay	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
630	11-0492-00	Faherty	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
631	11-0493-00	Welch	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
632	11-0504-00	Steamboat	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass; Hubt
633	11-0509-00	Cat	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
634	11-0511-00	Esterday	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
635	11-0513-00	Farnham	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena; C
636	11-0514-00	Dry Sand	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass; Wad
637	11-0517-00	Chub	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Cass	Cass
638	11-0565-00	Ding Pot	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
639	11-0615-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
640	11-0641-00	Fucat	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
641	11-0698-00	Unnamed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
642	11-0714-00	Unnamed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
643	11-0720-00	Rice Pad	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Cass	Cass
644	11-0738-00	Unnamed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
645	11-0776-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
646	11-0777-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
647	11-0780-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
648	11-0786-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
649	11-0862-00	Unnamed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
650	11-0975-00	Unnamed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Cass	Cass
651	13-0027-00	South Center	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
652	13-0028-00	South Lindstrom	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
653	13-0031-00	Sunrise	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
654	13-0032-01	North Center Lake	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
655	13-0041-01	Green (Little Green)	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
656	13-0041-02	GREEN (MAIN BASIN)	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
657	13-0053-00	Comfort	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
658	13-0059-01	South Sunrise Pool	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
659	13-0059-02	Mud Lake	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
660	13-0059-03	North Sunrise Pool	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
661	13-0060-00	Peterson Slough	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
662	13-0068-00	Fish	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
663	13-0069-01	East Rush	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
664	13-0073-00	Horseshoe	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago

	A	B	C	D	E	F	G	H	I	J
665	13-0080-00	Little Horseshoe	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
666	13-0083-01	GOOSE (NORTH BAY)	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
667	13-0083-02	GOOSE (SOUTH BAY)	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago
668	14-0004-00	Tilde	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clay	Clay; Beck
669	14-0103-00	Cromwell	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Clay	Clay
670	14-0336-00	Hartke	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Clay	Clay
671	15-0002-00	Haggerty	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Clearwater	Clearwater
672	15-0010-00	Elk	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
673	15-0014-00	Whipple	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
674	15-0016-00	Itasca	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
675	15-0018-00	Mallard	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
676	15-0019-00	Gill	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
677	15-0020-00	Sucker	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
678	15-0021-00	Unnamed	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
679	15-0024-00	Duncan	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
680	15-0025-00	Berg	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
681	15-0028-01	West Four-Legged (Northeast Portion)	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater

	A	B	C	D	E	F	G	H	I	J
682	15-0035-00	Spike	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
683	15-0038-00	Falk	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
684	15-0040-00	Bagley	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
685	15-0049-00	Unnamed	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
686	15-0056-00	Tamarack	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
687	15-0059-00	Upper Rice	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
688	15-0060-00	Walker Brook	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
689	15-0061-00	Mud	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
690	15-0074-00	Anderson	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
691	15-0075-00	Rockstad	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
692	15-0079-00	Minerva	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
693	15-0081-00	Lomond	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
694	15-0083-00	Peterson	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
695	15-0091-00	Second	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
696	15-0114-00	Kibbee	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Clearwater	Clearwater
697	15-0130-00	Lower Rice	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
698	15-0136-00	Tamarack	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
699	15-0137-00	Minnow	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater

	A	B	C	D	E	F	G	H	I	J
700	15-0139-00	First	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
701	15-0140-00	Second	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
702	15-0141-00	Third	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
703	15-0144-00	Lindberg	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
704	15-0149-00	Pine	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
705	15-0202-00	Unnamed	Lake	Red Lake River	09020303	Red Lake River	09020303	2B, 3, 4A,	Clearwater	Clearwater
706	15-0293-00	Unnamed	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Clearwater	Clearwater
707	15-0483-00	Floating Moss	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Clearwater	Clearwater
708	16-0003-00	Teal	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
709	16-0006-00	Cuffs	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
710	16-0009-00	Swamp	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
711	16-0013-00	Prout	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
712	16-0025-00	Royal	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
713	16-0026-00	Little John	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
714	16-0032-00	Otter	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
715	16-0033-00	Chester	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2A, 3,	Cook	Cook
716	16-0034-00	South Fowl	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
717	16-0035-00	John	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook

	A	B	C	D	E	F	G	H	I	J
718	16-0036-00	North Fowl	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
719	16-0043-00	Moose	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2A, 3,	Cook	Cook
720	16-0048-00	Marsh	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
721	16-0089-00	Northern Light	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
722	16-0096-00	Elbow	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
723	16-0107-00	Merganser	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
724	16-0114-00	Alder	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2A, 3,	Cook	Cook
725	16-0146-00	East Bearskin	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2A, 3,	Cook	Cook
726	16-0147-00	Flour	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2A, 3,	Cook	Cook
727	16-0156-00	Two Island	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
728	16-0157-00	Dick	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
729	16-0175-00	Bower Trout	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
730	16-0196-00	Wampus	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
731	16-0228-00	Bearskin	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2A, 3,	Cook	Cook
732	16-0250-00	Mark	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
733	16-0251-00	Turtle	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
734	16-0252-00	Pike	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
735	16-0253-00	Deer Yard	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook

	A	B	C	D	E	F	G	H	I	J
736	16-0256-00	Swamp	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
737	16-0328-00	Iron	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Cook	Cook
738	16-0331-00	North	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Cook	Cook
739	16-0344-00	Bigsby	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
740	16-0355-00	Little Iron	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Cook	Cook
741	16-0358-00	Barker	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
742	16-0360-00	Caribou	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
743	16-0366-00	Holly	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
744	16-0368-00	Mistletoe	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
745	16-0369-00	White Pine	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
746	16-0370-00	Strobus	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
747	16-0373-00	Christine	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
748	16-0380-00	Gust	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
749	16-0384-00	Tait	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
750	16-0386-00	East Pipe	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
751	16-0390-00	Grassy	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
752	16-0405-00	Star	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
753	16-0409-00	Vern	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook

	A	B	C	D	E	F	G	H	I	J
754	16-0416-00	Unnamed	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Cook	Cook
755	16-0417-00	Tucker	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Cook	Cook
756	16-0448-00	Loon	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Cook	Cook
757	16-0453-00	Rice	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
758	16-0476-00	Kelly	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
759	16-0478-00	Peterson	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
760	16-0486-00	Baker	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
761	16-0488-00	Marsh	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
762	16-0489-00	Moore	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
763	16-0521-00	Jack	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
764	16-0544-00	Rib	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Cook	Cook
765	16-0569-00	Gordon	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Cook	Cook
766	16-0639-00	Four Mile	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
767	16-0643-00	Richey	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
768	16-0645-00	Toohey	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
769	16-0664-00	Wonder	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
770	16-0706-00	Kelso	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bd, 3	Cook	Cook
771	16-0741-00	Fente	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Cook	Cook

	A	B	C	D	E	F	G	H	I	J
772	16-0804-00	North Wigwam	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook; Lake
773	16-0807-00	Knight	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Cook	Cook; Lake
774	16-0808-00	Phoebe	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Cook	Cook; Lake
775	16-0901-00	Swamp River Reservoir	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
776	16-0914-00	Mt Maud Wetland	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Cook	Cook
777	18-0001-00	Whitefish	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
778	18-0008-00	Twenty Two	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing
779	18-0009-00	Erskine	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing
780	18-0011-00	Bass	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing
781	18-0014-00	Bulldog	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing
782	18-0016-00	Rock	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing
783	18-0018-00	Camp	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
784	18-0020-00	Borden	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
785	18-0023-00	Jack Pine	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
786	18-0024-00	Williams	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
787	18-0026-00	Bassett	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
788	18-0028-00	Smith	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
789	18-0029-00	Holt	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
790	18-0031-00	Long	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
791	18-0032-00	Round	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
792	18-0033-00	Scott	Lake	Rum River	07010207	Mississippi River - Brainerd, Rum	07010104,	2B, 3, 4A,	Crow Wing	Crow Wing
793	18-0034-00	Bay	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
794	18-0038-00	Clearwater	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
795	18-0039-00	Coffee	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
796	18-0045-00	Maple	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
797	18-0049-00	Wilson	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
798	18-0052-00	Island	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
799	18-0053-00	Rice	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
800	18-0055-00	Unnamed	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
801	18-0067-00	Reno	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
802	18-0068-00	Rice	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
803	18-0082-00	Rushmeyer	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
804	18-0088-00	Platte	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing
805	18-0091-00	Olander	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
806	18-0093-01	Rabbit (East Portion)	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
807	18-0094-00	Mud	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
808	18-0096-00	Upper South Long	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
809	18-0101-00	Happy	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
810	18-0104-00	Nokay	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
811	18-0105-00	Pointon	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
812	18-0106-00	Twin Island	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
813	18-0107-00	Dog	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
814	18-0110-00	Grave	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
815	18-0111-00	Loon	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
816	18-0112-00	Wolf	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
817	18-0120-00	Hay	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
818	18-0121-00	Rice	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
819	18-0126-01	East Mahnomen	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
820	18-0126-02	Middle Mahnomen	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
821	18-0127-00	Cole	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
822	18-0136-00	South Long	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
823	18-0137-00	Mud	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
824	18-0139-00	Little Rabbit	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
825	18-0140-00	Black Bear	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
826	18-0147-00	Round	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
827	18-0148-02	East Twin	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
828	18-0152-00	Buffalo	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
829	18-0154-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
830	18-0155-00	Crow Wing	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
831	18-0161-00	Sebie	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
832	18-0162-00	Terry	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
833	18-0164-00	Nelson	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
834	18-0170-00	Upper Dean	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
835	18-0171-00	Olson	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
836	18-0172-00	Thompson	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
837	18-0175-00	Birchdale	Wetland	Pine River	07010105	Pine River	07010105	2D, 3, 4A,	Crow Wing	Crow Wing
838	18-0176-00	Little Pine	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
839	18-0178-00	Duck	Wetland	Pine River	07010105	Pine River	07010105	2D, 3, 4A,	Crow Wing	Crow Wing
840	18-0179-00	Caraway	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
841	18-0180-00	Lows	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
842	18-0181-00	Lower Dean	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
843	18-0182-00	Deer	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
844	18-0184-00	Rogers	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
845	18-0187-00	Rice Bed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
846	18-0188-00	Deadman's	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
847	18-0198-00	Mud	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
848	18-0201-00	Unnamed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
849	18-0202-00	Eastham	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
850	18-0203-00	Emily	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
851	18-0204-00	Dahler	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
852	18-0212-00	Ruth	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
853	18-0223-00	Goggle	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
854	18-0226-00	Goodrich	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
855	18-0228-00	Unnamed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
856	18-0229-00	Bass	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
857	18-0230-00	Grass	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
858	18-0231-00	Butterfield	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
859	18-0233-00	Green	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
860	18-0237-00	Faupel	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
861	18-0238-00	Half Moon	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
862	18-0242-00	Upper Mission	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
863	18-0243-00	Lower Mission	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
864	18-0247-00	Flanders	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
865	18-0259-00	Bonnie	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
866	18-0261-00	Pine	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
867	18-0266-00	Little Pine	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
868	18-0275-00	Lily Pad	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
869	18-0284-00	Velvet	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
870	18-0285-00	Big Bird	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
871	18-0287-00	Greer	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
872	18-0294-00	Mitchell	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
873	18-0296-01	Eagle (Main Bay)	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
874	18-0296-02	Eagle (West Bay)	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
875	18-0296-03	Eagle (East Bay)	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
876	18-0304-00	Perch	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
877	18-0308-00	Pelican	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
878	18-0310-00	Whitefish	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
879	18-0311-00	Rush	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
880	18-0312-01	Cross Lake Reservoir (Main Basin)	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
881	18-0312-02	Cross Lake Reservoir (Southeast Bay)	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
882	18-0312-03	Cross Lake Reservoir (Unnamed Bay)	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
883	18-0314-00	Duck	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
884	18-0315-00	Big Trout	Lake	Pine River	07010105	Pine River	07010105	1B, 2A, 3,	Crow Wing	Crow Wing
885	18-0316-00	Rice	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
886	18-0317-00	Horseshoe	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
887	18-0318-00	Tamarack	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
888	18-0320-01	GILBERT (EAST BAY)	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
889	18-0320-02	GILBERT (WEST BAY)	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
890	18-0320-03	Gilbert (South Bay)	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
891	18-0326-00	Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
892	18-0327-00	Rice	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
893	18-0328-00	Johnson	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
894	18-0329-00	Garden	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
895	18-0334-00	Mallard	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
896	18-0335-00	Mollie	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
897	18-0338-00	Gladstone	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
898	18-0351-00	Little Pelican	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
899	18-0352-00	Ossawinnamake e	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
900	18-0359-00	Star	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
901	18-0362-00	Grass	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
902	18-0366-00	Arrowhead	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
903	18-0367-00	Stewart	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
904	18-0372-00	North Long	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
905	18-0373-00	Round	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
906	18-0374-00	Clark	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
907	18-0375-00	Hubert	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
908	18-0376-00	Upper Cullen	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
909	18-0377-00	Middle Cullen	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
910	18-0378-00	Lower Hay	Lake	Pine River	07010105	Pine River	07010105	1B, 2A, 3,	Crow Wing	Crow Wing
911	18-0382-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
912	18-0383-00	Island	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
913	18-0386-00	Red Sand	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
914	18-0387-01	Upper Whipple	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
915	18-0387-02	Middle Whipple	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
916	18-0387-03	Lower Whipple	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
917	18-0388-00	Love	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
918	18-0395-00	Carlson	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
919	18-0398-00	Roy	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
920	18-0399-00	Nisswa	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
921	18-0401-00	Hole-in-the-Day	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
922	18-0403-00	Lower Cullen	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
923	18-0404-00	Sibley	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
924	18-0405-00	Rice	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
925	18-0408-00	Mayo	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass; Crow
926	18-0410-00	Rat	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
927	18-0412-00	Upper Hay	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
928	18-0413-00	Unnamed	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
929	18-0414-00	Clough	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
930	18-0415-00	Jail	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
931	18-0416-00	Lizzie	Lake	Pine River	07010105	Pine River	07010105	2B, 3, 4A,	Crow Wing	Crow Wing
932	18-0422-00	Unnamed	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
933	18-0424-00	Unnamed	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Crow Wing	Crow Wing
934	18-0444-00	Hay	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
935	18-0446-00	Sewells Pond	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
936	18-0485-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
937	18-0504-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
938	18-0510-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
939	18-0543-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
940	18-0544-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
941	18-0550-00	Unnamed	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Crow Wing	Crow Wing
942	18-0556-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Crow Wing	Crow Wing
943	19-0020-00	Chub	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Dakota	Dakota
944	19-0059-00	Blackhawk	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Dakota	Dakota
945	21-0034-00	Mill Pond	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
946	21-0041-00	Union	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
947	21-0055-00	Jessie	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
948	21-0057-00	Carlos	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
949	21-0058-00	Hidden	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
950	21-0075-00	Unnamed	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas

	A	B	C	D	E	F	G	H	I	J
951	21-0076-00	Irene	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
952	21-0083-00	Miltona	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
953	21-0092-00	Mary	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
954	21-0094-00	Louise	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
955	21-0095-00	North Union	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
956	21-0101-00	Stony	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
957	21-0102-00	Brophy	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
958	21-0105-00	Lottie	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
959	21-0106-01	LATOKA (NORTH BAY)	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
960	21-0106-02	LATOKA (SOUTH BAY)	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
961	21-0108-00	Mina	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
962	21-0123-00	Ida	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
963	21-0136-00	Indian	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Douglas	Douglas
964	21-0162-00	Freeborn	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Douglas	Douglas
965	21-0212-00	Little Chippewa	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Douglas	Douglas
966	21-0236-00	Mud	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Douglas	Douglas
967	21-0264-00	Stowe	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Douglas	Douglas
968	21-0343-00	Long	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Douglas	Douglas

	A	B	C	D	E	F	G	H	I	J
969	21-0353-00	Anka	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Douglas	Douglas
970	21-0355-00	Ina	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Douglas	Douglas
971	21-0375-00	Christina	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Douglas	Douglas; G
972	21-0416-00	Mork Pond	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Douglas	Douglas
973	22-0007-00	Rice	Lake	Blue Earth River	07020009	Blue Earth River	07020009	2B, 3, 4A,	Faribault	Faribault
974	22-0033-00	Minnesota	Lake	Le Sueur River	07020011	Le Sueur River	07020011	2B, 3, 4A,	Faribault	Faribault; E
975	22-0075-00	Rice	Lake	Le Sueur River	07020011	Le Sueur River	07020011	2B, 3, 4A,	Faribault	Faribault
976	24-0027-00	Lower Twin	Lake	Shell Rock River	07080202	Shell Rock River	07080202	2B, 3, 4A,	Freeborn	Freeborn
977	24-0028-00	Bear	Lake	Winnebago River	07080203	Winnebago River	07080203	2B, 3, 4A,	Freeborn	Freeborn
978	24-0045-00	Spicer	Lake	Le Sueur River	07020011	Le Sueur River	07020011	2B, 3, 4A,	Freeborn	Freeborn
979	24-0049-00	Trenton	Lake	Le Sueur River	07020011	Le Sueur River	07020011	2B, 3, 4A,	Freeborn	Freeborn; V
980	25-0016-00	Larson	Lake	Mississippi River - Lake Pepin	07040001	Mississippi River - Lake Pepin	07040001	2B, 3, 4A,	Goodhue	Goodhue
981	25-0017-01	Sturgeon	Lake	Mississippi River - Lake Pepin	07040001	Mississippi River - Lake Pepin	07040001	2B, 3, 4A,	Goodhue	Goodhue
982	25-0017-02	Nelson	Lake	Mississippi River - Lake Pepin	07040001	Mississippi River - Lake Pepin	07040001	2B, 3, 4A,	Goodhue	Goodhue
983	26-0002-00	Pelican	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Grant	Grant; Dou
984	26-0040-00	Elk	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Grant	Grant
985	27-0080-00	Grass	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Hennepin	Hennepin
986	27-0116-01	Rice Main Lake	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Hennepin	Hennepin

	A	B	C	D	E	F	G	H	I	J
987	27-0116-02	Rice - West Bay	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Hennepin	Hennepin
988	27-0116-03	Rice - South Marsh	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Hennepin	Hennepin
989	27-0116-04	Rice - Outlet Bay	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Hennepin	Hennepin
990	27-0132-00	Rice	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Carver	Carver; He
991	27-0135-00	Grass	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Hennepin	Hennepin
992	27-0179-01	North Little Long	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Hennepin	Hennepin
993	27-0179-02	South Little Long	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Hennepin	Hennepin
994	28-0005-01	Lawrence	Lake	Mississippi River - Reno	07060001	Mississippi River - Reno	07060001	2B, 3, 4A,	Houston	Houston
995	28-0005-02	Target	Lake	Mississippi River - La Crescent	07040006	Mississippi River - La Crescent,	07040006,	2B, 3, 4A,	Houston	Houston
996	28-0005-03	Blue	Lake	Mississippi River - La Crescent	07040006	Mississippi River - La Crescent	07040006	2B, 3, 4A,	Houston	Houston
997	29-0005-00	Tripp	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
998	29-0006-00	Oelschlager Slough	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
999	29-0019-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1000	29-0020-00	Loon	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1001	29-0021-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1002	29-0025-00	Ninth Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1003	29-0034-00	Upper Bass	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1004	29-0036-01	Eleventh Crow Wing (Main)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard

	A	B	C	D	E	F	G	H	I	J
1005	29-0036-02	Eleventh Crow Wing (East)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1006	29-0043-00	Shingobee	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1007	29-0045-00	Tenth Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1008	29-0054-00	Spring	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1009	29-0057-00	Unnamed	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1010	29-0059-00	Horseshoe	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1011	29-0060-00	Oak	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1012	29-0061-00	Garfield	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1013	29-0063-00	Hart	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1014	29-0065-00	Mud	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1015	29-0066-00	Midge	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1016	29-0072-00	Eighth Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1017	29-0075-00	Kabekona	Lake	Leech Lake River	07010102	Leech Lake River	07010102	1B, 2A, 3,	Hubbard	Hubbard
1018	29-0077-00	Third Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1019	29-0078-00	Fourth Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1020	29-0079-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1021	29-0080-00	Little Stony	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1022	29-0082-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard

	A	B	C	D	E	F	G	H	I	J
1023	29-0084-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1024	29-0085-00	Second Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1025	29-0086-00	First Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1026	29-0088-00	Island	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1027	29-0089-00	Shallow	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1028	29-0090-00	Deer	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1029	29-0091-00	Seventh Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1030	29-0092-00	Fifth Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1031	29-0093-00	Sixth Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1032	29-0094-00	Tamarack	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1033	29-0095-00	Holland-Lucy	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1034	29-0097-00	Clausens	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1035	29-0098-00	Waboose	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1036	29-0099-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1037	29-0114-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1038	29-0115-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1039	29-0116-00	Crow Wing	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1040	29-0117-01	SPIDER (NE/SW BAY)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard

	A	B	C	D	E	F	G	H	I	J
1041	29-0117-02	SPIDER (EAST BAY)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1042	29-0118-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1043	29-0119-00	Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1044	29-0123-00	2nd Little Gulch	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1045	29-0132-00	Bass	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1046	29-0142-00	Duck	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard; W
1047	29-0144-00	Sunday	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1048	29-0146-00	Belle Taine	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1049	29-0148-00	Upper Bottle	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1050	29-0150-00	Little Sand	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1051	29-0151-01	MANTRAP (EAST BASIN)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1052	29-0151-02	Mantrap (Middle Basin	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1053	29-0151-03	MANTRAP (MIRROR BAY)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1054	29-0151-04	MANTRAP (WEST ARM)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1055	29-0151-05	MANTRAP (HOME BAY)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1056	29-0156-00	Plantagenet	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard; B
1057	29-0157-00	Upper Twin	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard; W
1058	29-0158-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard

	A	B	C	D	E	F	G	H	I	J
1059	29-0177-00	Rice	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1060	29-0179-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1061	29-0180-00	Lower Bottle	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1062	29-0183-00	Little Rice	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1063	29-0185-00	Big Sand	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1064	29-0186-00	Emma	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1065	29-0197-00	Pine	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1066	29-0215-00	Schoolcraft	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1067	29-0216-00	George	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1068	29-0217-00	Paine	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1069	29-0220-00	Halverson	Lake	Leech Lake River	07010102	Leech Lake River	07010102	2B, 3, 4A,	Hubbard	Hubbard
1070	29-0227-00	Evergreen	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1071	29-0231-00	Twenty	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1072	29-0241-00	Frontenac	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1073	29-0242-00	Fish Hook	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1074	29-0243-00	Potato	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1075	29-0249-00	Hinds	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1076	29-0250-00	Portage	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard

	A	B	C	D	E	F	G	H	I	J
1077	29-0254-00	Island	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1078	29-0256-00	Eagle	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1079	29-0257-00	Many Arm	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1080	29-0263-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1081	29-0265-00	Beden	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1082	29-0267-00	Lower Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1083	29-0284-00	Upper Mud	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1084	29-0286-00	Alice	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1085	29-0289-00	Mary	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard; C
1086	29-0292-00	Beauty	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1087	29-0293-00	Twin	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1088	29-0300-00	Hattie	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Hubbard	Hubbard
1089	29-0554-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1090	29-0608-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard
1091	30-0004-00	Twin	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Isanti	Isanti
1092	30-0009-00	Typo	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Anoka	Anoka; Isa
1093	30-0017-00	Grass	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Chisago	Chisago; Is
1094	30-0018-00	Rice	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Isanti	Isanti

	A	B	C	D	E	F	G	H	I	J
1095	30-0020-00	Krans	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti; Chis
1096	30-0023-00	Linderman	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Chisago	Chisago; Is
1097	30-0026-00	Athens WMA	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1098	30-0044-00	Little Stanchfield	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1099	30-0046-00	Twin	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1100	30-0056-00	Long	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1101	30-0057-00	Upper Rice	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Isanti	Isanti
1102	30-0060-00	Section	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1103	30-0063-00	Unnamed	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1104	30-0065-00	Mud	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1105	30-0070-00	Marget	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1106	30-0083-00	Elizabeth	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1107	30-0094-00	Olson Impoundment	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1108	30-0100-00	German	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1109	30-0106-00	Mud	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1110	30-0116-00	Unnamed	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1111	30-0117-00	Mud	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1112	30-0138-00	South Stanchfield	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti

	A	B	C	D	E	F	G	H	I	J
1113	30-0140-00	Krone	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1114	30-0141-00	Matson	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1115	30-0142-00	Grass	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1116	30-0143-00	North Stanchfield	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti
1117	30-0144-00	Lindgren	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Isanti	Isanti; Kan
1118	30-0267-00	Mimi's Pond	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Isanti	Isanti
1119	31-0032-01	O'Brien (north portion)	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1120	31-0032-02	O'Brien (south portion)	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1121	31-0037-00	Hay	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1122	31-0053-00	Prairie	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1123	31-0066-00	Unnamed	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1124	31-0067-03	Swan Lake Southwest Bay	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1125	31-0074-00	Reed	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1126	31-0094-00	Unnamed	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1127	31-0096-00	Lammon Aid	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1128	31-0106-00	Ox Hide	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1129	31-0121-00	Moose	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1130	31-0122-00	Third Sucker	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1131	31-0124-00	Big Sucker	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1132	31-0142-00	Unnamed	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1133	31-0144-00	Grass	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1134	31-0152-00	Wolf	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1135	31-0154-00	Hartley	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1136	31-0157-00	Bear	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1137	31-0174-00	Herrigan	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1138	31-0179-00	Trible	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1139	31-0190-00	North Twin	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1140	31-0193-00	Crooked	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1141	31-0198-00	Little Cowhorn	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1142	31-0201-00	Rice	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1143	31-0203-00	Crooked	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1144	31-0204-00	Unnamed	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1145	31-0206-00	Mud	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1146	31-0210-00	Blackberry	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1147	31-0216-00	Trout	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	1B, 2A, 3,	Itasca	Itasca
1148	31-0229-00	Unnamed	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1149	31-0231-00	Lawrence	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1150	31-0242-00	Moose	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1151	31-0265-00	Bluebill	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1152	31-0266-01	Long (Main Bay)	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1153	31-0267-00	Gunny Sack	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1154	31-0271-00	Marble	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1155	31-0272-00	Buckman	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1156	31-0276-00	Someman	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1157	31-0288-00	Unnamed	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1158	31-0289-00	Lost	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1159	31-0291-00	Kelly	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1160	31-0294-00	Crescent	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1161	31-0298-00	Walters	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1162	31-0301-00	Otter	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1163	31-0303-00	O'Donnell	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1164	31-0305-00	Ann	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1165	31-0315-00	Rice	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1166	31-0317-00	Larson	Lake	Big Fork River	09030006	Big Fork River	09030006	1B, 2A, 3,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1167	31-0320-00	Wilson	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1168	31-0322-00	Unnamed	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1169	31-0334-00	Deer	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1170	31-0337-00	Unnamed	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1171	31-0340-00	Buck	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1172	31-0341-00	Little Split Hand	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1173	31-0347-00	Spruce	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1174	31-0360-00	Munzer	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1175	31-0377-00	Nagel	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1176	31-0384-01	Lower Prairie	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1177	31-0384-02	Prairie (main bay)	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1178	31-0384-03	Upper Prairie	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1179	31-0392-00	Wabana	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	1B, 2A, 3,	Itasca	Itasca
1180	31-0394-00	Little Trout	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	1B, 2A, 3,	Itasca	Itasca
1181	31-0395-00	Bluewater	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	1B, 2A, 3,	Itasca	Itasca
1182	31-0402-00	Clearwater	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1183	31-0403-00	Bosley	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1184	31-0410-00	Trout	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	1B, 2A, 3,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1185	31-0413-00	Burrows	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1186	31-0422-00	Ruby	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1187	31-0450-00	Hunters	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1188	31-0507-00	Marie	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1189	31-0519-00	Unnamed	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1190	31-0527-00	Grass	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1191	31-0532-01	POKEGAMA (MAIN BAY)	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	1B, 2A, 3,	Itasca	Itasca
1192	31-0532-02	POKEGAMA (WENDIGO)	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	1B, 2A, 3,	Itasca	Itasca
1193	31-0534-00	Shoal	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1194	31-0539-00	Copenhagen	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1195	31-0540-00	Clubhouse	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1196	31-0544-00	Cameron	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1197	31-0547-00	Smith	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1198	31-0561-00	Blackwater	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1199	31-0565-00	Jay Gould	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1200	31-0570-00	Long	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1201	31-0576-00	Bass	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1202	31-0594-00	Cottonwood	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1203	31-0609-00	Fawn	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1204	31-0610-00	Little Moose	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1205	31-0622-00	Dead Horse	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1206	31-0624-01	North Grave	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1207	31-0624-02	South Grave	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1208	31-0634-00	Irma	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1209	31-0637-00	Day	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1210	31-0663-00	Forest	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1211	31-0690-00	Aspen	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1212	31-0692-00	Lauchoh	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1213	31-0704-00	Batson	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1214	31-0707-00	Rice	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1215	31-0708-00	Logging Slough	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1216	31-0716-00	Little Rice	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1217	31-0717-00	Rice	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1218	31-0718-00	Stevens	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1219	31-0726-00	Bello	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1220	31-0727-00	Grass	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1221	31-0740-00	Little White Oak	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1222	31-0741-00	Little Drum	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1223	31-0750-00	Mud	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1224	31-0754-00	Island	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1225	31-0758-00	Little Bowstring	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1226	31-0775-00	No-ta-she-bun	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca; Cas
1227	31-0776-00	White Oak	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca; Cas
1228	31-0777-00	Round	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1229	31-0786-00	Jessie	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1230	31-0795-00	South Ackerman	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1231	31-0797-00	Little Spring	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1232	31-0798-00	East	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1233	31-0813-00	Bowstring	Lake	Big Fork River	09030006	Mississippi River - Headwaters, Big	07010101,	2B, 3, 4A,	Itasca	Itasca
1234	31-0815-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1235	31-0817-00	Egg	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1236	31-0818-00	First River	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1237	31-0821-00	Tuttle	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1238	31-0822-00	Little Ball Club	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1239	31-0826-00	Sand	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1240	31-0828-00	Stone Axe	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1241	31-0834-00	Bird's Eye	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1242	31-0840-00	Helen	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1243	31-0843-00	Whitefish	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1244	31-0852-00	Little Cut Foot Sioux	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1245	31-0853-00	Little Sand	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1246	31-0857-01	Cut Foot Sioux(Main Bay)	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1247	31-0857-02	Cut Foot Sioux(East Bay)	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1248	31-0857-03	Deer	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1249	31-0859-00	Wart	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1250	31-0860-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1251	31-0861-00	Mosomo	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1252	31-0867-00	Simpson	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1253	31-0869-00	Dry Creek	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1254	31-0876-00	Rice	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1255	31-0877-00	Natures	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1256	31-0878-00	Irene	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1257	31-0882-00	Dora	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1258	31-0883-00	Coddington	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1259	31-0884-00	Big Calf	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1260	31-0892-00	Middle Pigeon	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1261	31-0893-00	Lower Pigeon	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1262	31-0894-00	Pigeon Dam	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1263	31-0900-00	Lost	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1264	31-0901-00	Wilderness	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1265	31-0902-00	Farley	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1266	31-0904-00	Dunbar	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1267	31-0907-00	Sioux	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1268	31-0908-00	Upper Pigeon	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1269	31-0910-00	Shallow Pond	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1270	31-0911-00	Hamrey	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1271	31-0912-00	Wagner	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1272	31-0918-00	Fiske	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1273	31-0919-00	Bluerock	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1274	31-0921-00	Dixon	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1275	31-0923-00	Rabbits	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1276	31-0925-00	Raven	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1277	31-0926-00	Sugar	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1278	31-0928-00	Kenogama	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1279	31-0929-00	Morph	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1280	31-0934-00	Decker	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1281	31-0936-00	Little Dixon	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1282	31-0937-00	Marie	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1283	31-0939-00	Skimerhorn	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca
1284	31-0942-00	Rice	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca; Belt
1285	31-0943-00	Coleman	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca; Belt
1286	31-0944-00	Damon	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca; Belt
1287	31-0961-00	Unnamed	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Itasca	Itasca
1288	31-0991-00	Pothole	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	Itasca	Itasca
1289	31-0992-00	Dishpan	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1290	31-1209-00	Unnamed	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1291	31-1210-00	Unnamed	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Itasca	Itasca
1292	31-1223-00	Unnamed	Lake	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2B, 3, 4A,	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
1293	33-0001-00	Eleven	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Kanabec	Kanabec
1294	33-0008-00	White Lily	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Kanabec	Kanabec
1295	33-0009-00	Pomroy	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1296	33-0011-00	Rice	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Isanti	Isanti; Kan
1297	33-0012-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1298	33-0013-00	Grass	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1299	33-0014-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1300	33-0015-00	Quamba	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1301	33-0018-00	Sells	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1302	33-0019-00	Twin or East	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1303	33-0028-00	Knife	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1304	33-0029-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1305	33-0030-00	Pennington	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1306	33-0031-00	Erickson	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1307	33-0033-00	Devils	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1308	33-0035-00	Kent	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1309	33-0036-00	Fish	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1310	33-0040-00	Ann	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec

	A	B	C	D	E	F	G	H	I	J
1311	33-0072-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1312	33-0111-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec
1313	34-0022-02	Elizabeth (Main Lake)	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Kandiyohi	Kandiyohi
1314	34-0044-00	Diamond	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1315	34-0062-00	Calhoun	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1316	34-0072-00	Lillian	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Kandiyohi	Kandiyohi
1317	34-0079-00	Green	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1318	34-0119-00	Elkhorn	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1319	34-0143-00	Unnamed	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1320	34-0146-00	Eight	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1321	34-0148-00	Bear	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1322	34-0150-01	Holstad	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1323	34-0154-00	Nest	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1324	34-0158-01	Lake Monongalia -	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1325	34-0158-02	Lake Monongalia - Middle Fork	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1326	34-0158-03	Crow River Mill Pond (East)	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1327	34-0158-04	Crow River Mill Pond(Middle)	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1328	34-0158-05	Crow River Mill Pond (West)	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi

	A	B	C	D	E	F	G	H	I	J
1329	34-0169-01	Wakanda, Lake (Far East)	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Kandiyohi	Kandiyohi
1330	34-0169-02	Wakanda, Lake (East Bay)	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Kandiyohi	Kandiyohi
1331	34-0169-03	Wakanda, Lake (Main Basin	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Kandiyohi	Kandiyohi
1332	34-0169-04	Wakanda, Lake (West Bay)	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Kandiyohi	Kandiyohi
1333	34-0169-05	Wakanda, Lake (Far West)	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Kandiyohi	Kandiyohi
1334	34-0172-00	Ringo	Lake	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2B, 3, 4A,	Kandiyohi	Kandiyohi
1335	34-0181-00	Foot	Lake	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2B, 3, 4A,	Kandiyohi	Kandiyohi
1336	34-0206-00	Andrew	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1337	34-0224-00	Games	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1338	34-0236-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1339	34-0246-00	East Solomon	Lake	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2B, 3, 4A,	Kandiyohi	Kandiyohi
1340	34-0251-01	Norway (Northwest)	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1341	34-0251-02	Norway (Southern)	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1342	34-0339-00	Brenner	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1343	34-0342-00	Ole	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1344	34-0344-00	Deer	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1345	34-0345-00	Blaamyhre	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1346	34-0352-00	Glesne	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi

	A	B	C	D	E	F	G	H	I	J
1347	34-0353-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1348	34-0357-00	Crook	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi;
1349	34-0391-00	Unnamed	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1350	34-0611-00	Unnamed	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Kandiyohi	Kandiyohi
1351	34-0652-00	Andrea	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Kandiyohi	Kandiyohi
1352	35-0003-00	Bronson	Lake	Two Rivers	09020312	Two Rivers	09020312	1C, 2Bd, 3	Kittson	Kittson
1353	36-0001-00	Nett	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	Koochichin	Koochichin
1354	36-0006-00	Rat Root	Lake	Rainy River - Rainy Lake	09030003	Rainy River - Rainy Lake	09030003	2B, 3, 4A,	Koochichin	Koochichin
1355	36-0008-00	Moose	Lake	Rainy River - Rainy Lake	09030003	Rainy River - Rainy Lake	09030003	2B, 3, 4A,	Koochichin	Koochichin
1356	36-0009-00	Seretha	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Koochichin	Koochichin
1357	36-0018-00	Bartlett	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Koochichin	Koochichin
1358	36-0019-00	Teufer	Lake	Big Fork River	09030006	Big Fork River	09030006	2B, 3, 4A,	Koochichin	Koochichin
1359	36-0024-00	Battle	Lake	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2B, 3, 4A,	Koochichin	Koochichin
1360	37-0046-01	Lac Qui Parle (SE Bay)	Lake	Minnesota River - Headwaters	07020001	Minnesota River - Headwaters	07020001	2B, 3, 4A,	Chippewa	Chippewa;
1361	37-0046-02	Lac Qui Parle (NW Bay)	Lake	Minnesota River - Headwaters	07020001	Minnesota River - Headwaters	07020001	2B, 3, 4A,	Chippewa	Chippewa;
1362	38-0001-00	South Wigwam	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake; Cook
1363	38-0002-00	Cross River	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake; Cook
1364	38-0004-00	Cook	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake; Cook

	A	B	C	D	E	F	G	H	I	J
1365	38-0014-00	Cramer	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1366	38-0016-00	Kowalski	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1367	38-0024-01	CROOKED (EAST BAY)	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1368	38-0024-02	CROOKED (WEST BAY)	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1369	38-0036-00	Moose	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1370	38-0042-00	Wye	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1371	38-0047-00	Wilson	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1372	38-0048-00	Harriet	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1373	38-0049-00	Wanless	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1374	38-0055-00	Charity	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1375	38-0058-00	Scarp	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Lake	Lake
1376	38-0074-00	Square	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1377	38-0079-00	Watonwan	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1378	38-0080-00	Kawishiwi	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1379	38-0085-00	Bill	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1380	38-0104-00	Polly	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1381	38-0139-00	Roe	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1382	38-0219-00	Silver Island	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake

	A	B	C	D	E	F	G	H	I	J
1383	38-0220-00	Perent	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1384	38-0233-00	Micmac	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1385	38-0246-00	Cramer Homestead	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1386	38-0247-00	Twenty Three	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1387	38-0248-00	Sonju	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2A, 3,	Lake	Lake
1388	38-0251-00	Hoist	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1389	38-0254-00	Unnamed	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1390	38-0260-00	Cabin	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1391	38-0261-00	Bluebill	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1392	38-0264-00	Green Wing	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1393	38-0265-00	Folly	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1394	38-0269-00	Homestead	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1395	38-0270-00	Dumbbell	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1396	38-0271-00	Scott	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1397	38-0285-00	Swamp	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1398	38-0289-00	Island River	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1399	38-0290-00	Comfort	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1400	38-0292-00	Section 29	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake

	A	B	C	D	E	F	G	H	I	J
1401	38-0293-00	Bunny	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1402	38-0393-00	Dumbbell	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1403	38-0395-00	Sylvania	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1404	38-0396-00	Isabella	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1405	38-0406-00	Lax	Lake	Lake Superior - South	04010102	Lake Superior - South	04010102	2B, 3, 4A,	Lake	Lake
1406	38-0417-00	Round Island	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1407	38-0419-00	Crown	Lake	Lake Superior - North	04010101	Lake Superior - North	04010101	2B, 3, 4A,	Lake	Lake
1408	38-0420-00	Osier	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1409	38-0425-00	Tommy	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1410	38-0432-00	Eighteen	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1411	38-0440-00	Memegwesi	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Lake	Lake
1412	38-0441-00	Jack	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1413	38-0445-00	Nine A.M.	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1414	38-0446-00	Sapphire	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1415	38-0455-00	Pose	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1416	38-0458-00	Wager	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1417	38-0459-00	Diana	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1418	38-0465-00	Rice	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake

	A	B	C	D	E	F	G	H	I	J
1419	38-0491-00	Vera	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Lake	Lake
1420	38-0529-00	Snowbank	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Lake	Lake
1421	38-0538-00	Katherine	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1422	38-0539-00	Cloquet	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1423	38-0540-00	Sink	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1424	38-0550-00	Surprise	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1425	38-0552-00	Dragon	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1426	38-0553-00	Hide	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1427	38-0557-00	Grouse	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1428	38-0559-00	Kitigan	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1429	38-0561-00	Mitawan	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1430	38-0567-00	Rat	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1431	38-0568-00	Flat Horn	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1432	38-0573-00	Gegoka	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1433	38-0616-00	Manomin	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1434	38-0619-00	Newfound	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1435	38-0635-00	Grass	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1436	38-0637-00	Bald Eagle	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake

	A	B	C	D	E	F	G	H	I	J
1437	38-0642-00	Wind	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1438	38-0644-00	Moose	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1439	38-0645-00	Basswood	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Lake	Lake
1440	38-0647-00	Clark	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1441	38-0648-00	Langley	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1442	38-0649-00	Legler	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1443	38-0652-00	Driller	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1444	38-0653-00	Phantom	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1445	38-0654-00	Source	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1446	38-0655-00	Railroad	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1447	38-0656-00	Greenwood	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1448	38-0657-00	Fourth McDougal	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1449	38-0658-00	Middle McDougal	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1450	38-0659-00	South McDougal	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1451	38-0660-00	Stony	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1452	38-0664-00	Dunnigan	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1453	38-0666-00	Slate	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1454	38-0668-00	Deep	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake

	A	B	C	D	E	F	G	H	I	J
1455	38-0674-00	East Chub	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1456	38-0675-00	West Chub	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1457	38-0679-00	Campers	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1458	38-0684-00	Little Wampus	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1459	38-0685-00	Wampus	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1460	38-0686-00	North McDougal	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1461	38-0691-00	August	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1462	38-0701-00	Gabbro	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1463	38-0703-00	Little Gabbro	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1464	38-0708-00	Sourdough	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1465	38-0726-00	Good	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1466	38-0727-00	Ella Hall	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1467	38-0728-00	Hula	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1468	38-0729-00	Wood	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1469	38-0735-00	Sand	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1470	38-0736-00	Harris	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1471	38-0739-00	Pea Soup	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1472	38-0742-00	Mud	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake

	A	B	C	D	E	F	G	H	I	J
1473	38-0750-00	Christianson	Lake	Lake Superior - South	04010102	Lake Superior - South	04010102	2B, 3, 4A,	Lake	Lake
1474	38-0755-00	Sullivan	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1475	38-0756-00	Upland	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1476	38-0758-00	Hjalmer	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	Lake	Lake
1477	38-0761-00	Fools	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1478	38-0762-00	Bonga	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1479	38-0766-00	Lobo	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Lake	Lake
1480	38-0767-00	Cougar	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1481	38-0773-00	Denley	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1482	38-0778-00	South Farm	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1483	38-0779-00	Farm	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1C, 2Bd, 3	Lake	Lake
1484	38-0782-00	Garden	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1485	38-0784-00	Newton	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1486	38-0788-00	Muskeg	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake
1487	38-0810-00	Cedar	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1C, 2Bd, 3	Lake	Lake; St. L
1488	38-0811-00	Fall	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake; St. L
1489	38-0817-00	Crooked	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Lake	Lake; St. L
1490	38-0818-00	Papoose	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	Lake	Lake; St. L

	A	B	C	D	E	F	G	H	I	J
1491	38-0842-00	Island River	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake
1492	38-0909-00	Jouppi	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	Lake	Lake
1493	39-0002-01	Lake of the Woods (Main)	Lake	Lake of the Woods	09030009	Lake of the Woods	09030009	1B, 2Bd, 3	Lake of the	Lake of the
1494	39-0002-02	LAKE OF THE WOODS(4 MI BAY)	Lake	Lake of the Woods	09030009	Lake of the Woods	09030009	1B, 2Bd, 3	Lake of the	Lake of the
1495	39-0009-00	North Unit	Lake	Roseau River	09020314	Roseau River	09020314	2B, 3, 4A,	Lake of the	Lake of the
1496	40-0016-00	Rice	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Le Sueur	Le Sueur
1497	40-0037-00	Rice	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Le Sueur	Le Sueur
1498	40-0051-00	Fish	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Le Sueur	Le Sueur
1499	40-0114-01	Rice (North portion)	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Le Sueur	Le Sueur
1500	40-0114-02	Rice (South portion)	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Le Sueur	Le Sueur
1501	41-0045-00	Hawksnest	Lake	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2B, 3, 4A,	Lincoln	Lincoln
1502	41-0062-00	Oak	Lake	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2B, 3, 4A,	Lincoln	Lincoln
1503	41-0067-00	Perch	Lake	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2B, 3, 4A,	Lincoln	Lincoln
1504	41-0082-00	Steep Bank	Lake	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2B, 3, 4A,	Lincoln	Lincoln
1505	41-0109-00	Unnamed	Lake	Lac Qui Parle River	07020003	Lac Qui Parle River	07020003	2B, 3, 4A,	Lincoln	Lincoln; Ye
1506	42-0020-00	Lady Slipper	Lake	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2B, 3, 4A,	Lyon	Lyon
1507	43-0013-00	Grass	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	McLeod	McLeod
1508	43-0020-00	Coon	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	McLeod	McLeod; W

	A	B	C	D	E	F	G	H	I	J
1509	43-0042-00	Rice	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	McLeod	McLeod
1510	43-0168-00	Dagger Slough	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	McLeod	McLeod
1511	44-0001-00	Roy	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Clearwater	Clearwater
1512	44-0002-00	Lone	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1513	44-0003-00	Tulaby	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Becker	Becker; Ma
1514	44-0006-00	Bass	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1515	44-0011-00	Little Elbow	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1516	44-0014-00	South Twin	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1517	44-0024-00	Rice	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1518	44-0047-00	Grass	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1519	44-0054-00	Unnamed	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1520	44-0080-00	McCraney	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1521	44-0108-00	Sargent	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1522	44-0121-00	Snetsinger	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1523	44-0122-00	Wakefield	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1524	44-0169-00	Little Vanose	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1525	44-0572-00	Mahn	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen
1526	44-0573-00	Peabody	Lake	Wild Rice River	09020108	Wild Rice River	09020108	2B, 3, 4A,	Mahnomen	Mahnomen

	A	B	C	D	E	F	G	H	I	J
1527	47-0002-00	Francis	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker; W
1528	47-0015-00	Jennie	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1529	47-0032-00	Spring	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1530	47-0046-00	Washington	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1531	47-0068-00	Stella	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1532	47-0076-00	Darwin	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1533	47-0087-00	Rice	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1534	47-0118-00	Evenson	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Meeker	Meeker
1535	47-0134-01	Ripley (east portion)	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1536	47-0134-02	Ripley (west portion)	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1537	47-0154-00	Thoen	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker
1538	48-0002-00	Mille Lacs	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Aitkin	Aitkin; Crov
1539	48-0007-00	Cranberry	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Mille Lacs	Mille Lacs
1540	48-0009-00	Onamia	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Mille Lacs	Mille Lacs
1541	48-0010-00	Rice	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Mille Lacs	Mille Lacs;
1542	48-0012-00	Shakopee	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Mille Lacs	Mille Lacs
1543	48-0014-00	Ogechie	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Mille Lacs	Mille Lacs
1544	48-0016-00	Bass	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Mille Lacs	Mille Lacs

	A	B	C	D	E	F	G	H	I	J
1545	48-0017-00	Bass	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Mille Lacs	Mille Lacs
1546	48-0018-00	Bass	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Mille Lacs	Mille Lacs
1547	48-0020-00	Dewitt Marsh	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Mille Lacs	Mille Lacs
1548	48-0035-00	Korsness Pool	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Mille Lacs	Mille Lacs
1549	48-0036-00	Ernst Pool	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Mille Lacs	Mille Lacs
1550	48-0043-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Mille Lacs	Mille Lacs
1551	48-0044-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Rum River, Snake River - St.	07010207,	2B, 3, 4A,	Mille Lacs	Mille Lacs
1552	48-0047-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Mille Lacs	Mille Lacs
1553	48-0054-00	Unnamed	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Kanabec	Kanabec; M
1554	48-0074-00	Olson Pool	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Mille Lacs	Mille Lacs
1555	48-0077-00	Rum River State Forest Large Pool	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Mille Lacs	Mille Lacs
1556	48-0078-00	Townhall Pool	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Mille Lacs	Mille Lacs
1557	49-0005-00	Peavy	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1558	49-0006-00	Twelve	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Morrison	Morrison
1559	49-0007-00	Skunk	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1560	49-0014-00	Hannah	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing
1561	49-0015-00	Long	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Crow Wing	Crow Wing
1562	49-0016-00	Sullivan	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison

	A	B	C	D	E	F	G	H	I	J
1563	49-0018-00	Mud	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1564	49-0019-00	Round	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison; C
1565	49-0020-00	Coon	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1566	49-0024-00	Pierz	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1567	49-0025-00	Rice	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1568	49-0026-00	Skunk	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1569	49-0027-00	Mud	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1570	49-0030-00	Pelkey	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1571	49-0033-00	Popple	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison
1572	49-0035-00	Green Prairie Fish	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Morrison	Morrison
1573	49-0036-01	Sylvan (Main Basin)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass; Morr
1574	49-0036-02	Sylvan (North Basin)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass
1575	49-0051-00	Miller	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Morrison	Morrison
1576	49-0072-00	Mud	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1577	49-0079-00	Alexander	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1578	49-0080-00	Placid	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Cass	Cass; Morr
1579	49-0081-00	Pine	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Morrison	Morrison
1580	49-0095-00	Mud	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Morrison	Morrison

	A	B	C	D	E	F	G	H	I	J
1581	49-0101-00	Madaline	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1582	49-0104-00	Longs	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1583	49-0118-00	Stanchfield	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Morrison	Morrison
1584	49-0127-00	Shamineau	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1585	49-0133-00	Crookneck	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1586	49-0135-00	Bernhart	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1587	49-0136-00	Ham	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1588	49-0137-00	Fish Trap	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison
1589	49-0140-00	Cedar	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Morrison	Morrison; T
1590	52-0033-00	Rice	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Nicollet	Nicollet; Sib
1591	52-0034-00	Swan	Lake	Minnesota River - Mankato	07020007	Minnesota River - Mankato	07020007	2B, 3, 4A,	Nicollet	Nicollet
1592	56-0001-00	East Annalaide	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail; T
1593	56-0004-00	South Maple	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1594	56-0006-00	Rice	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1595	56-0013-00	North Maple	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1596	56-0024-00	Unnamed	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1597	56-0043-00	Wing River	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1598	56-0069-00	Bear	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail

	A	B	C	D	E	F	G	H	I	J
1599	56-0094-00	Unnamed	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1600	56-0100-00	Sixteen	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1601	56-0101-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1602	56-0110-00	Snow	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1603	56-0114-00	West Leaf	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1604	56-0115-00	Grass	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1605	56-0116-01	Middle Leaf	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1606	56-0116-02	East Leaf	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1607	56-0126-00	Nitche	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1608	56-0130-00	Big Pine	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1609	56-0132-00	Mud	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1610	56-0138-00	East Battle	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1611	56-0139-00	Gourd	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1612	56-0140-01	Portage (main bay)	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1613	56-0140-02	Mack	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1614	56-0141-00	Rush	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1615	56-0143-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1616	56-0160-00	Spitzer	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail

	A	B	C	D	E	F	G	H	I	J
1617	56-0178-00	Ellingson	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1618	56-0191-01	STUART (MAIN BASIN)	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1619	56-0191-02	Stuart (Little West Bay)	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1620	56-0192-00	Tamarack	Lake	Redeye River	07010107	Redeye River	07010107	2B, 3, 4A,	Otter Tail	Otter Tail
1621	56-0194-00	Emma	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1622	56-0195-00	Beauty Shore	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1623	56-0198-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1624	56-0210-00	Long	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1625	56-0211-00	Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1626	56-0212-00	Boedigheimer	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1627	56-0213-00	Head	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1628	56-0215-00	Mud (McGowan)	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1629	56-0222-00	Mud	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1630	56-0229-00	Murphy	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail; E
1631	56-0239-00	West Battle	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1632	56-0242-00	Otter Tail	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1633	56-0243-00	Marion	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1634	56-0284-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail

	A	B	C	D	E	F	G	H	I	J
1635	56-0293-00	Crane	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1636	56-0298-00	Deer	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1637	56-0306-00	Elbow	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1638	56-0310-00	Walker	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1639	56-0311-00	Davies	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1640	56-0315-00	Brown	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1641	56-0318-00	Bolton	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1642	56-0328-00	Little McDonald	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1643	56-0335-00	Paul	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1644	56-0349-00	North Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1645	56-0352-00	South Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1646	56-0353-00	Gray	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1647	56-0358-00	Scalp	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1648	56-0360-00	Rose	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1649	56-0363-00	Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1650	56-0364-00	Jim	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1651	56-0377-00	South Turtle	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1652	56-0378-01	East Lost (North Bay)	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail

	A	B	C	D	E	F	G	H	I	J
1653	56-0378-02	East Lost (South Bay)	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1654	56-0379-00	North Turtle	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1655	56-0381-01	Amor	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1656	56-0381-02	Mud	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1657	56-0383-00	Dead	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1658	56-0385-00	Star	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1659	56-0387-00	Sybil	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1660	56-0388-00	Long	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1661	56-0433-00	Tamarack	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1662	56-0436-00	Unnamed	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1663	56-0437-00	Stalker	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1664	56-0471-00	Peterson	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1665	56-0472-00	Bray	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1666	56-0481-00	West Lost	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1667	56-0482-00	Sharp	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1668	56-0483-00	Duck	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1669	56-0484-00	Mud	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1670	56-0497-00	Zorns	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail

	A	B	C	D	E	F	G	H	I	J
1671	56-0498-00	Maria	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1672	56-0519-00	West Silent	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1673	56-0523-00	East Loon	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1674	56-0532-01	Trowbridge	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1675	56-0532-02	Leek	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1676	56-0559-00	Clear	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1677	56-0571-00	Fogard	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1678	56-0573-00	East Red River	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1679	56-0613-00	Ten Mile	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1680	56-0620-00	Rose	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1681	56-0695-00	Heilberger	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1682	56-0702-00	Rice	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1683	56-0711-00	Otter Tail River(Red Rive	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1684	56-0717-00	Grass	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1685	56-0723-00	Grass	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1686	56-0724-00	Beers	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1687	56-0727-00	Fladmark	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1688	56-0747-01	North Lida	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail

	A	B	C	D	E	F	G	H	I	J
1689	56-0749-00	Crystal	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1690	56-0760-01	Lizzie (north portion)	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1691	56-0768-00	Fish	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1692	56-0782-00	Hoot	Lake	Otter Tail River	09020103	Otter Tail River	09020103	1C, 2Bd, 3	Otter Tail	Otter Tail
1693	56-0783-00	Wright	Lake	Otter Tail River	09020103	Otter Tail River	09020103	1C, 2Bd, 3	Otter Tail	Otter Tail
1694	56-0784-00	Long	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1695	56-0786-00	Pelican	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1696	56-0876-00	Reed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1697	56-0925-00	Duck	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1698	56-0927-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1699	56-0935-00	Rankle	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Otter Tail	Otter Tail
1700	56-0945-00	Orwell	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1701	56-1031-00	Unnamed	Lake	Buffalo River	09020106	Buffalo River	09020106	2B, 3, 4A,	Otter Tail	Otter Tail
1702	56-1083-00	Unnamed	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Otter Tail	Otter Tail
1703	56-1126-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1704	56-1148-00	Mud	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1705	56-1149-00	Berger	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1706	56-1259-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Otter Tail	Otter Tail

	A	B	C	D	E	F	G	H	I	J
1707	56-1273-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1708	56-1517-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1709	56-1550-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1710	56-1554-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1711	56-1578-00	Unnamed	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1712	56-1627-00	Hoffman	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1713	56-1641-00	Rusch	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1714	56-1787-00	East Wing Pond	Lake	Otter Tail River	09020103	Otter Tail River	09020103	2B, 3, 4A,	Otter Tail	Otter Tail
1715	57-0051-00	Red Lake River Reservoir	Lake	Red Lake River	09020303	Red Lake River, Thief River	09020303,	2B, 3, 4A,	Pennington	Pennington
1716	58-0005-00	Hay Creek Flowage	Lake	Upper St. Croix River	07030001	Upper St. Croix River	07030001	2B, 3, 4A,	Pine	Pine
1717	58-0013-00	Greigs	Lake	Upper St. Croix River	07030001	Upper St. Croix River	07030001	2B, 3, 4A,	Pine	Pine
1718	58-0026-00	Crooked	Lake	Upper St. Croix River	07030001	Upper St. Croix River	07030001	2B, 3, 4A,	Pine	Pine
1719	58-0028-00	Little Tamarack	Lake	Upper St. Croix River	07030001	Upper St. Croix River	07030001	2B, 3, 4A,	Pine	Pine
1720	58-0029-00	Grace	Lake	Upper St. Croix River	07030001	Upper St. Croix River	07030001	2B, 3, 4A,	Pine	Pine
1721	58-0038-00	Net	Lake	Nemadji River	04010301	Nemadji River	04010301	2B, 3, 4A,	Carlton	Carlton; Pi
1722	58-0044-00	Olive	Lake	Upper St. Croix River	07030001	Upper St. Croix River	07030001	2B, 3, 4A,	Pine	Pine
1723	58-0048-00	Oak	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1724	58-0058-00	McCormick	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine

	A	B	C	D	E	F	G	H	I	J
1725	58-0061-00	Unnamed	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1726	58-0066-00	Little North Sturgeon	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1727	58-0067-00	Sturgeon	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1728	58-0071-00	Close	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1729	58-0076-00	Passenger	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1730	58-0078-00	Rush	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1731	58-0081-00	Sand	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Carlton	Carlton; Pi
1732	58-0089-00	Cedar	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1733	58-0102-00	Fox	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1734	58-0106-00	Little Mud	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1735	58-0111-00	Stanton	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1736	58-0125-00	Grass	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Pine	Pine
1737	58-0138-00	Big Pine	Lake	Kettle River	07030003	Kettle River	07030003	2B, 3, 4A,	Aitkin	Aitkin; Pine
1738	58-0142-00	Pokegama	Lake	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2B, 3, 4A,	Pine	Pine
1739	58-0170-00	Unnamed	Lake	Upper St. Croix River	07030001	Upper St. Croix River	07030001	2B, 3, 4A,	Pine	Pine
1740	60-0012-00	Spring	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk
1741	60-0027-01	Cross (North East Bay)	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk
1742	60-0027-02	Cross (Main Basin)	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk

	A	B	C	D	E	F	G	H	I	J
1743	60-0027-03	CROSS (EAST BAY)	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk
1744	60-0192-00	Bee	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk
1745	60-0199-00	Eighteen	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk
1746	60-0217-00	Union	Lake	Red River of the North - Sandhill	09020301	Red River of the North - Sandhill	09020301	2B, 3, 4A,	Polk	Polk
1747	60-0220-00	Unnamed	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk
1748	60-0247-00	Unnamed	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk
1749	60-0721-00	Unnamed	Lake	Clearwater River	09020305	Clearwater River	09020305	2B, 3, 4A,	Polk	Polk
1750	61-0002-00	East Johanna	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope; Kan
1751	61-0007-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1752	61-0023-00	Grove	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Pope	Pope
1753	61-0029-00	Westport	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Pope	Pope
1754	61-0069-00	Rice	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1755	61-0072-00	Gilchrist	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1756	61-0086-00	Rasmuson	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1757	61-0091-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1758	61-0149-00	Signalness	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1759	61-0180-00	Emily	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1760	61-0186-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope

	A	B	C	D	E	F	G	H	I	J
1761	61-0287-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1762	61-0417-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Pope	Pope
1763	62-0074-00	Grass	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Ramsey	Ramsey
1764	65-0002-00	Preston	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Renville	Renville
1765	66-0014-00	Dudley	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1766	66-0015-00	Kelly	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1767	66-0041-00	Weinberger	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1768	66-0046-00	Pooles	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1769	66-0047-00	Hunt	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1770	66-0048-00	Rice	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1771	66-0051-00	Willing	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1772	66-0052-00	Cedar	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1773	66-0054-00	Mud	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1774	66-0063-00	Hatch	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Rice	Rice
1775	66-0103-00	Unnamed	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Rice	Rice
1776	68-0002-00	Marvin	Lake	Roseau River	09020314	Roseau River	09020314	2B, 3, 4A,	Roseau	Roseau
1777	68-0004-00	Hayes	Lake	Roseau River	09020314	Roseau River	09020314	2B, 3, 4A,	Roseau	Roseau
1778	68-0005-00	Pool I	Lake	Roseau River	09020314	Roseau River	09020314	2B, 3, 4A,	Roseau	Roseau

	A	B	C	D	E	F	G	H	I	J
1779	68-0006-00	Pool II	Lake	Roseau River	09020314	Roseau River	09020314	2B, 3, 4A,	Roseau	Roseau
1780	68-0007-00	Pool III	Lake	Roseau River	09020314	Roseau River	09020314	2B, 3, 4A,	Roseau	Roseau
1781	68-0150-00	Bednar	Lake	Lake of the Woods	09030009	Lake of the Woods	09030009	2B, 3, 4A,	Roseau	Roseau
1782	69-0001-00	Pine	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	Lake	Lake; St. L
1783	69-0002-00	Seven Beaver	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis; L
1784	69-0003-00	Birch	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	Lake	Lake; St. L
1785	69-0004-00	White Iron	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1C, 2Bd, 3	Lake	Lake; St. L
1786	69-0008-00	King	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1787	69-0009-00	Kookoosh	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1788	69-0014-00	Ruth	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1789	69-0015-00	Joker	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1790	69-0017-00	Warren	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1791	69-0023-00	Indian	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1792	69-0024-00	Papoose	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1793	69-0027-01	North Stone	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1794	69-0027-02	South Stone	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1795	69-0028-00	Little Stone	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1796	69-0030-00	White	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1797	69-0034-00	Kylen	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1798	69-0035-00	Tommila	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1799	69-0037-00	Breda	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1800	69-0040-00	George	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1801	69-0041-00	Bassett	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1802	69-0044-00	Butterball	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1803	69-0046-00	Stone	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1804	69-0047-00	Black Mallard	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1805	69-0048-00	Round	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1806	69-0054-00	Blueberry	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1807	69-0055-00	Canary	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1808	69-0057-00	Kangas	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1809	69-0061-00	One Pine	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1810	69-0070-00	Low	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1811	69-0079-00	Picket	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1812	69-0080-00	Nels	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1813	69-0082-00	Grassy	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1814	69-0089-00	Bear Trap	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1815	69-0092-00	Gull	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1816	69-0111-00	Smith	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1817	69-0112-00	Bear	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1818	69-0115-00	Bear Island	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1819	69-0117-00	Johnson	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1820	69-0118-00	Burntside	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	St. Louis	St. Louis
1821	69-0123-00	Lieung	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1822	69-0131-00	Alden	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1823	69-0132-00	Barrs	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1824	69-0143-00	Wolf	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1825	69-0147-00	Cranberry	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1826	69-0150-00	Hay	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1827	69-0151-00	Mud	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1828	69-0161-00	Wolf	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1829	69-0163-01	East Twin	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1830	69-0163-02	West Twin	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1831	69-0165-00	Meadow	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1832	69-0174-00	East Twin	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1833	69-0177-00	La Pond	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1834	69-0178-00	Big Rice	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1835	69-0180-00	Little Rice	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1836	69-0190-00	Big	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1C, 2Bd, 3	St. Louis	St. Louis
1837	69-0191-00	Duck	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1838	69-0199-00	Ed Shave	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1839	69-0216-00	Beaver	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1840	69-0232-00	Horseshoe	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1841	69-0238-00	Eagle	Lake	Lake Superior - South	04010102	Lake Superior - South	04010102	2B, 3, 4A,	St. Louis	St. Louis
1842	69-0246-00	Sullivan	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1843	69-0255-00	Horseshoe	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1844	69-0267-00	Comet	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1845	69-0270-00	Fishing	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1846	69-0271-00	Little Birch	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1847	69-0280-00	Gafvert	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1848	69-0281-00	Four Mile	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1849	69-0283-00	Six Mile	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1850	69-0285-03	Eagles Nest #3	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1851	69-0288-00	Five Mile	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1852	69-0371-00	Wild Rice	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1853	69-0372-01	Island Lake Rsvr(W.Basin)	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1854	69-0372-02	Island Lake Rsvr(E.Basin)	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1855	69-0375-00	Whiteface Reservoir	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1856	69-0376-00	Whitewater	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1857	69-0378-01	East Vermilion	Lake	Vermilion River	09030002	Vermilion River	09030002	1C, 2Bd, 3	St. Louis	St. Louis
1858	69-0378-02	West Vermilion	Lake	Vermilion River	09030002	Vermilion River	09030002	1C, 2Bd, 3	St. Louis	St. Louis
1859	69-0378-03	Vermilion - Pike Bay	Lake	Vermilion River	09030002	Vermilion River	09030002	1C, 2Bd, 3	St. Louis	St. Louis
1860	69-0391-00	Mogie	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1861	69-0406-00	Upper Bug	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1862	69-0408-00	Wabuse	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1863	69-0409-00	Washusk #1	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1864	69-0410-00	Washusk #2	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1865	69-0417-00	Hay	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1866	69-0419-00	North Twin	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1867	69-0427-00	Turpela	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1868	69-0434-01	Sabin	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1869	69-0434-02	Wynne	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1870	69-0435-00	Hay	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1871	69-0436-00	Little Mesaba	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1872	69-0439-00	Hay	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1873	69-0441-00	Hay	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1874	69-0442-00	Moose	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1875	69-0452-00	Bootleg	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1876	69-0456-00	Jeanette	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1877	69-0464-00	Lower Pauness	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1878	69-0465-00	Upper Pauness	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1879	69-0489-00	Caribou	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1880	69-0491-01	Fish Lk Flowage(Main Bay)	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1881	69-0491-02	Fish Lk Flowage(East Bay)	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1882	69-0494-00	Mud Hen	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1883	69-0495-00	Long	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1884	69-0496-00	Embarrass	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1885	69-0498-00	Trout	Lake	Vermilion River	09030002	Vermilion River	09030002	1B, 2A, 3,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1886	69-0504-00	Twin	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1887	69-0505-00	Twin	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1888	69-0511-00	Grand	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1889	69-0521-00	Leora	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1890	69-0531-00	Whitchel	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1891	69-0534-00	Dollar	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1892	69-0565-00	Esquagama	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1893	69-0568-01	Cedar Island (N.Portion)	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1894	69-0568-02	Cedar Island (S.Portion)	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1895	69-0571-00	White	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1896	69-0573-00	Fourth	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1897	69-0578-00	Rice	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1898	69-0579-00	Hay	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1899	69-0587-00	Oriniack	Lake	Vermilion River	09030002	Vermilion River	09030002	1B, 2Bd, 3	St. Louis	St. Louis
1900	69-0589-00	Astrid	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1901	69-0594-00	Unnamed	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1902	69-0608-00	Little Vermilion	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bd, 3	St. Louis	St. Louis
1903	69-0612-00	Little Rice	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1904	69-0613-00	Vermilion River	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1905	69-0615-00	Echo	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1906	69-0616-00	Crane	Lake	Vermilion River	09030002	Rainy River - Headwaters,	09030001,	1B, 2A, 3,	St. Louis	St. Louis
1907	69-0617-00	Sand Point	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	St. Louis	St. Louis
1908	69-0618-00	Andy	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1909	69-0619-00	Simian	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1910	69-0623-00	Artichoke	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1911	69-0624-00	Schelins	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1912	69-0627-00	Nichols	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1913	69-0634-00	Unnamed	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1914	69-0637-00	Central	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1915	69-0638-00	East Stone	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1916	69-0640-00	Unnamed	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1917	69-0641-00	Anchor	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1918	69-0642-00	Elliot	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1919	69-0646-00	Murphy	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1920	69-0649-00	Round	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1921	69-0651-00	St. Mary's	Lake	St. Louis River	04010201	St. Louis River	04010201	1C, 2Bd, 3	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1922	69-0652-00	Mud	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1923	69-0653-00	Long	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1924	69-0655-00	Pleasant	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1925	69-0660-00	Ely	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1926	69-0667-00	Gill	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1927	69-0669-00	Big Rice	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1928	69-0679-00	Kabustasa	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1929	69-0684-00	Mukooda	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2A, 3,	St. Louis	St. Louis
1930	69-0686-00	Stone	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1931	69-0688-00	Perch	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1932	69-0694-00	Rainy	Lake	Rainy River - Rainy Lake	09030003	Rainy River - Rainy Lake,	09030003,	1B, 2Bd, 3	Koochichin	Koochichin
1933	69-0695-00	East Twin	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1934	69-0699-00	Side	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1935	69-0729-00	Little Sandy	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1936	69-0730-00	Sandy	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1937	69-0731-00	Auto	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1938	69-0734-00	James	Lake	Little Fork River	09030005	Little Fork River	09030005	1B, 2A, 3,	St. Louis	St. Louis
1939	69-0735-00	Wheel	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1940	69-0736-00	Sand	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1941	69-0737-00	Jamer	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1942	69-0740-00	Black	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1943	69-0741-00	Susan	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1944	69-0742-00	Ban	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1945	69-0744-00	Elbow	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1946	69-0749-00	Myrtle	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1947	69-0755-00	Marion	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1948	69-0764-00	Sunset	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1949	69-0765-00	Long	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1950	69-0766-00	Headquarters	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1951	69-0768-00	Martin	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1952	69-0771-00	Kingberg	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1953	69-0776-00	Grass	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1954	69-0790-00	Dark	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1955	69-0797-00	Watercress	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1956	69-0798-00	Moose	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1957	69-0800-00	Mud	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1958	69-0802-00	Hoodoo	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1959	69-0803-00	Rice	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1960	69-0806-00	Moose	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1961	69-0807-00	South Bog	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1962	69-0810-00	Elephant	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1963	69-0811-00	Bog	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1964	69-0837-00	Beast	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1965	69-0841-00	Pelican	Lake	Vermilion River	09030002	Vermilion River	09030002	1C, 2Bd, 3	St. Louis	St. Louis
1966	69-0842-00	Black Duck	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1967	69-0848-00	Prairie	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	St. Louis	St. Louis
1968	69-0849-00	Hockey	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	St. Louis	St. Louis
1969	69-0850-00	Blackwood	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	St. Louis	St. Louis
1970	69-0854-00	Thirty-Six	Lake	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2B, 3, 4A,	St. Louis	St. Louis
1971	69-0857-01	Longyear (North)	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1972	69-0857-02	Longyear (South)	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1973	69-0860-00	Balkan	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1974	69-0863-00	Swan	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1975	69-0864-00	Ash	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1976	69-0875-00	Leeman	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1977	69-0876-00	Vang	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1978	69-0901-00	Kelly	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1979	69-0913-00	Gansey	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1980	69-0922-00	Rat	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1981	69-0925-00	Shannon	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis
1982	69-0936-00	Locator	Lake	Rainy River - Rainy Lake	09030003	Rainy River - Rainy Lake	09030003	2B, 3, 4A,	St. Louis	St. Louis
1983	69-0939-01	Sturgeon	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis; I
1984	69-0939-02	Middle Sturgeon	Lake	Little Fork River	09030005	Little Fork River	09030005	2B, 3, 4A,	St. Louis	St. Louis; I
1985	69-0988-00	Hush	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1986	69-1291-02	St. Louis Bay	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1987	69-1291-03	Spirit Lake	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1988	69-1291-04	Upper Estuary	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1989	69-1291-05	St Louis River - Upper Estuary Channel	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1990	69-1345-00	Golf Course Pond	Lake	St. Louis River	04010201	St. Louis River	04010201	1B, 2Bd, 3	St. Louis	St. Louis
1991	69-1454-00	Unnamed	Lake	St. Louis River	04010201	St. Louis River	04010201	2B, 3, 4A,	St. Louis	St. Louis
1992	69-1463-00	Pat Zakovec Impoundment	Lake	Vermilion River	09030002	Vermilion River	09030002	2B, 3, 4A,	St. Louis	St. Louis
1993	69-1466-00	Canosia Wma	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
1994	69-1482-00	Trettel Pool	Lake	Cloquet River	04010202	Cloquet River	04010202	2B, 3, 4A,	St. Louis	St. Louis
1995	69-1489-00	Unnamed (Deadman)	Lake	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2B, 3, 4A,	St. Louis	St. Louis
1996	70-0001-00	Rice	Lake	Mississippi River - Lake Pepin	07040001	Mississippi River - Lake Pepin	07040001	2B, 3, 4A,	Dakota	Dakota; Sc
1997	70-0025-00	Rice	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Scott	Scott
1998	70-0060-00	Rice	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Scott	Scott
1999	70-0085-00	Unnamed	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Scott	Scott
2000	70-0087-00	Fisher	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Scott	Scott
2001	70-0088-00	Blue	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Scott	Scott
2002	71-0003-00	Kliever Marsh	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2003	71-0015-00	Rice	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2004	71-0016-00	Fremont	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2005	71-0025-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2006	71-0036-00	Long Pond	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Sherburne	Sherburne
2007	71-0040-00	Sandy	Lake	Rum River	07010207	Rum River	07010207	2B, 3, 4A,	Sherburne	Sherburne
2008	71-0057-00	Birch	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2009	71-0068-00	Josephine	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2010	71-0069-00	Ann	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2011	71-0078-00	Rice	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne

	A	B	C	D	E	F	G	H	I	J
2012	71-0081-00	Mitchell	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2013	71-0084-00	Johnson Slough	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2014	71-0085-00	Big Mud	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2015	71-0109-00	Lundberg Slough	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2016	71-0111-00	Jim	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2017	71-0116-00	Clitty	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2018	71-0118-00	Boyd	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2019	71-0141-00	Elk	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2020	71-0142-00	Rice	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2021	71-0147-00	Rush	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2022	71-0148-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2023	71-0154-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2024	71-0155-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2025	71-0187-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2026	71-0216-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2027	71-0296-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2028	71-0297-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2029	71-0375-00	Upper Roadside Pool	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne

	A	B	C	D	E	F	G	H	I	J
2030	71-0376-00	Lower Roadside Pool	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2031	71-0387-00	East Carpenter Pool	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2032	71-0404-00	Vision Pool	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Sherburne	Sherburne
2033	72-0042-00	Titlow	Lake	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2B, 3, 4A,	Sibley	Sibley
2034	73-0014-00	Marie	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Stearns	Stearns; W
2035	73-0015-00	Otter	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Stearns	Stearns
2036	73-0017-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Stearns	Stearns
2037	73-0020-00	Laura	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Stearns	Stearns
2038	73-0023-00	Beaver	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Stearns	Stearns
2039	73-0037-00	Pearl	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2040	73-0055-00	Grand	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2041	73-0069-00	Swamp	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2042	73-0076-00	Goodners	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2043	73-0077-00	Unnamed	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2044	73-0083-00	Great Northern	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2045	73-0089-00	Zumwalde	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2046	73-0092-00	Sagatagan	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2047	73-0104-00	Island	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns

	A	B	C	D	E	F	G	H	I	J
2048	73-0105-00	Long	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2049	73-0117-00	Big Spunk	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2050	73-0118-00	Pelican	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2051	73-0122-00	Ochotto	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2052	73-0123-00	Lower Spunk	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2053	73-0125-00	Achman	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2054	73-0126-00	Anna	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2055	73-0127-00	Linneman	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2056	73-0128-00	Middle Spunk	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2057	73-0133-01	Cedar Island (Main Bay)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2058	73-0133-02	Cedar Island (Mud Lk)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2059	73-0133-03	Cedar Island (Koetter Lk)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2060	73-0133-04	Cedar Island (East Lk)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2061	73-0133-05	Cedar Island (Little)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2062	73-0139-00	Long	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2063	73-0147-00	North Brown's	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2064	73-0159-00	Big	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2065	73-0160-00	Henry	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns

	A	B	C	D	E	F	G	H	I	J
2066	73-0161-00	Mud	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2067	73-0167-00	Little Rice	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2068	73-0168-00	Big Rice	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell, Sauk	07010201,	2B, 3, 4A,	Stearns	Stearns
2069	73-0180-00	Fifth	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2070	73-0196-00	Rice	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Stearns	Stearns
2071	73-0200-01	Mud	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Stearns	Stearns; M
2072	73-0201-00	Schultz Slough	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Stearns	Stearns
2073	73-0204-00	Gravel	Lake	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2B, 3, 4A,	Stearns	Stearns
2074	73-0226-00	Cedar	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2075	73-0237-00	Henry	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2076	73-0255-00	Cedar	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2077	73-0273-00	McCormic	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2078	73-0274-00	Unnamed	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2079	73-0276-00	South Twin	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns; To
2080	73-0277-00	Unnamed	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Stearns	Stearns
2081	73-0278-00	Tamarack	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Stearns	Stearns
2082	73-0279-00	Crow	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Stearns	Stearns
2083	73-0281-00	Fish	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Stearns	Stearns

	A	B	C	D	E	F	G	H	I	J
2084	73-0285-00	Raymond	Lake	North Fork Crow River	07010204	Sauk River, North Fork Crow	07010202,	2B, 3, 4A,	Stearns	Stearns
2085	73-0294-00	Grass	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Pope	Pope; Stea
2086	73-0343-00	Unnamed	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2087	73-0449-00	Raush Marsh	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns
2088	74-0001-00	Rice	Lake	Zumbro River	07040004	Zumbro River	07040004	2B, 3, 4A,	Steele	Steele; Do
2089	74-0004-01	Oak Glen (Main Bay)	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Steele	Steele
2090	74-0004-02	Oak Glen (East Bay)	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Steele	Steele
2091	75-0013-00	Unnamed	Lake	Pomme de Terre River	07020002	Pomme de Terre River	07020002	2B, 3, 4A,	Stevens	Stevens
2092	76-0038-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Swift	Swift
2093	76-0045-00	Unnamed	Lake	Chippewa River	07020005	Chippewa River	07020005	2B, 3, 4A,	Swift	Swift
2094	77-0004-00	Cass County	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison; T
2095	77-0005-00	West Nelson	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Morrison	Morrison; T
2096	77-0021-00	Twin	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd
2097	77-0023-00	Big Swan	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd
2098	77-0027-00	Long	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd
2099	77-0032-00	Lady	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd
2100	77-0034-00	Little Swan	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd
2101	77-0035-00	Beauty	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd

	A	B	C	D	E	F	G	H	I	J
2102	77-0042-00	Little Pine	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd
2103	77-0046-00	Coal	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2104	77-0050-00	Mill	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2105	77-0054-00	Little Rice	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2106	77-0055-00	Peat	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2107	77-0056-00	Beck	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2108	77-0061-00	Rice	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2109	77-0063-00	Big	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd
2110	77-0066-00	Thunder	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2111	77-0069-00	Long	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2112	77-0070-00	Mud	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2113	77-0073-00	Rogers	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2114	77-0074-00	Little Fishtrap	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2115	77-0075-00	Jaeger	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2116	77-0077-00	Pine Island	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2117	77-0080-00	Hayden	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Todd	Todd
2118	77-0081-00	Stones	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Todd	Todd
2119	77-0083-00	Lawrence	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd

	A	B	C	D	E	F	G	H	I	J
2120	77-0084-01	Big Birch (NE portion)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2121	77-0084-02	Big Birch (S portion)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns; To
2122	77-0087-00	Mud	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2123	77-0088-00	Turtle	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2124	77-0089-00	Little Birch	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Stearns	Stearns; To
2125	77-0120-00	Charlotte	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2126	77-0122-01	Sheets (North)	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2127	77-0122-02	Sheets (Middle)	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2128	77-0122-03	Sheets (South)	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2129	77-0134-00	Little Pine	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2130	77-0139-00	Tucker	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2131	77-0140-00	Unnamed	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2132	77-0143-00	Jacobson	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2133	77-0148-00	Spier	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2134	77-0149-01	LONG (MAIN BASIN)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2135	77-0149-02	LONG (SOUTH BAY)	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2136	77-0154-00	Fairy	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2137	77-0158-00	North Twin	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd

	A	B	C	D	E	F	G	H	I	J
2138	77-0176-00	Unnamed	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2139	77-0178-00	Unnamed	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2140	77-0180-00	William	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2141	77-0197-00	Unnamed	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2142	77-0201-00	Little Osakis	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2143	77-0202-00	Unnamed	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2144	77-0207-00	Pendergast	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Todd	Todd
2145	77-0215-00	Osakis	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Douglas	Douglas; T
2146	77-0235-00	Rice	Lake	Long Prairie River	07010108	Long Prairie River	07010108	2B, 3, 4A,	Todd	Todd
2147	77-0259-00	Unnamed	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2148	77-0357-00	Long	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2149	77-0358-00	Lily	Lake	Sauk River	07010202	Sauk River	07010202	2B, 3, 4A,	Todd	Todd
2150	77-0378-00	Kominek Pond	Lake	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2B, 3, 4A,	Todd	Todd
2151	79-0001-03	Maloney	Lake	Mississippi River - Winona	07040003	Mississippi River - Winona	07040003	2B, 3, 4A,	Wabasha	Wabasha
2152	79-0005-02	Robinson	Lake	Mississippi River - Winona	07040003	Mississippi River - Winona	07040003	2B, 3, 4A,	Wabasha	Wabasha
2153	79-0006-00	McCarthy	Lake	Mississippi River - Winona	07040003	Mississippi River - Winona	07040003	2B, 3, 4A,	Wabasha	Wabasha
2154	79-0012-00	Unnamed	Lake	Mississippi River - Winona	07040003	Mississippi River - Winona	07040003	2B, 3, 4A,	Wabasha	Wabasha
2155	79-0052-00	Unnamed	Lake	Mississippi River - Winona	07040003	Mississippi River - Winona	07040003	2B, 3, 4A,	Wabasha	Wabasha

	A	B	C	D	E	F	G	H	I	J
2156	80-0007-00	Unnamed	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2157	80-0012-00	Granning	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2158	80-0013-00	Strike	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2159	80-0018-00	Burgen	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2160	80-0019-00	Round	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Hubbard	Hubbard; W
2161	80-0022-00	Yaeger	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2162	80-0024-00	Rice	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2163	80-0027-02	Jim Cook (east)	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2164	80-0028-00	Finn	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2165	80-0030-00	Lower Twin	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2166	80-0034-00	Blueberry	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2167	80-0037-00	Stocking	Lake	Crow Wing River	07010106	Crow Wing River	07010106	2B, 3, 4A,	Wadena	Wadena
2168	81-0016-00	Goose	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Waseca	Waseca
2169	81-0022-00	Rice	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Waseca	Waseca
2170	81-0027-00	Everson	Lake	Cannon River	07040002	Cannon River	07040002	2B, 3, 4A,	Waseca	Waseca
2171	81-0067-00	Lily	Lake	Le Sueur River	07020011	Le Sueur River	07020011	2B, 3, 4A,	Waseca	Waseca; L
2172	81-0088-00	Rice	Lake	Le Sueur River	07020011	Le Sueur River	07020011	2B, 3, 4A,	Waseca	Waseca
2173	82-0146-00	Rice	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Washingto	Washingto

	A	B	C	D	E	F	G	H	I	J
2174	82-0168-00	Mud	Lake	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	2B, 3, 4A,	Anoka	Anoka; Wa
2175	82-0333-00	Unnamed	Lake	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2B, 3, 4A,	Washingto	Washingto
2176	86-0002-00	Rice	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2177	86-0019-00	Gonz	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2178	86-0025-00	School	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2179	86-0026-00	Hunters	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2180	86-0031-00	Pelican	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2181	86-0032-00	Rice	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Wright	Wright; Car
2182	86-0034-00	Cedar	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Wright	Wright
2183	86-0049-00	Mary	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2184	86-0064-00	Gilchrist	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2185	86-0097-00	Carrigan	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2186	86-0102-00	Pooles	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2187	86-0112-00	Malardi	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2188	86-0139-02	Little Mary (North Bay)	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2189	86-0152-00	Millstone	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2190	86-0157-00	Maple Unit	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2191	86-0164-00	Rice	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright

	A	B	C	D	E	F	G	H	I	J
2192	86-0180-00	School Section	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2193	86-0182-00	Rock	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2194	86-0183-00	Fish	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2195	86-0185-00	Mallard Pass	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2196	86-0194-00	Long	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2197	86-0197-00	Maple	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Wright	Wright
2198	86-0198-00	Butler	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	Wright	Wright
2199	86-0200-00	Spring	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2200	86-0204-00	Taylor	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2201	86-0209-00	Willima	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2202	86-0212-00	Albion	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2203	86-0213-00	Henshaw	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2204	86-0214-00	White	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2205	86-0219-00	Mud	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2206	86-0223-00	Indian	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2207	86-0224-00	Sandy	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2208	86-0229-00	Mink	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2209	86-0231-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright

	A	B	C	D	E	F	G	H	I	J
2210	86-0233-00	Sugar	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2211	86-0238-00	Nixon	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2212	86-0243-00	Grass	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2213	86-0244-00	Unnamed	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2214	86-0246-00	Long	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Wright	Wright
2215	86-0250-00	Smith	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2216	86-0252-01	Clearwater (East)	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Stearns	Stearns; W
2217	86-0252-02	Clearwater (West)	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Stearns	Stearns; W
2218	86-0253-00	Butternut	Lake	South Fork Crow River	07010205	South Fork Crow River	07010205	2B, 3, 4A,	McLeod	McLeod; W
2219	86-0255-00	Shakopee	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright; Mcl
2220	86-0257-00	Grass	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2221	86-0258-00	Unnamed	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2222	86-0279-00	West Lake Sylvia	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Wright	Wright
2223	86-0282-00	Louisa	Lake	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2B, 3, 4A,	Stearns	Stearns; W
2224	86-0296-00	Beaver Dam	Lake	North Fork Crow River	07010204	North Fork Crow River	07010204	2B, 3, 4A,	Meeker	Meeker; W
2225	04010101-501	Pigeon River	Stream	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bdg,	Cook	Cook
2226	04010101-502	Brule River	Stream	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Ag, 3	Cook	Cook
2227	04010101-543	Swamp River	Stream	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Ag, 3	Cook	Cook

	A	B	C	D	E	F	G	H	I	J
2228	04010101-610	Temperance River	Stream	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bdg,	Cook	Cook
2229	04010101-757	Unnamed creek (Grand Portage Creek)	Stream	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Ag, 3	Cook	Cook
2230	04010101-D75	Royal River	Stream	Lake Superior - North	04010101	Lake Superior - North	04010101	1B, 2Bdg,	Cook	Cook
2231	04010101-D81	Hoist Creek	Stream	Lake Superior - North	04010101	Lake Superior - North	04010101	2Bg, 3, 4A	Lake	Lake
2232	04010101-E12	Vern River	Stream			Lake Superior -	04010101	1B, 2Bdg,		Cook
2233	04010201-545	Bug Creek	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2234	04010201-552	Partridge River	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2235	04010201-579	Embarrass River	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2236	04010201-631	St Louis River	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2237	04010201-644	St Louis River	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2238	04010201-952	Second Creek (First Creek)	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2239	04010201-A37	Shiver Creek	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2240	04010201-A99	Embarrass River	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2241	04010201-B00	Embarrass River	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2242	04010201-B66	St Louis River	Stream	St. Louis River	04010201	St. Louis River	04010201	2Bg, 3, 4A	St. Louis	St. Louis
2243	04010202-590	Little Cloquet River	Stream	Cloquet River	04010202	Cloquet River	04010202	2Bg, 3, 4A	St. Louis	St. Louis
2244	04010202-664	Petrel Creek	Stream	Cloquet River	04010202	Cloquet River	04010202	2Bg, 3, 4A	St. Louis	St. Louis
2245	04010202-669	Cloquet River	Stream	Cloquet River	04010202	Cloquet River	04010202	1B, 2Ae, 3	Lake	Lake

	A	B	C	D	E	F	G	H	I	J
2246	04010202-671	Cloquet River	Stream	Cloquet River	04010202	Cloquet River	04010202	2Be, 3, 4A	St. Louis	St. Louis
2247	07010101-510	Turtle River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Beltrami	Beltrami
2248	07010101-517	Little Mississippi River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Beltrami	Beltrami
2249	07010101-521	Vermillion River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Cass	Cass; Itasc
2250	07010101-526	Third River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Itasca	Itasca
2251	07010101-546	Grant Creek	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Beltrami	Beltrami
2252	07010101-570	North Turtle River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Beltrami	Beltrami
2253	07010101-573	Birch Creek	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Hubbard	Hubbard
2254	07010101-600	Pigeon River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Itasca	Itasca
2255	07010101-753	Mississippi River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Beltrami	Beltrami; C
2256	07010101-755	Mississippi River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Cass	Cass; Beltr
2257	07010101-756	Mississippi River	Stream	Mississippi River - Headwaters	07010101	Mississippi River - Headwaters	07010101	2Bg, 3, 4A	Itasca	Itasca; Cas
2258	07010102-502	Necktie River	Stream	Leech Lake River	07010102	Leech Lake River	07010102	2Bg, 3, 4A	Hubbard	Hubbard
2259	07010102-507	Steamboat River	Stream	Leech Lake River	07010102	Leech Lake River	07010102	2Bg, 3, 4A	Cass	Cass
2260	07010102-511	Kabekona River	Stream	Leech Lake River	07010102	Leech Lake River	07010102	1B, 2Ag, 3	Hubbard	Hubbard
2261	07010102-518	Boy River	Stream	Leech Lake River	07010102	Leech Lake River	07010102	2Bg, 3, 4A	Cass	Cass
2262	07010102-520	Boy River	Stream	Leech Lake River	07010102	Leech Lake River	07010102	2Bg, 3, 4A	Cass	Cass
2263	07010102-545	Portage Creek	Stream	Leech Lake River	07010102	Leech Lake River	07010102	2Bg, 3, 4A	Cass	Cass

	A	B	C	D	E	F	G	H	I	J
2264	07010103-504	Sandy River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Aitkin	Aitkin
2265	07010103-508	Prairie River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Itasca	Itasca
2266	07010103-512	Sandy River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Aitkin	Aitkin
2267	07010103-514	West Savanna River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Aitkin	Aitkin
2268	07010103-515	Prairie River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Aitkin	Aitkin
2269	07010103-516	Prairie River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Aitkin	Aitkin; St. L
2270	07010103-542	Day Brook	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Itasca	Itasca; St.
2271	07010103-749	Moose River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids,	07010103,	2Bg, 3, 4A	Aitkin	Aitkin; Cas
2272	07010103-753	Swan River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Itasca	Itasca
2273	07010103-757	Tamarack River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Bg, 3, 4A	Carlton	Carlton; Ait
2274	07010103-758	Tamarack River	Stream	Mississippi River - Grand Rapids	07010103	Mississippi River - Grand Rapids	07010103	2Be, 3, 4A	Aitkin	Aitkin
2275	07010104-528	Little Elk River, South Branch	Stream	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2Bg, 3, 4A	Morrison	Morrison; T
2276	07010104-656	Mississippi River	Stream	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2Bg, 3, 4A	Crow Wing	Crow Wing
2277	07010104-661	Ripple River	Stream	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2Bg, 3, 4A	Aitkin	Aitkin
2278	07010104-674	Unnamed creek	Stream	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2Bg, 3, 4A	Crow Wing	Crow Wing
2279	07010104-692	Rice River	Stream	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2Bg, 3, 4A	Aitkin	Aitkin
2280	07010104-693	Rice River	Stream	Mississippi River - Brainerd	07010104	Mississippi River - Brainerd	07010104	2Bg, 3, 4A	Aitkin	Aitkin
2281	07010105-504	Pine River	Stream	Pine River	07010105	Mississippi River - Brainerd, Pine	07010104,	2Bg, 3, 4A	Crow Wing	Crow Wing

	A	B	C	D	E	F	G	H	I	J
2282	07010105-505	Little Pine River	Stream	Pine River	07010105	Pine River	07010105	2Bg, 3, 4A	Crow Wing	Crow Wing
2283	07010105-534	Pine River, South Fork	Stream	Pine River	07010105	Pine River	07010105	2Bg, 3, 4A	Cass	Cass
2284	07010105-671	Pine River	Stream	Pine River	07010105	Pine River	07010105	2Bg, 3, 4A	Cass	Cass
2285	07010105-672	Pine River	Stream	Pine River	07010105	Pine River	07010105	2Bg, 3, 4A	Crow Wing	Crow Wing;
2286	07010106-502	Gull River	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Cass	Cass; Crow
2287	07010106-510	Crow Wing River	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Wadena	Wadena; C
2288	07010106-516	Crow Wing River	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Wadena	Wadena; H
2289	07010106-523	Crow Wing River	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Hubbard	Hubbard
2290	07010106-542	Fishhook River	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Hubbard	Hubbard
2291	07010106-569	Indian Creek	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Becker	Becker
2292	07010106-617	Hay Creek	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Becker	Becker; Hu
2293	07010106-627	Fishhook River	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Hubbard	Hubbard
2294	07010106-681	Shell River	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Wadena	Wadena; H
2295	07010106-721	Crow Wing River	Stream	Crow Wing River	07010106	Mississippi River - Brainerd, Crow	07010104,	2Bg, 3, 4A	Morrison	Morrison; C
2296	07010106-722	Unnamed creek	Stream	Crow Wing River	07010106	Crow Wing River	07010106	2Bg, 3, 4A	Hubbard	Hubbard
2297	07010108-501	Long Prairie River	Stream	Long Prairie River	07010108	Crow Wing River, Long Prairie	07010106,	2Bg, 3, 4A	Morrison	Morrison; C
2298	07010108-505	Long Prairie River	Stream	Long Prairie River	07010108	Long Prairie River	07010108	2Bg, 3, 4A	Todd	Todd; Doug
2299	07010108-513	Turtle Creek	Stream	Long Prairie River	07010108	Long Prairie River	07010108	2Bg, 3, 4A	Todd	Todd

	A	B	C	D	E	F	G	H	I	J
2300	07010108-535	Long Prairie River	Stream	Long Prairie River	07010108	Long Prairie River	07010108	2Bg, 3, 4A	Douglas	Douglas
2301	07010201-507	Platte River	Stream	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2Bg, 3, 4A	Morrison	Morrison; C
2302	07010201-618	Rice Creek	Stream	Mississippi River - Sartell	07010201	Mississippi River - Sartell	07010201	2Bg, 3, 4A	Morrison	Morrison
2303	07010203-512	Rice Creek	Stream	Mississippi River - St. Cloud	07010203	Mississippi River - St. Cloud	07010203	2Bg, 3, 4A	Sherburne	Sherburne
2304	07010204-537	Crow River, Middle Fork	Stream	North Fork Crow River	07010204	North Fork Crow River	07010204	2Bg, 3, 4A	Kandiyohi	Kandiyohi;
2305	07010204-763	Crow River, North Fork	Stream	North Fork Crow River	07010204	North Fork Crow River	07010204	2Bm, 3, 4A	Stearns	Stearns; P
2306	07010204-764	Crow River, North Fork	Stream	North Fork Crow River	07010204	North Fork Crow River	07010204	2Bg, 3, 4A	Stearns	Stearns; K
2307	07010206-584	Rice Creek	Stream	Mississippi River - Twin Cities	07010206	Mississippi River - Twin Cities	07010206	1C, 2Bdg,	Anoka	Anoka; Ra
2308	07010207-518	Stanchfield Creek	Stream	Rum River	07010207	Rum River	07010207	2Bg, 3, 4A	Isanti	Isanti
2309	07010207-556	Rum River	Stream	Rum River	07010207	Mississippi River - Twin Cities, Rum	07010206,	2Bg, 3, 4A	Anoka	Anoka
2310	07010207-680	Trott Brook	Stream	Rum River	07010207	Rum River	07010207	2Bg, 3, 4A	Anoka	Anoka
2311	07020004-552	County Ditch 12	Stream	Minnesota River - Yellow Medicine	07020004	Minnesota River - Yellow Medicine	07020004	2Bg, 3, 4A	Redwood	Redwood
2312	07020011-668	Rice Creek	Stream	Le Sueur River	07020011	Le Sueur River	07020011	2Bg, 3, 4A	Faribault	Faribault
2313	07020011-669	Rice Creek	Stream	Le Sueur River	07020011	Le Sueur River	07020011	2Bg, 3, 4A	Blue Earth	Blue Earth
2314	07020012-842	Raven Stream, West Branch	Stream	Lower Minnesota River	07020012	Lower Minnesota River	07020012	2Bg, 3, 4A	Scott	Scott
2315	07030001-511	Hay Creek	Stream	Upper St. Croix River	07030001	Upper St. Croix River	07030001	1B, 2Bdg,	Pine	Pine
2316	07030001-549	Lost Creek	Stream	Upper St. Croix River	07030001	Upper St. Croix River	07030001	1B, 2Ag, 3	Pine	Pine
2317	07030003-502	Kettle River	Stream	Kettle River	07030003	Upper St. Croix River, Kettle	07030001,	2Bg, 3, 4A	Pine	Pine

	A	B	C	D	E	F	G	H	I	J
2318	07030003-511	Kettle River	Stream	Kettle River	07030003	Kettle River	07030003	2Bg, 3, 4A	Carlton	Carlton
2319	07030003-516	Grindstone River, South	Stream	Kettle River	07030003	Kettle River	07030003	2Bg, 3, 4A	Kanabec	Kanabec;
2320	07030003-531	Moose Horn River	Stream	Kettle River	07030003	Kettle River	07030003	2Bg, 3, 4A	Carlton	Carlton; Pi
2321	07030003-621	Willow River	Stream	Kettle River	07030003	Kettle River	07030003	2Bg, 3, 4A	Pine	Pine
2322	07030003-622	Willow River	Stream	Kettle River	07030003	Kettle River	07030003	2Be, 3, 4A	Pine	Pine
2323	07030004-503	Snake River	Stream	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2Bg, 3, 4A	Pine	Pine; Kana
2324	07030004-511	Ann River	Stream	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2Bg, 3, 4A	Kanabec	Kanabec
2325	07030004-533	Pokegama Creek	Stream	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2Bg, 3, 4A	Pine	Pine
2326	07030004-547	Mission Creek	Stream	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	1B, 2Bdg,	Pine	Pine
2327	07030004-575	Rice Creek	Stream	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin	07030004	2Bg, 3, 4A	Kanabec	Kanabec
2328	07030004-587	Snake River	Stream	Snake River - St. Croix Basin	07030004	Snake River - St. Croix Basin,	07030004,	2Bg, 3, 4A	Pine	Pine
2329	07030005-707	Unnamed creek	Stream	Lower St. Croix River	07030005	Lower St. Croix River	07030005	2Bg, 3, 4A	Isanti	Isanti
2330	07040002-501	Cannon River	Stream	Cannon River	07040002	Cannon River	07040002	2Bg, 3, 4A	Goodhue	Goodhue
2331	07040003-627	Mississippi River	Stream	Mississippi River - Winona	07040003	Mississippi River - Winona	07040003	2Bg, 3, 4A	Wabasha	Wabasha;
2332	07040008-581	Rice Creek	Stream	Root River	07040008	Root River	07040008	1B, 2Ag, 3	Fillmore	Fillmore
2333	07060001-509	Mississippi River	Stream	Mississippi River - Reno	07060001	Mississippi River - Reno	07060001	2Bg, 3, 4A	Houston	Houston
2334	09020103-530	Otter Tail River	Stream	Otter Tail River	09020103	Otter Tail River	09020103	1C, 2Bdg,	Becker	Becker; Ott
2335	09020103-541	Otter Tail River	Stream	Otter Tail River	09020103	Otter Tail River	09020103	1C, 2Bdg,	Otter Tail	Otter Tail

	A	B	C	D	E	F	G	H	I	J
2336	09020103-748	Egg River	Stream	Otter Tail River	09020103	Otter Tail River	09020103	2Bg, 3, 4A	Becker	Becker
2337	09020103-773	Otter Tail River	Stream	Otter Tail River	09020103	Otter Tail River	09020103	1C, 2Bdg,	Otter Tail	Otter Tail
2338	09020103-774	Otter Tail River	Stream	Otter Tail River	09020103	Otter Tail River	09020103	1C, 2Bdg,	Otter Tail	Otter Tail
2339	09020106-594	Buffalo River	Stream	Buffalo River	09020106	Buffalo River	09020106	2Bg, 3, 4A	Becker	Becker; Cla
2340	09020108-510	Wild Rice River	Stream	Wild Rice River	09020108	Wild Rice River	09020108	2Bg, 3, 4A	Mahnomen	Mahnomen
2341	09020108-512	Wild Rice River	Stream	Wild Rice River	09020108	Wild Rice River	09020108	2Bg, 3, 4A	Clearwater	Clearwater
2342	09020108-569	Gull Creek	Stream	Wild Rice River	09020108	Wild Rice River	09020108	2Bg, 3, 4A	Becker	Becker
2343	09020302-501	Tamarac River	Stream	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2Bg, 3, 4A	Koochichin	Koochichin
2344	09020302-513	Blackduck River	Stream	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2Bg, 3, 4A	Beltrami	Beltrami
2345	09020302-558	Manomin Creek	Stream	Upper/Lower Red Lake	09020302	Upper/Lower Red Lake	09020302	2Bg, 3, 4A	Beltrami	Beltrami
2346	09020305-517	Clearwater River	Stream	Clearwater River	09020305	Clearwater River	09020305	2Bg, 3, 4A	Clearwater	Clearwater
2347	09020305-518	Poplar River	Stream	Clearwater River	09020305	Clearwater River	09020305	2Bg, 3, 4A	Polk	Polk
2348	09020305-539	Hill River	Stream	Clearwater River	09020305	Clearwater River	09020305	2Bg, 3, 4A	Red Lake	Red Lake;
2349	09020305-647	Clearwater River	Stream	Clearwater River	09020305	Clearwater River	09020305	2Bg, 3, 4A	Clearwater	Clearwater
2350	09030001-512	Kawishiwi River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	Lake	Lake
2351	09030001-527	Isabella River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	Lake	Lake
2352	09030001-536	South Kawishiwi River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2Bg, 3, 4A	Lake	Lake
2353	09030001-540	Moose River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	St. Louis	St. Louis

	A	B	C	D	E	F	G	H	I	J
2354	09030001-598	Unnamed creek (Scott Creek Tributary)	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Ag, 3	Lake	Lake
2355	09030001-608	Bear Island River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2Bg, 3, 4A	St. Louis	St. Louis
2356	09030001-623	Unnamed creek	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2Bg, 3, 4A	Lake	Lake
2357	09030001-632	Dumbbell River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Ag, 3	Lake	Lake
2358	09030001-642	Little Indian Sioux River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	St. Louis	St. Louis
2359	09030001-643	Little Indian Sioux River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	St. Louis	St. Louis
2360	09030001-650	Nina Moose River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	St. Louis	St. Louis
2361	09030001-665	Bear Island River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2Bg, 3, 4A	St. Louis	St. Louis
2362	09030001-719	Horse River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	Lake	Lake
2363	09030001-808	Burntside River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2Bg, 3, 4A	St. Louis	St. Louis
2364	09030001-975	Bezhik Creek	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2Be, 3, 4A	St. Louis	St. Louis
2365	09030001-985	Stony River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2Bg, 3, 4A	Lake	Lake
2366	09030001-987	Dunka River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Ag, 3	St. Louis	St. Louis
2367	09030001-A11	Little Indian Sioux River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	St. Louis	St. Louis
2368	09030001-A12	Little Indian Sioux River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	2Bg, 3, 4A	St. Louis	St. Louis
2369	09030001-A13	Little Indian Sioux River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	St. Louis	St. Louis
2370	09030001-A14	Island River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	Lake	Lake
2371	09030001-A15	Island River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	Lake	Lake

	A	B	C	D	E	F	G	H	I	J
2372	09030001-A16	Island River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	Lake	Lake
2373	09030001-A17	Island River	Stream	Rainy River - Headwaters	09030001	Rainy River - Headwaters	09030001	1B, 2Bdg,	Lake	Lake
2374	09030002-501	Sand River	Stream	Vermilion River	09030002	Vermilion River	09030002	2Bg, 3, 4A	St. Louis	St. Louis
2375	09030002-503	Pike River	Stream	Vermilion River	09030002	Vermilion River	09030002	2Bg, 3, 4A	St. Louis	St. Louis
2376	09030002-530	Pelican River	Stream	Vermilion River	09030002	Vermilion River	09030002	2Bg, 3, 4A	St. Louis	St. Louis
2377	09030002-531	Vermilion River	Stream	Vermilion River	09030002	Vermilion River	09030002	2Bg, 3, 4A	St. Louis	St. Louis
2378	09030002-532	Echo River	Stream	Vermilion River	09030002	Vermilion River	09030002	2Bg, 3, 4A	St. Louis	St. Louis
2379	09030002-586	Camp Forty Creek	Stream	Vermilion River	09030002	Vermilion River	09030002	2Bg, 3, 4A	St. Louis	St. Louis
2380	09030002-602	Elbow River	Stream	Vermilion River	09030002	Vermilion River	09030002	2Bg, 3, 4A	St. Louis	St. Louis
2381	09030003-629	Tilson Creek	Stream	Rainy River - Rainy Lake	09030003	Rainy River - Rainy Lake	09030003	2Bg, 3, 4A	Koochichin	Koochichin
2382	09030005-517	Rice River	Stream	Little Fork River	09030005	Little Fork River	09030005	2Bg, 3, 4A	St. Louis	St. Louis
2383	09030005-527	Sturgeon River	Stream	Little Fork River	09030005	Little Fork River	09030005	2Bg, 3, 4A	St. Louis	St. Louis
2384	09030005-605	Shannon River	Stream	Little Fork River	09030005	Little Fork River	09030005	2Bg, 3, 4A	St. Louis	St. Louis
2385	09030006-505	Big Fork River	Stream	Big Fork River	09030006	Big Fork River	09030006	2Bg, 3, 4A	Itasca	Itasca
2386	09030006-512	Popple River	Stream	Big Fork River	09030006	Big Fork River	09030006	2Bg, 3, 4A	Itasca	Itasca
2387	09030006-538	Hinken Creek	Stream	Big Fork River	09030006	Big Fork River	09030006	2Bg, 3, 4A	Itasca	Itasca
2388	09030006-539	Rice River	Stream	Big Fork River	09030006	Big Fork River	09030006	2Bg, 3, 4A	Itasca	Itasca
2389	09030006-548	Rice River	Stream	Big Fork River	09030006	Big Fork River	09030006	2Bg, 3, 4A	Itasca	Itasca

	A	B	C	D	E	F	G	H	I	J
2390	09030006-555	Bowstring River	Stream	Big Fork River	09030006	Big Fork River	09030006	2Bg, 3, 4A	Itasca	Itasca
2391	09030006-635	Rice Creek	Stream	Big Fork River	09030006	Big Fork River	09030006	2Bg, 3, 4A	Itasca	Itasca
2392	09030008-502	Winter Road River	Stream	Lower Rainy River	09030008	Lower Rainy River	09030008	2Bg, 3, 4A	Lake of the	Lake of the
2393	09030008-513	Silver Creek	Stream	Lower Rainy River	09030008	Lower Rainy River	09030008	2Bg, 3, 4A	Lake of the	Lake of the
2394	09030008-535	Baudette River	Stream	Lower Rainy River	09030008	Lower Rainy River	09030008	2Bg, 3, 4A	Lake of the	Lake of the
2395	09030008-561	Rainy River	Stream	Lower Rainy River	09030008	Lower Rainy River	09030008	2Bg, 3, 4A	Lake of the	Lake of the
2396	09030009-537	Bostick Creek	Stream	Lake of the Woods	09030009	Lake of the Woods	09030009	2Bg, 3, 4A	Lake of the	Lake of the

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 2

MPCA Responses to Draft 2012 TMDL Public Comments (2012)

Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employer

September 17, 2012

RE: The 2012 Total Maximum Daily Load List 30-day Public Notice Period Minnesota Pollution Control Agency Response to Comments

Dear Commenters:

The Agency received 39 comments during the 30-day public notice period from January 23, 2012, to February 27, 2012. We appreciate the interest the draft 2012 Total Maximum Daily Load (TMDL) List has received. These comments have previously been added to the Minnesota Pollution Control Agency (MPCA) TMDL List webpage at the following hot link: http://www.pca.state.mn.us/enzq94b, as a PDF document.

The topics raised included wild rice, mining, sulfate concentrations in rivers and the new listing for chlorpyrifos. Two Contested Case Hearing Requests were also received. Enclosed are the Agency's responses to the comments received. This response document will be added to the MPCA TMDL List webpage at the hot link included above.

If you have any questions, please contact Howard Markus at 1-800-657-3864 or 651-757-2551. He may also be reached by e-mail at howard.markus@state.mn.us

Sincerely,

John Linc Stine
Commissioner

JLS/HM:jab

Enclosure

Minnesota Pollution Control Agency
Responses to the draft 2012 Total Maximum Daily Load List 30-Day Public Notice Comments
September 7, 2012

The draft 2012 Total Maximum Daily Load (TMDL) List 30-day public comment period began on January 23, 2012, and ended on February 27, 2012. Listed below are the comments received and Minnesota Pollution Control Agency (MPCA) responses. The set of complete comments is contained in a pdf file at the following location: http://www.pca.state.mn.us/enzq94b.

A. Commenters object to the fact that the MPCA has not listed any wild rice waters as impaired for excess sulfate. (Comments 2, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20)

Prior to assessing a waterbody for potential non-attainment of a water quality standard (indicative of the impairment of a beneficial use), the MPCA must first develop a method for analyzing available data and comparing that analysis against the standard in question to determine if the standard is being met in the waterbody. This method development must consider minimum data requirements, analysis procedures, and the threshold that demarcates attainment and non-attainment of the standard.

With a state as water-rich as Minnesota the MPCA is faced with the need to prioritize our efforts to develop assessment methods and subsequently assess waters for water quality standards. The MPCA's first priority for assessing Minnesota's waterbodies is to determine whether they meet the swimmable and fishable goals of the federal Clean Water Act (CWA) (CWA Section 101(a)(2)). Typically, when the MPCA is assessing waters to see if they meet the swimmable and fishable goals, the MPCA focuses on Class 2 water quality standards that protect the beneficial uses of aquatic life, aquatic recreation (swimming) and aquatic consumption (usually consumption of fish by humans and wildlife).

The 10 mg/liter sulfate standard that applies to "water used for production of wild rice during periods when the rice may be susceptible to damage by high sulfate levels" is a Class 4A standard (Minn. R. 7050.0224, subp. 2), and the MPCA has not yet developed an assessment methodology for analyzing ambient sulfate data and comparing it to that standard. This method development is complicated by two key factors:

1. Where the standard applies (the MPCA is currently identifying "water used for production of wild rice" on a case-by-case basis as further described below), and
2. When the standard applies (the MPCA is currently working through the determination of "the period when the rice may be susceptible to damage from high sulfate levels" on a case-by-case basis in permitting decisions).

Given these questions/information gaps, the MPCA was not in a position to assess sulfate impairment for the 2012 303(d) List. However, the MPCA is very much aware of the concern about sulfate and wild rice, and the MPCA plans to develop a wild rice sulfate standard assessment method to use in the development of the draft 2014 303(d) List and will provide opportunities for public input into that method development .

The MPCA recognizes that 24 waters are specifically identified as "wild rice waters" in Minn. R. 7050.0470, subpart 1, and that a number of reports and information sources identify waters that support wild rice. However, those reports and information sources that identify "wild rice waters" or "wild-rice supporting waters" do not identify "wild rice *production* waters," which are the waters

protected by the wild rice sulfate standard in Minn. R. 7050.0224, subp. 2. A comprehensive inventory of wild rice production waters does not exist, and therefore, the identification of such waters is currently a case-by-case determination.

To make this determination, the MPCA first consults the list of designated wild rice waters in Minn. R. 7050.0470, subp. 1 then looks at other available information about wild rice presence and extent in the water(s) in question to make the case-by-case determination. This decision-making process is currently initiated by a permitting proposal or environmental review. Where the MPCA does not have any existing information about wild rice, but the MPCA suspects it might be present, the MPCA currently requires the proposer to survey the downstream waters to identify the presence and extent of wild rice, so that the MPCA can determine if there are any wild rice production waters that may be affected by the discharge.

The MPCA has not yet determined how to apply this case-by-case decision-making process about where the standard applies to 303(d) assessment activities. As noted above, the MPCA intends to develop a wild rice sulfate standard assessment method to use in the development of the draft 2014 303(d) List. This timing will allow us to benefit from an effort currently underway to further clarify the definition of "water used for production of wild rice" in Minn. R. 7050.0224, subp. 2, and to take into account learning from the Wild Rice Standards Study currently underway (please see http://www.pca.state.mn.us/ktqhd17 for more information about the wild rice sulfate standard and Study).

In the meantime, the MPCA is taking a conservative approach to permitting with regards to sulfate and wild rice. Discharges upstream of known stands of wild rice are being evaluated for the potential to cause or contribute to an exceedance of the sulfate standard. The MPCA is evaluating all available effluent and ambient sulfate data and wild rice information prior to issuing permits and considering potential impacts to assimilative capacity when establishing limits and other permit conditions. The MPCA is also collecting and storing ambient sulfate data for lakes and streams, and beginning to compile GIS layer(s) of locations of potential waters used for production of wild rice for use in assessment once the methodology has been developed.

B. Commenters are concerned with the impacts from mining. (Comments 1, 3, 4, 5, 18)

The MPCA takes its' responsibility to implement the Clean Water Act National Pollutant Discharge Elimination System (NPDES) permit program in Minnesota very seriously. The concerns raised are all addressed during the process of issuing/denying and monitoring compliance with individual NPDES permits for mining facilities. The MPCA encourages participation in the public comment process for permit applications. Public notices of proposed permits are routinely posted on the MPCA's website at http://www.pca.state.mn.us/iryp3c9, and interested parties can sign up at this site to receive e-mail alerts of public notices and other MPCA matters.

C. Commenters object to Seven Mile Creek being listed for excess chlorpyrifos. (Comments 21, 22, 23, 24, 25, 26, 27)

The proposed listing is being made only after a great deal of careful consideration and in full accord with Minnesota rules and guidance governing impairment decisions. Numeric water quality standards for

toxic pollutants, such as pesticides, are adopted in Minn. Rules Chs. 7050 and 7052 in accord with the state Administrative Procedures Act and with US Environmental Protection Agency (EPA) approval.

Monitoring for pesticides in Minnesota is a responsibility of the Minnesota Department of Agriculture (MDA), while the review of monitoring data and the listing of water bodies for impairment are the responsibility of the MPCA. The MPCA works closely with the MDA on both monitoring and assessment activities. In assessing potential impacts of pesticides on the beneficial uses of Minnesota's water resources, the MPCA depends on the MDA's monitoring effort and comprehensive technical knowledge regarding the implementation of peer-reviewed protocols for collecting and handling samples, conducting laboratory analyses, and managing and reporting data. All available data used in determining if a stream reach or lake is meeting state water quality standards are carefully evaluated for quality assurance and quality control, as described in the MPCA's *2012 Guidance Manual for Assessing the Quality of Minnesota Surface Waters for Determination of Impairment: 305(b) Report and 303(d) List*.

The EPA reviews MDA's water quality programs, including water quality monitoring, on a semi-annual basis. The reviews are conducted on-site by visiting EPA staff from the Office of Pesticide Programs and involve two days of program review, interviews, and discussion. MDA usually submits its QA/QC protocols and Quality Assurance Program Plans (QAPPs), including analytical protocols and guidance, to EPA during these semi-annual meetings. EPA provides any comments or concerns regarding the water quality programs, including the QA/QC protocols and QAPPs, in post-meeting comments and requests for programmatic adjustments. MDA makes changes to its programs as necessary to respond to any EPA concerns. A more complete description of the sources MDA uses to develop its water quality monitoring program is included in the attached MDA response (Attachment A).

Some commenters seem to be arguing that, because there was only one detection of chlorpyrifos in Seven Mile Creek at acutely toxic levels, it should be assumed that the water quality standard is being attained and therefore that aquatic life is being supported in Seven Mile Creek. It is important to note that the chlorpyrifos concentration measured in Seven Mile Creek was nearly three times the Minnesota maximum standard for chlorpyrifos; even single occurrences of pesticide concentrations above the maximum standard can cause significant harm to aquatic life and are therefore unacceptable. Chlorpyrifos is highly toxic to aquatic invertebrates and fish; adverse affects from acute and chronic concentrations of chlorpyrifos (i.e. in the range of those detected by the MDA) have been observed in a variety of studies used to register chlorpyrifos and to establish the chlorpyrifos standard.

Statewide, detections of chlorpyrifos have been increasing in both frequency and magnitude; see attached response from MDA (Attachment A) and page 2 of MDA's Frequently Asked Questions Document at http://www.mda.state.mn.us/en/chemicals/pesticides/~/media/Files/chemicals/pesticides/chlorpyrifosfaq.ashx. MDA has recently proposed that chlorpyrifos be identified as a "surface water pesticide of concern" (see Attachment B and pages 1254 – 1255 of the State of Minnesota *State Register*, http://www.comm.media.state.mn.us/bookstore/stateregister/36_40.pdf).

The MPCA agrees with the comment that there are unanswered questions regarding the Seven Mile Creek detection and that more extensive monitoring is needed. This is precisely one of the things that will happen as a result of the proposed listing. Continued monitoring by MDA will be used to assess the extent of the problem as well as the success of subsequent pesticide management efforts.

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 3

MPCA Wild Rice Waters Database (2016)

MPCA Wild Rice Waters database (July 19, 2016)

Column L "STATUS_LIST" codes :
"DL" = Draft List
"II" = Insufficient Information
"7050" = wild rice water currently in Minn. R. 7050.0470

OBJECTID	Line_	COUNTY	NAME	Name2d	MPCA_WID	ALT_SITE_ID	WB_Type	ACRES	MNDNR2008ESTACRE	REFERENCE_SOURCE	STATUS_LIST	UTM_X_WB	UTM_Y_WB	LON_DD_WB	LAT_DD_WB	XIDNUM	Tribal_Water
1	1	Aitkin	Aitkin Lake		01-0040-00		Lake	850	298	2007, 2008, 2010	DL	477938.3951	5183444.215	-93.28913203	46.80417925	01004000	
2	2	Aitkin	Anderson Lake		01-0031-00		Lake	97	30	2008	DL	482215.385	5176079.008	-93.232794	46.73802725	01003100	
3	3	Aitkin	Big Sandy Lake		01-0062-00		Lake	9380	94	2007, 2008, MDNR APM, 2010	DL	478181.3702	5178684.461	-93.28572102	46.76135424	01006200	
4	4	Aitkin	Birch Lake		01-0206-00		Lake	449	5	2008	DL	437881.366	5135032.56	-93.80757411	46.36601615	01020600	
5	5	Aitkin	Blind Lake		01-0188-00		Lake	323	39	2007, 2008, MDNR APM	DL	442905.4194	5166748.135	-93.74616013	46.6518602	01018800	
6	6	Aitkin	Brown Lake		01-0078-00		Lake	97	34	2008	DL	474848.4135	5179262.557	-93.32939803	46.76643924	01007800	
7	7	Aitkin	Camp Lake		01-0098-00		Lake	127	30	2008	DL	463123.3526	5152763.392	-93.48083304	46.5274282	01009800	
8	8	Aitkin	Cedar Lake		01-0209-00		Lake	1778		MDNR APM, MDNR 2013	DL	438606.418	5148615.588	-93.79993513	46.48831317	01020900	
9	9	Aitkin	Clear Lake		01-0106-00		Lake	123	20	2008	DL	461268.3544	5178049.066	-93.50714108	46.75486923	01010600	
10	10	Aitkin	Cornish Lake		01-0427-00		Lake	600	30	2008, MDNR 2013	DL	483387.4164	5193211.245	-93.21807502	46.89223027	01042700	
11	11	Aitkin	Davis Lake		01-0071-01		Lake	76	30	2007, 2008	DL	472042.4156	5166660.95	-93.36538002	46.65292522	01007101	
12	12	Aitkin	Deer Lake		01-0086-00		Lake	47	3	2008	DL	460728.4262	5131618.141	-93.51028002	46.33700017	01008600	
13	13	Aitkin	Elm Island Lake		01-0123-00		Lake	656	30	2007, 2008, MDNR APM, 2010	DL	451850.3492	5145175.821	-93.62702807	46.45843518	01012300	
14	14	Aitkin	Farm Island		01-0159-00		Lake	2025	20	2007, 2008, MDNR APM	DL	440678.4139	5141202.979	-93.77199711	46.42179416	01015900	
15	15	Aitkin	Fleming Lake		01-0105-00		Lake	326	1	2008, MDNR APM	DL	461996.3973	5164148.51	-93.49646106	46.62982121	01010500	
16	16	Aitkin	Flowage Lake		01-0061-00		Lake	720	432	2007, 2008, UofM/MPCA 2013, 2010	DL	475630.3698	5172397.49	-93.31879302	46.70468923	01006100	
17	17	Aitkin	Gun Lake		01-0099-00		Lake	735	60	2008, MDNR APM, 2010	DL	459922.413	5166136.492	-93.52372607	46.64759021	01009900	
18	18	Aitkin	Hanging Kettle Lake		01-0170-00		Lake	320		MDNR APM, MDNR 2013	DL	445514.3594	5146576.332	-93.7096961	46.47055617	01017000	
19	19	Aitkin	Hickory Lake		01-0179-00		Lake	183	10	2008, MDNR APM	DL	443789.3883	5143171.313	-93.7317521	46.43977317	01017900	
20	20	Aitkin	Horseshoe Lake		01-0034-00		Lake	252		MDNR APM, MDNR 2013	DL	483601.4002	5173789.401	-93.21456999	46.71745824	01003400	
21	21	Aitkin	Jewett State WMA - Impoundment		01-0383-00		Lake	180	30	2008	DL	469219.3874	5139212.521	-93.400454	46.40578519	01038300	
22	22	Aitkin	Johnson Lake		01-0131-00		Lake	27	6	2008	DL	450791.4112	5152851.833	-93.64162909	46.52743519	01013100	
23	23	Aitkin	Killroy Lake		01-0238-00		Lake	23	4	2008	DL	452226.4235	5139461.629	-93.62154606	46.40703917	01023800	
24	24	Aitkin	Kimberly State.WMA - Lower Pool		01-0411-00		Lake	300	30	2008	DL	468838.4067	5156593.492	-93.40657402	46.56218521	01041100	
25	25	Aitkin	Kimberly State.WMA - UpperPool		01-0410-00		Lake	900	76	2008	DL	469433.3915	5157286.959	-93.39885702	46.56845321	01041000	
26	26	Aitkin	Krilwitz Lake		01-0283-00		Lake	30	6	2008	DL	446731.3914	5169786.696	-93.69651413	46.6795182	01028300	
27	27	Aitkin	Lily Lake		01-0088-00		Lake	50	2	2008	DL	462977.3835	5149697.792	-93.48249203	46.49983219	01008800	
28	28	Aitkin	Little Hill River WMA - Impoundm		01-0433-00		Lake	135	18	2008	DL	445081.4079	5205655.724	-93.72240018	47.00214524	01043300	
29	29	Aitkin	Little McKinney Lake		01-0197-00		Lake	26	6	2008	DL	444398.4212	5192575.105	-93.72978217	46.88438723	01019700	
30	30	Aitkin	Little Pine Lake		01-0176-00		Lake	126	1	2008, MDNR APM	DL	442648.3569	5143515.244	-93.7466471	46.44277217	01017600	
31	31	Aitkin	Little Red Horse Lake		01-0052-00		Lake	32	3	2007, 2008	DL	480386.3865	5193061.983	-93.25746303	46.89080526	01005200	
32	32	Aitkin	Little Willow R. WMA - Upper Pool		01-0420-00	W0642001	Stream	50	20	2008	DL	446953.2411	5173661.127	-93.69406013	46.71440021	W0642001	
33	33	Aitkin	Mallard Lake		01-0149-00		Lake	354	320	2007, 2008, 2010	DL	444965.3694	5140182.755	-93.71609209	46.41297616	01014900	
34	34	Aitkin	Mandy Lake		01-0068-00		Lake	107	27	2008	DL	474015.4073	5154191.518	-93.338895	46.54078921	01006800	
35	35	Aitkin	Minnewawa Lake		01-0033-00		Lake	2451	130	2007, 2008, 2010	DL	478834.3638	5172978.204	-93.27690701	46.71002424	01003300	
36	36	Aitkin	Monson Lake		01-0126-00		Lake	48	25	2008	DL	453887.4141	5144398.596	-93.60042506	46.45158318	01012600	
37	37	Aitkin	Moose Lake		01-0140-00		Lake	148	117	2007, 2008, 2010	DL	451607.3843	5190754.442	-93.63497614	46.86856823	01014000	
38	38	Aitkin	Moose River Pool		01-0358-00		Lake	900	89	2008, 2010	DL	460202.4013	5197478.973	-93.52279111	46.92964925	01035800	
39	39	Aitkin	Moose River		07010103-524	01r4	Stream			2008	DL	452539.5766	5192001.861	-93.62287513	46.87986024	01r4	
40	40	Aitkin	Moose Willow WMA - Willow Pool		01-0431-00		Lake	300	50	2008, 2010	DL	459095.4256	5199834.967	-93.53754412	46.95078225	01043100	
41	41	Aitkin	Mud Lake		01-0194-00		Lake	135	68	2008, 2010	DL	444369.3791	5184474.153	-93.72917615	46.81149022	01019400	
42	42	Aitkin	Nelson Lake		01-0010-00		Lake	71	1	2008, 1854 List	DL	492775.4022	5163283.872	-93.09436694	46.62307824	01001000	
43	43	Aitkin	Newstrom Lake		01-0097-00		Lake	97	76	2007, 2008, 2010	DL	460433.3538	5155972.573	-93.51618005	46.5561552	01009700	
44	44	Aitkin	Pine Lake		01-0001-00		Lake	391	4	2008	DL	494633.4138	5115304.851	-93.06954687	46.19129918	01000100	

45	45	Aitkin	Portage Lake		01-0069-00		Lake	387	5	2008	DL	467733.3572	5159299.751	-93.42118003	46.58648721	01006900	
46	46	Aitkin	Prairie River		07010103-515	01r6	Stream			2007, 2008, 2010, 1854 List	DL	482764.9724	5179934.468	-93.225745	46.77273725	01r6	
47	47	Aitkin	Rat House Lake		01-0053-00		Lake	122	100	2007, 2008, 2010	DL	482829.4179	5190455.034	-93.22529602	46.86741326	01005300	
48	48	Aitkin	Rat Lake		01-0077-00		Lake	442	45	2007, 2008, MDNR APM, 2010	DL	473428.406	5174048.205	-93.34769303	46.71946023	01007700	
49	49	Aitkin	Red Lake		01-0107-00		Lake	97	4	2007, 2008, MDNR APM, 2010	DL	459946.3558	5176729.777	-93.52433508	46.74291922	01010700	
50	50	Aitkin	Rice Lake		01-0005-00		Lake	83	50	2007, 2008, 2010	DL	489578.3892	5160180.878	-93.13605595	46.59511123	01000500	
51	51	Aitkin	Rice Lake		01-0067-00		Lake	3635	1700	2008, 2010	DL	471900.4056	5151421.537	-93.366311	46.5157762	01006700	
52	52	Aitkin	Rice River		07010104-508	01r1	Stream			2008	DL	474030.9086	5155712.9	-93.338778	46.55448121	01r1	
53	53	Aitkin	Ripple Lake		01-0146-00		Lake	676	50	MDNR APM, 2010	DL	448548.4153	5145724.082	-93.67008508	46.46312518	01014600	
54	54	Aitkin	Ripple River		07010104-661	01r3	Stream			2007, 2008, 2010	DL	446314.5697	5148633.78	-93.6995111	46.48913518	01r3	
55	55	Aitkin	Rock Lake		01-0072-00		Lake	366	50	2008, 2010, MDNR 2013	DL	470338.3771	5164611.559	-93.38751803	46.63440922	01007200	
56	56	Aitkin	Salo Marsh State WMA Imp.		01-0415-00		Lake	690	76	2008, 2010	DL	493183.4038	5160045.726	-93.08898994	46.59394124	01041500	
57	57	Aitkin	Sanders Lake		01-0076-00		Lake	55	36	2008	DL	469153.4274	5178568.135	-93.40393405	46.75995124	01007600	
58	58	Aitkin	Sandy River		07010103-504	01r2	Stream			2008	DL	474985.8537	5181844.724	-93.32773904	46.78968124	01r2	
59	59	Aitkin	Sandy River Lake		01-0060-00		Lake	368	200	2007, MDNR APM, 2010	DL	475786.3955	5174202.156	-93.31684702	46.72093524	01006000	
60	60	Aitkin	Savanna Lake		01-0014-00		Lake	86	1	2007, 2008	DL	486172.3815	5188043.316	-93.18136	46.84578826	01001400	
61	61	Aitkin	Savanna River		07010103-514	01r5	Stream			2007, 2008	DL	483448.1616	5180636.842	-93.216822	46.77907525	01r5	
62	62	Aitkin	Section Ten Lake		01-0115-00		Lake	440	52	2007, 2008, 2010	DL	454234.3536	5147953.32	-93.59625707	46.48359618	01011500	
63	63	Aitkin	Section Twelve Lake		01-0120-00		Lake	167	1	2007, 2008, 2010	DL	455233.3857	5147674.391	-93.58321506	46.48115318	01012000	
64	64	Aitkin	Shovel Lake		01-0200-00		Lake	230	207	2007, 2008, 2010	DL	442052.3885	5198923.155	-93.76138018	46.94130723	01020000	
65	65	Aitkin	Sisabagamah Lake		01-0129-00		Lake	386	39	2008	DL	453463.3844	5150232.758	-93.60652907	46.50405619	01012900	
66	66	Aitkin	Sitas Lake		01-0134-00	1013400	Lake	59	5	2008	DL	452673.1746	5178052.18	-93.61967811	46.75434322	1013400	
67	67	Aitkin	Sjodin Lake		01-0316-00		Lake	43	28	2007, 2008, 2010	DL	452633.377	5143476.269	-93.61665907	46.44319618	01031600	
68	68	Aitkin	Spirit Lake		01-0178-00		Lake	523	26	2007, 2008	DL	445668.3627	5143571.706	-93.70734009	46.44353017	01017800	
69	69	Aitkin	Split Rock Lake		01-0002-00		Lake	27	1	1854 List	DL	487054.3558	5139036.394	-93.16841893	46.4047772	01000200	
70	70	Aitkin	Spruce Lake		01-0151-00		Lake	80	80	2008, 2010	DL	439418.3607	5137850.979	-93.78795911	46.39151816	01015100	
71	71	Aitkin	Steamboat Lake		01-0071-02		Lake	59	15	2008	DL	472782.397	5165451.894	-93.35563802	46.64207522	01007102	
72	72	Aitkin	Stony Lake		01-0017-00		Lake	52	5	2008	DL	489140.4289	5184428.688	-93.14234598	46.81331526	01001700	
73	73	Aitkin	Swamp Lake		01-0092-00		Lake	270	1	2008, MDNR APM	DL	464359.3752	5143110.554	-93.46397802	46.44062619	01009200	
74	74	Aitkin	Tamarack River		07010103-521	01r7	Stream			2008	DL	488340.04	5180291.534	-93.15273198	46.77607126	01r7	
75	75	Aitkin	Twenty Lake		01-0085-00		Lake	153	119	2007, 2008, 2010	DL	459341.4042	5135172.693	-93.52861003	46.36890717	01008500	
76	76	Aitkin	Unnamed - Little Willow River WM		01-0332-00		Lake	140	50	2008, 2010	DL	446449.4204	5172403.276	-93.70050513	46.70304121	01033200	
77	77	Aitkin	Unnamed (Round Lake Pothole)		01-0285-00		Lake	15	12	2008	DL	449576.3821	5173976.619	-93.65977612	46.71744221	01028500	
78	78	Aitkin	Upper Blind Lake		01-0331-00		Lake	14	3	2008	DL	444450.3665	5168084.693	-93.72613213	46.6640172	01033100	
79	79	Aitkin	Washburn Lake		01-0111-00		Lake	73	4	2008	DL	464775.3811	5202770.993	-93.4631321	46.97752826	01011100	
80	80	Aitkin	Waukenabo Lake		01-0136-00		Lake	819	49	2008, MDNR APM, 2010	DL	452495.3537	5175934.262	-93.62178711	46.73527222	01013600	
81	81	Aitkin	West Lake		01-0287-00		Lake	51	20	2007, 2008	DL	451526.3801	5177392.109	-93.63462312	46.74832122	01028700	
82	82	Aitkin	White Elk Lake		01-0148-00		Lake	780	350	2007, 2008, 2010	DL	446502.3939	5184527.308	-93.70122615	46.81214322	01014800	
1317	1	Aitkin	Ball Bluff		01-0046-00		Lake	178		MDNR 2013	II	478650.0568	5197726.889	-93.28047404	46.93273027	1004600	
1318	2	Aitkin	Bear		01-0064-00		Lake	127	1	MDNR 2008	II	471770.1578	5120846.87	-93.36616496	46.24061217	1006400	
1319	3	Aitkin	Boot		01-0055-00		Lake	77		MDNR 2013	II	480957.9861	5189522.915	-93.24981202	46.85897426	1005500	
1320	4	Aitkin	Cartie		01-0189-00		Lake	27		MDNR 2013	II	440552.19	5163896.959	-93.77654414	46.62599919	1018900	
1321	5	Aitkin	Cedar		01-0065-00		Lake	260		MDNR 2013	II	468836.9212	5118626.941	-93.40406397	46.22050516	1006500	
1322	6	Aitkin	Clear		01-0093-00		Lake	590		MDNR 2013	II	461362.1061	5141495.868	-93.50286203	46.42593018	1009300	
1323	7	Aitkin	Dam		01-0096-00		Lake	633		MDNR 2013	II	464413.8008	5150837.95	-93.46386003	46.5101702	1009600	
1324	8	Aitkin	Diamond		01-0171-00		Lake	80		MDNR 2013	II	446763.8957	5145923.941	-93.69334709	46.46478517	1017100	
1325	9	Aitkin	Douglas		01-0009-00		Lake	75		MDNR 2013	II	492751.6995	5163882.944	-93.09468594	46.62846924	1000900	
1326	10	Aitkin	Glacier		01-0042-00		Lake	139		MDNR 2013	II	482727.9764	5181457.959	-93.226287	46.78644625	1004200	
1327	11	Aitkin	Hammal		01-0161-00		Lake	376	1	MDNR 2008	II	442938.2837	5147991.861	-93.74342111	46.48308117	1016100	
1328	12	Aitkin	Hay		01-0059-00		Lake	133	1	MDNR 2008	II	483907.0812	5200207.962	-93.21150103	46.95520528	1005900	
1329	13	Aitkin	Horseshoe		01-0154-00		Lake	53		MDNR 2013	II	441042.4173	5138742.91	-93.7669501	46.39968816	1015400	
1330	14	Aitkin	Jenkins		01-0100-00		Lake	127	1	MDNR 2008	II	462843.6769	5166521.939	-93.48558406	46.65122721	1010000	
1333	17	Aitkin	Kingsley Pothole		01-0138-00		Lake	33		MDNR 2013	II	448743.6609	5182049.972	-93.67157314	46.79002722	1013800	
1334	18	Aitkin	Little Prairie		01-0016-00		Lake	78	1	MDNR 2008	II	492013.2894	5184716.87	-93.10469397	46.81594927	1001600	
1335	19	Aitkin	Little Willow River WMA Pool 2		01-0332-00	W0642002	Stream	140	50	MDNR 2008	DL	446445.967	5172393.406	-93.699745	46.702969	W0642002	
1336	20	Aitkin	Long		01-0101-00		Lake	33		MDNR 2013	II	465169.3995	5166125.902	-93.45516105	46.64778822	1010100	
1337	21	Aitkin	Long		01-0089-00		Lake	433		MDNR 2013	II	462197.8737	5148325.93	-93.49253904	46.48744319	1008900	
1338	22	Aitkin	McKinney		01-0199-00		Lake	52		MDNR 2008	II	444460.1015	5191848.944	-93.72888417	46.87785823	1019900	

1339	23	Aitkin	Moulton		01-0212-00		Lake	282	1	MDNR 2008	II	440851.4739	5175152.954	-93.77408015	46.7273122	1021200	
1340	24	Aitkin	Mud (Grayling WMA)		01-0029-00		Lake	400	1	MDNR 2008	II	481157.6864	5167145.948	-93.24627299	46.65760823	1002900	
1341	25	Aitkin	Mud		01-0035-00		Lake	65		MDNR 2013	II	479139.0948	5170765.927	-93.27282	46.69012524	1003500	
1342	26	Aitkin	Round		01-0070-00		Lake	188		MDNR 2013	II	471006.1707	5166207.911	-93.37889403	46.64880422	1007000	
1343	27	Aitkin	Round		01-0023-00		Lake	571		MDNR 2013	II	485281.7208	5171453.952	-93.19250898	46.69648024	1002300	
1344	28	Aitkin	Round		01-0137-00		Lake	634	1	MDNR 2008	II	450129.9612	5174961.933	-93.65264012	46.72635021	1013700	
1345	29	Aitkin	Round		01-0204-00		Lake	736		MDNR 2013	II	438037.28	5131542.878	-93.8050861	46.33462715	1020400	
1346	30	Aitkin	Section 25		01-0127-00		Lake	48		MDNR 2013	II	456295.3657	5143298.908	-93.56897005	46.44184718	1012700	
1347	31	Aitkin	Sixteen		01-0124-00		Lake	18	1	MDNR 2008	II	451295.6935	5146729.964	-93.63441307	46.47238118	1012400	
1348	32	Aitkin	Spectacle		01-0156-00		Lake	107	1	MDNR 2008	II	439000.1869	5136949.932	-93.79328011	46.38337216	1015600	
1349	33	Aitkin	Studhorse		01-0110-00		Lake	63		MDNR 2013	II	457566.1775	5202213.958	-93.55786213	46.97209325	1011000	
1350	34	Aitkin	Sugar		01-0087-00		Lake	416	1	MDNR 2008	II	463357.7577	5140347.871	-93.47680002	46.41571018	1008700	
1351	35	Aitkin	Sugar		01-0084-00		Lake	23	1	MDNR 2008	II	464000.224	5139616.872	-93.46838402	46.40916618	1008400	
1352	36	Aitkin	Thornton		01-0174-00		Lake	186		MDNR 2013	II	438529.418	5144597.907	-93.80040812	46.45215216	1017400	
1353	37	Aitkin	Turner		01-0074-00		Lake	63		MDNR 2013	II	468997.4747	5162048.942	-93.40486403	46.61128721	1007400	
1354	38	Aitkin	Unnamed		01-0372-00		Lake	22		MDNR 2013	II	443118.0174	5154833.881	-93.74191712	46.54466618	1037200	
1355	39	Aitkin	Unnamed (Rice)		01-0419-00		Lake	16	1	MDNR 2008	II	452610.4604	5174494.918	-93.62013211	46.72232821	1041900	
1356	40	Aitkin	Unnamed (Twin Lakes)		01-0413-00		Lake	10		MDNR 2013	II	471981.0948	5153656.885	-93.36539401	46.53589621	1041300	
1357	41	Aitkin	Unnamed		01-0020-00		Lake	19	1	MDNR 2008	II	487644.4568	5189532.937	-93.162093	46.85922227	1002000	
1358	42	Aitkin	Unnamed		01-0262-00		Lake	14	1	MDNR 2008	II	464219.8118	5202943.886	-93.47045011	46.97905426	1026200	
1359	43	Aitkin	Unnamed		01-0314-00		Lake	16		MDNR 2013	II	456367.1952	5144218.919	-93.56812105	46.45013118	1031400	
1360	44	Aitkin	Unnamed		01-0450-00		Lake	5		MDNR 2013	II	444468.0959	5148706.863	-93.7235771	46.48964317	1045000	
1361	45	Aitkin	Vanduse		01-0058-00		Lake	233		MDNR 2013	II	481566.6882	5202488.942	-93.24235204	46.97567028	1005800	
1362	46	Aitkin	Wilkins		01-0102-00		Lake	366		MDNR 2013	II	461821.4912	5165178.951	-93.49883106	46.63908421	1010200	
1363	47	Aitkin	Wolf		01-0019-00		Lake	168		MDNR 2008	II	487625.5752	5188547.973	-93.162314	46.85035827	1001900	
83	83	Anoka	Amelia Lake		02-0014-00		Lake	178		MDNR APM	DL	495871.4226	4997624.106	-93.05250371	45.13207803	02001400	
84	84	Anoka	Carlos Avery WMA - Pool 1		DNR	W9001001		180	15	2008	DL	492792.499	5018395.369	-93.09195975	45.31902705	W9001001	
85	85	Anoka	Carlos Avery WMA - Pool 13		DNR	W9001013		586	2	2008	DL	490609.6387	5014447.198	-93.11973575	45.28346205	W9001013	
86	86	Anoka	Carlos Avery WMA - Pool 14		DNR	W9001014		749	15	2008	DL	489657.1415	5012039.522	-93.13183075	45.26177604	W9001014	
87	87	Anoka	Carlos Avery WMA - Pool 2		DNR	W9001002		683	20	2008	DL	491141.4969	5020019.884	-93.11305376	45.33363106	W9001002	
88	88	Anoka	Carlos Avery WMA - Pool 22		DNR	W9001022		141	10	2008	DL	496000.5361	5021608.136	-93.05105474	45.34797206	W9001022	
89	89	Anoka	Carlos Avery WMA - Pool 24		DNR	W9001024		35	2	2008	DL	496006.6783	5019305.376	-93.05095774	45.32724406	W9001024	
90	90	Anoka	Carlos Avery WMA - Pool 26		DNR	W9001026		200	5	2008	DL	497650.7653	5019885.904	-93.02998073	45.33247706	W9001026	
91	91	Anoka	Carlos Avery WMA - Pool 3		DNR	W9001003		186	120	2008, 2010	DL	493904.7992	5019102.087	-93.07777675	45.32539906	W9001003	
92	92	Anoka	Carlos Avery WMA - Pool 5		DNR	W9001005		52	25	2008	DL	494977.9442	5020448.378	-93.06409674	45.33752606	W9001005	
93	93	Anoka	Carlos Avery WMA - Pool 7		DNR	W9001007		240	3	2008	DL	494849.6349	5020965.291	-93.06573974	45.34217806	W9001007	
94	94	Anoka	Carlos Avery WMA - Pool 9		DNR	W9001009		269	120	2008, 2010, UofM/MPCA 2013	DL	495666.4061	5018377.746	-93.05529174	45.31889206	W9001009	
95	95	Anoka	Hickey Lake		02-0096-00		Lake	41	0	2007, 2008, 2010	DL	472994.4279	5019466.851	-93.34461682	45.32818904	02009600	
96	96	Anoka	Little Coon Lake		02-0032-00		Lake	486	10	2008	DL	491483.3806	5017356.273	-93.10864475	45.30965905	02003200	
97	97	Anoka	Pickerel Lake		02-0130-00		Lake	303	25	2008	DL	464868.3939	5020662.471	-93.44839485	45.33859103	02013000	
98	98	Anoka	Swan Lake		02-0098-00		Lake	273	33	2008	DL	478011.404	5018353.099	-93.2805468	45.31833904	02009800	
99	99	Anoka	Trott Brook		07010207-680	13UM044	Stream			MPCA_BioMon	DL	465548.3942	5014478.192	-93.43928584	45.28295903	13UM044	
100	100	Anoka	Unnamed Lake		02-0101-00		Lake	148	80	MDNR 2013	DL	477384.3708	5028506.032	-93.28901182	45.40970805	02010100	
1364	48	Anoka	Boot		02-0028-00		Lake	130		MDNR 2013	II	489804.5905	5020854.886	-93.13013276	45.34112906	2002800	
1365	49	Anoka	Carlos Avery WMA Pool 15		DNR	W9001015		365	1	MDNR 2008	II	497788.4658	5011663.852	-93.02818672	45.25846705	W9001015	
1366	50	Anoka	Carlos Avery WMA Pool 6		02-0029-00	W9001006		200	1	MDNR 2008	II	496024.1166	5019992.925	-93.05074074	45.33343306	W9001006	
1367	51	Anoka	Deer		02-0059-00		Lake	376		MDNR 2013	II	484232.6835	5021398.936	-93.20126878	45.34592305	2005900	
1368	52	Anoka	East Twin		02-0020-00		Lake	171	1	MDNR 2008	II	490986.4246	5015896.861	-93.11495775	45.29651605	2002000	

1369	53	Anoka	Fish		02-0065-00		Lake	332		MDNR 2013	II	486951.7203	5027759.922	-93.16672878	45.40323606	2006500	
1370	54	Anoka	Grass		02-0113-00		Lake	36		MDNR 2008	II	466526.86	5009521.854	-93.42647583	45.23839302	2011300	
1371	55	Anoka	Grass		02-0092-00		Lake	12		MDNR 2008	II	476255.0897	5022704.847	-93.30316382	45.35745305	2009200	
1372	56	Anoka	Rice		02-0008-00		Lake	371		MDNR 2008	II	490438.9072	5000082.942	-93.12163673	45.15415903	2000800	
1373	57	Anoka	Rice		02-0043-00		Lake	64	1	MDNR 2008	II	489226.8069	5021922.908	-93.13753077	45.35073406	2004300	
1374	58	Anoka	Rice Creek		07010206-584	02r1	Stream			MDNR 2008	II	480093.6008	4993461.927	-93.25298576	45.09434301	02r1	
1375	59	Anoka	Rondeau		02-0015-00		Lake	552		MDNR 2008	II	494906.3709	5005491.915	-93.06485673	45.20289504	2001500	
1376	60	Anoka	Rum River		07010207-556	02r2	Stream			MDNR 2008	II	469285.7852	5004208.906	-93.39099782	45.19069502	02r2	
1377	61	Anoka	Unnamed		02-0101-00		Lake	148		MDNR 2013	II	477042.3165	5028652.917	-93.29338982	45.41101905	2010100	
1378	62	Anoka	Unnamed		02-0505-00		Lake	1732		MDNR 2013	II	493204.7949	5018863.95	-93.08670575	45.32324906	2050500	
1379	63	Anoka	Unnamed		02-0031-00		Lake	635		MDNR 2013	II	494590.1242	5017725.901	-93.06901674	45.31301706	2003100	
1380	64	Anoka	Unnamed		02-0030-00		Lake	235		MDNR 2013	II	493954.5182	5018809.862	-93.07713875	45.32276906	2003000	
1381	65	Anoka	Unnamed		02-0029-00		Lake	1037		MDNR 2013	II	496355.7789	5020089.932	-93.04650874	45.33430806	2002900	
1382	66	Anoka	West Twin		02-0033-00		Lake	18		MDNR 2008	II	490602.871	5016119.939	-93.11985375	45.29851905	2003300	
2330		Anoka	Carlos Avery - Pool 9 (2)			W9001011	Lake	71	30	MDNR 2008	DL						
2331		Anoka	Carlos Avery - Pool 16			W9001016	Lake	67		MDNR 2008	II						
2332		Anoka	Carlos Avery - Pool 17			W9001017	Lake	185		MDNR 2008	II						
2333		Anoka	Carlos Avery - Pool 23			W9001023	Lake	1600		MDNR 2008	II						
101	101	Becker	Abners Lake		03-0039-00		Lake	100	80	2008, 2010	DL	327955.3864	5221079.351	-95.26814165	47.12075514	03003900	
102	102	Becker	Acorn Lake		03-0258-00		Lake	144		MCBS2011, MDNR 2013	DL	289668.3784	5180361.729	-95.75351272	46.74366806	03025800	
103	103	Becker	Aspinwall Lake		03-0104-00		Lake	178	18	2008	DL	315997.3703	5206893.221	-95.41986967	46.98998411	03010400	Y
104	104	Becker	Balsam Lake		03-0292-00		Lake	148	10	2008	DL	295414.3433	5204139.553	-95.68903074	46.95919409	03029200	
105	105	Becker	Bass Lake		03-0088-00		Lake	208	10	2008, MDNR APM	DL	320302.3743	5220722.379	-95.36880567	47.11550413	03008800	Y
106	106	Becker	Big Basswood Lake		03-0096-00		Lake	586	304	2007, 2008, 2010, MCBS 2011	DL	322508.3372	5216278.043	-95.33800066	47.07614213	03009600	Y
107	107	Becker	Big Elbow Lake		03-0159-00		Lake	1002		MDNR APM	DL	307135.3375	5224037.224	-95.54362773	47.14158412	03015900	Y
108	108	Becker	Big Floyd Lake		03-0387-00		Lake	1212		MDNR APM	DL	282251.3434	5194846.587	-95.85738177	46.87148007	03038700	
109	109	Becker	Big Rat Lake		03-0246-00		Lake	1102	110	2008, 2010	DL	297947.3608	5218802.025	-95.66232375	47.09177211	03024600	Y
110	110	Becker	Big Rush Lake		03-0103-00		Lake	1128	20	2008	DL	316123.3907	5208523.677	-95.41887567	47.00467812	03010300	Y
111	111	Becker	Big Sugarbush Lake		03-0304-00		Lake	668		MDNR APM, MDNR 2013	DL	288668.3471	5213761.297	-95.78208278	47.04356009	03030400	Y
112	112	Becker	Blackbird Lake		03-0197-00		Lake	284	42	2007, 2008, 2010	DL	301066.3644	5202367.37	-95.61404572	46.94498309	03019700	
113	113	Becker	Blueberry Lake		03-0007-00		Lake	160	2	2008	DL	330926.4073	5189533.613	-95.21724059	46.83786411	03000700	
114	114	Becker	Booth Lake		03-0198-00		Lake	48	43	2008, 2010	DL	303308.4011	5202769.544	-95.58478971	46.9492671	03019800	
115	115	Becker	Buffalo Lake		03-0350-00		Lake	444	89	2007, 2008, MDNR APM, 2010	DL	287619.3582	5205683.69	-95.79208677	46.97062208	03035000	
116	116	Becker	Buffalo River		09020106-594	03river	Stream			2007	DL	258407.2968	5202008.129	-96.17360487	46.92759505	03river	
117	117	Becker	Bullhead Lake		03-0312-00		Lake	39	6	2008	DL	289714.3733	5210597.534	-95.76685777	47.01545709	03031200	Y
118	118	Becker	Bush Lake		03-0212-00		Lake	110	40	2008, 2010	DL	304934.348	5212159.556	-95.56748672	47.03416111	03021200	Y
119	119	Becker	Cabin Lake		03-0346-00		Lake	38		2007, 2008, 2010	DL	290296.3668	5216370.446	-95.76188778	47.0675301	03034600	Y
120	120	Becker	Camp Seven Lake		03-0151-00		Lake	78	8	2008	DL	311501.3907	5216019.571	-95.4827457	47.07076812	03015100	Y
121	121	Becker	Carman Lake		03-0209-00		Lake	217	30	2007, 2008, 2010	DL	300240.3337	5212563.511	-95.62938274	47.0363911	03020900	Y
122	122	Becker	Chippewa Lake		03-0196-00		Lake	960	288	2007, 2008, 2010	DL	303016.3737	5204660.241	-95.58944371	46.9661771	03019600	
123	123	Becker	Dinner Lake		03-0044-00		Lake	53	11	2007, 2008	DL	334090.3887	5216648.372	-95.18569062	47.08248414	03004400	
124	124	Becker	Eagen Lake		03-0318-00		Lake	85		2007, 2008	DL	289389.3553	5207314.836	-95.76960277	46.98584809	03031800	Y
125	125	Becker	Equay Lake		03-0219-00		Lake	73	7	2008	DL	301960.3438	5206935.748	-95.60430472	46.9863181	03021900	Y
126	126	Becker	Flat Lake		03-0242-00		Lake	1970	197	2007, 2008, 2010	DL	298053.3479	5205762.171	-95.65510473	46.97458909	03024200	
127	127	Becker	Gull Creek		09020108-569	03r2	Stream			2007, 2008	DL	293445.8999	5224479.052	-95.72417378	47.14140611	03r2	Y
128	128	Becker	Gyles Lake		03-0066-00		Lake	42	16	2008, MDNR APM	DL	322401.3687	5199109.039	-95.33267663	46.92174211	03006600	
129	129	Becker	Height Of Land Lake		03-0195-00		Lake	3943	197	2007, 2008, UofM/MPCA 2013, MCBS 2011, MDNR APM, 2010	DL	301471.3703	5196402.971	-95.6061267	46.89148709	03019500	
130	130	Becker	Hubbel Pond Lake		03-0240-00		Lake	561	168	2007, 2008, 2010	DL	297235.3521	5194057.15	-95.66062972	46.86912108	03024000	
131	131	Becker	Ida Lake		03-0582-00		Lake			MDNR APM	DL	263244.3941	5180052.856	-96.09878982	46.73205203	03058200	
132	132	Becker	Indian Creek (I.C. Impoundment)		03-0786-00	03r4	Stream			2007, 2008	DL	324863.8673	5212702.837	-95.30561153	47.04462513	03r4	Y
133	133	Becker	Johnson Lake		03-0199-00		Lake	181	40	2008	DL	302284.3724	5201673.551	-95.59775571	46.93911009	03019900	
134	134	Becker	Johnson Lake		03-0374-01		Lake			MDNR APM	DL	283332.3291	5179456.856	-95.83593074	46.73351005	03037401	
135	135	Becker	Kane Lake		03-0042-00		Lake	28		MCBS 2011, MDNR 2013	DL	334229.3639	5218536.6	-95.18455562	47.09949815	03004200	
136	136	Becker	Kneebone Lake		03-0090-00		Lake	149	15	2008	DL	319121.3684	5219339.62	-95.38380468	47.10274913	03009000	Y
137	137	Becker	Knutson Lake		03-0004-00		Lake	54		MCBS 2011, MDNR 2013	DL	333027.3768	5191657.152	-95.19048558	46.85749011	03000400	

138	138	Becker	Little Basswood Lake		03-0092-00		Lake	105	31	2007, 2008, 2010	DL	322586.364	5218130.538	-95.33770266	47.09281913	03009200	Y
139	139	Becker	Little Dinner Lake		03-0045-00		Lake	12	5	2008	DL	333255.3419	5216497.949	-95.19662762	47.08092114	03004500	
140	140	Becker	Little Flat Lake		03-0217-00		Lake	235	211	2008, 2010, UofM/MPCA 2013	DL	298016.3916	5208241.313	-95.65669474	46.9968631	03021700	Y
141	141	Becker	Little Floyd Lake		03-0386-00		Lake	231		MDNR APM, MDNR 2013	DL	284072.3819	5195155.699	-95.83366177	46.87485207	03038600	
142	142	Becker	Little Mud Lake		03-0022-00		Lake	25	6	2008	DL	333403.3839	5209154.227	-95.19197061	47.01492314	03002200	
143	143	Becker	Little Rice Lake		03-0239-00		Lake	110	21	2008	DL	302812.3695	5216885.368	-95.59745073	47.07601411	03023900	Y
144	144	Becker	Little Round Lake		03-0302-00		Lake	565	0	2013, hydroponic seed stock lake	DL	290953.3475	5205452.842	-95.74820176	46.96960709	03030200	
145	145	Becker	Little Toad Lake		03-0189-00		Lake	434		MDNR APM, MDNR 2013	DL	304392.3824	5190187.001	-95.56515668	46.83647208	03018900	
146	146	Becker	Long Lake		03-0383-00		Lake			MDNR APM	DL	278830.3551	5187791.298	-95.89879977	46.80694205	03038300	
147	147	Becker	Lower Egg Lake		03-0210-00		Lake	171	75	2007, 2008, 2010	DL	302375.3804	5211998.898	-95.60106273	47.03195711	03021000	Y
148	148	Becker	Many Point Lake		03-0158-00		Lake	1588		MCBS 2011, MDNR 2013	DL	308029.3509	5217388.231	-95.52901371	47.08207212	03015800	Y
149	149	Becker	Mary Yellowhead Lake		03-0243-00		Lake	68	7	2008	DL	296075.3407	5210567.959	-95.68324475	47.0171821	03024300	Y
150	150	Becker	Mud Lake		03-0023-00		Lake	85	42	2008, 2010	DL	333106.3946	5208582.932	-95.19566461	47.00971113	03002300	
151	151	Becker	Mud Lake		03-0067-00		Lake	88	83	2008, 2010	DL	323939.3481	5199033.448	-95.31246363	46.92147211	03006700	
152	152	Becker	Ottertail River		09020103-530	03r1	Stream			2007, 2008	DL	292533.8195	5177176.41	-95.71460571	46.71593106	03r1	
153	153	Becker	Rice Lake		03-0291-00		Lake	245	196	2007, 2008, 2010	DL	289864.33	5203295.536	-95.76150276	46.94987208	03029100	
154	154	Becker	Rice Lake		03-0201-00		Lake	245	245	2008, 2010, MCBS 2011, MDNR APM	DL	303691.3858	5200243.165	-95.5786707	46.92666909	03020100	
155	155	Becker	Rock Lake		03-0293-00		Lake	1198	240	2007, 2008, MDNR APM, 2010	DL	289734.3682	5201190.84	-95.76223476	46.93091308	03029300	
156	156	Becker	Round Lake		03-0155-00		Lake	1094	0	2007, 2008, MDNR APM, MCBS 2011	DL	306875.3802	5212544.133	-95.54212871	47.03818811	03015500	Y
157	157	Becker	Saint Patrick Lake		03-0277-00		Lake	78	78	MDNR 2013	DL	287467.3358	5191664.644	-95.78753775	46.84456707	03027700	
158	158	Becker	Schultz Lake		03-0278-00		Lake	103	82	2008, 2010	DL	288335.3912	5190625.467	-95.77568474	46.83550307	03027800	
159	159	Becker	Shell Lake		03-0102-00		Lake	3147	169	2007, 2008, MDNR APM, MCBS 2011, 2010	DL	313776.3497	5202078.607	-95.44707567	46.94607711	03010200	
160	160	Becker	Sieverson / Sivertson Lake		03-0108-00		Lake	79	1	MDNR 2013, MCBS 2011	DL	307474.3835	5195044.687	-95.52682968	46.88104209	03010800	
161	161	Becker	Spindler Lake		03-0214-00		Lake	185	125	2008	DL	301439.3802	5211634.061	-95.61320873	47.0283971	03021400	Y
162	162	Becker	St. Clair Lake		03-0430-00		Lake	192		MCBS 2011,MDNR 2013	DL	285229.3509	5211521.606	-95.82623579	47.02232209	03043000	Y
163	163	Becker	Tamarack Lake		03-0388-00		Lake			MDNR APM	DL	281087.3744	5195666.391	-95.87302978	46.87846607	03038800	
164	164	Becker	Tamarack North Lake		03-0241-02		Lake	1442		2008, 2010, MCBS 2011, MDNR 2013	DL	297363.3399	5201953.627	-95.66246673	46.94014309	03024102	
165	165	Becker	Tamarack South Lake		03-0241-01		Lake			2008, 2010, MCBS 2011	DL	296260.3453	5197838.379	-95.67509973	46.90281308	03024101	
166	166	Becker	Tea Cracker Lake		03-0157-00		Lake	122	30	2008	DL	305975.3449	5207839.074	-95.55194671	46.99562711	03015700	Y
167	167	Becker	Toad Lake		03-0107-00		Lake	1816		MDNR APM, MDNR 2013	DL	310149.3798	5193205.146	-95.49098967	46.86527309	03010700	
168	168	Becker	Town Lake		03-0264-00		Lake	117	35	2008	DL	291985.3993	5178797.316	-95.72250671	46.73033106	03026400	
169	169	Becker	Trieglaff Lake		03-0263-00		Lake	111	56	2008, 2010	DL	294287.371	5181391.812	-95.69357471	46.75436606	03026300	
170	170	Becker	Twin Island Lake		03-0033-00		Lake	71	5	2007,	DL	327311.3995	5222863.31	-95.27730965	47.13662714	03003300	
171	171	Becker	Two Inlets Lake		03-0017-00		Lake	643	40	2007, 2008, MDNR APM, 2010	DL	333307.3373	5210788.567	-95.19383561	47.02959514	03001700	
172	172	Becker	Unnamed - Big Slough Lake		03-0185-00		Lake	33	33	MDNR 2013	DL	298713.3802	5191971.703	-95.64033671	46.85082308	03018500	
173	173	Becker	Unnamed - Davis Lake		03-0268-00		Lake	19	1	MDNR 2013 Hubbel Pond WMA	DL	296258.3836	5196036.933	-95.67431972	46.88661908	03026800	
174	174	Becker	Unnamed - Myrel's Pond		DNR	03_imp_002		40	30	MDNR 2013 Hubbel Pond WMA	DL	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	03_imp_002	
175	175	Becker	Unnamed - Osprey Pond					42	42	MDNR 2013 Hubbel Pond WMA	DL	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN		
176	176	Becker	Unnamed - Trout Pond		DNR	03_imp_003		20	20	MDNR 2013	DL	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	03_imp_003	
177	177	Becker	Unnamed (Indian Creek impoundment)		03-0786-00		Lake	13		2007, 2008, 2010	DL	325069.3737	5212781.087	-95.30293864	47.04538313	03078600	Y
178	178	Becker	Unnamed Lake		03-0434-00		Lake	21	17	2008	DL	284242.3791	5210645.754	-95.83878979	47.01412909	03043400	Y
179	179	Becker	Unnamed Lake		03-0716-00		Lake	25	12	2008	DL	308955.3676	5192839.516	-95.50648767	46.86164409	03071600	
180	180	Becker	Unnamed Lake		03-0776-00		Lake	20	10	2008	DL	309051.3303	5195728.555	-95.50643968	46.88764509	03077600	
181	181	Becker	Unnamed Lake		03-1093-00		Lake	72	7	2008	DL	297839.3301	5211512.079	-95.66048174	47.0262101	03109300	Y
182	182	Becker	Upper Egg Lake		03-0206-00		Lake	493	24	2007, 2008, 2010	DL	302014.3963	5213854.64	-95.60662173	47.04853111	03020600	Y
183	183	Becker	White Earth Lake		03-0328-00		Lake	2074		MDNR APM, MDNR 2013	DL	291099.3484	5223130.588	-95.75445879	47.12854611	03032800	Y
184	184	Becker	Winter Lake		03-0216-00		Lake	117	43	2008, 2010	DL	298814.3733	5211322.597	-95.64757974	47.0248041	03021600	Y

185	185	Becker	Wolf Lake		03-0101-00		Lake	1453	10	2007, 2008	DL	317954.3748	5188611.312	-95.38684363	46.8261511	03010100		
1383	67	Becker	Alvin		03-0184-00		Lake	20		MDNR 2013	II	299203.8486	5192036.872	-95.63393871	46.85155708	3018400		
1384	68	Becker	Bad Medicine		03-0085-00		Lake	782		MDNR 2013	II	318153.2983	5222270.889	-95.39773569	47.12883713	3008500		Y
1385	69	Becker	Bass		03-0332-00		Lake	138		MDNR 2013	II	291328.8439	5220283.889	-95.75011678	47.1030321	3033200		Y
1386	70	Becker	Bass		03-0127-00		Lake	142		MDNR 2013	II	315718.4572	5197532.933	-95.41973665	46.9057501	3012700		
1387	71	Becker	Besseau (Bijou)		03-0638-00		Lake	229		MDNR 2013	II	259894.0817	5190260.94	-96.14791985	46.82258204	3063800		
1388	72	Becker	Big Cormorant		03-0576-00		Lake	3380		MDNR 2013	II	266512.749	5183836.96	-96.05799881	46.76720704	3057600		
1389	73	Becker	Campbell		03-0419-00		Lake	547		MDNR 2013	II	283042.3776	5200877.936	-95.84988778	46.92594707	3041900		
1390	74	Becker	Cotton		03-0286-00		Lake	1916		MDNR 2013	II	294456.6983	5194607.923	-95.69729773	46.87321908	3028600		
1391	75	Becker	Dahlberg		03-0577-00		Lake	77		MDNR 2008	II	267450.5329	5187843.881	-96.04776782	46.80354204	3057700		
1392	76	Becker	Dead		03-0160-00		Lake	296		MDNR 2008	DL	304728.5484	5176977.892	-95.55512566	46.71781907	3016000		
1393	77	Becker	Detroit		03-0381-00		Lake	3089		MDNR 2013	II	284939.1554	5185471.925	-95.81774475	46.78809406	3038100		
1394	78	Becker	Dumbbell		03-0124-00		Lake	149		MDNR 2013	II	314060.4338	5199752.897	-95.44239466	46.9252471	3012400		
1395	79	Becker	Elbow		03-0065-00		Lake	65		MDNR 2013	II	320531.9636	5200500.92	-95.35775864	46.93375411	3006500		
1396	80	Becker	Eunice		03-0503-00		Lake	370		MDNR 2013	II	273248.8857	5180368.944	-95.96818478	46.73836204	3050300		
1397	81	Becker	Floyd		03-0387-00		Lake	1212		MDNR 2013	II	282238.475	5194815.902	-95.85753577	46.87120006	3038700		
1398	82	Becker	Halverson		03-0412-00		Lake	18		MDNR 2008	II	282006.7741	5201947.882	-95.86398679	46.93522407	3041200		
1399	83	Becker	Hanson		03-0177-00		Lake	35		MDNR 2013	II	297276.5394	5195781.928	-95.66085672	46.88463808	3017700		
1400	84	Becker	Hernando DeSoto		03-0032-00		Lake	180		MDNR 2013	II	331346.1993	5223291.909	-95.22430364	47.14152615	3003200		
1401	85	Becker	Hungry		03-0166-00		Lake	245		MDNR 2013	II	299463.6562	5185330.944	-95.62759369	46.79135207	3016600		
1402	86	Becker	Island		03-0153-00		Lake	1209		MDNR 2013	II	307189.3569	5200158.925	-95.53273269	46.9269371	3015300		
1403	87	Becker	Jones		03-0123-00		Lake	36		MDNR 2013	II	310515.189	5202101.918	-95.48989768	46.9453631	3012300		
1404	88	Becker	Juggler		03-0136-00		Lake	434		MDNR 2013	II	313475.351	5222556.891	-95.4594777	47.13010113	3013600		Y
1405	89	Becker	Leif		03-0575-00		Lake	519		MDNR 2013	II	268705.4595	5186838.865	-96.03083681	46.79494704	3057500		
1406	90	Becker	Little Bass		03-0337-00		Lake	87		MDNR 2013	II	292031.637	5219610.912	-95.74055478	47.0972051	3033700		Y
1407	91	Becker	Little Long		03-0009-00		Lake	14		MDNR 2013	II	333472.9837	5188745.971	-95.18358258	46.83142311	3000900		
1408	92	Becker	Little Mud		03-0188-00		Lake	63		MDNR 2013	II	300482.0352	5189686.891	-95.6161637	46.83081608	3018800		
1409	93	Becker	Little Sugar Bush		03-0313-00		Lake	222		MDNR 2013	II	289126.875	5209180.891	-95.77391877	47.00253709	3031300		Y
1410	94	Becker	Loon		03-0489-00		Lake	236		MDNR 2013	II	275698.4605	5181987.914	-95.93695378	46.75373904	3048900		
1411	95	Becker	Maud		03-0500-00		Lake	540		MDNR 2013	II	272107.5596	5181383.891	-95.98360779	46.74709504	3050000		
1412	96	Becker	Meadow		03-0371-00		Lake	66		MDNR 2013	II	280705.0551	5181776.869	-95.87138276	46.75350505	3037100		
1413	97	Becker	Melissa		03-0475-00		Lake	1827		MDNR 2013	II	278685.3362	5180620.866	-95.89723676	46.74244904	3047500		
1414	98	Becker	Mud		03-0120-00		Lake	170		MDNR 2008	DL	309504.8559	5202420.973	-95.50329469	46.9479421	3012000		
1415	99	Becker	Mud		03-0016-00		Lake	86		MDNR 2008	II	329505.4711	5211577.972	-95.24413063	47.03572413	3001600		
1416	100	Becker	Mud		03-0187-00		Lake	144		MDNR 2013	II	301368.0793	5189879.906	-95.6046417	46.83281608	3018700		
1417	101	Becker	Net		03-0334-00		Lake	243		MDNR 2013	II	289045.1812	5220574.971	-95.78031379	47.1049221	3033400		Y
1418	102	Becker	Pearl		03-0486-00		Lake	268		MDNR 2008	II	275620.5691	5184427.936	-95.93916578	46.77564205	3048600		
1419	103	Becker	Pine		03-0200-00		Lake	540		MDNR 2013	II	298424.0976	5199192.872	-95.64732072	46.91564909	3020000		
1420	104	Becker	Rice		03-0173-00		Lake	37		MDNR 2008	II	296478.3989	5177604.881	-95.66323969	46.72099506	3017300		
1421	105	Becker	Rice		03-0285-00		Lake	51		MDNR 2008	II	292812.1994	5187669.94	-95.71570672	46.81034407	3028500		
1422	106	Becker	Sallie		03-0359-00		Lake	1287		MDNR 2013	II	278933.7427	5183810.884	-95.89552577	46.77120205	3035900		
1423	107	Becker	Sand		03-0659-00		Lake	199		MDNR 2013	II	258184.2631	5195044.954	-96.17283386	46.86494904	3065900		
1424	108	Becker	Senical		03-0365-00		Lake	122		MDNR 2013	II	286012.4562	5182219.911	-95.80218174	46.75920905	3036500		
1425	109	Becker	Shipman		03-0005-00		Lake	71		MDNR 2008	DL	331125.1059	5191287.96	-95.21528559	46.85369011	3000500		
1426	110	Becker	Strawberry		03-0323-00		Lake	1607		MDNR 2013	II	295015.4755	5216645.977	-95.69993176	47.0714881	3032300		Y
1427	111	Becker	Unnamed		DNR	being assign*		6		MDNR 2013	II	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	being assigned	
1428	112	Becker	Unnamed		DNR	W0127601		20		MDNR 2013	II	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	W0127601		
1429	113	Becker	Unnamed		03-0140-00		Lake	43		MDNR 2008	II	312343.9944	5222938.882	-95.47454071	47.13321413	3014000		Y
1430	114	Becker	Unnamed		03-0175-00		Lake	25		MDNR 2013	II	304914.3399	5194769.968	-95.56027769	46.87782609	3017500		
1431	115	Becker	Unnamed		03-0087-00		Lake	23		MDNR 2008	II	321685.3923	5221911.964	-95.35106167	47.12657514	3008700		Y
1432	116	Becker	Unnamed		03-0600-00		Lake	59		MDNR 2008	II	263855.588	5184676.896	-96.09318082	46.77382003	3060000		
1433	117	Becker	Unnamed		03-0598-00		Lake	36		MDNR 2008	II	263913.5852	5185215.9	-96.09269982	46.77868404	3059800		
1434	118	Becker	Unnamed		03-0599-00		Lake	34		MDNR 2008	II	264270.9419	5184605.915	-96.08771182	46.77332903	3059900		
1435	119	Becker	Unnamed (Little Round)		03-0008-00		Lake	12		MDNR 2013	II	334775.6475	5189463.953	-95.16677357	46.83820411	3000800		
1436	120	Becker	Upper Cormorant		03-0588-00		Lake	963		MDNR 2013	II	261121.1	5184630.948	-96.12892083	46.77243403	3058800		
1437	121	Becker	Waboose		03-0213-00		Lake	249		MDNR 2013	II	303716.1436	5211457.905	-95.58319972	47.02749311	3021300		Y
1438	122	Becker	Wahbegon		03-0082-00		Lake	121		MDNR 2013	II	319358.2341	5215827.95	-95.37927867	47.07124113	3008200		Y
2334		Becker	Albertson		03-0266-00		Lake	73		MDNR 2008	II							
2335		Becker	Axberg		03-0660-00		Lake	47		MDNR 2008	II							
2336		Becker	Bass		03-0480-00		Lake	28		MDNR 2008	II							
2337		Becker	Bean		03-0411-00		Lake	19		MDNR 2008	II							

2338		Becker	Lyman WPA			03IMP003	Lake			MDNR 2008	II						
2339		Becker	Tamarack NWR - Ogemash Pool			03IMP002	Lake	71	20	MDNR 2008	DL						
186	186	Beltrami	Andrusia Lake		04-0038-00		Lake	1448		MCBS2011, MDNR 2013	DL	375330.3859	5255987.865	-94.65364952	47.44540623	04003800	Y
187	187	Beltrami	Big Lake		04-0049-00		Lake	3565	250	2008, 2010	DL	379184.361	5261970.552	-94.60418752	47.49994324	04004900	Y
188	188	Beltrami	Big Rice Lake		04-0031-00		Lake	642	96	2007, 2008, 2010	DL	382935.399	5264774.132	-94.55514551	47.52584625	04003100	Y
189	189	Beltrami	Blackduck Lake		04-0069-00		Lake			MDNR APM	DL	378766.3412	5287839.476	-94.61689456	47.73253627	04006900	
190	190	Beltrami	Blackduck River		09020302-513	14RD122	Stream			MPCA_BioMon	DL	369584.5113	5307535.602	-94.74522463	47.90787929	14RD122	Y
191	191	Beltrami	Bootleg Lake		04-0211-00		Lake	308	185	2007, 2008, 2010	DL	348674.3405	5256721.807	-95.00726963	47.44636321	04021100	
192	192	Beltrami	Buck Lake		04-0042-00		Lake			MDNR APM	DL	382472.3898	5257439.941	-94.5593395	47.45979424	04004200	Y
193	193	Beltrami	Burns Lake		04-0001-00		Lake	131	105	2008, 2010	DL	392997.3446	5260176.29	-94.42040546	47.48622226	04000100	Y
194	194	Beltrami	Campbell Lake		04-0196-00		Lake	462	23	2008, MCBS 2011	DL	353982.347	5276283.253	-94.94339464	47.62348523	04019600	
195	195	Beltrami	Carr Lake		04-0141-00		Lake	51	8	2007, 2008	DL	357429.3956	5255930.547	-94.89094959	47.44122121	04014100	
196	196	Beltrami	Cass Lake		04-0030-00		Lake	15958	10	2008	DL	385150.3655	5253523.753	-94.52280448	47.42504624	04003000	Y
197	197	Beltrami	Clearwater Lake		04-0343-00		Lake	1039		MDNR APM, MDNR2008	DL	335792.4051	5289067.319	-95.19012573	47.73407323	04034300	
198	198	Beltrami	Cranberry Lake		04-0123-00		Lake	77	46	2007, 2008, 2010	DL	367633.3825	5286471.856	-94.7648896	47.71804926	04012300	
199	199	Beltrami	Depressional Wetland		04-0460-00	09Belt143	Wetland			MPCA_BioMon	DL	391923.2117	5285499.914	-94.44090151	47.71383029	09Belt143	
200	200	Beltrami	Erickson NW Lake		04-0068-01		Lake			2008, 2010	DL	375039.3893	5280950.541	-94.66460557	47.66986726	04006801	
201	201	Beltrami	Erickson SE Lake		04-0068-02		Lake			2008, 2010	DL	375460.3466	5280193.342	-94.65878456	47.66313826	04006802	
202	202	Beltrami	George Lake		04-0175-00		Lake	89	18	2008	DL	355303.4072	5286756.03	-94.92929165	47.71795925	04017500	
203	203	Beltrami	Gourd Lake		04-0253-00		Lake			UofM/MPCA 2013	DL	352766.3556	5297178.944	-94.96662968	47.81111126	04025300	Y
204	204	Beltrami	Grant Creek		07010101-546	04r1	Stream			2007, 2008	DL	345145.3849	5258601.407	-95.05470764	47.4624362	04r1	Y
205	205	Beltrami	Gull Lake		04-0064-00		Lake	170	34	2008	DL	376508.3643	5273231.642	-94.64286755	47.60072525	04006400	
206	206	Beltrami	Gull Lake		04-0120-00		Lake			UofM/MPCA 2013	DL	370686.412	5281499.123	-94.72272758	47.67394526	04012000	
207	207	Beltrami	Heart Lake		04-0271-00		Lake	10		2007, 2008	DL	353129.3378	5304202.19	-94.96416769	47.87434827	04027100	Y
208	208	Beltrami	Irving Lake		04-0140-00		Lake	644	97	2008, 2010	DL	357940.3721	5257988.713	-94.88483759	47.45984222	04014000	
209	209	Beltrami	Kitchi Lake		04-0007-00		Lake	1850	185	MDNR APM, 2010	DL	385966.3661	5262109.498	-94.51420549	47.50241725	04000700	Y
210	210	Beltrami	Little Mississippi River		07010101-517	13UM122	Stream			MPCA_BioMon	DL	339511.0917	5258108.366	-95.12923566	47.4566392	13UM122	
211	211	Beltrami	Little Puposky Lake		04-0197-00		Lake	158	95	2008, 2010	DL	354403.404	5285714.417	-94.94093665	47.70839025	04019700	
212	212	Beltrami	Little Rice Lake		04-0015-00		Lake	123	60	2008, 2010	DL	384213.3748	5262662.675	-94.5376195	47.50708325	04001500	Y
213	213	Beltrami	Little Turtle Lake		04-0155-00		Lake	464	23	2008	DL	357983.3833	5277543.191	-94.89058263	47.63570524	04015500	
214	214	Beltrami	Long Lake		04-0227-00		Lake	706		MDNR APM, MDNR 2013	DL	350757.3789	5280136.307	-94.98760466	47.65739823	04022700	
215	215	Beltrami	Manomin Lake		04-0286-00		Lake	288	144	2007, 2008, 2010	DL	343682.4007	5256967.915	-95.07352865	47.4473982	04028600	
216	216	Beltrami	Marquette Lake		04-0142-00		Lake	578		2008, MDNR APM	DL	356239.3519	5254687.631	-94.9063206	47.42978221	04014200	
217	217	Beltrami	Medicine Lake		04-0122-00		Lake	458	69	2008, 2010	DL	369744.3416	5287684.586	-94.7371196	47.72938526	04012200	
218	218	Beltrami	Mississippi River		07010101-755	04r2	Stream			2007, 2008, MPCA_BioMon	DL	393208.1223	5255519.775	-94.41648246	47.44437025	04r2	Y
219	219	Beltrami	Moose Lake		04-0011-00		Lake	617	96	2008, 2010	DL	389819.4016	5266686.368	-94.46420549	47.54425026	04001100	Y
220	220	Beltrami	Moose Lake		04-0342-00		Lake	133		2007, 2008, MCBS 2011	DL	335720.3986	5259746.653	-95.18009968	47.4704252	04034200	
221	221	Beltrami	Movil Lake		04-0152-00		Lake			MDNR APM, MDNR 2013	DL	359278.3537	5272086.08	-94.87160061	47.58691223	04015200	
222	222	Beltrami	Norman Lake		04-0029-00		Lake	61	8	2008	DL	390312.3894	5333449.478	-94.47458159	48.14483334	04002900	
223	223	Beltrami	North Turtle River		07010101-570	13UM131	Stream			MPCA_BioMon	DL	384212.5861	5273055.215	-94.54036752	47.60056026	13UM131	
224	224	Beltrami	Pimushe Lake		04-0032-00		Lake	1350	135	2007, 2008, 2010, MCBS 2011	DL	385542.3726	5265749.442	-94.5207795	47.53508326	04003200	Y
225	225	Beltrami	Puposky Lake		04-0198-00		Lake	2120	236	2008, 2010	DL	355114.3476	5283667.29	-94.93078465	47.69014124	04019800	
226	226	Beltrami	Rabideau Lake		04-0034-00		Lake	723	217	2007, 2008, MDNR APM, MCBS 2011, 2010	DL	386446.3591	5277394.557	-94.51178652	47.63998627	04003400	
227	227	Beltrami	Rice Lake		04-0121-00		Lake	36		2008, MCBS 2011	DL	369001.3988	5289570.675	-94.7475906	47.74619727	04012100	
228	228	Beltrami	Rice Lake		04-0174-00		Lake	55		2008, MCBS 2011	DL	356492.3932	5287505.828	-94.91369465	47.72496725	04017400	
229	229	Beltrami	Rice Pond		04-0059-00		Lake	247	123	2008, 2010	DL	379762.3898	5275918.047	-94.60033254	47.62549926	04005900	
230	230	Beltrami	Tamarac River		09020302-501	14RD139	Stream			MPCA_BioMon	DL	388818.2624	5334497.569	-94.4949346	48.15400034	14RD139	
231	231	Beltrami	Three Island Lake		04-0134-00		Lake	836	125	2007, 2008, 2010	DL	363609.3378	5275223.282	-94.8150046	47.61605124	04013400	
232	232	Beltrami	Turtle Lake		04-0159-00		Lake	1584		MDNR APM, MCBS 2011, MDNR 2013	DL	359664.3983	5275496.428	-94.86756062	47.61766524	04015900	
233	233	Beltrami	Turtle River		07010101-510	13UM153	Stream			MPCA_BioMon	DL	379732.6869	5266970.688	-94.59827553	47.54501825	13UM153	
234	234	Beltrami	Turtle River Lake		04-0111-00		Lake	1664		2007, 2008, MDNR APM, 2010	DL	372587.3732	5270612.396	-94.69424656	47.57640925	04011100	
235	235	Beltrami	Whitefish Lake		04-0309-00		Lake	126		2007, 2008	DL	341998.3775	5283890.751	-95.1055357	47.68907723	04030900	
1439	123	Beltrami	Alice		04-0151-00		Lake	96		MDNR 2013	II	355382.8631	5268251.882	-94.92211862	47.55157523	4015100	
1440	124	Beltrami	Balm		04-0329-00		Lake	512		MDNR 2013	II	341911.0372	5294891.962	-95.11069471	47.78797324	4032900	
1441	125	Beltrami	Barr		04-0327-00		Lake	28		MDNR 2013	II	339625.6661	5295955.886	-95.14157872	47.79697424	4032700	
1442	126	Beltrami	Bass		04-0191-00		Lake	56		MDNR 2013	II	357778.1874	5292382.971	-94.89815265	47.76911026	4019100	
1443	127	Beltrami	Baumgartner		04-0021-00		Lake	27		MDNR 2013	II	389522.9454	5273127.949	-94.4697645	47.60214127	4002100	

1444	128	Beltrami	Beltrami		04-0135-00		Lake	701		MDNR 2013	II	363942.5114	5273007.963	-94.80988559	47.59619824	4013500	
1445	129	Beltrami	Bemidji		04-0130-02	4013000		6920		MDNR 2013	II	360618.6548	5263066.878	-94.85092559	47.50609023	4013000	
1446	130	Beltrami	Benjamin		04-0033-00		Lake	36		MDNR 2013	II	383817.9023	5277342.901	-94.54675353	47.63905527	4003300	
1447	131	Beltrami	Borden		04-0027-00		Lake	30		MDNR 2013	II	385409.1728	5292699.981	-94.52961354	47.77746729	4002700	
1448	132	Beltrami	Bullhead		04-0002-00		Lake	35		MDNR 2013	II	384481.5798	5258864.943	-94.53306449	47.47297125	4000200	Y
1449	133	Beltrami	Carla		04-0058-00		Lake	25		MDNR 2013	II	383449.5017	5277816.885	-94.55178253	47.64325227	4005800	
1450	134	Beltrami	Carter		04-0056-00		Lake	30		MDNR 2013	II	376206.077	5277587.923	-94.64811856	47.63984826	4005600	
1451	135	Beltrami	Chinaman		04-0017-00		Lake	72		MDNR 2013	II	390031.1153	5275925.948	-94.4637085	47.62739527	4001700	
1452	136	Beltrami	Crandall		04-0070-00		Lake	74		MDNR 2013	II	381094.5424	5285805.913	-94.58530055	47.71467927	4007000	
1453	137	Beltrami	Deer		04-0230-00		Lake	287		MDNR 2013	II	348050.4593	5280430.902	-95.02373467	47.65941723	4023000	
1454	138	Beltrami	Dellwater		04-0331-00		Lake	147		MDNR 2013	II	343989.4847	5294504.957	-95.08282471	47.78500024	4033100	
1455	139	Beltrami	Dutchman		04-0067-00		Lake	171		MDNR 2008	II	377987.6684	5281070.957	-94.62538155	47.67151327	4006700	
1456	140	Beltrami	Erick		04-0229-00		Lake	75		MDNR 2013	II	346839.0371	5280559.978	-95.03990367	47.66029223	4022900	
1457	141	Beltrami	Fagen		04-0060-00		Lake	35		MDNR 2013	II	378068.0897	5276192.974	-94.62295055	47.62765526	4006000	
1458	142	Beltrami	Flora		04-0051-00		Lake	178		MDNR 2013	II	375985.5132	5265914.965	-94.64775454	47.53481825	4005100	Y
1459	143	Beltrami	Fox		04-0162-00		Lake	148		MDNR 2013	II	361552.9567	5274578.916	-94.84215161	47.60982024	4016200	
1460	144	Beltrami	Funk		04-0073-00		Lake	140		MDNR 2013	II	379990.9768	5282915.941	-94.59921255	47.68848227	4007300	
1461	145	Beltrami	Gilstad		04-0024-00		Lake	256		MDNR 2013	II	385068.1505	5280802.881	-94.53102453	47.67039927	4002400	
1462	146	Beltrami	Gimmer		04-0020-00		Lake	77		MDNR 2013	II	391091.3495	5274430.972	-94.44922949	47.61412727	4002000	
1463	147	Beltrami	Grant		04-0217-00		Lake	200		MDNR 2013	II	348908.0891	5261712.938	-95.00587863	47.49130021	4021700	
1464	148	Beltrami	Grass		04-0216-00		Lake	233		MDNR 2008	II	353382.7699	5262300.906	-94.94670462	47.49761122	4021600	
1465	149	Beltrami	Grenn		040-241-00		Lake	70		MDNR 2013	II	353048.055	5290454.889	-94.96059366	47.75071125	4024100	
1466	150	Beltrami	Holland (Little Rice Pond)		04-0023-00		Lake	22		MDNR 2008	II	384663.2153	5274159.955	-94.53466552	47.61057726	4002300	
1467	151	Beltrami	Island		04-0265-00		Lake	368		MDNR 2013	II	347357.1688	5293590.924	-95.03757269	47.77758825	4026500	
1468	152	Beltrami	Jessie		04-0052-00		Lake	50		MDNR 2013	II	375622.854	5263204.919	-94.65180553	47.51037424	4005200	Y
1469	153	Beltrami	Julia		04-0166-00		Lake	492		MDNR 2013	II	357762.2392	5281522.987	-94.89481963	47.67144624	4016600	
1470	154	Beltrami	Lindgren		04-0153-00		Lake	84		MDNR 2013	II	363881.0765	5280848.933	-94.81314061	47.66670125	4015300	
1471	155	Beltrami	Little Gilstad		04-0016-00		Lake	40		MDNR 2013	II	386070.5819	5280632.957	-94.51763152	47.66904827	4001600	
1472	156	Beltrami	Little Rabideau		04-0359-00		Lake	25		MDNR 2013	II	383565.7694	5276848.964	-94.54997753	47.63456727	4035900	
1473	157	Beltrami	Little Rice		04-0170-00		Lake	72		MDNR 2008	II	357939.0594	5290968.982	-94.89554465	47.75643026	4017000	
1474	158	Beltrami	Lower Red		04-0035-02		Lake	164519		MDNR 2008	II	347377.1685	5314368.953	-95.04464473	47.96442227	4003502	Y
1475	159	Beltrami	Manomin Creek		07010101-546	04r1	Stream			MDNR 2008	II	347978.8899	5331810.913	-95.04278275	48.12139329	04r1	Y
1476	160	Beltrami	Meadow		04-0050-00		Lake	118		MDNR 2013	II	375307.6894	5270457.904	-94.65804555	47.57554825	4005000	
1477	161	Beltrami	Muskrat		04-0054-00		Lake	37		MDNR 2013	II	381929.2861	5280172.979	-94.57265154	47.66416827	4005400	
1478	162	Beltrami	Muskrat		04-0240-00		Lake	106		MDNR 2013	II	349266.3092	5282082.959	-95.00812167	47.67455724	4024000	
1479	163	Beltrami	Nelson		04-0057-00		Lake	29		MDNR 2013	II	378354.9527	5278493.918	-94.61977355	47.64840426	4005700	
1480	164	Beltrami	Ose		04-0089-00		Lake	68		MDNR 2013	II	372402.7768	5256069.979	-94.69248854	47.44557823	4008900	
1481	165	Beltrami	Peterson		04-0119-00		Lake	78		MDNR 2013	II	371989.0736	5273298.982	-94.70298257	47.60045425	4011900	
1482	166	Beltrami	Peterson		04-0177-00		Lake	66		MDNR 2013	II	362837.7855	5284579.949	-94.82820262	47.70003425	4017700	
1483	167	Beltrami	Peterson		04-0235-00		Lake	305		MDNR 2013	II	351623.1976	5274695.927	-94.97423664	47.60867523	4023500	
1484	168	Beltrami	Polly Wog		04-0168-00		Lake	35		MDNR 2013	II	362839.5116	5289435.889	-94.82970863	47.74370426	4016800	
1485	169	Beltrami	Preston		04-0009-00		Lake	10		MDNR 2013	II	384288.2765	5269723.933	-94.53848251	47.57061026	4000900	
1486	170	Beltrami	Rice		04-0250-00		Lake	124		MDNR 2008	II	351879.0577	5292098.916	-94.97674067	47.76522725	4025000	
1487	171	Beltrami	Roadside		04-0075-00		Lake	46		MDNR 2013	II	374326.5004	5270477.952	-94.67109255	47.57553925	4007500	
1488	172	Beltrami	School		04-0114-00		Lake	74		MDNR 2013	II	369065.9561	5276266.948	-94.74273858	47.62656325	4011400	
1489	173	Beltrami	Stump		04-0130-01		Lake	323		MDNR 2013	II	368161.4015	5261009.935	-94.75019556	47.48916323	4013001	
1490	174	Beltrami	Swenson		04-0085-00		Lake	394		MDNR 2013	II	373021.7679	5258501.907	-94.68498054	47.46757223	4008500	
1491	175	Beltrami	Ten Mile		04-0267-00		Lake	98		MDNR 2013	II	354413.4638	5292010.908	-94.94290866	47.76501325	4026700	
1492	176	Beltrami	Unnamed (Twin Pothole North)		04-0010-00		Lake	9		MDNR 2013	II	384461.4669	5269175.955	-94.53603651	47.56571226	4001000	
1493	177	Beltrami	Unnamed (Twin Pothole South)		DNR	not assigned		7		MDNR 2013	II	384856.1536	5268451.954	-94.53060151	47.55927026	not assigned	
1494	178	Beltrami	Unnamed		04-0090-00		Lake	27		MDNR 2013	II	370095.2708	5254757.972	-94.72269654	47.43332223	4009000	
1495	179	Beltrami	Unnamed		04-0103-00		Lake	43		MDNR 2013	II	371704.1619	5265959.912	-94.70462755	47.53439124	4010300	
1496	180	Beltrami	Unnamed		04-0080-00		Lake	130		MDNR 2013	II	373224.7558	5260755.985	-94.68293554	47.48788524	4008000	Y
1497	181	Beltrami	Unnamed		04-0117-00		Lake	48		MDNR 2013	II	373113.8049	5273509.889	-94.68808756	47.60257225	4011700	
1498	182	Beltrami	Unnamed		04-0370-00		Lake	223		MDNR 2013	II	376971.9915	5271399.88	-94.63618854	47.58433825	4037000	
1499	183	Beltrami	Unnamed		04-0146-00		Lake	34		MDNR 2013	II	354997.6396	5253392.95	-94.9223526	47.41786421	4014600	
1500	184	Beltrami	Unnamed		04-0131-00		Lake	45		MDNR 2013	II	364316.1078	5258635.939	-94.80048757	47.46702223	4013100	
1501	185	Beltrami	Unnamed		04-0220-00		Lake	28		MDNR 2013	II	351884.5686	5270692.951	-94.96940964	47.57273823	4022000	
1502	186	Beltrami	Unnamed		04-0202-00		Lake	18		MDNR 2013	II	350178.3615	5261151.954	-94.98883463	47.48654921	4020200	

1503	187	Beltrami	Unnamed		04-0232-00		Lake	32		MDNR 2013	II	353395.7933	5278644.931	-94.95198764	47.64459024	4023200	
1504	188	Beltrami	Unnamed (Addition)		04-0144-00		Lake	12		MDNR 2013	II	357337.2396	5254830.952	-94.89181659	47.43131221	4014400	
1505	189	Beltrami	Unnamed (Great Lake Pond)		04-0203-00		Lake	44		MDNR 2013	II	347820.088	5262057.953	-95.02043264	47.49414921	4020300	
1506	190	Beltrami	Unnamed (Horseshoe)		04-0301-00		Lake	24		MDNR 2013	II	340773.9104	5274688.968	-95.11849169	47.60603822	4030100	
1507	191	Beltrami	Unnamed (Kinn)		04-0100-00		Lake	32		MDNR 2013	II	367893.9799	5265314.957	-94.75503457	47.52782724	4010000	
1508	192	Beltrami	Unnamed (Moose)		04-0112-00		Lake	58		MDNR 2013	II	371058.4381	5271662.901	-94.71487657	47.58555525	4011200	
1509	193	Beltrami	Unnamed (Parkers)		04-0106-00		Lake	48		MDNR 2013	II	370665.177	5263735.953	-94.71777256	47.51418324	4010600	
1510	194	Beltrami	Upper Lindgren		04-0179-00		Lake	56		MDNR 2013	II	363807.2707	5281712.98	-94.81439261	47.67445625	4017900	
1511	195	Beltrami	Upper Red		04-0035-01	4003500		119217		MDNR 2008	II	368560.8794	5332401.902	-94.76654167	48.13129031	4003500	Y
1512	196	Beltrami	Whitefish		04-0300-00		Lake	122		MDNR 2013	II	341732.5403	5274673.979	-95.10574068	47.60613822	4030000	
1513	197	Beltrami	Wolf		04-0079-00		Lake	1206		MDNR 2013	II	372516.0057	5252352.885	-94.68991653	47.41216823	4007900	
1514	198	Benton	Pularskis		05-0009-00		Lake	138		MDNR 2013	II	413683.6849	5067291.912	-94.1098221	45.75379504	5000900	
1515	199	Big Stone	Big Stone		06-0152-00		Lake	6028		MDNR 2013	II	216435.7778	5035056.91	-96.62389876	45.41151581	6015200	
1516	200	Big Stone	Long Tom		06-0029-00		Lake	110		MDNR 2013	II	237185.6901	5023704.944	-96.35315567	45.31760982	6002900	
1517	201	Big Stone	Marsh		06-0001-00		Lake	6100		MDNR 2013	II	252368.6824	5009219.906	-96.15252659	45.19294082	6000100	
1518	202	Big Stone	North Rothwell		06-0147-00		Lake	228		MDNR 2013	II	230938.1921	5045098.875	-96.44440172	45.50746884	6014700	
1519	203	Blue Earth	Rice		07-0059-00		Lake	255		MDNR 2008	II	429863.3165	4877600.892	-93.8755128	44.04821781	7005900	
1520	204	Blue Earth	Rice Creek		07020011-531	07r1	Stream			MDNR 2008	II	414983.0211	4861995.83	-94.05873483	43.90616678	07r1	
1521	205	Brown	Gilman (Rice)		08-0035-00		Lake	164		MDNR 2008	II	363018.5763	4897181.931	-94.71474606	44.21499478	8003500	
2340		Brown	Altematt		08-0054-00		Lake			MDNR 2008	II						
236	236	Buffalo, WI	Mississippi Pool 5 / Spring		07040003-627	S007-660				UofM/MPCA 2013	DL	592333.3783	4894937.929	-91.84441724	44.20181797	S007-660	
237	237	Buffalo, WI - Wa	Mississippi Pool 5 / Spring		07040003-627	S007-690	Stream			2008, UofM/MPCA2013	DL	592209.376	4894656.895	-91.84601824	44.19930397	S007-690	
238	238	Carlton	Bang Lake		09-0046-00		Lake	58	1	2008, 1854 List	DL	522586.3999	5168264.365	-92.70473683	46.66755727	09004600	Y
239	239	Carlton	Bob Lake		09-0026-00		Lake	78	1	2008, 1854 List	DL	529520.4002	5164473.081	-92.6143358	46.63316928	09002600	
240	240	Carlton	Cedar Lake		09-0031-00		Lake	62	10	2008, 1854 List	DL	529879.4067	5175923.167	-92.60890282	46.73619329	09003100	Y
241	241	Carlton	Cross Lake		09-0062-00		Lake	110	6	2008, 1854 List	DL	507923.4249	5174575.341	-92.8963109	46.72468527	09006200	
242	242	Carlton	Dead Fish Lake		09-0051-00		Lake	153	115	2007, 2008, UofM/MPCA 2013, 1854 List, 2010	DL	523630.3925	5177168.933	-92.69063184	46.74765429	09005100	Y
243	243	Carlton	Flower Lake		09-0064-00		Lake	14	10	2008, 1854 List	DL	507605.4164	5169892.635	-92.90054989	46.68254826	09006400	
244	244	Carlton	Hardwood Lake		09-0030-00		Lake	100	25	2008, 1854 List	DL	526164.4081	5178805.838	-92.65736384	46.76229029	09003000	Y
245	245	Carlton	Hay Lake		09-0010-00		Lake	103	1	2007, 2008, MDNR APM, 1854 List, 2010	DL	541084.4276	5160925.008	-92.46358075	46.60063128	09001000	
246	246	Carlton	Island Lower Lake		09-0060-02		Lake			2007, 2008, 1854 List, 2010	DL	509406.3695	5168148.701	-92.87703588	46.66683126	09006002	
247	247	Carlton	Island Upper Lake		09-0060-01		Lake			2007, 2008, 1854 List, 2010	DL	509567.3846	5169937.547	-92.87489389	46.68292726	09006001	
248	248	Carlton	Jaskari Lake		09-0050-00		Lake	74	74	2008, 1854 List, 2010	DL	522900.4285	5169408.991	-92.70057484	46.67784728	09005000	Y
249	249	Carlton	Kettle Lake		09-0049-00		Lake	611	415	2007, 2008, 1854 List, 2010	DL	517109.4209	5164266.435	-92.77648285	46.63174126	09004900	
250	250	Carlton	Kettle Lake		09-0074-00		Lake	22		1854 List, MDNR 2013	DL	495343.3558	5164008.841	-93.06083193	46.62962524	09007400	
251	251	Carlton	Kettle River		07030003-511	KR	Stream			1854 List	DL	514628.35	5164249.242	-92.80889586	46.63164526	KR	
252	252	Carlton	Little Kettle Lake		09-0077-00		Lake	18		1854 List, MDNR 2013, 2010	DL	515755.4248	5166857.403	-92.79408286	46.65509127	09007700	
253	253	Carlton	Long Lake		09-0066-00		Lake	17	4	2008, 1854 List, 2010	DL	504102.4152	5169103.943	-92.94636291	46.67548126	09006600	
254	254	Carlton	Miller Lake		09-0053-00		Lake	156	156	2008, 1854 List, 2010	DL	522708.4053	5174872.692	-92.70281584	46.72702228	09005300	Y
255	255	Carlton	Moose (Little) Lake		09-0043-00		Lake	133		2008, 1854 List	DL	522483.3683	5142145.332	-92.7073498	46.43250624	09004300	
256	256	Carlton	Moose Horn River		07030003-531	MHR	Stream			2007, 1854 List, 2010	DL	515179.2234	5141197.428	-92.80245283	46.42417923	MHR	
257	257	Carlton	Moosehead Lake		09-0041-00		Lake	279		2008, 1854 List	DL	518612.3857	5143833.209	-92.75766782	46.44781424	09004100	
258	258	Carlton	Perch Lake		09-0036-00		Lake	796	597	2008, 1854 List, 2010	DL	525072.4013	5170616.203	-92.67211083	46.68863328	09003600	Y
259	259	Carlton	Rice Portage Lake		09-0037-00		Lake	832	120	2007, 2008, 1854 List, 2010	DL	523384.4059	5171870.868	-92.69412184	46.69998528	09003700	Y
260	260	Carlton	Sawyer WMA (Sawyer P)		09-0145-00		Lake	21		1854 List, MDNR 2013	DL	528112.3721	5165976.165	-92.63263881	46.64675628	09014500	
261	261	Carlton	Sawyer WMA, Sterly Pool		DNR	W0854002		29	2	2008, 1854 List	DL	528488.6341	5165462.104	-92.62775381	46.64211428	W0854002	
262	262	Carlton	Tamarack Lake		09-0067-00		Lake	228	11	2008, 1854 List, 2010	DL	500619.388	5167527.675	-92.99190392	46.66130825	09006700	
263	263	Carlton	Tamarack River		07010103-521	09r1	Stream			1854 List, in MDNR 2008 as 09r1, 2010	DL	500607.88	5167847.365	-92.99205392	46.66418525	09r1	
264	264	Carlton	unnamed (FDL1)		09-0178-00		Lake			1854 List, MDNR 2013	DL	524499.4025	5176122.189	-92.67931084	46.73820329	09017800	Y
265	265	Carlton	unnamed (SWTorchlight)		09-0027-00		Lake	15		1854 List, MDNR 2013	DL	525421.3643	5165165.813	-92.66784782	46.63957127	09002700	
266	266	Carlton	Walli Lake		09-0071-00		Lake	12		1854 List, MDNR 2013	DL	495827.3631	5164762.543	-93.05451593	46.63641124	09007100	

267	267	Carlton	Wild Rice Lake		09-0023-00		Lake	54	36	2008, 1854 List, MCBS 2011, 2010	DL	530339.4281	5169067.718	-92.60333381	46.67448028	09002300	Y
268	268	Carlton	Woodbury Lake		09-0063-00		Lake	59	10	2008, 1854 List	DL	505295.3785	5169851.713	-92.9307569	46.68220226	09006300	
1522	206	Carlton	Eagle		09-0057-00		Lake	410		MDNR 2013	II	506282.0805	5165504.872	-92.91791389	46.64307525	9005700	
1523	207	Carlton	Merwin		09-0058-00		Lake	51		MDNR 2013	II	511482.0764	5165077.942	-92.84997787	46.63916426	9005800	
1524	208	Carlton	Railroad		09-0174-00		Lake	7		MDNR 2013	II	503880.1643	5169438.934	-92.94926591	46.67849726	9017400	
1525	209	Carlton	Venoah		09-0009-00		Lake	82		MDNR 2013	II	542862.5234	5163161.959	-92.44015875	46.62065029	9000900	
1526	210	Carver	Rice		10-0078-00		Lake	244		MDNR 2008	II	431406.4778	4961357.889	-93.8673299	44.80232893	10007800	
1527	211	Carver	Rice Marsh		10-0001-00		Lake	77		MDNR 2008	II	458957.6936	4966577.903	-93.51939981	44.85143296	10000100	
269	269	Cass	Baby Lake		11-0283-00		Lake	736	7	2008	DL	396663.3827	5202809.643	-94.35850236	46.97075319	11028300	
270	270	Cass	Bergkeller Lake		11-0447-00		Lake	120	5	2008	DL	373017.3566	5175944.341	-94.66176841	46.72498514	11044700	
271	271	Cass	Beuber Lake		11-0353-00		Lake	135	15	2007, 2008, MCBS 2011, 2010	DL	384457.3544	5191944.145	-94.51615239	46.87099417	11035300	
272	272	Cass	Big Birch Lake		11-0017-00		Lake	255	45	2008, 2010	DL	433752.3638	5211094.237	-93.87220323	47.05004224	11001700	
273	273	Cass	Big Boy Lake		11-0144-00		Lake			MDNR APM	DL	412535.3509	5237785.197	-94.15669336	47.28770425	11014400	Y
274	274	Cass	Big Portage Lake		11-0308-00		Lake	956	30	2008, MDNR APM, MCBS 2011	DL	391450.3671	5189987.715	-94.42395436	46.85457217	11030800	
275	275	Cass	Big Rice Lake		11-0073-00		Lake	2717	1411	2007, 2008, MCBS 2011, 2010	DL	428989.4221	5204898.837	-93.93393024	46.99380423	11007300	
276	276	Cass	Big Sand Lake		11-0077-00		Lake	752	10	2008, MCBS 2011	DL	426093.3473	5212719.52	-93.97329227	47.06385323	11007700	
277	277	Cass	Big Vermillion Lake		11-0029-00		Lake			MDNR APM	DL	434432.3776	5224618.03	-93.86522125	47.17179126	11002900	
278	278	Cass	Birch Lake		11-0412-00		Lake	1262	1	2008, MDNR APM	DL	382049.386	5199894.214	-94.54979841	46.94208717	11041200	
279	279	Cass	Boy Lake		11-0143-00		Lake	5544	340	2007, 2008, MDNR APM	DL	416785.3631	5219557.735	-94.09711231	47.12426923	11014300	
280	280	Cass	Boy River		07010102-518	11r2	Stream			2007, 2008	DL	409568.7532	5225164.5	-94.19336535	47.17376023	11r2	
281	281	Cass	Boy River		07010102-520	00UM012	Stream			2008, MPCA_BioMon	DL	416443.2836	5214511.717	-94.10068531	47.07882723	00UM012	Y
282	282	Cass	Brockway Lake		11-0366-00		Lake	182	55	2007, 2008, MCBS 2011	DL	390694.4023	5186270.008	-94.43297836	46.82100317	11036600	
283	283	Cass	Bullhead Lake		11-0184-00		Lake	88		2008, Aquatic veg map/lake depth map 1993	DL	409847.4093	5205074.207	-94.18567132	46.99305221	11018400	Y
284	284	Cass	Cat Lake		11-0509-00		Lake	108	5	2008	DL	371974.3669	5140350.017	-94.66558036	46.40459309	11050900	
285	285	Cass	Cedar Lake		11-0444-00		Lake	17	4	2008	DL	376784.3738	5177700.737	-94.6129624	46.74149014	11044400	
286	286	Cass	Cedar Lake		11-0481-00		Lake	34	3	2008	DL	374997.3486	5219630.899	-94.64787647	47.11832719	11048100	
287	287	Cass	Cedar Lake		11-0082-00		Lake	20		MCBS2011, MDNR 2013	DL	427847.3988	5221265.365	-93.95156527	47.14093725	11008200	
288	288	Cass	Child Lake		11-0263-00		Lake	295	12	2008, MDNR APM, MCBS2011	DL	397515.379	5200074.939	-94.34668736	46.94628319	11026300	
289	289	Cass	Chub Lake		11-0517-00		Lake	57	51	2008, 2010	DL	421619.3945	5235026.177	-94.03609632	47.26403126	11051700	Y
290	290	Cass	Ding Pot Lake		11-0565-00		Lake	29	29	2008	DL	394162.3488	5183063.725	-94.38678634	46.79271817	11056500	
291	291	Cass	Drumbeater Lake		11-0145-00		Lake	376	5	2008, 2010	DL	412133.376	5235170.703	-94.16149335	47.26412925	11014500	Y
292	292	Cass	Esterday Lake		11-0511-00		Lake	43	3	2008	DL	365672.358	5147991.125	-94.74972939	46.4721051	11051100	
293	293	Cass	Farnham Lake		11-0513-00		Lake	142	71	2007, 2008	DL	363555.3737	5151971.356	-94.77845841	46.5074831	11051300	
294	294	Cass	Five Point Lake		11-0351-00		Lake	265	13	2008, MDNR APM	DL	389636.3632	5192804.542	-94.44842437	46.87961417	11035100	
295	295	Cass	Flaherty Lake		11-0492-00		Lake	24		MCBS 2011, MDNR 2013	DL	381990.3754	5235773.977	-94.55997547	47.26482522	11049200	Y
296	296	Cass	George Lake		11-0101-00		Lake	720	262	2007, 2008, MCBS 2011	DL	421241.371	5193201.038	-94.03378825	46.88767821	11010100	
297	297	Cass	Girl Lake		11-0174-00		Lake	384		MDNR APM, MDNR 2013	DL	407114.3539	5204145.29	-94.22141732	46.9843172	11017400	
298	298	Cass	Goose Lake		11-0096-00		Lake	844	844	2007, 2008, MCBS 2011	DL	426195.3839	5230143.156	-93.97481029	47.22062926	11009600	
299	299	Cass	Gull Lake		11-0305-00		Lake	9541	15	2008, MDNR APM	DL	396217.3553	5144490.849	-94.35120528	46.44600712	11030500	
300	300	Cass	Gull River		07010106-502	11r1	Stream	219	110	2007, 2008	DL	395962.8672	5134286.802	-94.35224726	46.35416011	11r1	
301	301	Cass	Hardy Lake		11-0332-00		Lake	89	2	2008	DL	386345.3866	5146131.96	-94.48009232	46.45918111	11033200	
302	302	Cass	Hattie Lake		11-0232-00		Lake	592	40	2008, MDNR APM, 2010	DL	393566.3896	5185847.713	-94.39524035	46.81766917	11023200	
303	303	Cass	Hay Lake		11-0199-00		Lake	364	36	2008	DL	402334.3706	5191425.473	-94.28152432	46.86919418	11019900	
304	304	Cass	Hunter Lake		11-0170-00		Lake	189	2	2008	DL	406487.3858	5197570.061	-94.22830532	46.9250732	11017000	
305	305	Cass	Inguadona Lake		11-0120-00		Lake	935	19	2007, 2008, MCBS 2011	DL	413769.3743	5201327.369	-94.1333883	46.95986421	11012000	
306	306	Cass	Island Lake		11-0102-00		Lake	390	10	2008, 2010	DL	420759.3861	5197735.148	-94.04090326	46.92841621	11010200	
307	307	Cass	Island Lake		11-0360-00		Lake	117	30	2007, 2008, MCBS 2011	DL	383951.402	5190203.789	-94.52234639	46.85525016	11036000	
308	308	Cass	Jack Lake		11-0400-00		Lake	145		MCBS 2011, 2010	DL	390112.3877	5213039.23	-94.4470814	47.0617232	11040000	Y
309	309	Cass	Kelly Lake		11-0428-00		Lake	50	10	2008	DL	380681.4111	5157301.336	-94.55669235	46.55868512	11042800	
310	310	Cass	Kid Lake		11-0262-00		Lake	167	3	2008	DL	394746.3878	5200994.291	-94.38327537	46.95412019	11026200	
311	311	Cass	Laura Lake		11-0104-00		Lake	1424	854	2007, 2008, MCBS 2011	DL	422941.4086	5203804.331	-94.01327526	46.98328022	11010400	
312	312	Cass	Leech Lake		11-0203-00		Lake	109415	4000	2007, 2008, 2010	DL	393359.387	5224311.154	-94.40700641	47.16365622	11020300	Y
313	313	Cass	Lind (Lindsey) Lake		11-0367-00		Lake	462	95	2007, 2008	DL	387005.3545	5186595.552	-94.48140537	46.82331616	11036700	
314	314	Cass	Little Birch Lake		11-0018-00		Lake	25	25	2008, MCBS 2011	DL	434095.378	5209637.714	-93.86747523	47.03697124	11001800	
315	315	Cass	Little Boy Lake		11-0167-00		Lake	1396	10	2008	DL	409426.3696	5199544	-94.19010331	46.9432402	11016700	
316	316	Cass	Little Hattie Lake (Unnamed)		11-0232-01		Lake	55		MCBS2011,MDNR 2013	DL	394181.3787	5186731.18	-94.38738535	46.82571517	11023201	
317	317	Cass	Little Swift Lake		11-0131-00		Lake	62	16	2008	DL	420675.3541	5213322.88	-94.04473729	47.06865323	11013100	
318	318	Cass	Little Vermillion Lake		11-0030-00		Lake	138	15	2008	DL	436522.4083	5226247.818	-93.83787525	47.18666026	11003000	

319	319	Cass	Little Woman Lake		11-0265-00		Lake			2008, MCBS2011	DL	398418.4145	5199761.598	-94.33475435	46.94360319	11026500	
320	320	Cass	Lizotte Lake		11-0231-00		Lake	75	50	2008	DL	396557.3949	5178996.643	-94.35449533	46.75650416	11023100	
321	321	Cass	Lomish Lake		11-0136-00		Lake	282	197	2008, MCBS 2011, 2010	DL	414104.3749	5214232.643	-94.13143631	47.07601622	11013600	Y
322	322	Cass	Long Lake		11-0142-00		Lake	926		MDNR APM, MDNR 2013	DL	410548.3848	5208126.266	-94.17705732	47.02060621	11014200	Y
323	323	Cass	Lower Hand Lake		11-0251-00		Lake	122	50	2008, 2010	DL	400674.364	5188553.284	-94.30267533	46.84310818	11025100	
324	324	Cass	Lower Milton Lake		11-0080-00		Lake	80	5	2008	DL	428851.4123	5221330.582	-93.93833627	47.14163325	11008000	
325	325	Cass	Lower Trelipe Lake		11-0129-00		Lake	618	20	2007, 2008, MDNR APM	DL	418743.3658	5204595.103	-94.06860928	46.98989322	11012900	
326	326	Cass	Margaret Lake		11-0222-00		Lake	230	3	2008, MDNR APM	DL	395316.3866	5149053.695	-94.36395729	46.48692013	11022200	
327	327	Cass	McCarthey Lake		11-0168-00		Lake	194	78	2008	DL	411561.3885	5198770.172	-94.1619053	46.9365662	11016800	
328	328	Cass	McKeown Lake		11-0261-00		Lake	171	3	2008	DL	399156.4078	5201676.623	-94.32548535	46.96094419	11026100	
329	329	Cass	Middle Sucker Lake		11-0317-00		Lake	290		MCBS 2011, MDNR 2013	DL	392519.3459	5244824.722	-94.42302244	47.34805124	11031700	Y
330	330	Cass	Moon Lake		11-0078-00		Lake	58	5	2008	DL	422983.3689	5212716.558	-94.01424128	47.06347123	11007800	
331	331	Cass	Moose Lake		11-0424-00		Lake	92	1	2007, 2008, 2010	DL	379069.4129	5161855.698	-94.57890437	46.59936813	11042400	
332	332	Cass	Mud Lake		11-0309-00		Lake	18	18	2008	DL	392570.3925	5187156.124	-94.40860035	46.82928017	11030900	
333	333	Cass	Mud Lake		11-0100-00		Lake	1440	1300	2007, 2008, MCBS 2011, 2010	DL	425768.3859	5233588.957	-93.9810213	47.25158326	11010000	Y
334	334	Cass	Norway Brook		07010105-671	11000000	Stream			MDNR APM	DL	393084.2279	5176099.757	-94.39928534	46.72989516	11000000	
376	335	Cass	Norway Lake		11-0307-00		Lake	498	10	2007, 2008, MDNR APM, MCBS 2011	DL	393233.3439	5177059.147	-94.39755734	46.73855016	11030700	
377	336	Cass	Nushka Lake		11-0137-00		Lake	78		2008	DL	417414.3503	5242363.126	-94.09303134	47.32952326	11013700	Y
378	337	Cass	Ododikossi Lake		11-0074-00		Lake	20	10	2008	DL	423849.4006	5210072.162	-94.00239227	47.03977923	11007400	
379	338	Cass	Oxbow Lake		11-0075-00		Lake	172	4	2008	DL	424381.35	5209170.333	-93.99524027	47.03172623	11007500	
380	339	Cass	Peterson Lake		11-0154-00		Lake	139	3	2008	DL	409686.3984	5186415.82	-94.18408529	46.82516119	11015400	
381	340	Cass	Pick Lake		11-0267-00		Lake	36	1	MCBS 2011, 2008	DL	397208.402	5199082.149	-94.35049535	46.93730419	11026700	
382	341	Cass	Pillager Lake		11-0320-00		Lake	213	10	2008	DL	386312.3876	5136027.189	-94.4780633	46.3682661	11032000	
383	342	Cass	Pine Mountain Lake		11-0411-00		Lake	1657	40	2008, 2010	DL	383063.3463	5186741.336	-94.53310539	46.82394716	11041100	
384	343	Cass	Pine River		07010105-672	11river_1	Stream			2007	DL	397050.945	5171629.582	-94.34638431	46.69030116	11river_1	
385	344	Cass	Pleasant Lake		11-0383-00		Lake	997		UofM/MPCA 2013, MDNR 2013	DL	387687.3423	5195981.468	-94.47477839	46.90786718	11038300	
386	345	Cass	Portage Creek		07010102-545	12UM100	Stream			MPCA_BioMon	DL	401800.7673	5241056.17	-94.2993404	47.31560924	12UM100	Y
387	346	Cass	Portage Lake		11-0476-00		Lake	277		2007, 2008, 2010	DL	381960.3406	5207409.847	-94.55292442	47.00967818	11047600	
388	347	Cass	Portage Lake		11-0134-00		Lake	154	10	MDNR 2013	DL	415459.394	5214686.696	-94.11367631	47.08027623	11013400	Y
389	348	Cass	Portage Lake		11-0204-00		Lake	1381		MDNR APM, MDNR 2013	DL	401989.3903	5243839.62	-94.2974584	47.34067725	11020400	Y
390	349	Cass	Potshot Lake		11-0149-00		Lake	28	14	2008	DL	404056.3865	5191030.366	-94.25885132	46.86589019	11014900	
391	350	Cass	Rabbit Lake		11-0135-00		Lake	32	10	MDNR 2013	DL	413029.3655	5214728.455	-94.14568932	47.08033622	11013500	Y
392	351	Cass	Rainy Lake		11-0356-00		Lake	132		MDNR APM	DL	389652.3968	5189068.74	-94.44731037	46.84600917	11035600	
393	352	Cass	Rat Lake		11-0285-00		Lake	104		2008, Aquatic Veg map/lake depth map	DL	395427.3569	5211114.184	-94.37666538	47.0452682	11028500	Y
394	353	Cass	Ray Lake		11-0220-00		Lake	183	37	2008	DL	397902.4054	5152987.312	-94.33113628	46.52270813	11022000	
395	354	Cass	Rice (Carrol's) Lake		11-0227-00		Lake	46	46	2008, 2010	DL	396901.3481	5174205.187	-94.34891732	46.71345016	11022700	
396	355	Cass	Rice (Pillager) Lake		11-0321-00		Lake	232	100	2007, 2008	DL	385159.413	5136778.432	-94.49323231	46.3748301	11032100	
397	356	Cass	Rice Lake		11-0162-00		Lake	342	137	2008	DL	411665.3456	5201882.451	-94.1611453	46.96458121	11016200	
398	357	Cass	Rice Lake		11-0402-00		Lake	188	5	2008	DL	386458.3602	5218131.854	-94.49646642	47.1069162	11040200	Y
399	358	Cass	Rice Pad		11-0720-00		Lake	14	4	2008	DL	437305.3951	5190698.171	-93.82261219	46.86686722	11072000	
400	359	Cass	Rock Lake		11-0324-00		Lake	249	10	2008, MDNR APM	DL	386341.3881	5142478.559	-94.47925431	46.42631211	11032400	
401	360	Cass	Sailor Lake		11-0019-00		Lake	42	10	2008	DL	438602.4197	5208113.792	-93.80795021	47.02369324	11001900	
402	361	Cass	Schafer Lake		11-0004-00		Lake	44	2	2008	DL	434037.401	5187374.882	-93.8650062	46.83664821	11000400	
403	362	Cass	Scribner Lake		11-0441-00		Lake	93	5	2008	DL	382120.3804	5183173.359	-94.54454439	46.79168416	11044100	
404	363	Cass	Six Mile Lake		11-0146-00		Lake	1288	70	2008	DL	414439.347	5239762.807	-94.13189835	47.30574726	11014600	Y
405	364	Cass	Skunk Lake		11-0027-00		Lake	145	30	2008	DL	438917.3893	5227043.053	-93.80637424	47.19404226	11002700	
406	365	Cass	Spring Lake		11-0022-00		Lake	86	12	2008	DL	433198.387	5219179.846	-93.88069425	47.12273725	11002200	
407	366	Cass	Steamboat Bay		11-0491-00		Lake	146		2007	DL	377371.3426	5235935.663	-94.62105449	47.26543221	11049100	Y
408	367	Cass	Steamboat River		07010102-507	11river_2	Stream			2007	DL	377663.7332	5235244.305	-94.61700148	47.25926821	11river_2	Y
409	368	Cass	Swift Lake		11-0133-00		Lake	359	51	MDNR APM, MCBS, 2008 2011, 2010	DL	417190.4039	5217612.74	-94.09141531	47.10682123	11013300	
410	369	Cass	Sylvan Lake		11-0304-00		Lake	882		MDNR APM, MDNR 2013	DL	393372.352	5136404.93	-94.38639028	46.37281411	11030400	
411	370	Cass	Tamarack Lake		11-0189-00		Lake	63	6	2008	DL	410544.4167	5203878.399	-94.17627031	46.98238821	11018900	
412	371	Cass	Tamarack Lake		11-0347-00		Lake	46	4	2008	DL	387969.3992	5176572.843	-94.46632035	46.73331315	11034700	
413	372	Cass	Thiebault Lake		11-0020-00		Lake	37	5	2008	DL	437169.3658	5207904.917	-93.82677722	47.02167924	11002000	
414	373	Cass	Third Guide Lake		11-0001-00		Lake	44	14	2008	DL	440861.3668	5192248.964	-93.77616018	46.88114722	11000100	
415	374	Cass	Thunder Lake		11-0062-00		Lake	1316	2	2008	DL	425796.4078	5200979.766	-93.97527725	46.95819222	11006200	
416	375	Cass	Twin (East Twin) Lake		11-0123-00		Lake	297	50	2008, MCBS 2011, 2010	DL	419719.3638	5208728.597	-94.05650928	47.02720222	11012300	

417	376	Cass	Unnamed (Pistol Lake Rice Bed)		11-0738-00		Lake	22	20	2008	DL	417198.3982	5186612.054	-94.08565126	46.82790319	11073800	
418	377	Cass	Unnamed Lake		11-0780-00		Lake	10	4	2008	DL	395477.3583	5131469.924	-94.35792826	46.32874111	11078000	
419	378	Cass	Upper Gull Lake		11-0218-00		Lake	345	2	2008, MDNR APM	DL	396848.3814	5153422.314	-94.34497129	46.52646113	11021800	
420	379	Cass	Upper Hand Lake		11-0242-00		Lake	316	20	2008	DL	399814.3928	5189716.819	-94.31420633	46.85344718	11024200	
421	380	Cass	Upper Trelipe Lake		11-0105-00		Lake	422		MDNR APM, MDNR 2013	DL	421210.3722	5202927.811	-94.03588127	46.97519022	11010500	
422	381	Cass	Wabedo Lake		11-0171-00		Lake	1272	5	2008, MCBS 2011	DL	408368.4007	5196482.31	-94.20338431	46.9155492	11017100	
423	382	Cass	Wabegon Lake		11-0403-00		Lake	42	4	2008	DL	387139.4125	5216851.123	-94.48717242	47.0955122	11040300	Y
424	383	Cass	Washburn Lake		11-0059-00		Lake	1768	60	2008, MDNR APM	DL	424740.35	5190278.654	-93.98738524	46.86178921	11005900	
425	384	Cass	Wax Lake		11-0124-00		Lake	95	10	2008	DL	420809.3546	5207855.059	-94.04201428	47.01947422	11012400	
426	385	Cass	West Twin Lake		11-0125-00		Lake	200	11	2008	DL	418470.4114	5208825.495	-94.07296029	47.02792122	11012500	
427	386	Cass	Winnibigoshish Lake		11-0147-00		Lake	69821	1000	2007, 2008, 2010	DL	409409.417	5255217.945	-94.20158039	47.44410827	11014700	Y
428	387	Cass	Woman Lake		11-0201-00		Lake	5360	54	2007, 2008, MDNR APM, 2010	DL	402001.384	5199533.722	-94.28763834	46.94209219	11020100	
429	388	Cass	Unnamed Lake		11-0777-00		Lake	40		2008, multi-year MDNR WR observations	DL	394444.3831	5131130.947	-94.37126826	46.3255311	11077700	
1528	212	Cass	Ada		11-0250-00		Lake	1092		MDNR 2013	II	397137.2077	5187142.881	-94.34873534	46.82988217	11025000	
1529	213	Cass	Barnum		11-0281-00		Lake	139		MDNR 2013	II	399107.3979	5203802.97	-94.32660235	46.9800662	11028100	
1530	214	Cass	Bass		11-0474-00		Lake	264		MDNR 2013	II	377301.8022	5205951.887	-94.61379244	46.99571618	11047400	
1531	215	Cass	Big Deep		11-0277-00		Lake	532		MDNR 2013	II	394672.3067	5196116.895	-94.38311836	46.91023018	11027700	
1532	216	Cass	Blackwater		11-0274-00		Lake	761		MDNR 2013	II	400649.1714	5195842.879	-94.30459434	46.90868619	11027400	
1533	217	Cass	Bluebill		11-0397-00		Lake	51	1	MDNR 2008	II	388849.6902	5205477.94	-94.4618454	46.99349219	11039700	
1534	218	Cass	Cedar		11-0289-00		Lake	121		MDNR 2013	II	399689.164	5210130.934	-94.32035736	47.0370832	11028900	Y
1535	219	Cass	Crow Wing River		07010106-721	11r3	Stream			MDNR 2008	II	390172.6843	5131693.896	-94.42687628	46.3299171	11r3	
1536	220	Cass	Dade		11-0214-00		Lake	103		MDNR 2013	II	394773.1754	5136962.956	-94.36830727	46.37805411	11021400	
1537	221	Cass	Donkey (Little Mule)		11-0280-00		Lake	54		MDNR 2008	II	402433.1566	5194474.87	-94.28088133	46.89664319	11028000	
1538	222	Cass	Dry Sand		11-0514-00		Lake	191		MDNR 2013	II	363883.1069	5155604.928	-94.77525341	46.5402341	11051400	
1539	223	Cass	Fucat		11-0641-00		Lake	10		MDNR 2013	II	381046.1417	5142929.965	-94.54826133	46.42946111	11064100	
1540	224	Cass	Gijik		11-0185-00		Lake	118	1	MDNR 2008	II	410646.2833	5205648.929	-94.17528031	46.99833121	11018500	Y
1541	225	Cass	Grass		11-0090-00		Lake	16		MDNR 2008	II	423357.2523	5218419.93	-94.01028828	47.11482924	11009000	
1542	226	Cass	Grass		11-0315-00		Lake	113		MDNR 2008	II	393779.8132	5247814.898	-94.40705444	47.37515524	11031500	Y
1543	227	Cass	Hardy		11-0209-00		Lake	108		MDNR 2013	II	397432.1826	5127995.953	-94.33178025	46.2977831	11020900	
1544	228	Cass	Hole-In-Bog		11-0197-00		Lake	76		MDNR 2008	II	406470.3992	5239788.88	-94.23730238	47.30489225	11019700	Y
1545	229	Cass	Horseshoe		11-0284-00		Lake	142		MDNR 2013	II	399034.3138	5211409.875	-94.32926037	47.04848921	11028400	Y
1546	230	Cass	Horseshoe		11-0358-00		Lake	245		MDNR 2013	II	387350.0467	5189780.916	-94.47767338	46.85203017	11035800	
1547	231	Cass	Hovde		11-0394-00		Lake	115		MDNR 2013	II	389922.0999	5207557.873	-94.44825139	47.01238219	11039400	
1548	232	Cass	Island		11-0257-00		Lake	173		MDNR 2013	II	398960.9144	5193991.909	-94.32634634	46.89177918	11025700	
1549	233	Cass	Iverson		11-0194-00		Lake	80		MDNR 2013	II	407575.1939	5216014.961	-94.21778634	47.09116922	11019400	Y
1550	234	Cass	Johnson		11-0363-00		Lake	92		MDNR 2013	II	390371.0067	5187527.889	-94.43751836	46.83226617	11036300	
1551	235	Cass	Kerr		11-0268-00		Lake	81	1	MDNR 2008	DL	395922.446	5199508.936	-94.36748336	46.94094319	11026800	
1552	236	Cass	Life Raft		11-0406-00		Lake	45		MDNR 2013	II	390888.8703	5236124.958	-94.44247143	47.26952323	11040600	Y
1553	237	Cass	Little Boy		11-0369-00		Lake	71		MDNR 2008	II	392409.7573	5194281.866	-94.41238636	46.89335918	11036900	
1554	238	Cass	Little Long		11-0323-00		Lake	33	1	MDNR 2013	II	386918.6468	5143268.859	-94.47193531	46.43351911	11032300	
1555	239	Cass	Little Moss		11-0489-00		Lake	93		MDNR 2013	II	381232.0592	5238424.897	-94.57070147	47.28853322	11048900	Y
1556	240	Cass	Little Reservoir		11-0002-00		Lake	14		MDNR 2013	II	438100.6069	5191801.909	-93.81232919	46.87687322	11000200	
1557	241	Cass	Little Thunder		11-0009-00		Lake	264		MDNR 2013	II	434075.9827	5202101.914	-93.86663322	46.96916423	11000900	
1558	242	Cass	Little Twin		11-0487-00		Lake	114		MDNR 2013	II	382075.3426	5239721.925	-94.55989647	47.30035222	11048700	Y
1559	243	Cass	Long		11-0258-00		Lake	229		MDNR 2013	II	396716.3709	5193321.877	-94.35565035	46.88540618	11025800	
1560	244	Cass	Long		11-0023-00		Lake	112		MDNR 2013	II	434642.6737	5218875.896	-93.86161124	47.12014725	11002300	
1561	245	Cass	Long		11-0480-00		Lake	218		MDNR 2013	II	378368.7062	5214602.969	-94.60209345	47.07373119	11048000	
1562	246	Cass	Loon		11-0226-00		Lake	220		MDNR 2013	II	395219.9663	5158869.918	-94.3674283	46.57522114	11022600	
1563	247	Cass	Lower Sucker		11-0313-00		Lake	598		MDNR 2013	II	392292.0467	5242737.931	-94.42552544	47.32924224	11031300	Y
1564	248	Cass	Mad Dog		11-0193-00		Lake	27		MDNR 2008	II	406573.4075	5217772.871	-94.23134735	47.10684322	11019300	Y
1565	249	Cass	Mile		11-0207-00		Lake	76		MDNR 2013	II	397749.794	5133234.909	-94.32879826	46.34496811	11020700	
1566	250	Cass	Ox Yoke		11-0355-00		Lake	199		MDNR 2013	II	388475.0963	5191665.908	-94.46338138	46.86917717	11035500	
1567	251	Cass	Pickerel		11-0352-00		Lake	66		MDNR 2008	II	388557.1498	5193650.924	-94.46279038	46.88704817	11035200	
1568	252	Cass	Pine		11-0292-00		Lake	256		MDNR 2013	II	394910.888	5208846.966	-94.38293538	47.0247902	11029200	Y
1569	253	Cass	Portage		11-0490-00		Lake	352		MDNR 2013	II	378867.8953	5237391.935	-94.60167448	47.27880922	11049000	Y
1570	254	Cass	Reservoir		11-0003-00		Lake	60		MDNR 2013	II	437983.8578	5191191.875	-93.81377819	46.87137322	11000300	
1571	255	Cass	Rice		11-0138-00		Lake	55	1	MDNR 2008	II	419030.365	5243303.925	-94.07181834	47.33818926	11013800	Y
1572	256	Cass	Sanborn		11-0361-00		Lake	224		MDNR 2013	II	389115.9917	5187473.958	-94.45395637	46.83157317	11036100	
1573	257	Cass	Sand		11-0275-00		Lake	36		MDNR 2013	II	397954.6703	5196006.9	-94.34000335	46.90975319	11027500	

1574	258	Cass	Sand		11-0279-00		Lake	144		MDNR 2013	II	398004.1606	5195072.909	-94.33914435	46.90135819	11027900	
1575	259	Cass	Silver		11-0202-00		Lake	104		MDNR 2013	II	401971.5737	5206788.904	-94.28959835	47.0073592	11020200	Y
1576	260	Cass	Spider		11-0221-00		Lake	21		MDNR 2013	II	397486.3784	5152331.904	-94.33641428	46.51674813	11022100	
1577	261	Cass	Steamboat		11-0504-00		Lake	1761		MDNR 2013	II	374535.5759	5235936.923	-94.6585255	47.26490721	11050400	Y
1578	262	Cass	Stephens		11-0213-00		Lake	104	1	MDNR 2008	II	397260.1916	5137712.922	-94.33614126	46.38518411	11021300	
1579	263	Cass	Stony		11-0371-00		Lake	523		MDNR 2013	II	386705.6706	5202230.896	-94.4892224	46.96391918	11037100	
1580	264	Cass	Swamp		11-0483-00		Lake	592		MDNR 2013	II	375512.0998	5230277.898	-94.64404648	47.2141922	11048300	Y
1581	265	Cass	Ten		11-0467-00		Lake	28		MDNR 2013	II	375432.4143	5211841.921	-94.63999146	47.04834818	11046700	
1582	266	Cass	Ten Mile		11-0413-00		Lake	4640		MDNR 2013	II	379995.0918	5203132.918	-94.57763643	46.97085218	11041300	
1583	267	Cass	Third River Flowage		11-0147-00	11014701		2260		MDNR 2013	II	403031.813	5265019.896	-94.28830543	47.53136627	11014701	Y
1584	268	Cass	Thirty-Six		11-0173-00		Lake	49	1	MDNR 2008	II	411635.3809	5194383.97	-94.16008129	46.8971132	11017300	
1585	269	Cass	Three Island		11-0177-00		Lake	168		MDNR 2013	II	403584.8111	5210439.872	-94.26915935	47.04044221	11017700	Y
1586	270	Cass	Tobique		11-0132-00		Lake	24		MDNR 2013	II	421447.0469	5219022.883	-94.03556929	47.12002924	11013200	
1587	271	Cass	Trillium		11-0270-00		Lake	149		MDNR 2013	II	394336.7449	5198745.917	-94.38813436	46.93382819	11027000	
1588	272	Cass	Twin		11-0484-00		Lake	168		MDNR2008	II	382171.7044	5240958.916	-94.55894947	47.31149622	11048400	Y
1589	273	Cass	Unnamed (Rice Swamp)		11-0698-00		Lake	11		MDNR 2008	II	379662.1723	5176262.875	-94.57492839	46.72908014	11069800	
1590	274	Cass	Unnamed		11-0714-00		Lake	19		MDNR 2013	II	395583.1852	5182965.905	-94.36815234	46.79206217	11071400	
1591	275	Cass	Unnamed		11-0776-00		Lake	18		MDNR 2013	II	394149.313	5129448.88	-94.37472126	46.3103511	11077600	
1592	276	Cass	Unnamed		11-0862-00		Lake	10		MDNR 2013	II	399479.3116	5188311.907	-94.31829133	46.84075718	11086200	
1593	277	Cass	Unnamed (Greenhill)		11-0786-00		Lake	12		MDNR 2013	II	393714.9882	5138776.922	-94.38247528	46.39420911	11078600	
1594	278	Cass	Unnamed (Egg)		11-0975-00		Lake	15		MDNR 2013	II	439414.0655	5187533.906	-93.79452718	46.83859022	11097500	
1595	279	Cass	Unnamed (MPL)		11-0777-00		Lake	40		MDNR 2008	II	394439.4433	5131116.917	-94.37132926	46.3254041	11077700	
1596	280	Cass	Unnamed (Rice)		11-0615-00		Lake	11		MDNR 2008	II	366652.6712	5142570.902	-94.73541638	46.42354209	11061500	
1597	281	Cass	Upper Loon		11-0225-00		Lake	114		MDNR 2008	II	394016.0757	5160238.945	-94.38344831	46.58734914	11022500	
1598	282	Cass	Upper Milton		11-0081-00		Lake	27		MDNR 2013	II	429180.6589	5220826.936	-93.93391527	47.13713725	11008100	
1599	283	Cass	Vermillion		11-0029-00		Lake	408		MDNR 2013	II	434793.2979	5225120.964	-93.86053225	47.17635226	11002900	
1600	284	Cass	Vermillion River		07010106-502	11r1	Stream			MDNR 2013	II	435253.9609	5225568.923	-93.85451825	47.18042826	11r1	
1601	285	Cass	Webb		11-0311-00		Lake	619		MDNR 2013	II	392417.0971	5200551.975	-94.41377337	46.94976719	11031100	
1602	286	Cass	Welch		11-0493-00		Lake	191		MDNR 2013	II	381994.0776	5234751.892	-94.55965647	47.25563222	11049300	Y
1603	287	Cass	White Oak		11-0016-00		Lake	68	1	MDNR 2008	II	432909.6887	5194351.915	-93.88081921	46.89931422	11001600	
1604	288	Cass	Widow		11-0273-00		Lake	197		MDNR 2008	II	398530.2988	5197166.889	-94.33270535	46.92027719	11027300	
2304		Cass	Bowen		11-0350-00		Lake	182		MDNR 2008	DL	386236.7422	5185145.827	-94.49092669	46.81046902	11035000	
430	389	Chisago	Carlos Avery WMA - Mud		13-0059-02		Lake	400	15	MDNR 2013	DL	502518.3844	5027702.248	-92.96782073	45.40283408	13005902	
431	390	Chisago	Carlos Avery WMA - North Sunrise Pool		13-0059-03		Lake	875	80	MDNR 2013	DL	506276.4345	5030890.539	-92.91976072	45.43150908	13005903	
432	391	Chisago	Carlos Avery WMA - Peterson Slough		13-0060-00		Lake	50	12	MDNR 2013	DL	506812.4024	5032629.195	-92.91288472	45.44715409	13006000	
433	392	Chisago	Carlos Avery WMA - South Sunrise Pool		13-0059-01		Lake	1480	80	MDNR 2013	DL	502357.3978	5025202.215	-92.96988972	45.38033107	13005901	
1605	289	Chisago	Comfort		13-0053-00		Lake	220		MDNR 2013	II	504118.1212	5018586.903	-92.94745571	45.32077607	13005300	
1606	290	Chisago	Fish		13-0068-00		Lake	323		MDNR 2013	II	497323.3924	5047450.91	-93.03430877	45.5805941	13006800	
1607	291	Chisago	Goose		13-0083-00		Lake	710		MDNR 2008	II	493826.9037	5052667.936	-93.07919279	45.6275301	13008300	
1608	292	Chisago	Green		13-0041-00		Lake	1830		MDNR 2013	II	507758.1082	5020781.876	-92.9009777	45.34050307	13004100	
1609	293	Chisago	Horseshoe		13-0073-00		Lake	226		MDNR 2013	II	495354.8059	5048361.85	-93.05955078	45.5887831	13007300	
1610	294	Chisago	North Center		13-0032-01	13003200		760		MDNR 2013	II	513320.6585	5028208.878	-92.82977869	45.40727209	13003200	
1611	295	Chisago	Rush		13-0069-01	13006900		3170		MDNR 2008	II	495160.7615	5059866.949	-93.06215279	45.69233811	13006900	
1612	296	Chisago	South Center		13-0027-00		Lake	913		MDNR 2013	II	513930.6931	5025007.869	-92.82207368	45.37844708	13002700	
1613	297	Chisago	South Lindstrom		13-0028-00		Lake	664		MDNR 2013	II	511251.8147	5025541.883	-92.85627669	45.38330208	13002800	
1614	298	Chisago	Sunrise		13-0031-00		Lake	810		MDNR 2013	II	510550.2894	5030482.867	-92.8651317	45.42778809	13003100	
434	393	Clay	Cromwell Lake		14-0103-00		Lake	27		sampled	DL	247757.3897	5206539.278	-96.31578492	46.96434104	14010300	
1615	299	Clay	Hartke		14-0336-00		Lake	18		MDNR 2013	II	247563.8927	5207728.949	-96.31898592	46.97495504	14033600	
1616	300	Clay	Tilde		14-0004-00		Lake	256		MDNR 2013	II	257174.8869	5211348.947	-96.19476689	47.01107106	14000400	
435	394	Clearwater	Anderson Lake		15-0074-00		Lake	53	3	2008	DL	318075.4022	5240810.277	-95.40629372	47.29549416	15007400	
436	395	Clearwater	Bagley Lake		15-0040-00		Lake	106		2007, 2008	DL	332495.3435	5292045.093	-95.23521275	47.75999823	15004000	
437	396	Clearwater	Clearwater		09020305-517	S004-204				UofM/MPCA 2013	DL	320050.2425	5265466.668	-95.39020875	47.51770819	S004-204	
438	397	Clearwater	Clearwater River		09020305-510	15r1	Stream			2007, 2008, 2010, UofM/MPCA 2013	DL	312362.4005	5309217.433	-95.51105985	47.90881323	15r1	
439	398	Clearwater	Elk Lake		15-0010-00		Lake	305		2008, UofM/MPCA 2013	DL	331990.3419	5228539.093	-95.21777864	47.18887216	15001000	
440	399	Clearwater	Falk Lake		15-0038-00		Lake	71		MCBS 2011, MDNR 2013	DL	327880.4	5286317.684	-95.29448075	47.70729122	15003800	

441	400	Clearwater	First Lake		15-0139-00		Lake	60	3	2008	DL	315068.3918	5265725.494	-95.45642777	47.51863718	15013900		
442	401	Clearwater	Gill Lake		15-0019-00		Lake	380	38	2008	DL	329030.3654	5238340.44	-95.26056667	47.27623716	15001900		
443	402	Clearwater	Itasca Lake		15-0016-00		Lake	1065		2008, UofM/MPCA 2013	DL	333341.3844	5231532.739	-95.20107164	47.21613416	15001600		
444	403	Clearwater	Lomond Lake		15-0081-00		Lake	108	5	2008	DL	318817.3556	5266856.477	-95.40714176	47.52986019	15008100		
445	404	Clearwater	Lower Rice		09020108-512	S006-985	Stream			UofM/MPCA 2013	DL	312015.0465	5250695.164	-95.49055475	47.38264616	S006-985	Y	
446	405	Clearwater	Lower Rice		09020108-512	S007-164				UofM/MPCA 2013	DL	311809.131	5250597.416	-95.49323875	47.38170816	S007-164	Y	
447	406	Clearwater	Lower Rice Lake		15-0130-00		Lake	2375	1568	2007, 2008, 2010	DL	313548.3364	5247498.056	-95.46891774	47.35434416	15013000	Y	
448	407	Clearwater	Mallard Lake		15-0018-00		Lake	123	25	2008	DL	328545.3684	5241143.013	-95.26805168	47.30130917	15001800		
449	408	Clearwater	Minerva Lake		15-0079-00		Lake	239	36	2007, 2008, MCBS 2011, 2010	DL	325070.363	5249586.205	-95.3173027	47.37630217	15007900		
450	409	Clearwater	Minnow Lake		15-0137-00		Lake	107		MDNR APM, MDNR 2013	DL	313967.3463	5267289.763	-95.47169977	47.53238518	15013700		
451	410	Clearwater	Mississippi River		07010101-923	15r3	Stream			2007, 2008	DL	335026.1578	5246340.236	-95.18431366	47.34970518	15r3		
452	411	Clearwater	Moose Lake		04-0342-00	4034200				2008 ArcMap, MCBS 2011	DL	335289.3704	5259899.895	-95.18587259	47.4716942	4034200		
453	412	Clearwater	Mud Lake		15-0061-00		Lake	294	103	2007, 2008, 2010	DL	326650.3888	5255390.965	-95.29865971	47.42891318	15006100		
454	413	Clearwater	Pine Lake		15-0149-00		Lake	1465	220	2008, UofM/MPCA 2013, 2010	DL	310447.3878	5285329.797	-95.52622382	47.6935312	15014900		
455	414	Clearwater	Second Lake		15-0140-00		Lake	68	7	2008, MCBS 2011	DL	313616.4076	5265737.128	-95.47570077	47.51832718	15014000		
456	415	Clearwater	Second Lake		15-0091-00		Lake			UofM/MPCA 2013	DL	322962.3488	5299771.253	-95.36546579	47.82690823	15009100	Y	
457	416	Clearwater	Spike Lake		15-0035-00		Lake	89		MCBS 2011, MDNR 2013	DL	329321.3442	5289646.263	-95.27659175	47.73759922	15003500		
458	417	Clearwater	Sucker Lake		15-0020-00		Lake	90	14	2007, 2008, MCBS 2011, 2010	DL	327943.3427	5236575.871	-95.27424767	47.26008716	15002000		
459	418	Clearwater	Third Lake		15-0141-00		Lake	38	2	2008	DL	310468.3545	5266497.477	-95.51780179	47.52425218	15014100		
460	419	Clearwater	Unnamed (Rice Bed)		15-0021-00		Lake	150	45	2008, 2010	DL	328207.3797	5249643.563	-95.27580269	47.37765018	15002100		
461	420	Clearwater	Upper Rice Lake		15-0059-00		Lake	1860	1116	2007, 2008, MCBS 2011, 2010	DL	326783.3406	5251502.21	-95.2953777	47.39398518	15005900		
462	421	Clearwater	Walker Brook Lake		15-0060-00		Lake	94		MCBS 2011, MDNR 2013	DL	326822.3494	5262285.943	-95.29908372	47.49095019	15006000		
463	422	Clearwater	Wild Rice River		09020108-512	15r2	Stream			2008	DL	308776.0378	5252671.729	-95.53427677	47.39947416	15r2	Y	
1617	301	Clearwater	Duncan		15-0024-00		Lake	18		MDNR 2008	II	332260.7932	5260704.903	-95.22633969	47.47815919	15002400		
1618	302	Clearwater	Floating Moss		15-0483-00		Lake	3		MDNR 2013	II	330681.5749	5226568.886	-95.23429765	47.17082115	15048300		
1619	303	Clearwater	Haggerty		15-0002-00		Lake	149		MDNR 2013	II	335206.8435	5291804.989	-95.19896674	47.75853823	15000200		
1620	304	Clearwater	Kibbee / Shuckhart		15-0114-00		Lake	61		MDNR 2013	II	311520.401	5231667.917	-95.48905673	47.21145314	15011400	Y	
1621	305	Clearwater	Lindberg		15-0144-00		Lake	92		MDNR 2013	II	313844.8769	5279788.905	-95.4786278	47.64471019	15014400		
1622	306	Clearwater	Peterson		15-0083-00		Lake	114		MDNR 2013	II	320599.1819	5281629.963	-95.38953277	47.6631682	15008300		
1623	307	Clearwater	Rockstad		15-0075-00		Lake	128		MDNR 2013	II	319213.2541	5240456.912	-95.39111371	47.29263216	15007500		
1624	308	Clearwater	Tamarack		15-0056-00		Lake	21		MDNR 2008	II	326258.9671	5242813.941	-95.29892369	47.31573017	15005600		
1625	309	Clearwater	Tamarack		15-0136-00		Lake	115		MDNR 2008	II	315183.2869	5255086.877	-95.45045075	47.42303117	15013600	Y	
1626	310	Clearwater	Unnamed		15-0049-00		Lake	26		MDNR 2013	II	331955.2696	5295350.925	-95.24369275	47.78957923	15004900		
1627	311	Clearwater	Unnamed (Little Pine)		15-0293-00		Lake	32		MDNR 2013	II	312572.9569	5282648.899	-95.49677281	47.6700522	15029300		
1628	312	Clearwater	West Four-Legged		15-0028-01		Lake	129		MDNR 2013	II	330491.854	5279563.969	-95.25707473	47.64726121	15002801		
1629	313	Clearwater	Whipple		15-0014-00		Lake	30		MDNR 2013	II	330854.5448	5226140.88	-95.23185564	47.16701715	15001400		
2341		Clearwater	Berg		15-0025-00		Lake	50		MDNR 2008	II							
2342		Clearwater	Lower Red		15-0202-00		Lake			MDNR 2008	II							Y
464	423	Cook	Baker Lake		16-0486-00		Lake	22		1854 List, MDNR 2013	DL	663217.404	5301604.093	-90.81835646	47.84704257	16048600		
465	424	Cook	Bigsby Lake		16-0344-00		Lake	89	1	2008, 1854 List	DL	677616.4323	5289135.547	-90.63115738	47.73113557	16034400		
484	425	Cook	Bower Trout Lake		16-0175-00		Lake	136		1854 List	DL	690283.4088	5313058.358	-90.45187236	47.94255761	16017500		
485	426	Cook	Brule River		04010101-502	BR	Stream			1854 List	DL	714757.0991	5309837.522	-90.12614726	47.90588063	BR		
486	427	Cook	Caribou Lake		16-0360-00		Lake	714	7	2008,1854 List	7050	675862.4381	5286954.106	-90.65541039	47.71200457	16036000		
487	428	Cook	Christine Lake		16-0373-00		Lake	192	19	2008, 7050.0470, 1854 List	7050	670294.4181	5289024.588	-90.72877241	47.73211156	16037300		
488	429	Cook	Cuffs Lake		16-0006-00		Lake	16		2008, 1854 List	DL	743182.4466	5315492.282	-89.74317014	47.94653366	16000600	Y	
489	430	Cook	Dick Lake		16-0157-00		Lake	141		1854 List	DL	687917.4471	5304349.573	-90.48731736	47.8649756	16015700		
490	431	Cook	East Pipe Lake		16-0386-00		Lake	136		1854 List, MDNR 2013	DL	672420.4163	5306215.119	-90.69360542	47.88609359	16038600		
491	432	Cook	Elbow Lake		16-0096-00		Lake	415	124	2007, 2008, 1854 List	DL	702581.4421	5304648.695	-90.2913203	47.86320761	16009600		
492	433	Cook	Fente Lake		16-0741-00		Lake	35		2008, 1854 List	DL	654344.3783	5318212.658	-90.93092651	47.99856959	16074100		
493	434	Cook	Fourmile Lake		16-0639-00		Lake	593	42	2008, 7050.0470, 1854 List	7050	652391.4063	5283900.551	-90.96917348	47.69051254	16063900		
494	435	Cook	Grassy Lake		16-0390-00		Lake	22		1854 List	DL	674708.4395	5315313.059	-90.65933643	47.9672636	16039000		
495	436	Cook	Gust Lake		16-0380-00		Lake	159	1	1854 List	DL	673251.3848	5303226.888	-90.68369742	47.85900558	16038000		
496	437	Cook	Iron Lake		16-0328-00		Lake	125		2007, 2008, 1854 List	DL	678341.4197	5326413.668	-90.60608943	48.06604862	16032800		
497	438	Cook	Jack Lake		16-0521-00		Lake	127	12	2008, 1854 List	DL	664693.4118	5307664.056	-90.79633246	47.90114958	16052100		
498	439	Cook	John Lake		16-0035-00		Lake	101		2008, 1854 List, MDNR 2013	DL	718906.4112	5328281.15	-90.06129526	48.07020166	16003500		
499	440	Cook	Kelly Lake		16-0476-00		Lake	188	56	1854 List	DL	663515.4523	5304254.203	-90.81337346	47.87079358	16047600		
500	441	Cook	Kelso Lake		16-0706-00		Lake	97	2	MDNR 2013	DL	656719.3965	5306870.791	-90.90324049	47.89601457	16070600		
501	442	Cook	Little John Lake		16-0026-00		Lake	39		1854 List, MDNR 2013	DL	719550.4378	5326974.255	-90.05333226	48.05823766	16002600		
502	443	Cook	Mark Lake		16-0250-00		Lake	126		2007, 2008, 2010, 1854 List	DL	680305.452	5295321.746	-90.59276138	47.78600158	16025000		
503	444	Cook	Marsh Lake		16-0048-00		Lake	18		1854 List, MDNR 2013	DL	710211.4537	5305868.511	-90.18883227	47.87171862	16004800		

504	445	Cook	Marsh Lake		16-0488-00		Lake	62	31	2007, 2008, 7050.0470, 1854 List	7050	662873.4276	5299622.181	-90.82369645	47.82931057	16048800	
505	446	Cook	Merganser Lake		16-0107-00		Lake			1854 List	DL	704790.4574	5310628.435	-90.2589823	47.91624762	16010700	
506	447	Cook	Moore Lake		16-0489-00		Lake	64	48	2008, 7050.0470, 1854 List	7050	665462.381	5300271.271	-90.78888145	47.83448557	16048900	
507	448	Cook	Mt. Maud Wetland		PCA - SN	16-wetland2				2008, 1854 List	DL	743104.374	5318348.197			16-wetland2	
508	449	Cook	North Fowl Lake		16-0036-00		Lake	297		2008, 1854 List	DL	722021.4499	5329452.622	-90.01892725	48.07965066	16003600	
509	450	Cook	Northern Light Lake		16-0089-00		Lake	443	133	2008, 7050.0470, 1854 List	7050	706360.3881	5309367.066	-90.23859829	47.90440862	16008900	
510	451	Cook	Otter Lake		16-0032-00		Lake	76		1854 List, MDNR 2013	DL	723459.4096	5319737.355	-90.00471523	47.99185865	16003200	
511	452	Cook	Peterson Lake		16-0478-00		Lake	104	1	2008, 1854 List	DL	662861.3874	5302361.49	-90.82282646	47.85394257	16047800	
512	453	Cook	Phoebe Lake		16-0808-00		Lake	758	1	2008, 1854 List	DL	648909.4143	5302470.958	-91.00918052	47.85831156	16080800	
513	454	Cook	Pigeon River		04010101-501	PR	Stream			1854 List T. 64, R. 4 - 5 E	DL	755853.4821	5321844.272	-89.5699991	47.99864768	PR	
514	455	Cook	Prout Lake		16-0013-00		Lake	18		2008, 1854 List	DL	730678.4294	5318681.095	-89.9086612	47.97980665	16001300	
515	456	Cook	Rib Lake		16-0544-00		Lake	94		2008, 1854 List	DL	665152.446	5322986.759	-90.78430748	48.0387906	16054400	
516	457	Cook	Rice Lake		16-0453-00		Lake	230	92	2007, 2008, 7050.0470, 1854 List	7050	666272.4085	5294622.439	-90.78023143	47.78348957	16045300	
517	458	Cook	Richey Lake		16-0643-00		Lake	114		2008, 1854 List	DL	650914.4325	5281158.093	-90.98979148	47.66619854	16064300	
518	459	Cook	Royal Lake		16-0025-00		Lake	22		1854 List	DL	721467.4348	5326290.266	-90.02799325	48.05142966	16002500	
519	460	Cook	Royal River		04010101-075	16r1	Stream			2008, 1854 List	DL	722090.6762	5327041.807	-90.01925125	48.05796566	16r1	
520	461	Cook	South Fowl Lake		16-0034-00		Lake	508		2008, 1854 List	DL	724192.4114	5326662.145	-89.99128224	48.05381966	16003400	
521	462	Cook	Swamp Lake		16-0009-00		Lake			2008, 1854 List	DL	734980.4207	5316079.044	-89.85252118	47.95486566	16000900	Y
522	463	Cook	Swamp Lake		16-0256-00		Lake			1854 List	DL	680379.436	5302021.413	-90.58898639	47.84620759	16025600	
523	464	Cook	Swamp River		04010101-543	16r2	Stream			2008, 1854 List	DL	729152.0883	5321018.03	-89.92783821	48.00135066	16r2	
524	465	Cook	Swamp River Reservoir		16-0901-00		Lake	165	153	2008, 7050.0470, 1854 List	7050	727020.3912	5313512.768	-89.96033821	47.93467965	16090100	
525	466	Cook	Teal Lake		16-0003-00		Lake	73	1	2008, 1854 List	DL	749327.414	5320738.774	-89.65797412	47.99129567	16000300	Y
526	467	Cook	Temperance River		04010101-610	16r3				2008, 1854 List	DL	660874.5646	5297850.314	-90.85104346	47.81388257	16r3	
527	468	Cook	Toohey Lake		16-0645-00		Lake	369		2008, 1854 List	DL	653495.4481	5287163.739	-90.95332148	47.71959355	16064500	
528	469	Cook	Turtle Lake		16-0251-00		Lake	61		2007, 2008, 1854 List	DL	679008.4258	5294469.911	-90.61041338	47.77870558	16025100	
529	470	Cook	Two Island Lake		16-0156-00		Lake	858		1854 List	DL	689346.4488	5305460.602	-90.46774235	47.8745426	16015600	
530	471	Cook	unnamed (Grd Portage)		04010101-757	URGP				1854 List	DL	742535.1312	5318120.496	-89.75034315	47.97038766	URGP	Y
531	472	Cook	Unnamed Lake		16-0416-00		Lake	14	14	2008, 1854 List	DL	673502.4512	5325057.83	-90.67153744	48.05519461	16041600	
532	473	Cook	Vern River		04010101-899	VR	Stream			1854 List T. 63, R. 3W, MDNR 2013	DL	665637.3971	5309069.638	-90.78317146	47.91354358	VR	
533	474	Cook	White Pine Lake		16-0369-00		Lake	374		2008, 7050.0470, 1854 List	7050	668177.3858	5290609.655	-90.75637242	47.74691756	16036900	
534	475	Cook	Wonder Lake		16-0664-00		Lake	76	5	MDNR 2013	DL	655809.4141	5300814.072	-90.91759049	47.84177756	16066400	
1630	314	Cook	Alder		16-0114-00		Lake	342		MDNR 2013	II	700424.5103	5324428.948	-90.31091333	48.04165663	16011400	
1631	315	Cook	Barker		16-0358-00		Lake	166		MDNR 2013	II	669062.3973	5285256.91	-90.74665241	47.69856156	16035800	
1632	316	Cook	Bearskin		16-0228-00		Lake	522		MDNR 2013	II	690658.7004	5326844.92	-90.44072538	48.06636263	16022800	
1633	317	Cook	Chester		16-0033-00		Lake	50		MDNR 2013	II	717639.9381	5318663.898	-90.08315825	47.98421964	16003300	
1634	318	Cook	Deer Yard		16-0253-00		Lake	358		MDNR 2013	II	679032.4056	5288476.936	-90.61256037	47.72482357	16025300	
1635	319	Cook	East Bearskin		16-0146-00		Lake	643		MDNR 2013	II	696510.5378	5324394.944	-90.36338435	48.04256763	16014600	
1636	320	Cook	Flour		16-0147-00		Lake	352		MDNR 2013	II	694792.6196	5325560.929	-90.38587836	48.05357363	16014700	
1637	321	Cook	Gordon		16-0569-00		Lake	167		MDNR 2013	II	665011.5508	5316589.926	-90.78865747	47.98131659	16056900	
1638	322	Cook	Holly		16-0366-00		Lake	78		MDNR 2013	II	672570.5093	5294121.927	-90.69641841	47.77733357	16036600	
1639	323	Cook	Knight		16-0807-00		Lake	99		MDNR 2013	II	648267.7241	5304221.913	-91.01715352	47.87420456	16080700	
1640	324	Cook	Little Iron		16-0355-00		Lake	121		MDNR 2013	II	675509.001	5326280.893	-90.64413044	48.06564061	16035500	
1641	325	Cook	Loon		16-0448-00		Lake	1197		MDNR 2013	II	671891.2022	5327274.899	-90.69225145	48.07556161	16044800	
1642	326	Cook	Mistletoe		16-0368-00		Lake	151		MDNR 2013	II	672203.2194	5293255.964	-90.70166041	47.76964657	16036800	
1643	327	Cook	Moose		16-0043-00		Lake	452		MDNR 2013	II	717114.3903	5331518.912	-90.08367427	48.09990666	16004300	
1644	328	Cook	North		16-0331-00		Lake	549		MDNR 2013	II	681097.2543	5331540.904	-90.56695742	48.11136063	16033100	
1645	329	Cook	Pike		16-0252-00		Lake	850		MDNR 2013	II	680454.5484	5293049.976	-90.59171637	47.76553758	16025200	
1646	330	Cook	Star		16-0405-00		Lake	120		MDNR 2013	II	675670.1425	5308669.919	-90.64917341	47.90728059	16040500	
1647	331	Cook	Strobus		16-0370-00		Lake	11		MDNR 2013	II	669349.5836	5291162.977	-90.74053142	47.75158556	16037000	
1648	332	Cook	Tait		16-0384-00		Lake	386		MDNR 2013	II	672600.5513	5299387.883	-90.69392242	47.82466758	16038400	
1649	333	Cook	Tucker		16-0417-00		Lake	168		MDNR 2013	II	673501.3433	5325488.959	-90.67137744	48.05907061	16041700	
1650	334	Cook	Vern		16-0409-00		Lake	230		MDNR 2013	II	669827.9992	5307793.926	-90.72763344	47.90097859	16040900	
1651	335	Cook	Wampus		16-0196-00		Lake	33		MDNR 2013	II	693112.7544	5325790.96	-90.40829436	48.05615163	16019600	
1911	595	Cook	Moose		16-0043-00		Lake	452		MDNR 2013	II	717114.4282	5331517.912	-90.08367427	48.09989766	16004300	
535	476	Crow Wing	Arrowhead Lake		18-0366-00		Lake	285	40	2008	DL	407124.3981	5174360.747	-94.21522528	46.71634817	18036600	
536	477	Crow Wing	Bass Lake		18-0011-00		Lake	65	13	2008	DL	432246.3842	5115366.564	-93.8779921	46.18850412	18001100	
537	478	Crow Wing	Bay Lake		18-0034-00		Lake	2435	1	MDNR APM	DL	434213.3972	5137763.462	-93.85563813	46.39024415	18003400	

538	479	Crow Wing	Big Bird Lake		18-0285-00		Lake	205	10	2008	DL	418187.4062	5166956.562	-94.06918423	46.65117317	18028500	
539	480	Crow Wing	Birchdale Lake		18-0175-00		Lake	80	40	2008, MDNR APM	DL	435531.3663	5174524.62	-93.84360917	46.7211662	18017500	
540	481	Crow Wing	Borden Lake		18-0020-00		Lake	1038	31	2008	DL	434648.3711	5128219.395	-93.84865111	46.30440114	18002000	
541	482	Crow Wing	Buffalo Lake		18-0152-00		Lake	36	18	2008	DL	405023.4138	5130802.153	-94.23380422	46.32413811	18015200	
542	483	Crow Wing	Bulldog Lake		18-0014-00		Lake	151	5	2008, MDNR APM	DL	432185.4192	5113351.015	-93.8784931	46.17036012	18001400	
543	484	Crow Wing	Camp Lake		18-0018-00		Lake	537	22	2007, 2008, MDNR APM	DL	431858.3887	5121074.766	-93.88384311	46.23983313	18001800	
544	485	Crow Wing	Caraway Lake		18-0179-00		Lake	40	32	2008	DL	435579.4026	5178128.27	-93.84348618	46.7535972	18017900	
545	486	Crow Wing	Clark Lake		18-0374-00		Lake	309	3	2008, MDNR APM	DL	403297.4072	5151495.445	-94.26050426	46.51008214	18037400	
546	487	Crow Wing	Clough Creek Lake		18-0414-00		Lake	274		MDNR APM	DL	399151.3957	5182192.035	-94.32124132	46.78564917	18041400	
547	488	Crow Wing	Crow Wing Lake		18-0155-00		Lake	378		2007, 2008	DL	397241.3729	5121177.697	-94.33276924	46.23640709	18015500	
548	489	Crow Wing	Unnamed Creek	Crow Wing I	07010104-674	18river_1	Stream			2007	DL	394231.5718	5121946.329	-94.37196725	46.24286109	18river_1	
549	490	Crow Wing	Dahler Lake		18-0204-00		Lake	277	28	2007, 2008	DL	426047.419	5174363.26	-93.96766921	46.71873219	18020400	
550	491	Crow Wing	Deadmans Lake		18-0188-00		Lake	28	5	2008	DL	427948.3909	5158427.165	-93.94031018	46.57554517	18018800	
551	492	Crow Wing	Deer Lake		18-0182-00		Lake	78	30	2008	DL	431893.3517	5159190.354	-93.88894517	46.58282418	18018200	
552	493	Crow Wing	Dog Lake		18-0107-00		Lake	71	71	2008	DL	424674.4139	5134349.368	-93.97913816	46.35852714	18010700	
553	494	Crow Wing	Duck Lake		18-0314-00		Lake	160	3	2007, 2008	DL	411445.3668	5166899.122	-94.15726525	46.64979916	18031400	
554	495	Crow Wing	Duck Lake		18-0178-00		Lake	310	175	UofM/MPCA 2013	DL	432681.3493	5178135.487	-93.88142819	46.7533762	18017800	
555	496	Crow Wing	Eagle Lake		18-0296-00		Lake	356	1	2008, MDNR APM	DL	419761.3998	5178690.387	-94.05066424	46.75694119	18029600	
556	497	Crow Wing	Edward Lake		18-0556-00		Lake			MDNR APM	DL	410101.4083	5148611.045	-94.17127723	46.48507214	18055600	
557	498	Crow Wing	Emily Lake		18-0203-00		Lake	675	2	2008	DL	427718.371	5175045.659	-93.9459152	46.72505519	18020300	
558	499	Crow Wing	Erskine Lake		18-0009-00		Lake	186	7	2008	DL	431075.3484	5116709.894	-93.89336111	46.20047512	18000900	
559	500	Crow Wing	Faupel Lake		18-0237-00		Lake	42	25	2008	DL	415693.4014	5151944.4	-94.09903822	46.51578815	18023700	
560	501	Crow Wing	Flanders Lake		18-0247-00		Lake	181	20	2008	DL	416728.3508	5160522.583	-94.08708922	46.59310216	18024700	
561	502	Crow Wing	Garden Lake		18-0329-00		Lake	262	100	2007, 2008	DL	407678.3572	5152491.608	-94.20361025	46.51966014	18032900	
562	503	Crow Wing	Gilbert Lake		18-0320-00		Lake	391	7	2008, MCBS 2011, MDNR APM	DL	408761.3837	5137956.019	-94.18664922	46.38902113	18032000	
563	504	Crow Wing	Goodrich Lake		18-0226-00		Lake	382	5	2008	DL	421641.3805	5171387.75	-94.02480622	46.69145718	18022600	
564	505	Crow Wing	Google Lake		18-0223-00		Lake	107	11	2007, 2008	DL	422256.3704	5163079.722	-94.01536421	46.61677417	18022300	
565	506	Crow Wing	Grass Lake		18-0230-00		Lake	78	4	2008	DL	421319.4009	5174420.588	-94.02953523	46.71870818	18023000	
566	507	Crow Wing	Greer Lake		18-0287-00		Lake	384	20	2008	DL	419320.3785	5165840.579	-94.05418522	46.64126917	18028700	
567	508	Crow Wing	Half Moon Lake		18-0238-00		Lake	70	14	2007, 2008	DL	416354.4044	5150946.227	-94.09024321	46.50688915	18023800	
568	509	Crow Wing	Happy Lake		18-0101-00		Lake	51	36	2008	DL	421142.3952	5138152.117	-94.02568318	46.39234314	18010100	
569	510	Crow Wing	Hay Lake		18-0444-00		Lake	46	29	2008	DL	417661.3816	5141575.721	-94.07155519	46.42273414	18044400	
570	511	Crow Wing	Hay Lake		18-0120-00		Lake	44		MDNR APM, 2010	DL	420631.3619	5145137.263	-94.03351619	46.45513715	18012000	
571	512	Crow Wing	Hole-in-the-Day Lake		18-0401-00		Lake	217	90	2008	DL	400965.3798	5148644.912	-94.29028727	46.48409613	18040100	
572	513	Crow Wing	Holt Lake		18-0029-00		Lake	164	10	2007, 2008	DL	435551.3622	5122815.711	-93.8361861	46.25586013	18002900	
573	514	Crow Wing	Horseshoe Lake		18-0317-00		Lake	33	13	2008	DL	411468.4202	5141954.419	-94.15220622	46.42535813	18031700	
574	515	Crow Wing	Island Lake		18-0052-00		Lake	37	18	2008	DL	429555.3824	5131972.828	-93.91534314	46.33766714	18005200	
575	516	Crow Wing	Island Lake		18-0383-00		Lake	85	2	2008	DL	398983.385	5129828.819	-94.31203824	46.31450711	18038300	
576	517	Crow Wing	Jail Lake		18-0415-00		Lake	190	2	2008	DL	400676.3617	5183743.941	-94.30160432	46.79984017	18041500	
577	518	Crow Wing	Johnson Lake		18-0328-00		Lake	129	25	2008	DL	406996.3854	5153081.315	-94.21261725	46.52487214	18032800	
578	519	Crow Wing	Lily Pad Lake		18-0275-00		Lake	47	30	2008	DL	419000.3539	5171294.008	-94.05932423	46.69029918	18027500	
579	520	Crow Wing	Little Pine Lake		18-0176-00		Lake	135	30	2007, 2008	DL	437845.4133	5182093.966	-93.81435718	46.78949621	18017600	
580	521	Crow Wing	Little Pine Lake		18-0266-00		Lake	384	20	2008	DL	418641.3592	5172916.598	-94.06430524	46.70485518	18026600	
581	522	Crow Wing	Little Pine River		07010105-505	18river_2	Stream			2007	DL	420877.4335	5161568.953	-94.03311221	46.60301917	18river_2	
582	523	Crow Wing	Lizzie Lake		18-0416-00		Lake	384	100	2007, 2008, MCBS 2011	DL	398916.394	5184094.579	-94.32473933	46.80273017	18041600	
583	524	Crow Wing	Long Lake		18-0031-00		Lake	80	4	2008	DL	431445.3969	5122559.123	-93.88941512	46.25314913	18003100	
584	525	Crow Wing	Love Lake		18-0388-00		Lake	88	18	2008, MDNR APM	DL	398911.3853	5143334.946	-94.31588927	46.43601612	18038800	
585	526	Crow Wing	Lower Dean Lake		18-0181-00		Lake	372	360	2007, 2008	DL	432123.3585	5161261.373	-93.88624717	46.60148318	18018100	
586	527	Crow Wing	Lower Mission Lake		18-0243-00		Lake	739	50	2008, MDNR APM	DL	415649.3833	5153757.667	-94.09994122	46.53209815	18024300	
587	528	Crow Wing	Lows Lake		18-0180-00		Lake	320	45	2007, 2008, MDNR APM	DL	436441.3897	5176576.559	-93.83198617	46.7397172	18018000	
588	529	Crow Wing	Mallard Lake		18-0334-00		Lake	73	4	2008	DL	405303.3487	5149299.59	-94.23391625	46.49061014	18033400	
589	530	Crow Wing	Maple Lake		18-0045-00		Lake	68	20	2008	DL	432251.4014	5135323.078	-93.88080013	46.36809015	18004500	
590	531	Crow Wing	Mayo Lake		18-0408-00		Lake	278		MDNR APM	DL	398731.3501	5158227.316	-94.32147529	46.56997814	18040800	
591	532	Crow Wing	Middle Cullen Lake		18-0377-00		Lake	405	2	2007, 2008	DL	403250.4041	5156210.6	-94.26209927	46.55249914	18037700	
592	533	Crow Wing	Mississippi River		07010104-656	18r1	Stream		1	2007, 2008, UofM/MPCA 2013, MDNR APM	DL	413571.3873	5143395.925	-94.12510921	46.43860114	18r1	
593	534	Crow Wing	Mitchell Lake		18-0294-00		Lake	460	3	2008	DL	420029.4005	5181073.554	-94.04757124	46.77841619	18029400	
594	535	Crow Wing	Mollie Lake		18-0335-00		Lake	421	17	2008	DL	407907.4108	5148580.733	-94.19985024	46.48450314	18033500	
595	536	Crow Wing	Mud Lake		18-0094-00		Lake	78	6	2008	DL	428055.4003	5152064.778	-93.93792717	46.51830616	18009400	
596	537	Crow Wing	Mud Lake		18-0137-00		Lake	132	40	2008	DL	418282.3694	5136186.017	-94.06253318	46.37431213	18013700	
597	538	Crow Wing	Mud Lake		18-0198-00		Lake	103	10	2008	DL	427803.3959	5167990.866	-93.94369619	46.66158518	18019800	

598	539	Crow Wing	Mud Lake		18-0326-00		Lake	82	60	2008	DL	406187.3884	5154612.782	-94.22347225	46.53853914	18032600	
599	540	Crow Wing	Nelson Lake		18-0164-00		Lake	323	100	2008	DL	435310.4152	5162618.196	-93.84482916	46.61400718	18016400	
600	541	Crow Wing	Nisswa Lake		18-0399-00		Lake	213	25	2008, MDNR APM	DL	400456.4105	5152604.57	-94.29776427	46.51964714	18039900	
601	542	Crow Wing	North Long Lake		18-0372-00		Lake	6178	10	2007, 2008, MDNR APM	DL	404642.3693	5143500.888	-94.24134024	46.43834313	18037200	
602	543	Crow Wing	Olson Lake		18-0171-00		Lake	28	3	2008	DL	431884.3521	5167125.64	-93.89023218	46.65422718	18017100	
603	544	Crow Wing	Ossawinnamakee		18-0352-00		Lake	739	1	2008, multi-year MDNR WR observations	DL	408313.4066	5164635.043	-94.19773626	46.62900716	18035200	
604	545	Crow Wing	Pelican Lake		18-0308-00		Lake	8468		MDNR APM	DL	409907.3671	5158751.062	-94.17577225	46.57628215	18030800	
605	546	Crow Wing	Perch Lake		18-0304-00		Lake	181	8	2008	DL	412509.4085	5153585.292	-94.14084623	46.53014615	18030400	
606	547	Crow Wing	Pine Lake		18-0261-00		Lake	391	60	2008	DL	415359.4156	5165357.51	-94.10584224	46.63643417	18026100	
607	548	Crow Wing	Pine River		07010105-504	18river_3	Stream			2007	DL	420633.7086	5157282.062	-94.0355592	46.56441716	18river_3	
608	549	Crow Wing	Platte Lake		18-0088-00		Lake	1768	350	2007, 2008, MDNR APM	DL	428494.4106	5112765.878	-93.92621311	46.16471712	18008800	
609	550	Crow Wing	Pointon Lake		18-0105-00		Lake	193	14	2008, MDNR 2013	DL	424301.4052	5135853.586	-93.98422916	46.37202114	18010500	
610	551	Crow Wing	Rat Lake		18-0410-00		Lake	100	2	2008	DL	399532.4099	5170264.31	-94.3136423	46.67839516	18041000	
611	552	Crow Wing	Red Sand Lake		18-0386-00		Lake	569	28	2008, MDNR APM	DL	401354.416	5136298.453	-94.28261125	46.37306712	18038600	
612	553	Crow Wing	Rice (Blomberg's) Lake		18-0121-00		Lake	78	60	2008	DL	426276.4124	5144804.248	-93.95996617	46.45278115	18012100	
613	554	Crow Wing	Rice (Clark Lake) Lake		18-0327-00		Lake	181	124	2008	DL	404189.3698	5151586.525	-94.24889926	46.51102914	18032700	
614	555	Crow Wing	Rice (Deerwood) Lake		18-0068-00		Lake	185	170	2007, 2008	DL	428838.4073	5146052.674	-93.92680116	46.46429016	18006800	
615	556	Crow Wing	Rice (Hesitation WMA) Lake		18-0053-00		Lake	168	138	2007, 2008, UofM/MPCA 2013	DL	431169.3476	5132053.957	-93.89438613	46.33856314	18005300	
616	557	Crow Wing	Rice (Lowell WMA) Lake		18-0405-00		Lake	85	33	2008	DL	402628.3609	5161175.002	-94.27125528	46.59707515	18040500	
617	558	Crow Wing	Rice (Pratt's) Lake		18-0316-00		Lake	100	90	2008	DL	410550.3873	5142114.345	-94.16418222	46.42667613	18031600	
618	559	Crow Wing	Rice Bed Lake		18-0187-00		Lake	50	47	2008	DL	424017.3888	5163341.691	-93.9924112	46.61933317	18018700	
619	560	Crow Wing	Rock Lake		18-0016-00		Lake	210	10	2008	DL	431040.3761	5113766.5	-93.8933851	46.17398412	18001600	
620	561	Crow Wing	Rogers Lake		18-0184-00		Lake	249	4	2008	DL	431353.3803	5168310.455	-93.89734718	46.66483419	18018400	
621	562	Crow Wing	Round (Round-Rice Bed WMA)		18-0032-00		Lake	82	5	2008	DL	436510.385	5131712.943	-93.82494611	46.33601615	18003200	
622	563	Crow Wing	Round Lake		18-0147-00		Lake	144	5	2008	DL	405779.3595	5118613.646	-94.2215472	46.2145731	18014700	
623	564	Crow Wing	Round Lake		18-0373-00		Lake	1706		MDNR APM	DL	401481.3433	5145711.419	-94.28294626	46.45777813	18037300	
624	565	Crow Wing	Roy Lake		18-0398-00		Lake	310	5	MDNR APM	DL	398745.3641	5152562.471	-94.32005628	46.51901313	18039800	
625	566	Crow Wing	Scott Lake		18-0033-00		Lake	178		MDNR APM	DL	433213.4144	5131235.33	-93.86771212	46.33140114	18003300	
626	567	Crow Wing	Sebie Lake		18-0161-00		Lake	180	2	2008	DL	397790.402	5113766.867	-94.32404723	46.16981009	18016100	
627	568	Crow Wing	Sewells Pond		18-0446-00		Lake	20	16	2008	DL	407738.4029	5119231.944	-94.1962752	46.2204051	18044600	
628	569	Crow Wing	Sibley Lake		18-0404-00		Lake	412	10	2008, MDNR APM	DL	398289.4114	5161243.961	-94.32790329	46.59705214	18040400	
629	570	Crow Wing	Smith Lake		18-0028-00		Lake	486	49	2008, MDNR APM	DL	434074.4086	5123648.004	-93.85546311	46.26320813	18002800	
630	571	Crow Wing	South Long Lake		18-0136-00		Lake	1380	4	2008	DL	417418.3802	5126661.812	-94.07208917	46.28850612	18013600	
631	572	Crow Wing	Stewart Lake		18-0367-00		Lake	254	5	2008	DL	406891.4118	5182493.512	-94.21992329	46.78948718	18036700	
632	573	Crow Wing	Tamarack Lake		18-0318-00		Lake	34	30	2008	DL	409933.3532	5141207.124	-94.17203622	46.41843113	18031800	
633	574	Crow Wing	Terry Lake		18-0162-00		Lake	102	55	2008	DL	440263.4097	5162861.419	-93.78018214	46.61665519	18016200	
634	575	Crow Wing	Twentytwo Lake		18-0008-00		Lake	169	42	2008	DL	433291.3905	5116346.206	-93.8645901	46.19742312	18000800	
635	576	Crow Wing	Twin Island Lake		18-0106-00		Lake	85	42	2008	DL	420204.404	5136978.119	-94.03768118	46.38166914	18010600	
636	577	Crow Wing	Unnamed (Blackies Slough)		18-0544-00		Lake	33	20	2008	DL	399143.3954	5140201.376	-94.31219326	46.40785712	18054400	
637	578	Crow Wing	Unnamed (Lost Rice)		18-0228-00		Lake	157	80	2008	DL	421234.4191	5167107.692	-94.02939622	46.65289817	18022800	
638	579	Crow Wing	Unnamed (Nokasippi R. Rice Bed)		18-0485-00		Lake	166	40	2008	DL	413879.3441	5121550.682	-94.11709018	46.24207511	18048500	
639	580	Crow Wing	Unnamed (Total's Pothole)		18-0543-00		Lake	28	16	2008	DL	399705.3698	5138782.445	-94.30457926	46.39517412	18054300	
640	581	Crow Wing	Unnamed Lake		18-0413-00		Lake	103	27	2008	DL	399738.3626	5183150.884	-94.31376332	46.79436417	18041300	
641	582	Crow Wing	Unnamed Lake		18-0550-00		Lake	30	30	2008	DL	413383.3515	5146403.422	-94.12811522	46.46563814	18055000	
642	583	Crow Wing	Upper Cullen Lake		18-0376-00		Lake	459	23	2007, 2008, MDNR APM	DL	403684.3672	5157720.465	-94.25675327	46.56614615	18037600	
643	584	Crow Wing	Upper Dean Lake		18-0170-00		Lake	263	10	2008	DL	432448.3513	5165590.329	-93.88263717	46.64046918	18017000	
644	585	Crow Wing	Upper Hay Lake		18-0412-00		Lake	640	2	2008, MDNR APM	DL	400304.3716	5166295.37	-94.30269329	46.64280215	18041200	
645	586	Crow Wing	Upper Mission Lake		18-0242-00		Lake	895	5	2008, MDNR APM	DL	417700.4108	5156169.559	-94.07362821	46.55405416	18024200	
646	587	Crow Wing	Upper Whitefish Lake		18-0310-00		Lake	7969	50	20072008	DL	407175.3659	5171221.764	-94.21392528	46.68811317	18031000	
647	588	Crow Wing	Velvet Lake		18-0284-00		Lake	167	2	2008	DL	420122.3589	5167926.522	-94.04406922	46.66013417	18028400	

648	589	Crow Wing	Whipple Lake		18-0387-00		Lake	345	40	2008	DL	399668.3555	5135137.005	-94.30427925	46.36236911	18038700	
649	590	Crow Wing	Whitefish Lake		18-0001-00		Lake	709	30	2008, MDNR APM	DL	437712.4075	5117540.659	-93.80745408	46.20859113	18000100	Y
650	591	Crow Wing	Williams Lake		18-0024-00		Lake	47	3	2008	DL	431143.411	5125859.059	-93.89381512	46.28281413	18002400	
651	592	Crow Wing	Wilson Lake		18-0049-00		Lake	63	4	2008	DL	434258.376	5132840.186	-93.85436212	46.34594515	18004900	
652	593	Crow Wing	Wolf Lake		18-0112-00		Lake	218	25	2008	DL	424129.4188	5141044.994	-93.98730717	46.41871615	18011200	
1652	336	Crow Wing	Bass		18-0229-00		Lake	114	1	MDNR 2008	II	421105.7623	5165743.939	-94.03084422	46.64061217	18022900	
1653	337	Crow Wing	Bassett		18-0026-00		Lake	32		MDNR 2013	II	433500.4934	5124933.935	-93.86309111	46.27472413	18002600	
1654	338	Crow Wing	Big Trout		18-0315-00		Lake	1486		MDNR 2013	II	411531.1079	5174734.885	-94.15765026	46.72031217	18031500	
1655	339	Crow Wing	Black Bear		18-0140-00		Lake	235		MDNR 2013	II	418609.5685	5151064.879	-94.0608752	46.50823315	18014000	
1656	340	Crow Wing	Bonnie		18-0259-00		Lake	83		MDNR 2013	II	413612.1963	5156056.967	-94.12692923	46.55252815	18025900	
1657	341	Crow Wing	Butterfield		18-0231-00		Lake	225	1	MDNR 2008	II	421838.3465	5178276.901	-94.02340223	46.75346719	18023100	
1658	342	Crow Wing	Carlson		18-0395-00		Lake	45	1	MDNR 2008	II	400501.5961	5137781.862	-94.29401225	46.38628912	18039500	
1659	343	Crow Wing	Clearwater		18-0038-00		Lake	917		MDNR 2013	II	429742.2724	5138253.857	-93.91385714	46.39420715	18003800	
1660	344	Crow Wing	Coffee		18-0039-00		Lake	24		MDNR 2013	II	436921.1064	5138611.903	-93.82053912	46.39813716	18003900	
1661	345	Crow Wing	Cole		18-0127-00		Lake	114	1	MDNR 2008	II	421908.1778	5153630.904	-94.01831819	46.53171316	18012700	
1662	346	Crow Wing	Cross Lake Reservoir		18-0312-00		Lake	1884		MDNR 2013	II	414040.6517	5169132.95	-94.12377225	46.67023617	18031200	
1663	347	Crow Wing	Eastham		18-0202-00		Lake	68		MDNR 2013	II	428002.2634	5164991.967	-93.94062919	46.63462218	18020200	
1664	348	Crow Wing	Gladstone		18-0338-00		Lake	457		MDNR 2013	II	404812.1451	5147959.904	-94.24004125	46.47848714	18033800	
1665	349	Crow Wing	Grass		18-0362-00		Lake	45	1	MDNR 2008	II	406612.7652	5167822.862	-94.22059227	46.65745416	18036200	
1666	350	Crow Wing	Grave		18-0110-00		Lake	177		MDNR 2013	II	423670.2985	5132363.856	-93.99186516	46.34054813	18011000	
1667	351	Crow Wing	Green		18-0233-00		Lake	14	1	MDNR 2008	II	412473.8753	5144454.891	-94.13959222	46.44798814	18023300	
1668	352	Crow Wing	Hubert		18-0375-00		Lake	1344		MDNR 2013	II	402768.7969	5148889.915	-94.26684826	46.48656313	18037500	
1669	353	Crow Wing	Jack Pine		18-0023-00		Lake	149		MDNR 2013	II	428978.7621	5124531.884	-93.92171013	46.27064813	18002300	
1670	354	Crow Wing	Little Pelican		18-0351-00		Lake	402		MDNR 2013	II	406994.3987	5156863.966	-94.21340125	46.55890615	18035100	
1671	355	Crow Wing	Little Rabbit		18-0139-00		Lake	153		MDNR 2013	II	419057.6719	5146336.962	-94.05421319	46.46574515	18013900	
1672	356	Crow Wing	Loon / Ward		18-0111-00		Lake	54		MDNR 2013	II	426267.8602	5140636.941	-93.95941916	46.41528115	18011100	
1673	357	Crow Wing	Lower Cullen		18-0403-00		Lake	469		MDNR 2013	II	401032.8536	5154735.894	-94.29070527	46.53890814	18040300	
1674	358	Crow Wing	Lower Hay		18-0378-00		Lake	720		MDNR 2013	II	401816.6856	5169014.9	-94.28351629	46.66749316	18037800	
1675	359	Crow Wing	Mahnomen		18-0126-00		Lake	238	1	MDNR2008	II	423088.3075	5149554.961	-94.00225718	46.49517315	18012600	
1676	360	Crow Wing	Mayo		18-0408-00		Lake	148		MDNR 2013	II	398726.3926	5158237.958	-94.32154229	46.57007314	18040800	
1677	361	Crow Wing	Nokay		18-0104-00		Lake	782		MDNR 2013	II	425327.7664	5136315.88	-93.97096016	46.37629514	18010400	
1678	362	Crow Wing	Olander		18-0091-00		Lake	89		MDNR 2013	II	427886.167	5145191.872	-93.93906816	46.45644315	18009100	
1679	363	Crow Wing	Pointon		18-0105-00		Lake	193		MDNR 2013	II	424287.3836	5135919.884	-93.98442216	46.37261614	18010500	
1680	364	Crow Wing	Rabbit		18-0093-01	18009300		840		MDNR 2013	II	430148.2176	5153474.872	-93.91085916	46.53121517	18009300	
1681	365	Crow Wing	Reno		18-0067-00		Lake	181		MDNR 2013	II	431203.6084	5146419.907	-93.89605515	46.46784016	18006700	
1682	366	Crow Wing	Rush-Hen (Rush)		18-0311-00		Lake	782		MDNR 2013	II	412798.6506	5171204.93	-94.14039825	46.68871817	18031100	
1683	367	Crow Wing	Rushmeyer		18-0082-00		Lake	43		MDNR 2013	II	435705.2523	5150423.936	-93.83798214	46.50431517	18008200	
1684	368	Crow Wing	Ruth		18-0212-00		Lake	623		MDNR 2013	II	427224.6988	5178007.96	-93.95284421	46.75165619	18021200	
1685	369	Crow Wing	Star		18-0359-00		Lake	153		MDNR 2013	II	410438.2104	5167938.961	-94.17062626	46.65902116	18035900	
1686	370	Crow Wing	Thompson		18-0172-00		Lake	20		MDNR 2013	II	433998.45	5165655.959	-93.86239517	46.64121419	18017200	
1687	371	Crow Wing	Twin (East Twin)		18-0148-02		Lake	25		MDNR 2013	II	399990.6649	5117394.939	-94.29631922	46.20278109	18014802	
1688	372	Crow Wing	Unnamed		18-0504-00		Lake	28		MDNR 2013	II	429019.9801	5146790.898	-93.92454916	46.47095216	18050400	
1689	373	Crow Wing	Unnamed		18-0422-00		Lake	20		MDNR 2013	II	432181.6952	5115720.876	-93.8788811	46.19168612	18042200	
1690	374	Crow Wing	Unnamed		18-0201-00		Lake	16	1	MDNR 2008	II	422556.2072	5166933.863	-94.01209521	46.65148818	18020100	
1691	375	Crow Wing	Unnamed		18-0424-00		Lake	16		MDNR 2013	II	434091.9843	5124219.883	-93.85531511	46.26835613	18042400	
1692	376	Crow Wing	Unnamed (Little Whale)		18-0510-00		Lake	36		MDNR 2013	II	436166.6788	5145364.957	-93.83127513	46.45883516	18051000	
1693	377	Crow Wing	Unnamed		18-0154-00		Lake	57		MDNR 2013	II	407580.4602	5126057.864	-94.19966121	46.28180311	18015400	
1694	378	Crow Wing	Unnamed		18-0055-00		Lake	70	1	MDNR 2008	II	435062.1603	5132136.92	-93.84382012	46.33969415	18005500	
1695	379	Crow Wing	Unnamed (Island)		18-0382-00		Lake	139		MDNR 2013	II	399558.9462	5131551.906	-94.30493325	46.33009611	18038200	
1696	380	Crow Wing	Upper South Long		18-0096-00		Lake	793		MDNR 2013	II	419995.509	5128759.877	-94.03899517	46.30769413	18009600	
1697	381	Dakota	Chub		19-0020-00		Lake	301	1	MDNR 2008	II	482699.0982	4934679.885	-93.21787068	44.56524794	19002000	
2343		Dakota	Blackhawk		19-0059-00		Lake			MDNR 2008	II						
653	594	Douglas	Anka Lake		21-0353-00		Lake	208		UofM/MPCA 2013, MDNR 2013	II	288604.3269	5106359.811	-95.73395761	46.07810597	21035300	
654	595	Douglas	Christina Lake		21-0375-00		Lake	3949		UofM/MPCA 2013, MDNR 2013	DL	289029.3469	5108477.247	-95.72940661	46.09727297	21037500	
655	596	Douglas	Ida Lake		21-0123-00		Lake	4506		MDNR APM	DL	312457.3932	5093224.406	-95.42060251	45.96694998	21012300	
656	597	Douglas	Ina Lake		21-0355-00		Lake	221		UofM/MPCA 2013	DL	289300.3847	5105993.307	-95.72480361	46.07502597	21035500	
657	598	Douglas	Irene Lake		21-0076-00		Lake	691		MDNR APM	DL	321531.3851	5103457.454	-95.30740949	46.061396	21007600	
658	599	Douglas	Latoka Lake		21-0106-00		Lake	872		MDNR APM	DL	311106.3965	5082994.073	-95.4339955	45.87458496	21010600	
659	600	Douglas	Long Prairie		07010108-505	S007-203				UofM/MPCA 2013	DL	332642.7646	5093306.437	-95.16029843	45.972908	S007-203	
660	601	Douglas	Long Prairie		07010108-535	S007-204				UofM/MPCA 2013	DL	324764.1835	5097341.321	-95.26339847	46.00722799	S007-204	

661	602	Douglas	Louise Lake		21-0094-00		Lake	220		UofM/MPCA 2013,MDNR APM, MDNR 2013	DL	312460.3854	5089019.092	-95.4189175	45.92913497	21009400	
662	603	Douglas	Mill Pond Lake		21-0034-00		Lake	48		UofM/MPCA 2013, MDNR 2013	DL	328959.3892	5105505.383	-95.21218346	46.08171201	21003400	
663	604	Douglas	Miltona Lake		21-0083-00		Lake	5924		MDNR APM, MDNR 2013	DL	316697.3844	5101320.95	-95.3690325	46.04090499	21008300	
664	605	Douglas	Taylor Lake		21-0105-00		Lake	98		MDNR APM	DL	311591.3336	5085753.852	-95.4288345	45.89953497	21010500	
665	606	Douglas	Union Lake		21-0041-00		Lake	227		MDNR APM	DL	318047.3907	5076375.232	-95.34213346	45.81693096	21004100	
666	607	Douglas	Unnamed Lake		21-0416-00		Lake	24		MCBS 2011 , south of Miltona Lake, MDNR 2013	DL	317570.3499	5099798.795	-95.3571775	46.02744999	21041600	
1698	382	Douglas	Brophy		21-0102-00		Lake	281		MDNR 2013	II	310571.7536	5086205.908	-95.4421445	45.90331997	21010200	
1699	383	Douglas	Freeborn		21-0162-00		Lake	250		MDNR 2013	II	296658.6851	5074582.883	-95.61642353	45.79484294	21016200	
1700	384	Douglas	Hidden		21-0058-00		Lake	17		MDNR 2013	II	318124.6838	5096019.923	-95.34858149	45.99361499	21005800	
1701	385	Douglas	Indian		21-0136-00		Lake	83		MDNR 2013	II	308280.6822	5099835.901	-95.47711353	46.02524598	21013600	
1702	386	Douglas	Little Chippewa		21-0212-00		Lake	282		MDNR 2013	II	299149.9611	5097180.91	-95.59385056	45.99875797	21021200	
1703	387	Douglas	Long		21-0343-00		Lake	205		MDNR 2013	II	292001.3761	5092736.951	-95.68413658	45.95667296	21034300	
1704	388	Douglas	Mary		21-0092-00		Lake	2559		MDNR 2013	II	307508.1468	5077773.921	-95.4782305	45.82664795	21009200	
1705	389	Douglas	Mina		21-0108-00		Lake	447		MDNR 2013	II	307286.3452	5084527.948	-95.48378751	45.88731896	21010800	
1706	390	Douglas	Mud		21-0236-00		Lake	50		MDNR 2008	II	299232.9494	5107633.964	-95.59718357	46.09276598	21023600	
1707	391	Douglas	Stowe		21-0264-00		Lake	533		MDNR 2013	II	296418.5603	5096713.959	-95.62888857	45.99375397	21026400	
1708	392	Douglas	Unnamed		21-0075-00		Lake	32		MDNR 2013	II	319171.8518	5106110.903	-95.3388985	46.084638	21007500	
1709	393	Faribault	Rice		22-0075-00		Lake	976		MDNR 2008	II	412122.991	4848772.875	-94.09217083	43.78679676	22007500	
1710	394	Faribault	Rice		22-0007-00		Lake	266		MDNR 2008	II	440290.5472	4832850.851	-93.74036171	43.64625676	22000700	
2344		Faribault	Minnesota		22-0033-00		Lake	1915		MDNR 2008	II						
1711	395	Fillmore	Rice		07040008-581	23r1				MDNR 2008	II	571643.2201	4850658.883	-92.10931027	43.8055259	23r1	
667	608	Freeborn	Spicer Lake		24-0045-00		Lake	125	100	2008	DL	455351.3976	4851795.253	-93.55519968	43.8178798	24004500	
668	609	Freeborn	Trenton Lake		24-0049-00		Lake	184	18	2008	DL	453853.3877	4854963.196	-93.57409969	43.8463098	24004900	
1712	396	Freeborn	Bear		24-0028-00		Lake	1560		MDNR 2008	II	459979.796	4821456.848	-93.49539563	43.54498776	24002800	
1713	397	Freeborn	Lower Twin		24-0027-00		Lake	480		MDNR 2013	II	464372.9842	4823755.875	-93.44116661	43.56591077	24002700	
669	610	Goodhue	Sturgeon Lake		25-0017-01		Lake	830		2008, Restoration efforts underway	DL	528597.3943	4943054.117	-92.63940853	44.64027599	25001701	
1714	398	Goodhue	Rice Bottoms		07040002-501	25r1				MDNR 2008	II	532752.1384	4937740.854	-92.5873605	44.59226698	25r1	
2345		Goodhue	Cannon River			25r2	Stream			MDNR 2008	II						
1715	399	Grant	Elk		26-0040-00		Lake	171		MDNR 2013	II	282013.0413	5083469.905	-95.8086696	45.87026694	26004000	
1716	400	Grant	Pelican		26-0002-00		Lake	3680		MDNR 2013	II	282244.3472	5104053.873	-95.81505663	46.05538096	26000200	
1717	401	Hennepin	Grass		27-0135-00		Lake	7		MDNR 2008	II	459002.8027	5004080.94	-93.52188685	45.18902001	27013500	
1718	402	Hennepin	Grass		27-0080-00		Lake	326		MDNR 2008	II	463124.5077	4962255.852	-93.46635579	44.81275396	27008000	
1719	403	Hennepin	Little Long		27-0179-00		Lake	117		MDNR 2013	II	444155.7879	4977621.911	-93.70792787	44.94983896	27017900	
1720	404	Hennepin	Rice		27-0132-00		Lake	294		MDNR 2008	II	459198.7246	4962323.896	-93.5160078	44.81315295	27013200	
1721	405	Hennepin	Rice		27-0116-00		Lake	353		MDNR 2008	II	463298.201	4995817.905	-93.46660183	45.114878	27011600	
670	611	Houston	Blue Lake		28-0005-03		Lake	362		2008, see MDNR lake map veg.	DL	637435.4292	4852857.051	-91.29107103	43.81600995	28000503	
671	612	Houston	Lawrence Lake		28-0005-01		Lake	142		2008, see USGS Long Term Resource Management Program (LTRMP)	DL	639342.3787	4844565.252	-91.26952402	43.74102894	28000501	
672	613	Houston	Miss. River backwater		28-0005-00	11HOUS044	Stream			MPCA_BioMon	DL	639251.3898	4845550.929	-91.27039802	43.74991694	11HOUS044	
673	614	Houston	Mississippi Pool 8 at Genoa		28-0005-99	S007-222	Stream			UofM/MPCA 2013	DL	642641.351	4826277.69	-91.23340699	43.57581792	S007-222	
674	615	Houston	Mississippi Pool 8 at Reno Bottoms		28-0005-99	S007-556				UofM/MPCA 2013	DL	639739.0522	4829177.711	-91.268587	43.60246792	S007-556	
675	616	Houston	Target Lake		28-0005-02		Lake	424		2008, see USGS Long Term Resource Management Program (LTRMP)	DL	638429.4151	4850128.47	-91.27942203	43.79126795	28000502	
676	617	Hubbard	Bass Lake 2		29-0132-00		Lake	21		MCBS 2011, MDNR 2013	DL	361067.4069	5224719.698	-94.83299253	47.16130718	29013200	
677	618	Hubbard	Beden		29-0265-00		Lake	40		MCBS 2011, MDNR 2013	DL	337700.369	5207067.824	-95.13472648	46.99722914	29026500	
678	619	Hubbard	BelleTaine Lake		29-0146-00		Lake	1252		MDNR APM	DL	354593.3864	5199713.097	-94.91030951	46.93500815	29014600	
679	620	Hubbard	Birch Creek		07010101-573	29r1	Stream			2008	DL	348533.9498	5232414.086	-95.00085259	47.22773818	29r1	
680	621	Hubbard	Crow Wing Lake		29-0116-00		Lake	47		2007, 2008	DL	358740.3546	5207563.833	-94.85830251	47.00651416	29011600	
681	622	Hubbard	Crow Wing River		07010106-516	29river	Stream			2008	DL	355973.5226	5185244.775	-94.88761849	46.80518013	29river	
682	623	Hubbard	Deer Lake		29-0090-00		Lake	193		2008, MDNR APM	DL	358126.3864	5203182.618	-94.86500351	46.96697815	29009000	
683	624	Hubbard	Duck Lake		29-0142-00		Lake	651		MDNR APM	DL	354538.3948	5185674.911	-94.90655349	46.80873713	29014200	
684	625	Hubbard	Eagle Lake		29-0256-00		Lake	440	4	2008, MDNR APM	DL	340210.3597	5209563.904	-95.10261658	47.02028614	29025600	
685	626	Hubbard	Eighth Crow Wing Lake		29-0072-00		Lake	493	1	2008, MDNR APM, MCBS 2011	DL	363425.4057	5202214.77	-94.79508949	46.95938616	29007200	

686	627	Hubbard	Fifth Crow Wing Lake		29-0092-00		Lake	406	10	2007, 2008, MDNR APM, MCBS 2011	DL	356529.3887	5198291.764	-94.8844405	46.92264615	29009200	
687	628	Hubbard	First Crow Wing Lake		29-0086-00		Lake	564	50	2008	DL	359700.3552	5188914.174	-94.83992648	46.83897914	29008600	
688	629	Hubbard	First Crow Wing River		07010106-523	29river_1	Stream			2007	DL	357225.2853	5187236.455	-94.87184349	46.82336313	29river_1	
689	630	Hubbard	Fish Hook Lake		29-0242-00		Lake	1432		MDNR APM, MDNR 2013	DL	342909.3462	5202424.466	-95.06465056	46.95672814	29024200	
690	631	Hubbard	Fishhook River		07010106-542	29r4	Stream			2008, MDNR APM	DL	345031.3434	5188305.612	-95.03197553	46.83025312	29r4	
691	632	Hubbard	Fourth Crow Wing Lake		29-0078-00		Lake	523	130	2007, 2008, MDNR APM	DL	358014.384	5193033.423	-94.86330649	46.87567114	29007800	
692	633	Hubbard	Garfield Lake		29-0061-00		Lake	984	90	2007, 2008, MDNR APM	DL	367704.3533	5231756.251	-94.74754851	47.2259632	29006100	
693	634	Hubbard	Hart Lake		29-0063-00		Lake	236	118	2007, 2008, MCBS 2011	DL	367430.4133	5238879.135	-94.75327953	47.28997221	29006300	
694	635	Hubbard	Hay Creek		07010106-617	29river_2	Stream			2007	DL	335209.5805	5210604.327	-95.1687516	47.02841514	29river_2	
695	636	Hubbard	Horseshoe Lake		29-0059-00		Lake	264		2008, MDNR APM, MCBS 2011	DL	370881.3515	5226003.123	-94.70394349	47.17484919	29005900	
696	637	Hubbard	Island Lake		29-0254-00		Lake	522	60	2007, 2008, MDNR APM	DL	339883.3805	5212456.284	-95.10794059	47.04621715	29025400	
697	638	Hubbard	Kabekona Lake		29-0075-00		Lake	2433		2007, 2008	DL	366803.3439	5224389.861	-94.75725551	47.15952619	29007500	
698	639	Hubbard	Kabekona River		07010102-511	290075T2	Stream			2007, 2008	DL	364149.6022	5226916.109	-94.79301352	47.18170519	290075T2	
699	640	Hubbard	Lake Alice Lake		29-0286-00		Lake	150	15	2007, 2008	DL	342321.3443	5232024.325	-95.08272861	47.22277117	29028600	
700	641	Hubbard	Lake George		29-0216-00		Lake	882	18	2007, 2008, MCBS 2011	DL	350365.3851	5228554.246	-94.97538458	47.19344618	29021600	
701	642	Hubbard	Little Gulch Lake		29-0123-00		Lake	22		MCBS 2011, MDNR 2013	DL	359510.3703	5226458.729	-94.85406854	47.17661718	29012300	
702	643	Hubbard	Little Sand Lake		29-0150-00		Lake	437		MDNR APM	DL	353087.3471	5206019.038	-94.93212553	46.99139015	29015000	
703	644	Hubbard	Lower Bottle Lake		29-0180-00		Lake	712	10	2008	DL	351891.3838	5210253.459	-94.94923054	47.02920616	29018000	
704	645	Hubbard	Lower Mud Lake		29-0267-00		Lake	30	30	2008	DL	340970.3754	5214297.738	-95.09428859	47.06303915	29026700	
705	646	Hubbard	Mantrap Lake		29-0151-00		Lake	1770	200	2007, 2008	DL	355457.378	5213918.234	-94.90349853	47.06295516	29015100	
706	647	Hubbard	Mary Lake		29-0289-00		Lake	65		MCBS 2011, MDNR 2013	DL	335800.3799	5228026.497	-95.16733463	47.18522516	29028900	
707	648	Hubbard	Mississippi River		07010101-923	29river_3	Stream			2007	DL	338384.8207	5253214.157	-95.14237966	47.41235319	29river_3	
708	649	Hubbard	Unnamed Creek	Mud Creek	07010106-722	29r3	Stream			2008	DL	340212.8068	5216303.374	-95.10496859	47.08089215	29r3	
709	650	Hubbard	Mud Lake		29-0119-00		Lake	146	30	2008	DL	354967.4009	5216462.745	-94.91076554	47.08573217	29011900	
710	651	Hubbard	Mud Lake		29-0065-00		Lake	68		MCBS 2011, MDNR 2013	DL	373055.3903	5250896.825	-94.68235253	47.39917723	29006500	Y
711	652	Hubbard	Necktie River		07010102-502	29r2	Stream			2007, 2008	DL	368547.3667	5234975.058	-94.73736452	47.2550832	29r2	
712	653	Hubbard	Ninth Crow Wing Lake		29-0025-00		Lake	235		2008, MCBS 2011	DL	365059.3645	5203968.329	-94.77414548	46.97549316	29002500	
713	654	Hubbard	Oak Lake		29-0060-00		Lake	58	1	2007, 2008	DL	369517.374	5225722.069	-94.7218535	47.17205219	29006000	
714	655	Hubbard	Plantagenet Lake		29-0156-00		Lake	2620		2008, MDNR APM	DL	354760.3523	5250256.278	-94.92446859	47.38960321	29015600	
715	656	Hubbard	Potato Lake		29-0243-00		Lake	2239	30	MDNR APM, MCBS 2011	DL	343978.3719	5207457.655	-95.05234157	47.00224414	29024300	
716	657	Hubbard	Rice Lake		29-0177-00		Lake	230	58	2007, 2008	DL	345698.3363	5210985.574	-95.03093457	47.03437415	29017700	
717	658	Hubbard	Schoolcraft Lake		29-0215-00		Lake	176	35	2007, MCBS 20111	DL	347238.3878	5224072.607	-95.01511358	47.15242417	29021500	
718	659	Hubbard	Second Crow Wing Lake		29-0085-00		Lake	228	5	2008	DL	357076.3789	5188850.709	-94.87429949	46.83785014	29008500	
719	660	Hubbard	Seventh Crow Wing Lake		29-0091-00		Lake	251	10	2008, MCBS 2011	DL	360854.3924	5200583.024	-94.82836449	46.94417515	29009100	
720	661	Hubbard	Shallow Lake		29-0089-00		Lake	295	9	2008	DL	357272.4115	5203300.849	-94.87626051	46.96785815	29008900	
721	662	Hubbard	Shell River		07010106-681	29r5	Stream			2007, 2008	DL	355965.0443	5185473.349	-94.88780149	46.80723413	29r5	
722	663	Hubbard	Shingobee Lake		29-0043-00		Lake	180		MCBS 2011, MDNR 2013	DL	371618.3499	5206966.877	-94.68879946	47.00376817	29004300	
723	664	Hubbard	Sixth Crow Wing Lake		29-0093-00		Lake	358	5	2007, 2008, MCBS 2011	DL	358095.4079	5198900.424	-94.8640725	46.92845715	29009300	
724	665	Hubbard	Spring Lake		29-0054-00		Lake	43		2007, 2008	DL	373412.1751	5231465.859	-94.67210306	47.2244762	29005400	Y
725	666	Hubbard	Tenth Crow Wing Lake		29-0045-00		Lake	185	9	2008, MDNR APM	DL	366675.4124	5205589.732	-94.75338548	46.99040417	29004500	
726	667	Hubbard	Third Crow Wing Lake		29-0077-00		Lake	636	40	2008, MDNR APM	DL	358450.3493	5191477.764	-94.85710549	46.86177214	29007700	
727	668	Hubbard	Unnamed (Hay Creek) Lake		29-0554-00		Lake	38	20	2008	DL	336982.3968	5210850.05	-95.1455256	47.03106414	29055400	
728	669	Hubbard	Upper Bottle Lake		29-0148-00		Lake	505	30	2007, 2008	DL	353574.3775	5211703.291	-94.92756354	47.04262016	29014800	
729	670	Hubbard	Upper Mud Lake		29-0284-00		Lake	50	50	2008	DL	341046.3892	5215576.195	-95.09373859	47.07455415	29028400	
1722	406	Hubbard	Beauty		29-0292-00		Lake	54		MDNR 2013	II	338891.6392	5225883.946	-95.12579161	47.16672316	29029200	
1724	408	Hubbard	Big Sand		29-0185-00		Lake	1738		MDNR 2013	II	350559.7375	5207191.956	-94.96573454	47.00137315	29018500	
1725	409	Hubbard	Eleventh Crow Wing		29-0036-00		Lake	752		MDNR2008	II	368954.9039	5208357.92	-94.72422247	47.01575817	29003600	
1726	410	Hubbard	Emma		29-0186-00		Lake	85		MDNR 2013	II	352011.1041	5208974.894	-94.94723754	47.01773415	29018600	
1727	411	Hubbard	Evergreen		29-0227-00		Lake	206		MDNR 2013	II	347759.0029	5240656.934	-95.0138936	47.30168519	29022700	
1728	412	Hubbard	Frontenac		29-0241-00		Lake	224		MDNR 2013	II	349383.8361	5245043.931	-94.99389761	47.34151219	29024100	
1729	413	Hubbard	Halverson		29-0220-00		Lake	19		MDNR 2013	II	354332.0585	5225859.969	-94.92217456	47.17010618	29022000	

1730	414	Hubbard	Hattie		29-0300-00		Lake	359		MDNR 2008	DL	344624.2668	5237435.921	-95.05421161	47.27198418	29030000	
1731	415	Hubbard	Hinds		29-0249-00		Lake	310		MDNR 2013	II	343521.1335	5188932.877	-95.05197954	46.83554112	29024900	
1732	416	Hubbard	Holland-Lucy		29-0095-00		Lake	44		MDNR 2008	II	360877.0641	5196303.896	-94.82675749	46.90569215	29009500	
1733	417	Hubbard	Island		29-0088-00		Lake	235		MDNR 2013	II	360326.6884	5194298.908	-94.83336548	46.88754315	29008800	
1734	418	Hubbard	Little Rice		29-0183-00		Lake	27	1	MDNR 2008	II	346359.977	5210349.967	-95.02201556	47.02881215	29018300	
1735	419	Hubbard	Little Stony		29-0080-00		Lake	55		MDNR 2008	II	355106.1038	5194383.931	-94.9018805	46.88719014	29008000	
1736	420	Hubbard	Loon		29-0020-00		Lake	112		MDNR 2008	II	365218.6621	5197205.96	-94.77004547	46.91470115	29002000	
1737	421	Hubbard	Many Arm		29-0257-00		Lake	71		MDNR 2013	II	342687.7023	5211565.971	-95.07073658	47.03888415	29025700	
1738	422	Hubbard	Midge		29-0066-00		Lake	588		MDNR 2013	II	370362.5682	5249693.943	-94.71767153	47.38782922	29006600	
1739	423	Hubbard	Oelschlager Slough		29-0006-00		Lake	328		MDNR 2008	II	366598.0939	5188463.908	-94.74938045	46.83634715	29000600	
1740	424	Hubbard	Paine		29-0217-00		Lake	258		MDNR 2008	II	348822.9066	5228179.934	-94.99560858	47.18972717	29021700	
1741	425	Hubbard	Pine		29-0197-00		Lake	46		MDNR 2013	II	345723.356	5222361.937	-95.03449858	47.13668716	29019700	
1742	426	Hubbard	Portage		29-0250-00		Lake	429		MDNR 2008	DL	338696.3896	5203544.889	-95.12038158	46.96579213	29025000	
1743	427	Hubbard	Spider		29-0117-00		Lake	593		MDNR 2008	II	359204.5846	5205883.954	-94.85167651	46.99150416	29011700	
1744	428	Hubbard	Spring		29-0054-00		Lake	43		MDNR 2008	DL	373412.0578	5231468.975	-94.67210549	47.2245042	29005400	Y
1745	429	Hubbard	Sunday		29-0144-00		Lake	62		MDNR 2008	II	354621.5622	5195168.884	-94.90848751	46.89414414	29014400	
1746	430	Hubbard	Tamarack		29-0094-00		Lake	36		MDNR 2008	DL	363328.1474	5196665.904	-94.79469848	46.90945715	29009400	
1747	431	Hubbard	Tripp		29-0005-00		Lake	155	1	MDNR 2008	II	365413.5721	5190289.911	-94.76544446	46.85253315	29000500	
1748	432	Hubbard	Twenty		29-0231-00		Lake	88		MDNR 2013	II	347632.6808	5237665.894	-95.0145416	47.27475818	29023100	
1749	433	Hubbard	Twin		29-0293-00		Lake	7		MDNR 2008	II	336124.8382	5227173.976	-95.16274363	47.17764016	29029300	
1750	434	Hubbard	Unnamed		29-0021-00		Lake	16		MDNR 2008	II	363893.8544	5197430.904	-94.78750248	46.91645415	29002100	
1751	435	Hubbard	Unnamed		29-0115-00		Lake	16		MDNR 2008	II	356587.0997	5207702.937	-94.88665752	47.00730216	29011500	
1752	436	Hubbard	Unnamed		29-0118-00		Lake	21		MDNR 2008	II	356523.5013	5207127.966	-94.88731152	47.00211716	29011800	
1753	437	Hubbard	Unnamed		29-0179-00		Lake	16		MDNR 2008	II	352493.2715	5212289.976	-94.94197854	47.04765616	29017900	
1754	438	Hubbard	Unnamed		29-0057-00		Lake	54		MDNR 2013	II	368341.5505	5228276.924	-94.73811251	47.19479719	29005700	
1755	439	Hubbard	Unnamed		29-0114-00		Lake	24		MDNR 2008	II	357509.4965	5207997.887	-94.87462252	47.01015416	29011400	
1756	440	Hubbard	Unnamed		29-0019-00		Lake	15		MDNR 2008	II	364206.8527	5197968.888	-94.78355448	46.92135715	29001900	
1757	441	Hubbard	Unnamed		29-0158-00		Lake	60		MDNR 2008	II	353982.4778	5191503.866	-94.9156985	46.86104114	29015800	
1758	442	Hubbard	Unnamed		29-0263-00		Lake	20		MDNR 2008	II	338640.9391	5210942.931	-95.12374559	47.03230614	29026300	
1759	443	Hubbard	Unnamed		29-0084-00		Lake	87		MDNR 2008	II	356349.5549	5190702.965	-94.88440849	46.85435314	29008400	
1760	444	Hubbard	Unnamed		29-0608-00		Lake	9		MDNR 2013	II	365307.4118	5189581.882	-94.76662746	46.84614315	29060800	
1761	445	Hubbard	Unnamed (Boubora)		29-0082-00		Lake	48	1	MDNR 2008	II	362824.5973	5190931.934	-94.79958147	46.85777914	29008200	
1762	446	Hubbard	Unnamed (Thirteen)		29-0079-00		Lake	38		MDNR 2008	II	356298.8993	5194516.909	-94.8862745	46.88864514	29007900	
1763	447	Hubbard	Unnamed (Waboose #1)		29-0099-00		Lake	26		MDNR 2008	II	360192.1399	5212797.919	-94.84083251	47.05389817	29009900	
1764	448	Hubbard	Upper Bass		29-0034-00		Lake	30		MDNR 2008	II	373030.8932	5211857.934	-94.67159946	47.04803518	29003400	
1765	449	Hubbard	Upper Twin		29-0157-00		Lake	212	1	MDNR 2008	DL	345319.1047	5185859.941	-95.02737753	46.80832512	29015700	
1766	450	Hubbard	Waboose		29-0098-00		Lake	158		MDNR 2013	II	361259.042	5213049.874	-94.82686951	47.05638917	29009800	
2292		Hubbard	Clausens		29-0097-00		Lake	222		MDNR 2008	DL	356301.4258	5204463.192	-94.89296622	46.97753268	29009700	
1779	463	Isanti	Mud		30-0065-00		Lake	300		MDNR 2008	II	479713.1971	5056548.916	-93.26041385	45.66219309	30006500	
1780	464	Isanti	Mud		30-0106-00		Lake	81		MDNR 2008	II	463316.7765	5035772.876	-93.46932288	45.47452005	30010600	
1781	465	Isanti	North Stanchfield		30-0143-00		Lake	153		MDNR 2008	II	464500.9647	5055855.848	-93.4556319	45.65534308	30014300	
1782	466	Isanti	Olson Impoundment		30-0094-00		Lake	24		MDNR 2013	II	476917.4185	5046078.933	-93.29580584	45.56786708	30009400	
1783	467	Isanti	Rice		30-0018-00		Lake	42		MDNR 2008	II	496362.4722	5041525.861	-93.04658177	45.52725809	30001800	
1784	468	Isanti	Section		30-0060-00		Lake	130		MDNR 2008	II	488059.6613	5058574.955	-93.15332382	45.6806231	30006000	
1785	469	Isanti	South Stanchfield		30-0138-00		Lake	433		MDNR 2008	II	463351.4985	5054196.934	-93.4702599	45.64035207	30013800	
1786	470	Isanti	Twin		30-0046-00		Lake	31		MDNR 2013	II	487769.7892	5051446.869	-93.15686681	45.61645909	30004600	
1787	471	Isanti	Twin		30-0004-00		Lake	59		MDNR 2013	II	495286.3009	5032539.948	-93.06027676	45.44636808	30000400	
1788	472	Isanti	Typo		30-0009-00		Lake	273		MDNR 2008	II	493231.4786	5028965.87	-93.08650376	45.41418007	30000900	
1789	473	Isanti	Unnamed		30-0063-00		Lake	55		MDNR 2013	II	479372.4769	5032235.946	-93.26376182	45.44334306	30006300	
1790	474	Isanti	Unnamed		30-0116-00		Lake	36		MDNR 2013	II	463536.3885	5037920.947	-93.46667288	45.49386605	30011600	
730	671	Isanti	German Lake		30-0100-00		Lake	340		2007, 2008	DL	469736.3746	5036191.84	-93.38721886	45.47859906	30010000	
731	672	Isanti	Rice Creek		07030005-707	30river	Stream			2007	DL	495853.4904	5038812.844	-93.05307676	45.50283508	30river	
732	673	Isanti	Stanchfield Creek		07010207-518	13UM047				MPCA_BioMon	DL	476532.1387	5051644.276	-93.30101085	45.61794708	13UM047	
733	674	Isanti	Upper Rice Lake		30-0057-00		Lake	208	208	2008	DL	481916.4216	5062232.327	-93.23234385	45.7134091	30005700	
1767	451	Isanti	Athens WMA		30-0026-00		Lake	101		MDNR 2013	II	481269.663	5033964.902	-93.23956881	45.45895906	30002600	
1768	452	Isanti	Elizabeth		30-0083-00		Lake	323		MDNR 2008	II	476290.5187	5044683.861	-93.30377184	45.55528907	30008300	
1769	453	Isanti	Grass		30-0017-00		Lake	51		MDNR 2008	II	497951.122	5041539.917	-93.02623776	45.52739109	30001700	
1770	454	Isanti	Grass		30-0142-00		Lake	33		MDNR 2008	II	465196.7963	5057807.91	-93.4468409	45.67294808	30014200	
1771	455	Isanti	Krans		30-0020-00		Lake	47		MDNR 2013	II	488758.4832	5053141.952	-93.14422481	45.6317331	30002000	
1772	456	Isanti	Krone		30-0140-00		Lake	142		MDNR 2008	II	465756.2608	5062453.857	-93.43998591	45.71479209	30014000	

1773	457	Isanti	Linderman		30-0023-00		Lake	70		MDNR 2013	II	488811.6742	5058202.928	-93.14365881	45.6772871	30002300	
1774	458	Isanti	Little Stanchfield		30-0044-00		Lake	155		MDNR 2008	II	481799.1691	5053623.862	-93.23352783	45.63592309	30004400	
1775	459	Isanti	Marget		30-0070-00		Lake	188		MDNR 2013	II	475101.2902	5035050.854	-93.31851884	45.46854106	30007000	
1776	460	Isanti	Matson		30-0141-00		Lake	89		MDNR 2013	II	467488.273	5061206.876	-93.4176489	45.70365209	30014100	
1777	461	Isanti	Mimi's Pool		DNR	W0098001		5		MDNR 2013	II	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	W0098001	
1778	462	Isanti	Mud		30-0117-00		Lake	99		MDNR 2008	II	464213.7233	5036953.919	-93.45793388	45.48519705	30011700	
2346		Isanti	Lindgren		30-01444-00		Lake	75		MDNR 2008	II						
335	676	Itasca	Aspen Lake		31-0690-00		Lake	86	5	2007, 2008	DL	450320.3529	5284745.12	-93.66233828	47.71417434	31069000	
336	677	Itasca	Bass Lake		31-0576-00		Lake	2844	427	2007, 2008, UofM/MPCA 2013	DL	449030.3621	5243084.362	-93.67471122	47.33923929	31057600	
337	678	Itasca	Big Fork River		09030006-505	31r3	Stream			2007, 2008	DL	424785.4222	5289510.187	-94.00355339	47.75457232	31r3	
338	679	Itasca	Big Sucker Lake		31-0124-00		Lake			UofM/MPCA 2013	DL	480151.422	5247969.763	-93.26297211	47.38488333	31012400	
339	680	Itasca	Birdseye Lake		31-0834-00		Lake	73	11	2008	DL	426093.3609	5273205.893	-93.98334436	47.60804431	31083400	Y
340	681	Itasca	Blackberry Lake		31-0210-00		Lake	240	50	2007, 2008	DL	469776.4154	5228332.979	-93.39909512	47.2077923	31021000	
341	682	Itasca	Blackwater Lake		31-0561-00		Lake	674	300	2007, 2008	DL	449242.3565	5233549.513	-93.67081921	47.25346428	31056100	
342	683	Itasca	Blue Rock Lake		31-0919-00		Lake			MDNR APM	DL	411771.3986	5291643.155	-94.17759144	47.77211031	31091900	
343	684	Itasca	Bluebill Lake		31-0265-00		Lake	144	14	2008	DL	469436.3661	5273114.217	-93.40667519	47.61071335	31026500	
344	685	Itasca	Bosley Lake		31-0403-00		Lake	41	10	2008	DL	457224.3812	5249191.764	-93.5668372	47.39477931	31040300	
345	686	Itasca	Bowstring Lake		31-0813-00		Lake	8900	1335	2007, 2008	DL	431775.36	5264967.779	-93.90647432	47.5345513	31081300	Y
346	687	Itasca	Bowstring River		09030006-555	S007-219	Stream			2008, UofM/MPCA 2013 (31r4)	DL	420415.5737	5283766.63	-94.0607984	47.70237831	S007-219	
347	688	Itasca	Buckman Lake		31-0272-00		Lake	222	33	2008	DL	469249.3831	5268679.24	-93.40885218	47.57080034	31027200	
348	689	Itasca	Cameron Lake		31-0544-00		Lake	77	5	MDNR 2013	DL	456974.3702	5278097.33	-93.57297525	47.65484034	31054400	
349	690	Itasca	Canoe Lake (Unnamed)		31-0519-00		Lake	52	5	MDNR 2013	DL	458310.3515	5276140.584	-93.55499824	47.63732234	31051900	
350	691	Itasca	Clearwater Lake		31-0402-00		Lake	67	10	2008	DL	464301.3561	5248983.678	-93.47304417	47.39333232	31040200	
351	692	Itasca	Coddington Lake		31-0883-00		Lake	70	18	2008	DL	418917.3678	5290336.806	-94.08198841	47.76129732	31088300	
352	693	Itasca	Crescent Lake		31-0294-00		Lake	42	2	2008	DL	468651.3563	5279409.344	-93.4175712	47.66731636	31029400	
353	694	Itasca	Crooked Lake		31-0203-00		Lake	80	12	2007, 2008	DL	466863.4126	5220990.246	-93.43701712	47.14158028	31020300	
354	695	Itasca	Cut Foot Sioux Lake		31-0857-00		Lake	3222	322	2007, 2008	DL	418410.3606	5260927.229	-94.08327137	47.49666028	31085700	Y
355	696	Itasca	Damon Lake		31-0944-00		Lake	53	20	2007, 2008	DL	393754.3438	5273233.744	-94.41351448	47.60380027	31094400	
356	697	Itasca	Decker Lake		31-0934-00		Lake	292	58	2008	DL	394934.3779	5278070.343	-94.39898049	47.64749828	31093400	
357	698	Itasca	Deer Lake		31-0334-00		Lake	1854		the harvester survy report), 2008	DL	471344.3901	5298134.698	-93.38293422	47.83592038	31033400	
358	699	Itasca	Dishpan Lake		31-0992-00		Lake	15	15	2008	DL	418185.3977	5291001.94	-94.09187942	47.76718832	31099200	
359	700	Itasca	Dixon Lake		31-0921-00		Lake	666	67	2007, 2008	DL	403581.4	5272522.909	-94.28265244	47.59894228	31092100	Y
360	701	Itasca	Dora Lake		31-0882-00		Lake	477	89	2007, 2008	DL	421524.372	5287224.378	-94.0466444	47.73362032	31088200	
361	702	Itasca	Egg Lake		31-0817-00		Lake	118	11	2008	DL	427468.3896	5259342.99	-93.96276533	47.48348029	31081700	Y
362	703	Itasca	Farley Lake		31-0902-00		Lake	33	5	2008	DL	409137.3961	5268333.356	-94.20789142	47.56205628	31090200	Y
363	704	Itasca	First River Lake		31-0818-00		Lake	228	160	2007, 2008	DL	424760.385	5258822.174	-93.99861634	47.47848729	31081800	Y
364	705	Itasca	Fiske Lake		31-0918-00		Lake			MDNR APM	DL	412403.4019	5292121.916	-94.16925444	47.77650331	31091800	
365	706	Itasca	Grass Lake		31-0727-00		Lake	117		noted along south and eastern shore	DL	447062.3751	5276310.089	-93.70474828	47.63802533	31072700	
366	707	Itasca	Gunny Sack Lake		31-0267-00		Lake	81	8	2008	DL	470496.3566	5272619.959	-93.39253818	47.60631535	31026700	
367	708	Itasca	Hamrey Lake		31-0911-00		Lake	61	15	2008	DL	406335.3921	5285961.748	-94.24890545	47.7202363	31091100	
368	709	Itasca	Hay Lake		31-0037-00		Lake	21		2008, UofM/MPCA 2013	DL	492443.4158	5237026.165	-93.09993105	47.28666833	31003700	
369	710	Itasca	Helen Lake		31-0840-00		Lake	109	76	2008	DL	426053.4147	5283938.14	-93.98569137	47.70459132	31084000	
370	711	Itasca	Herrigen Lake		31-0174-00		Lake	27	3	2008	DL	479821.36	5302611.04	-93.26986419	47.8765174	31017400	
371	712	Itasca	Hinken Creek		09030006-538	S007-207	Stream			UofM/MPCA 2013	DL	425590.5504	5286444.749	-93.99228838	47.72708832	S007-207	
372	713	Itasca	Hunters Lake		31-0450-00		Lake	162	16	2008	DL	465260.3878	5265846.404	-93.46166319	47.54511034	31045000	
373	714	Itasca	Island Lake		31-0754-00		Lake	291	10	2008	DL	445428.3939	5253509.396	-93.72367125	47.4327473	31075400	
374	715	Itasca	Kelly Lake		31-0291-00		Lake	31	19	2008	DL	471852.3542	5281984.365	-93.37510019	47.69063236	31029100	
375	716	Itasca	Lawrence Lake		31-0231-00		Lake	382	19	2008, MDNR APM	DL	471592.424	5253968.396	-93.37675215	47.43854233	31023100	
1791	475	Itasca	Batson		31-0704-00		Lake	107		MDNR 2013	II	453846.9641	5276936.92	-93.61449826	47.64418434	31070400	
1792	476	Itasca	Bear		31-0157-00		Lake	328		MDNR 2013	II	479873.3137	5279601.882	-93.26810316	47.66949537	31015700	
1793	477	Itasca	Bello		31-0726-00		Lake	492		MDNR 2013	II	445885.421	5279934.88	-93.72086429	47.67054033	31072600	
1794	478	Itasca	Big Calf		31-0884-00		Lake	24		MDNR 2013	II	413989.4767	5298049.903	-94.14926344	47.83004332	31088400	
1795	479	Itasca	Bluewater		31-0395-00		Lake	356		MDNR 2013	II	458319.0711	5252140.873	-93.5526092	47.42138531	31039500	
1796	480	Itasca	Buck		31-0340-00		Lake	18		MDNR 2013	II	470326.0189	5295470.905	-93.39636022	47.81190738	31034000	
1797	481	Itasca	Burrows		31-0413-00		Lake	322		MDNR 2013	II	463286.0046	5263915.955	-93.4877392	47.52763233	31041300	
734	675	Itasca	Ann Lake		31-0305-00		Lake	94	5	2008	DL	468119.3929	5277069.356	-93.4244862	47.64623635	31030500	
735	717	Itasca	Leighton Lake		31-0032-00		Lake	242	12	2008	DL	489641.3578	5244273.954	-93.13715507	47.35184734	31003200	
736	718	Itasca	Lillian Lake		31-0750-00		Lake	90	14	2008	DL	445303.417	5243535.044	-93.72409824	47.34299329	31075000	
737	719	Itasca	Little Ball Club Lake		31-0822-00		Lake	181	10	2008	DL	425053.3509	5252516.326	-93.99365933	47.42178928	31082200	Y

738	720	Itasca	Little Cut Foot Sioux Lake		31-0852-00		Lake	1357	136	2008	DL	421929.3757	5262249.098	-94.03679136	47.50898429	31085200	Y
739	721	Itasca	Little Drum Lake		31-0741-00		Lake	89	22	2008	DL	445853.3804	5233577.291	-93.71560822	47.25344328	31074100	
740	722	Itasca	Little Island Lake		31-0179-00		Lake	26	3	2008	DL	475268.3865	5300682.366	-93.33064321	47.85900539	31017900	
741	723	Itasca	Little Moose Lake		31-0610-00		Lake	234	12	2008	DL	450297.3568	5250582.768	-93.65878023	47.4068043	31061000	
742	724	Itasca	Little Rice Lake		31-0716-00		Lake	157		2008, see 1976 MDNR lake map for WR locations	DL	446674.3565	5231643.547	-93.70452822	47.23611128	31071600	
743	725	Itasca	Little Spring Lake		31-0797-00		Lake	121	3	2008	DL	435718.3975	5274755.643	-93.85552432	47.62301332	31079700	
744	726	Itasca	Little White Oak Lake		31-0740-00		Lake	493	25	2008	DL	442442.4074	5235122.307	-93.76088324	47.26705428	31074000	Y
745	727	Itasca	Lost Lake		31-0900-00		Lake	26	5	2008	DL	411358.4117	5268971.52	-94.17850141	47.56810429	31090000	Y
746	728	Itasca	Lower Pigeon Lake		31-0893-00		Lake	53	20	2008, MDNR APM	DL	412631.4061	5268529.143	-94.1614924	47.56429729	31089300	Y
747	729	Itasca	Marble Lake		31-0271-00		Lake	155	20	2008	DL	468221.3618	5269384.931	-93.42257119	47.57710034	31027100	
748	730	Itasca	Marie Lake		31-0507-00		Lake	51		2007	DL	457458.1871	5281981.846	-93.56691095	47.68982235	31050700	
749	731	Itasca	Marie Lake		31-0937-00		Lake	45	10	2008	DL	393997.3528	5274800.626	-94.41066148	47.61793427	31093700	
750	732	Itasca	Middle Pigeon Lake		31-0892-00		Lake	182	15	2008	DL	412160.3895	5270461.513	-94.16813941	47.58161729	31089200	Y
751	733	Itasca	Mississippi River		07010101-756	31r6	Stream			2007, 2008, 2010, UofM/MPCA 2013, MDNR APM	DL	454533.8639	5233657.645	-93.60090119	47.25482529	31r6	
752	734	Itasca	Mississippi River above Clay Boswell		07010101-756	S007-163	Stream			UofM/MPCA 2013, MDNR APM	DL	445554.1921	5231904.608	-93.71935822	47.23836828	S007-163	
753	735	Itasca	Mississippi River below Clay Boswell		07010101-756	S006-923	Stream			UofM/MPCA 2013, MDNR APM	DL	452041.8524	5233689.924	-93.6338382	47.25493829	S006-923	
754	736	Itasca	Moose Lake		31-0242-00		Lake	70	10	MDNR 2013	DL	474438.3606	5263861.678	-93.33958216	47.52767834	31024200	
755	737	Itasca	Morph Lake		31-0929-00		Lake	67	3	MDNR APM	DL	396381.3945	5267978.044	-94.37733346	47.55694927	31092900	
756	738	Itasca	Mosomo Lake		31-0861-00		Lake	47	5	2008	DL	414476.4181	5267839.985	-94.13683539	47.55834329	31086100	Y
757	739	Itasca	Mud Lake		31-0206-00		Lake	271	203	2008	DL	468929.371	5230396.895	-93.41042313	47.2263243	31020600	
758	740	Itasca	Munzer Lake		31-0360-00		Lake	108	3	2008	DL	459176.368	5221152.123	-93.53840715	47.14260528	31036000	
759	741	Itasca	Nagel Lake		31-0377-00		Lake	90	50	2008	DL	457043.3516	5236679.228	-93.56802718	47.28218229	31037700	
760	742	Itasca	Natures Lake		31-0877-00		Lake	2885	2499	2007, 2008	DL	416201.35	5277515.286	-94.1157604	47.6456083	31087700	Y
761	743	Itasca	O'Donnell Lake		31-0303-00		Lake	47	10	2008	DL	470341.4113	5277454.612	-93.39492719	47.64980836	31030300	
762	744	Itasca	Otter Lake		31-0301-00		Lake	117		2007, 2008	DL	473115.3838	5278053.197	-93.35802718	47.65531536	31030100	
763	745	Itasca	Ox Hide Lake		31-0106-00		Lake	114		UofM/MPCA 2013	DL	483984.4061	5243185.741	-93.21201709	47.34194133	31010600	
764	746	Itasca	Pigeon Dam Lake		31-0894-00		Lake	511	500	2008	DL	413533.3456	5263951.735	-94.14860439	47.52323928	31089400	Y
765	747	Itasca	Pigeon River		07010101-600	31river_1	Stream			2007	DL	413743.0331	5264828.795	-94.14599139	47.53115728	31river_1	Y
766	748	Itasca	Pokegama Lake		31-0532-00		Lake	15600	100	2008, MDNR APM	DL	456067.393	5225964.397	-93.57987917	47.18570628	31053200	
767	749	Itasca	Popple River		09030006-512	S006-188	Stream			UofM/MPCA 2013	DL	418812.294	5286307.699	-94.08263841	47.72503831	S006-188	
768	750	Itasca	Prairie Lake		31-0384-00		Lake	1167	45	2008	DL	458911.4141	5240471.811	-93.54367618	47.3164273	31038400	
769	751	Itasca	Prairie Lake		31-0053-00		Lake	29	1	2007,2008, 2010	DL	486534.4276	5271204.31	-93.17911412	47.59410936	31005300	
770	752	Itasca	Prairie River		07010103-508	S007-209	Stream			2007, 2008, UofM/MPCA 2013	DL	463043.4052	5233274.056	-93.48840816	47.2519083	S007-209	
771	753	Itasca	Rabbits Lake		31-0923-00		Lake	209	157	2008	DL	401709.3441	5259723.176	-94.30468943	47.48352027	31092300	Y
772	754	Itasca	Raven Lake		31-0925-00		Lake	97	70	2008	DL	399835.3869	5258772.896	-94.32934144	47.47468626	31092500	Y
773	755	Itasca	Rice Creek		09030006-635	31r1	Stream			2008	DL	453681.4726	5290984.611	-93.61819428	47.77056136	31r1	
774	756	Itasca	Rice Lake		31-0201-00		Lake	115	6	2008	DL	473478.4078	5223902.826	-93.3499501	47.1680883	31020100	
775	757	Itasca	Rice Lake		31-0315-00		Lake	37	15	2008	DL	467253.3899	5291795.674	-93.43712323	47.77869137	31031500	
776	758	Itasca	Rice Lake		31-0876-00		Lake	911	729	2007, 2008	DL	420926.352	5279936.692	-94.05329739	47.66798631	31087600	Y
777	759	Itasca	Rice Lake		31-0717-00		Lake	959		2008, MCBS 2011	DL	448288.3936	5229175.81	-93.68292021	47.21403628	31071700	
778	760	Itasca	Rice Lake		31-0707-00		Lake	24		2008, see MDNR lake map for WR locations	DL	449986.4213	5276532.77	-93.66584927	47.64026133	31070700	
779	761	Itasca	Rice River		09030006-548	31r2	Stream			2007, 2008	DL	451142.3223	5288468.825	-93.65179828	47.74773935	31r2	
780	762	Itasca	Rice River		09030006-539	S006-208	Stream			UofM/MPCA 2013	DL	450848.4971	5280315.191	-93.65479827	47.67435834	S006-208	
781	763	Itasca	Ruby Lake		31-0422-00		Lake	243	5	2008	DL	458353.3602	5263151.01	-93.55319322	47.52045233	31042200	
782	764	Itasca	Sand Lake		31-0826-00		Lake	3391	50	2008	DL	424228.414	5273265.958	-94.00816436	47.6083693	31082600	Y
783	765	Itasca	Shallow Pond		31-0910-00		Lake	281	11	2008	DL	405611.4013	5289313.501	-94.25928346	47.7502813	31091000	
784	766	Itasca	Simpson Lake		31-0867-00		Lake	35	5	2008	DL	414955.4028	5266365.249	-94.13018439	47.54513929	31086700	Y
785	767	Itasca	Sioux Lake		31-0907-00		Lake	69	27	2008	DL	405287.4045	5271421.655	-94.25972543	47.58928728	31090700	Y
786	768	Itasca	Skimmerhorn Lake		31-0939-00		Lake	30	6	2008	DL	393888.3914	5281380.262	-94.41370749	47.67710028	31093900	
787	769	Itasca	Soneman Lake		31-0276-00		Lake	40	16	2008	DL	475402.3875	5268235.97	-93.32702016	47.56707435	31027600	
788	770	Itasca	Spruce Lake		31-0347-00		Lake	58	58	2008	DL	466615.398	5272966.421	-93.4441982	47.60924435	31034700	
789	771	Itasca	Stevens		31-0718-00		Lake	224	11	2008	DL	446783.4858	5242054.852	-93.70432883	47.32979729	31071800	
790	772	Itasca	Stone Axe Lake		31-0828-00		Lake	37	4	2008	DL	424943.3569	5278403.77	-93.99953437	47.65467431	31082800	Y
791	773	Itasca	Swan Lake		31-0067-00		Lake	2472	50	2007, 2008, UofM/MPCA 2013, Smith_Lakes	DL	486094.3756	5238511.227	-93.18393907	47.29992732	31006700	

792	774	Itasca	Swan River		07010103-506	SwanR	Stream			506)	DL	482435.5651	5237288.751	-93.23228809	47.28883932	SwanR	
793	775	Itasca	Third River		07010101-526	31river_2	Stream			2007	DL	404828.931	5265473.924	-94.26453343	47.53571628	31river_2	Y
794	776	Itasca	Tuttle Lake		31-0821-00		Lake	56	16	2008	DL	424965.3544	5253799.139	-93.99504333	47.43332028	31082100	Y
795	777	Itasca	Unnamed Lake		31-0066-00		Lake	23	3	2008	DL	488536.3981	5286465.07	-93.15288513	47.73145939	31006600	
796	778	Itasca	Unnamed Lake		31-0204-00		Lake	28	3	2008	DL	467317.3947	5219767.493	-93.43094112	47.13060028	31020400	
797	779	Itasca	Unnamed Lake		31-0322-00		Lake	28	2	2008	DL	472122.3939	5285948.074	-93.3717552	47.72630737	31032200	
798	780	Itasca	Unnamed Lake		31-0815-00		Lake	109	5	2008	DL	425604.4019	5250270.847	-93.98597732	47.40165028	31081500	Y
799	781	Itasca	Unnamed Lake		31-0860-00		Lake	24	5	2008	DL	413044.3683	5267886.587	-94.1558764	47.55857229	31086000	Y
800	782	Itasca	Unnamed Lake		31-0961-00		Lake	10	2	2008	DL	468691.4173	5282290.055	-93.41724421	47.69323736	31096100	
801	783	Itasca	Unnamed Lake		31-0288-00		Lake	27	4	MDNR 2013	DL	470577.3825	5282428.024	-93.3921202	47.69456736	31028800	
802	784	Itasca	Upper Pigeon Lake		31-0908-00		Lake	86	10	2008	DL	411650.3555	5271562.817	-94.17514241	47.59145529	31090800	Y
803	785	Itasca	Walters Lake		31-0298-00		Lake	120	18	2008	DL	472229.3982	5279271.578	-93.36990319	47.66624036	31029800	
804	786	Itasca	Wart Lake		31-0859-00		Lake	14	5	2008	DL	413729.3559	5269884.64	-94.1471654	47.57663829	31085900	Y
805	787	Itasca	White Fish Lake		31-0142-00		Lake	31	2	2008	DL	479948.3589	5258949.139	-93.26616013	47.48366934	31014200	
806	788	Itasca	White Oak Lake		31-0776-00		Lake	905	271	2007, 2008	DL	439749.3615	5240240.755	-93.79717226	47.31286528	31077600	
807	789	Itasca	Whitefish Lake		31-0843-00		Lake	493	10	2008	DL	427562.3675	5281637.884	-93.96519837	47.68406832	31084300	
808	790	Itasca	Wilderness Lake		31-0901-00		Lake	26	4	2008	DL	407412.4168	5269681.627	-94.23110142	47.57394128	31090100	Y
809	791	Itasca	Wolf Lake		31-0152-00		Lake	199	30	MDNR 2013	DL	480336.4091	5268101.574	-93.26141814	47.56603336	31015200	
1798	482	Itasca	Coleman		31-0943-00		Lake	57		MDNR 2013	II	393684.4157	5277607.877	-94.41550649	47.64313428	31094300	
1799	483	Itasca	Cottonwood		31-0594-00		Lake	109		MDNR 2013	II	447411.517	5253349.909	-93.69735625	47.4314753	31059400	
1800	484	Itasca	Crooked		31-0193-00		Lake	423		MDNR 2013	II	474638.8633	5256238.966	-93.33648014	47.45909834	31019300	
1801	485	Itasca	Day		31-0637-00		Lake	46		MDNR 2013	II	451410.0925	5259014.919	-93.64495924	47.48275632	31063700	
1802	486	Itasca	Dead Horse		31-0622-00		Lake	96		MDNR 2013	II	449190.9605	5264628.963	-93.67506026	47.53309832	31062200	
1803	487	Itasca	Dry Creek		31-0869-00		Lake	98		MDNR 2013	II	417620.4109	5264668.935	-94.09445738	47.53022229	31086900	Y
1804	488	Itasca	Dunbar		31-0904-00		Lake	273		MDNR 2013	II	406874.477	5277356.962	-94.23988344	47.64290929	31090400	Y
1805	489	Itasca	East		31-0798-00		Lake	92		MDNR 2013	II	435965.663	5280617.933	-93.85309233	47.67577933	31079800	
1806	490	Itasca	Fawn		31-0609-00		Lake	174		MDNR 2013	II	448236.7791	5251559.953	-93.68620424	47.4154363	31060900	
1807	491	Itasca	Forest		31-0663-00		Lake	29		MDNR 2013	II	450078.4224	5271098.948	-93.66400526	47.59137933	31066300	
1808	492	Itasca	Grass		31-0144-00		Lake	40		MDNR 2008	II	477514.2782	5257478.965	-93.29839413	47.47036134	31014400	
1809	493	Itasca	Grass		31-0527-00		Lake	19		MDNR 2008	II	458683.3787	5302192.938	-93.55250828	47.87174337	31052700	Y
1810	494	Itasca	Grave		31-0624-00		Lake	538		MDNR 2013	II	448858.103	5260881.969	-93.67904725	47.49935932	31062400	
1811	495	Itasca	Hartley		31-0154-00		Lake	271		MDNR 2013	II	476426.7829	5267171.923	-93.31334415	47.55753835	31015400	
1812	496	Itasca	Irene		31-0878-00		Lake	10	1	MDNR 2008	II	419201.269	5284479.915	-94.0771134	47.70864431	31087800	
1813	497	Itasca	Irma		31-0634-00		Lake	337		MDNR 2008	II	453450.1226	5259381.9	-93.61792123	47.48620732	31063400	
1814	498	Itasca	Jay Gould		31-0565-00		Lake	455		MDNR 2013	II	452691.9715	5232166.979	-93.62508519	47.24128228	31056500	
1815	499	Itasca	Jessie		31-0786-00		Lake	1782		MDNR 2013	II	438313.406	5270500.91	-93.82039231	47.58498632	31078600	
1816	500	Itasca	Kenogama		31-0928-00		Lake	580		MDNR 2013	II	397043.6965	5260943.937	-94.36688745	47.49378026	31092800	Y
1817	501	Itasca	Lammon Aid		31-0096-00		Lake	64		MDNR 2013	II	481158.1851	5233046.981	-93.24900209	47.25063531	31009600	
1818	502	Itasca	Larson		31-0317-00		Lake	190		MDNR 2013	II	469095.2133	5290434.934	-93.41244122	47.76653937	31031700	
1819	503	Itasca	Lauchoh		31-0692-00		Lake	50		MDNR 2013	II	450733.9219	5282438.957	-93.65656428	47.69345734	31069200	
1820	504	Itasca	Little Bowstring		31-0758-00		Lake	314		MDNR 2013	II	445384.5831	5260270.934	-93.72508826	47.49357931	31075800	
1821	505	Itasca	Little Cowhorn		31-0198-00		Lake	157		MDNR 2013	II	467951.2737	5216493.873	-93.42235011	47.10117428	31019800	
1822	506	Itasca	Little Dixon		31-0936-00		Lake	31		MDNR 2013	II	402408.7757	5276166.902	-94.29905945	47.63154629	31093600	
1823	507	Itasca	Little Sand		31-0853-00		Lake	222		MDNR 2013	II	422800.4574	5277647.918	-94.02793338	47.64762231	31085300	Y
1824	508	Itasca	Little Trout		31-0394-00		Lake	78		MDNR 2013	II	458945.4994	5253949.925	-93.5444722	47.43770232	31039400	
1825	509	Itasca	Logging Slough (Stevens)		31-0708-00		Lake	232		MDNR 2008	II	451704.0515	5276667.986	-93.64299826	47.64160834	31070800	
1826	510	Itasca	Long		31-0570-00		Lake	117		MDNR 2013	II	450517.4583	5230303.896	-93.6536092	47.22435828	31057000	
1827	511	Itasca	Long		31-0266-01	31026600		238		MDNR 2013	II	469615.8914	5271666.89	-93.40418619	47.59769935	31026600	
1828	512	Itasca	Lost		31-0289-00		Lake	89		MDNR 2008	II	469683.91	5281950.922	-93.4039942	47.69023336	31028900	
1829	513	Itasca	Moose (Rice)		31-0121-00		Lake	108		MDNR 2008	II	477961.1612	5250680.942	-93.29212512	47.40920833	31012100	
1830	514	Itasca	North Twin		31-0190-00		Lake	250		MDNR 20013	II	475946.6845	5239406.97	-93.31821611	47.30769332	31019000	
1831	515	Itasca	No-ta-she-bun (Willow)		31-0775-00		Lake	232		MDNR 2013	II	441383.2143	5222612.962	-93.77324622	47.15440626	31077500	
1832	516	Itasca	Pothole		31-0991-00		Lake	8		MDNR 2008	II	451079.6628	5256797.927	-93.64909924	47.46278431	31099100	
1833	517	Itasca	Reed		31-0074-00		Lake	72		MDNR 2013	II	481306.2671	5216030.938	-93.24633606	47.09752229	31007400	
1834	518	Itasca	Rice		31-0942-00		Lake	39		MDNR 2008	II	393687.9119	5264027.978	-94.41217047	47.52098226	31094200	Y
1835	519	Itasca	Rice (Round)		31-0777-00		Lake	363		MDNR 2008	II	442091.4767	5255313.927	-93.76815427	47.4486953	31077700	
1836	520	Itasca	Shoal		31-0534-00		Lake	661		MDNR 2013	II	456713.2527	5238936.957	-93.57261119	47.3024753	31053400	
1837	521	Itasca	Smith		31-0547-00		Lake	39		MDNR 2013	II	455662.2652	5216994.933	-93.58434116	47.10497127	31054700	
1838	522	Itasca	South Ackerman		31-0795-00		Lake	22		MDNR 2013	II	436309.3683	5276743.979	-93.84794932	47.64096032	31079500	
1839	523	Itasca	Sugar		31-0926-00		Lake	1585		MDNR 2013	II	401236.9446	5256195.979	-94.31016943	47.45171926	31092600	Y

1840	524	Itasca	Third Sucker		31-0122-00		Lake	34		MDNR 2013	II	479104.6158	5249881.92	-93.27693112	47.40205633	31012200	
1841	525	Itasca	Trout		31-0216-00		Lake	1953		MDNR 2013	II	469380.3034	5234109.97	-93.40472113	47.2597563	31021600	
1842	526	Itasca	Trout		31-0410-00		Lake	1792		MDNR 2013	II	458990.5097	5257870.973	-93.54423921	47.47298532	31041000	
1843	527	Itasca	Unnamed		31-0094-00		Lake	30		MDNR 2013	II	479558.8758	5233805.891	-93.27017209	47.25741631	31009400	
1844	528	Itasca	Unnamed		31-1223-00		Lake	65		MDNR 2013	II	398895.9811	5256562.939	-94.34129944	47.45466126	31122300	Y
1845	529	Itasca	Unnamed (Dishpan)		31-1210-00		Lake	106		MDNR 2013	II	417345.8024	5291464.944	-94.10317042	47.77124632	31121000	
1846	530	Itasca	Unnamed (Hecemovich) (Shamrock)		31-0229-00		Lake	14		MDNR 2013	II	469761.1651	5246256.976	-93.40051215	47.36907332	31022900	
1847	531	Itasca	Unnamed (Pinnett)		31-0337-00		Lake	18		MDNR 2013	II	469763.8638	5299185.956	-93.40412823	47.84530638	31033700	
1848	532	Itasca	Unnamed (Wildlife Marsh)		31-1209-00		Lake	70		MDNR 2013	II	415943.4688	5292332.948	-94.12205143	47.77887332	31120900	
1849	533	Itasca	Wabana		31-0392-00		Lake	2146		MDNR 2013	II	460578.2254	5252193.947	-93.52266319	47.42200332	31039200	
1850	534	Itasca	Wagner		31-0912-00		Lake	63		MDNR 2013	II	409733.3681	5290441.926	-94.20453745	47.76102231	31091200	
1851	535	Itasca	Wilson		31-0320-00		Lake	84		MDNR 2013	II	474154.6709	5287150.906	-93.34472619	47.73721437	31032000	
2347		Itasca	Clubhouse		31-0540-00		Lake			MDNR 2008	II						
2348		Itasca	Cophenhagen		31-0539-00		Lake			MDNR 2008	II						
466	792	Kanabec	Ann Lake		33-0040-00		Lake	363	18	2007, 2008	DL	468540.4192	5085059.147	-93.40568893	45.91838112	33004000	
467	793	Kanabec	Knife Lake		33-0028-00		Lake	1039		multi-year MDNR WR observations	DL	476814.3611	5091696.485	-93.2993149	45.97844813	33002800	
468	794	Kanabec	Mud (Quamba) Lake		33-0015-00		Lake	226		multi-year MDNR WR observations	DL	486392.4037	5082712.779	-93.17541286	45.89784813	33001500	
469	795	Kanabec	Rice Creek		07030004-575	33r5	Stream			2008	DL	484807.2921	5071291.811	-93.19548571	45.79502012	31r5	
470	796	Kanabec	Ann riparian wetland		0703004-511	Ann	Riparian wetland			MPCA_BioMon	DL	470944.3968	5081786.941	-93.37449091	45.88903612	Ann	
471	797	Kanabec	Unnamed Lake		33-0111-00		Lake	33	27	2008	DL	460117.4233	5079214.936	-93.51381895	45.8653451	33011100	
1852	536	Kanabec	Devils		33-0033-00		Lake	121		MDNR 2013	II	474065.4297	5073574.912	-93.33382289	45.81524911	33003300	
1853	537	Kanabec	Eleven		33-0001-00		Lake	320		MDNR 2013	II	493454.9932	5109487.932	-93.08473787	46.13893617	33000100	
1854	538	Kanabec	Fish		33-0036-00		Lake	440		MDNR 2013	II	475747.9832	5075622.888	-93.31226889	45.83374311	33003600	
1855	539	Kanabec	Grass		33-0013-00		Lake	24		MDNR 2008	II	487454.1839	5069086.948	-93.16137083	45.77522812	33001300	
1856	540	Kanabec	Kent		33-0035-00		Lake	34		MDNR 2008	II	474305.7107	5078463.89	-93.3309909	45.85926112	33003500	
1857	541	Kanabec	Knife		33-0028-00		Lake	1259		MDNR 2008	II	476818.8195	5091707.912	-93.2992579	45.97855113	33002800	
1858	542	Kanabec	Pennington		33-0030-00		Lake	132		MDNR 2013	II	478828.1626	5069740.856	-93.27235087	45.78090311	33003000	
1859	543	Kanabec	Rice		33-0011-00		Lake	172		MDNR 2008	II	483246.7019	5064943.948	-93.21534584	45.73784911	33001100	
1861	545	Kanabec	Rice (Erickson)		33-0031-00		Lake	39		MDNR 2008	II	472584.1131	5068418.899	-93.35259689	45.7687851	33003100	
1862	546	Kanabec	Twin or East		33-0019-00		Lake	27		MDNR 2008	II	487078.2151	5077228.951	-93.16642485	45.84850413	33001900	
1863	547	Kanabec	Unnamed		33-0029-00		Lake	21		MDNR 2008	II	474792.5022	5071919.898	-93.32437788	45.80038011	33002900	
1864	548	Kanabec	Unnamed (WL Imp Pool 1)		33-0072-00		Lake	31	1	MDNR 2008	II	460184.3566	5080727.919	-93.51308195	45.8789661	33007200	
1865	549	Kanabec	Unnamed (Jones)		33-0012-00		Lake	11		MDNR 2008	II	488814.3041	5070188.937	-93.14390183	45.78517012	33001200	
1866	550	Kanabec	Unnamed (Twin)		33-0014-00		Lake	30		MDNR 2008	II	486011.6968	5066807.863	-93.17985884	45.75468711	33001400	
1867	551	Kanabec	White Lily		33-0008-00		Lake	32		MDNR 2013	II	492136.8658	5103709.909	-93.10170786	46.08691916	33000800	
2349		Kanabec	Pomroy		33-0009-00		Lake	267		MDNR 2008	II						
472	798	Kandiyohi	Blaamyhre Lake		34-0345-00		Lake	121		2008, UofM/MPCA 2013	DL	329189.3338	5025978.983	-95.18118335	45.36649591	34034500	
818	799	Kandiyohi	Depressional Wetland		34-0143-00	New London	Wetland			MPCA_BioMon	DL	346727.4739	5019846.177	-94.95546628	45.31538092	New London	
819	800	Kandiyohi	Glesne Lake		34-0352-00		Lake	205		2008, MCBS 2011	DL	328230.3437	5025323.539	-95.19319235	45.36036591	34035200	
820	801	Kandiyohi	Glesne Slough (Unnamed) Lake		34-0353-00		Lake	16		UofM/MPCA 2013	DL	328521.4058	5024578.964	-95.18922035	45.35373991	34035300	
821	802	Kandiyohi	Monongalia Lake		34-0158-00		Lake	2516		2008, UofM/MPCA 2013 seed stock lake	DL	346921.3971	5022004.837	-94.95366128	45.33484292	34015800	
822	803	Kandiyohi	Ole Lake		34-0342-00		Lake	66		2008, MCBS 2011	DL	329742.3898	5028043.877	-95.17483835	45.38520392	34034200	
823	804	Kandiyohi	Unnamed Lake		34-0611-00		Lake			UofM/MPCA 2013	DL	353957.362	5014123.559	-94.86159124	45.26543792	34061100	
824	805	Kandiyohi	Unnamed Wetland				Wetland	25		MPCA_BioMon	DL	326311.7921	5030757.809	-95.21958337	45.40877191		
1868	552	Kandiyohi	Andrew		34-0206-00		Lake	781		MDNR 2013	II	339788.8964	5019398.907	-95.0437893	45.30980791	34020600	
1869	553	Kandiyohi	Brenner		34-0339-00		Lake	81		MDNR 2013	II	324890.0475	5029471.945	-95.23728137	45.39685191	34033900	
1870	554	Kandiyohi	Calhoun		34-0062-00		Lake	1396		MDNR 2013	II	356268.7432	5014909.904	-94.83237124	45.27298892	34006200	
1871	555	Kandiyohi	Crook		34-0357-00		Lake	82		MDNR 2013	II	329836.4851	5030909.878	-95.17462635	45.41100592	34035700	
1872	556	Kandiyohi	Deer		34-0344-00		Lake	115		MDNR 2013	II	331954.9508	5028738.874	-95.14683234	45.39198992	34034400	
1873	557	Kandiyohi	Diamond		34-0044-00		Lake	1697		MDNR 2013	II	355341.3029	5004966.844	-94.84129723	45.18334191	34004400	
1874	558	Kandiyohi	East Solomon		34-0246-00		Lake	601		MDNR 2013	II	334980.7599	5004892.91	-95.1002693	45.17820589	34024600	
1875	559	Kandiyohi	Eight		34-0146-00		Lake	89		MDNR 2008	II	344595.3103	5018723.889	-94.98230028	45.30481592	34014600	

1876	560	Kandiyohi	Elizabeth		34-0022-02	34002200		1153		MDNR 2013	II	358102.3043	4991684.901	-94.8024032	45.0644019	34002200	
1877	561	Kandiyohi	Elkhorn		34-0119-00		Lake	79		MDNR 2013	II	347375.0872	5008252.856	-94.94364526	45.21122491	34011900	
1878	562	Kandiyohi	Foot		34-0181-00		Lake	544		MDNR 2013	II	338602.3542	4999993.877	-95.05262228	45.13497289	34018100	
1879	563	Kandiyohi	Games		34-0224-00		Lake	557		MDNR 2013	II	335556.3491	5022014.884	-95.09861632	45.33236091	34022400	
1880	564	Kandiyohi	Green		34-0079-00		Lake	5821		MDNR 2013	II	350493.5753	5012743.919	-94.90530425	45.25229792	34007900	
1881	565	Kandiyohi	Lillian		34-0072-00		Lake	1608		MDNR 2013	II	352094.6617	4980672.929	-94.8754352	44.96409688	34007200	
1882	566	Kandiyohi	Nest		34-0154-00		Lake	1019		MDNR 2013	II	346175.2931	5013592.84	-94.96056727	45.25900391	34015400	
1883	567	Kandiyohi	Norway		34-0251-00		Lake	2496		MDNR 2013	II	335186.5752	5019335.919	-95.10244032	45.30817591	34025100	
1884	568	Kandiyohi	Ringo		34-0172-00		Lake	774		MDNR 2013	II	342246.507	5010291.852	-95.00956328	45.22843791	34017200	
1885	569	Kandiyohi	Unnamed		34-0150-01	34015000		19		MDNR 2013	II	351072.5813	5017990.845	-94.89950426	45.29962492	34015000	
1886	570	Kandiyohi	Unnamed		34-0391-00		Lake	16		MDNR 2013	II	342570.0546	5020583.869	-95.00870929	45.32109692	34039100	
1887	571	Kandiyohi	Unnamed		34-0236-00		Lake	117		MDNR 2008	II	334449.5616	5025961.898	-95.11405333	45.36760492	34023600	
1888	572	Kandiyohi	Wakanda Lake		34-0169-00		Lake	1792		MDNR 2013	II	343301.1668	4991384.899	-94.99020725	45.05858188	34016900	
2351		Kandiyohi	Bear		34-0148-00		Lake	128		MDNR 2008	II						
825	806	Koochiching	Nett Lake		36-0001-00		Lake	7369		2007, 2008	DL	488853.3576	5328222.06	-93.1497382	48.10716444	36000100	Y
826	807	Koochiching	Rainy Lake		69-0694-00		Lake	24349		2007, 2008	DL	499902.3873	5384071.183	-93.00132424	48.60971551	69069400	
827	808	Koochiching	Rat Root Lake		36-0006-00		Lake	734		2007, 2008	DL	478806.374	5371501.089	-93.2868763	48.49627348	36000600	
828	809	Koochiching	Tilson Creek		DNR	36r1	Stream	0		2007, 2008	DL	481924.0231	5382259.637	-93.24514331	48.59315749	36r1	
1889	573	Koochiching	Battle		36-0024-00		Lake	268		MDNR 2013	II	399638.5726	5303058.986	-94.34213051	47.87302031	36002400	
1890	574	Koochiching	Moose		36-0008-00		Lake	50		MDNR 2013	II	468577.9885	5359668.959	-93.42443633	48.38940045	36000800	
1891	575	Koochiching	Seretha		36-0009-00		Lake	58		MDNR 2013	II	418050.1733	5317847.968	-94.09878046	48.00867035	36000900	
1892	576	Lac Qui Parle	Lac Qui Parle		37-0046-00		Lake	8400		MDNR 2013	II	263279.7419	5000832.85	-96.00984254	45.12129582	37004600	
829	810	Lake	August Lake		38-0691-00		Lake	228	9	MDNR 2013	DL	604518.3905	5290951.585	-91.60521568	47.7634535	38069100	
830	811	Lake	Bald Eagle Lake		38-0637-00		Lake	1243		2008, 1854 List	DL	607544.4341	5298401.189	-91.56299968	47.82996252	38063700	
831	812	Lake	Basswood Lake		38-0645-00		Lake	14610	485	2008, 1854 List	DL	604112.3963	5320990.92	-91.60338272	48.03371354	38064500	
832	813	Lake	Bluebill Lake		38-0261-00		Lake	44	11	2008, 7050.0470, 1854 List	7050	635018.4483	5273233.803	-91.20385953	47.59844651	38026100	
833	814	Lake	Bonga Lake		38-0762-00		Lake	138	138	2008, 1854 List	DL	598913.3795	5272659.65	-91.68413768	47.59979648	38076200	
834	815	Lake	Cabin Lake		38-0260-00		Lake	71	55	2007, 2008, 7050.0470, 1854 List	7050	637376.406	5272022.265	-91.17288752	47.58705551	38026000	
835	816	Lake	Camp East Creek		09030001-553	CECr	Stream			1854 List, T.60, R.10W, S.11,12 trib to Stony River	DL	607167.0516	5283415.786	-91.57173566	47.6952355	CECr	
836	817	Lake	Campers Lake		38-0679-00		Lake	56	56	2007, 2008, 1854 List	DL	605886.3885	5279608.305	-91.58972166	47.66119849	38067900	
837	818	Lake	Charity Lake		38-0055-00		Lake	26		2008, 1854 List	DL	640998.4274	5278740.552	-91.12257852	47.64669552	38005500	
838	819	Lake	Christianson Lake		38-0750-00		Lake	158		2008, 1854 List	DL	600239.3778	5234542.244	-91.67513662	47.25670143	38075000	
839	820	Lake	Clark Lake		38-0647-00		Lake	49		2007, 2008, 2010, 1854 List	DL	602335.4176	5237423.093	-91.64678062	47.28229344	38064700	
840	821	Lake	Cloquet Lake		38-0539-00		Lake	176		2007, 2008, 2010, UofM/MPCA 2013, 1854 List	DL	613880.4427	5254871.763	-91.48969459	47.43734147	38053900	
841	822	Lake	Cloquet River		04010202-507	38r1	Stream	0		2008, 1854 List	DL	612929.3666	5252351.317	-91.50294659	47.41483546	38r1	
842	823	Lake	Comfort Lake		38-0290-00		Lake	42		2008, 1854 List, MCBS 2011	DL	631741.4308	5291718.884	-91.24185357	47.76536553	38029000	
843	824	Lake	Cougar Lake		38-0767-00		Lake	71	1	2008, 1854 List	DL	598039.4098	5267776.689	-91.69685167	47.55600447	38076700	
844	825	Lake	Cramer Homestead Lake		38-0246-00		Lake	26		1854 List, MDNR 2013	DL	637827.3948	5262301.884	-91.16993851	47.4995415	38024600	
845	826	Lake	Cramer Lake		38-0014-00		Lake	69	55	2007, 2008, 1854 List	DL	643342.4444	5264952.923	-91.09588849	47.52219051	38001400	
846	827	Lake	Crooked Lake		38-0024-00		Lake	272		2008, 1854 List	DL	645058.4187	5274492.549	-91.06995749	47.60759752	38002400	
847	828	Lake	Crooked Lake		38-0817-00		Lake	5229		2008, 1854 List	DL	589233.4232	5337990.095	-91.79937081	48.18887455	38081700	
848	829	Lake	Cross River Lake		38-0002-00		Lake	75	1	1854 List, MDNR 2013	DL	648033.3876	5282923.393	-91.02754549	47.68273853	38000200	
849	830	Lake	Crown Lake		38-0419-00		Lake	69		2008, 1854 List	DL	622889.429	5268695.244	-91.36641058	47.56003849	38041900	
850	831	Lake	Driller Lake		38-0652-00		Lake	24		2008, 1854 List	DL	604793.3982	5256821.199	-91.60970863	47.45640146	38065200	
851	832	Lake	Dumbbell Lake		38-0393-00		Lake	476	48	2008, 1854 List	DL	630274.4029	5274940.818	-91.26643155	47.61476951	38039300	
852	833	Lake	Dumbbell River		09030001-632	14RN089	Stream			MPCA_BioMon	DL	630039.6129	5283456.951	-91.26702157	47.69140752	14RN089	
853	834	Lake	Dumbbell River Pool		38-0270-00		Lake	13		1854 List, MDNR 2013	DL	630068.3982	5277088.843	-91.26853356	47.63412951	38027000	
854	835	Lake	Dunnigan Lake		38-0664-00		Lake	81		1854 List	DL	602690.3928	5284780.974	-91.63105868	47.70824249	38066400	
855	836	Lake	Eighteen Lake		38-0432-00		Lake	102		1854 List, MDNR 2013	DL	623957.3737	5278176.262	-91.34953958	47.64510851	38043200	
856	837	Lake	Ella Hall Lake		38-0727-00		Lake	372	1	2008, 1854 List	DL	600610.4377	5316057.287	-91.65150373	47.98989853	38072700	
857	838	Lake	Fall Lake		38-0811-00		Lake	2322	23	2008, 1854 List	DL	593977.3826	5311533.671	-91.74137375	47.95021752	38081100	
858	839	Lake	Farm Lake		38-0779-00		Lake	1292		2007, 2008, 2010, 1854 List	DL	595263.3911	5305926.381	-91.72539474	47.89958951	38077900	
859	840	Lake	Flat Horn Lake		38-0568-00		Lake	52		2008, 1854 List, MCBS 2011	DL	615741.4289	5279633.895	-91.45850462	47.6597405	38056800	
860	841	Lake	Fools Lake		38-0761-00		Lake	14	14	2008, 1854 List	DL	599439.3949	5274480.966	-91.67672868	47.61609948	38076100	
861	842	Lake	Gabbro Lake		38-0701-00		Lake	927		2008, 1854 List	DL	605683.3864	5301194.887	-91.58717669	47.85539952	38070100	
862	843	Lake	Garden Lake		38-0782-00		Lake	4236	212	2007, 2008, 1854 List	DL	593579.4049	5308293.444	-91.74740675	47.92112952	38078200	

863	844	Lake	Gegoka Lake		38-0573-00		Lake	174	14	2007, 2008, MCBS 2011, 1854 List	DL	614161.3874	5278619.086	-91.47980562	47.6508935	38057300	
864	845	Lake	Grass Lake		38-0635-00		Lake	24	1	MDNR 2013	DL	610141.3731	5284623.851	-91.53180365	47.7056015	38063500	
865	846	Lake	Green Wing Lake		38-0264-00		Lake	34		1854 List, MDNR 2013	DL	636735.3914	5285284.355	-91.17726254	47.70645953	38026400	
866	847	Lake	Greenwood Lake		38-0656-00		Lake	1469	15	2007, 2008, 1854 List, MCBS 2011	DL	602949.384	5263712.365	-91.63255765	47.51868447	38065600	
867	848	Lake	Grouse Lake		38-0557-00		Lake	149		1854 List, MDNR 2013	DL	616058.4073	5282704.22	-91.45346862	47.6872995	38055700	
868	849	Lake	Harriet Lake		38-0048-00		Lake	265	53	MDNR 2013, 1854 List	DL	641721.4041	5280936.176	-91.11224552	47.66628253	38004800	
869	850	Lake	Harris Lake		38-0736-00		Lake	121	18	2008, 1854 List	DL	599959.4226	5290653.298	-91.6661057	47.7614935	38073600	
870	851	Lake	Hjalmer Lake		38-0758-00		Lake	109	2	2008, 1854 List	DL	595461.4146	5254582.139	-91.73396667	47.43769345	38075800	
871	852	Lake	Hoist Creek		04010101-D81	HCr	Stream			1854 List	DL	637133.6241	5272343.241	-91.17601452	47.58999351	HCr	
872	853	Lake	Hoist Lake		38-0251-00		Lake	117		2007, 2008, 2010, 1854 List	DL	637293.4186	5275752.34	-91.17282253	47.62061852	38025100	
873	854	Lake	Horse River		09030001-719	38r5	Stream	0		2008, 1854 List, T.65, R. 11W, S.14,22,23,27,28	DL	596214.1182	5329414.692	-91.70740877	48.11072254	38r5	
874	855	Lake	Hula Lake		38-0728-00		Lake	121	121	2007, 2008, 1854 List	DL	604254.4397	5316953.574	-91.60245972	47.99737654	38072800	
875	856	Lake	Isabella Lake		38-0396-00		Lake	1318		2008, 1854 List	DL	628106.3905	5296799.249	-91.28884259	47.81178853	38039600	
876	857	Lake	Isabella River		09030001-527	38r4	Stream			2008, 1854 List	DL	610309.4907	5294994.812	-91.52693266	47.79885551	38r4	
877	858	Lake	Island River Lake		38-0289-00		Lake	148		MCBS 2011, MDNR 2013	DL	632288.3956	5292018.111	-91.23446657	47.76794453	38028900	
878	859	Lake	Island River Lake		38-0842-00		Lake	49	49	8W (T.61, R.8, S. 4), MDNR 2013	DL	626080.3953	5292699.328	-91.31708359	47.77531553	38084200	
879	860	Lake	Kawishiwi Lake		38-0080-00		Lake	468		2008, 1854 List	DL	641211.3809	5300854.274	-91.11256654	47.84551155	38008000	
880	861	Lake	Kawishiwi River		09030001-512	38r2	Stream	0		2008, 1854 List	DL	595852.5727	5306591.941	-91.71736574	47.90548851	38r2	
881	862	Lake	Kitigan Lake		38-0559-00		Lake	84		1854 List, MDNR 2013	DL	617930.4142	5283193.628	-91.42840061	47.69136251	38055900	
882	863	Lake	Kowalski Lake		38-0016-00		Lake	13	1	G. H. Crosby Manitou State Park)	DL	644170.3954	5263975.609	-91.08521648	47.51321851	38001600	
883	864	Lake	Langley Lake		38-0648-00		Lake	14		1854 List	DL	606068.446	5243334.495	-91.59602461	47.33487645	38064800	
884	865	Lake	Lax Lake		38-0406-00		Lake	273		1854 List, MDNR 2013	DL	628495.398	5244872.459	-91.29884852	47.34468947	38040600	
885	866	Lake	Legler Lake		38-0649-00		Lake	51		1854 List, MDNR 2013	DL	604965.3827	5242852.492	-91.61073461	47.33071844	38064900	
886	867	Lake	Little Gabbro Lake		38-0703-00		Lake	151		2008, 1854 List	DL	602953.3944	5301361.733	-91.6236217	47.85734352	38070300	
887	868	Lake	Little Wampus Lake		38-0684-00		Lake	16		2008, 1854 List	DL	604416.3892	5278463.795	-91.60956766	47.65114249	38068400	
888	869	Lake	Lobo Lake		38-0766-00		Lake	132	99	2008, 1854 List	DL	597721.3925	5270711.368	-91.70042468	47.58245147	38076600	
889	870	Lake	Manomin Lake		38-0616-00		Lake	455	23	2008	DL	612719.4092	5322055.335	-91.48768369	48.04182555	38061600	
890	871	Lake	Middle McDougal Lake		38-0658-00		Lake	104		2007, 2008, 2010, 1854 List	DL	608817.3906	5275802.847	-91.55164364	47.62648249	38065800	
891	872	Lake	Moose Lake		38-0036-00		Lake	201		2008, 1854 List	DL	639691.3772	5269272.882	-91.14298951	47.56183551	38003600	
892	873	Lake	Moose Lake		38-0644-00		Lake	1300		1854 List, MDNR 2013	DL	611382.4112	5316246.228	-91.50712469	47.98981254	38064400	
893	874	Lake	Mud Lake		38-0742-00		Lake	164		2008, 1854 List	DL	599120.415	5314585.915	-91.67180873	47.97689653	38074200	
894	875	Lake	Muskeg Lake		38-0788-00		Lake	178	71	2008, 1854 List	DL	598759.4028	5315873.676	-91.67634874	47.98853553	38078800	
895	876	Lake	Newton Lake		38-0784-00		Lake	516		2008, 1854 List	DL	595802.4404	5315340.622	-91.71608875	47.98419053	38078400	
896	877	Lake	Nine A M Lake		38-0445-00		Lake	27	14	2008, 1854 List	DL	628753.4101	5290745.538	-91.28199958	47.75721553	38044500	
897	878	Lake	North McDougal Lake		38-0686-00		Lake	273		2008, 1854 List	DL	609014.4137	5276993.317	-91.54872564	47.63715749	38068600	
898	879	Lake	Osier Lake		38-0420-00		Lake	72	28	MDNR 2013, 1854 List	DL	620828.4181	5268343.035	-91.39389358	47.55725749	38042000	
899	880	Lake	Papoose Lake		38-0818-00		Lake	54	3	2008, 1854 List	DL	589555.3818	5334882.154	-91.7956948	48.16087354	38081800	
900	881	Lake	Pea Soup Lake		38-0739-00		Lake	13		MDNR APM	DL	599962.3973	5310916.012	-91.66138273	47.94375552	38073900	
901	882	Lake	Perent Lake		38-0220-00		Lake	1598		1854 List, MDNR 2013	DL	639461.4395	5295585.105	-91.13763954	47.79850954	38022000	
902	883	Lake	Phantom Lake		38-0653-00		Lake	70		2008, 1854 List	DL	606329.4433	5257260.192	-91.58923063	47.46010146	38065300	
903	884	Lake	Polly Lake		38-0104-00		Lake	479		1854 List	DL	642062.4474	5307374.483	-91.09905355	47.90395656	38010400	
904	885	Lake	Railroad Lake		38-0655-00		Lake	11	1	2008, 1854 List	DL	609800.3732	5258278.388	-91.54294061	47.46868447	38065500	
905	886	Lake	Rat Lake		38-0567-00		Lake	10		1854 List, MDNR 2013	DL	616280.3853	5280481.826	-91.45110362	47.6672705	38056700	
906	887	Lake	Rice Lake		38-0465-00		Lake	206	206	2008, 1854 List	DL	622209.4194	5297330.621	-91.36742662	47.81771453	38046500	
907	888	Lake	Riparian, stream wetland		DNR	11LAKE149	Wetland			MPCA_BioMon	DL	605428.4165	5277857.248	-91.59624166	47.64552249	11LAKE149	
908	889	Lake	Roe Lake		38-0139-00		Lake	76		2008, 1854 List	DL	639152.3853	5320462.995	-91.13373558	48.02229257	38013900	
909	890	Lake	Round Island Lake		38-0417-00		Lake	58	58	2007, 2008, 7050.0470, 1854 List	7050	628319.4171	5274562.1	-91.29254556	47.61175351	38041700	
910	891	Lake	Sand Lake		38-0735-00		Lake	506	51	2007, 2008, 1854 List	DL	600057.381	5270749.736	-91.66935867	47.58244047	38073500	
911	892	Lake	Sand River	Stony River	PCA Verify	38r3	Stream			(2008, below Stony Lake)	DL	605308.4251	5279804.931	-91.59736966	47.66306149	38r3	
912	893	Lake	Scarp Lake (Cliff)		38-0058-00		Lake	39		1854 List, MDNR 2013	DL	640653.443	5277894.548	-91.12744152	47.63916252	38005800	
913	894	Lake	Scott Lake		38-0271-00		Lake	52		2008, 1854 List	DL	635687.4152	5277351.379	-91.19368954	47.63533752	38027100	
914	895	Lake	Silver Island Lake		38-0219-00		Lake	1239		2008, 1854 List	DL	639117.3835	5288319.264	-91.14455754	47.73324353	38021900	
915	896	Lake	Sink Lake		38-0540-00		Lake			1854 List	DL	614974.4421	5253253.068	-91.47561159	47.42258947	38054000	

916	897	Lake	Slate Lake		38-0666-00		Lake	293		2008, 1854 List	DL	603184.3911	5283177.509	-91.62485467	47.69374049	38066600	
917	898	Lake	Snowbank Lake		38-0529-00		Lake	4819	50	2008, 1854 List	DL	617974.4051	5316142.162	-91.41883366	47.98769455	38052900	
918	899	Lake	Sonju Lake		38-0248-00		Lake			1854 List	DL	634958.4128	5260398.917	-91.20859552	47.48302849	38024800	
919	900	Lake	Source Lake		38-0654-00		Lake	35	1	2008, 1854 List	DL	609025.3916	5259641.546	-91.55288462	47.48107647	38065400	
920	901	Lake	Sourdough Lake		38-0708-00		Lake	17	17	2008, 1854 List	DL	602201.4199	5313127.91	-91.63088272	47.96329753	38070800	
921	902	Lake	South Farm Lake		38-0778-00		Lake	618		1854 List, MDNR 2013	DL	597771.4181	5305277.836	-91.69199373	47.89337852	38077800	
922	903	Lake	South Kawishiwi River		09030001-609	SKR	Stream			1854 List	DL	589991.292	5299993.209	-91.79715375	47.8469795	SKR	
923	904	Lake	South McDougal Lake		38-0659-00		Lake	277	3	2008, 1854 List	DL	608731.4143	5274763.543	-91.55304564	47.61714849	38065900	
924	905	Lake	South Wigwam Lake		38-0001-00		Lake	63		1854 List, MDNR 2013	DL	648015.3813	5284550.098	-91.0272335	47.69737054	38000100	
925	906	Lake	Stony Lake		38-0660-00		Lake	409	245	2007, 2008, 1854 List	DL	603113.3809	5274915.676	-91.62774966	47.61943548	38066000	
926	907	Lake	Stony River		09030001-515	38r6	Stream	0		2007, 2008, 1854 List	DL	592142.7869	5287883.163	-91.77097473	47.73773949	38r6	
927	908	Lake	Surprise Lake		38-0550-00		Lake	38		1854 List, MDNR 2013	DL	610813.4122	5285043.65	-91.52274165	47.7092625	38055000	
928	909	Lake	Swallow Lake (Shallow,Deep)		38-0668-00		Lake	147		1854 List	DL	606383.4323	5283585.271	-91.58213466	47.6968895	38066800	
929	910	Lake	Sylvania Lake		38-0395-00		Lake	86		1854 List, MDNR 2013	DL	629691.4231	5287009.835	-91.27060257	47.72343052	38039500	
930	911	Lake	Twentythree Lake		38-0247-00		Lake	52		1854 List, MDNR 2013	DL	636498.3908	5261394.982	-91.18785651	47.4916655	38024700	
931	912	Lake	Unnamed (Scott) Creek		09030001-597	Scott	Stream			1854 List	DL	634665.2046	5278124.906	-91.20705254	47.64250752	Scott	
932	913	Lake	Upland Lake		38-0756-00		Lake	74	1	2008, 1854 List	DL	600926.4329	5255696.7	-91.66125365	47.44689646	38075600	
933	914	Lake	Vera Lake		38-0491-00		Lake	262		2008, 1854 List	DL	625806.385	5323924.844	-91.31162564	48.05619356	38049100	
934	915	Lake	Wampus Lake		38-0685-00		Lake	146		2008, 1854 List	DL	603438.4275	5277681.031	-91.62277167	47.64425849	38068500	
935	916	Lake	Wind Lake		38-0642-00		Lake	952	10	2008	DL	609214.3837	5318852.46	-91.5355097	48.01362754	38064200	
936	917	Lake	Wood Lake		38-0729-00		Lake	587	125	2008, 1854 List	DL	605524.3708	5315846.374	-91.58571371	47.98720954	38072900	
937	918	Lake	Wye Lake		38-0042-00		Lake	55		1854 List, MDNR 2013	DL	640410.4173	5284626.215	-91.12851153	47.69975253	38004200	
1893	577	Lake	Bill		38-0085-00		Lake	51		MDNR 2013	II	644768.1748	5297208.965	-91.06627253	47.81194055	38008500	
1894	578	Lake	Bunny		38-0293-00		Lake	41		MDNR 2013	II	629969.4182	5287551.884	-91.26673557	47.72824952	38029300	
1895	579	Lake	Cedar		38-0810-00		Lake	472		MDNR 2013	II	590318.9105	5312175.961	-91.79022477	47.95652152	38081000	
1896	580	Lake	Cook		38-0004-00		Lake	89		MDNR 2013	II	647772.0299	5299113.937	-91.02552352	47.82838755	38000400	
1897	581	Lake	Denley		38-0773-00		Lake	45		MDNR 2013	II	598850.1257	5285743.9	-91.6820197	47.71750349	38077300	
1898	582	Lake	Diana		38-0459-00		Lake	49		MDNR 2013	II	620295.8024	5298965.988	-91.39252563	47.83278353	38045900	
1899	583	Lake	Dragon		38-0552-00		Lake	85		MDNR 2013	II	611990.8921	5283892.972	-91.50734564	47.6987095	38055200	
1900	584	Lake	East Chub		38-0674-00		Lake	98		MDNR 2013	II	603409.2866	5281445.89	-91.62226867	47.67812849	38067400	
1901	585	Lake	Folly		38-0265-00		Lake	16		MDNR 2013	II	635832.729	5282578.917	-91.19013154	47.68231952	38026500	
1902	586	Lake	Fourth McDougal		38-0657-00		Lake	14		MDNR 2013	II	608599.8108	5276322.972	-91.55440964	47.63119749	38065700	
1903	587	Lake	Hide (Bearskin)		38-0553-00		Lake	22		MDNR 2013	II	610680.8177	5283128.879	-91.52499464	47.6920625	38055300	
1904	588	Lake	Homestead		38-0269-00		Lake	50		MDNR 2013	II	637439.0012	5278266.9	-91.17009653	47.64320152	38026900	
1905	589	Lake	Island River		DNR	H-1-92-21-15	Stream			MDNR 2013	II	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	H-1-92-21-15	
1906	590	Lake	Jack		38-0441-00		Lake	51		MDNR 2013	II	628247.9907	5286098.923	-91.29010958	47.71552652	38044100	
1907	591	Lake	Jouppi		38-0909-00		Lake	7		MDNR 2013	II	626297.3738	5271870.927	-91.32021457	47.5879465	38090900	
1908	592	Lake	Katherine		38-0538-00		Lake	77		MDNR 2013	II	615233.3307	5255390.917	-91.47162359	47.44177347	38053800	
1909	593	Lake	Micmac		38-0233-00		Lake	121		MDNR 2013	II	631789.7094	5245297.904	-91.25512951	47.34786047	38023300	
1910	594	Lake	Mitawan		38-0561-00		Lake	202		MDNR 2013	II	617962.3455	5281393.912	-91.42846161	47.6751695	38056100	
1912	596	Lake	Newfound		38-0619-00		Lake	652		MDNR 2013	II	614512.6971	5319754.906	-91.46424768	48.02081655	38061900	
1913	597	Lake	Pose		38-0455-00		Lake	76		MDNR 2013	II	624863.398	5302229.938	-91.33057461	47.86126754	38045500	
1914	598	Lake	Redskin		38-0440-00		Lake	43		MDNR 2013	II	626589.7907	5277040.985	-91.31483357	47.63438851	38044000	
1915	599	Lake	Sapphire		38-0446-00		Lake	42		MDNR 2013	II	625206.2385	5290071.89	-91.3295036	47.75185552	38044600	
1916	600	Lake	Section 29		38-0292-00		Lake	97		MDNR 2013	II	631723.3397	5289220.957	-91.24285157	47.74290453	38029200	
1917	601	Lake	Slate (Spider)		38-0666-00		Lake	354		MDNR 2013	II	603212.9116	5283388.909	-91.62442467	47.69563749	38066600	
1918	602	Lake	Square		38-0074-00		Lake	127		MDNR 2013	II	640695.2186	5302941.979	-91.11878255	47.86439855	38007400	
1919	603	Lake	Sullivan		38-0755-00		Lake	45		MDNR 2013	II	600132.6932	5248020.979	-91.67351464	47.37797045	38075500	
1920	604	Lake	Swamp		38-0285-00		Lake	33		MDNR 2013	II	636902.2263	5292351.983	-91.17281655	47.76998354	38028500	
1921	605	Lake	Tommy		38-0425-00		Lake	8		MDNR 2013	II	621674.482	5283390.881	-91.3784706	47.69244251	38042500	
1922	606	Lake	Unnamed (Two Fifty Four)		38-0254-00		Lake	12		MDNR 2013	II	632846.8227	5276029.972	-91.23188655	47.62404251	38025400	
1923	607	Lake	Wager		38-0458-00		Lake	10		MDNR 2013	II	620954.0153	5299216.989	-91.38366362	47.83491753	38045800	
1924	608	Lake	Wanless		38-0049-00		Lake	78		MDNR 2013	II	639790.3041	5281846.974	-91.13766253	47.67489353	38004900	
1925	609	Lake	Watonwan		38-0079-00		Lake	58		MDNR 2013	II	643464.0782	5300765.958	-91.08250354	47.84421855	38007900	
1926	610	Lake	West Chub		38-0675-00		Lake	124		MDNR 2013	II	601990.0268	5280980.922	-91.64128068	47.67417149	38067500	
1927	611	Lake	Wilson		38-0047-00		Lake	666		MDNR 2013	II	644546.8102	5281654.903	-91.07439451	47.67212053	38004700	
2350		Lake	Sells		33-0018-00		Lake	64		MDNR 2008	II						

2295		Lake	Good		38-0726-00		Lake	175		MPCA Bio2015	II	603276.0938	5317329.501	-91.60822401	48.00682782	38072600	
938	919	Lake of the Woo	Baudette River		09030008-535	39r2	Stream	0		2007, 2008	DL	382702.635	5394587.903	-94.59394472	48.6932984	39r2	
939	920	Lake of the Woo	Bostick Creek		09030009-537	39r1	Stream			2008	DL	370318.2331	5411544.713	-94.7675008	48.8433184	39r1	
940	921	Lake of the Woo	Lake of the Woods		39-0002-00		Lake	305534		2007, 2008	DL	353116.4008	5437664.224	-95.01123492	49.07430541	39000200	
941	922	Lake of the Woo	Rainy River		09030008-505	39r5	Stream	0		2007, 2008, 2010	DL	375160.136	5408496.234	-94.70061078	48.81689941	39r5	
942	923	Lake of the Woo	Roseau Flowage		39000900	39IMP001		200	100	2008, T.159, R.36, S.32	DL	328978.0699	5379530.002	-95.31726991	48.54553732	39IMP001	
943	924	Lake of the Woo	Silver Creek		09030008-513	39r3	Stream	0		2007, 2008	DL	390612.5375	5394077.647	-94.48636169	48.69014641	39r3	
944	925	Lake of the Woo	Winter Road River		09030008-502	39r4	Stream	0		2007, 2008, 2010	DL	377981.5863	5401923.789	-94.66024176	48.7583594	39r4	
1928	612	Le Sueur	Fish		40-0051-00		Lake	84		MDNR 2013	II	446838.5673	4897501.828	-93.66563776	44.22880686	40005100	
1929	613	Le Sueur	Rice		40-0016-00		Lake	182		MDNR 2008	II	456932.5755	4921797.831	-93.54126476	44.4481999	40001600	
1930	614	Le Sueur	Rice		40-0114-00		Lake	11		MDNR 2008	II	436017.358	4919945.893	-93.80387383	44.42998088	40011400	
1931	615	Le Sueur	Rice		40-0037-00		Lake	21		MDNR 2008	II	444003.1777	4902543.839	-93.70167678	44.27398486	40003700	
1932	616	LeSueur	Rice		DNR	40wtld1				MDNR 2008	II	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	40wtld1	
1933	617	Lincoln	Hawksnest		41-0045-00		Lake	270		MDNR 2013	II	245021.0751	4929835.934	-96.2060705	44.47682671	41004500	
1934	618	Lincoln	Oak		41-0062-00		Lake	107		MDNR 2013	II	242452.9867	4936607.907	-96.24168552	44.53678472	41006200	
1935	619	Lincoln	Perch		41-0067-00		Lake	206		MDNR 2013	II	238604.2166	4934224.841	-96.28884353	44.51398171	41006700	
1936	620	Lincoln	Steep Bank		41-0082-00		Lake	208		MDNR 2013	II	235507.4285	4937149.91	-96.32924055	44.53914271	41008200	
1937	621	Lincoln	Unnamed (Bohemian)		41-0109-00		Lake	111		MDNR 2013	II	230716.9541	4947270.937	-96.39473058	44.62832572	41010900	
945	926	Mahnomen	Depressional Wetland		44005400	07Mahn175	Wetland			MPCA_BioMon	DL	289320.0684	5234997.842	-95.78346481	47.23464112	07Mahn175	Y
946	927	Mahnomen	Depressional Wetland		DNR	09Mahn139	wetland			MPCA_BioMon	DL	304575.8933	5235262.67	-95.58224176	47.24173913	09Mahn139	Y
947	928	Mahnomen	Lone Long Lake		44-0002-00		Lake	117		2007, 2008, MCBS 2011	DL	306890.3767	5248107.241	-95.55725577	47.35788815	44000200	Y
948	929	Mahnomen	McCraney Lake		44-0080-00		Lake	277		MDNR APM, MDNR 2013	DL	295783.3564	5227656.908	-95.69482578	47.17069912	44008000	Y
949	930	Mahnomen	Roy Lake		44-0001-00		Lake	689		MCBS 2011, Aquatic Veg. Reports 2011, 2014	DL	307134.3955	5243594.088	-95.55207076	47.31739015	44000100	Y
950	931	Mahnomen	Wild Rice River		09020108-510	14RD030	Stream			MPCA_BioMon	DL	301297.2781	5251667.907	-95.6328368	47.38821815	14RD030	Y
951	932	Mahnomen	Wild Rice River		09020108-510	14RD004	Stream			MPCA_BioMon	DL	294584.8745	5246318.271	-95.71920181	47.33805914	14RD004	Y
1938	622	Mahnomen	Bass		44-0006-00		Lake	700		MDNR 2013	II	304011.8782	5233539.949	-95.58893176	47.22608513	44000600	Y
1939	623	Mahnomen	Grass		44-0047-00		Lake	22		MDNR 2008	II	297299.191	5240257.965	-95.68055379	47.28443313	44004700	Y
1940	624	Mahnomen	Little Vanose		44-0169-00		Lake	149		MDNR 2013	II	289094.1955	5256764.91	-95.79676285	47.43020114	44016900	Y
1941	625	Mahnomen	Peabody		DNR	44-wetld1				MDNR 2008	II	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	44-wetld1	
1942	626	Mahnomen	Rice		44-0024-00		Lake	120		MDNR 2008	II	297795.8663	5237539.902	-95.67276179	47.26015513	44002400	Y
1943	627	Mahnomen	Sargent		44-0108-00		Lake	174		MDNR 2008	II	296815.2308	5238630.963	-95.68620579	47.26965913	44010800	Y
1944	628	Mahnomen	Snetsinger		44-0121-00		Lake	213		MDNR 2013	II	295102.5568	5251536.922	-95.71476382	47.38512714	44012100	Y
1945	629	Mahnomen	Tulaby		44-0003-00		Lake	849		MDNR 2013	II	302621.2991	5225239.871	-95.60362775	47.15105812	44000300	Y
1946	630	Mahnomen	Wakefield		44-0122-00		Lake	149		MDNR 2013	II	296485.0393	5250869.919	-95.69616181	47.37956414	44012200	Y
952	933	Mcleod	Depressional Wetland		DNR	05Mcle001	Wetland			MPCA_BioMon	DL	397269.5731	4952967.013	-94.29719001	44.72271788	05Mcle001	
1947	631	McLeod	Coon		43-0020-00		Lake	118		MDNR 2013	II	412829.7192	4980788.877	-94.10552999	44.97519093	43002000	
1948	632	McLeod	Grass		43-0013-00		Lake	62		MDNR 2008	II	416152.1471	4979826.911	-94.06324098	44.96693294	43001300	
1949	633	McLeod	Rice		43-0042-00		Lake	60		MDNR 2008	II	401030.5823	4959377.837	-94.250955	44.7809459	43004200	
953	934	Meeker	Evenson Lake		47-0118-00		Lake	130		MDNR APM	DL	375195.3989	4988880.418	-94.58467613	45.04238591	47011800	
954	935	Meeker	Stella		47-0068-00		Lake	596		UofM/MPCA 2013, MDNR 2013	DL	388310.3487	4991418.345	-94.41877109	45.06741393	47006800	
1950	634	Meeker	Darwin		47-0076-00		Lake	200		MDNR 2013	II	389665.3772	4993537.943	-94.40203009	45.08670093	47007600	
1951	635	Meeker	Francis		47-0002-00		Lake	1172		MDNR 2013	II	401010.6498	5008278.904	-94.26082407	45.22104096	47000200	
1952	636	Meeker	Jennie		47-0015-00		Lake	1089		MDNR 2013	II	394925.9771	4983763.862	-94.33315706	44.99954092	47001500	
1953	637	Meeker	Rice		47-0087-00		Lake	69		MDNR 2008	II	386664.2559	5003777.843	-94.44247511	45.17837394	47008700	
1954	638	Meeker	Ripley		47-0134-00	47013400		1060		MDNR 2013	II	378834.9829	4995976.914	-94.54019513	45.10687592	47013400	
1955	639	Meeker	Spring		47-0032-00		Lake	202		MDNR 2013	II	398374.4646	4993180.941	-94.29132006	45.08479294	47003200	
1956	640	Meeker	Stella		47-0068-00		Lake	626		MDNR 2013	II	388274.8136	4991349.849	-94.41920709	45.06679192	47006800	
1957	641	Meeker	Thoen (Grass)		47-0154-00		Lake	216		MDNR 2008	II	371976.7437	4995446.889	-94.62720415	45.10089791	47015400	
1958	642	Meeker	Washington		47-0046-00		Lake	2524		MDNR 2013	II	391691.151	4991589.873	-94.37587508	45.06948293	47004600	
955	936	Mille Lacs	Dewitt Marsh Lake		48-0020-00		Lake	110	131	2008	DL	465105.402	5093439.004	-93.45059495	45.99363513	48002000	
956	937	Mille Lacs	Ernst Pool Lake		48-0036-00		Lake	300	200	2008	DL	460790.3683	5100748.407	-93.50691398	46.05918613	48003600	
957	938	Mille Lacs	Mille Lacs WMA, Headquarters 2 P		DNR	W9004009		500	13	2008	DL	455708.2027	5089662.511	-93.57158598	45.95910411	W9004009	
958	939	Mille Lacs	Mille Lacs WMA, Jones 1 Pool		DNR	W9004008		520	3	2008	DL	454138.31	5091296.206	-93.59200099	45.97370411	W9004008	
959	940	Mille Lacs	MilleLacs WMA Korsness Pool 1		48-0035-00			54	35	2008	DL	452725.387	5094622.809	-93.61056763	46.00354712	W9004001	

960	941	Mille Lacs	Mille Lacs WMA, Olson Pool		DNR	W9004007		85	2	2008	DL	458028.5594	5102733.436	-93.54279299	46.07688713	W9004007	Y
961	942	Mille Lacs	Mille Lacs WMA, Townhall Pool		DNR	W9004010		110	3	2008	DL	454122.4258	5089669.086	-93.59204999	45.95905911	W9004010	
962	943	Mille Lacs	Ogechie Lake		48-0014-00		Lake	732		2008, MCBS 2011	DL	440450.4031	5111155.102	-93.77116007	46.15137112	48001400	Y
963	944	Mille Lacs	Onamia Lake		48-0009-00		Lake	2250	1350	2007, 2008	DL	447890.3509	5103542.004	-93.67398503	46.08346612	48000900	Y
964	945	Mille Lacs	Shakopee Lake		48-0012-00		Lake	771		2008, MCBS 2011	DL	444272.3494	5106334.443	-93.72110404	46.10831112	48001200	Y
965	946	Mille Lacs	Unnamed (Pool 3)		48-0054-00		Lake	32	25	2008	DL	459660.3723	5080060.433	-93.51977795	45.8729281	48005400	
966	947	Mille Lacs	Unnamed Lake		48-0043-00		Lake	60	10	2008	DL	456302.4232	5092114.957	-93.56414198	45.98121412	48004300	
967	948	Mille Lacs	Unnamed Lake		48-0044-00		Lake	500		2008, Mille Lacs State WMA	DL	454774.3812	5090970.732	-93.58375998	45.97081711	48004400	
1959	643	Mille Lacs	Bass		48-0017-00		Lake	14		MDNR 2013	II	439377.0038	5114410.892	-93.78547607	46.18057613	48001700	Y
1960	644	Mille Lacs	Bass		48-0018-00		Lake	22		MDNR 2013	II	438968.3049	5114062.917	-93.79072607	46.17740813	48001800	Y
1961	645	Mille Lacs	Bass		48-0016-00		Lake	12		MDNR 2013	II	439586.1502	5114626.957	-93.78279407	46.18253913	48001600	Y
1962	646	Mille Lacs	Cranberry		48-0007-00		Lake	240		MDNR 2013	II	454837.5112	5093466.852	-93.58318099	45.99328612	48000700	
1964	648	Mille Lacs	Mikkelson Pool		48-0035-00	W9004001				MDNR 2008	II	452069.815	5092199.935	-93.618791	45.98169611	W9004001	
1965	649	Mille Lacs	Mille Lacs		48-0002-00		Lake	132516		MDNR 2013	DL	450178.0844	5121194.887	-93.64625504	46.24250415	48000200	
1966	650	Mille Lacs	Rice		48-0010-00		Lake	512		MDNR 2008	II	449100.9871	5046763.915	-93.65233095	45.57255305	48001000	
1967	651	Mille Lacs	Section 3 Pool		48-0043-00	W9004005				MDNR 2008	II	456190.7089	5092134.86	-93.56558598	45.98138612	W9004005	
1968	652	Mille Lacs	Unnamed		48-0047-00		Lake	25		MDNR 2013	II	454347.5107	5084352.956	-93.58863898	45.9112291	48004700	
1969	653	Mille Lacs	West Fork Groundhouse River		07030004-538	48IMP002	Stream	50		MDNR 2008	II	456231.3538	5082552.909	-93.56418597	45.8951511	48IMP002	
1970	654	Mille Lacs	Wildlife Impoundment		48-0047-00		Lake			MDNR 2008	II	454255.5859	5084287.857	-93.58981798	45.9106371	48004700	
968	949	Morrison	Alexander Lake		49-0079-00		Lake	2990		MDNR APM, MDNR 2013	DL	382620.3534	5117785.443	-94.52149529	46.20352008	49007900	
969	950	Morrison	Coon Lake		49-0020-00		Lake	75	75	2008	DL	414736.3438	5082063.19	-94.09890212	45.88685206	49002000	
970	951	Morrison	Fish Trap Lake		49-0137-00		Lake	1320		MDNR APM, MDNR 2013	DL	375277.3617	5118854.439	-94.61692132	46.21183107	49013700	
971	952	Morrison	Hannah Lake		49-0014-00		Lake	109	27	2008	DL	433305.3476	5111648.886	-93.86374709	46.15515312	49001400	
972	953	Morrison	Long Lake		49-0015-00		Lake	128	32	MDNR APM	DL	431352.3826	5111611.981	-93.8890311	46.15462712	49001500	
973	954	Morrison	Long Prairie River		07010108-501	49river	Stream			2007	DL	375831.6509	5131361.573	-94.61303633	46.32445109	49river	
974	955	Morrison	Miller Lake		49-0051-00		Lake	39	9	2008	DL	389267.3397	5111619.874	-94.43392125	46.14916108	49005100	
975	956	Morrison	Mud Lake		49-0072-00		Lake	83	5	2008	DL	384260.3599	5118902.057	-94.50051828	46.21384708	49007200	
976	957	Morrison	Mud Lake		49-0027-00		Lake	23	9	2008, MDNR APM	DL	404212.3797	5085568.221	-94.23520716	45.91700706	49002700	
977	958	Morrison	Peavy Lake		49-0005-00		Lake	140		2007, 2008	DL	432003.3655	5109155.806	-93.88024909	46.13258911	49000500	
978	959	Morrison	Pelkey Lake		49-0030-00		Lake	113	10	2008	DL	404890.3469	5093871.506	-94.22811617	45.99181707	49003000	
979	960	Morrison	Placid Lake		49-0080-00		Lake	537		2007, 2008	DL	382873.3821	5129201.585	-94.5210543	46.30627209	49008000	
980	961	Morrison	Platte River		07010201-507	49r2	Stream			(RiceLake 49-0025-00 outlets to the Platte River)	DL	406225.8917	5088726.47	-94.20986616	45.94570406	49r2	
981	962	Morrison	Popple Lake		49-0033-00		Lake	153		2008, Popple Lake State WMA	DL	398627.346	5090658.53	-94.30828619	45.96200906	49003300	
982	963	Morrison	Rice Creek		07010201-618	49r1	Stream			2008, (connects Pelkey Lake 49-0003-00 with Rice Lake 49-0025-00)	DL	404358.6195	5088902.787	-94.23398717	45.94703306	49r1	
983	964	Morrison	Rice Lake		49-0025-00		Lake	323	250	2008	DL	404128.3807	5088073.868	-94.23679117	45.93954206	49002500	
984	965	Morrison	Round Lake		49-0019-00		Lake	134	14	2008	DL	424837.3992	5111855.154	-93.97343112	46.15612811	49001900	
985	966	Morrison	Shamineau Lake		49-0127-00		Lake	1453		MDNR APM, MDNR 2013	DL	376336.4079	5123581.604	-94.60443632	46.25455208	49012700	
986	967	Morrison	Skunk Lake		49-0026-00		Lake	320	256	2008, MDNR APM	DL	404936.345	5086554.783	-94.22606916	45.92598506	49002600	
987	968	Morrison	Sullivan Lake		49-0016-00		Lake	1199	20	2008, MDNR APM	DL	427287.3881	5109609.126	-93.94136111	46.13618211	49001600	
988	969	Morrison	Twelve Lake		49-0006-00		Lake	159	80	2008	DL	436618.3942	5109315.217	-93.82053308	46.13446812	49000600	
1971	655	Morrison	Cedar		49-0140-00		Lake	250		MDNR 2013	II	372845.6135	5074576.939	-94.63663826	45.81303301	49014000	
1972	656	Morrison	Crookneck		49-0133-00		Lake	200		MDNR 2008	II	375805.8976	5122430.896	-94.61101332	46.24410308	49013300	
1973	657	Morrison	Green Prairie Fish		49-0035-00		Lake	193		MDNR 2013	II	392336.1909	5102443.941	-94.39211323	46.06709207	49003500	
1974	658	Morrison	Little Elk WMA		07010104-528	W0069101				MDNR 2013	II	375195.4797	5101922.941	-94.61352629	46.05949105	W0069101	
1975	659	Morrison	Longs		49-0104-00		Lake	60		MDNR 2008	II	377493.6788	5114517.934	-94.5870763	46.17322007	49010400	
1976	660	Morrison	Madaline		49-0101-00		Lake	50		MDNR 2008	II	376350.351	5115244.943	-94.60207231	46.17955407	49010100	
1977	661	Morrison	Mud		49-0095-00		Lake	105		MDNR 2008	II	382372.1904	5096761.951	-94.51950326	46.01432905	49009500	
1978	662	Morrison	Mud		49-0018-00		Lake	29		MDNR 2008	II	424736.358	5105631.922	-93.97375212	46.1001151	49001800	
1979	663	Morrison	Pierz		49-0024-00		Lake	186		MDNR 2013	II	410920.347	5090799.891	-94.14969715	45.96498707	49002400	
1980	664	Morrison	Pine		49-0081-00		Lake	197		MDNR 2013	II	373187.3628	5076568.954	-94.63276526	45.83101802	49008100	
1981	665	Morrison	Skunk		49-0007-00		Lake	32		MDNR 2008	II	432891.8011	5107924.907	-93.86857509	46.12160011	49000700	
1982	666	Morrison	Stanchfield		49-0118-00		Lake	145		MDNR 2013	II	381329.8573	5124961.928	-94.5400223	46.26786108	49011800	
1983	667	Morrison	Sylvan		49-0036-00		Lake	260		MDNR 2013	II	393290.2123	5129051.943	-94.38578526	46.3066451	49003600	
2352		Morrison	Bernhart		49-0135-00		Lake	39		MDNR 2008	II						
1984	668	Nicollet	Rice		52-0033-00		Lake	118		MDNR 2008	II	406546.9035	4922947.879	-94.17461494	44.45379585	52003300	

1985	669	Nicollet	Swan		52-0034-00		Lake	9346		MDNR 2013	II	401542.3701	4904775.889	-94.23406293	44.28956883	52003400	
989	970	Otter Tail	Amor (Mud) Lake		56-0381-00		Lake	260		2008, MCBS 2011	DL	287795.3357	5146801.39	-95.76262068	46.44140602	56038100	
990	971	Otter Tail	Beauty Shore Lake		56-0195-00		Lake	233		2008, MCBS 2011	DL	298119.3933	5133052.48	-95.62243362	46.32096601	56019500	
991	972	Otter Tail	Big Pine Lake		56-0130-00		Lake	4726		MDNR APM	DL	308078.3369	5165669.143	-95.50662963	46.61711606	56013000	
992	973	Otter Tail	Boedigheimer Lake		56-0212-00		Lake	169		MCBS 2011,MDNR 2013	DL	301181.3274	5154560.535	-95.59185264	46.51523904	56021200	
993	974	Otter Tail	Bray Lake		56-0472-00		Lake	142		UofM/MPCA 2013, MDNR 2013	DL	279026.3634	5148016.215	-95.87721271	46.44951201	56047200	
994	975	Otter Tail	Crystal Lake		56-0749-00		Lake	1412		MDNR APM	DL	274087.3986	5166629.106	-95.95048876	46.61516202	56074900	
995	976	Otter Tail	Dead Lake		56-0383-00		Lake	7827		2008, MDNR APM	DL	288053.3444	5150611.529	-95.76099768	46.47573702	56038300	
996	977	Otter Tail	Deer Lake		56-0298-00		Lake	468		MDNR APM, MDNR 2013	DL	287035.3292	5137701.482	-95.76835966	46.359366	56029800	
997	978	Otter Tail	Depressional Wetland		DNR	07Otte140	Wetland			MPCA_BioMon	DL	299674.7238	5123786.666	-95.5983076	46.238122	07Otte140	
998	979	Otter Tail	Depressional Wetland		56-1554-00	Field	Wetland			MPCA_BioMon	DL	272548.1176	5156093.523	-95.96539575	46.51995501	Field	
999	980	Otter Tail	East Battle Lake		56-0138-00		Lake	1985		MDNR APM	DL	305185.3452	5130945.102	-95.52986559	46.30408601	56013800	
1000	981	Otter Tail	East Leaf Lake		56-0116-02		Lake	423		MDNR APM, MDNR 2013	DL	313131.3313	5141273.66	-95.43089158	46.39919304	56011602	
1001	982	Otter Tail	East Lost Lake		56-0378-00		Lake	505		MDNR APM, MDNR 2013	DL	284481.3683	5137374.771	-95.80136867	46.355621	56037800	
1002	983	Otter Tail	East Red River Lake		56-0573-00		Lake	292		2008, MPCA Lake Survey	DL	275742.3712	5141512.333	-95.91679471	46.389972	56057300	
1003	984	Otter Tail	Emma Lake		56-0194-00		Lake	473		2008, MCBS 2011	DL	296767.3459	5134759.105	-95.64071663	46.33590501	56019400	
1004	985	Otter Tail	Fish Lake		56-0768-00		Lake			MDNR APM	DL	270432.3972	5173869.854	-96.00175878	46.67899403	56076800	
1005	986	Otter Tail	Fogard Lake		56-0571-00		Lake			MDNR APM	DL	276665.3953	5144846.688	-95.90639771	46.420247	56057100	
1006	987	Otter Tail	Head Lake		56-0213-00		Lake	499		2008, MDNR APM	DL	299469.342	5151265.459	-95.61272664	46.48510803	56021300	
1007	988	Otter Tail	Heilberger Lake		56-0695-00		Lake	212		MDNR APM, MDNR 2013	DL	273274.3718	5146335.213	-95.95119073	46.432496	56069500	
1008	989	Otter Tail	Hoffman Lake		56-1627-00		Lake	157		MDNR APM	DL	285475.3346	5163050.421	-95.80028571	46.58673203	56162700	
1009	990	Otter Tail	Hoot Lake		56-0782-00		Lake	158		MDNR APM, MDNR 2013	DL	266495.3848	5132397.787	-96.03235973	46.30492898	56078200	
1010	991	Otter Tail	Jim Lake		56-0364-00		Lake	100		MCBS 2011, MDNR 2013	DL	292338.3279	5172513.738	-95.7150577	46.67395705	56036400	
1011	992	Otter Tail	Lake Sixteen		56-0100-00		Lake	107		2007, 2008, 2010	DL	309057.3755	5123862.831	-95.47675956	46.24150701	56010000	
1012	993	Otter Tail	Lida North Lake		56-0747-01		Lake	73		MDNR APM, MDNR 2013	DL	272480.3302	5162883.698	-95.96960776	46.58095802	56074701	
1013	994	Otter Tail	Long Lake		56-0388-00		Lake	1400		MDNR APM	DL	291144.3759	5170134.993	-95.7295727	46.65220305	56038800	
1014	995	Otter Tail	Long Lake		56-0784-00		Lake	746		MDNR APM	DL	265381.397	5146386.047	-96.05380976	46.43025699	56078400	
1015	996	Otter Tail	Maria Lake		56-0498-00		Lake	48	20	MDNR 2013	DL	280850.3872	5150253.896	-95.85454471	46.47022001	56049800	
1016	997	Otter Tail	Marion Lake		56-0243-00		Lake	13845		MDNR APM	DL	297219.3824	5156271.172	-95.64419266	46.52943604	56024300	
1017	998	Otter Tail	Middle Leaf Lake		56-0116-01		Lake	404		MDNR APM	DL	311476.3726	5141768.184	-95.45259958	46.40318003	56011601	
1018	999	Otter Tail	North Turtle Lake		56-0379-00		Lake	1603		MDNR APM	DL	284066.3475	5131717.782	-95.80415467	46.30463799	56037900	
1019	1000	Otter Tail	Ottertail River		09020103-570	56r1	Stream	0		2007, 2008, 2010, MDNR APM	DL	267131.9506	5134786.514	-96.02528873	46.32661598	56r1	
1020	1001	Otter Tail	Pelican Lake		56-0786-00		Lake	4314		MDNR APM, MDNR 2013	DL	269127.3399	5176087.532	-96.01991079	46.69847503	56078600	
1021	1002	Otter Tail	Red River Lake		56-0711-00		Lake	330		MDNR APM, MDNR 2013	DL	268747.3785	5141414.359	-96.00760074	46.38673599	56071100	
1022	1003	Otter Tail	Rice Lake		56-0363-00		Lake	350		2008, MCBS 2011	DL	293524.3588	5172616.555	-95.6996147	46.67524805	56036300	
1023	1004	Otter Tail	Rice Lake		56-0211-00		Lake	263		Boedigheimer Aquatic Management Area (AMA)	DL	299349.3535	5154595.621	-95.61572465	46.51501104	56021100	
1024	1005	Otter Tail	Rose Lake		56-0360-00		Lake	1177		MDNR APM, MDNR 2013	DL	290585.3309	5172331.393	-95.73786771	46.67177205	56036000	
1025	1006	Otter Tail	Rush Lake		56-0141-00		Lake	5340		2008, MDNR APM	DL	305912.3823	5151313.716	-95.52888462	46.48742804	56014100	
1026	1007	Otter Tail	Scalp Lake		56-0358-00		Lake	244		MDNR APM, MDNR 2013	DL	287502.3828	5174880.837	-95.77930172	46.69371705	56035800	
1027	1008	Otter Tail	South Turtle Lake		56-0377-00		Lake	743		MDNR APM, MDNR 2013	DL	283975.3944	5128791.673	-95.80399066	46.27830599	56037700	
1028	1009	Otter Tail	Spitzer		56-0160-00		Lake	756		MDNR APM, MDNR 2013	DL	297154.3358	5114290.842	-95.62688959	46.15200199	56016000	
1029	1010	Otter Tail	Stalker Lake		56-0437-00		Lake	1357		MDNR APM, MDNR 2013	DL	281779.3494	5121053.325	-95.82887966	46.20804398	56043700	
1030	1011	Otter Tail	Star Lake		56-0385-00		Lake	4809		2007, 2008, 2010, MDNR APM	DL	284056.3818	5155706.396	-95.8153667	46.52026502	56038500	
1031	1012	Otter Tail	Stuart		56-0191-00		Lake	747		MDNR APM	DL	301121.3749	5127941.276	-95.5813166	46.27590001	56019100	
1032	1013	Otter Tail	Unnamed (Cemetery) Lake		56-0024-00		Lake	45		MDNR APM	DL	322706.403	5114520.621	-95.2963605	46.16119201	56002400	
1033	1014	Otter Tail	Walker Lake		56-0310-00		Lake	694		MDNR APM	DL	294311.3706	5145937.426	-95.67750565	46.43565602	56031000	
1034	1015	Otter Tail	West Battle Lake		56-0239-00		Lake	5565		2008, UofM/MPCA 2013	DL	293261.3672	5129759.488	-95.68402163	46.289898	56023900	
1035	1016	Otter Tail	West Leaf Lake		56-0114-00		Lake	729		MDNR APM, MDNR 2013	DL	309419.3386	5142399.558	-95.47959259	46.40828003	56011400	
1036	1017	Otter Tail	West Lost Lake		56-0481-00		Lake	915		2008, MDNR APM	DL	278490.3542	5140750.054	-95.8807387	46.384026	56048100	
1037	1018	Otter Tail	Wright Lake		56-0783-00		Lake	69		MDNR APM	DL	266744.3537	5131302.276	-96.02858773	46.29516898	56078300	
1038	1019	Otter Tail	East Loon Lake		56-0523-00		Lake	1073		MDNR APM, MDNR 2013	DL	282922.3379	5166733.539	-95.83529773	46.61901703	56052300	
1986	670	Otter Tail	Bear		56-0069-00		Lake	217		MDNR 2013	II	316349.6542	5172913.933	-95.40158261	46.68457208	56006900	
1987	671	Otter Tail	Beers		56-0724-00		Lake	255		MDNR 2013	II	274681.2297	5155682.934	-95.93742374	46.51698201	56072400	
1988	672	Otter Tail	Brown		56-0315-00		Lake	164		MDNR 2013	II	287534.7661	5139164.899	-95.76253867	46.37267801	56031500	
1989	673	Otter Tail	Clear		56-0559-00		Lake	378		MDNR 2013	II	275478.183	5113531.95	-95.90689167	46.13838896	56055900	
1990	674	Otter Tail	Davies		56-0311-00		Lake	69		MDNR 2008	II	292136.7846	5147328.916	-95.70640066	46.44749902	56031100	
1991	675	Otter Tail	Duck		56-0483-00		Lake	96		MDNR 2013	II	281464.6737	5148831.93	-95.8458867	46.45763801	56048300	
1992	676	Otter Tail	Duck		56-0925-00		Lake	41		MDNR 2008	DL	264361.6732	5177345.932	-96.08280081	46.70812203	56092500	

1993	677	Otter Tail	East Annalaide		56-0001-00		Lake	97		MDNR 2013	II	334018.9497	5115265.938	-95.15020646	46.17074403	56000100	
1994	678	Otter Tail	Elbow		56-0306-00		Lake	193		MDNR 2013	II	288305.0645	5130248.939	-95.74851365	46.29277	56030600	
1995	679	Otter Tail	Ellingson		56-0178-00		Lake	158		MDNR 2013	II	301564.3692	5124692.898	-95.57420459	46.246824	56017800	
1996	680	Otter Tail	Fladmark		56-0727-00		Lake	55		MDNR 2013	II	275687.3267	5153990.872	-95.92350873	46.50211001	56072700	
1997	681	Otter Tail	Gourd		56-0139-00		Lake	986		MDNR 2008	DL	303244.3325	5139036.929	-95.55843961	46.37627802	56013900	
1998	682	Otter Tail	Grass		56-0115-00		Lake	81		MDNR 2008	DL	306305.654	5141972.932	-95.5198876	46.40355903	56011500	
1999	683	Otter Tail	Grass		56-0717-00		Lake	72		MDNR 2008	II	273975.1831	5156537.959	-95.94703174	46.52443001	56071700	
2000	684	Otter Tail	Grass		56-0723-00		Lake	37		MDNR 2008	II	273164.7928	5155074.884	-95.95686974	46.51100801	56072300	
2001	685	Otter Tail	Gray		56-0353-00		Lake	92		MDNR 2013	II	295441.3668	5176126.971	-95.6761377	46.70739306	56035300	
2002	686	Otter Tail	Leek (Trowbridge)		56-0532-00		Lake	640		MDNR 2013	II	281661.9412	5174201.935	-95.85527274	46.68573504	56053200	
2003	687	Otter Tail	Little McDonald		56-0328-00		Lake	1506		MDNR 2008	II	292841.4261	5165428.867	-95.70530869	46.61042504	56032800	
2004	688	Otter Tail	Long		56-0210-00		Lake	1098		MDNR 2008	DL	297652.5657	5147544.904	-95.63475664	46.45111703	56021000	
2005	689	Otter Tail	Mud		56-1148-00		Lake	134		MDNR 2008	II	289362.3274	5162070.872	-95.7491617	46.57915704	56114800	
2006	690	Otter Tail	Mud		56-0222-00		Lake	437		MDNR 2008	DL	301879.4587	5166847.959	-95.58801366	46.62591205	56022200	
2007	691	Otter Tail	Mud		56-0484-00		Lake	585		MDNR 2013	II	279018.6437	5149133.954	-95.87784271	46.45955601	56048400	
2008	692	Otter Tail	Mud		56-0132-00		Lake	155		MDNR 2008	II	312574.6959	5173431.935	-95.45111263	46.68818307	56013200	
2009	693	Otter Tail	Mud (Amor)		56-0381-00		Lake	231		MDNR 2008	II	287778.3388	5146785.966	-95.76283468	46.44126202	56038100	
2010	694	Otter Tail	Mud (McGowan)		56-0215-00		Lake	138		MDNR 2008	II	302053.1765	5149634.868	-95.57840363	46.47121203	56021500	
2011	695	Otter Tail	Murphy		56-0229-00		Lake	358		MDNR 2013	II	296923.4039	5176546.946	-95.65695569	46.71162006	56022900	
2012	696	Otter Tail	Nitche		56-0126-00		Lake	72		MDNR 2013	II	310618.7331	5163970.899	-95.47278662	46.60256906	56012600	
2013	697	Otter Tail	North Maple		56-0013-00		Lake	161		MDNR 2008	DL	327847.2036	5117473.859	-95.23090149	46.18906902	56001300	
2014	698	Otter Tail	North Rice		56-0349-00		Lake	103		MDNR 2008	II	290860.501	5160022.859	-95.72870669	46.56121503	56034900	
2015	699	Otter Tail	Orwell		56-0945-00		Lake	396		MDNR 2013	II	256392.3473	5123177.856	-96.15859575	46.21852396	56094500	
2016	700	Otter Tail	Paul		56-0335-00		Lake	334		MDNR 2013	II	293241.6909	5163862.861	-95.69938768	46.59647104	56033500	
2017	701	Otter Tail	Peterson		56-0471-00		Lake	141		MDNR 2008	II	281727.2607	5147062.901	-95.8416437	46.44182201	56047100	
2018	702	Otter Tail	Portage		56-0140-00		Lake	289		MDNR 2013	II	305548.8621	5143571.913	-95.53038861	46.41771803	56014000	
2019	703	Otter Tail	Rankle		56-0935-00		Lake	57		MDNR 2008	II	258408.0648	5172535.955	-96.15804882	46.66277801	56093500	
2020	704	Otter Tail	Reed		56-0876-00		Lake	155		MDNR 2008	II	262503.4739	5146790.966	-96.09141977	46.43288999	56087600	
2021	705	Otter Tail	Rice		56-0006-00		Lake	6		MDNR 2008	II	328447.1588	5114551.855	-95.22207348	46.16294202	56000600	
2022	706	Otter Tail	Rice		56-0702-00		Lake	26		MDNR 2008	II	270264.5821	5145295.885	-95.98980274	46.422138	56070200	
2023	707	Otter Tail	Rose		56-0620-00		Lake	107		MDNR 2013	II	270765.3692	5119736.921	-95.9708297	46.19259197	56062000	
2024	708	Otter Tail	Rusch		56-1641-00		Lake	100		MDNR 2013	II	292083.8331	5163832.884	-95.71447369	46.59584404	56164100	
2025	709	Otter Tail	Sharp		56-0482-00		Lake	160		MDNR 2008	II	281692.458	5139709.968	-95.83866269	46.375718	56048200	
2026	710	Otter Tail	Snow		56-0110-00		Lake	72		MDNR 2013	II	310738.8496	5119400.922	-95.45318055	46.20185701	56011000	
2027	711	Otter Tail	South Maple		56-0004-00		Lake	160		MDNR 2008	DL	327506.7039	5116181.901	-95.23483949	46.17736402	56000400	
2028	712	Otter Tail	South Rice		56-0352-00		Lake	121		MDNR 2008	II	289998.6335	5158458.94	-95.73923069	46.54688803	56035200	
2029	713	Otter Tail	Sybil		56-0387-00		Lake	654		MDNR 2013	II	286913.1346	5167358.95	-95.78352471	46.62591804	56038700	
2030	714	Otter Tail	Tamarack		56-0433-00		Lake	470		MDNR 2008	DL	283469.2978	5124111.92	-95.80840166	46.23607798	56043300	
2031	715	Otter Tail	Tamarack		56-0192-00		Lake	440		MDNR 2008	DL	301852.257	5137171.91	-95.57573361	46.35910402	56019200	
2032	716	Otter Tail	Ten Mile		56-0613-00		Lake	1445		MDNR 2013	II	270815.4299	5112294.901	-95.96658168	46.12571996	56061300	
2033	717	Otter Tail	Unnamed		56-0094-00		Lake	23		MDNR 2013	II	310959.1031	5118833.937	-95.45010155	46.19682001	56009400	
2034	718	Otter Tail	Unnamed		56-1517-00		Lake	23		MDNR 2008	II	278382.1903	5145815.915	-95.88454471	46.429524	56151700	
2035	719	Otter Tail	Unnamed		56-0284-00		Lake	83		MDNR 2008	II	293498.8748	5127347.896	-95.67988363	46.26829	56028400	
2036	720	Otter Tail	Unnamed		56-0927-00		Lake	35		MDNR 2008	DL	260296.129	5176965.937	-96.13571082	46.70326302	56092700	
2037	721	Otter Tail	Unnamed		56-1031-00		Lake	35		MDNR 2013	II	256780.4618	5167236.944	-96.17650082	46.61457501	56103100	
2038	722	Otter Tail	Unnamed		56-0198-00		Lake	69		MDNR 2008	II	300591.0267	5147271.867	-95.59641863	46.44953703	56019800	
2039	723	Otter Tail	Unnamed		56-0101-00		Lake	14		MDNR 2013	II	306502.8534	5123508.863	-95.50971757	46.23760201	56010100	
2040	724	Otter Tail	Unnamed (Beaver Pond Lake)		56-1126-00		Lake	28		MDNR 2013	II	294320.6478	5134949.906	-95.67255664	46.33688201	56112600	
2041	725	Otter Tail	Unnamed		56-0143-00		Lake	31		MDNR 2013	II	305917.4584	5166941.88	-95.53535864	46.62793706	56014300	
2042	726	Otter Tail	Unnamed		56-1273-00		Lake	126		MDNR 2008	II	306145.0283	5125822.879	-95.51530558	46.25830601	56127300	
2043	727	Otter Tail	Unnamed		56-1578-00		Lake	29		MDNR 2008	II	260780.73	5150983.9	-96.11596078	46.46996099	56157800	
2044	728	Otter Tail	Unnamed		56-1259-00		Lake	12		MDNR 2008	II	301644.6027	5110995.904	-95.56742157	46.12369799	56125900	
2045	729	Otter Tail	Unnamed		56-1550-00		Lake	14		MDNR 2008	II	280719.9496	5150948.948	-95.85656871	46.47642501	56155000	
2046	730	Otter Tail	Unnamed (Nycklemoe)		56-1083-00		Lake	198		MDNR 2008	II	291049.9469	5110142.962	-95.70402761	46.11286898	56108300	
2047	731	Otter Tail	Unnamed (Olson)		56-0436-00		Lake	42		MDNR 2013	II	283311.8286	5122142.897	-95.80953765	46.21832798	56043600	
2048	732	Otter Tail	West Silent		56-0519-00		Lake	340		MDNR 2013	II	278818.826	5159005.904	-95.88513573	46.54822102	56051900	
2049	733	Otter Tail	Wing River		56-0043-00		Lake	138		MDNR 2008	DL	323358.6004	5123949.88	-95.29144451	46.24615703	56004300	
2050	734	Otter Tail	Zorns		56-0497-00		Lake	49		MDNR 2013	II	279975.7824	5151452.871	-95.86648871	46.48071201	56049700	
2353		Otter Tail	Berger		56-1149-00		Lake	190		MDNR 2008	II						
1039	1020	Pennington	Clearwater River		09020305-510	S002-121	Stream			UofM/MPCA 2013	DL	299114.5292	5312767.599	-95.68980891	47.93670822	S002-121	

2051	735	Pennington	Red Lake River Reservoir		57-0051-00		Lake	75		MDNR 2013	II	264011.053	5334703.927	-96.17122808	48.1218092	57005100	
1040	1021	Pine	Crooked Lake		58-0026-00		Lake	94	85	2007, 2008	DL	534847.4006	5107509.339	-92.54898471	46.12027021	58002600	
1041	1022	Pine	Grindstone River (SF)		07030003-516	96SC063	Stream			MPCA_BioMon	DL	497352.796	5098284.375	-93.03421084	46.03812816	96SC063	
1042	1023	Pine	Hay Creek		07030001-511	58river	Stream			Flowage)	DL	545658.0174	5103539.506	-92.40945566	46.08390521	58river	
1043	1024	Pine	Hay Creek Flowage		58-0005-00		Lake	66	40	2008, 2010, UofM/MPCA 2013	DL	546366.3736	5105175.193	-92.40013466	46.09857822	58000500	
1044	1025	Pine	Kettle River		07030003-502	58r2	Stream	0		2007, 2008	DL	520444.315	5078255.253	-92.73664672	45.85755916	58r2	
1045	1026	Pine	Little Island Lake		58-0061-00		Lake	36		1854 List, MDNR 2013	DL	520675.3679	5139619.791	-92.7309948	46.40983524	58006100	
1046	1027	Pine	Little North Sturgeon Lake		58-0066-00		Lake	20		2008, 1854 List	DL	517202.3811	5137235.99	-92.77626881	46.38847923	58006600	
1047	1028	Pine	Mission Creek		07030004-547	S001-646	Stream			UofM/MPCA 2013	DL	499891.5742	5078728.169	-93.0013968	45.86211914	S001-646	
1048	1029	Pine	Moose Horn River		07030003-531	58r3	Stream	0		2007, 1854 List, 2010	DL	511909.955	5134822.397	-92.84516	46.36687	58r3	
1049	1030	Pine	Net Lake		58-0038-00		Lake	138		MDNR APM, 1854 List, MDNR 2013	DL	542271.3998	5140272.188	-92.44996172	46.41470026	58003800	
1050	1031	Pine	Pokegama Lake		58-0142-00	58r5	Lake	0		2007, 2008	DL	496748.1625	5079302.208	-93.04189581	45.86727814	58r5	
1051	1032	Pine	Pokegama Lake		58-0142-00		Lake	1621	16	2008, MDNR APM	DL	496881.4145	5076799.298	-93.04016281	45.84475113	58014200	
1052	1033	Pine	Riparian, stream wetland		07030001-549	09Pine142	Wetland			MPCA_BioMon	DL	521556.0895	5090359.958	-92.72178174	45.96647217	09Pine142	
1053	1034	Pine	Pokegama Creek (Pokegama River)		07030004-533	Yacht	Riparian wetland			MPCA_BioMon	DL	496437.3626	5079671.912	-93.04590281	45.87060414	Yacht	
1054	1035	Pine	Pokegama Creek (Pokegama River)		07030004-533	Yacht-B	Riparian, stream wetland			MPCA_BioMon	DL	496561.3694	5079638.955	-93.04430481	45.87030814	Yacht-B	
1055	1036	Pine	Snake River		07030004-587	58r4	Stream	0		2007	DL	517979.411	5074519.756	-92.76854	45.82401	58r4	
1056	1037	Pine	Snake River Bay		07030004-503	58000000				MDNR APM	DL	497317.6827	5073832.961	-93.0345278	45.81805413	58000000	
1057	1038	Pine	Stanton Lake		58-0111-00		Lake	84	34	2008, MDNR APM	DL	512996.3918	5130171.57	-92.83116682	46.32499522	58011100	
1058	1039	Pine	Willow River		07030003-504	58r1	Stream			2007, 2008	DL	521820.406	5132158.381	-92.71644479	46.34264923	58r1	
2052	736	Pine	Close		58-0071-00		Lake	34		MDNR 2013	II	516117.5707	5136357.876	-92.79040782	46.38060323	58007100	
2053	737	Pine	Fox		58-0102-00		Lake	200		MDNR 2008	DL	508254.0575	5128773.946	-92.89279784	46.31249121	58010200	
2054	738	Pine	Grace		58-0029-00		Lake	78		MDNR 2013	II	543222.0991	5102524.878	-92.44105267	46.07493221	58002900	
2055	739	Pine	Grass		58-0125-00		Lake	84		MDNR 2008	II	502316.3732	5112388.958	-92.96999584	46.16507318	58012500	
2056	740	Pine	Greigs		58-0013-00		Lake	58		MDNR 2013	II	540835.8048	5100043.868	-92.47212368	46.0527502	58001300	
2057	741	Pine	Little Mud		58-0106-00		Lake	19		MDNR 2013	II	510095.1647	5125938.888	-92.86894683	46.28695121	58010600	
2058	742	Pine	Little Tamarack		58-0028-00		Lake	58		MDNR 2013	II	538641.9655	5103198.855	-92.50022569	46.08127221	58002800	
2059	743	Pine	McCormick		58-0058-00		Lake	61		MDNR 2008	DL	516257.1743	5129483.93	-92.78883081	46.31873622	58005800	
2060	744	Pine	Oak		58-0048-00		Lake	444		MDNR 2013	II	531169.9803	5137167.951	-92.59461676	46.38736724	58004800	
2061	745	Pine	Olive		58-0044-00		Lake	12		MDNR 2013	II	529626.6314	5095615.872	-92.61729371	46.01347519	58004400	
2062	746	Pine	Sand		58-0081-00		Lake	575		MDNR 2013	II	516896.1911	5140644.935	-92.78012782	46.41916623	58008100	
2063	747	Pine	Sturgeon		58-0067-00		Lake	1456		MDNR 2013	II	518682.5038	5136157.869	-92.75706181	46.37873723	58006700	
2064	748	Pine	Unnamed		58-0170-00		Lake	70		MDNR 2013	II	516065.5158	5078345.905	-92.79304874	45.85849115	58017000	
2294		Pine	Cedar		58-0089-00		Lake	71		MDNR 2008	DL	511180.041	5085118.526	-92.8565967	45.91673989	58008900	
2296		Pine	Big Pine		58-0138-00		Lake	399		MDNR 2008	II	496268.543	5117130.346	-93.04747059	46.20834188	58013800	
2297		Pine	Passenger		58-0076-00		Lake	75		MDNR 2008	II	518205.2988	5132539.704	-92.76365139	46.34564807	58007600	
2298		Pine	Rush		58-0078-00		Lake	88		MDNR 2008	II	517852.2891	5133802.409	-92.77030086	46.35695017	58007800	
1059	1040	Polk	Bee Lake		60-0192-00		Lake	116		UofM/MPCA 2013, MDNR 2013	DL	271066.3934	5282700.788	-96.04898696	47.65716315	60019200	
1060	1041	Polk	Eighteen Lake		60-0199-00		Lake	79		UofM/MPCA 2013, MDNR 2013	DL	270504.3787	5280668.612	-96.05539496	47.63870515	60019900	
1061	1042	Polk	Hill River		09020305-539	14RD253	Stream			MPCA_BioMon	DL	289150.5188	5291978.916	-95.81293591	47.74668918	14RD253	
1062	1043	Polk	Poplar River		09020305-518	14RD218	Stream			MPCA_BioMon	DL	298134.4367	5274264.331	-95.68503684	47.59034817	14RD218	
1063	1044	Polk	Unnamed (Round) Lake		60-0721-00		Lake	9	2	2008	DL	267695.3397	5283893.187	-96.09444998	47.66667515	60072100	
2065	749	Polk	Union		60-0217-00		Lake	910		MDNR 2013	II	270026.9532	5276814.978	-96.05971895	47.60391114	60021700	
2066	750	Polk	Unnamed (Leo)		60-0220-00		Lake	34		MDNR 2013	II	269424.5906	5279985.967	-96.06938996	47.63218815	60022000	
2067	751	Polk	Unnamed (Tamarack)		60-0247-00		Lake	92		MDNR 2013	II	266971.7345	5283796.935	-96.10402298	47.66555015	60024700	
1064	1045	Pope	Grove Lake		61-0023-00		Lake	345		MDNR APM	DL	329210.3642	5051907.515	-95.18993639	45.59971794	61002300	
1065	1046	Pope	Signalness Lake		61-0149-00		Lake	41		MDNR APM	DL	303056.3878	5046215.31	-95.52269347	45.54161391	61014900	
2068	752	Pope	East Johanna (Rocky Mountain)		61-0002-00		Lake	98		MDNR 2013	II	329343.6075	5031405.842	-95.18109236	45.41534692	61000200	
2069	753	Pope	Emily		61-0180-00		Lake	2164		MDNR 2013	II	291939.6341	5043571.886	-95.66381651	45.5146139	61018000	
2070	754	Pope	Gilchrist		61-0072-00		Lake	330		MDNR 2013	II	315545.5462	5038014.917	-95.35977341	45.47128391	61007200	
2071	755	Pope	Rice		61-0069-00		Lake	191		MDNR 2008	II	320361.7049	5065115.892	-95.30818544	45.71627795	61006900	
2072	756	Pope	Unnamed		61-0091-00		Lake	47		MDNR 2013	II	305951.4599	5033164.865	-95.48048644	45.4250679	61009100	

2073	757	Pope	Unnamed		61-0007-00		Lake	32		MDNR 2013	II	324400.9779	5039381.941	-95.24706238	45.48586292	61000700	
2074	758	Pope	Unnamed		61-0287-00		Lake	195		MDNR 2013	II	322919.4413	5052741.897	-95.27084141	45.60564794	61028700	
2075	759	Pope	Westport		61-0029-00		Lake	209		MDNR 2013	DL	328879.1093	5063506.951	-95.1982604	45.70396496	61002900	
2076	760	Ramsey	Grass		62-0074-00		Lake	139		MDNR 2008	II	490983.3764	4989186.921	-93.11451372	45.05608302	62007400	
2077	761	Redwood	Rice Creek		DNR	64r1	Stream			MDNR 2008	II	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	64r1	
2078	762	Renville	Preston		65-0002-00		Lake	678		MDNR 2013	II	378295.9984	4959975.848	-94.53836508	44.78281888	65000200	
1066	1047	Rice	Cedar Lake		66-0052-00		Lake	927	93	2008	DL	465759.4289	4904694.697	-93.42920771	44.29469788	66005200	
1067	1048	Rice	Hatch Lake		66-0063-00		Lake	102	10	2008	DL	461808.3644	4928445.483	-93.48047975	44.50831891	66006300	
1068	1049	Rice	Hunt Lake		66-0047-00		Lake	190	19	2008	DL	464438.3736	4908875.137	-93.44605172	44.33226989	66004700	
1069	1050	Rice	Mud Lake		66-0054-00		Lake	269	54	2008	DL	466055.3955	4911925.618	-93.42596871	44.35980989	66005400	
1070	1051	Rice	Weinberger Lake		66-0041-00		Lake	53	8	2008	DL	466092.3923	4902439	-93.4248877	44.27440588	66004100	
1071	1052	Rice	Willing Lake		66-0051-00		Lake	53	5	2008	DL	466583.403	4906729.584	-93.41900971	44.31305588	66005100	
2079	763	Rice	Dudley		66-0014-00		Lake	83		MDNR 2008	II	471331.0828	4911359.826	-93.35973469	44.3549439	66001400	
2081	765	Rice	Kelly		66-0015-00		Lake	62		MDNR 2008	II	470439.4099	4911176.858	-93.3709127	44.35326089	66001500	
2082	766	Rice	Pooles		66-0046-00		Lake	182		MDNR 2008	II	460148.7098	4894446.843	-93.49875571	44.20215286	66004600	
2083	767	Rice	Rice		66-0048-00		Lake	331		MDNR 2008	II	461548.974	4908621.908	-93.48227373	44.32984288	66004800	
2084	768	Rice	Unnamed		66-0103-00		Lake	26		MDNR 2008	II	469538.3003	4910775.9	-93.3821957	44.34961389	66010300	
1072	1053	Roseau	Bednar Impoundment		68-0150-00	68IMP002		240	40	2008, Impoundment on the East Branch Warroad River T.161, R.35, S.34	DL	342689.4765	5399278.271	-95.13912289	48.72666136	68IMP002	
1073	1054	Roseau	Roseau River WMA - Pool 2		68-0006-00		Lake	4600	100	MDNR 2013	DL	263442.3851	5430584.112	-96.23332525	48.9828153	68000600	
1074	1055	Roseau	Roseau River WMA - Pool 3		68-0007-00		Lake	3700	10	MDNR 2013	DL	259817.3827	5428937.538	-96.28181627	48.9666293	68000700	
2085	769	Roseau	Hayes		68-0004-00		Lake	187		MDNR 2013	II	313192.8028	5389368.991	-95.53536699	48.62946331	68000400	
2086	770	Roseau	Marvin		68-0002-00		Lake	199		MDNR 2013	II	322079.0048	5429053.996	-95.43207702	48.98873737	68000200	
2087	771	Roseau	Roseau River WMA Pool 1-West		68-0005-00	68000502		1016		MDNR 2013	II	274104.3438	5427105.942	-96.08589121	48.95556231	68000502	
1075	1056	Scott	Blue Lake		70-0088-00		Lake	316	120	2008	DL	465553.3917	4961261.147	-93.43557178	44.80392096	70008800	
1076	1057	Scott	Fisher Lake		70-0087-00		Lake	396	190	2008, UofM/MPCA 2013	DL	467308.3647	4960743.876	-93.41334777	44.79934696	70008700	
1077	1058	Scott	Raven Stream W Branch		07020012-716	14MN132	Stream			MPCA_BioMon	DL	451227.4463	4937446.197	-93.6144408	44.58870691	14MN132	
1078	1059	Scott	Rice Lake		70-0025-00		Lake	328	160	2008	DL	468924.4084	4959736.979	-93.39285376	44.79035496	70002500	
2088	772	Scott	Rice		70-0001-00		Lake	55		MDNR 2008	II	478026.085	4938922.873	-93.2768987	44.60331794	70000100	
2089	773	Scott	Rice		70-0060-00		Lake	27		MDNR 2008	II	465029.9961	4949287.927	-93.44136876	44.69611194	70006000	
2354		Scott	Artic		70-0085-00		Lake			MDNR 2008	II						
1079	1060	Sherburne	Big Mud Lake		71-0085-00		Lake	263	100	2008, UofM/MPCA 2013	DL	441605.4234	5033566.304	-93.74681496	45.45318103	71008500	
1080	1061	Sherburne	Boyd Lake		71-0118-00		Lake	160	20	MDNR 2013	DL	431409.3933	5041114.324	-93.878254	45.52018703	71011800	
1081	1062	Sherburne	Buck Lake		DNR	71IMP007		30	26	2008	DL	444881.7141	5039742.391	-93.70561095	45.50903504	71IMP007	
1082	1063	Sherburne	Jim Lake		71-0111-00		Lake	20	20	2008	DL	436194.3559	5037461.121	-93.81651698	45.48776203	71011100	
1083	1064	Sherburne	Johnson Slough		71-0084-00		Lake	65	10	2008	DL	440951.4217	5035285.669	-93.75538496	45.46860103	71008400	
1084	1065	Sherburne	Josephine Pool		71-0068-00		Lake	143	72	2008	DL	446688.3867	5034282.87	-93.68189094	45.46003703	71006800	
1085	1066	Sherburne	Lower Roadside Lake		71-0376-00		Lake	8	7	2008	DL	438786.3702	5037113.658	-93.78330697	45.48486703	71037600	
1086	1067	Sherburne	Muskrat Pool		71-0297-00	71IMP003		299	15	2008	DL	441985.8794	5038147.568	-93.74249096	45.49444603	71IMP003	
1087	1068	Sherburne	Orrock Lake		71-0085-00	71IMP010		215	162	2008	DL	440779.3413	5033857.353	-93.75741396	45.45573103	71IMP010	
1088	1069	Sherburne	Pool 1		DNR	71IMP001		2	2	2008	DL	443251.915	5041411.85	-93.72666696	45.52393004	71IMP001	
1089	1070	Sherburne	Pool 2		71008400	71IMP002		30	15	2008, T.34, R.27, S.6	DL	441565.2241	5034944.834	-93.74749296	45.46558503	71IMP002	
1090	1071	Sherburne	Rice Lake		71-0142-00		Lake	187	2	2008	DL	426996.3976	5043575.953	-93.93511902	45.54189303	71014200	
1091	1072	Sherburne	Schoolhouse Pool		DNR	71IMP009		225	90	2008	DL	444851.3031	5036484.713	-93.70563395	45.47971203	71IMP009	
1092	1073	Sherburne	Unnamed Lake		71-0148-00		Lake	89		MDNR APM	DL	419996.4201	5034035.757	-94.02321303	45.45526501	71014800	
1093	1074	Sherburne	Unnamed wetland		71-0154-00		Lake	49		MDNR APM	DL	418803.4215	5034014.832	-94.03846504	45.45493901	71015400	
1094	1075	Sherburne	Unnamed wetland		71-0155-00		Lake	71		MDNR APM	DL	419484.3628	5033395.056	-94.02965604	45.44944001	71015500	
1095	1076	Sherburne	Unnamed wetland		71-0216-00		Lake	8		MDNR APM	DL	418552.4138	5034812.883	-94.04180704	45.46209201	71021600	
2090	774	Sherburne	Ann		71-0069-00		Lake	226		MDNR 2013	II	446312.2523	5030621.863	-93.68630193	45.42705703	71006900	
2091	775	Sherburne	Birch		71-0057-00		Lake	149		MDNR 2013	II	447619.6578	5024991.93	-93.66899192	45.37648302	71005700	
2092	776	Sherburne	Elk		71-0141-00		Lake	352		MDNR 2013	II	426071.4035	5035739.927	-93.94578401	45.47127202	71014100	
2093	777	Sherburne	Fremont		71-0016-00		Lake	466		MDNR 2008	II	455377.521	5033882.862	-93.57072091	45.45704604	71001600	
2094	778	Sherburne	Kliever Marsh		71-0003-00		Lake	37		MDNR 2008	II	458203.1217	5015445.92	-93.53302187	45.29127102	71000300	
2095	779	Sherburne	Long Pond		71-0036-00		Lake	82		MDNR 2008	DL	456124.8911	5039982.886	-93.56170791	45.51199805	71003600	
2096	780	Sherburne	Lundberg Slough		71-0109-00		Lake	50		MDNR 2008	II	439029.6574	5028967.858	-93.77918396	45.41157302	71010900	
2097	781	Sherburne	Mitchell		71-0081-00		Lake	156		MDNR 2013	II	440642.269	5021750.875	-93.75770894	45.34675501	71008100	

2098	782	Sherburne	Pool 31		71-0187-00	71IMP011	Lake			MDNR 2008	II	444294.9032	5039516.918	-93.71309695	45.50695904	71IMP011	
2099	783	Sherburne	Rice		71-0015-00		Lake	11		MDNR 2008	II	454247.9978	5025823.913	-93.5844179	45.38443603	71001500	
2100	784	Sherburne	Rice		71-0078-00		Lake	505		MDNR 2008	II	447463.7077	5037181.939	-93.67228494	45.48618904	71007800	
2101	785	Sherburne	Rice Creek		07010203-512	71-river1	Stream			MDNR 2008	II	423868.5044	5037157.926	-93.97418202	45.48379702	71-river1	
2102	786	Sherburne	Rush		71-0147-00		Lake	161		MDNR 2013	II	427091.0548	5037603.905	-93.93301801	45.48815502	71014700	
2103	787	Sherburne	Sand Prairie WMA		DNR	W0152601				MDNR 2013	II	414787.3582	5043623.858	-94.09148907	45.54093702	W0152601	
2104	788	Sherburne	Sandy		71-0040-00		Lake	70		MDNR 2013	II	459461.3077	5037132.901	-93.5187599	45.48654805	71004000	
2105	789	Sherburne	Upper Roadside		71-0375-00	71IMP005				MDNR 2008	II	438820.3737	5037346.874	-93.78290097	45.48696903	71IMP005	
2301		Sherburne	Clitty		71-0116-00		Lake	56		MDNR 2008	II	430869.8145	5029498.729	-93.8834924	45.41569518	71011600	
2302		Sherburne	Unnamed		71-0025-00		Lake	31		MDNR 2008	II	452303.561	5031466.05	-93.61035746	45.43556351	71002500	
2106	790	Sibley	Titlow		72-0042-00		Lake	924		MDNR 2008	II	404821.4137	4935961.834	-94.19869696	44.57070587	72004200	
473	1200	St. Louis	Prairie River		07010103-516	PrairieR	Stream			1854 List	DL	506145.6039	5181609.491	-92.91948192	46.78800528	PrairieR	
474	1201	St. Louis	Rat (Jamer) Lake		69-0737-00		Lake	26		2008, 1854 List	DL	529214.3737	5277346.455	-92.61099496	47.64885541	69073700	
475	1202	St. Louis	Rice Lake		69-0578-00		Lake	41	41	2008	DL	547319.4187	5268500.722	-92.37088388	47.56819742	69057800	
476	1203	St. Louis	Rice Lake		69-0180-00		Lake	161		1854 List	DL	576655.4319	5319344.032	-91.97192683	48.02278551	69018000	
477	1204	St. Louis	Rice Lake		69-0803-00		Lake	160		MDNR 2015	DL	514074.4953	5317027.833	-92.81129913	48.00639145	69080300	
478	1205	St. Louis	Round Lake		69-0048-00		Lake	336		2008, 7050.0470, 1854 List	7050	589647.4183	5259342.599	-91.8100897	47.48134445	69004800	
479	1206	St. Louis	Round Lake		69-0649-00		Lake	57		1854 List	DL	533891.3987	5238781.868	-92.55168089	47.30163337	69064900	
480	1207	St. Louis	Ruth Lake		69-0014-00		Lake	47	9	2008, 1854 List	DL	588776.378	5224636.612	-91.82857265	47.16923641	69001400	
481	1208	St. Louis	Sand Lake		69-0736-00		Lake	792		MDNR 2013	DL	527303.2972	5277579.912	-92.63642684	47.65103941	69073600	
482	1209	St. Louis	Sand River		09030002-501	S003-249	Stream			UofM/MPCA 2013	DL	543253.52	5275894.809	-92.4242079	47.63500843	S003-249	
483	1210	St. Louis	Sand River		09030002-501	SandR	Stream			1854 List	DL	543563.4008	5276026.157	-92.4200699	47.63616943	SandR	
1118	1099	St. Louis	Bug Lake (Whitchel)		69-0531-00		Lake	71	53	2008, 1854 List	DL	547456.4083	5221075.285	-92.37412881	47.14146936	69053100	
1119	1100	St. Louis	Burntside Lake		69-0118-00		Lake	7314		2007, 2008, 2010, 1854 List	DL	576621.4047	5309130.674	-91.97420482	47.9309125	69011800	
1120	1101	St. Louis	Burntside River		09030001-808	14RN051	Stream			MPCA_BioMon	DL	578202.9402	5307457.456	-91.95333881	47.9156695	14RN051	
1121	1102	St. Louis	Butterball (Long) Lake		69-0044-00		Lake	442	400	2007, 2008, 7050.0470, 1854 List	7050	585408.4243	5257287.853	-91.86674071	47.46342944	69004400	
1122	1103	St. Louis	Camp 97 Impoundment		69-0594-00		Lake	50		2008, 1854 List, MDNR APM	DL	544285.4237	5332861.78	-92.40462598	48.1474635	69059400	
1123	1104	St. Louis	Camp Forty Creek		09030002-587	Camp40Cr	Stream			1854 List	DL	537970.7413	5345876.238	-92.48835203	48.26495651	Camp40Cr	
1124	1105	St. Louis	Canary Lake		69-0055-00		Lake	22	1	2008, 1854 List	DL	583290.398	5294202.333	-91.88781477	47.79578949	69005500	
1125	1106	St. Louis	Caribou Lake		69-0489-00		Lake	569	3	2008, 1854 List	DL	552880.4348	5194270.986	-92.30573375	46.89986933	69048900	
1126	1107	St. Louis	Cedar Island Lake		69-0568-00		Lake			1854 List	DL	549488.4235	5260175.676	-92.34298486	47.49313241	69056800	
1127	1108	St. Louis	Comet Lake		69-0267-00		Lake	28		2008, 1854 List	DL	565649.3813	5287166.197	-92.12440783	47.73452946	69026700	
1128	1109	St. Louis	Cranberry Lake		69-0147-00		Lake	69		2008, 1854 List	DL	574153.4118	5262261.065	-92.01521976	47.50955044	69014700	
1129	1110	St. Louis	Crane Lake		69-0616-00		Lake	3396	600	2007, 2008, 1854 List	DL	538805.4276	5348601.513	-92.47685503	48.28942351	69061600	
1130	1111	St. Louis	Day Brook		07010103-542	DayBr	Stream			HibbTac (multiple locations)	DL	487997.3918	5266554.882	-93.15952728	47.55230336	DayBr	
1131	1112	St. Louis	East Robinson	Deadmans	69-0162-00	69IMP001	Lake	5		1854 List T.62, R.13, S.12	DL	580045.8209	5302316.651	-91.92963179	47.86919649	69IMP001	
1132	1113	St. Louis	Dollar Lake		69-0534-00		Lake	51	51	2008, 1854 List	DL	549527.4217	5236394.231	-92.34512282	47.27915438	69053400	
1133	1114	St. Louis	Duck Lake		69-0191-00		Lake	126		2008, 1854 List	DL	571271.4026	5324320.16	-92.04329586	48.06817351	69019100	
1134	1115	St. Louis	Dunka River		09030001-513	DunkaR	Stream			1854 List	DL	584747.9363	5285199.95	-91.87011075	47.71461548	DunkaR	
1135	1116	St. Louis	Eagles Nest 3 Lake		69-0285-03		Lake	1028		2008, 1854 List	DL	568237.4101	5296094.936	-92.08849183	47.81458748	69028503	
1136	1117	St. Louis	East Stone Lake		69-0638-00		Lake			2008, 1854 List	DL	535103.3721	5236844.421	-92.53580188	47.28413637	69063800	
1137	1118	St. Louis	Echo Lake		69-0615-00		Lake	1139		2008, 1854 List	DL	538052.4194	5335888.654	-92.48814801	48.17509849	69061500	
1138	1119	St. Louis	Echo River		09030002-532	EchoR	Stream			1854 List	DL	539841.5795	5346693.004	-92.46306702	48.27218951	EchoR	
1139	1120	St. Louis	Ed Shave Lake		69-0199-00		Lake	90		2008, 1854 List	DL	578792.3677	5325167.009	-91.94219983	48.07490652	69019900	
1140	1121	St. Louis	Elbow River		09030002-602	ElbowR	Stream			MDNR 2015	DL	513158.995	5319493.9	-92.82349773	48.02859845	ElbowR	
1141	1122	St. Louis	Elliott Lake		69-0642-00		Lake	393	20	2008, 1854 List	DL	542027.3835	5240001.107	-92.44394686	47.31213238	69064200	
1142	1123	St. Louis	Embarrass Lake		69-0496-00		Lake			1854 List,MPCA Lakes	DL	551183.4254	5264311.477	-92.32000286	47.53021242	69049600	
1143	1124	St. Louis	Embarrass River		04010201-577	69r3	Stream	0		2007, 2008, 1854 List	DL	548594.3053	5258502.153	-92.35503886	47.47814241	69r3	
1144	1125	St. Louis	Esquagama Lake		69-0565-00		Lake			1854 List	DL	548767.3762	5257389.608	-92.35286486	47.46811941	69056500	
1145	1126	St. Louis	Fish Lake (east)		69-0491-00		Lake			1854 List, MDNR 2013	DL	555871.3775	5199066.291	-92.26587975	46.94277334	69049100	
1146	1127	St. Louis	Fivemile Lake		69-0288-00		Lake	106	10	2008, 1854 List	DL	563673.3814	5296983.631	-92.14931985	47.82305047	69028800	
1147	1128	St. Louis	Fourmile Lake		69-0281-00		Lake	86	1	2008, 1854 List	DL	562837.3693	5297637.862	-92.16039286	47.82901847	69028100	
1148	1129	St. Louis	Fourth Lake		69-0573-00		Lake			1854 List	DL	548510.3787	5258537.023	-92.35614886	47.47846241	69057300	
1149	1130	St. Louis	Gafvert Lake		69-0280-00		Lake	33	1	2008, 1854 List	DL	565751.4233	5300791.727	-92.12098185	47.85710048	69028000	
1150	1131	St. Louis	Gill Lake		69-0667-00		Lake	18		2008, 1854 List	DL	541423.4331	5257207.05	-92.45032988	47.4669854	69066700	
1151	1132	St. Louis	Grand Lake		69-0511-00		Lake	1742	10	2008, 1854 List	DL	545448.4132	5191504.494	-92.40357878	46.87552532	69051100	
1152	1133	St. Louis	Grass Lake		69-0776-00		Lake	49	1	2008, 1854 List	DL	515915.3914	5251059.685	-92.78902698	47.41279437	69077600	
1153	1134	St. Louis	Grassy Lake		69-0082-00		Lake	257		2008, 1854 List	DL	585091.4246	5316954.704	-91.85928279	48.00022452	69008200	
1154	1135	St. Louis	Grassy Lake		69-0216-00		Lake	95		2008, 1854 list	DL	571626.3688	5294878.577	-92.04342982	47.80327648	69021600	
1155	1136	St. Louis	Gull Lake		69-0092-00		Lake	196	20	2008, 1854 List	DL	585580.4108	5330750.195	-91.84996781	48.12425353	69009200	

1156	1137	St. Louis	Hay Lake		69-0150-00		Lake	32	1	2008, 1854 List	DL	576919.4341	5284470.071	-91.97459378	47.70902947	69015000	
1157	1138	St. Louis	Hay Lake		69-0417-00		Lake	82	45	2007, 2008, 1854 List	DL	554773.4271	5237737.965	-92.27559781	47.29082739	69041700	
1158	1139	St. Louis	Hay Lake		69-0439-00		Lake	42	1	2008, 1854 List	DL	557167.4076	5284632.044	-92.23785686	47.71253745	69043900	
1159	1140	St. Louis	Hay Lake		69-0441-00		Lake	47		2008, 1854 List	DL	559290.3939	5286964.712	-92.20923886	47.73333246	69044100	
1160	1141	St. Louis	Hay Lake		69-0579-00		Lake	114	114	2008, 1854 List	DL	545325.3928	5268367.09	-92.39740688	47.56713742	69057900	
1161	1142	St. Louis	Hay Lake		69-0435-00		Lake	78	78	2008, 7050.0470, 1854 List, MPCA Lakes, MDNR APM	7050	554677.383	5273016.201	-92.27250385	47.60824543	69043500	
1162	1143	St. Louis	Hockey Lake		69-0849-00		Lake	139	70	2007, 2008, 1854 List	DL	510525.3839	5180844.718	-92.8621169	46.78106828	69084900	
1163	1144	St. Louis	Hoodoo Lake		69-0802-00		Lake	252	252	2007, 2008	DL	521116.4083	5313858.795	-92.71704305	47.97768545	69080200	
1164	1145	St. Louis	Horseshoe Lake		69-0255-00		Lake	39	10	2008, 1854 List	DL	566421.385	5293197.445	-92.11319084	47.78871047	69025500	
1165	1146	St. Louis	Hush Lake		69-0988-00		Lake	14		1854 List	DL	568441.3845	5258622.315	-92.09163178	47.47743943	69098800	
1166	1147	St. Louis	Indian Lake		69-0023-00		Lake	57		2008, 1854 List	DL	586847.3718	5236231.936	-91.85177068	47.27381242	69002300	
1167	1148	St. Louis	Island Lake Reservoir		69-0372-00		Lake	8280		1854 List, MDNR 2013	DL	562184.4079	5207364.68	-92.18179973	47.01687936	69037200	
1168	1149	St. Louis	Jeanette Lake		69-0456-00		Lake	612		2008, 1854 List	DL	552705.4158	5331987.648	-92.29154395	48.1389575	69045600	
1169	1150	St. Louis	Johnson Lake		69-0117-00		Lake	473	24	2008, 1854 List	DL	581211.4338	5295854.467	-91.91526078	47.81091749	69011700	
1170	1151	St. Louis	Kabustasa Lake (Rice)		69-0679-00		Lake	126		1854 List, MDNR 2013	DL	535604.4174	5335953.134	-92.52107002	48.17582049	69067900	
1171	1152	St. Louis	King Lake		69-0008-00		Lake	320	39	2008, 1854 List	DL	587773.4189	5226775.127	-91.84138566	47.18861041	69000800	
1172	1153	St. Louis	Kingburg Lake		69-0771-00		Lake	19		1854 List, MDNR 2013	DL	518075.4044	5189596.709	-92.76286588	46.8596653	69077100	
1173	1154	St. Louis	Knuckey (Mud) Lake		69-0800-00		Lake	71	18	2007, 2008	DL	517624.3986	5277368.964	-92.76531901	47.6494774	69080000	
1174	1155	St. Louis	Kookoosh Lake		69-0009-00		Lake	17		1854 List	DL	588610.4207	5226283.747	-91.83043666	47.18407741	69000900	
1175	1156	St. Louis	Kylen Lake		69-0034-00		Lake	16	2	2008, 1854 List	DL	589914.4147	5243345.101	-91.80979367	47.33739143	69003400	
1176	1157	St. Louis	Lake George		69-0040-00		Lake	42		2007, 2008, 1854 List	DL	588664.3791	5237721.327	-91.82745667	47.28696842	69004000	
1177	1158	St. Louis	Lapond Lake		69-0177-00		Lake	176	176	2008, 1854 List	DL	573011.4198	5322976.51	-92.02017185	48.05588951	69017700	
1178	1159	St. Louis	Leeman Lake		69-0875-00		Lake	284	90	2008, 1854 List	DL	504509.3837	5186812.806	-92.94086793	46.83484328	69087500	
1179	1160	St. Louis	Lieuna (Lieung) Lake		69-0123-00		Lake	476	10	2008, 7050.0470, 1854 List, MDNR APM	7050	576906.4037	5216564.777	-91.98655369	47.09810738	69012300	
1180	1161	St. Louis	Little Birch Lake		69-0271-00		Lake			2008, 1854 List	DL	562383.3844	5287257.113	-92.16794984	47.73567146	69027100	
1181	1162	St. Louis	Little Cloquet River		04010202-590	69r6	Stream			2008, 1854 List	DL	575022.2349	5217207.642	-92.0112717	47.10410838	69r6	
1182	1163	St. Louis	Little Indian Sioux River		09030001-647	69r7	Stream			2007, 2008, 2010, 1854 List	DL	554998.9748	5342967.265	-92.25929495	48.23753752	69r7	
1183	1164	St. Louis	Little Mesaba Lake		69-0436-00		Lake	207		2008, 1854 List	II	557088.3954	5268195.387	-92.24105484	47.56466443	69043600	
1184	1165	St. Louis	Little Rice Lake		69-0612-00		Lake	266	266	2007, 2008, UofM/MPCA 2013, 1854 List	DL	542094.4097	5284498.042	-92.43880792	47.71249044	69061200	
1185	1166	St. Louis	Little Sandy Lake		69-0729-00		Lake	89	89	2008, Smith_Lakes, 1854 List	DL	529921.4055	5273934.67	-92.60181395	47.61812541	69072900	
1186	1167	St. Louis	Little Stone Lake		69-0028-00		Lake	163		2007, 2008, 1854 List	DL	589146.4074	5231969.988	-91.82223166	47.23516142	69002800	
1187	1168	St. Louis	Little Vermillion Lake		69-0608-00		Lake	558		2007, 2008, 1854 List	DL	543831.3941	5348055.415	-92.40915901	48.28418251	69060800	
1188	1169	St. Louis	Low Lake		69-0070-00		Lake	353	71	2007, 2008, 1854 List	DL	587930.3983	5314271.992	-91.82178178	47.97570852	69007000	
1189	1170	St. Louis	Lower Pauness Lake		69-0464-00		Lake	162	1	2008, 1854 List	DL	555914.3907	5338521.108	-92.24755394	48.19745952	69046400	
1190	1171	St. Louis	Martin Lake		69-0768-00		Lake	71		2008, 1854 List	DL	523277.389	5186561.189	-92.69477586	46.8321873	69076800	Y
1191	1172	St. Louis	Mogie Lake		69-0391-00		Lake	16		1854 List, MDNR 2013	DL	559738.4202	5179746.543	-92.21760271	46.76859432	69039100	
1192	1173	St. Louis	Moose Lake		69-0798-00		Lake	82	62	2007, 2008, 1854 List	DL	520879.3946	5276866.037	-92.72200099	47.64485541	69079800	
1193	1174	St. Louis	Moose Lake		69-0442-00		Lake	18		MDNR APM, MDNR 2013	DL	557600.4085	5286990.044	-92.23177286	47.73371345	69044200	
1194	1175	St. Louis	Moose River		09030001-540	69-river5	Stream	0		1854 List	DL	568017.9528	5334090.173	-92.08540389	48.15641852	69-river5	
1195	1176	St. Louis	Mud (Black Mallard) Lake		69-0047-00		Lake	49		2008, 1854 List	DL	585378.3815	5260717.736	-91.86647572	47.49428945	69004700	
1196	1177	St. Louis	Mud Hen Lake		69-0494-00		Lake	165		2008, 1854 List	DL	552278.3927	5246089.446	-92.30761183	47.3661744	69049400	
1197	1178	St. Louis	Mud Lake		69-0151-00		Lake	51		2008, 1854 List	DL	576088.4052	5284072.299	-91.98573978	47.70554947	69015100	
1198	1179	St. Louis	Mud Lake		69-0797-00		Lake	43	43	2008, 1854 List	DL	523032.4119	5279371.599	-92.69320299	47.66732641	69079700	
1199	1180	St. Louis	Mud Lake		69-0652-00		Lake			1854 List	DL	535798.4254	5252334.219	-92.5253629	47.42347439	69065200	
1200	1181	St. Louis	Myrtle Lake		69-0749-00		Lake	876		2008, 1854 List	DL	523941.3892	5325687.686	-92.67852805	48.08401047	69074900	
1201	1182	St. Louis	Nels Lake		69-0080-00		Lake	200	2	2008	DL	582744.4374	5319493.746	-91.89024981	48.02337252	69008000	
1202	1183	St. Louis	Nichols Lake		69-0627-00		Lake	444	22	2008, 1854 List	DL	535101.4142	5215593.756	-92.53749185	47.09291934	69062700	
1203	1184	St. Louis	Nina Moose River		09030001-650	69-river3	Stream			2007, 1854 List	DL	568535.3102	5337323.539	-92.07792689	48.18544953	69-river3	
1204	1185	St. Louis	One Pine Lake		69-0061-00		Lake	369	37	2008, 1854 List	DL	584090.403	5295922.475	-91.87680077	47.81115949	69006100	
1205	1186	St. Louis	Oriniack Lake		69-0587-00		Lake	748		2008, 1854 IList	DL	549812.3666	5318273.56	-92.33202794	48.01581248	69058700	
1206	1187	St. Louis	Papoose Lake		69-0024-00		Lake	16	16	2008, 7050.0470, 1854 List	7050	585723.433	5235444.979	-91.86677868	47.26688042	69002400	
1207	1188	St. Louis	Partridge River		04010201-552	S007-443	Stream			UofM/MPCA 2013, 1854 List	DL	560934.368	5263402.648	-92.19059482	47.52119443	S007-443	
1208	1189	St. Louis	Partridge River		04010201-552	S007-513	Stream			UofM/MPCA 2013, 1854 List	DL	561031.8689	5262724.442	-92.18939381	47.51508343	S007-513	
1209	1190	St. Louis	Partridge River		04010201-552		Lake			MPCA Streams	DL	558068.7001	5260311.853	-92.22906382	47.49364842	04010201-552	

1210	1191	St. Louis	Pelican Lake		69-0841-00		Lake	11944	119	2007, 2008	DL	506958.389	5323214.356	-92.90660612	48.06216945	69084100		
1211	1192	St. Louis	Pelican River		09030002-530	69river_	Stream			2007, 2008, MDNR 2015	DL	531401.5978	5334761.845	-92.57769022	48.16532449	69river_		
1212	1193	St. Louis	Perch Lake		69-0688-00		Lake	79	32	2008, 1854 List	DL	533235.3802	5238964.395	-92.56034489	47.30330937	69068800		
1213	1194	St. Louis	Petrel Creek		04010202-664	69r4	Stream	0		2007, 2008, 2010, 1854 List	DL	582913.8793	5240557.408	-91.9029617	47.31323642	69r4		
1214	1195	St. Louis	Picket Lake		69-0079-00		Lake	78	7	2008, 1854 List	DL	585708.4226	5320192.758	-91.8503658	48.02926952	69007900		
1215	1196	St. Louis	Pike River		09030002-503	S006-927	Stream			UofM/MPCA 2013	DL	549036.4439	5286597.389	-92.3460279	47.73088845	S006-927		
810	1211	St. Louis	Sandy Lake		69-0730-00		Lake	121	121	2008, UofM/MPCA 2013, Smith_Lakes, 1854 List	DL	530745.4153	5274341.845	-92.59081995	47.62175041	69073000		
811	1212	St. Louis	Second Creek		04010201-952	S007-220	Stream			UofM/MPCA 2013, 1854 List	DL	560858.2619	5263242.248	-92.19162782	47.51975843	S007-220		
812	1213	St. Louis	Second Creek		04010201-952		Stream			MPCA Streams	DL	560834.6019	5263251.227	-92.19194082	47.51984143	04010201-952		
813	1214	St. Louis	Seven Beaver Lake		69-0002-00		Lake	1508	1282	2007, 20008, 7050.0470, 1854 List	7050	589440.4307	5261318.969	-91.8124357	47.49915245	69000200		
814	1215	St. Louis	Shannon Lake		69-0925-00		Lake	135	108	2007, 2008,	DL	502232.4008	5274793.19	-92.97028706	47.62653739	69092500		
815	1216	St. Louis	Shannon River		09030005-605	69river_1	Stream			2007, 2008	DL	504630.041	5277794.909	-92.93834306	47.65353339	69river_1		
816	1217	St. Louis	Shiver Creek Impoundment		0410201-A37	ShiverCrImp				1854 List	DL	573612.3342	5250578.437	-92.02435075	47.40450642	ShiverCrImp		
817	1218	St. Louis	Side Lake		69-0699-00		Lake	25	15	2008, 1854 List	DL	527158.3933	5180721.807	-92.64423383	46.77949229	69069900	Y	
1096	1077	St. Louis	Alden Lake		69-0131-00		Lake	190		2008, 1854 List	DL	573580.4401	5212439.63	-92.0310487	47.06137138	69013100		
1097	1078	St. Louis	Anchor Lake		69-0641-00		Lake	316	32	2008, 1854 List	DL	538907.3693	5240988.355	-92.48513887	47.32120838	69064100		
1098	1079	St. Louis	Andy Lake		69-0618-00		Lake	15		1854 List, MDNR 2013	DL	538559.4152	5188033.488	-92.4942728	46.84472631	69061800		
1099	1080	St. Louis	Angell Pool		DNR	W0889001		500	80	2008, part of the Canosia State WMA T.51, R.15, S.15	DL	557741.0804	5195604.35	-92.24175474	46.91146234	W0889001		
1100	1081	St. Louis	Artichoke Lake		69-0623-00		Lake	306		2008, 7050.0470, 1854 List	7050	535394.398	5203397.111	-92.53458683	46.98315333	69062300		
1101	1082	St. Louis	Balkan Lake		69-0860-00		Lake	36	2	2008	DL	508880.4172	5272573.534	-92.88184803	47.60650839	69086000		
1102	1083	St. Louis	Bassett Lake		69-0041-00		Lake	436		1854 List, MDNR 2013	DL	582639.4138	5246689.659	-91.90545271	47.36844043	69004100		
1103	1084	St. Louis	Bear Island River		09030001-608	69r8	Stream			2007, 2008, 1854 List	DL	587664.4198	5299216.979	-91.82840576	47.8403185	69r8		
1104	1085	St. Louis	Bear Island River		09030001-665	14RN058	Stream			MPCA_BioMon	DL	582109.2034	5294871.116	-91.90345778	47.80195749	14RN058		
1105	1086	St. Louis	Bear Lake (Mudd)		69-0112-00		Lake	125	125	2008	DL	581288.4406	5219029.866	-91.92837368	47.11976039	69011200		
1106	1087	St. Louis	Beartrap Lake		69-0089-00		Lake	131		2008, 1854 List	DL	584102.4345	5332528.138	-91.86947382	48.14044354	69008900		
1107	1088	St. Louis	Beaver (Joker) Lake		69-0015-00		Lake	46	5	2008, 1854 List	DL	587876.4369	5222825.296	-91.84079965	47.1530614	69001500		
1108	1089	St. Louis	Bezhik Creek		09030001-975	14RN036	Stream			MPCA_BioMon	DL	564744.3435	5323985.34	-92.13095089	48.06585751	14RN036		
1109	1090	St. Louis	Big Lake		69-0190-00		Lake	2049	20	2008, 1854 list	DL	574849.3681	5324845.734	-91.99518285	48.07249152	69019000		
1110	1091	St. Louis	Big Rice Lake		69-0178-00		Lake	416	416	2008, 1854 List	DL	572585.4156	5320159.022	-92.02636585	48.03059251	69017800		
1111	1092	St. Louis	Big Rice Lake		69-0669-00		Lake	2072	1700	2007, 2008, 1854 List	DL	538335.4078	5282563.557	-92.48908993	47.69531943	69066900		
1112	1093	St. Louis	Birch Lake		69-0003-00		Lake	7628	381	2007, 2008, 1854 List, UofM/MPCA 2013	DL	581375.4045	5287106.699	-91.91470977	47.73220248	69000300		
1113	1094	St. Louis	Black Lake		69-0740-00		Lake	118		2008, 1854 List	DL	525608.371	5313025.974	-92.65690203	47.97002845	69074000		
1114	1095	St. Louis	Blueberry Lake		69-0054-00		Lake	130	13	2008, 1854 List	DL	584054.3828	5293982.706	-91.87765777	47.79371449	69005400		
1115	1096	St. Louis	Bootleg Lake		69-0452-00		Lake	352		2008, 1854 List	DL	559469.403	5320704.223	-92.2022039	48.0368535	69045200		
1116	1097	St. Louis	Breda Lake		69-0037-00		Lake	137	135	2007, 2008, 7050.0470, 1854 List	7050	585367.411	5243224.146	-91.86999369	47.33691243	69003700		
1117	1098	St. Louis	Bug Creek		04010201-545	BugCr	Stream			1854 List	DL	546923.3211	5224368.221	-92.38081482	47.17113737	BugCr		
1216	1197	St. Louis	Pike River		09030002-503	69r1	Stream	0		2007, 2008, 2010, 1854 List	DL	544962.701	5290766.435	-92.39992292	47.76869445	69r1		
1217	1198	St. Louis	Pine Lake		69-0001-00		Lake	442		1854 List	DL	590891.4186	5256961.605	-91.79407169	47.45975245	69000100		
1218	1199	St. Louis	Prairie Lake		69-0848-00		Lake	807	16	2008, 1854 List	DL	507341.4036	5182044.323	-92.90380791	46.79190628	69084800		
1219	1219	St. Louis	Simian Lake		69-0619-00		Lake	81	5	2008, 1854 List	DL	536292.4058	5181644.539	-92.5245118	46.7873613	69061900	Y	
1220	1220	St. Louis	Sixmile Lake		69-0283-00		Lake	103		2008, 1854 List	DL	564753.4346	5297974.227	-92.13474385	47.83185447	69028300		
1221	1221	St. Louis	Smith (Little Pequaywan) Lake		69-0111-00		Lake	220		1854 List	DL	582835.4248	5223261.498	-91.90720367	47.1576394	69011100		
1222	1222	St. Louis	St. Louis Estuary		04010201-532	S007-444	Stream			UofM/MPCA 2013	DL	558389.6901	5166875.349	-92.2368997	46.65289331	S007-444		
1223	1223	St. Louis	St. Louis R.(FR 1060)		04010201-644	StLR_2	Stream			1854 List	DL	570253.4999	5257286.737	-92.06779677	47.46523043	StLR_2		
1224	1224	St. Louis	St. Louis River		04010201-532	69r2	Stream			2007, 2008, 2010 headwaters, Norway Pt	DL	556149.99	5167173.9	-92.2661317	46.6557713	69r2		
1225	1225	St. Louis	St. Louis River (FR 790)		04010201-644	StLR_4	Stream			1854 List	DL	566173.6267	5258138.321	-92.12179879	47.47331943	StLR_4		
1226	1226	St. Louis	St. Louis River (FR 791)		04010201-644	StLR_5	Stream			1854 List	DL	562853.2782	5258109.866	-92.1658628	47.47339242	StLR_5		
1227	1227	St. Louis	St. Louis River (hdwtrs)		04010201-631	StLR_1	Stream			7050.0470 (04010201-631), 1854 List	7050	579885.9575	5257628.457	-91.93994173	47.46719444	StLR_1		
1228	1228	St. Louis	St. Louis River (Norway Pt)		04010201-644	StLR_3	Stream			1854 List	DL	564529.3707	5254493.338	-92.14414979	47.44069042	StLR_3		
1229	1229	St. Louis	St.Louis Estuary (2)		04010201-533	Tallas	Stream			1854 List	DL	562803.8939	5174092.049	-92.17823169	46.71743232	Tallas		

1230	1230	St. Louis	Stone (Tommila) Lake		69-0035-00		Lake	87	85	2008, 7050.0470, 1854 List	7050	590054.4415	5242450.427	-91.80812167	47.32932343	69003500	
1231	1231	St. Louis	Stone Lake		69-0686-00		Lake	160	24	2008, 7050.0470, 1854 List	7050	533734.3842	5237354.21	-92.55386589	47.28879537	69068600	
1232	1232	St. Louis	Stone Lake		69-0046-00		Lake	230	173	2007, 2008, 2010, 7050.0470, 1854 List, MCBS 2011, UofM/MPCA 2013	7050	583518.4018	5261072.279	-91.89109772	47.49772045	69004600	
1233	1233	St. Louis	Sturgeon River		09030005-527	S004-870	Stream			UofM/MPCA 2013	DL	505161.5468	5278057.088	-92.93126206	47.65588839	S004-870	
1234	1234	St. Louis	Sturgeon Lake		69-0939-01		Lake	1624		2008, UofM/MPCA 2013	DL	496259.3847	5280875.498	-93.0498391	47.68125739	69093901	
1235	1235	St. Louis	Sturgeon Lake, Middle		69-0939-02		Lake	133		UofM/MPCA 2013	DL	495658.43	5279369.085	-93.0578311	47.66769938	69093902	
1236	1236	St. Louis	Sullivan Lake		69-0246-00		Lake	36		1854 List, MDNR 2013	DL	570477.388	5231855.876	-92.06885973	47.2364044	69024600	
1237	1237	St. Louis	Sunset Lake		69-0764-00		Lake	309	6	2008, 1854 List	DL	523196.387	5310838.052	-92.68933503	47.95043545	69076400	
1238	1238	St. Louis	Susan Lake		69-0741-00		Lake	305		2008, 1854 List	DL	525241.3827	5314570.746	-92.66172803	47.98394146	69074100	
1239	1239	St. Louis	Turpela Lake		69-0427-00		Lake	76	61	2008, UofM/MPCA 2013	DL	557615.4168	5256714.37	-92.23555082	47.46132142	69042700	
1240	1240	St. Louis	Twin (East Twin) Lake		69-0163-00		Lake	224		2008, 1854 List	DL	577234.3698	5300442.329	-91.9675548	47.85267949	69016300	
1241	1241	St. Louis	Twin Lake		69-0504-00		Lake	18	1	2008, 1854 List	DL	544471.395	5181123.498	-92.41740977	46.78217731	69050400	
1242	1242	St. Louis	Twin Lake		69-0695-00		Lake	115		2008, 1854 List	DL	532149.4002	5182703.382	-92.57871582	46.7971023	69069500	Y
1243	1243	St. Louis	Twin Lakes (East Twin)		69-0174-00		Lake	140		1854 List, MDNR 2013	DL	579655.3719	5314017.116	-91.93268881	47.97449951	69017400	
1244	1244	St. Louis	Unnamed (FDL2) Lake		69-1454-00		Lake			1854 List, MDNR 2013	DL	530645.3743	5183288.363	-92.59838482	46.8024373	69145400	Y
1245	1245	St. Louis	Unnamed Lake		69-0634-00		Lake	101	20	2008, 1854 List	DL	541177.3918	5234570.729	-92.45569385	47.26332437	69063400	
1246	1246	St. Louis	Upper Bug Lake		69-0406-00		Lake	23		2008, 1854 List	DL	555051.4187	5221908.936	-92.27386878	47.14837937	69040600	
1247	1247	St. Louis	Upper Pauness Lake		69-0465-00		Lake	215	1	2008, 1854 List	DL	555333.4347	5337848.273	-92.25545894	48.19145751	69046500	
1248	1248	St. Louis	Vang Lake		69-0876-00		Lake	126	3	2008, 1854 List	DL	505712.4325	5189952.961	-92.92505293	46.86309228	69087600	
1249	1249	St. Louis	Vermilion River		09030002-531	69-river4	Stream			2007, 2008, MDNR 2013, MPCA_BioMon	DL	534397.3826	5346239.363	-92.53647104	48.2684275	69-river4	
1250	1250	St. Louis	Vermilion River Lake		69-0613-00		Lake	1125	562	2008, 1854 List	DL	540514.4332	5318142.146	-92.45671698	48.01528748	69061300	
1251	1251	St. Louis	Vermillion (Rice Bay)		69-0378-00		Lake	49110	250	2008, 1854 List	DL	543448.434	5301352.629	-92.41906994	47.86404246	69037800	
1252	1252	St. Louis	Wabuse Lake		69-0408-00		Lake	64	51	2008, 1854 List	DL	554915.4016	5233613.857	-92.2742278	47.25370839	69040800	
1253	1253	St. Louis	Wagon Wheel Lake		69-0735-00		Lake	11	6	2008, 1854 List	DL	529917.415	5277359.027	-92.60163296	47.64893642	69073500	
1254	1254	St. Louis	Washusk Number One Lake		69-0409-00		Lake	51	40	2008, 1854 List	DL	554346.3664	5232963.311	-92.2818268	47.24790238	69040900	
1255	1255	St. Louis	Washusk Number Two Lake		69-0410-00		Lake	24		1854 List, MDNR 2013	DL	553648.3781	5232180.284	-92.2911438	47.24091438	69041000	
1256	1256	St. Louis	White Iron Lake		69-0004-00		Lake	3238		2008, 1854 List	DL	591854.392	5305022.887	-91.77118775	47.89195951	69000400	
1257	1257	St. Louis	White Lake		69-0571-00		Lake	56		1854 List	DL	543755.4111	5261051.716	-92.41900588	47.50142541	69057100	
1258	1258	St. Louis	Wild Rice Reservoir		69-0371-00		Lake	2133	1	2008, UofM/MPCA 2013, 1854 List	DL	562102.4281	5193400.376	-92.18478872	46.89123734	69037100	
1259	1259	St. Louis	Wolf Lake		69-0143-00		Lake	456		MDNR APM, MCBS 2011, 1854 List	DL	579749.3788	5236657.885	-91.9455217	47.27854641	69014300	
1260	1260	St. Louis	Wynne Lake		69-0434-02		Lake	764		1854 List, MDNR 2013	DL	553562.4064	5267730.955	-92.28798285	47.56078643	69043402	
2107	791	St. Louis	Ash		69-0864-00		Lake	678		MDNR 2013	II	504662.1132	5340021.924	-92.93724215	48.21340747	69086400	
2108	792	St. Louis	Astrid		69-0589-00		Lake	114		MDNR 2013	II	549794.8351	5328937.921	-92.33102095	48.1117555	69058900	
2109	793	St. Louis	Auto		69-0731-00		Lake	100		MDNR 2013	II	527762.3147	5280737.95	-92.63011397	47.67943442	69073100	
2110	794	St. Louis	Ban		69-0742-00		Lake	396		MDNR 2013	II	526225.0315	5321058.976	-92.64814904	48.04227646	69074200	
2111	795	St. Louis	Barrs		69-0132-00		Lake	134		MDNR 2013	II	578510.5072	5212102.927	-91.96619568	47.05777438	69013200	
2112	796	St. Louis	Bear Island		69-0115-00		Lake	2667		MDNR 2013	II	579078.8722	5292488.895	-91.94435378	47.78090648	69011500	
2113	797	St. Louis	Beast		69-0837-00		Lake	96		MDNR 2013	II	517319.8977	5372891.913	-92.76550015	48.50890452	69083700	
2114	798	St. Louis	Black Duck		69-0842-00		Lake	1264		MDNR 2013	II	513444.897	5337946.894	-92.81908111	48.19461347	69084200	
2115	799	St. Louis	Blackwood		69-0850-00		Lake	25		MDNR 2013	II	508693.5946	5180711.883	-92.8861159	46.77989928	69085000	
2116	800	St. Louis	Bog		69-0811-00		Lake	30		MDNR 2013	II	517322.2762	5334074.971	-92.76706409	48.15968447	69081100	
2117	801	St. Louis	Central		69-0637-00		Lake	75		MDNR 2013	II	539198.6662	5236844.882	-92.48164886	47.28390837	69063700	
2118	802	St. Louis	Dark		69-0790-00		Lake	244		MDNR 2013	II	516478.2185	5275644.942	-92.78064601	47.6339954	69079000	
2119	803	St. Louis	Elbow		69-0744-00		Lake	1528		MDNR 2013	II	526374.8306	5316822.906	-92.64640003	48.00415846	69074400	
2120	804	St. Louis	Elephant		69-0810-00		Lake	782		MDNR 2013	II	518949.4732	5337841.905	-92.74501509	48.19352848	69081000	
2121	805	St. Louis	Ely		69-0660-00		Lake	827		MDNR 2013	II	538975.8001	5255399.906	-92.48296689	47.4508764	69066000	
2122	806	St. Louis	Fishing		69-0270-00		Lake	17		MDNR 2013	II	563795.7846	5287638.937	-92.14905784	47.73896846	69027000	
2123	807	St. Louis	Gansey		69-0913-00		Lake	74		MDNR 2008	II	496791.2796	5269118.932	-93.04266608	47.57547737	69091300	
2124	808	St. Louis	Goldmine Slough Section - Vermilion		09030002-531	R001-46G				MDNR 2013	II	530774.0799	5343078.991	-92.58552605	48.2401815	R001-46G	

2125		809	St. Louis	Golf Course Pond (Upper Twin)		69-1345-00		Lake	1		MDNR 2013	II	566673.7367	5180942.907	-92.12660668	46.77870233	69134500	
2126		810	St. Louis	Headquarters		69-0766-00		Lake	65		MDNR 2013	II	515133.6663	5185367.949	-92.80159889	46.82168429	69076600	
2127		811	St. Louis	Horseshoe		69-0232-00		Lake	96		MDNR 2013	II	567581.0065	5204335.932	-92.11125371	46.98909836	69023200	
2128		812	St. Louis	James		69-0734-00		Lake	19		MDNR 2013	II	529516.6598	5278086.961	-92.60691996	47.65550442	69073400	
2129		813	St. Louis	Kangas		69-0057-00		Lake	35		MDNR 2013	II	586801.0327	5290614.919	-91.84166375	47.76305449	69005700	
2130		814	St. Louis	Kelly		69-0901-00		Lake	21		MDNR 2013	II	499521.5946	5251354.974	-93.00634204	47.41564535	69090100	
2131		815	St. Louis	Leora		69-0521-00		Lake	276		MDNR 2013	II	545201.0045	5216868.872	-92.40429481	47.10377836	69052100	
2132		816	St. Louis	Little Rice		69-0180-00		Lake	161		MDNR 2008	II	576653.8142	5319347.901	-91.97194783	48.02282051	69018000	
2133		817	St. Louis	Locator		69-0936-00		Lake	140		MDNR 2013	II	500037.6286	5376274.963	-92.99949023	48.5395785	69093600	
2134		818	St. Louis	Long		69-0653-00		Lake	157		MDNR 2013	II	534334.7819	5249937.897	-92.5449539	47.40199139	69065300	
2135		819	St. Louis	Long		69-0495-00		Lake	366		MDNR 2013	II	551385.8188	5239898.925	-92.32014782	47.31054539	69049500	
2136		820	St. Louis	Long		69-0765-00		Lake	472		MDNR 2013	II	520343.6713	5350506.914	-92.7256461	48.30742849	69076500	
2137		821	St. Louis	Longyear		69-0857-00		Lake	188		MDNR 2013	II	509519.1231	5259789.967	-92.87362701	47.49147437	69085700	
2138		822	St. Louis	Marion		69-0755-00		Lake	174		MDNR 2013	II	524216.8939	5348200.975	-92.67354509	48.28654649	69075500	
2139		823	St. Louis	Meadow		69-0165-00		Lake	21		MDNR 2013	II	572216.0068	5297995.881	-92.03503682	47.83125448	69016500	
2140		824	St. Louis	Moose		69-0806-00		Lake	942		MDNR 2013	II	515648.9601	5325365.962	-92.78988509	48.08137346	69080600	
2141		825	St. Louis	Mukooda		69-0684-00		Lake	748		MDNR 2013	II	537911.4347	5353825.952	-92.48843704	48.33647852	69068400	
2142		826	St. Louis	Murphy		69-0646-00		Lake	356		MDNR 2013	II	537886.1249	5238373.874	-92.49887487	47.29774338	69064600	
2143		827	St. Louis	North Twin		69-0419-00		Lake	67		MDNR 2013	II	556291.2094	5255357.984	-92.25329182	47.44923341	69041900	
2144		828	St. Louis	Pat Zakovec Impoundment		69-1463-00		Lake	72		MDNR 2013	II	522368.0817	5339163.965	-92.69894508	48.20531148	69146300	
2145		829	St. Louis	Pleasant		69-0655-00		Lake	360		MDNR 2013	II	538440.9301	5248893.964	-92.49062688	47.39236939	69065500	
2146		830	St. Louis	Rat		69-0922-00		Lake	73		MDNR 2008	II	499329.2565	5266658.952	-93.00891506	47.55335037	69092200	
2147		831	St. Louis	Rice River		09030005-517	69-river9	Stream			MDNR 2008	II	517261.0721	5298634.97	-92.76931304	47.84082843	69-river9	
2148		832	St. Louis	Sabin		69-0434-01		Lake			1854 List	II	552585.415	5270772.919	-92.30060486	47.58823543	69043401	
2149		833	St. Louis	Sand		69-0736-00		Lake	792		MDNR 2013	II	527401.6983	5277317.969	-92.63513297	47.64867841	69073600	
2150		834	St. Louis	Sand Point		69-0617-00		Lake	4848		MDNR 2008	II	536862.7877	5357883.953	-92.50223105	48.37304752	69061700	
2151		835	St. Louis	Schelins		69-0624-00		Lake	164		MDNR 2013	II	536434.8799	5201490.949	-92.52105883	46.96594433	69062400	
2152		836	St. Louis	South Bog		69-0807-00		Lake	20		MDNR 2013	II	517462.4926	5332990.909	-92.76522309	48.14992747	69080700	
2153		837	St. Louis	St. Mary's		69-0651-00		Lake	249		MDNR 2013	II	536730.6946	5252886.894	-92.5129569	47.42839539	69065100	
2154		838	St. Louis	Stone		69-0027-00		Lake	228		MDNR 2013	II	587817.0225	5230500.962	-91.84007966	47.22212441	69002700	
2155		839	St. Louis	Swan		69-0863-00		Lake	85		MDNR 2013	II	509494.3869	5329486.956	-92.87242912	48.11857146	69086300	
2156		840	St. Louis	Thirty-Six		69-0854-00		Lake	110		MDNR 2013	II	514024.0185	5179436.951	-92.81632788	46.76833528	69085400	
2157		841	St. Louis	Trettel Pool		DNR	W0889002		30		MDNR 2008	II	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	W0889002	
2158		842	St. Louis	Trout		69-0498-00		Lake	9237		MDNR 2013	II	550974.2864	5312724.955	-92.31710693	47.96580248	69049800	
2159		843	St. Louis	Twin		69-0505-00		Lake	25		MDNR 2008	II	544424.706	5180510.949	-92.41808077	46.77666831	69050500	
2160		844	St. Louis	Unnamed		69-0640-00		Lake	10		MDNR 2008	II	539325.6686	5243610.977	-92.47937187	47.34478138	69064000	
2161		845	St. Louis	Vermilion Falls Section - Vermilion		09030002-531	R001-46V				MDNR 2013	II	531393.984	5345251.98	-92.57701605	48.2597005	R001-46V	
2162		846	St. Louis	White		69-0030-00		Lake	134		MDNR 2013	II	584677.7391	5229208.908	-91.88178068	47.21091241	69003000	
2163		847	St. Louis	White Iron		69-0004-00		Lake	3429		MDNR 2013	II	591857.4934	5305015.933	-91.77114775	47.89189651	69000400	
2164		848	St. Louis	Whiteface Reservoir		69-0375-00		Lake	4980		MDNR 2013	II	560994.2777	5238311.97	-92.19325378	47.2954424	69037500	
2165		849	St. Louis	Whitewater		69-0376-00		Lake	599		MDNR 2013	II	562303.8359	5260778.982	-92.17277681	47.49745943	69037600	
2166		850	St. Louis	Wolf		69-0161-00		Lake	301		MDNR 2013	II	573041.6304	5303805.981	-92.02302482	47.88342949	69016100	
2355			St. Louis	Cloquet River			69r5	Stream			MDNR 2008	II						
2356			St. Louis	Sioux River			69r9	Stream			MDNR 2008	II						
1261		1261	Stearns	Beaver Lake		73-0023-00		Lake	158		MDNR APM	DL	402600.3842	5029630.589	-94.24478109	45.41341299	73002300	
1262		1262	Stearns	Goodners Lake		73-0076-00		Lake	285		MDNR APM, MDNR 2013	DL	392199.3742	5026929.946	-94.37708013	45.38758497	73007600	
1263		1263	Stearns	Grand Lake		73-0055-00		Lake	666		MDNR APM, MDNR 2013	DL	395423.3987	5032339.204	-94.33705512	45.43675098	73005500	
1264		1264	Stearns	McCormic Lake		73-0273-00		Lake	211		2008, UofM/MPCA 2013	DL	351777.3394	5064486.808	-94.90458032	45.71805998	73027300	
1265		1265	Stearns	Ochotto Lake		73-0122-00		Lake	40		MDNR APM	DL	387120.4129	5052877.016	-94.44791418	45.620263	73012200	
1266		1266	Stearns	Padua Lake		73-0277-00		Lake	100		UofM/MPCA 2013	DL	342681.3818	5054257.832	-95.01807634	45.62403996	73027700	
1267		1267	Stearns	Raymond Lake		73-0285-00		Lake	126		2008, UofM/MPCA 2013	DL	342340.3983	5055084.744	-95.02271534	45.63140096	73028500	
1268		1268	Stearns	Restored Wedland		73-0077-00		Lake			MDNR APM	DL	391999.3818	5050240.53	-94.38476616	45.597315	73007700	
1269		1269	Stearns	South Twin Lake		73-0276-00		Lake	64	15	MDNR 2013	DL	352029.345	5070370.687	-94.90314233	45.77104399	73027600	
1270		1270	Stearns	Tamarack Lake		73-0278-00		Lake	470	235	2008	DL	336803.3362	5036214.006	-95.08741234	45.46037793	73027800	
1271		1271	Stearns	Unnamed (Tower WMA)		73-0343-00		Lake	10	10	MDNR 2013	DL	334649.3976	5060324.513	-95.12310238	45.67674196	73034300	
1272		1272	Stearns	Unnamed Lake		73-0274-00		Lake	127	100	MDNR 2013	DL	351726.3656	5063837.274	-94.90503632	45.71220598	73027400	
2167		851	Stearns	Achman		73-0125-00		Lake	49		MDNR 2013	II	390596.0037	5051049.853	-94.40293616	45.604378	73012500	
2168		852	Stearns	Big		73-0159-00		Lake	446		MDNR 2013	II	376622.1765	5031023.907	-94.57702219	45.42184996	73015900	

2169	853	Stearns	Big Spunk		73-0117-00		Lake	410		MDNR 2013	II	385259.1835	5050032.942	-94.47111118	45.594367	73011700	
2170	854	Stearns	Cedar		73-0255-00		Lake	243		MDNR 2013	II	352528.2713	5068190.923	-94.89606433	45.75154199	73025500	
2171	855	Stearns	Cedar Island		73-0133-00		Lake	995		MDNR 2013	II	383038.4891	5030900.91	-94.49500816	45.42184597	73013300	
2172	856	Stearns	Crow		73-0279-00		Lake	461		MDNR 2008	DL	340671.9107	5033649.912	-95.03713132	45.43820593	73027900	
2173	857	Stearns	Fifth		73-0180-00		Lake	76		MDNR 2008	II	379947.1159	5049948.945	-94.5391732	45.59271399	73018000	
2174	858	Stearns	Fish		73-0281-00		Lake	204		MDNR 2008	DL	337327.6888	5031260.934	-95.07907233	45.41594593	73028100	
2175	859	Stearns	Grass		73-0294-00		Lake	157		MDNR 2008	II	333323.9064	5032607.859	-95.13066434	45.42711892	73029400	
2176	860	Stearns	Gravel		73-0204-00		Lake	55		MDNR 2008	II	371591.6557	5048220.9	-94.64579923	45.57567298	73020400	
2177	861	Stearns	Great Northern		73-0083-00		Lake	113		MDNR 2013	II	385142.7511	5032926.872	-94.46859316	45.44042497	73008300	
2178	862	Stearns	Henry		73-0237-00		Lake	191		MDNR 2008	II	358074.8494	5036782.948	-94.81564526	45.47014395	73023700	
2179	863	Stearns	Henry		73-0160-00		Lake	62		MDNR 2008	II	378906.266	5048083.862	-94.5520502	45.57575199	73016000	
2180	864	Stearns	Island		73-0104-00		Lake	118		MDNR 2013	II	390817.1694	5045513.953	-94.39886316	45.554599	73010400	
2181	865	Stearns	Koronis (Mud)		73-0200-01		Lake	156		MDNR 2013	II	369913.5428	5021524.85	-94.6602332	45.33516595	73020001	
2182	866	Stearns	Laura		73-0020-00		Lake	147		MDNR 2013	II	406570.6562	5021740.855	-94.19255807	45.34295198	73002000	
2183	867	Stearns	Linneman		73-0127-00		Lake	108		MDNR 2008	II	387204.9174	5050657.908	-94.44631718	45.600309	73012700	
2184	868	Stearns	Little Rice		73-0167-00		Lake	56		MDNR 2008	DL	381022.5513	5045267.936	-94.52425019	45.55077999	73016700	
2185	869	Stearns	Long		73-0139-00		Lake	478		MDNR 2013	II	380680.9542	5027102.92	-94.52421217	45.38727296	73013900	
2186	870	Stearns	Long		73-0105-00		Lake	31		MDNR 2013	II	390035.9519	5045304.913	-94.40882216	45.55259499	73010500	
2187	871	Stearns	Lower Spunk		73-0123-00		Lake	269		MDNR 2008	DL	386245.6559	5052628.933	-94.45907318	45.617888	73012300	
2188	872	Stearns	Marie		73-0014-00		Lake	145		MDNR 2013	II	404365.7123	5018464.878	-94.22006307	45.31317297	73001400	
2189	873	Stearns	Middle Spunk		73-0128-00		Lake	242		MDNR 2008	DL	386132.6989	5051492.852	-94.46025618	45.607647	73012800	
2190	874	Stearns	Mud		73-0161-00		Lake	55		MDNR 2008	II	378197.466	5048539.954	-94.56124521	45.57973199	73016100	
2191	875	Stearns	North Brown's		73-0147-00		Lake	312		MDNR 2013	II	379605.0629	5026976.915	-94.53792017	45.38595496	73014700	
2192	876	Stearns	Otter		73-0015-00		Lake	125		MDNR 2013	II	409260.6457	5019579.937	-94.15783305	45.32385798	73001500	
2193	877	Stearns	Pearl		73-0037-00		Lake	755		MDNR 2013	II	397750.0769	5028103.884	-94.30643611	45.39898198	73003700	
2194	878	Stearns	Pelican		73-0118-00		Lake	344		MDNR 2013	II	384321.193	5056749.885	-94.48472819	45.65465	73011800	
2195	879	Stearns	Rice		73-0196-00		Lake	1568		MDNR 2008	II	373074.6946	5025806.892	-94.62100519	45.37427395	73019600	
2196	880	Stearns	Sagatagan		73-0092-00		Lake	170		MDNR 2008	II	391513.0844	5047547.895	-94.39040116	45.57301	73009200	
2197	881	Stearns	Schultz Slough		73-0201-00		Lake	29		MDNR 2008	II	369729.6944	5024414.864	-94.6633402	45.36113495	73020100	
2198	882	Stearns	Swamp		73-0069-00		Lake	40		MDNR 2013	II	393806.2957	5052757.922	-94.36215316	45.62024601	73006900	
2199	883	Stearns	Unnamed		73-0017-00		Lake	47		MDNR 2013	II	410539.8115	5026609.907	-94.14278706	45.38728899	73001700	
2200	884	Stearns	Zumwalde		73-0089-00		Lake	111		MDNR 2013	II	383763.3994	5032347.877	-94.48608716	45.43498697	73008900	
2293		Stearns	Cedar		73-0226-00		Lake	152		MDNR 2008	DL	364096.3184	5062767.146	-94.74789302	45.70460253	73022600	
2299		Stearns	Anna		73-0126-00		Lake	133		MDNR 2008	II	387972.7266	5051704.987	-94.43703324	45.61042103	73012600	
2300		Stearns	Big Rice		73-0168-00		Lake	282		MDNR 2008	II	379506.9414	5043721.616	-94.5411685	45.53987304	73016800	
1273	1273	Steele	Oak Glen Lake		74-0004-00		Lake	350	4	2008	DL	493771.4261	4863984.655	-93.07759556	43.92895185	74000400	
1274	1274	Steele	Rice Lake		74-0001-00		Lake	697	467	2008, MDNR APM	DL	495329.3693	4881103.172	-93.05833757	44.08308987	74000100	
1275	1275	Todd	Beauty Lake		77-0035-00		Lake	255		MDNR APMMDNR 2013	DL	368329.3711	5096221.981	-94.70068131	46.00691604	77003500	
1276	1276	Todd	Beck Lake		77-0056-00		Lake	57	25	2008	DL	367051.398	5114622.178	-94.72232634	46.17220006	77005600	
1277	1277	Todd	Big Swan Lake		77-0023-00		Lake	918		UofM/MPCA 2013, MDNR APM, MDNR 2013	DL	364049.3821	5082694.482	-94.75209731	45.88438402	77002300	
1278	1278	Todd	Cass County Lake		77-0004-00		Lake	25	18	2008	DL	373006.3702	5122209.402	-94.64725333	46.24159307	77000400	
1279	1279	Todd	Charlotte Lake		77-0120-00		Lake	181		MDNR APM, MDNR 2013	DL	355601.3704	5090407.473	-94.86323835	45.95204702	77012000	
1280	1280	Todd	Jaeger Lake		77-0075-00		Lake	46	28	2008	DL	365957.4108	5119299.685	-94.73781835	46.21406406	77007500	
1281	1281	Todd	Little Birch Lake		77-0089-00		Lake	793		UofM/MPCA 2013, MDNR APM, MDNR 2013	DL	360682.3987	5072186.63	-94.7924303	45.78918	77008900	
1282	1282	Todd	Little Osakis Lake		77-0201-00		Lake	124		MDNR APM	DL	341453.3598	5090862.452	-95.0458344	45.953018	77020100	
1283	1283	Todd	Long Lake		77-0069-00		Lake	356	338	2007, 2008	DL	368640.3956	5117577.886	-94.70257134	46.19909806	77006900	
1284	1284	Todd	Long Lake		77-0027-00		Lake	372		MDNR APM, MDNR 2013	DL	366268.3521	5082868.125	-94.7235613	45.88638102	77002700	
1285	1285	Todd	Long Prairie River		07010108-501	77-river1	Stream			2007, UofM/MPCA 2013	DL	374924.1082	5130712.732	-94.62464834	46.31844708	77-river1	
1286	1286	Todd	Mud Lake		77-0087-00		Lake	398	318	2007, 2008	DL	363097.3591	5108398.84	-94.77172835	46.11543305	77008700	
1287	1287	Todd	Rice Lake		77-0061-00		Lake	675	60	2008	DL	365574.3733	5110774.868	-94.74036034	46.13730005	77006100	
1288	1288	Todd	Robbinson Pond		77-0378-00	77IMP001		60	30	24	DL	372220.6724	5111056.484	-94.65442632	46.14111106	77IMP001	
1289	1289	Todd	Rogers Lake		77-0073-00		Lake	185	130	2007, 2008	DL	370069.3758	5118512.701	-94.68431533	46.20778207	77007300	
1290	1290	Todd	Turtle Creek		07010108-513	77-river2	Stream			2007	DL	361624.9479	5116381.422	-94.79310536	46.18694505	77-river2	
1291	1291	Todd	Turtle Lake		77-0088-00		Lake	124		MDNR APM	DL	363415.3854	5116823.577	-94.77004336	46.19128406	77008800	
1292	1292	Todd	Twin Lake		77-0021-00		Lake	317	159	2008	DL	365675.4067	5077371.68	-94.72966529	45.83681701	77002100	
1293	1293	Todd	Unnamed Lake		77-0176-00		Lake	40	2	2008	DL	348113.3564	5100776.688	-94.96310039	46.04370302	77017600	
1294	1294	Todd	Unnamed Lake		77-0178-00		Lake	42	23	2008	DL	347393.3994	5099468.749	-94.97198139	46.03177802	77017800	
1295	1295	Todd	West Nelson Lake		77-0005-00		Lake	84	70	2008	DL	372538.3953	5128000.159	-94.65488834	46.29360008	77000500	
2201	885	Todd	Big Birch		77-0084-00		Lake	2025		MDNR 2013	II	364674.0958	5069761.921	-94.74041928	45.76816	77008400	
2202	886	Todd	Coal		77-0046-00		Lake	178		MDNR 2013	II	364292.7133	5104600.946	-94.75518134	46.08150604	77004600	

2203	887	Todd	Fairy		77-0154-00		Lake	303		MDNR 2013	II	345634.3046	5072584.881	-94.98605136	45.78956199	77015400	
2204	888	Todd	Hayden		77-0080-00		Lake	253		MDNR 2008	II	363849.209	5133951.9	-94.76937638	46.34545108	77008000	
2205	889	Todd	Jacobson		77-0143-00		Lake	40		MDNR 2008	II	357429.7086	5132343.917	-94.8522704	46.32966607	77014300	
2206	890	Todd	Lady		77-0032-00		Lake	207		MDNR 2013	II	364184.8844	5079643.936	-94.7494903	45.85696701	77003200	
2207	891	Todd	Lawrence		77-0083-00		Lake	172		MDNR 2008	II	364181.4577	5130764.909	-94.76413837	46.31684907	77008300	
2208	892	Todd	Lily		77-0358-00		Lake	56		MDNR 2013	II	345903.1021	5074073.881	-94.98307036	45.80301599	77035800	
2209	893	Todd	Little Fishtrap		77-0074-00		Lake	51		MDNR 2008	II	367145.8044	5118755.871	-94.72226535	46.20940506	77007400	
2210	894	Todd	Little Pine		77-0134-00		Lake	16		MDNR 2008	II	363237.7781	5118141.943	-94.77272536	46.20310806	77013400	
2211	895	Todd	Little Pine (Little Rice)		77-0042-00		Lake	71		MDNR 2008	II	365361.5562	5091655.922	-94.73771031	45.96526203	77004200	
2212	896	Todd	Little Rice		77-0054-00		Lake	71		MDNR 2008	II	366152.4414	5115956.895	-94.73434435	46.18403106	77005400	
2213	897	Todd	Little Swan		77-0034-00		Lake	178		MDNR 2013	II	368723.6886	5087718.888	-94.6932573	45.93049403	77003400	
2214	898	Todd	Long		77-0357-00		Lake	98		MDNR 2013	II	346167.5551	5074701.878	-94.97986936	45.80872399	77035700	
2215	899	Todd	Long		77-0149-00		Lake	215		MDNR 2013	II	353184.6957	5073402.94	-94.88921233	45.79856799	77014900	
2216	900	Todd	Mill		77-0050-00		Lake	166		MDNR 2013	II	364879.8076	5099669.862	-94.74619233	46.03726204	77005000	
2217	901	Todd	Mud		77-0070-00		Lake	219		MDNR 2008	II	370718.7941	5125774.879	-94.67789134	46.27323707	77007000	
2218	902	Todd	North Twin		77-0158-00		Lake	71		MDNR 2013	II	351689.1591	5071703.873	-94.90792433	45.78296399	77015800	
2219	903	Todd	Peat		77-0055-00		Lake	28		MDNR 2013	II	364087.4847	5116105.963	-94.76113135	46.18496306	77005500	
2220	904	Todd	Pendergast		77-0207-00		Lake	93		MDNR 2008	II	335541.7968	5115656.953	-95.13062846	46.17463003	77020700	
2221	905	Todd	Pine Island		77-0077-00		Lake	156		MDNR 2008	II	363950.4672	5118240.896	-94.76352036	46.20414106	77007700	
2222	906	Todd	Rice		77-0235-00		Lake	28		MDNR 2008	II	363617.3887	5098460.926	-94.76215333	46.02613603	77023500	
2223	907	Todd	Spier		77-0148-00		Lake	53		MDNR 2013	II	353045.1755	5076795.851	-94.89204034	45.82906	77014800	
2224	908	Todd	Stones		77-0081-00		Lake	63		MDNR 2008	II	365947.1674	5133652.915	-94.74203937	46.34318008	77008100	
2225	909	Todd	Thunder		77-0066-00		Lake	215		MDNR 2008	II	365006.4783	5108606.91	-94.74709234	46.11768505	77006600	
2226	910	Todd	Tucker		77-0139-00		Lake	43		MDNR 2008	II	355892.3423	5134060.896	-94.87276041	46.34478507	77013900	
2227	911	Todd	Unnamed		77-0197-00		Lake	53		MDNR 2008	II	339379.6381	5097865.875	-95.07492842	46.01552801	77019700	
2228	912	Todd	Unnamed		77-0259-00		Lake	50		MDNR 2013	II	351965.5623	5077276.858	-94.90608034	45.833156	77025900	
2229	913	Todd	Unnamed		77-0140-00		Lake	61		MDNR 2008	II	356730.7578	5134115.939	-94.86188741	46.34545807	77014000	
2230	914	Todd	William		77-0180-00		Lake	131		MDNR 2013	II	343284.9472	5075686.944	-95.01726637	45.81693599	77018000	
2357		Todd	Sheets		77-0122-00		Lake	100		MDNR 2008	II						
2358		Todd	Unnamed		77-0202-00		Lake	70		MDNR 2008	II						
1296	1296	Wabasha	Maloney Lake		79-0001-03		Lake			UofM/MPCA 2013	DL	585932.4249	4899137.617	-91.92382427	44.24040397	79000103	
1297	1297	Wabasha	Mississippi Pool 4/Robinson Lake		79-0005-02		Lake			UofM/MPCA 2013	DL	579681.3752	4912278.562	-92.00009131	44.35940499	79000502	
1298	1298	Wabasha	Unnamed Lake		DNR	W0580001		160	25	2008	DL	1.#QNAN	1.#QNAN	1.#QNAN	1.#QNAN	W0580001	
2231	915	Wabasha	McCarthy		79-0006-00		Lake	57		MDNR 2013	II	581290.7921	4905120.868	-91.98101429	44.29479598	79000600	
2232	916	Wabasha	Unnamed		79-0012-00		Lake	8		MDNR 2008	II	583963.5445	4902104.914	-91.94800128	44.26734398	79001200	
1299	1299	Wadena	Blueberry Lake		80-0034-00		Lake	555	30	2008	DL	340678.3559	5183219.17	-95.08724354	46.78348311	80003400	
1300	1300	Wadena	Burgen Lake		80-0018-00		Lake	92	86	2008	DL	357257.3358	5176717.162	-94.86814747	46.72875612	80001800	
1301	1301	Wadena	Crow Wing River		07010106-510	81river	Stream			2007	DL	363179.1722	5141863.952	-94.7803924	46.41648809	81river	
1302	1302	Wadena	Finn Lake		80-0028-00		Lake	148	30	2008	DL	351162.3357	5179533.238	-94.9487825	46.75275412	80002800	
1303	1303	Wadena	Granning Lake		80-0012-00		Lake	50	50	2008	DL	358221.3929	5161122.87	-94.85074344	46.5886971	80001200	
1304	1304	Wadena	Lower Twin Lake		80-0030-00		Lake	267	5	2008, MCBS2011	DL	344464.4101	5184776.69	-95.03820453	46.79838412	80003000	
1305	1305	Wadena	Round Lake		80-0019-00		Lake	58	58	2008	DL	357635.3796	5185011.732	-94.86577748	46.80344113	80001900	
1306	1306	Wadena	Stocking Lake		80-0037-00		Lake	356		MDNR APM, MDNR 2013	DL	342162.3754	5180744.113	-95.06696253	46.76157711	80003700	
1307	1307	Wadena	Strike Lake		80-0013-00		Lake	76	76	2008	DL	357401.3755	5161848.149	-94.86166545	46.5950471	80001300	
1308	1308	Wadena	Unnamed Lake		80-0007-00		Lake	16	16	2008	DL	357064.3576	5136899.863	-94.85840341	46.37057007	80000700	
1309	1309	Wadena	Yaeger Lake		80-0022-00		Lake	384	346	2008	DL	349081.3866	5173917.739	-94.9741685	46.70178211	80002200	
2233	917	Wadena	Jim Cook		80-00027-02	80002700		238		MDNR 2008	II	346108.2042	5178878.963	-95.01469751	46.74572411	80002700	
2234	918	Wadena	Rice		80-0024-00		Lake	8		MDNR 2008	II	348360.8614	5172349.885	-94.98307149	46.68751811	80002400	
1310	1310	Waseca	Lily Lake		81-0067-00		Lake	118		UofM/MPCA 2013, MDNR APM, MDNR 2013	DL	448852.3691	4893434.66	-93.64002775	44.19233585	81006700	
2235	919	Waseca	Goose		81-0016-00		Lake	370		MDNR 2013	II	464725.4239	4880534.877	-93.44054568	44.07713885	81001600	
2236	920	Waseca	Rice		81-0088-00		Lake	75		MDNR 2008	II	440095.6246	4892290.905	-93.74946478	44.18137284	81008800	
2237	921	Waseca	Rice		81-0022-00		Lake	214		MDNR 2008	II	461825.8753	4884012.851	-93.47700869	44.10830585	81002200	
1311	1311	Washington	Mud Lake		82-0168-00		Lake	230		MDNR APM, MDNR 2013	DL	498334.3577	5012429.334	-93.02123172	45.26535905	82016800	
1312	1312	Washington	Rice Lake		82-0146-00		Lake	116		MDNR APM, MDNR 2013	DL	502713.3799	5000544.684	-92.96547769	45.15837504	82014600	
1313	1313	Wright	Clearwater Lake		86-0252-00		Lake	3704		MDNR APM	DL	412165.3785	5017387.566	-94.12038704	45.30449698	86025200	
1314	1314	Wright	Sandy Lake		86-0224-00		Lake	118	150	2008	DL	416290.3636	5017946.243	-94.06787403	45.31002898	86022400	
1315	1315	Wright	Sugar Lake		86-0233-00		Lake	1145		MDNR APM	DL	418525.4142	5018733.247	-94.03949602	45.31737499	86023300	
1316	1316	Wright	Unnamed Lake		86-0231-00		Lake	18		UofM/MPCA 2013	DL	417925.7825	5012171.876	-94.04605909	45.25825298	86023100	
2238	922	Wright	Fish		86-0183-00		Lake	104		MDNR 2013	II	420465.1047	5026019.891	-94.01592502	45.383177	86018300	

2239	923	Wright	Grass		86-0243-00		Lake	92		MDNR 2008	II	412802.7705	5020230.936	-94.11275904	45.33016598	86024300	
2240	924	Wright	Grass		86-0257-00		Lake	2		MDNR 2008	II	409879.9917	4987671.921	-94.14416501	45.03677094	86025700	
2241	925	Wright	Long		86-0246-00		Lake	85		MDNR 2013	II	416709.7985	5020036.84	-94.06287603	45.32889399	86024600	
2242	926	Wright	Louisa		86-0282-00		Lake	183		MDNR 2008	II	402448.2708	5018001.942	-94.24442808	45.30874297	86028200	
2243	927	Wright	Malardi		86-0112-00		Lake	149		MDNR 2008	II	429322.5573	4992382.859	-93.89801995	45.08137896	86011200	
2244	928	Wright	Millstone		86-0152-00		Lake	221		MDNR 2008	II	422075.1688	5015322.928	-93.993677	45.28708499	86015200	
2245	929	Wright	Rice		86-0002-00		Lake	57		MDNR 2008	II	455481.1823	5009855.943	-93.56723087	45.24078801	86000200	
2246	930	Wright	Rice		86-0032-00		Lake	246		MDNR 2008	II	438289.6785	4981028.939	-93.7827019	44.98002096	86003200	
2247	931	Wright	Rice		86-0164-00		Lake	93		MDNR 2008	II	422071.1158	5025949.934	-93.99540302	45.382728	86016400	
2248	932	Wright	Rock		86-0182-00		Lake	181		MDNR 2013	II	420396.6477	5002415.947	-94.01301199	45.17073197	86018200	
2249	933	Wright	Smith		86-0250-00		Lake	330		MDNR 2008	II	411283.4615	4992174.863	-94.12714601	45.07747495	86025000	
2250	934	Wright	Unnamed		86-0258-00		Lake	18		MDNR 2008	II	405774.7641	4986018.905	-94.19596402	45.02135993	86025800	
2251	935	Wright	Unnamed		86-0244-00		Lake	78		MDNR 2013	II	413852.3584	5020194.857	-94.09936104	45.32997099	86024400	
2252	936	Wright	West Lake Sylvia		86-0279-00		Lake	1027		MDNR 2013	II	405217.9738	5010195.891	-94.20761306	45.23887196	86027900	
2303		Wright	Cedar		86-0034-00		Lake	191		MDNR 2008	DL	434858.2012	4985490.214	-93.82652692	45.01985827	86003400	
2305		Wright	Albion		86-0212-00		Lake	238		MDNR 2008	II			-94.07541801	45.21765298	86021200	
2306		Wright	Beaver Dam		86-0296-00		Lake	253		MDNR 2008	II			-94.25316621	45.08330626	86029600	
2307		Wright	Butler		86-0198-00		Lake	131		MDNR 2008	II			-94.04562362	44.98373276	86019800	
2308		Wright	Butternut		86-0253-00		Lake	203		MDNR 2008	II			-94.16298401	44.98115794	86025300	
2309		Wright	Carrigan		86-0097-00		Lake	162		MDNR 2008	II			-93.95483022	45.05770459	86009700	
2310		Wright	Gilchrist		86-0064-00		Lake	388		MDNR 2008	II			-93.82809597	45.23296094	86006400	
2311		Wright	Gonz		86-0019-00		Lake	152		MDNR 2008	II			-93.68044104	45.18809377	86001900	
2312		Wright	Henshaw		86-0213-00		Lake	277		MDNR 2008	II			-94.04896801	45.20194823	86021300	
2313		Wright	Long		86-0194-00		Lake	255		MDNR 2008	II			-94.0560087	45.002764	86019400	
2314		Wright	Mallard Pass		86-0185-00		Lake	51		MDNR 2008	II			-94.06087111	45.05809818	86018500	
2315		Wright	Maple		86-0197-00		Lake	82		MDNR 2008	II			-94.09912991	44.98740736	86019700	
2316		Wright	Maple Unit		86-0157-00		Lake	177		MDNR 2008	II			-93.98677024	45.25701667	86015700	
2317		Wright	Mary		86-0049-00		Lake	331		MDNR 2008	II			-93.85753181	45.1480913	86004900	
2318		Wright	Mink		86-0229-00		Lake	304		MDNR 2008	II			-94.02207923	45.27305679	86022900	
2319		Wright	Mud		86-0026-00		Lake	128		MDNR 2008	II			-93.64627601	45.24660777	86002600	
2320		Wright	Mud		86-0219-00		Lake	66		MDNR 2008	II			-94.021323	45.17007091	86021900	
2321		Wright	Pelican		86-0031-00		Lake	2793		MDNR 2008	II			-93.74302727	45.21847299	86003100	
2322		Wright	Pools		86-0102-00		Lake	166		MDNR 2008	II			-93.89492815	44.99582578	86010200	
2323		Wright	School		86-0025-00		Lake	76		MDNR 2008	II			-93.65731374	45.24364789	86002500	
2324		Wright	School Section		86-0180-00		Lake	266		MDNR 2008	II			-94.01553258	45.0761208	86018000	
2325		Wright	Shakopee		86-0255-00		Lake	206		MDNR 2008	II			-94.20852974	44.98346209	86025500	
2326		Wright	Spring		86-0200-00		Lake	63		MDNR 2008	II			-94.12085598	45.06645902	86020000	
2327		Wright	Taylor		86-0204-00		Lake	78		MDNR 2008	II			-94.05527809	45.10297339	86020400	
2328		Wright	White		86-0214-00		Lake	145		MDNR 2008	II			-94.02566048	45.19404451	86021400	
2329		Wright	Willima		86-0209-00		Lake	246		MDNR 2008	II			-94.11350948	45.22592262	8620900	

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 4

MPCA Responses to 2020 Draft Impaired Waters List Public Comments (2021)

Minnesota Pollution Control Agency
Responses to the 2020 Draft Impaired Waters List Public Notice Comments
February 25, 2021

The 2020 Draft Impaired Waters List comment period began on November 12, 2019, and ended on January 14, 2020. The Minnesota Pollution Control Agency (MPCA) appreciates the public's engagement on the impaired waters list and all the comments provided.

The comments received are summarized below, along with the MPCA's responses. The unabridged comments are posted online on the MPCA Impaired Waters List website. See the same website for the 2020 Proposed Impaired Waters List and the 2020 Guidance Manual for Assessing the Quality of Minnesota's Surface Waters for Determination of Impairment: 305(b) Report and 303(d) List, referenced in this document.

Comment 1: Minnesota and Wisconsin need to protect the St. Croix River; concerned about hog farms and manure spills in Wisconsin.

The states of Minnesota and Wisconsin work collaboratively on issues related to the St. Croix River. The states collaborated to develop the Total Maximum Daily Load (TMDL) for Lake St. Croix, which determines the reductions needed to help the lake achieve water quality goals. We also collaborated to develop the implementation plan to guide work to meet the goals of the TMDL. However, each state is required to enforce their own rules and laws pertaining to permitted facilities and spills. Because the spill referenced in the comment was not on a shared water, Minnesota does not have jurisdiction.

Comment 2: Minnesota and Wisconsin need to protect the St. Croix River; concerned about manure spills and different standards/practices in the states.

The states of Minnesota and Wisconsin work collaboratively on issues related to the St. Croix River. The states collaborated to develop the Total Maximum Daily Load (TMDL) for Lake St. Croix, which determines the reductions needed to help the lake achieve water quality goals. We also collaborated to develop the implementation plan to guide work to meet the goals of the TMDL. While that work has not yet been completed for the specific river impairment, the lake TMDL and implementation plan cover the entire watershed and include actions needed from areas within and upstream of the impaired river reach. Those actions will help the river reach come into compliance with standards.

Each state develops, approves, and submits to EPA their own water quality standards. On border waters, we work collaboratively to ensure that there is awareness of the water quality assessment decisions being made. Ultimately, each state determines impairments according to their own rules and standards. The Environmental Protection Agency oversees water programs for the states. They approve our rules, water quality standards, oversee our permitting programs, and approve our impaired waters lists and TMDLs. The National Park Service does not play a role in approving water quality standards for states. We did coordinate with them and use National Park Service data as a part of our water quality assessment.

The states continue to work together as a part of the St. Croix Interagency Basin Planning Team. This team has been in existence since 1993 and includes members from state, local, and federal governments on both sides of the river. You can find more information on the coordinated effort to meet phosphorus reduction goals here: https://www.pca.state.mn.us/water/st-croix-river-basin-interagency-water-resource-management-planning-effort.

Comment 3: Statewide moratoriums on expansions of CAFOS are needed to protect the St. Croix River.

The states of Minnesota and Wisconsin each have their own state rules and statues to follow for CAFO operations in addition to enforcement of the National Pollutant Discharge Elimination System (NPDES) rules.

All CAFOs (NPDES permitted, State Disposal System permitted and CAFOs not required to be permitted) are inspected by the Minnesota Pollution Control Agency on a routine basis with an appropriate mix of field inspections, offsite monitoring and compliance assistance. MPCA staff conduct the inspections in accordance with our EPA-approved NPDES Compliance Monitoring Strategy. CAFOs do not self-monitor in Minnesota.

Comment 4: Speed up protection of the unimpaired waters. Keep the Enbridge Line 3 out.

As part of the Legacy Amendment, the MPCA tracks progress on protection strategies. That tracking can be viewed here: https://www.pca.state.mn.us/water/watershed-restoration-and-protection-strategy-status. To view the specifics of these Watershed Restoration and Protection Strategies (WRAPS), choose the watershed of interest on this webpage: https://www.pca.state.mn.us/water/watersheds.

The MPCA issued a 401 certification for Line 3 which included consideration of requirements to protect unimpaired waters through antidegradation analyses.

Comments 5, 6, 8, 10, 11, 13, 15, 19: State and federal regulatory agencies plainly have the ability to identify water quality impairments in wild rice waters throughout the state. The impaired waters identified here must be included on the Draft List before it is sent to US EPA for approval, along with all impaired wild rice waters.

The MPCA's analysis of the eight waters suggested in the comments from Tribal leaders show that sulfate in seven of the waters exceed the 10 mg/L sulfate wild rice standard. However, in 2015 the Minnesota Legislature adopted wild rice legislation (1st Special Session, Chapter 4, Article 4, Section 136) which says that the agency shall not list waters as impaired for the wild rice sulfate water quality standard. Therefore these waters were not included in the final impaired waters list submission.

Comments 7: The St. Croix River is impaired due to a natural scientific ongoing event.

Thank you for your comment. The river is considered impaired because excess phosphorus and excess algae were found in that portion of the river. Due to the work from the Lake St. Croix Total Maximum Daily Load, it was determined that excess phosphorus occurred from multiple locations, including the Kettle, Sunrise and Snake river watersheds in Minnesota and Apple, Kinnickinnic, and Willow river watersheds in Wisconsin. https://www.pca.state.mn.us/sites/default/files/wq-b6-12.pdf A number of these tributaries discharge into the river upstream of the impaired location. There are also a number of permitted facilities upstream of the reach that has been listed. While the geology of the streambed is different, and different soils have different levels of phosphorus, we are unable to call an impairment naturally occurring if sources of phosphorus have been found that are human induced (wastewater and stormwater, logging, agricultural and urban land use, etc.).

Comments 8 and 19: Failure of the MPCA to engage in meaningful tribal consultation with Indian tribes is contrary to Executive Order 19-24 and disrespectful to original inhabitants.

Shakopee Mdewakanton Sioux Community and the Minnesota Indian Affairs Council provided comments relating to the need to improve government-to-government relations through effective tribal consultation. The comments specifically speak to the need for consultation to be timely and "provide adequate opportunities for Indian tribes to raise their concerns prior to and outside of the traditional notice and comment periods made available to the general citizenry of the state."

The comment seems to speak specifically to a lack of consultation regarding listing waters as impaired for the wild rice sulfate standard. As noted above, comments specific to wild rice and sulfate are discussed separately. However, the MPCA engaged in consultation with Minnesota's eleven federally recognized Tribes about a holistic path forward for the protection and restoration of wild rice in Minnesota. The MPCA also participated in the July 16, 2020 consultation between Governor Walz and Tribal leaders on this topic. The MPCA takes the need for consultation seriously, and is working to improve engagement and consultation.

Specifically, the MPCA increased our engagement with Tribal environmental staff during preparation of the 2020 impaired waters list. The Commissioner and several MPCA staff attended a meeting with Tribal environmental program staff on August 26, 2019 and discussed the impaired waters list. MPCA followed up with an invitation to discussion and request for specific areas of discussion. MPCA also provided a copy of Appendix E, the approach to listing Tribal waters, and information on the public notice plan for Impaired Waters list. The MPCA's impaired waters coordinator and water assessment section manager attended the Minnesota Tribal Environmental Council meeting held on October 10, 2019 to share further information about the impaired waters list, the public notice period, and the process for commenting. We specifically called out areas where we wanted comments, including how tribal waters are described on the list. Tribal environmental staff were provided with an early copy of the list and public notice in mid-October, two weeks prior to the publication of the general public notice.

We understand that engagement is not consultation, but do appreciate our engagement with tribal environmental staff in reviewing data and making determinations about impaired waters. We have heard concerns about MPCA's engagement and consultation on the impaired waters list and will continue to work to improve. To that end the MPCA has committed to working with the Minnesota Indian Affairs Council to revise the MPCA's existing water Tribal consultation/coordination policy.

Comment 9: AUID 07010206-814 expanded existing impairments and relisted delisted waters where such actions are not supported by data.

The Metropolitan Council provided comments that included a detailed chronology of impaired waters listings and refinements through time leading to the current proposal. It appears that the primary concern is that the shape (or length) of the AUID will predetermine or constrain management actions, such that unnecessary limits would be required of one or more facilities that you operate. This concern is expressed most concisely on page 5 of the letter:

> *"If the impairments in the chart above were expanded to cover all of AUID 814, there is a potential for significant impacts on the Council and its ratepayers though the data show that the portions of the waterbody where the Council is discharging are not impaired and additional regulation of the Council will likely not materially improve water quality."*

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 5

Letter of MPCA Commissioner Katrina Kessler
to EPA Region 5 Water Division Director Tera Fong (2021)

MINNESOTA POLLUTION CONTROL AGENCY

520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300

800-657-3864 | Use your preferred relay service | info.pca@state.mn.us | Equal Opportunity Employer

March 15, 2021

Ms. Tera L. Fong
Division Director, Water Division
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3590

Dear Ms. Fong,

On March 9th, EPA requested further information from the Minnesota Pollution Control Agency (MPCA) to proceed with EPA's review of Minnesota's 2020 Clean Water Act Section 303(d) List. EPA particularly asked for clarification on two issues:

- Whether MPCA considers the eight waters presented in the comments from the Tribal leaders to be "waters used for the production of wild rice" as used in MPCA's water quality standards (Minnesota Rule 7050.0224) and therefore subject to the 10 mg/L sulfate criterion, and MPCA's rationale for its conclusion; and
- The source of all data and information evaluated and used by Minnesota in its assessment of whether the eight waters are attaining the sulfate criteria, the period of record of the data set, and any assumptions which were made by MPCA regarding applicability of Minnesota's wild rice use and the associated numeric and narrative criteria for purposes of evaluating the tribes' comment.

The MPCA has not developed a methodology to assess the wild rice sulfate standard, which is 10 mg/L, applicable to "water used for production of wild rice during periods when the rice may be susceptible to damage by high sulfate levels." Any formalized methodology would include detailing which waters MPCA considers to be waters used for production of wild rice and the evaluation of data for comparison to the 10 mg/L sulfate criterion. However, EPA has indicated in the past that "A lack of a formalized assessment methodology by itself is not a basis for a state to avoid evaluating data or information when developing its Section 303(d) list or to fail to list any water that is appropriate for listing under currently applicable standards."[1] When considering the eight waters, the MPCA considered how they could be evaluated without a formal methodology.

[1] See footnote 1 to EPA's DECISION DOCUMENT FOR THE APPROVAL OF MINNESOTA'S 2014 CLEAN WATER ACT SECTION 303(d) LIST (May 29, 2018)

Water Used for the Production of Wild Rice

In 2017 the MPCA proposed revisions to the wild rice sulfate standard as part of a rulemaking process.[2] As articulated in the Statement of Need and Reasonableness (SONAR) for that rule:

> *The MPCA is proposing to eliminate this confusing term ["water used for production of wild rice"] and instead identify specifically where the standard applies, i.e., to a "wild rice water" in order to protect the wild rice beneficial use. The MPCA is not proposing to change the beneficial use of wild rice, but is proposing to modify the phrase in order to more clearly articulate the recognized use. The MPCA is proposing to specifically identify the rivers, streams, lakes, and wetlands demonstrating this beneficial use."*[3]

The proposed rule revisions included a list of approximately 1300 waters that the MPCA planned to identify as having the wild rice beneficial use designation.[4] During the rulemaking, many commenters indicated they felt the MPCA's proposed list was too narrow, and the Administrative Law Judge reviewing the rule also found that MPCA inappropriately excluded some waters.[5] As part of its review of the comments from the Tribal leaders, the MPCA concluded that the eight waters submitted should be considered as "waters used for production of wild rice" for the purpose of evaluating impairment status, because: (1) the eight waters presented in the comments received during the comment period for Minnesota's 2020 Impaired Waters List were on the proposed list in the rulemaking; and (2) based on the fact that the proposed list in the rulemaking could likely be considered the most narrow list of waters that demonstrate the wild rice beneficial use.

Data and Information Evaluated

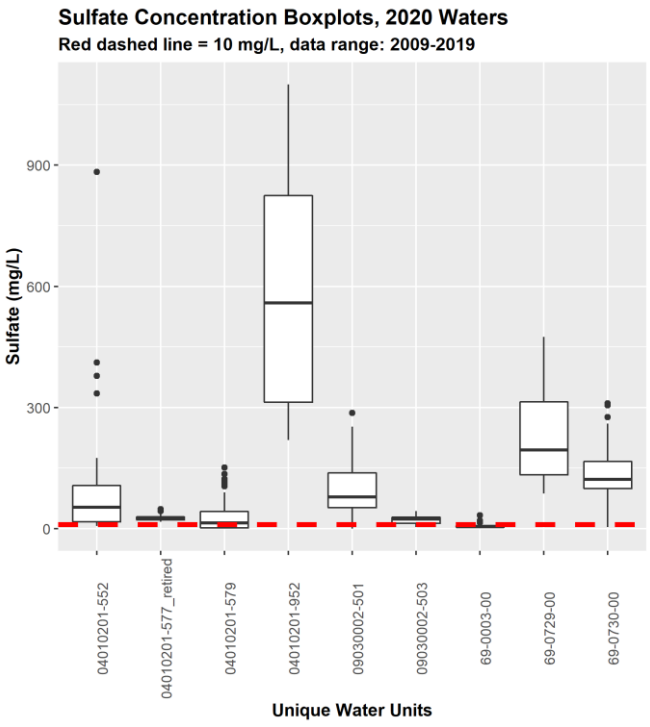
MPCA staff then proceeded to gather and evaluate the data. The eight waters were provided with names only. Because water quality assessments use a system of WIDs or AUIDs (Waterbody Identifiers or Assessment Unit Identifiers) when pooling data, making use support determinations, and listing for impairment, the first step was to match the listed waterbodies with WIDs. Since all waterbodies were identified in the proposed rules as described above, the MPCA chose to use the WIDs matched to those waterbody names and included in the previously proposed rulemaking.

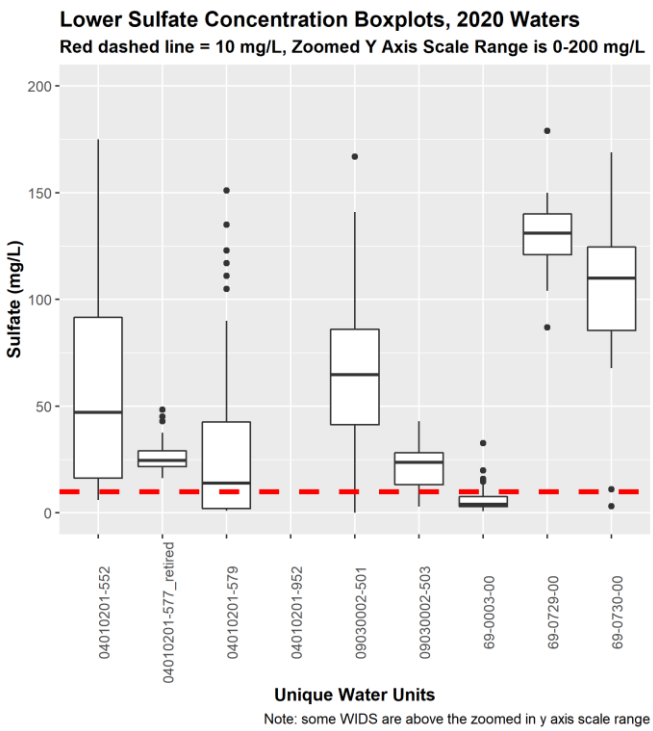
[2] Information is available at: https://www.pca.state.mn.us/water/protecting-wild-rice-waters
[3] SONAR, pg 20. Available at: https://www.pca.state.mn.us/sites/default/files/wq-rule4-15i.pdf
[4] This proposal included retaining the separate nature of a set of other waters called "wild rice waters" and explicitly identified in rule with the code [WR].
[5] https://www.pca.state.mn.us/sites/default/files/wq-rule4-15mm.pdf

Waterbody	WID
Birch Lake	69-0003-00
Embarrass River	04010201-A99 and 04010201-B00 (formerly 04010201-577)
Little Sandy Lake	69-0729-00
Partridge River	04010201-552
Pike River	09030002-503
Sand River	09030002-501
Sandy Lake	69-0730-00
Second Creek	04010201-952

MPCA staff then evaluated the data available for these waters from all available databases. MPCA staff reviewed data over the last 10 years (2009 – 2019), consistent with our general assessment methodologies. The data was analyzed in multiple ways, as described in Attachment 1 and Attachment 2, and the results compared to the 10 mg/L sulfate criterion.[6] Data has been provided electronically to Mr. Proto.

Examples of some comparison of mean concentrations to 10 mg/L are shown in the following box plots.





[6] MPCA did not evaluate the narrative criterion for wild rice, as the comments focused on sulfate.

The MPCA's analysis is not a complete assessment, and does not represent a final decision on an appropriate assessment methodology. However, the MPCA finds that it demonstrates that under any reasonable assessment methodology consistent with those already developed by MPCA, all of eight waterbodies demonstrate the beneficial use and seven of the eight waters – all except Birch Lake – would be shown to exceed 10 mg/L sulfate.

Additional information regarding MPCA's data analysis is included in Attachment 1 and 2. If you have any follow-up questions please let me know.

Sincerely,

Katrina Kessler

Katrina Kessler
Assistant Commissioner

Attachments 1 and 2

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 6

MPCA Wild Rice Producing Waters Impaired for Sulfate
from Draft 2024 Impaired Waters List (2024)

Wild Rice Producing Waters Impaired Due to Sulfate (2024)
Sorted by Date and Name

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	**Water body name**	**Water body description**	**Water body type**	**Year added to List**	**Basin**	**AUID**	**Use Class**	**County**	**HUC 8**	**Watershed name**	**Partial tribal designation**	**Affected designated use**	**Pollutant or stressor**	**TMDL Commitment Group**	**EPA category**
2	Cedar Island (N.Portion)	Lake or Reservoir	Lake	2020	Lake Superior	69-0568-01	2B	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
3	Cedar Island (S.Portion)	Lake or Reservoir	Lake	2020	Lake Superior	69-0568-02	2B	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
4	Clearwater River	Ruffy Bk to JD 1	Stream	2020	Red River of the North	09020305-647	2Bg	Clearwater	09020305	Clearwater River		Wild Rice Production	Sulfate	2	5
5	Crow River, Middle Fork	Headwaters to Monongalia (Mud) Lk	Stream	2020	Upper Mississippi River, Upper Portion	07010204-537	2Bg	Kandiyohi	07010204	North Fork Crow River		Wild Rice Production	Sulfate	2	5
6	East Vermilion	Lake or Reservoir	Lake	2020	Rainy River	69-0378-01	1C, 2Bd	St. Louis	09030002	Vermilion River		Wild Rice Production	Sulfate	2	5
7	Embarrass	Lake or Reservoir	Lake	2020	Lake Superior	69-0496-00	2B	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
8	Embarrass River	Headwaters to Embarrass Lk	Stream	2020	Lake Superior	04010201-579	2Bg	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
9	Embarrass River	Embarrass Lk thru Esquagama Lk	Stream	2020	Lake Superior	04010201-A99	2Bg	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
10	Esquagama	Lake or Reservoir	Lake	2020	Lake Superior	69-0565-00	2B	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
11	Hay	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	31-0037-00	2B	Itasca	07010103	Mississippi River - Grand Rapids		Wild Rice Production	Sulfate	2	5
12	Lake Monongalia - main basin	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	34-0158-01	2B	Kandiyohi	07010204	North Fork Crow River		Wild Rice Production	Sulfate	2	5
13	Lake Monongalia - Middle Fork Crow River	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	34-0158-02	2B	Kandiyohi	07010204	North Fork Crow River		Wild Rice Production	Sulfate	2	5
14	Little Sandy	Lake or Reservoir	Lake	2020	Rainy River	69-0729-00	2B	St. Louis	09030002	Vermilion River		Wild Rice Production	Sulfate	2	5
15	Long Prairie River	Fish Trap Cr to Crow Wing R	Stream	2020	Upper Mississippi River, Upper Portion	07010108-501	2Bg	Morrison	07010108	Long Prairie River		Wild Rice Production	Sulfate	2	5
16	Mississippi River	Chippewa R (WI) to L & D #6	Stream	2020	Upper Mississippi River, Lower Portion	07040003-627	2Bg	Wabasha	07040003	Mississippi River - Winona		Wild Rice Production	Sulfate	2	5
17	Mississippi River	Root R to MN/IA border	Stream	2020	Upper Mississippi River, Lower Portion	07060001-509	2Bg	Houston	07060001	Mississippi River - Reno		Wild Rice Production	Sulfate	2	5
18	Ox Hide	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	31-0106-00	2B	Itasca	07010103	Mississippi River - Grand Rapids		Wild Rice Production	Sulfate	2	5
19	Partridge River	Headwaters to St Louis R	Stream	2020	Lake Superior	04010201-552	2Bg	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
20	Perch	Lake or Reservoir	Lake	2020	Lake Superior	69-0688-00	2B	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
21	Pike River	Sand R to Vermilion Lk	Stream	2020	Rainy River	09030002-503	2Bg	St. Louis	09030002	Vermilion River		Wild Rice Production	Sulfate	2	5

Wild Rice Producing Waters Impaired Due to Sulfate (2024)
Sorted by Date and Name

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
22	Rice	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	71-0142-00	2B	Sherburne	07010203	Mississippi River - St. Cloud		Wild Rice Production	Sulfate	2	5
23	Sand River	Headwaters (Sandy Lk 69-0730-00) to Pike R	Stream	2020	Rainy River	09030002-501	2Bg	St. Louis	09030002	Vermilion River		Wild Rice Production	Sulfate	2	5
24	Sandy	Lake or Reservoir	Lake	2020	Rainy River	69-0730-00	2B	St. Louis	09030002	Vermilion River		Wild Rice Production	Sulfate	2	5
25	Second Creek (First Creek)	First Cr to Partridge R	Stream	2020	Lake Superior	04010201-952	2Bg	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
26	Stanchfield Creek	Ties Cr (Stanchfield Bk) to Rum R	Stream	2020	Upper Mississippi River, Upper Portion	07010207-518	2Bg	Isanti	07010207	Rum River		Wild Rice Production	Sulfate	2	5
27	Sturgeon	Lake or Reservoir	Lake	2020	Upper Mississippi River, Lower Portion	25-0017-01	2B	Goodhue	07040001	Mississippi River - Lake Pepin	Prairie Island	Wild Rice Production	Sulfate	2	5
28	Swan Lake Southwest Bay	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	31-0067-03	2B	Itasca	07010103	Mississippi River - Grand Rapids		Wild Rice Production	Sulfate	2	5
29	Swan River	Swan Lk to Trout Cr	Stream	2020	Upper Mississippi River, Upper Portion	07010103-753	2Bg	Itasca	07010103	Mississippi River - Grand Rapids		Wild Rice Production	Sulfate	2	5
30	Trott Brook	CD 51 to Rum R	Stream	2020	Upper Mississippi River, Upper Portion	07010207-680	2Bg	Anoka	07010207	Rum River		Wild Rice Production	Sulfate	2	5
31	Upper Estuary	Lake or Reservoir	Lake	2020	Lake Superior	69-1291-04	2B	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
32	Vermilion - Pike Bay	Lake or Reservoir	Lake	2020	Rainy River	69-0378-03	1C, 2Bd	St. Louis	09030002	Vermilion River		Wild Rice Production	Sulfate	2	5
33	Wynne	Lake or Reservoir	Lake	2020	Lake Superior	69-0434-02	2B	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
34	Goodners	Lake or Reservoir	Lake	2022	Upper Mississippi River, Upper Portion	73-0076-00	2B	Stearns	07010202	Sauk River		Wild Rice Production	Sulfate	2	5
35	Long Prairie River	Spruce Cr to Eagle Cr	Stream	2022	Upper Mississippi River, Upper Portion	07010108-505	2Bg	Todd	07010108	Long Prairie River		Wild Rice Production	Sulfate	2	5
36	Stella	Lake or Reservoir	Lake	2022	Upper Mississippi River, Upper Portion	47-0068-00	2B	Meeker	07010204	North Fork Crow River		Wild Rice Production	Sulfate	2	5
37	Bear	Lake or Reservoir	Lake	2024	Cedar River	24-0028-00	2B	Freeborn	07080203	Winnebago River		Wild Rice Production	Sulfate	2	5
38	Birch	Lake or Reservoir	Lake	2024	Rainy River	69-0003-00	2B	Lake	09030001	Rainy River - Headwaters		Wild Rice Production	Sulfate	2	5
39	Buffalo River	Unnamed ditch to Hay Cr	Stream	2024	Red River of the North	09020106-594	2Bg	Becker	09020106	Buffalo River		Wild Rice Production	Sulfate	2	5
40	Cannon River	Belle Cr to split near mouth	Stream	2024	Upper Mississippi River, Lower Portion	07040002-501	2Bg	Goodhue	07040002	Cannon River		Wild Rice Production	Sulfate	2	5

Wild Rice Producing Waters Impaired Due to Sulfate (2024)
Sorted by Date and Name

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
41	Clearwater (West)	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	86-0252-02	2B	Stearns	07010203	Mississippi River - St. Cloud		Wild Rice Production	Sulfate	2	5
42	Dunka River	Unnamed ditch to Birch Lk	Stream	2024	Rainy River	09030001-987	1B, 2Ag	St. Louis	09030001	Rainy River - Headwaters		Wild Rice Production	Sulfate	2	5
43	Elizabeth (Main Lake)	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	34-0022-02	2B	Kandiyohi	07010205	South Fork Crow River		Wild Rice Production	Sulfate	2	5
44	Embarrass River	Esquagama Lk to St Louis R	Stream	2024	Lake Superior	04010201-B00	2Bg	St. Louis	04010201	St. Louis River		Wild Rice Production	Sulfate	2	5
45	Green	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	34-0079-00	2B	Kandiyohi	07010204	North Fork Crow River		Wild Rice Production	Sulfate	2	5
46	Hill River	Hill River Lk to Lost R	Stream	2024	Red River of the North	09020305-539	2Bg	Red Lake	09020305	Clearwater River		Wild Rice Production	Sulfate	2	5
47	Little Rabbit	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	18-0139-00	2B	Crow Wing	07010104	Mississippi River - Brainerd		Wild Rice Production	Sulfate	2	5
48	North Twin	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	31-0190-00	2B	Itasca	07010103	Mississippi River - Grand Rapids		Wild Rice Production	Sulfate	2	5
49	Orwell	Lake or Reservoir	Lake	2024	Red River of the North	56-0945-00	2B	Otter Tail	09020103	Otter Tail River		Wild Rice Production	Sulfate	2	5
50	Pearl	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	73-0037-00	2B	Stearns	07010202	Sauk River		Wild Rice Production	Sulfate	2	5
51	Poplar River	Spring Lk to Highway 59	Stream	2024	Red River of the North	09020305-518	2Bg	Polk	09020305	Clearwater River		Wild Rice Production	Sulfate	2	5
52	Rice	Lake or Reservoir	Lake	2024	Minnesota River	10-0078-00	2B	Carver	07020012	Lower Minnesota River		Wild Rice Production	Sulfate	2	5
53	Rice	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	73-0196-00	2B	Stearns	07010204	North Fork Crow River		Wild Rice Production	Sulfate	2	5
54	Sturgeon River	Headwaters (Little Sturgeon Lk 69-1290-00) to E Br Sturgeon R	Stream	2024	Rainy River	09030005-527	2Bg	St. Louis	09030005	Little Fork River		Wild Rice Production	Sulfate	2	5
55	Tilde	Lake or Reservoir	Lake	2024	Red River of the North	14-0004-00	2B	Clay	09020108	Wild Rice River		Wild Rice Production	Sulfate	2	5
56	Trout	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	31-0216-00	1B, 2A	Itasca	07010103	Mississippi River - Grand Rapids		Wild Rice Production	Sulfate	2	5

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 7

MPCA, Gerald Blaha Emails regarding Dark Lake (2013)

From: Blaha, Gerald (MPCA) [mailto:gerald.blaha@state.mn.us]
Sent: Friday, September 06, 2013 9:28 AM
To: Darren Vogt <Dvogt@1854treatyauthority.org>
Cc: Handeland, Stephanie (MPCA) <stephanie.handeland@state.mn.us>; Swain, Ed (MPCA) <edward.swain@state.mn.us>
Subject: FW: Dark Lake 9/5/2013 Survey Update

Darren, this update is for the third, and last, survey visit the U of M field crew has made to Dark Lake this summer.

Gerald Blaha
Minnesota Pollution Control Agency
Environmental Analysis & Outcomes Division
520 Lafayette Road North
St. Paul, MN 55155
gerald.blaha@state.mn.us
Office: (651) 757-2234
Fax: (651) 297-7709

From: Blaha, Gerald (MPCA) **Sent:** Friday, September 06, 2013 8:19 AM **To:** Handeland, Stephanie (MPCA) **Cc:** Swain, Ed (MPCA) **Subject:** Dark Lake 9/5/2013 Survey Update

Stephanie, below is an excerpt from the U of M field crew who sampled Dark Lake yesterday. Please forward it on to those who may have an interest.

Today's coring and sampling took place on Dark Lake. We toured the smaller basin where the boat launch is located again, but could not find any rice growing anywhere other than the two small stands near the public access. The coordinates for the coring site are;
Lat: 47.63871
Lon: -92.77822

The rice observed at this location is just adjacent to the dock. Plants were fully mature, and most seed heads were still holding kernels. While the stand was small in abundance, plants appeared healthy, emerging ~ 1 m from the water surface. The sediment at this location was comprised of fine-grain sand and gravel with a shallow layer of organic muck at the surface.

A duplicate sampling effort was conducted at Dark Lake as well. This coring location took place on the opposite side of the launch as the initial rice stand was not quite large enough to allow us to sample it twice. The duplicate sampling site is approximately 30' from the initial site at the same distance from shore, in similar substrate.

Thank you.

Gerald Blaha
Minnesota Pollution Control Agency
Environmental Analysis & Outcomes Division
520 Lafayette Road North
St. Paul, MN 55155
gerald.blaha@state.mn.us

Office: (651) 757-2234
Fax: (651) 297-7709

From: Blaha, Gerald (MPCA) [mailto:gerald.blaha@state.mn.us]
Sent: Thursday, June 20, 2013 10:33 AM
To: Darren Vogt <Dvogt@1854treatyauthority.org>
Cc: Myhre, Karen M (DNR) <karen.myhre@state.mn.us>; Geisen, Ann (DNR) <ann.geisen@state.mn.us>; Swain, Ed (MPCA) <edward.swain@state.mn.us>
Subject: Dark Lake, St. Louis County (69-0790-00)

Darren, during our recent ³Call for Data² request for wild rice information, the MDNR compiled and submitted a list of waters where wild rice has been identified. These waters are in addition to the list of wild rice waters noted in Appendix B of the MDNR 2008 report. The recent MDNR list identified the presence of wild rice in Dark Lake (69-0790-00) during a July 30, 2012 survey of the northeast bay of the lake (see June 16, 2013 email message below from Karen Myhre, MDNR).

Hello Gerald,

I conduct rare aquatic plant searches for the Minnesota Biological Survey of the MNDNR (in 75 to 100 lakes per year, 1840 lakes surveyed since the survey began in 1995). In the course of those searches, I record every aquatic and emergent plant species that I observe, creating a species list for each lake in which I do a search.

I conducted a rare aquatic plant search in the northeast bay of Dark Lake on 7/30/2012 and recorded that I observed wild rice in the course of the survey. The northeast bay has extensive emergent borders with wild rice as a component of these borders (there are more extensive emergent borders in the main body of the lake-visible on air photos, but I did not survey the main body of the lake). I don't delineate plant communities as part of my work (stands) or make estimates of common species densities.

Wild rice was one of the first species that I recorded (looking at the field data), which would indicate to me that it was immediately noticeable at the lake, but I don't remember stand density.

Karen Myhre
botanist
Minnesota Biological Survey
Minnesota Department of Natural Resources

I was wondering if you might have some additional wild rice information from either the northeast bay or the main body of Dark Lake? If not, perhaps the MPCA can request that a reconnaisance survey be performed by the U of M LacCore survey crew later this summer. I¹ll have to check with Ed Swain to see if we can fit this additional lake into the survey budget.

Thank you.

Gerald Blaha
Minnesota Pollution Control Agency
Environmental Analysis & Outcomes Division
520 Lafayette Road North
St. Paul, MN 55155
gerald.blaha@state.mn.us
Office: (651) 757-2234
Fax: (651) 297-7709

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 8

Barr Engineering Wild Rice and Water Quality Sampling Report
Dark River and Dark Lake prepared for U.S. Steel Corp. (2013)

2013 Wild Rice and Water Quality Sampling Report

Dark River and Dark Lake

Prepared for
United States Steel Corporation,
Minnesota Ore Operations - Minntac

December 2013

2013 Wild Rice and Water Quality Sampling Report

Dark River and Dark Lake

Prepared for
United States Steel Corporation,
Minnesota Ore Operations - Minntac

December 2013

BARR

4700 West 77th Street
Minneapolis, MN 55435-4803
Phone: (952) 832-2600
Fax: (952) 832-2601

Executive Summary

Barr Engineering Company (Barr) was retained by U. S. Steel Corporation (U. S. Steel) to conduct a wild rice survey of the Dark River and Dark Lake located downstream of the U. S. Steel Minntac tailings basin facility (see Figure 1 and Figure 2) as requested by Minnesota Pollution Control Agency (MPCA) in letters dated June 28 and July 3, 2013 (Appendix A). The scope provided by MPCA for the wild rice survey includes a field survey to determine if wild rice is present and collecting grab water quality samples for sulfate analysis at locations where wild rice is identified.

Barr conducted the wild rice survey field work in August 2013 using a protocol similar to the one used by the 1854 Treaty Authority, "Wild Rice Monitoring and Abundance in the 1854 Ceded Territory (1998–2008)" (reference (1)) and other vegetation plot data surveys designed to quantify in situ plant species (e.g., A Handbook for Collecting Vegetation Plot Data in Minnesota: The Relevé Method 2007 (reference (2)). Surface water quality sample collection methods followed Barr's standard operating procedure (SOP), Collection of Surface Water Samples (Appendix B).

Barr observed wild rice in only three single-point locations (density 1) on the northwest side of Dark Lake (Figure 2). A grab water quality sample collected at this location exhibited a sulfate concentration of 176 mg/L (Figure 3). Additionally, Barr conducted plant identification and sampling as part of quality control and quality assurance measures during the survey.

3.0 Summary

Wild rice was observed in three single-point locations on the northwest side of Dark Lake, all of which received a density rating of "1" (<10% coverage within the stand). The sulfate concentration in that location was 176 mg/L. Water levels of approximately 20 inches recorded at the wild rice locations are consistent with literature documenting optimal water levels for wild rice growth. No wild rice was found on Dark River. Identification of macrophytes within the study area with characteristics similar to wild rice was carried out as part of the survey. The most frequently documented macrophytes include *Schoenoplectus acutus* (hardstem bulrush), *Nuphar lutea* (yellow pond-lily), *Sparganium* spp. (bur-reeds), and *Stuckenia pectinata* (sago pondweed).

Appendix C

Study Area Photographs

Photo 1: Dark Lake – Wild Rice Stand (Density = 1)
(Wild Rice Point: MT_BRB_WR-1_20130819)

Photo 2: Dark Lake – Wild Rice Stand (Density = 1)
(Wild Rice Point: MT_BRB_WR-3_20130819)

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 9

1854 Treaty Authority Darren Vogt Email and Dark Lake photos for GLIFWC (2016)

Subject: Dark Lake
Date: Tuesday, November 29, 2016 at 8:16:09 AM Central Standard Time
From: Darren Vogt
To: pmaccabee@justchangelaw.com

Paula,

I have provided several messages below about wild rice presence in Dark Lake. It is my understanding that Dark Lake is on the DNR statewide inventory of wild rice waters. It is just outside of the 1854 Ceded Territory, so does not appear on our list of rice waters.

I've also attached two of the photos taken by Scott Cardiff on July 31, 2016 of wild rice in the lake. I believe that he is a student at University of Wisconsin working with John Coleman and Esteban Chiriboga at GLIFWC. He completed some water sampling work on the Dark River side, so if you have any interest in that, they would be the contacts.

Thanks.

Darren Vogt
Environmental Director
1854 Treaty Authority
4428 Haines Road
Duluth, MN 55811
218-722-8907 (phone)
218-722-7003 (fax)
dvogt@1854treatyauthority.org
www.1854treatyauthority.org

-------- Forwarded Message --------
Subject: Dark Lake photos
Date: Mon, 08 Aug 2016 17:15:20 -0500
From: Scott Cardiff <scardiff@wisc.edu>
To:esteban@glifwc.org

Hi Esteban,

Attached are the photos of apparently some wild rice at Dark Lake.
Photos were taken from shore next to the boat launch ramp (coordinates
are 47.63889, -92.77812, as in the photo of the GPS) on 31JUL2016.
Sorry for the large size of the files!

Scott

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 10

MPCA Dark Lake Sulfate Data

Dark Lake Sulfate from MPCA Surface Water Data

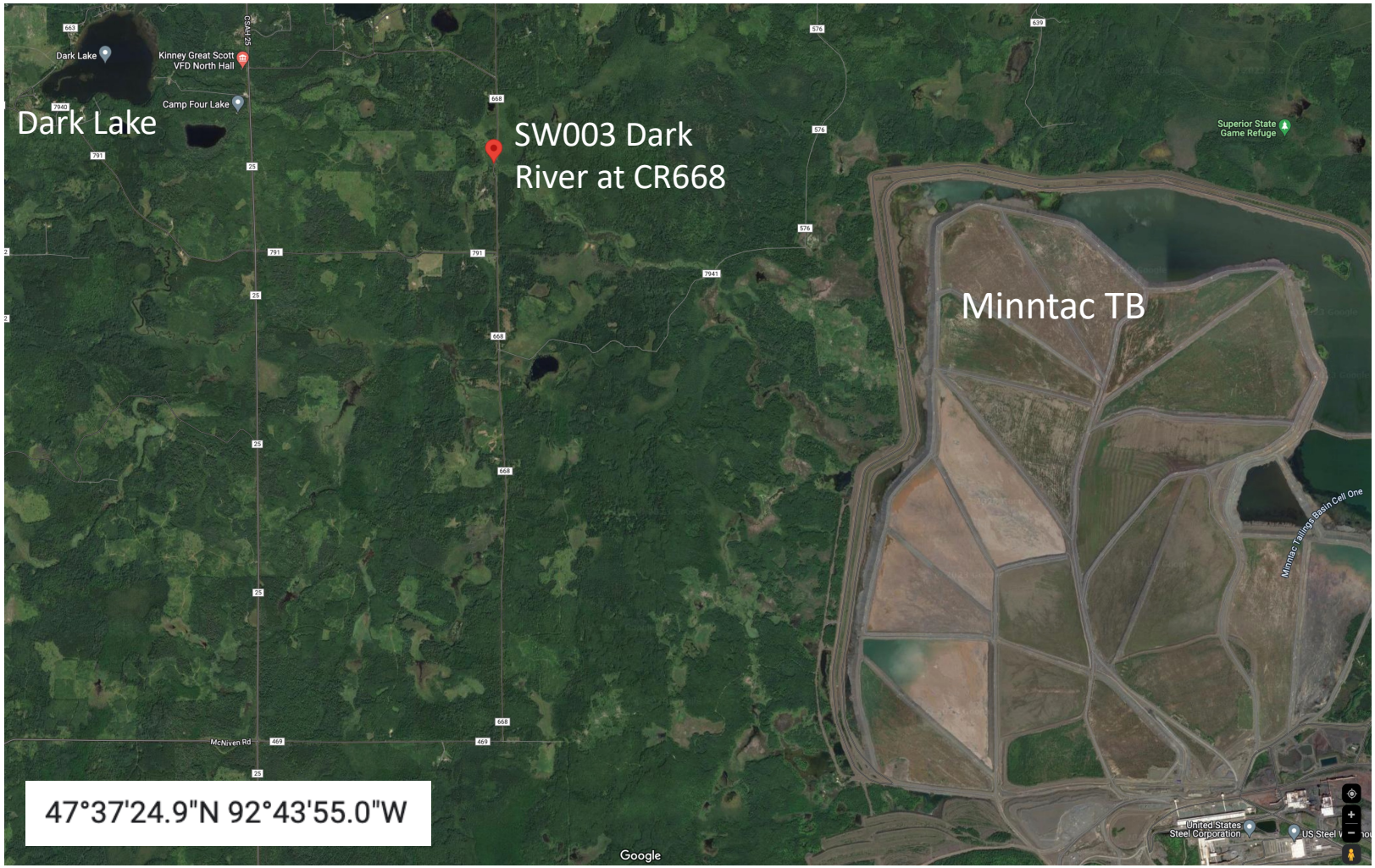
analysisDate	collectingOrg	county	gtlt	parameter	result	result Unit	sampleDate	sampleTime	labNameCode	labCompanyName	sample Depth Unit	stationId	station Name	test MethodId
2010-06-02	Clean Water Legacy Surface Water Monitoring	St. Louis	(null)	Sulfate as SO4	396	mg/L	2010-05-11	16:30:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-201	DARK	300.1
2011-05-21	Clean Water Legacy Surface Water Monitoring	St. Louis	(null)	Sulfate as SO4	166	mg/L	2011-05-17	15:30:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-201	DARK	300.1
2011-06-21	Mercury Trends	St. Louis	(null)	Sulfate as SO4	180	mg/L	2011-06-01	11:30:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2011-06-21	Mercury Trends	St. Louis	(null)	Sulfate as SO4	180	mg/L	2011-06-01	11:30:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2013-07-25	Wild Rice - Sulfate Project	St. Louis	(null)	Sulfate as SO4	175	mg/L	2013-07-10	11:00:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2013-08-13	Wild Rice - Sulfate Project	St. Louis	(null)	Sulfate as SO4	37.1	mg/L	2013-07-10	11:00:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2013-09-11	Wild Rice - Sulfate Project	St. Louis	(null)	Sulfate as SO4	173	mg/L	2013-08-15	14:00:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2013-09-11	Wild Rice - Sulfate Project	St. Louis	(null)	Sulfate as SO4	8.81	mg/L	2013-08-15	14:00:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2013-09-21	Wild Rice - Sulfate Project	St. Louis	(null)	Sulfate as SO4	175	mg/L	2013-09-05	09:30:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2013-09-27	Wild Rice - Sulfate Project	St. Louis	(null)	Sulfate as SO4	27.7	mg/L	2013-09-05	09:30:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2013-09-21	Wild Rice - Sulfate Project	St. Louis	(null)	Sulfate as SO4	176	mg/L	2013-09-05	12:20:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1
2013-09-27	Wild Rice - Sulfate Project	St. Louis	(null)	Sulfate as SO4	41.1	mg/L	2013-09-05	12:20:00	MN00006	Minnesota Department of Health, Public Health,	m	69-0790-00-202	DARK	300.1

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 11

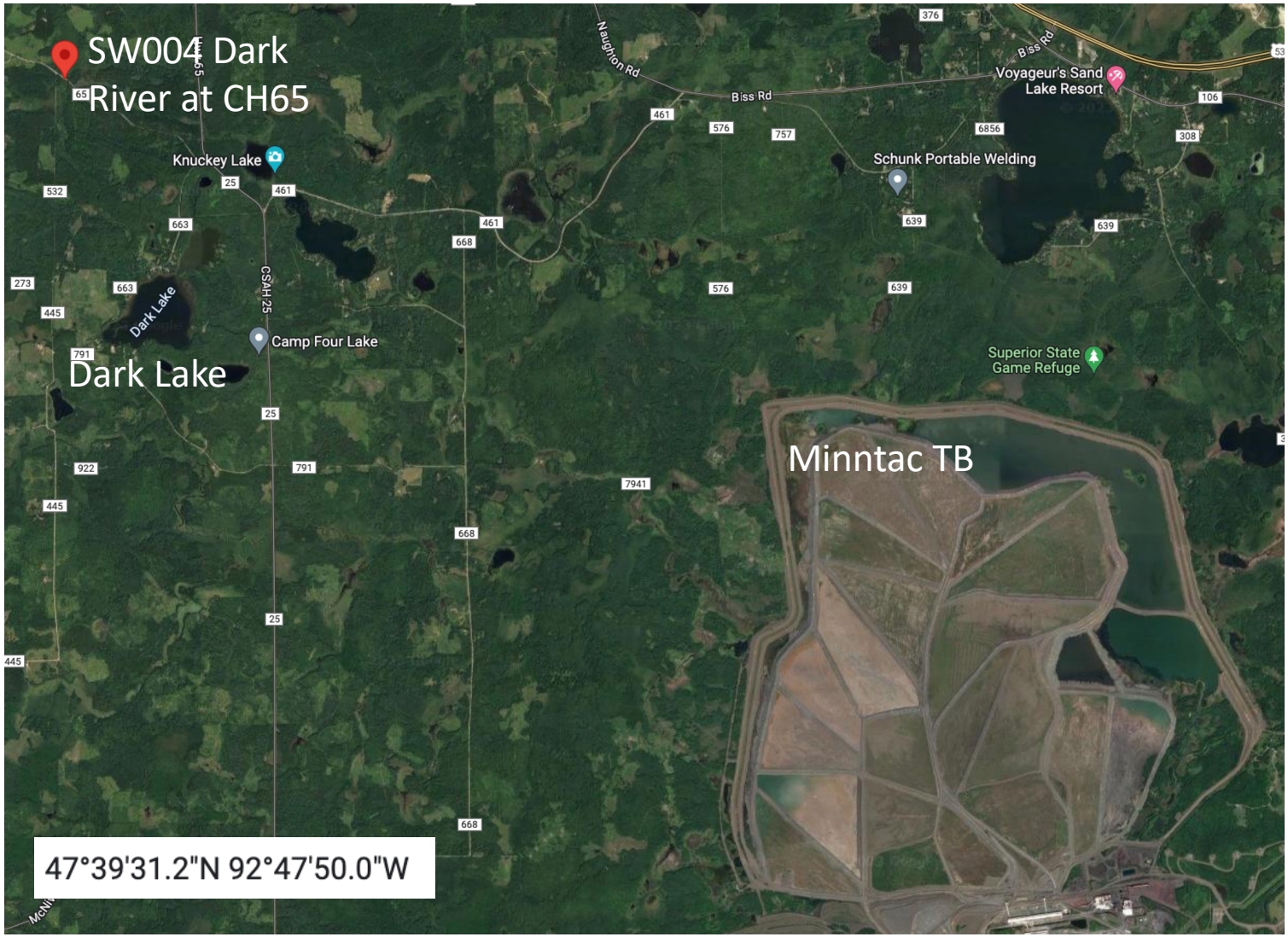
Location Maps for U.S. Steel Minntac Dark River monitoring sites SW003 and SW004

U.S. Steel Minntac Permit MN 0057207 Dark River Surface Water Site SW003



Source: MPCA Wastewater Data Browser for latitude/longitude of SW003, Google Maps at https://www.google.com/maps/place/47%C2%B037'24.9%22N+92%C2%B043'55.0%22W/@47.6128293,-92.726109,14z/data=!4m4!3m3!8m2!3d47.6235833!4d-92.7319444?entry=ttu

U.S. Steel Minntac Permit MN 0057207 Dark River Surface Water Site SW004



Source: MPCA Wastewater Data Browser for latitude/longitude of SW004, Google Maps at https://www.google.com/maps/place/47%C2%B039'31.2%22N+92%C2%B047'50.0%22W/@47.604773,-92.7824524,39433m/data=!3m1!1e3!4m4!3m3!8m2!3d47.6586667!4d-92.7972222?entry=ttu

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 12

U.S. Steel Minntac Permit MN0057207 Sulfate Data for Dark River Sites SW003 and SW004

US Steel Corp. Minntac Tailings Basin Permit MN0057207 Monitoring Data (SW003 and SW004 Dark River)

Station	Station Description	Year of Mon End Date	Month of Mon End Date	Mon End Date	Parameter	Rpt Value	Units	Watershed [Huc8 Coe]	Huc12 Name	Longitude	Latitude
SW 003	Dark River at CR668	2018	December	12/31/2018	Sulfate, Total (as SO4)	747	mg/L	Little Fork River (09030005)	Dark River	-92.7319401	47.62358694
		2019	January	1/31/2019	Sulfate, Total (as SO4)	769	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
			February	2/28/2019	Sulfate, Total (as SO4)	837	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
			March	3/31/2019	Sulfate, Total (as SO4)	853	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
			April	4/30/2019	Sulfate, Total (as SO4)	196	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
			May	5/31/2019	Sulfate, Total (as SO4)	281	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
			June	6/30/2019	Sulfate, Total (as SO4)	490	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
			July	7/31/2019	Sulfate, Total (as SO4)	597	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
			August	8/31/2019	Sulfate, Total (as SO4)	613	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
			Septembe r	9/30/2019	Sulfate, Total (as SO4)	693	mg/L	Little Fork River (09030005)	Dark River	-92.73194006	47.62358694
SW 004	Dark River at CH65	2018	December	12/31/2018	Sulfate, Total (as SO4)	298	mg/L	Little Fork River (09030005)	Dark River	-92.7972099	47.6586771
		2019	January	1/31/2019	Sulfate, Total (as SO4)	324	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771
			February	2/28/2019	Sulfate, Total (as SO4)	361	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771
			March	3/31/2019	Sulfate, Total (as SO4)	420	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771
			April	4/30/2019	Sulfate, Total (as SO4)	148	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771
			May	5/31/2019	Sulfate, Total (as SO4)	127	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771
			June	6/30/2019	Sulfate, Total (as SO4)	219	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771

US Steel Corp. Minntac Tailings Basin Permit MN0057207 Monitoring Data (SW003 and SW004 Dark River)

			July	7/31/2019	Sulfate, Total (as SO4)	261	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771
			August	8/31/2019	Sulfate, Total (as SO4)	286	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771
			September	9/30/2019	Sulfate, Total (as SO4)	363	mg/L	Little Fork River (09030005)	Dark River	-92.79720994	47.6586771

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 13

Isadore, C., US Steel, once the world's largest corporation, agrees to sell itself to a Japanese company, *CNN* (2023)

US Steel, once the world's largest corporation, agrees to sell itself to a Japanese company

https://www.cnn.com/2023/12/18/investing/us-steel-nippon-steel-deal/index.html

By Chris Isidore, CNN
7 minute read
Updated 7:49 PM EST, Mon December 18, 2023

A ladle of molten iron is poured into a Basic Oxygen Process (BOP) furnace at U. S. Steel's Granite City Works, where it will be transformed into liquid steel.

U.S. Steel

New YorkCNN —

US Steel has agreed to be bought by Nippon Steel, Japan's largest steelmaker, in a $14.1 billion deal.

The deal marks the latest step in a gradual decline for the iconic 122-year old company, which was once the largest company on the planet. It was one of the first major conglomerates and a symbol of American industrial might.

But it is no longer even the largest US steelmaker, having been surpassed by Nucor Steel years ago.

“We are confident that … this combination is truly best for all,” said US Steel CEO David Burritt. “Today’s announcement also benefits the United States — ensuring a competitive, domestic steel industry, while strengthening our presence globally.”

“US Steel’s best days are ahead, together,” Burritt told investors at the conclusion of a conference call Monday.

Under terms of the deal, US Steel’s operations will retain its name and will continue to have a headquarters in Pittsburgh. But the deal could still stir opposition.

Earlier this summer the United Steelworkers union vowed to only support a proposed offer by another unionized American steel company, Cleveland Cliffs, to buy US Steel, in a cash and stock deal then valued at $32.53 a share, or 40% less than Nippon’s all cash offer. The US Steel board rejected that offer and started considering other bids.

The union, which has 11,000 members at US Steel, attacked the Nippon Steel deal on Monday.

“To say we’re disappointed in the announced deal between US Steel and Nippon is an understatement, as it demonstrates the same greedy, shortsighted attitude that has guided US Steel for far too long,” said USW President David McCall. “We remained open throughout this process to working with US Steel to keep this iconic American company domestically owned and operated, but instead it chose to push aside the concerns of its dedicated workforce and sell to a foreign-owned company.”

The union made clear it hopes to block the deal.

“We also will strongly urge government regulators to carefully scrutinize this acquisition and determine if the proposed transaction serves the national security interests of the United States and benefits workers,” it said.

Some lawmakers from rust belt states joined the union in voicing opposition to a foreign buyer Monday.

“Today, a critical piece of America’s defense industrial base was auctioned off to foreigners for cash,” said Ohio’s Republican Senator JD Vance, in a statement. “I warned of this outcome months ago and will oppose it in the months ahead.”

Pennsylvania Democrat Sen. John Fetterman – who lives in and was previously mayor of Braddock, PA, where one of US Steel's first steel plants still operates – slammed the deal and promised to work to block the transaction.

"It's absolutely outrageous that US Steel has agreed to sell themselves to a foreign company," Fetterman said in a statement. "Steel is always about security – both our national security and the economic security of our steel communities. I am committed to doing anything I can do, using my platform and my position, to block this foreign sale."

Fetterman called the deal another example of "hard-working Americans being blindsided by greedy corporations willing to sell out their communities to serve their shareholders." He also filmed a video from the roof of his home, across the street from the US Steel plant in Braddock, PA, to blast the deal.

Manuel Bonder, a spokesperson for Pennsylvania Governor Josh Shapiro, said on Monday that the governor "will continue to engage with key stakeholders in pursuit of his top priority: protecting good-paying Pennsylvania jobs in the steel industry, keeping U.S. Steel's headquarters in Pittsburgh and production in the Mon Valley and Western Pennsylvania, and ensuring the steel industry has a real growth strategy that benefits Pennsylvanians and the Commonwealth as a whole."

US Steel's statement said that Nippon Steel has a strong track record of safety in the workplace and working collaboratively with unions, that all union contracts will remain in place and that Nippon Steel is committed to maintaining these relationships uninterrupted.

US Steel was created in 1901 through a merger when a group led by J.P. Morgan and Charles Schwab, two of the world's leading financiers of the time, bought the steel company owned by Andrew Carnegie and combined it with their holdings in its rival Federal Steel company.

The new company became the world's first to be valued at more than $1 billion, double the entire US budget that year. The deal made owner Andrew Carnegie the richest man in the world.

In the early part of the last century, the company produced the steel that helped the United States become a global economic superpower, providing steel not just for skyscrapers, bridges and dams, but also for autos, appliances and other products craved by American consumers.

US Steel was so dominant, in fact, that its competitive prowess helped lead to the creation of the nation's antitrust laws, passed in an attempt to keep the company's strategic and financial might, and that of the Standard Oil's, in check.

The company's name entered popular culture, as shorthand for both size and industrial might. In "The Godfather Part II," mobster Hyman Roth, explaining the growing reach of the mob, tells Michael Corleone, "Michael, we're bigger than US Steel." When the Yankees were winning an unprecedented five straight World Series, those baseball fans who hated the team would say that "cheering for the Yankees is like cheering for US Steel."

Decades of decline

But in recent years, US Steel has fallen far below other American steel companies in steel output and stock market value.

And the domestic steel industry is a shell of its former self, with no company among the 10 largest steel producers around the globe.

"That company peaked out in 1916," longtime steel industry analyst Charles Bradford told CNN in August when the bidding started for US Steel. "It's been downhill ever sense. Peak output was in the 1970s. It's done nothing for decades."

According to a story in The Pittsburgh Post-Gazette on its 100th anniversary in 2001, the company's peak employment of 340,000 came in 1943, during World War II, when it played a critical role in the Allied forces' war efforts.

The same article said peak steel output came in 1953, when the company produced 35.8 million tons of steel while steelmakers in Europe and Japan were still struggling to recover from the war. Last year, US Steel shipped only 11.2 million tons of steel from its US operations and had just under 15,000 US employees.

From its peak, the company began to fall behind upstart competitors — both foreign and domestic. First, it fell behind competitors in Japan and Germany, which were forced to rebuild from scratch after World War II and used new technologies that required far less labor and energy.

Using old technology

"What US Steel had was 1940s technology," Bradford said.

US Steel, once a symbol of America's economic might, is now for sale in the bargain bin

US Steel and other steelmakers eventually followed those foreign competitors to upgrade factories and equipment, but they still largely used the older methods to make steel by melting raw materials such as iron ore in giant blast furnaces.

Those "integrated" steelmakers soon lagged behind so-called "mini-mills," nonunion competitors that use more efficient electric arc furnaces to turn old steel scrap from discarded cars and other products into new steel products.

The industry itself faces pressures from regulators around the globe to cut carbon emissions from a steelmaking process that is incredibly energy intensive and full of carbon emissions.

One pioneer of this mini-mill technology, Charlotte-based Nucor has a market capitalization of $42.5 billion compared to US Steel's value of just over $14 billion as set by this deal.

Nucor is also the largest steelmaker in America by output, making an estimated 20.6 million metric tons of steel per year, ranking 16th largest in the world. That compares to 14.49 million metric tons from US Steel, including its operations in Europe, which rank 27th in the world for 2022, according to the World Steel Association.

US Steel didn't open its first electric arc furnace until 2020.

Bradford said all along the way, US Steel and other US integrated steelmaking rivals with storied names such as Bethlehem Steel, Inland Steel and LTV Steel underestimated the competitive challenge that they faced from overseas and mini-mills at home. In more recent years, steelmakers from China, India and Korea have expanded capacity far beyond US Steel. Those three other integrated steelmakers have already been swallowed up in earlier mergers and are today part of US Steel rival Cleveland Cliffs.

By 1991, after 90 years in the Dow Jones Industrial Average, US Steel was bounced out of that benchmark of the nation's 30 most important companies. At the same time, Walt Disney and JPMorgan & Co., a Wall Street firm ironically named for US Steel's founder, joined the index. It was a further sign that the nation's economy was now focused more on information and finance, not manufacturing.

Monday's all-cash offer represents a 40% premium on the closing price for US Steel shares from Friday. Shares of US Steel jumped 27% in morning trading. Shares of Nippon were down 1% in trading in Japan, which closed before the deal was announced.

– CNN's Matt Egan contributed to this report.

This story has been updated with additional context and developments.

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 14

MPCA Minnesota's TMDL Prioritization Framework 2022-2032, October 2023 Draft

Minnesota's Total Maximum Daily Load Studies Prioritization Framework 2022–2032

DRAFT October 2023

MINNESOTA POLLUTION CONTROL AGENCY

CLEAN WATER LAND & LEGACY AMENDMENT

Document Number: wq-iw1-82

1. Introduction

The U.S. Environmental Protection Agency (EPA) requires states, territories, and authorized tribes to submit a Total Maximum Daily Load (TMDL) prioritization framework. The framework is a planning document that describes long-term priorities, a rationale for selecting those priorities, and a general strategy for implementing the goals of the EPA's 2022–2032 Vision.

This document is Minnesota's TMDL Prioritization Framework for 2022–2032 (Framework), and it provides supporting documentation to Minnesota's impaired waters lists[1] over the Framework time period. The draft Framework was made available for public review during the public notice period for the 2024 impaired waters list and is posted on the Minnesota Pollution Control Agency's (MPCA) TMDL and WRAPS guidance[2] web page.

The EPA also requires two-year commitments for completing TMDLs starting with federal fiscal year (FY) 2025–2026. The Framework must be shared with EPA by April 1, 2024, and the first set of two-year commitments must be submitted to EPA through its ATTAINS (Assessment, TMDL, Tracking, and Implementation System) database by September 30, 2024.

The Framework describes Minnesota's process for selecting water bodies on Minnesota's impaired waters list for TMDL development and describes how the MPCA sets priorities and commitments for TMDLs under the EPA's Vision process.

2. EPA's Vision Process and Minnesota's TMDL Commitments

The EPA developed a Vision for the Clean Water Act Section 303(d) program[3] beginning in 2013. Section 303(d) requires states, territories, and authorized tribes to list impaired waters and develop TMDLs for water bodies in need of a TMDL. A TMDL establishes the maximum amount of a pollutant allowed in a water body and serves as the starting point or scientific planning tool for restoring water quality.

The EPA's 2013 Vision was a long-term planning and prioritization process, and states and territories were asked to put together a TMDL priority framework report and TMDL priorities and commitments for 2016–2022.

Minnesota's TMDL Priority Framework Report[4] (2015, with 2022 updates) included a list of priority impairments for 2016–2022. This long-term framework reflected Minnesota's priorities for development of TMDLs and included impairments for which MPCA committed to develop TMDLs—1,225 impairments on Minnesota's 2014 impaired waters list. Of these, 280 impairments were removed during EPA's "open season" for priority list modification. At the end of the 2013 Vision period in 2022, the MPCA had completed 98% of the final priority list of TMDL commitments.

[1] https://www.pca.state.mn.us/air-water-land-climate/minnesotas-impaired-waters-list
[2] https://www.pca.state.mn.us/business-with-us/tmdl-and-wraps-guidance
[3] https://www.epa.gov/tmdl#:~:text=Section%20303(d)%20of%20the%20Clean%20Water%20Act%20authorizes%20EPA,(TMDLs)%20for%20these%20waterbodies.
[4] MPCA 2015, with February 2022 update. Minnesota's TMDL Priority Framework Report. Document #wq-iw1-54.

The bridge metric TMDL commitments—*Minnesota's TMDL Priorities for FY23–24*[5]—were developed for federal FY23–24 as a bridge between the original 2013 Vision and the 2022 Vision. Minnesota committed to complete and have EPA-approved TMDL reports for 70 impairments in FY23–24. The EPA expects states and tribes to achieve at least 85% of these TMDL commitments, using the EPA's watershed area-based tracking metric.

The **EPA's 2022 Vision** covers 2022–2032 and builds on the experience gained from implementing the 2013 Vision. The *2022–2032 Vision for the Clean Water Act Section 303(d) Program*[6] "is intended to encourage flexible and innovative approaches for states, territories, and authorized tribes … to implement CWA Section 303(d), as well as to identify ways to use limited resources to lead to restoration and protection, to leverage partnerships, and to encourage development of solutions to emerging and difficult water quality issues."

2.1 Minnesota's 2022–2032 TMDL Commitments

Every two years, the MPCA will commit to developing TMDLs for specific impairments, using this Framework as a guide. The TMDL commitments for each two-year period reflect the components of Minnesota's Watershed Approach and other statewide strategies and initiatives (described in Section 3).

The TMDL commitment list may also take into account degree of impairment, local water plans, development pressure, aquatic recreation significance, needs of other state programs such as wastewater and stormwater, and data availability. The MPCA consults with other state agencies, local partners, tribal nations, and other interested stakeholders to decide for which impairments TMDLs will be developed.

This biennial TMDL commitment list includes TMDLs that MPCA commits to being EPA-approved and TMDLs that MPCA commits to being in progress during the two-year period. This list of TMDL commitments is posted on MPCA's TMDL and WRAPS guidance[7] web page.

The two-year periods for which MPCA will develop TMDL commitment lists are federal FY 2025–2026, 2027–2028, 2029–2030, and 2031–2032, and the lists will be finalized by September 30 of every even year. The federal fiscal years are from October 1 of the first year through September 30 of the following year. For example, the first TMDL commitment list after the bridge metric period will cover 10/1/2024–9/30/2026 and will be finalized by 9/30/2024.

Minnesota expects to complete additional TMDLs for impairments on the impaired waters list as part of our ongoing Watershed Approach. The MPCA will report on progress on the federal FY 2025–26 TMDL commitments and additional TMDLs completed through ATTAINS and as part of our Environmental Performance Partnership Agreement (EnPPA) and Performance Partnership Grant (PPG) workplan.

2.2 Integration of TMDL Commitments with the Biennial Impaired Waters List and Integrated Report

Federal regulations require states and tribes to include a priority ranking for impaired waters that require TMDLs (40 CFR § 130.7 (b)(4)). The *TMDL Commitment Grouping* in Minnesota's 2024 impaired

[5] MPCA 2022. Minnesota's TMDL Priorities for FY23-24. Document #wq-iw1-8.
[6] https://www.epa.gov/system/files/documents/2022-09/CWA%20Section%20303d%20Vision_September%202022.pdf
[7] https://www.pca.state.mn.us/business-with-us/tmdl-and-wraps-guidance

waters list indicates MPCA's priority ranking and reflects the Watershed Approach and other statewide strategies and initiatives as described in this Framework (Section 3). The *TMDL Commitment Grouping* identifies waters targeted for TMDL development in the two-year period following the release of the impaired waters list and consists of two groups:

- TMDL Commitment Grouping 1—All impairments on the MPCA's TMDL commitment list, which includes impairments for which TMDLs will be EPA-approved ("completed") during the two-year period and TMDLs that will be in progress during the two-year period. As noted above, the list of TMDL Commitments in Grouping 1 can be found in the *TMDL Commitment Grouping* field in the latest impaired waters list.[8]
- TMDL Commitment Grouping 2—All remaining impairments that need a TMDL (i.e., category 5 in the *EPA category* field of the impaired waters list)

This Framework does not preclude development of TMDLs for impairments in TMDL Commitment Grouping 2.

3. Minnesota's Prioritization Framework to meet the 2022 Vision

3.1 Foundation for the Prioritization Framework

The 2022–2032 Prioritization Framework reflects Minnesota's values and strategies to protect its abundant water resources.

Minnesota's Governor Walz proclaimed October 2022 the Month of Clean Water on the 50th anniversary of the Clean Water Act.[9] The State of Minnesota's proclamation[10] states the importance of clean water to the state of Minnesota:

- Minnesota's abundant lakes, rivers, and streams provide its residents with clean drinking water and year-round recreational opportunities that greatly enhance their quality of life and support healthy stands of wild rice, aquatic species, and wildlife.
- Clean water plays a vital role in the economic prosperity of Minnesota by supporting a robust tourism industry, providing a sustainable fishing industry, and sustaining our industrial and agricultural sectors.
- Minnesota voters passed a historic amendment to the state constitution in 2008, the Clean Water and Land and Legacy Amendment, which provided the financial support for state programs to protect, enhance, and restore water quality in lakes, rivers, and streams, protect groundwater from degradation, and protect drinking water sources.
- This work relies on continued collaboration between federal, state, tribal, and local governments, to protect and improve our waterways.

[8] https://www.pca.state.mn.us/air-water-land-climate/minnesotas-impaired-waters-list
[9] https://www.pca.state.mn.us/business-with-us/clean-water-act-50th-anniversary
[10] https://mn.gov/governor/assets/10.01.22%20Month%20of%20Clean%20Water_tcm1055-544257.pdf

- In the last 50 years, the health of our lakes, rivers, streams, and wetlands have dramatically improved for many pollutants.

Clean Water, Land and Legacy Amendment

As noted in the Governor's proclamation, the resources supporting the Framework largely come from the Clean Water, Land, and Legacy Amendment, approved by the voters in 2008, which supports the "Clean Water Fund."[11] The Fund has been the most important factor in accelerating the breadth and pace of Minnesota's clean water work by creating a stable funding source for a watershed-based approach to protect and restore our water resources.

The Legacy Amendment increases the state sales tax by three-eighths of one percent continuing until 2034, and 33% of the sales tax revenue from the Legacy Amendment is allocated to the Clean Water Fund. Those funds may only be spent to protect, enhance, and restore water quality in lakes, rivers, and streams and to protect groundwater from degradation.

The Clean Water Fund amounts to over $300 million biennially. The *Clean Water Fund Performance Report*[12] summarizes the funds invested, action taken, and outcomes achieved. Past and current investments include monitoring, assessment and characterization, nonpoint source implementation, groundwater/drinking water implementation, and research, evaluation and tool development activities.

Because of the significant resources provided by the Clean Water Fund, the MPCA's prioritization of TMDLs is not so much about applying scarce resources to a limited number of projects, but rather applying those resources to TMDLs across the entire state in a systematic fashion.

3.2 MPCA's Watershed Approach

Protecting Minnesota's waters is a joint effort among seven partner agencies who collaborate and partner on Minnesota's water resource management activities under the Clean Water Fund.

Minnesota adopted *The Minnesota Water Management Framework*,[13] which is a watershed-based management approach that promotes increased collaboration and a common vision for planning and implementation activities. Partnerships among state agencies, tribes, local governments, and stakeholders play a key role in successful resource management as they prioritize, target, and measure Clean Water Fund activities.

As part of the framework, MPCA follows a "Watershed Approach"[14] in which the MPCA and its partners systematically evaluate waters in each major watershed in Minnesota every 10 years, following the *Watershed Lake and Stream Monitoring Schedule* (2018–2028).[15] This process begins with lake and

[11] https://www.legacy.mn.gov/clean-water-fund
[12] https://www.pca.state.mn.us/sites/default/files/lrp-f-1sy22.pdf
[13] https://bwsr.state.mn.us/sites/default/files/The%20Minnesota%20Water%20Management%20Framework%202023.pdf
[14] https://www.pca.state.mn.us/air-water-land-climate/watershed-approach-to-water-quality
[15] https://www.pca.state.mn.us/sites/default/files/wq-swm1-12.pdf

stream water quality and biological monitoring. Once completed, the MPCA and its partners assess the monitoring data to determine if the water bodies meet state water quality standards.

Waters not meeting water quality standards are considered "impaired" and are added to Minnesota's impaired waters list for potential TMDL development. The MPCA develops its list of two-year TMDL Commitments from the impaired waters list to meet the requirements of EPA's Vision process.

The Watershed Approach rotates every year through the state's watersheds, completing the evaluation of waters through the whole state in a 10-year cycle, evaluating 6 to 8 major watersheds each year. While intensive watershed monitoring closely follows the 10-year schedule to maintain the data record, TMDL and Watershed Restoration and Protection Strategy (WRAPS) development timing is more flexible based largely on local partner timing needs. The following is an overview of the first two cycles.

- First cycle of the Watershed Approach: Working with local and regional partners, and funded by the Clean Water, Land, and Legacy Amendment, the MPCA completed the first cycle of the Watershed Approach in June 2023 (see "The power of partnerships" at Water quality resources[16]), when the last of the WRAPS reports were completed for all 80 major watersheds in the state. Intensive watershed monitoring was completed for all 80 watersheds in 2019.

  The first round of watershed monitoring and assessment provided a baseline for determining where waters need protection and restoration, and for informing selection of management strategies. Each WRAPS report uses monitoring and modeling data, along with information from stressor identification and TMDL studies in the watershed, and develops ideas for local strategies needed on the ground to protect and restore waters. This informs local water planning called One Watershed, One Plan[17] (1W1P) to develop comprehensive local water plans that target local implementation activities to see improvement in water quality.

- Second cycle of the Watershed Approach: The MPCA began its second cycle of the Watershed Approach in 2019. The second round of watershed-based lake and stream monitoring continues to include biological, fish contaminant, water quality, and pollutant load sampling. This monitoring is essential to measure progress in restoring and protecting lakes and streams. Additionally, the monitoring will fill gaps to guide local planning and implementation efforts and track long-term changes in water quality and biological communities over time. This second cycle will start to show the effects of restoration and protection efforts that were implemented based on first-cycle WRAPS reports. "WRAPS Updates" (see more below in Section 3.2.1) are underway in many watersheds, and several are scheduled for completion each year during the Vision period.

- Future cycles: Going forward, the MPCA will update WRAPS reports, coordinate with local partners to understand local conditions, and revise targets for successive phases of restoration and protection efforts.

[16] https://www.pca.state.mn.us/business-with-us/water-quality-resources
[17] https://bwsr.state.mn.us/one-watershed-one-plan

Throughout the 2022 Vision period, the MPCA will continue to use the Watershed Approach as the basis for the Framework, and to select impairments for 2022–2032 TMDL commitments. The following sections describe these key components of the MPCA's Watershed Approach in more detail: WRAPS, TMDLs, protection studies, and public participation.

3.2.1 Watershed Restoration and Protection Strategies

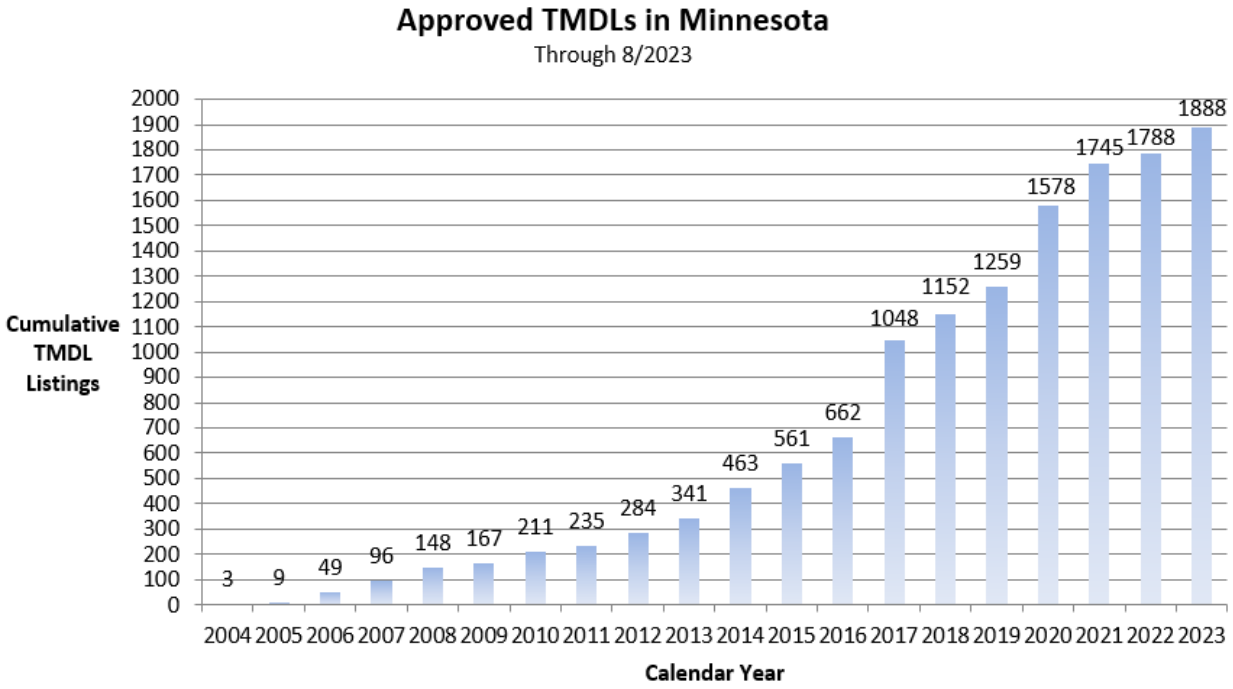
The MPCA develops WRAPS reports, which are required by the state Clean Water Legacy Act. WRAPS use TMDL reports, monitoring results, stressor identification, modeling, and other information to develop strategies for restoring polluted waters and protecting healthy ones. Local partners use this information to develop and set priorities for Comprehensive Watershed Management Plans and implementation projects. As of June 2023, WRAPS have been approved for all 80 watersheds.

"WRAPS Updates" tell the story of what has changed in each watershed since the original WRAPS was completed and focus on new issues and watershed information and action needs. As part of WRAPS Updates, watersheds will have monitoring and assessment and stressor identification report updates, new TMDLs, and many will have additional studies or source assessments depending on the priorities of local partners. Watershed Updates will vary in scale as appropriate. The focus will be on what has changed, trends, what work has been done, new strategies needed, and what additional work is most needed to advance water quality goals in that watershed. The WRAPS Update is a vehicle to synthesize the work that has been done and document ongoing or future work needs. WRAPS Updates add value to the Watershed Approach and include work that is deemed useful to restoration and protection efforts.

3.2.2 Total Maximum Daily Loads

As noted above, TMDLs support the restoration components of WRAPS projects, and are the measure for MPCA's two-year TMDL Commitments to EPA for the 2022 Vision. As explained in Section 2.1, impaired waters are identified as commitments based on the expectation that a TMDL will be completed or in-progress for that impaired listing.

Following the Watershed Approach, watershed TMDLs are organized based on a rotating 10-year schedule, and provide source assessments and pollutant load allocations for permitted and nonpermitted pollutant sources. There have been significant gains in efficiency over the past decade (see figure below) as the agency has evolved the approach to TMDL development to a watershed scale.



To view the status of WRAPS and TMDLs, including that of select 2022–2032 TMDL Commitments, see MPCA's *Healthier Watersheds* webpage.[18]

3.2.3 Protection Studies

The MPCA has created a process for developing "protection studies" using the Watershed Approach. A protection study establishes water quality targets and goals for a water body that already meets water quality standards:

- Targets for water body condition. The target may be a numeric target that is equal to or more restrictive than a state water quality standard (e.g., lake phosphorus concentration, stream TSS concentration), or may be for a parameter for which a numeric state water quality standard does not exist (e.g., frequency of nuisance algae blooms, stream temperature).
- Goals to meet the condition targets (e.g., load reduction goal, vegetation enhancement goals).

The approach is similar to a TMDL study; the difference is that in a TMDL study the numeric target is typically a state water quality standard, whereas in a protection study the numeric target may be lower than the water quality standard and is developed with input from local partners. To provide meaningful load reduction goals in a protection study, it is important to already have data on the water body condition and pollutant sources.

The following general steps make up a protection study:

- Characterize water body and watershed
- Establish target for water body condition

[18] https://www.pca.state.mn.us/business-with-us/healthier-watersheds-tracking-the-actions-taken

- Source assessment
- Establish goals to meet the condition targets
- Strategy development (optional)

3.2.4 Public Participation and Partner Engagement

Public participation and engagement refer to education, outreach, marketing, training, technical assistance, and other methods of working with local and state partners to achieve water resource management goals. The MPCA also works with tribal nations to seek their involvement in projects of mutual interest.

During the first cycle of the Watershed Approach, the MPCA made an important early commitment to support this work at the local level. The goals of MPCA's investment were to support partner participation in WRAPS development and to encourage more active participation by individual stakeholders and groups in dialogue and actions that lead to cleaner water. Funds provided by a partner agency, the Board of Water and Soil Resources (BWSR), are now used to support public participation in planning and implementation projects.

WRAPS and TMDL reports are available on MPCA's Watershed Information web page[19] and typically have a 30-day public notice period to gather comments and suggestions before the reports are finalized. Public meetings may also be held to share information on projects, or to get input on draft reports during the public notice period. MPCA's project managers work closely with local partners throughout the development of WRAPS and TMDLs, and local priorities are a key element in determining TMDL Commitments for the 2022 Vision.

3.3 Other Statewide Strategies and Initiatives Informing Minnesota's Priority Framework

In addition to the specific components of the Watershed Approach mentioned above, the MPCA is also working on other key strategies and initiatives that inform Minnesota's Priority Framework and TMDL commitments. Here are some notable examples of the work that will have an ongoing influence on how the agency prioritizes its work.

3.3.1 Nutrient Reduction Strategy

The Minnesota Nutrient Reduction Strategy (NRS)[20] outlines how Minnesota will reduce nutrient pollution in its lakes and streams and limit impacts downstream. Excessive nutrients, particularly phosphorus and nitrogen, pose a significant problem for Minnesota's lakes and rivers, as well as downstream waters including the Great Lakes, Lake Winnipeg, and the Gulf of Mexico. Nutrients are important for human and aquatic life. However, when levels exceed normal conditions, they can cause excessive algae growth, low levels of oxygen, toxicity to aquatic life, and unhealthy drinking water.

The NRS was first published in September 2014, and called for nutrient level reductions in major rivers by 10% to 20%, with 45% to 50% reductions by 2040, compared to baselines in the 1990s. The MPCA has developed estimates of how much the nutrient load must be reduced in each watershed to lower Minnesota's nutrient contribution to waters outside of the state, and many WRAPS and WRAPS Updates

[19] https://www.pca.state.mn.us/business-with-us/watershed-information
[20] https://www.pca.state.mn.us/air-water-land-climate/reducing-nutrients-in-waters

contain strategies to meet these reduction goals. The information will help determine which and how many management practices are needed to achieve nutrient load reductions and will require ongoing work with partners to select and implement effective best management practices.

The MPCA, working with 10 other organizations, has begun a process to update and improve the NRS by 2025. The revised strategy will include the most up-to-date science on practices to reduce nutrients, remaining river nutrient load reductions, and priority areas. It will also include improved approaches to accelerate adoption of best management practices, track and show progress, and work in partnership with local watersheds.

3.3.2 Environmental Justice

All Minnesotans deserve to live in conditions that support a healthy and fulfilling life. One important part of this is living in an environment with clean air, clean water, and unpolluted land. Working to achieve these conditions is at the heart of the MPCA's mission to protect and improve our environment and human health. As with other work in the WRAPS process, the nature of environmental justice work will vary as widely as the context and conditions vary from watershed to watershed.

The MPCA will continue to work on ways to better incorporate environmental justice considerations into the WRAPS Update process. For example, the agency actively seeks to partner with tribal nations on monitoring, assessments, WRAPS Updates, or other watershed activities. The agency invites tribal staff to help identify priority areas within a watershed to inform monitoring site selection and assessment and can provide funding for tribes to conduct monitoring. Tribes are also invited to participate in local working groups, and to provide data, information, Indigenous Knowledge, and/or Traditional Ecological Knowledge about a watershed to include in a monitoring and assessment report, a TMDL report, and/or a WRAPS Update report.

3.3.3 Climate Change

The MPCA is a leading state agency working to address the impacts of climate change on water resources in Minnesota. As a member of the Governor's subcabinet on Climate Change, the MPCA helped create the "Climate Action Framework"[21] and is leading initiatives to meet its goals for the reduction of greenhouse gas emissions and increased resiliency in communities, businesses, agriculture, waterways, contaminated sites, and infrastructure.

The MPCA also participated with state water management agencies to develop the "2020 State Water Plan: Climate and Water,"[22] coordinated by the Minnesota Environmental Quality Board. The MPCA is leading the implementation of the state water plan's action steps, including climate resiliency planning and local water infrastructure grants for local governments and tribal nations**,** water-quality trading permits, tools for tracking greenhouse gas and nutrient reductions from agricultural practices, and new requirements to reduce runoff from feedlots.

Incorporating climate change into WRAPS Update work is a complex challenge. Work will continue to implement these and other strategies using the best scientific tools available to understand and mitigate climate change impacts in Minnesota's lakes and streams. As an example, in the Duluth Urban Area

[21] https://climate.state.mn.us/minnesotas-climate-action-framework
[22] https://www.eqb.state.mn.us/state-water-plan

WRAPS,[23] MPCA considered in-stream temperature sensitivity to prioritize streams in the Lake Superior Watershed that are most vulnerable to climate change, and to implement protection practices.

3.3.4 Mercury

Mercury emitted into the atmosphere deposits in lakes and streams and accumulates in fish, and eating fish with high levels of mercury can be toxic. The MPCA developed a plan to reduce mercury releases[24] by 2025 based on Minnesota's statewide mercury TMDL,[25] which was approved by the EPA in 2007. The plan includes input and recommendations from a broad range of stakeholders. Every two years, the MPCA updates the statewide mercury TMDL to include new impairments that are covered by the statewide TMDL.

The statewide TMDL does not cover mercury impairments in fish where exceptionally high mercury concentrations preclude those waters from meeting the water quality standard even with the mercury source reductions called for in the statewide TMDL. The MPCA has begun development of individual mercury TMDLs for these waters.

3.3.5 PFAS

Per- and polyfluoroalkyl substances, commonly known as PFAS, are a family of nearly 5,000 chemicals now pervasive in the environment. Called "forever chemicals," they do not break down and can bioaccumulate in both humans and other living organisms. Some PFAS are toxic.

Minnesota state agencies developed a strategic, coordinated approach to protecting families and communities from these ubiquitous substances. *Minnesota's PFAS Blueprint*[26] takes a three-pronged approach:

- Prevent PFAS pollution wherever possible.
- Manage PFAS pollution when prevention is not feasible or pollution has already occurred.
- Clean up PFAS pollution at contaminated sites.

Minnesota's PFAS Blueprint identifies short- and long-term opportunities, as well as legislative actions, to manage PFAS in our environment and protect families and communities. Over the coming months and years, state agencies will further develop these strategies and engage Minnesotans on how best to implement them.

Future needs and opportunities are complex and resource intensive. State agencies and community partners will need to work together to undertake projects that most strategically advance the collective goal to protect human health and the environment from the impacts of PFAS.

3.3.6 Sulfate

Wild rice is an important part of the ecosystem in many Minnesota lakes and streams. Wild rice is also a cultural and spiritual resource to many, particularly members of Minnesota's Dakota and Ojibwe tribal communities, and is an important economic resource to those who harvest and market it.

[23] https://www.pca.state.mn.us/sites/default/files/wq-ws4-42a.pdf
[24] https://www.pca.state.mn.us/air-water-land-climate/reducing-mercury-releases
[25] https://www.pca.state.mn.us/business-with-us/statewide-mercury-tmdl
[26] https://www.pca.state.mn.us/air-water-land-climate/minnesotas-pfas-blueprint

In 1973, Minnesota adopted a sulfate standard to protect wild rice[27] based on studies showing that wild rice was found primarily in low sulfate waters. The MPCA has preliminarily determined a list of approximately 2,400 waters that can reasonably be considered waters that could potentially be used for production of wild rice.

As of the 2022 impaired waters list, 35 water bodies are listed with wild rice production impairments due to high sulfate. Sulfate impairments are predominantly point source driven, and the MPCA is primarily addressing these impairments through discharge permits. The MPCA is continuing to work with the public and state, local, federal, and tribal nations to develop ways to protect this important Minnesota resource through implementation of the long-standing sulfate standard in monitoring, assessment, and permitting.

3.3.7 Chloride

Minnesota has a growing salty water problem that threatens its freshwater fish and other aquatic life. The Statewide Chloride Management Plan (CMP)[28] outlines a comprehensive strategy to reduce salt (chloride) use from a variety of sources to protect our lakes, rivers, and other water resources. The CMP incorporates water quality conditions, sources of chloride, salt reduction strategies, protection strategies, and monitoring recommendations as well as measurement and tracking of results.

The plan was developed by the MPCA in partnership with municipalities, counties, watershed districts, and other state experts. As outlined in the CMP, the MPCA and partners will collaborate on a number of salt reduction and prevention efforts:

- Develop chloride TMDLs to address the 54 waters (as of the 2022 impaired waters list) with aquatic life impairments due to chloride.
- Monitor, evaluate, and better understand the level of chloride in lakes, streams, wetlands, and groundwater.
- Develop statewide tools and materials for partners and stakeholders interested in minimizing the impact of chloride on Minnesota lakes, rivers, and groundwater.
- Conduct MPCA's Smart Salting training[29] to help organizations that apply road salt improve operator effectiveness and reduce chloride pollution, while keeping roads, parking lots, and sidewalks safe.
- Offer chloride reduction grants from the MPCA in selected communities to work with residents, local businesses, institutions, and industries to identify chloride sources and decrease or eliminate their use.

3.4 Process moving forward and contact information

The Framework is intended to describe the broad, long-term direction for the agency's TMDL program that will fulfill its TMDL Commitments throughout the 2022–2032 Vision period.

[27] https://www.pca.state.mn.us/air-water-land-climate/protecting-wild-rice-waters
[28] https://www.pca.state.mn.us/business-with-us/statewide-chloride-resources
[29] https://www.pca.state.mn.us/business-with-us/smart-salting-training

This document will remain on the agency's TMDL and WRAPS guidance[30] web page. Any significant updates will be made available for review with the appropriate edition of the impaired waters list. The most recent two-year commitments for TMDLs that will be completed, or are in development, can also be found on the web page.

For questions or comments on the Framework, please see contact information on the MPCA's TMDL and WRAPS guidance web page.

[30] https://www.pca.state.mn.us/business-with-us/tmdl-and-wraps-guidance

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 15

Wild Rice Producing Waters Impaired for Sulfate – Potential Sources (2024)

Wild Rice Impaired Waters Sources (2024)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	**Water body name**	**Water body description**	**Water body type**	**Year added to List**	**Basin**	**AUID**	**Use Class**	**County**	**HUC 8**	**Watershed name**	**Affected designated use**	**Pollutant or stressor**	**TMDL Commitment Group**	**EPA category**	**Potential Source**	**Permits**
2	Birch	Lake or Reservoir	Lake	2024	Rainy River	69-0003-00	2B	Lake	09030001	Rainy River - Headwaters	Wild Rice Production	Sulfate	2	5	Cliffs	MN0042579(Dunka) MN0055301(Northshore)
3	Dunka River	Unnamed ditch to Birch Lk	Stream	2024	Rainy River	09030001-987	1B, 2Ag	St. Louis	09030001	Rainy River - Headwaters	Wild Rice Production	Sulfate	2	5	Cliffs	MN0042579(Dunka) MN0046981(Northshore)
4	Partridge River	Headwaters to St Louis R	Stream	2020	Lake Superior	04010201-552	2Bg	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0046981(Northshore) MN0054089(LTV TB) MN0042536(Erie)
5	Second Creek (First Creek)	First Cr to Partridge R	Stream	2020	Lake Superior	04010201-952	2Bg	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet [1]	MN0046981(Northshore) MN0054089(LTV TB) MN0042536(Erie)
6	Cedar Island (N.Portion)	Lake or Reservoir	Lake	2020	Lake Superior	69-0568-01	2B	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0054089(TB) MN0042536(Erie)
7	Embarrass	Lake or Reservoir	Lake	2020	Lake Superior	69-0496-00	2B	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0054089(LTV TB) MN0042536(Erie)
8	Embarrass River	Esquagama Lk to St Louis R	Stream	2024	Lake Superior	04010201-B00	2Bg	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0054089(LTV TB) MN0042536(Erie)
9	Esquagama	Lake or Reservoir	Lake	2020	Lake Superior	69-0565-00	2B	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0054089(LTV TB) MN0042536(Erie)
10	Wynne	Lake or Reservoir	Lake	2020	Lake Superior	69-0434-02	2B	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0054089(LTV TB) MN0042536(Erie)
11	Embarrass River	Headwaters to Embarrass Lk	Stream	2020	Lake Superior	04010201-579	2Bg	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0054089(LTV TB) MN0042536(Erie)
12	Embarrass River	Embarrass Lk thru Esquagama Lk	Stream	2020	Lake Superior	04010201-A99	2Bg	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0054089(LTV TB) MN0042536(Erie)
13	Cedar Island (S.Portion)	Lake or Reservoir	Lake	2020	Lake Superior	69-0568-02	2B	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs & Cliffs/PolyMet	MN0054089(TB) MN0042536(Erie)
14	Perch	Lake or Reservoir	Lake	2020	Lake Superior	69-0688-00	2B	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	Cliffs (& Eveleth)	MN0044946(UTAC) MN0052116(UTAC TB)
15	Hay	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	31-0037-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0055948(Keetac TB) MN0031879(Keetac)
16	Little Sandy	Lake or Reservoir	Lake	2020	Rainy River	69-0729-00	2B	St. Louis	09030002	Vermilion River	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0057207(Minntac TB)
17	Ox Hide	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	31-0106-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0055948(Keetac TB) MN0031879(Keetac)
18	Sandy	Lake or Reservoir	Lake	2020	Rainy River	69-0730-00	2B	St. Louis	09030002	Vermilion River	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0057207(Minntac TB)
19	Swan Lake Southwest Bay	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	31-0067-03	2B	Itasca	07010103	Mississippi River - Grand Rapids	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0055948(Keetac TB) MN0031879(Keetac)
20	Swan River	Swan Lk to Trout Cr	Stream	2020	Upper Mississippi River, Upper Portion	07010103-753	2Bg	Itasca	07010103	Mississippi River - Grand Rapids	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0055948(Keetac TB) MN0031879(Keetac)
21	East Vermilion	Lake or Reservoir	Lake	2020	Rainy River	69-0378-01	1C, 2Bd	St. Louis	09030002	Vermilion River	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0057207(Minntac TB)

Wild Rice Impaired Waters Sources (2024)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
22	Pike River	Sand R to Vermilion Lk	Stream	2020	Rainy River	09030002-503	2Bg	St. Louis	09030002	Vermilion River	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0057207(Minntac TB)
23	Sand River	Headwaters (Sandy Lk 69-0730-00) to Pike R	Stream	2020	Rainy River	09030002-501	2Bg	St. Louis	09030002	Vermilion River	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0057207(Minntac TB)
24	Sturgeon River	Headwaters (Little Sturgeon Lk 69-1290-00) to E Br Sturgeon R	Stream	2024	Rainy River	09030005-527	2Bg	St. Louis	09030005	Little Fork River	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0057207(Minntac TB)
25	Trout	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	31-0216-00	1B, 2A	Itasca	07010103	Mississippi River - Grand Rapids	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0055948(Keetac TB) MN0031879(Keetac)
26	Vermilion - Pike Bay	Lake or Reservoir	Lake	2020	Rainy River	69-0378-03	1C, 2Bd	St. Louis	09030002	Vermilion River	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0057207(Minntac TB)
27	North Twin	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	31-0190-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Wild Rice Production	Sulfate	2	5	U.S. Steel	MN0055948(Keetac TB) MN0031879(Keetac)
28	Upper Estuary	Lake or Reservoir	Lake	2020	Lake Superior	69-1291-04	2B	St. Louis	04010201	St. Louis River	Wild Rice Production	Sulfate	2	5	U.S. Steel, Cliffs, Cliffs/PolyMet	Multiple Mining Permits
29	Bear	Lake or Reservoir	Lake	2024	Cedar River	24-0028-00	2B	Freeborn	07080203	Winnebago River	Wild Rice Production	Sulfate	2	5		
30	Buffalo River	Unnamed ditch to Hay Cr	Stream	2024	Red River of the North	09020106-594	2Bg	Becker	09020106	Buffalo River	Wild Rice Production	Sulfate	2	5		
31	Cannon River	Belle Cr to split near mouth	Stream	2024	Upper Mississippi River, Lower Portion	07040002-501	2Bg	Goodhue	07040002	Cannon River	Wild Rice Production	Sulfate	2	5		
32	Clearwater (West)	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	86-0252-02	2B	Stearns	07010203	Mississippi River - St. Cloud	Wild Rice Production	Sulfate	2	5		
33	Clearwater River	Ruffy Bk to JD 1	Stream	2020	Red River of the North	09020305-647	2Bg	Clearwater	09020305	Clearwater River	Wild Rice Production	Sulfate	2	5		
34	Crow River, Middle Fork	Headwaters to Monongalia (Mud) Lk	Stream	2020	Upper Mississippi River, Upper Portion	07010204-537	2Bg	Kandiyohi	07010204	North Fork Crow River	Wild Rice Production	Sulfate	2	5		
35	Elizabeth (Main Lake)	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	34-0022-02	2B	Kandiyohi	07010205	South Fork Crow River	Wild Rice Production	Sulfate	2	5		
36	Goodners	Lake or Reservoir	Lake	2022	Upper Mississippi River, Upper Portion	73-0076-00	2B	Stearns	07010202	Sauk River	Wild Rice Production	Sulfate	2	5		
37	Green	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	34-0079-00	2B	Kandiyohi	07010204	North Fork Crow River	Wild Rice Production	Sulfate	2	5		
38	Hill River	Hill River Lk to Lost R	Stream	2024	Red River of the North	09020305-539	2Bg	Red Lake	09020305	Clearwater River	Wild Rice Production	Sulfate	2	5		

Wild Rice Impaired Waters Sources (2024)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
39	Lake Monongalia - main basin	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	34-0158-01	2B	Kandiyohi	07010204	North Fork Crow River	Wild Rice Production	Sulfate	2	5		
40	Lake Monongalia - Middle Fork Crow River	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	34-0158-02	2B	Kandiyohi	07010204	North Fork Crow River	Wild Rice Production	Sulfate	2	5		
41	Little Rabbit	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	18-0139-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Wild Rice Production	Sulfate	2	5		
42	Long Prairie River	Fish Trap Cr to Crow Wing R	Stream	2020	Upper Mississippi River, Upper Portion	07010108-501	2Bg	Morrison	07010108	Long Prairie River	Wild Rice Production	Sulfate	2	5		
43	Long Prairie River	Spruce Cr to Eagle Cr	Stream	2022	Upper Mississippi River, Upper Portion	07010108-505	2Bg	Todd	07010108	Long Prairie River	Wild Rice Production	Sulfate	2	5		
44	Mississippi River	Chippewa R (WI) to L & D #6	Stream	2020	Upper Mississippi River, Lower Portion	07040003-627	2Bg	Wabasha	07040003	Mississippi River - Winona	Wild Rice Production	Sulfate	2	5		
45	Mississippi River	Root R to MN/IA border	Stream	2020	Upper Mississippi River, Lower Portion	07060001-509	2Bg	Houston	07060001	Mississippi River - Reno	Wild Rice Production	Sulfate	2	5		
46	Orwell	Lake or Reservoir	Lake	2024	Red River of the North	56-0945-00	2B	Otter Tail	09020103	Otter Tail River	Wild Rice Production	Sulfate	2	5		
47	Pearl	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	73-0037-00	2B	Stearns	07010202	Sauk River	Wild Rice Production	Sulfate	2	5		
48	Poplar River	Spring Lk to Highway 59	Stream	2024	Red River of the North	09020305-518	2Bg	Polk	09020305	Clearwater River	Wild Rice Production	Sulfate	2	5		
49	Rice	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	71-0142-00	2B	Sherburne	07010203	Mississippi River - St. Cloud	Wild Rice Production	Sulfate	2	5		
50	Rice	Lake or Reservoir	Lake	2024	Minnesota River	10-0078-00	2B	Carver	07020012	Lower Minnesota River	Wild Rice Production	Sulfate	2	5		
51	Rice	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	73-0196-00	2B	Stearns	07010204	North Fork Crow River	Wild Rice Production	Sulfate	2	5		
52	Stanchfield Creek	Ties Cr (Stanchfield Bk) to Rum R	Stream	2020	Upper Mississippi River, Upper Portion	07010207-518	2Bg	Isanti	07010207	Rum River	Wild Rice Production	Sulfate	2	5		
53	Stella	Lake or Reservoir	Lake	2022	Upper Mississippi River, Upper Portion	47-0068-00	2B	Meeker	07010204	North Fork Crow River	Wild Rice Production	Sulfate	2	5		

Wild Rice Impaired Waters Sources (2024)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
54	Sturgeon	Lake or Reservoir	Lake	2020	Upper Mississippi River, Lower Portion	25-0017-01	2B	Goodhue	07040001	Mississippi River - Lake Pepin	Wild Rice Production	Sulfate	2	5		
55	Tilde	Lake or Reservoir	Lake	2024	Red River of the North	14-0004-00	2B	Clay	09020108	Wild Rice River	Wild Rice Production	Sulfate	2	5		
56	Trott Brook	CD 51 to Rum R	Stream	2020	Upper Mississippi River, Upper Portion	07010207-680	2Bg	Anoka	07010207	Rum River	Wild Rice Production	Sulfate	2	5		
57																
58	1 Permit MN0054089 (LTV TB) was transferred to PolyMet in 2018. Although New Range has asserted it is now the permittee, no regulatory process has made this transfer.															
59																
60																

	PERMIT	PERMIT HOLDER
61	PERMIT	PERMIT HOLDER
62	MN0055948	U.S. Steel Keetac TB
63	MN0031879	U.S. Steel Keetac mine
64	MN0057207	U.S. Steel Minntac TB
65	MN0052493	US Steel Minntac mine
66		
67	MN0069078	Mesabi mining area
68	MN0020249	Mesabi Metallics
69	MN0067687	Mesabi Nugget
70		
71	MN0070378	Magnetation 4
72	MN0069221	(Mag1 & Mesabi Chief TB)
73	MN0044946	(Mag 2)
74	MN0068241	Essar Steel
75		
76	MN0052116	Cliffs UTAC Fairlane plant
77	MN0044946	Cliffs UTAC was Eveleth Mine
78		
79	MN0049760	Cliffs Hibbing Taconite TB
80	MN0001465	Cliffs Hibbing Taconite mine
81		
82	MN0067962	Cliffs- Taconite Harbor
83	MN0046981	Cliffs Northshore-PeterMitchell
84	MN0055301	Cliffs Northshore
85	MN0042579	Cliffs - Dunka mine area
86		
87	MN0059633	Cliffs Minorca mine
88	MN0055964	Cliffs Minorca mine
89	MN0042536	Cliffs/PolyMet Erie mine area
90	MN0054089	Cliffs/New Range Tailings Bsain
91		
92	MN0071013	PolyMet/NewRange (proposed mine)

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 16

MPCA Citizens' Board Materials for Authorization
to Issue Keetac NPDES/SDS Permits MN0031879 and MN0055948 (2011)

Minnesota Pollution Control Agency
520 Lafayette Road North | St. Paul, Minnesota 55155-4194 | 651-296-6300
800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us | Equal Opportunity Employer

October 14, 2011

RE: United States Steel Corporation, Minnesota Ore Operations, Keetac - Request for Approval of Findings of Fact, Conclusions of Law, and Order and Authorization to Issue National Pollutant Discharge Elimination System/State Disposal System Permits MN0031879 and MN0055948

TO: INTERESTED PARTIES

Enclosed for your information is a copy of the Minnesota Pollution Control Agency (MPCA) Citizens' Board (Board) Item documents for the proposed United States Steel Corporation, Minnesota Ore Operations – Keetac National Pollutant Discharge Elimination System/State Disposal System Permits MN0031879 and MN0055948 (Permits), Itasca County, and a copy of the Board Agenda. The Board packet includes:

- Proposed Findings of Fact, Conclusions of Law, and Order for the National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) Permits
- Comment letters received on the Draft Permits
- Responses to written comments received on the draft permits
- Table of changes to draft Permits
- Proposed Permits
- Statement of Basis for the Proposed Permits
- Map of the facility

The United States Steel Corporation, Minnesota Ore Operations – Keetac - Request for Approval of Findings of Fact, Conclusions of Law, and Order and Request and Authorization to Issue National Pollutant Discharge Elimination System/State Disposal System Permits MN0031879 and MN0055948 Board Packet may also be viewed at the MPCA St. Paul Office and on our MPCA Web site at http://www.pca.state.mn.us/about/board/bdagenda.html.

The draft Permits and Statement of Basis documents are very lengthy. In an effort to save postage and resources, the draft Permit and Statement of Basis will not be included in this mailing. All Board Item documents, including the draft Permit and Statement of Basis may be reviewed at the MPCA offices in St. Paul and on the MPCA Web site at http://www.pca.state.mn.us/about/board/bdagenda.html. Requests for copies of these documents may be made by contacting the St. Paul office at 651-757-2084.

The Board Item will be presented at the MPCA Board Meeting on October 25, 2011. Please refer to the enclosed Board Agenda for specific location, dates, and times. We encourage your attendance at the Board Meeting. If you have any questions regarding the enclosed Board Item or the specifics of the meeting, feel free to contact Brandon Smith of our staff at 651-757-2740.

Sincerely,

Ann Foss

Ann M. Foss
Director
Strategic Projects Sector
Industrial Division

AMF:rm

Enclosures

MINNESOTA POLLUTION CONTROL AGENCY

Industrial Division
Strategic Projects Sector

Board Item Cover Sheet

MEETING DATE:	October 25, 2011	**DATE MAILED:**	October 14, 2011
Presenter(s):	Brandon Smith BES	**Phone Number:**	651-757-2740
Project Manager:	Brian Timerson BT	**Phone Number:**	651-757-2785
Sector Director:	Ann Foss AMF	**Phone Number:**	651-757-2366
Division Director:	Jeff Smith	**Phone Number:**	651-757-2735
Asst. Co.: (if issue applies to water or air issue)	Rebecca Flood	**Phone Number:**	651-757-2022
Deputy Commissioner:	John Stine JSR	**Phone Number:**	651-757-2014
Attorney:	Robert Roche	**Phone Number:**	651-757-1372

TITLE OF BOARD ITEM: United States Steel Corporation, Minnesota Ore Operations - Keetac, Keewatin, Minnesota - Request for Approval of Findings of Fact, Conclusions of Law, and Order and Request for Authorization to Issue National Pollutant Discharge Elimination System/State Disposal System Permits MN0031879 and MN0055948.

LOCATION: Keewatin (City/Township) Itasca (County)

TYPE OF ACTION: Permit Issuance

RECOMMENDED ACTION: Authorization to Issue National Pollutant Discharge Elimination System/State Disposal System Permits MN0031879 and MN0055948.

ISSUE STATEMENT:

The Minnesota Pollution Control Agency (MPCA) staff requests that the MPCA Citizens' Board (Board) approve reissuance of National Pollutant Discharge Elimination System (NPDES)/State Disposal System(SDS) Permits MN0031879 and MN0055948 (Permits) for the United States Steel Corporation – Minnesota Ore Operations (Permittee) – Keetac Mining Area facility. The MPCA staff prepared the draft Permits for the Keetac Mining Area facility, and submitted the draft Permits for public comments on June 27, 2011. The public comment period for the Permits was extended twice, closing on August 19, 2011. Prior to extending the public comment period to end on August 19, 2011, the MPCA received 179 requests for extension of the public comment period, 177 were received in substantially identical e-mails. In addition to the requests for extension of the public comment period, the MPCA received 117 comment letters regarding the Permit, 106 of which were received in substantially identical e-mails. Comments received on the draft Permits centered primarily on the relationship between the Permits and a proposed expansion on mining at the Keetac facility, water quality-based effluent limitations, and a compliance schedule in the draft Permits for the application of final effluent limitations for sulfate, which are based on an ambient water quality standard for wild rice production waters. In response to comments received, the MPCA staff has modified the draft Permits to clarify and improve enforceability of compliance schedule requirements. The MPCA staff recommends that the Board approve the reissuance of each of the Permits.

ATTACHMENTS:

1. Proposed Findings of Fact, Conclusions of Law, and Order Permit No. MN0031879
2. Proposed Findings of Fact, Conclusions of law and Order Permit No. MN0055948
   Appendix A – Comment Letters received on the Draft Permits
   Appendix B – Responses to Comments Received on the Draft Permits
   Appendix C – Table of Changes to Draft NPDES/SDS Permits
3. Proposed NPDES/SDS Permit No. MN0031879
4. Proposed NPDES/SDS Permit No. MN0055948
5. Statement of Basis Permit No. MN0031879
6. Statement of Basis Permit No. MN0031879
7. Map of Facility

MINNESOTA POLLUTION CONTROL AGENCY
Industrial Division
Land and Water Quality Permits Section

United States Steel Corporation, Minnesota Ore Operations, Keetac
National Pollutant Discharge Elimination System/State Disposal System
Permits MN0031879 and MN0055948

October 25, 2011

ISSUE STATEMENT

The Minnesota Pollution Control Agency (MPCA) staff requests that the MPCA Citizens' Board (Board) approve reissuance of National Pollutant Discharge Elimination System (NPDES)/State Disposal System(SDS) Permits MN0031879 and MN0055948 (Permits) for the United States Steel Corporation – Minnesota Ore Operations (Permittee) – Keetac facility. The MPCA staff prepared the draft Permits for the Keetac facility, and submitted the draft Permits for public comments on June 27, 2011. The public comment periods for the Permits were extended twice, closing on August 19, 2011. Prior to extending the public comments period to end on August 19, 2011, the MPCA received 179 requests for extension of the public comments period, 177 were received in substantially identical e-mails. In addition to the requests for extension of the public comment periods, the MPCA received 117 comment letters regarding the Permits, 106 of which were received in substantially identical e-mails. Comments received on the draft Permits centered primarily on the relationship between the Permits and a proposed expansion on mining at the Keetac facility, water quality-based effluent limitations, and a compliance schedule in the draft Permits for the application of final effluent limitations for sulfate, which are based on an ambient water quality standard for wild rice production waters. In response to comments received, the MPCA staff has modified the draft Permits to clarify and improve enforceability of compliance schedule requirements. The MPCA staff recommends that the Board approve the reissuance of each of the Permits.

I. BACKGROUND:

A. Facility Description

The principal activity at the Keetac facility is the open pit mining of taconite from the Biwabik Iron Formation for processing into taconite pellets. The Keetac facility is currently subject to NPDES/SDS Permits MN0031879 and MN0055948, which regulate discharges from the mining/processing facility and the tailings basin system, respectively. The permitted activities under NPDES/SDS Permit MN0031879 consist of discharges from the Permittee's Keetac plant area, all mine excavations, mining waste disposal areas, plant areas, materials and equipment storage areas, and wastewater disposal facilities. The

permitted activities under NPDES/SDS Permit MN0055948 consist of discharges of process and dewatering wastewaters associated with the Keetac tailings basin system.

The Permittee has proposed an expansion to its mining and pellet production operations at the Keetac facility, which will increase production from 6.0 million short tons of pellets per year to 9.6 million short tons per year. A short ton equals 2,000 pounds. The proposed expansion exceeded the threshold for requiring mandatory environmental review. Pursuant to Minn. R. 4410.2000, subp. 3.B., the Permittee and the Minnesota Department of Natural Resources (DNR) agreed that a discretionary Environmental Impact Statement should be prepared pursuant to Minn. R. 4410.4400 subp. 8, and the DNR would be the Responsible Governmental Unit for the State of Minnesota.

B. Procedural History

On January 11, 2010, the MPCA received applications for modification of both of the Permits to address proposed mining expansion. The proposed expansion does not change the operation of the previously permitted disposal systems associated with the Keetac mine area and processing plant or the discharge of wastewater associated with the previously permitted disposal systems.

In February, 2010, the MPCA determined waters downstream from the discharges authorized by the Permits to be waters used for the production of wild rice.

In August, 2010, the MPCA staff determined that the requested modifications to the Permits should be included with the upcoming reissuance of each of the Permits.

On December 30, 2010, the DNR determined the final EIS for the proposed Keetac mine expansion to be adequate.

On June 27, 2011, the MPCA staff public noticed the draft Permits for reissuance.

On July 27, 2011, the MPCA staff extended the public comment period for the Permits to end on August 12, 2011, to account for business days lost due to the Minnesota State government service interruption that occurred in July.

On August 12, 2011, the US Environmental Protection Agency (EPA) formally requested a 30 day review of the draft Permits, starting from August 2, 2011, and ending on September 2, 2011.

On August 12, 2011, the MPCA staff extended the public comment period for the Permits to end on August 19, 2011, in response to requests for additional time to submit public comments.

On August 19, 2011, the public comment period for the draft Permits ended.

On September 2, 2011, the MPCA staff received comments from the EPA review of the draft Permits. The comments requested corrections and clarifications to the language in the draft Permits regarding the compliance schedule for sulfate.

II. DISCUSSION:

The draft permits do not authorize, and the permittee had not requested expansion of any of the permitted discharges above the volumes and mass loadings authorized under the previous permits. The substantial changes to the Permits, as compared to previous permits issued to this facility, occurred as a result of the determination that discharges from the facility impact downstream waters, which are used for the production of wild rice.

As required by federal Clean Water Act regulations, the MPCA staff performed an analysis to determine whether the discharge would have the reasonable potential to cause or contribute to a violation of any water quality standards in the receiving waters. Under the regulation, where the MPCA determines that a discharge of a particular pollutant has the reasonable potential to cause or contribute to a violation of an applicable water quality standard in a receiving water, the permit must include a water quality based effluent limit for that pollutant. This “reasonable potential” analysis results in water quality based effluent limit recommendations, which are included in the draft permits.

On February 2, 2010, the MPCA staff completed the effluent limit recommendations and associated nondegradation review for NPDES/SDS Permit MN0031879, in accordance with all state and federal regulations, as well as MPCA policies governing such reviews.

On April 7, 2011, the MPCA staff completed the effluent limits recommendations and associated nondegradation review for NPDES/SDS Permit MN0055948, in accordance with all state and federal regulations, as well as the MPCA policies governing such reviews.

Minnesota's water quality standards include a 10 mg/L sulfate limit for waters used for the production of wild rice when the rice may be susceptible to damage by high sulfate levels. The reasonable potential analysis for sulfate in the mine area discharges resulted in the inclusion of an effluent limit based on that standard. The sulfate effluent limits are 14 mg/L calendar month average and a 24 mg/L daily maximum. These effluent limits were calculated utilizing the same statistical procedures that are used to determine water quality-based effluent limitations for NPDES/SDS permits throughout Minnesota.

Because U. S. Steel is currently unable to comply with the sulfate effluent limits, the MPCA staff developed a compliance schedule based on the time required for the completion of evaluations and implementation of the final plans to attain compliance with the sulfate effluent limits. The compliance schedule was developed in accordance with the requirements of 40 CFR § 122.47, and Minn. R. 7001.0150, subp. 2 (A).

Commentors expressed a variety of concerns regarding the topics identified above. These comments are addressed in the Response to Comments document (Appendix B of Attachment 2). In response to comments made by EPA, changes were made to the draft permit, which are defined in Appendix C of Attachment 2. The following is a summary of the changes made to the draft permit: (1) the MPCA modified the tailings basin permit to include reference to the compliance schedule for non-tailings basin discharges found in the mining operations permit. (2) Interim effluent limits for sulfate were added to the permit for outfalls where full-scale treatment evaluation is approved. (3) Full-scale treatment evaluation is required for outfalls representative of wastewater type. (4) Additional monitoring requirements for selenium added to the permit.

Many of the other comments received from environmental groups and concerned citizens related to the effluent limits for sulfate, including whether the effluent limits were calculated appropriately and the assumptions used in the calculations, as well as concerns regarding the appropriate length of the compliance schedule to achieve the sulfate limits. Comments also included requests to increase the frequency of sulfate monitoring and to include additional monitoring and effluent limits for hardness and other parameters.

The issue before the Board is whether to reissue each of the two Permits as prepared by the MPCA staff. The MPCA's decision to reissue Permits is governed by Minn. R. 7001.0140 subp. 1, which states:

> *Subpart 1.Agency action. Except as provided in subpart 2, the agency shall issue, reissue, revoke and reissue, or modify a permit if the agency determines that the proposed permittee or permittees will, with respect to the facility or activity to be permitted, comply or will undertake a schedule of compliance to achieve compliance with all applicable state and federal pollution control statutes and rules administered by the agency, and conditions of the permit and that all applicable requirements of Minnesota Statutes, chapter 116D, and the rules adopted under Minnesota Statutes, chapter 116D, have been fulfilled. For solid waste facilities, the requirements of Minnesota Statutes, section 473.823, subdivisions 3 and 6, must also be fulfilled.*

The MPCA staff believes that the requirements of Minn. R. 7001.0140 subp. 1 have been fulfilled.

III. CONCLUSIONS:

For the reasons discussed above and more fully described in the Findings of Fact, Conclusions of Law and Order, in the staff's response to comments, and in the Statement of Basis for the Mining Operations, the MPCA staff believes that Permit No. MN0031879 should be issued.

For the reasons discussed above and more fully described in the Findings of Fact, Conclusions of Law and Order, in the staff's response to comments, and in the Statement of Basis for the Tailings Basin, the MPCA staff believes that Permit No. MN0055948 should be issued.

IV. RECOMMENDATION:

The MPCA staff recommends that, in accordance with the standard and criteria set forth in Minn. R. 4410.1700, the Board vote to approve issuance of NPDES/SDS Permits MN0031879 and MN0055948 for the United States Steel Corporation, Minnesota Ore Operations – Keetac facility.

SUGGESTED STAFF RESOLUTION

Authorization to Issue NPDES/SDS Permits MN0031879 and MN0055948

BE IT RESOLVED, that the Minnesota Pollution Control Agency (MPCA) approves and adopts the attached Findings of Fact, Conclusions of Law, and Order (Attachment 1 and Attachment 2) in support of its approval of issuance of the NPDES/SDS Permits for United States Steel Corporation, Minnesota Ore Operations - Keetac Project.

BE IT FURTHER RESOLVED, that the Commissioner is authorized to do the following: (1) execute the Findings of Fact, Conclusions of Law, and Order (Attachment 1 and Attachment 2) on behalf of the MPCA; (2) issue NPDES/SDS Permits MN0031879 and MN0055948 on behalf of the MPCA; and (3) undertake all actions necessary for issuance and effectiveness of the water permit.

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

IN THE MATTER OF THE PROPOSAL TO
REISSUE THE NPDES/SDS
PERMIT NO. MN0031879
FOR UNITED STATES STEEL – MINNESOTA ORE OPERATIONS - KEETAC
MINING
KEEWATIN, MINNESOTA

FINDINGS OF FACT
CONCLUSIONS OF LAW
AND ORDER

The above-entitled matter came before the Minnesota Pollution Control Agency (MPCA) Citizens' Board at a regular meeting held in St. Paul, Minnesota on October 25, 2011. Based on the MPCA staff review, comments and information received during the comment period, and other information in the record of the MPCA, the MPCA hereby makes the following Findings of Fact, Conclusions of Law, and Order:

FINDINGS OF FACT

This matter involves the application of United States Steel Corporation for reissuance of National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Permit No. MN0031879 for the Minnesota Ore Operations - Keetac – Mining Facility. For the purposes of these Findings, Conclusions of Law and Order, the United States Steel Corporation is referred to as U. S. Steel or the Permittee and the Minnesota Ore Operations Keetac – Mining Facility is referred to as Keetac. The permit reissuance includes: 1) a description of the proposed expansion of the taconite processing plant with which the permitted operations are associated; 2) effluent limitations based on the 10 mg/L sulfate water quality standard for "waters used for the production of wild rice;" and 3) continuation of the currently effective compliance schedule for the sulfate effluent limitations, which was added as part of a major permit modification issued on June 17, 2010. The MPCA must decide whether, under applicable statutes and rules, it should reissue the permit.

DESCRIPTION OF THE PROJECT

1. United States Steel Corporation ("U. S. Steel Corp.") owns and operates a taconite (iron ore) mine and processing plant in Keewatin, Minnesota. The facility, U. S. Steel Corporation, Minnesota Ore Operations - Keetac ("Keetac"), produces taconite pellets for use as a primary raw ingredient at iron and steel mills.

2. Iron ore mining and taconite pellet production have been on-going at the Keetac facility since 1967. The original Phase I taconite processing plant began operation in 1969. At that time, the Keetac facility included one operating taconite production line.

3. In 1977, the Phase II expansion added a second operating line. The Phase I line was idled in December 1980 under the ownership of National Steel Pellet Corporation. U. S. Steel Corp. purchased the National Steel Corporation in 2003, including the Keetac facility.

4. Currently, there is one operational pellet producing line (Phase II) with annual production of approximately 6.0 million tons of taconite pellets per year (MTPY). The facility has proposed an expansion to its mining and pellet production operations, which will increase production from 6.0 MTPY to 9.6 MTPY. A joint state and federal Environmental Impact Statement (EIS) was completed for the proposed expansion, and was determined to be adequate by the Minnesota Department of Natural Resources on December 30, 2010.

5. The reissuance of NPDES/SDS Permit No. MN0031879 is requested to authorize continued operation of permitted disposal systems associated with the Keetac mine area and processing plant, and the discharge of wastewater associated with the permitted disposal systems.

6. The current mining facility has four surface water discharge points. The proposed expansion does not change the operation of currently permitted disposal systems associated with the Keetac mine area and processing plant, or the discharge of wastewater associated with the currently permitted disposal systems, each of which is described below.

7. The water supply treatment plant, located just north of Welcome Lake, currently discharges backwash wastewater from the sand filters on a periodic basis through culvert outfall SD001, at a rate of less than 0.010 million gallons per day (MGD), to Welcome Lake.

8. A Diversion Ditch System consisting of a series of sedimentation basins and a conveyance channel, currently discharges treated runoff from the Keetac plant area and stockpile areas, as well as overflow discharges of mine pit dewatering and runoff from a holding and treatment basin identified as Reservoir 5, at an average rate of 2.3 MGD to Welcome Creek via weir outfall SD001.

9. Mine pit dewatering from the Mesabi Chief Pit may be pumped and discharged through pipe outfall SD003, at an average rate of 5.85 MGD, to O'Brien Creek, which flows to the O'Brien Reservoir.

10. Discharges of mine pit dewatering from the Perry Pit, which includes stormwater from stripping and stockpiling activities west of the Mesabi Chief mining area, are directed through pipe outfall SD012 at rate of up to 4.32 MGD to O'Brien Creek.

APPLICABLE STANDARDS

Technology-based Treatment Standards

11. Minn. R. 7053.0225 subp. 1.A requires that all point source dischargers of industrial or other wastes shall comply with applicable federal standards, including those listed in 40 CFR pt. 401 through 469. The MPCA has determined that the specific industrial category and federal effluent limitation guidelines (Categorical Standards) applicable to this facility are those described in 40 CFR pt. 440 subp. A, for the iron ore mining and dressing point source category.

12. The facility constitutes an existing source, and is therefore not subject to the New Source Performance Standards for this industry. The Categorical Standards for Best Practicable Control Technology currently available (BPT) and Best Available Technology economically achievable (BAT) have been applied for the conditions in this permit.

13. The applicable BPT and BAT standards for mining area discharges are for Total Suspended Solids (TSS) and Total Iron, as limited in the currently effective Permit.

14. The applicable standards for the discharge of water supply treatment plant backwash water are based on the State Discharge Restrictions for pH and TSS pursuant to Minn. R. 7053.0225, as limited in the currently effective Permit.

Water Quality Standards

15. The immediate receiving waters affected by this permit reissuance include: Welcome Lake, Welcome Creek, O'Brien Creek, and the O'Brien Reservoir.

16. All waters of the state of Minnesota must be classified based on considerations of best usage in the interest of the public and in conformance with the requirements of the applicable statutes, as described in Minn. R. 7050.0140. Based on these considerations, Welcome Creek and O'Brien Creek are classified as Class 2C waters as listed in 7050.0470 subp. 4.A. items (127) and (236), respectively. According to Minn. R. 7050.0410, any listed water in part 7050.0470 is also classified as a Class 3C, 4A, 4B, 5, and 6 water. Welcome Lake and O'Brien Reservoir are not listed waters in Minn. R. 7050.0470. As detailed in Minn. R. 7050.0430, all surface waters of the state that are not listed in part 7050.0470 and that are not wetlands as defined in part 7050.0186, subp. 1a, are classified as Class 2B, 3C, 4A, 4B, 5, and 6 waters.

17. Based on the applicable classifications, the receiving waters named above are designated for use in the forms of aquatic life and recreation, industrial consumption, agriculture and wildlife, aesthetic enjoyment and navigation, and other uses.

18. In addition, the MPCA staff has made the determination that discharges from the facility reach downstream waters, which are "used for the production of wild rice" as stated in Minn. R. 7050.0224 subp. 2. The wild rice determination was made prior to the permit modification dated June 17, 2010, and no revisions to the determination were made during the permit reissuance process.

19. As required by 40 C.F.R. § 122.44(d)(1), the MPCA evaluated the proposed discharge to determine whether it has a reasonable potential to cause or contribute to an excursion above applicable water quality standards.

20. Effluent limitations have been included in the draft Permit for total sulfate based on the results of the reasonable potential analysis.

21. In addition to the numeric water quality standards for applicable use classifications, Minn. R. 7050.0185 governs nondegradation for all waters. Nondegradation review is required by the MPCA for significant new and expanding discharges as defined in Minn. R. 7050.0185 to determine whether additional controls beyond compliance with water quality standards are warranted to prevent degradation of waters of the state. For this Permit, a significant new or expanded discharge would be defined as one in which the maximum design flow expands by more than 200,000 gallons per day above the existing baseline flow, or would increase the concentration of a toxic pollutant in the receiving water by greater than one percent. No expansion of the maximum

daily design flows above the currently permitted levels is authorized by the Permit. Additionally, the EIS for the proposed Keetac expansion project indicates that water chemistry in the discharges authorized by the Permit is not anticipated to change due to continuation of similar mining and dewatering activity following the expansion. Therefore, the discharges authorized by the Permit do not constitute significant new or expanded discharges, and nondegradation review is not required for the proposed reissuance of the Permit.

22. Minn. R. 7050.0180 governs nondegradation for Outstanding Resource Value Waters (ORVWs). None of the discharges authorized by the Permit are directly to ORVWs, therefore nondegradation with regard to ORVWs under the Permit is limited to verifying that new or expanding flows are controlled to prevent degradation of downstream ORVWs. As previously discussed, permitted flows are required to remain within the range currently permitted, and changes to the chemistry of the permitted discharges are not expected to occur. Therefore, degradation of downstream ORVWs is not anticipated, and additional controls are not required pursuant to Minn. R. 7050.0180.

PROTECTION OF WATERS USED FOR THE PRODUCTION OF WILD RICE

23. The reasonable potential analysis for sulfate in the mine area discharges resulted in the inclusion of an effluent limit based on the 10 mg/L stated applicable to "waters used for the production of wild rice." The sulfate effluent limits are 14 mg/L calendar month average and 24 mg/L daily maximum.

24. The effluent limitations for sulfate have been calculated utilizing statistical methods derived from the EPA Technical Support Document for Water Quality-Based Toxics Control. The limits are calculated assuming no dilution capacity in the receiving waters, maximum flow from the permitted discharges, and a waste load allocation of 10 mg/L sulfate based on the ambient water quality standard for waters used for the production of wild rice. Compliance with the calculated effluent limitations provides reasonable assurance that the Permittee's discharges are not causing or contributing to excursions above the water quality standard within the water bodies where the standard applies.

25. U. S. Steel is currently unable to comply with the sulfate effluent limits. Due to the complex nature of the wastewater disposal systems at the Keetac facility, a facility-wide compliance solution must be investigated that incorporates both water management and treatment solutions. The MPCA staff determined that inclusion of a compliance schedule in the permit is appropriate. Therefore, the permit reissuance includes a schedule for attaining compliance with the final effluent limitations for total sulfate on a facility-wide basis.

26. The compliance schedule in the draft Permit requires the completion of a Water Management Study and a Sulfate Reduction Strategy Study, which are required to inform the development and implementation of a Sulfate Reduction Plan. The implementation of the Sulfate Reduction Plan is required to lead to compliance with the final effluent limitations for sulfate as soon as possible. The Sulfate Reduction Plan must provide justification for the proposed timeframe for attaining compliance.

27. The schedule requires attainment of compliance as soon as possible and in no case later than August 17, 2018. The maximum term of the compliance schedule is based on potential time required for completion of evaluations by the Permittee, as well as time for implementation of any final plans for attaining compliance, including time for obtaining various regulatory approvals. The schedule does not automatically grant the maximum timeframe, but requires the MPCA approval at interim steps and requires that all interim steps proceed to compliance with final effluent limitations as soon as possible. The schedule requires the Permittee to make reductions in sulfate concentration to the extent practical prior to the end of the compliance schedule.

28. Interim requirements for the compliance schedule prior to the final attainment of compliance include completion of the Water Management Study and Sulfate Reduction Strategy Study currently underway, preparation and submittal of the Sulfate Reduction Plan, implementation of the Sulfate Reduction Plan following MPCA approval of the plan, and progress reporting. The Permit specifies maximum timeframes for completion of interim requirements. Implementation of the actions contained in the Sulfate Reduction Plan following the MPCA approval will also be enforceable actions due to implementation of the approved plan being an enforceable condition of the Permit.

29. Additional enforceable interim requirements are built into the schedule contingent upon the proposals in the Sulfate Reduction Plan. Distinct timeframes for the attainment of compliance following MPCA approval of the plan are required, and are dependent on whether or not the MPCA approves full-scale testing of treatment technology on representative outfalls prior to final implementation on all discharges. The Permit allows time for completion of such testing in the event that such a proposal is approved by the MPCA, but specifies maximum timeframes for completion of the testing, and requires that interim effluent limitations for sulfate be met at the representative outfalls following treatment evaluations. If full-scale treatment evaluation is not approved by the MPCA, the Permit requires compliance to be attained in a shorter timeframe.

REVISIONS TO THE SULFATE COMPLIANCE SCHEDULE FOLLOWING PUBLIC COMMENT PERIOD

30. The U.S. Environmental Protection Agency (EPA) requested to review the draft permit, outside of the public comment period, under federal oversight authority. The EPA submitted a comment letter to the MPCA dated September 2, 2011. Specific comments and the MPCA responses regarding the sulfate compliance schedule are discussed below. These changes were made following public notice of the Permit.

31. The EPA requested the MPCA to revise draft NPDES/SDS Permit No. MN0055948 either to incorporate by reference the compliance schedule in draft NPDES/SDS Permit No. MN0031879, or provide the same level of detail as is included in draft NPDES/SDS Permit No. MN0031879.

32. The MPCA staff modified draft NPDES/SDS Permit No. MN0055948 to include the compliance schedule contained in draft NPDES/SDS Permit No. MN0031879 by reference.

33. The EPA requested the MPCA to revise the compliance schedule so that the different paths within the compliance schedule following the MPCA approval or disapproval of treatment technology pilot studies are independent, and contain distinct enforceable actions leading to compliance with the effluent limits for sulfate.

34. The MPCA staff modified the language in draft NPDES/SDS Permit No. MN0031879 to indicate two distinct schedules, with distinct requirements for attainment of compliance with final effluent limitations for each case regarding the MPCA approval or disapproval of a request for full-scale treatment evaluation on representative outfalls.

35. The EPA requested the MPCA to revise the compliance schedule so that it is clear that the full scale treatment technology pilot studies are required for a representative outfall of each type of discharge, specifically tailings basin, dewatering pit, and Reservoir 5/sedimentation basins. The EPA asked that the MPCA staff specify that the representative dewatering pit outfall will be one included in draft NPDES/SDS Permit No. MN0031879 and therefore fall under that schedule.

36. The MPCA staff modified the compliance schedule in draft NPDES/SDS Permit No. MN0031879 to require evaluation of full-scale treatment evaluation for outfalls representative of wastewater type. The MPCA did not specify the three waste types contained in the EPA comments, due to the possibility of these waste types changing due to operational modifications, dependent on the results of the Water Management Study that is currently in progress. As an equivalent measure, the MPCA is requiring the Permittee to base any request for testing on representative outfalls on consideration of physical condition of the wastewater, wastewater chemistry, and the size/frequency of the discharge within the Sulfate Reduction Plan. The permit language has also been modified to specify compliance dates based on the type of wastewater discharged as requested.

37. The EPA stated that the schedules of compliance require successful full-scale pilot treatment of outfalls representing the various types of discharges at the facility. The EPA requested the MPCA to require interim limits for sulfate at each outfall selected for the full-scale pilot studies, effective upon completion of the testing phases specified in paragraphs 1.11, 1.12 and 1.13 of draft NPDES/SDS Permit No. MN0031879.

38. The MPCA staff modified the language to require compliance with an interim effluent limitation for total sulfate of 14 mg/L as a calendar quarter average. This effluent limitation will be applied on any outfalls for which full scale treatment evaluation is approved, following the completion of those evaluations, to ensure continued progress toward compliance with final effluent limitations.

39. The EPA requested the MPCA to correct the dates specified in the draft NPDES/SDS permits to reflect that the sulfate effluent limits shall be attained as soon as possible but no later than August 17, 2018, as opposed to the August 2019 date specified in the draft NPDES/SDS Permit No. MN0031879.

40. The MPCA staff corrected the final compliance date to require compliance with final effluent limitations as soon as possible and in no case later than August 17, 2018, for non-tailings basin discharges.

41. The revised compliance schedule language, based on EPA comments, is included in the permit document found in Attachment 3. The compliance schedule has been developed in accordance with the requirements of Minn. R. 7001.0150, subp. 2 (A) and 40 CFR § 122.47. The Permit requires that compliance with final effluent limitations be attained as soon as possible, and that completion of

interim steps result in continued progress toward compliance with final effluent limitations. Where the time between specific interim steps exceeds one year, the compliance schedule requires progress reports to be submitted to the MPCA at a minimum of every 6 months to provide details regarding the implementation of the requirements of the schedule and verify continued progress toward achieving compliance as soon as possible.

PROCEDURAL HISTORY

42. Pursuant to Minn. R. 7001.0100, a draft permit was prepared by the MPCA staff for the proposed permit reissuance.

43. The public comment period for the draft permit began on June 27, 2011, and ended on August 19, 2011. The initial 30-day comment period ended on July 27, 2011. Due to circumstances with the state government shutdown, which ran from July 1, 2011, to July 21, 2011, the comment period was extended to August 12, 2011, and a second extension was granted until August 19, 2011.

44. During the comment period, the MPCA received 2 comment letters from government agencies and received 11 comment letters from citizens.

45. The MPCA reviewed each of the comments and prepared responses to all comments received during the public comment period. Comment letters received have been hereby incorporated by reference as Appendix A to these findings. The MPCA responses to comments received are hereby incorporated by reference as Appendix B to these findings.

46. The MPCA concurs with the reasoning of MPCA staff in its Responses to Comments document (Attachment B) and adopts the reasoning by reference on these findings. The EPA comments and MPCA responses to those comments are also included in the Appendix A and Appendix B, respectively.

SELECTED COMMENTS AND MPCA RESPONSES

47. During the public comment period for the Permit, the MPCA received 179 requests for extension of the public comments period, 177 were received in substantially identical e-mails.

48. In addition to the requests for extension of the public comment periods, the MPCA received 117 comment letters regarding the Permit, 106 of which were received in substantially identical e-mails.

49. Comments received on the draft Permit centered primarily on the relationship between the Permits and a proposed expansion on mining at the Keetac facility, water quality-based effluent limitations, and a compliance schedule in the draft Permits for the application of final effluent limitations for sulfate, which are based on an ambient water quality standard for wild rice production waters.

50. In response to comments received, the MPCA staff has modified the draft Permit to clarify and improve enforceability of compliance schedule requirements.

51. The comments received on this Permit and NPDES/SDS Permit MN0055948, as well as the MPCA responses to the comments, are detailed in Appendix B.

FINAL DETERMINATION OF WHETHER TO REISSUE PERMIT

52. The MPCA finds there is jurisdiction for U. S Steel's NPDES/SDS permit reissuance in accordance with Minn. R. 7001.0100, subp. 1 which states:

> *Subpart 1. After a permit application is complete, the commissioner shall make a preliminary determination as to whether the permit should be issued or denied.*

53. The MPCA has followed the procedures for the reissuance of the NPDES/SDS Permit according to the provisions in Minn. R. ch. 7001.

54. The MPCA's decision to reissue the NPDES/SDS Permit is governed by its permit rule, Minn. R. 7001.0140, which in part, states:

> *Subpart 1. Except as provided in subpart 2, the agency shall issue, reissue, revoke and reissue, or modify a permit if the agency determines that the proposed permittee or permittees will, with respect to the facility or activity to be permitted, comply or will undertake a schedule of compliance to achieve compliance with all applicable state and federal pollution control statutes and rules administered by the agency, and conditions of the permit and that all applicable requirements of Minnesota Statutes, chapter 116D, and the rules adopted under Minnesota Statutes, chapter 116D, have been fulfilled. For solid waste facilities, the requirements of Minnesota Statutes, section 473.823, subdivisions 3 and 6, must also be fulfilled.*

CONCLUSIONS OF LAW

55. The MPCA is authorized and required to administer and enforce all laws relating to the pollution of the air and water of the state. Minn. Stat. chs. 115 and 116.

56. The MPCA has authority to reissuance this NPDES/SDS Permit. Minn. Stat. chs. 115 and 116 and Minn. R. chs. 7000, 7001, 7009, and 7020.

57. Under the federal Clean Water Act, the MPCA is delegated the authority from the EPA to issue NPDES permits. 33 U.S.C. §1342; Minn. Stat. § 115.03, subd. 5.

58. A draft permit for the facility was prepared and public noticed in accordance with the requirements of Minn. R. 7001.0100 and public comments on the draft permit were addressed in accordance with the MPCA rule requirements.

59. The requirements of Minn. R. ch. 7001, including Minn. R. 7001.0100 reissuance of a NPDES/SDS Permit, have been met including all applicable provisions of Minn. Stat. ch. 116D and Minn. R. ch. 4410. The MPCA determines that the Permittee will comply and will undertake the schedule of

compliance to achieve compliance with all applicable state and federal pollution control statutes and rules administered by the MPCA, and conditions of the reissued NPDES/SDS Permit.

60. The NPDES/SDS Permit contains effluent limitations and requirements that are protective of the environment and human health.

61. The findings of the MPCA justify reissuance of the NPDES/SDS Permit and do not support denial of the permit.

62. Areas where the potential for significant environmental effects may have existed have been identified and appropriate mitigation measures have been incorporated into the project design and permits. The project is expected to comply with all the MPCA standards.

63. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

The Minnesota Pollution Control Agency approves the reissuance of the National Pollutant Discharge Elimination System/State Disposal System Permit No. MN0031879 to U.S. Steel Corporation for the Minnesota Ore Operations Keetac - Mining Facility.

IT IS SO ORDERED

_____
Commissioner Paul W. Aasen
Chair, Citizens' Board
Minnesota Pollution Control Agency

_____
Date

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

IN THE MATTER OF THE PROPOSAL TO
REISSUE THE NPDES/SDS
PERMIT NO. MN0055948
FOR UNITED STATES STEEL – MINNESOTA ORE OPERATIONS – KEETAC
TAILINGS BASIN
KEEWATIN, MINNESOTA

FINDINGS OF FACT
CONCLUSIONS OF LAW
AND ORDER

The above-entitled matter came before the Minnesota Pollution Control Agency (MPCA) Citizens' Board at a regular meeting held in St. Paul, Minnesota on October 25, 2011. Based on the MPCA staff review, comments and information received during the comment period, and other information in the record of the MPCA, the MPCA hereby makes the following Findings of Fact, Conclusions of Law, and Order:

FINDINGS OF FACT

This matter involves the application of United States Steel Corporation for reissuance of National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Permit No. MN0055948 for the Minnesota Ore Operations - Keetac Tailings Basin. For the purposes of these Findings, Conclusions of Law and Order, the United States Steel Corporation is referred to as U. S. Steel or the Permittee and the Minnesota Ore Operations - Keetac Tailings Basin Facility is referred to as Keetac. The permit reissuance includes: 1) a description of the proposed expansion of the taconite processing plant with which the permitted operations are associated; 2) a new outfall constructed to facilitate direct discharge of Sargent Pit dewatering, which is currently directed to other outfalls that are covered under NPDES/SDS Permit No. MN0031879; and 3) a compliance schedule to meet the sulfate effluent limits based on the 10 mg/L sulfate water quality standard for "waters used for the production of wild rice."

DESCRIPTION OF THE PROJECT

1. United States Steel Corporation ("U. S. Steel Corp.") owns and operates a taconite (iron ore) mine and processing plant in Keewatin, Minnesota. The facility, U. S. Steel Corporation, Minnesota Ore Operations - Keetac ("Keetac"), produces taconite pellets for use as a primary raw ingredient at iron and steel mills.

2. Iron ore mining and taconite pellet production have been on-going at the Keetac facility since 1967. The original Phase I taconite processing plant began operation in 1969. At that time, the Keetac facility included one operating taconite production line.

3. In 1977, the Phase II expansion added a second operating line. The Phase I line was idled in December 1980 under the ownership of National Steel Pellet Corporation. U. S. Steel Corp. purchased the National Steel Corporation in 2003, including the Keetac facility.

4. Currently, there is one operational pellet producing line (Phase II) with annual production of approximately 6.0 million tons of taconite pellets per year (MTPY). The facility has proposed an expansion to their mining and pellet production operations, which will increase production from 6.0 MTPY to 9.6 MTPY. A joint state and federal Environmental Impact Statement (EIS) was completed for the proposed expansion, and was determined to be adequate by the Minnesota Department of Natural Resources on December 30, 2010.

5. The current facility has two surface water discharge points. The proposed expansion does not change the operation of previously permitted disposal systems associated with the Keetac mine area and processing plant, or the discharge of wastewater associated with the previously permitted disposal systems as described below.

6. Reservoir 6 is a holding and treatment basin used for water storage, and contains water decanted from the tailings basin. Return water for the plant water supply is pumped from a station on Reservoir 6. This reservoir discharges through siphon outfall SD001, at a combined maximum rate of 9.4 million gallons per day (MGD), to Reservoir 2, which is a water of the state that flows to the O'Brien Diversion Channel.

7. Outfall SD005 was established to discharge water from the tailings basin to Reservoir 2 North and Welcome Creek, to Reservoir 2, at a maximum flow of approximately 23 MGD. The proposed expansion to the mining and pellet manufacturing process will result in a vertical expansion of the tailings basin, and changes to the volumes discharged to and from the tailings basin. Discharges to surface water from the tailings basin following the expansion will not exceed the pre-expansion volumes.

8. The reissuance of NPDES/SDS Permit No. MN0055948 (Permit) is requested to authorize continued operation of permitted disposal systems associated with the Keetac tailings basin and the discharge of wastewater associated with the permitted disposal systems.

9. In order to better meet the operational needs of the facility, the Permittee requested a new outfall for dewatering the Sargent Pit, which is an existing mine pit where the dewatering water is currently directed to outfall SD003 authorized under NPDES/SDS Permit No. MN0031879 (Keetac Mining).

10. While the dewatering activity is similar to other mine pit dewatering operations authorized in NPDES/SDS Permit MN0031879, due to the proposed discharge location, MPCA staff determined that the direct discharge of mine pit dewatering from the Sargent Pit to an unnamed ditch should be included in NPDES/SDS Permit No. MN0055948.

11. The immediate receiving waters affected by this permit reissuance include: Reservoir 2, Reservoir 2 North, Welcome Creek, and an unnamed ditch, which discharges to Welcome Creek.

APPLICABLE STANDARDS

Technology-based Treatment Standards

12. Minn. R. 7053.0225 subp. 1.A requires that all point source dischargers of industrial or other wastes shall comply with applicable federal standards, including those listed in 40 CFR pt. 401 through 469. The MPCA has determined that the specific industrial category and federal effluent limitation guidelines (Categorical Standards) applicable to this facility are those described in 40 CFR pt. 440 subp. A, for the iron ore mining and dressing point source category.

13. The facility constitutes an existing source, and is therefore not subject to the New Source Performance Standards for this industry. The Categorical Standards for Best Practicable Control Technology currently available (BPT) and Best Available Technology economically achievable (BAT) have been applied for the conditions in this permit.

14. The applicable BPT and BAT standards for mining area and tailings basin discharges are total Suspended Solids (TSS) and Total Iron, as limited in the currently effective Permit.

Water Quality Standards

15. All waters of the state of Minnesota must be classified based on considerations of best usage in the interest of the public and in conformance with the requirements of the applicable statutes, as described in Minn. R. 7050.0140. Based on these considerations, Welcome Creek is classified as Class 2C waters as listed in 7050.0470 subp. 4.A. item (236). According to Minn. R. 7050.0410, any listed water in part 7050.0470 is also classified as a Class 3C, 4A, 4B, 5, and 6 water. Reservoir 2, Reservoir 2 North, and the unnamed ditch leading to Welcome Creek are not listed waters in Minn. R. 7050.0470. As detailed in Minn. R. 7050.0430, all surface waters of the state that are not listed in part 7050.0470 and that are not wetlands as defined in part 7050.0186, subp. 1a, are classified as Class 2B, 3C, 4A, 4B, 5, and 6 waters.

16. Based on the applicable classifications, the receiving waters named above are designated for use in the forms of aquatic life and recreation, industrial consumption, agriculture and wildlife, aesthetic enjoyment and navigation, and other uses.

17. In addition, the MPCA staff has made the determination that discharges from the facility reaches downstream waters, which are “used for the production of wild rice” as stated in Minn. R. 7050.0224 subp. 2. The determination was made prior to the permit modification dated June 17, 2010, and no revisions to the determination were made during the permit reissuance process.

18. As resquired by 40 C.F.R. § 122.44(d)(1), MPCA evaluated the proposed discharge to determine whether the discharge has a reasonable potential to cause or contribute to a violation of applicable water quality standards.

19. Effluent limitations have been included in the draft Permit for total sulfate based on the results of the reasonable potential analysis.

20. In addition to the numeric water quality standards for applicable use classifications, Minn. R. 7050.0185 governs nondegradation for all waters. Nondegradation review is required by the MPCA for significant new and expanding discharges as defined in Minn. R. 7050.0185 to determine whether additional controls beyond compliance with water quality standards are warranted to prevent degradation of waters of the state. For this Permit, a significant new or expanded discharge would be defined as one in which the maximum design flow expands by more than 200,000 gallons per day above the existing baseline flow, or would increase the concentration of a toxic pollutant in the receiving water by greater than one percent. Nondegradation review has been completed for this Permit as detailed below.

21. Given that the new discharge location for Sargent Pit dewatering to the unnamed ditch represents an expansion of the facility's permitted discharge to this receiving water by more than 0.2 mgd, and an increased loading of one or more pollutants over the baseline quality in the receiving water, the discharge of dewatering effluent has been reviewed in accordance with Minn. R. 7050.0185. The review includes consideration of the quantity and quality of the proposed discharge and the potential for violating water quality standards in the receiving water. The statistical reasonable potential analysis shows that the proposed project will not impair the designated beneficial uses of the receiving waters. Sargent Pit dewatering effluent is currently directed to other pits, and discharged via outfalls permitted under NPDES/SDS Permit MN0031879, therefore the new outfall only constitutes a new or expanded discharge to the extent that it discharges to waters that do not currently receive Sargent Pit dewatering effluent. The O'Brien Diversion Channel was determined to be a water of the state that already receives the proposed discharge, therefore nondegradation review was limited to waters of the state upstream from that water body. The proposed discharge has been permitted to protect water quality standards in the water bodies upstream of the O'Brien Diversion Channel. The EIS for the proposed Keetac expansion project indicates that water chemistry in the discharge is not anticipated to change due to continuation of similar mining and dewatering activity following the expansion, therefore degradation of the O'Brien Diversion Channel and its downstream waters is not expected. Additional controls to prevent degradation in the immediate receiving waters upstream of the O'Brien Diversion Channel have not been determined to be warranted pursuant to Minn. R. 7050.0185.

22. No expansion of the maximum daily design flows above the currently permitted levels is authorized by the Permit for stations SD001 or SD005. Additionally, the water chemistry in these discharges is not anticipated to change because the Permittee has committed to install additional treatment technology on internal waste streams to maintain baseline quality as defined in Minn. R. 7050.0185. Therefore, discharges via SD001 and SD005 authorized by the Permit do not constitute significant new or expanded discharges, and nondegradation review is not required for these discharges for the proposed reissuance of the Permit.

PROTECTION OF WATERS USED FOR THE PRODUCTION OF WILD RICE

23. The reasonable potential analysis for sulfate in the mine area discharges resulted in the inclusion of an effluent limit based on the 10 mg/L stated applicable to "waters used for the production of wild rice." The sulfate effluent limits are 14 mg/L calendar month average and 24 mg/L daily maximum.

24. The effluent limitations for sulfate have been calculated utilizing statistical methods derived from the U.S. Environmental Protection Agency (EPA) Technical Support Document for Water Quality-Based Toxics Control. The limits are calculated assuming no dilution capacity in the receiving waters, maximum flow from the permitted discharges, and a waste load allocation of 10 mg/L sulfate based on the ambient water quality standard for waters used for the production of wild rice. Compliance with the calculated effluent limitations provides reasonable assurance that the Permittee's discharges are not causing or contributing to excursions above the water quality standard within the water bodies where the standard applies.

25. U. S. Steel is currently unable to comply with the sulfate effluent limits. Due to the complex nature of the wastewater disposal systems at the Keetac facility, a facility-wide compliance solution must be investigated that incorporates both water management and treatment solutions. The MPCA staff determined that inclusion of a compliance schedule in the Permit is appropriate. Therefore, the Permit reissuance includes by reference a schedule contained in NPDES/SDS Permit MN0031879 for attaining compliance with the final effluent limitations for total sulfate on a facility-wide basis.

26. The compliance schedule in the draft Permit requires the completion of a Water Management Study and a Sulfate Reduction Strategy Study, which are required to inform the development and implementation of a Sulfate Reduction Plan. The implementation of the Sulfate Reduction Plan is required to lead to compliance with the final effluent limitations for sulfate as soon as possible. The Sulfate Reduction Plan must provide justification for the proposed timeframe for attaining compliance.

27. The schedule requires attainment of compliance as soon as possible and in no case later than August 17, 2018. The maximum term of the compliance schedule is based on potential time required for completion of evaluations by the Permittee, as well as time for implementation of any final plans for attaining compliance, including time for obtaining various regulatory approvals. The schedule does not automatically grant the maximum timeframe, but requires MPCA approval at interim steps and requires that all interim steps proceed to compliance with final effluent limitations as soon as possible. The schedule requires the Permittee to make reductions in sulfate concentration to the extent practical prior to the end of the compliance schedule.

28. Interim requirements for the compliance schedule prior to the final attainment of compliance include completion of the Water Management Study and Sulfate Reduction Strategy Study currently underway, preparation and submittal of the Sulfate Reduction Plan, implementation of the Sulfate Reduction Plan following the MPCA approval of the plan, and progress reporting. The Permit specifies maximum timeframes for completion of interim requirements. Implementation of the actions contained in the Sulfate Reduction Plan following MPCA approval will also be enforceable actions due to implementation of the approved plan being an enforceable condition of the Permit.

29. Additional enforceable interim requirements are built into the schedule contingent upon the proposals in the Sulfate Reduction Plan. Distinct timeframes for the attainment of compliance following the MPCA approval of the plan are required, and are dependent on whether or not the the MPCA approves full-scale testing of treatment technology on representative outfalls prior to final implementation on all discharges. The Permit allows time for completion of such testing in

the event that such a proposal is approved by the MPCA, but specifies maximum timeframes for completion of the testing, and requires that interim effluent limitations for sulfate be met at the representative outfalls following treatment evaluations. If full-scale treatment evaluation is not approved by the MPCA, the Permit requires compliance to be attained in a shorter timeframe.

REVISIONS TO THE SULFATE COMPLIANCE SCHEDULE

30. The EPA requested to review the draft permits, outside of the public comment period, under federal authority. The EPA submitted a comment letter to the MPCA dated September 2, 2011. Specific comments and the MPCA responses regarding the sulfate compliance schedule are discussed below.

31. The EPA requested the MPCA to revise draft NPDES/SDS Permit No. MN0055948 either to incorporate by reference the compliance schedule in draft NPDES/SDS Permit No. MN0031879, or provide the same level of detail as is included in draft NPDES/SDS Permit No. MN0031879.

32. The MPCA staff modified draft NPDES/SDS Permit No. MN0055948 to include the compliance schedule contained in draft NPDES/SDS Permit No. MN0031879 by reference.

33. The EPA requested the MPCA to revise the compliance schedule so that the different paths outlined in the compliance schedule following the MPCA approval or disapproval of treatment technology pilot studies are independent, and contain distinct enforceable actions leading to compliance with the effluent limits for sulfate.

34. The MPCA staff modified the language in draft NPDES/SDS Permit No. MN0059948 to indicate two distinct schedules, with distinct requirements for attainment of compliance with final effluent limitations for each case regarding MPCA approval or disapproval of a request for full-scale treatment evaluation on representative outfalls.

35. The EPA requested the MPCA to revise the compliance schedules so that it is clear that the full scale treatment technology pilot studies are required for a representative outfall of each type of discharge, specifically tailings basin, dewatering pit, and Reservoir 5/sedimentation basins. The EPA asked that the MPCA specify that the representative dewatering pit outfall will be one included in draft NPDES/SDS Permit No. MN0031879 and therefore fall under that schedule.

36. The MPCA staff modified the compliance schedule in draft NPDES/SDS Permit No. MN0031879 to require evaluation of full-scale treatment evaluation for outfalls representative of wastewater type. The MPCA has not specified the three waste types contained in the EPA comments, due to the possibility of these waste types changing due to operational modifications, dependent on the results of the Water Management Study that is currently in progress. As an equivalent measure, the MPCA is requiring the Permittee to base any request for testing on representative outfalls on consideration of physical condition of the wastewater, wastewater chemistry, and the size/frequency of the discharge within the Sulfate Reduction Plan. The permit language has also been modified to specify compliance dates based on the type of wastewater discharged as requested.

37. The EPA stated that the schedules of compliance require successful full-scale pilot treatment of outfalls representing the various types of discharges at the facility. The EPA requested the MPCA to require interim limits for sulfate at each outfall selected for the full-scale pilot studies, effective upon

completion of the testing phases specified in paragraphs 1.5, 1.6, and 1.7 of draft NPDES/SDS Permit No. MN0055948.

38. The MPCA staff modified the language to require compliance with an interim effluent limitation for total sulfate of 14 mg/L as a calendar quarter average. This effluent limitation will be applied on any outfalls for which full scale treatment evaluation is approved, following the completion of those evaluations, to ensure continued progress toward compliance with final effluent limitations.

39. The EPA requested the MPCA to correct the dates specified in the draft NPDES/SDS permits to reflect that the sulfate effluent limits shall be attained as soon as possible but no later than August 17, 2018, as opposed to the August 2019, date specified in the draft NPDES/SDS Permit No. MN0031879. Draft NPDES/SDS Permit No. MN0055948 also appears to specify the incorrect date. Please revise the dates specified in both draft permits to correct the discrepancy.

40. The MPCA staff corrected the final compliance dates to require compliance with final effluent limitations as soon as possible and in no case later than August 17, 2018, for non-tailings basin discharges, and August 17, 2019, for tailings basin discharges.

41. The revised compliance schedule language, based on EPA comments, is included in the permit documents found in Appendix XX. The compliance schedule has been developed in accordance with the requirements of Minn. R. 7001.0150, subp. 2 (A) and 40 CFR § 122.47. The Permit requires that compliance with final effluent limitations be attained as soon as possible, and that completion of interim steps result in continued progress toward compliance with final effluent limitations. Where the time between specific interim steps exceeds one year, the compliance schedule requires progress reports to be submitted to the MPCA at a minimum of every 6 months to provide details regarding the implementation of the requirements of the schedule and verify continued progress toward achieving compliance as soon as possible.

PROCEDURAL HISTORY

42. Pursuant to Minn. R. 7001.0100, a draft permit was prepared by the MPCA staff for the proposed permit reissuance.

43. The public comment period for the draft permit began on June 27, 2011, and ended on August 19,2011. The initial 30-day comment period ended on July 27, 2011. Due to circumstances with the state government shutdown, which ran from July 1, 2011 to July 21, 2011, the comment period was extended to August 12, 2011, and a second extension was granted until August 19, 2011.

44. During the comment period, the MPCA received 2 comment letters from government agencies and received 11 comment letters from citizens.

45. The MPCA reviewed each of the comments and prepared responses to all comments received during the public comment period. Comment letters received have been hereby incorporated by reference as Appendix A to these findings. The MPCA responses to comments received are hereby incorporated by reference as Appendix B to these findings.

46. The MPCA concurs with the reasoning of the MPCA staff in its Responses to Comments document (Attachment B) and adopts the reasoning by reference on these findings. The EPA comments and the MPCA responses to those comments are also included in the Appendix A and Appendix B, respectively.

SELECTED COMMENTS AND MPCA RESPONSES

47. During the public comment period for the Permit, the MPCA received 179 requests for extension of the public comments period, 177 were received in substantially identical e-mails.

48. In addition to the requests for extension of the public comment periods, the MPCA received 117 comment letters regarding the Permit, 106 of which were received in substantially identical e-mails.

49. Comments received on the draft Permit centered primarily on the relationship between the Permits and a proposed expansion on mining at the Keetac facility, water quality-based effluent limitations, and a compliance schedule in the draft Permits for the application of final effluent limitations for sulfate, which are based on an ambient water quality standard for wild rice production waters.

50. In response to comments received, the MPCA staff has modified the draft Permit to clarify and improve enforceability of compliance schedule requirements.

51. The comments received on this Permit and NPDES/SDS Permit MN0031879, as well as the MPCA responses to the comments, are detailed in Appendix B.

FINAL DETERMINATION OF WHETHER TO REISSUE PERMIT

52. The MPCA finds there is jurisdiction for U. S. Steel's NPDES/SDS permit reissuance in accordance with Minn. R. 7001.0100, subp. 1 which states:

> *Subpart 1. After a permit application is complete, the commissioner shall make a preliminary determination as to whether the permit should be issued or denied.*

53. The MPCA has followed the procedures for the reissuance of the NPDES/SDS Permit according to the provisions in Minn. R. ch. 7001.

54. The MPCA's decision to reissue the NPDES/SDS Permit is governed by its permit rule, Minn. R.7001.0140, which in part, states:

> *Subpart 1. Except as provided in subpart 2, the agency shall issue, reissue, revoke and reissue, or modify a permit if the agency determines that the proposed permittee or permittees will, with respect to the facility or activity to be permitted, comply or will undertake a schedule of compliance to achieve compliance with all applicable state and federal pollution control statutes and rules administered by the agency, and conditions of the permit and that all applicable requirements of Minnesota Statutes, chapter 116D,*

and the rules adopted under Minnesota Statutes, chapter 116D, have been fulfilled. For solid waste facilities, the requirements of Minnesota Statutes, section 473.823, subdivisions 3 and 6, must also be fulfilled.

CONCLUSIONS OF LAW

55. The MPCA is authorized and required to administer and enforce all laws relating to the pollution of the air and water of the state. Minn. Stat. chs. 115 and 116.

56. The MPCA has authority to reissuance this NPDES/SDS Permit. Minn. Stat. chs. 115 and 116 and Minn. R. chs. 7000, 7001, 7009, and 7020.

57. Under the federal Clean Water Act, the MPCA is delegated the authority from EPA to issue NPDES permits. 33 U.S.C. §1342; Minn. Stat. § 115.03, subd. 5.

58. A draft permit for the facility was prepared and public noticed in accordance with the requirements of Minn. R. 7001.0100 and public comments on the draft permit were addressed in accordance with MPCA rule requirements.

59. The requirements of Minn. R. ch. 7001, including Minn. R. 7001.0100 reissuance of a NPDES/SDS Permit, have been met including all applicable provisions of Minn. Stat. ch. 116D and Minn. R. ch. 4410. The MPCA determines that the Permittee will comply and will undertake the schedule of compliance to achieve compliance with all applicable state and federal pollution control statutes and rules administered by the MPCA, and conditions of the reissued NPDES/SDS Permit.

60. The NPDES/SDS Permit contains effluent limitations and requirements that are protective of the environment and human health.

61. The findings of the MPCA justify reissuance of the NPDES/SDS Permit and do not support denial of the permit.

62. Areas where the potential for significant environmental effects may have existed have been identified and appropriate mitigation measures have been incorporated into the project design and permits. The project is expected to comply with all MPCA standards.

63. Any findings that might properly be termed conclusions and any conclusions that might properly be termed findings are hereby adopted as such.

ORDER

The Minnesota Pollution Control Agency approves the reissuance of the National Pollutant Discharge Elimination System/State Disposal System Permit No. MN0055948 to U. S. Steel Corporation for the Minnesota Ore Operations – Keetac Tailings Basin.

IT IS SO ORDERED

_____

Commissioner Paul W. Aasen
Chair, Citizens' Board
Minnesota Pollution Control Agency

_____

Date

APPENDIX A

Minnesota Pollution Control Agency

United States Steel Corporation, Minnesota Ore Operations, Keetac
National Pollutant Discharge Elimination System/State Disposal System
Permits MN0031879 and MN0055948

LIST OF COMMENT LETTERS RECEIVED

1. Lenard Anderson, Cloquet Citizen. Letter received electronically August 12, 2011.
2. Larry Dolphin, Izaak Walton League of America. Letter received August 19, 2011.
3. Lotti Matkovits, Golden Valley Citizen, Letter received electronically August 11, 2011.
4. Kathryn Hoffman, Minnesota Center for Environmental Advocacy (MCEA), Letter received electronically August 19, 2011.
5. Kevin M. Pierard, U. S. EPA Region 5. Letter received September 2, 2011.
6. Paula Goodman Maccabee, Esq., Just Change Law Offices, WaterLegacy. Letter received electronically August 18, 2011.
7. Nick Axtell, 1854 Treaty Authority. Letter received electronically August 12, 2011.
8. Mason C and Gwen S Myers, Minnetonka Citizens, Letter received electronically August 19, 2011.
9. Susan Stewart, Mahtomedi Citizen, Letter received electronically August 18, 2011.
10. Christine Hoffman, Alexandria Citizen, Letter received electronically August 14, 2011.
11. Gale Havrilla, Silver Bay Citizen, Letter received electronically August 12, 2011.
12. Comments from Group of Concerned Citizens – Extension Request. Letters received electronically August 10, 2011, to August 20, 2011.
13. Comments from Group of Concerned Citizens. Letters received electronically August 15, 2011 to September 8, 2011.

Comments from Group of Concerned Citizens – Extension Request:

Greg Overlid, Tracy Napp, Jean Ross, Michele Nihipali, Mary Dosch, Harriet Mccleary, Stephen Rossitter, Elizabeth Mullen, William Herzberg, Mikanuk "Larry D. Adams," Kim Clymer Kelly, Diane Jankord, Rose Ramsey, Maxene Linehand, Cary Anderson, Beth Lewis, Ryan Anderson, Stephen Jay, Rebecca Lucking, Jacquelin Bartosh, Steven Koschak, Jane Koschak, Jamie Hoerter, Linville Doan, Steven Tracy, Amy Gardner, Lawrence Krantz, Melinda Sueflow, Stuart Knappmiller, Frank Moe, Kay Hempel, Ann Galbraith Miller, James Dushane, Pat Stevesand, Judith Rosenblatt, Paul Schollmeier, Carolyn Clements, Kay Labanca, Sue and Mike Prom, Guy Bateman, Elinor Ogden, Brian Major, Christine Hoffman, Christopher Boldt, Nathaniel Mordal, Paulette Anholm, Roger Michael, Jim Bambenek, Kay Koelkerwestby, Madelynn Frazier, Verba Weaver, Jamie Kaiser, Jan Scofield, Margaret Klette, Robert Robbings, Jayne Johnson, Judith Stoltzfus, William Dustin, Robert Davis, Frank Verderame, Colles Larkin, Terry Hokenson, Honor Schauland, Will Tajibnapis, Andy Pearson, Margie and David Back, Leslie Limberg, Lewsi Kuhlman, Amy Rus, Matt Johansen, Patricia Liquard, Sandra Keller, Anne Uehling, Gavin Sparby, Roger Muellner, Ann Marie, Mike Conrad, Betsey Porter, Mollie Schierman, David Howd, Susan Stewart, Jeanne Piehl, Karen Brugger, Kimberly Nieman, Martin Makinen, Kim Fishburn, Jim Carlen, Carol Mockovak, Dan Iverson, Kristi Kraling, Terry McCarthy, Sharon Meister, Jane Jasperson, John Paul Roy, Marie Digatono, James and Sara Conway, Alexander Heid, Jeffrey Kirst, Jim Scheidt, Mark Sulander, Dick Bently, Barbara Janssen, Alex Barbeau, John Schmitt, Jesse Lucking, Christopher Loch, Allan Hancock, Nan Corliss, Elizabeth Merz, Annie Gardner, Diadra Decker, Kurt Seaberg, Glady's Schmitz, SSND, Christopher Norbury, Seymour Gross, Kevin Koschak, John Viacrucis, Donald Janes, Ann Beane, Krissy Hughes, Chad Oness, Peter Veits, Mary Moriarty, Ordell Vee, David Higgins, Corinne Livesay, Rosemary Welch, Art Wilkinson, Susan Scherer, Michael Kinney, Tony Doom, Karen Matthew, Erin Strauss, Ann Mikkelsen, Mark Kassal, Sue Halligan, Elisabeth Johnson, Robert Bullis, Erik Roth, Candice Mohammad, Janice Hallman, Janice Greenfield, Gail Grabow, Alma Ronningen, Judy Nelson, Gary Rost, Mimi Gngold, Katherine Doerr, Brian Thornbjornsen, Barb Knoth, Robert Desjarlait, Sharon Fortunak, Walk Gordon, Andrea Heier, John Pegg, Kathleen Moraski, Brent Gurtek, Carol Schaaf, Loren Stoner, Karrie Vrabel, Marie Nickell, Kate Ford, Michael Rice, Rebecca Stoner, Jeffrey Masco, A Bonvouloir, Jon Damon, Catherine Chayka, Ann Herdna, Martha Krikava, Douglas Limon, Lynn Lang, Kathy Kormanik, Bryan Hansel, Sandy Dvorsky, Mark Jepson, Lotti Matkovits

Comments from Group of Concerned Citizens:

A. Bonvouloir, Allan Hancock, Analiese Miller, Ann Chemin, Ann Marie, Annie Gardner, Arnie Roos, Art Wilkinson, Barbara Janssen, Barbara Stamp, Betsey Porter, Bruce McKay, Carlos Zhingre, Carolyn Clemnts, Cheryl Dannenbring, Chris Burda, Christine Hoffman, Christopher Carlson, Corinne Livesay, David Higgins, Deborah Huskins, Diane Tuff, Dorie Reisenweber, Edjee Jonson, Edward Bouril, Erik Roth, Gail Grabow, Greg Klave, Gregory King, Guy Bateman, Harriet Mccleary, Herbert Davis, Honor Schauland, Ian Johnson, Jacqueline Bartosh, James Merkling, Jan Karon, Janice Greenfield, Jenna Conley, Jim Hart, Jim Hawkins, Jody Slocum, Joe Thorne, Johann Chemin, John Bussjaeger, John Schmitt, John Viacrucis, Karen Brugger, Karen Raccio, Kay Hempel, Kay Koelkerwestby, Krissy Hughes, Kristi Kraling, Kristin Olson, Lawrence Krantz, Lea Foushee, Lewis Kuhlman, Linda Morris, Lois Norrgard, Loren Stoner, Louis Asher, Lynn Lang, M. Richardson, Margie and David Back, Mark Kowaliw, Mark Salamon, Mary Lou Wilm, Mary Smith, Mary Suelflow, Mary Thompson, Mary Zink, Mikanuk "Larry D. Adams," Mike Ferguson, Mike Link, Mike Mjelde, Nan Corliss, Nancy Conger, Ordell Vee, Paul Thompson, Retha Dooley, Robert Davis, Roberta Avidor, Robin Poppe, Roger Muellner, Rosie Neher, Ryan Anderson, Sally Fineday, Sandra Keller, Saraphine Metis, Sharon Fortunak, Terry Hokenson, Terry Williams, Tony Doom, Tracy Napp, Tyler Henkels, Verba Weaver, Vikki Howard, Wanda Ballentine, Wendy Robertson, Will Tajibnapis, William Barton, William Dustin, William Herzberg

APPENDIX B

Minnesota Pollution Control Agency

United States Steel, Minnesota Ore Operations
Keetac – Tailings Basin NPDES/SDS Permit No. MN0055948
Keetac – Mining Operations NPDES/SDS Permit No. MN0031879

RESPONSES TO COMMENTS ON THE DRAFT PERMITS

1. Comments by Leonard Anderson, Cloquet Citizen. Letter received electronically August 12, 2011.

Comment 1-1: The sulfate limit allowed in this permit is in violation of the Minnesota standard for sulfate in wild rice.

Response: The comment indicates that the final effluent limitations contained in the draft permits are not consistent with the ambient water quality standard of 10 milligrams per liter (mg/L) sulfate for the protection of wild rice production waters, and that the maximum daily effluent limitation of 24 mg/L total sulfate is simply based on the highest observed value. The effluent limitations contained in the permit are based directly on the 10 mg/L total sulfate standard, and were calculated utilizing the same statistical procedures that are used to determine water quality-based effluent limitations (WQBEL) for National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permits throughout Minnesota. The maximum measured value of 23.4 mg/L was not used in any way to determine the appropriate effluent limitations, but rather was used as a basis for comparison to determine whether or not the discharges authorized by the permits exhibited reasonable potential to cause or contribute to an excursion above the applicable water quality standard in the receiving water body. Based on the statistical analyses that were completed, the Minnesota Pollution Control Agency (MPCA) technical staff have determined that compliance with the effluent limitations contained in the draft permits will ensure that the permittee is not causing or contributing to excursions above 10 mg/L total sulfate in the receiving waters.

Comment 1-2: It is wrong to write an agreement between United States Steel Corporation (USS). and the State of Minnesota that allows them to violate the 10 mg/L standard until August 17, 2019.

Response: The MPCA disagrees with the characterization of the permits as agreements. The permits are regulatory instruments that require compliance with applicable environmental protection requirements. MPCA also disagrees with the assertion that the permits allow U.S. Steel Corporation to violate the 10 mg/L water quality standard until 2019. This statement is incorrect, as the permits are regulatory documents that contain a schedule of compliance that requires the Permittee to comply with the final effluent limitations for sulfate as soon as possible. The permits require progress toward compliance throughout the duration of the compliance schedule, and do not automatically grant the maximum amount of time allowed by the schedule, but instead require continual progress toward compliance, and require approval of proposed timeframes by the Minnesota Pollution Control Agency (MPCA).

Comment 1-3: Fish tissue mercury should also be considered. Increased sulfate discharges will in turn increase mercury methylation and therefore increase the fish tissue mercury.

Response: The permits do not authorize discharge of additional sulfate above the nondegradation baseline under the current permits for the referenced waters. The sulfate and mercury monitoring requirements in the permits during the interim period prior to the attainment of compliance with the final effluent limitations are consistent with the MPCA policy for addressing mercury impairments, including fish tissue impairments affected by mercury methylation. The effluent limitations of 14 mg/L as a calendar month average and 24 mg/L as a daily maximum represent decreases from the current discharge concentrations; therefore it is incorrect to state that they will result in any additional degradation beyond currently observed levels. Furthermore, the compliance schedules in the draft permits require the Permittee to take actions to reduce sulfate concentrations to the extent practical as soon as possible during the interim period.

Comment 1-4: The sulfate limit in the permit should be 10 mg/L.

Response: The final effluent limitations in the draft Permits have been calculated based on a waste load allocation of 10 mg/L total sulfate, and are applied to ensure that the Permittee's discharges do not cause or contribute to excursions above the applicable ambient water quality standard for sulfate, thereby ensuring that the Permits are protective of waters used for the production of wild rice. The limits are applied with a schedule of compliance in accordance with all state and federal regulations. Therefore, the Permits have not been modified as requested in your letter.

2. <u>Comments by Larry Dolphin, Izaak Walton League of America. Letter received August 19, 2011.</u>

Comment 2-1: The Minnesota Division Izaak Walton League of America opposes the issuance of a permit that allows a 10 mg/L sulfate standard until August 17, 2019 and supports the comments of member Len Anderson.

Response: See responses to comment 1-1 through 1-4.

3. <u>Comments by Lotti Matkovits, Golden Valley Citizen, Letter received electronically August 11, 2011.</u>

Comment 3-1: The commenter opposes the issuance of the permits without imposing limits on mercury and other toxic metals.

Response: The MPCA has reviewed site-specific data from the permit applications, including effluent data for mercury and metals, and determined that the discharges do not exhibit reasonable potential to cause or contribute to an excursion above the applicable water quality standards in the receiving water body for those pollutants. This reasonable potential evaluation was completed consistent with applicable state and federal requirements and is detailed in the statement of basis documents supporting the draft permits. Furthermore, the mercury monitoring requirements in the draft permits are consistent with MPCA policy for addressing mercury impairments in receiving and downstream waters.

Comment 3-2: The commenter also requests more time to comment on the permits.

Response: The MPCA extended the original public comment period for the permits, with the final comment period closing on August 19, 2011. The information related to the Keetac expansion has previously been available for public review during the public notice of intent to major modify

NPDES/SDS Permit MN0031879, which was open from May 14, 2010, to June 14, 2010; the public comment period for the Environmental Impact Statement (EIS) scoping process, which was open from September 8, 2008 to October 8, 2008; the public comment period for the draft EIS, which was open for 45 days, ending on January 26, 2010; the public comment period for the final EIS, which was open from November 12, 2010, to December 20, 2010; and public meetings regarding the EIS on October 1, 2008, and January 11, 2010. Additionally, the public will have the opportunity to present comments regarding the proposed reissuance of the permits at the MPCA Citizens Board meeting on October 25, 2011, where the permits will be presented for final determination on the reissuance. Additional information regarding the meeting can be found on the MPCA website, at the following address: http://www.pca.state.mn.us/index.php/about-mpca/mpca-overview/mpca-citizens-board/mpca-citizens-board.html

4. Comments by Kathryn Hoffman, Minnesota Center for Environmental Advocacy (MCEA), Letter received electronically August 19, 2011.

Comment 4-1: MCEA requests that the MPCA Citizens Board consider the issuance of the NPDES permits.

Response: The MPCA has agreed to present the permits to the Citizens Board for final determination on the proposed reissuances, pursuant to requests received during the public comment period.

Comment 4-2: MCEA requests that changes be made to Permit MN0055948 to clarify the location and limit derivation for SD008.

Response: Page 6 of the permit lists SD008 as the sum of the outfalls associated with SD001 and SD005. This is not an additional outfall, but simply a mathematical summation of the discharge flows associated with SD001 and SD005 to ensure that the total volume discharged from the tailings basin meets federal regulations. Given that the interim and final periods referenced in the permit are associated with effluent limitations for sulfate at individual outfalls, the permit has been corrected to reflect that the monitoring and reporting requirements for SD008 are applicable during both the interim and final periods.

Comment 4-3: The compliance schedule is contrary to Minnesota law. It exceeds the maximum time period for compliance, and does not meet the statutory or regulatory definitions of a compliance schedule.

Response: The comments indicate that the compliance schedules contained in the draft permits exceed the maximum timeframe of five years allowed under Minn. R. 7052.0260 subp. 3. Please note that Minn. R. ch. 7052 applies specifically to the Lake Superior Basin. Given that the compliance schedule in the permits regulates point source discharges to the Mississippi River basin, the rules regarding compliance schedules under Minn. R. 7052.0260 are not applicable in this case. The compliance schedule has been developed in accordance with the requirements of Minn. R. 7001.0150 subp. 2.A.

The comments additionally state that the compliance schedules contained in the permits do not meet the requirements for a compliance schedule by failing to lead to compliance with applicable Minnesota Rules. The comment also states that the compliance schedules do not lead to compliance, as the schedule does not specify the means by which the limitations must be met, or

require interim benchmarks other than further study. These statements are incorrect, as the requirements of the compliance schedules are explicitly written with the requirement to attain compliance with the final effluent limitations for total sulfate contained in the permits. The requirements to complete the Water Management Study and the Sulfate Reduction Strategy Study, both currently in progress pursuant to NPDES/SDS Permit MN0031879, have the express purpose of informing the development of a Sulfate Reduction Plan that the Permittee is required to implement following MPCA review and approval to attain compliance with the final effluent limitations contained in the permits. The permits have been modified to clarify how the actions required by the compliance schedules must lead to compliance with the final effluent limitations for total sulfate.

The comments indicate that the compliance schedules in the permits fail to require interim measures that lead to compliance with the final effluent limitations, specifically stating that the interim requirements do not lead to compliance within five years, that interim reductions in pollutant load or concentration must be made to achieve compliance with final effluent limitations as soon as possible, and that the interim requirements of the schedules fail to meet the intent of the federal regulations governing compliance schedules in NDPES permits. As previously discussed, the five year maximum timeframe referenced in your comments is not applicable to the compliance schedules contained in the permits, and the schedules meet the applicable requirements under Minn. R. 7001.0150. Please note that the compliance schedules require the Permittee to continue minimizing sulfate concentrations in the discharge to the extent possible prior to the compliance date, a requirement which will be informed by the completion of the required Water Management Study and Sulfate Reduction Strategy Study currently in progress. Additionally, in response to comments received following public notice of the intent to reissue the permits, the MPCA has added requirements to comply with interim effluent limitations following completion of any approved treatment evaluations to ensure that continued progress is made toward compliance with the final effluent limitations prior to the end of the compliance schedules. Following completion of the required Water Management Study and Sulfate Reduction Strategy Study, the permits require the Permittee to implement the actions contained in an approved Sulfate Reduction Plan, which is required by permit language to lead to compliance with final effluent limitations as soon as possible. The language in the permits has been modified to clarify how implementation of the Sulfate Reduction Plan will lead to compliance with final effluent limitations.

The comments raise concern that no progress has been made toward compliance with effluent limitations based on the ambient water quality standard for sulfate in wild rice production waters. It should be noted that, as stated in the permits, the Permittee submitted plans for the Water Management Study and the Sulfate Reduction Strategy Study following modification of NPDES/SDS Permit MN0031879 on June 17, 2010, and both plans were approved by the MPCA on October 6, 2010. Both of the studies are currently in progress, as indicated by the first progress report, which was submitted in accordance with the requirements of NPDES/SDS Permit MN0031879 on April 6, 2011.

Additionally the comments correctly note that 40 CFR 122.47(a)(1) requires that compliance schedules must be written to require compliance as soon as possible. It should also be noted that the permits have been drafted to explicitly require that “Compliance with the final effluent limitations shall be attained as soon as possible, and in no case shall compliance be attained later than August 17, 2018, for non-tailings basin discharges, and August 17, 2019, for tailings basin

discharges, unless the permit is modified pursuant to 40 CFR 122.62." Additionally, the permits do not automatically grant the maximum amount of time, but rather require approval by the MPCA of proposed timeframes for the attainment of compliance, and ongoing demonstration by the Permittee through progress reports on the implementation of the Sulfate Reduction Plan that compliance is being attained as soon as possible.

The comments further state that the schedules in the draft permits fail to lead to compliance with the applicable effluent limitations because the compliance schedules do not mandate specific solutions that must be evaluated and implemented to lead to compliance with final effluent limitations. Please note that this is the express purpose of the required Water Management Study and Sulfate Reduction Strategy, and the implementation of solutions that will result in compliance with final effluent limitations for sulfate as soon as possible is the express purpose of the required Sulfate Reduction Plan. The language in the permits has been modified to clarify the intent of these actions.

Comment 4-4: The compliance schedule is contrary to federal law.

Response: The comments indicate that MPCA has violated federal regulation by failing to enforce the ambient water quality standard for sulfate in wild rice production waters, and has exercised authority in violation of federal law by failing to require compliance as soon as possible. As previously discussed, the draft permits include schedules, which specifically require the reduction of sulfate concentrations in the permitted discharges to the extent practical prior to achieving compliance with the final effluent limitations, and require the Permittee to evaluate and implement facility-wide water management strategies and sulfate reduction options with the explicit requirement to comply with final effluent limitations based on the applicable water quality standard as soon as possible. The schedule of compliance contained in the Permits requires that compliance be attained in accordance with all federal regulations. Comments further suggest that the inclusion of language regarding collection of data and research implies that the Permittee may select this as an alternative to compliance with final effluent limitations as required by the permits. Language included in Chapter 1, Section 2 of NPDES/SDS Permit MN0031879 in no way allows the Permittee to select an alternative to compliance with the final effluent limitations in the permits unless the permits are modified in accordance with all state and federal regulations. The language has not been removed at this time.

Comment 4-5: The permits do not reflect the additional pollution burden of the proposed expansion of Keetac mining operations.

Response: The comment indicates that the permits do not require mitigation of impacts on wastewater discharges resulting from the proposed increase in mining and taconite processing activities at the Keetac facility. Please note that the draft Permits do not authorize discharge of sulfate above the nondegradation baseline established by the currently effective Permits, and the Permittee has proposed to implement the mitigation for pollutant increases indicated in the final EIS for the proposed Keetac expansion project in order to prevent the unmitigated impacts predicted by the EIS, as indicated in the applications for the permits. Although the draft permits do not require the Permittee to implement specific mitigation actions, the Permittee is required to implement actions as necessary to prevent degradation of downstream waters and comply with all rules governing nondegradation. The permits do not authorize expansion or change to the characteristics of wastewater discharges that conflict with the requirements of Minn. R.

7050.0180 and Minn. R. 7050.0185 regarding nondegradation for waters of the state, therefore the Permittee must implement mitigation to prevent degradation above currently permitted levels. Furthermore, the compliance schedules previously discussed require the Permittee to further reduce sulfate-related impacts from existing levels. Therefore the impacts on wastewater discharges from the Keetac facility as a result of the proposed mining expansion are not expected to increase from the currently permitted levels. The permits have not been changed to require additional mitigation.

Comment 4-6: The commenter states that "reasonable potential" and WQBEL calculations should be done for all receiving waters, not just immediate receiving waters.

Response: The comment states that the calculations used to determine whether or not the Keetac discharges exhibit reasonable potential to cause or contribute to an excursion above the water quality standards are incomplete, as they have not evaluated the potential to exceed water quality standards in the receiving waters downstream from those immediately receiving the discharge. This statement is incorrect, as the MPCA does evaluate the potential to exceed water quality standards in downstream water bodies. This review is the basis for inclusion of effluent limitations for total sulfate in the draft permits. The immediate receiving waters have not been determined to be waters used for the production of wild rice, however the reasonable potential to cause or contribute to excursions above the ambient water quality standard for the protection of wild rice has been evaluated specifically because of the fact that downstream receiving waters have been determined by the MPCA to be waters used for the production of wild rice. Additionally, the comments state that the reasonable potential calculations do not take into account the higher flows for the downstream receiving waters where the ambient water quality standard for the protection of wild rice would actually apply. The MPCA has taken a conservative approach by applying the effluent limitations as calculated for the immediate receiving water, as the critical low flow rate of zero in the receiving water requires the Permittee to meet the water quality standard without any allowance for dilution in the receiving water, as reflected by the waste load allocation of 10 mg/L used in the reasonable potential calculations for sulfate.

Comment 4-7: When calculating the sulfate effluent limits, MPCA should use the actual coefficient of variation (CV) from the Keetac facility, not a hypothetical CV of 0.6.

Response: The comment indicates that effluent limitations for total sulfate should be calculated utilizing a CV of 0.106 based on the current variability observed in discharges via SD005, instead of an assumed CV of 0.6, as it results in a lower effluent limitation, which MCEA believes to be more conservative. The CV is a statistical value, which describes the variability associated with treatment operations, and the default value of 0.6 taken from U.S. Environmental Protection Agency (EPA) guidance is based on typical variability of effluent concentrations when treatment processes are utilized prior to discharge. Given the likelihood that some form of treatment will be necessary in order to comply with the final effluent limitations for the outfalls currently authorized by the permits, the assumption that the variability of effluent concentrations will remain the same as observed under current operations, in which there is no treatment process in operation specifically for the reduction of sulfate, is not justified. Additionally, the assumption of higher effluent variability is a more conservative assumption, as this assumes that a lower long-term average effluent concentration must be targeted in order to ensure that the effluent waste load allocation of 10 mg/L is met. The effluent limitations for the draft permits have not been

recalculated.

Comment 4-8: Based on USS's history, MPCA should require USS to monitor its outfall effluent daily, rather than twice a month. This will result in more accurate testing and more stringent limits.

Response: The permits require that a minimum of two samples per month be collected to demonstrate compliance with sulfate limitations. This sampling frequency is consistent with the MPCA practice for water quality-based effluent limitations in NPDES/SDS permits throughout Minnesota. Although the use of a higher sampling frequency in the statistical reasonable potential calculations does result in lower effluent limitations, the lower effluent limitation does not correlate to a better environmental impact, as the waste load allocation for the discharge of pollutants and the long term average pollutant concentration following treatment do not change. Given that the additional sampling is not believed to be necessary to ensure compliance with environmental standards, the monitoring frequencies required by the draft permits have not been changed.

5. Comment by Kevin M. Pierard, U. S. EPA Region 5. Letter received September 2, 2011.

Comment 5-1: Please revise draft NPDES/SDS Permit MN0055948 either to incorporate by reference the schedule in draft NPDES/SDS Permit MN0031879, or provide the same level of detail as is included in draft Permit MN0031879.

Response: NPDES/SDS Permit MN0055948 has been modified to include the compliance schedule contained in NPDES/SDS Permit MN0031879 by reference.

Comment 5-2: Please revise the schedules so that the different compliance schedules following MPCA approval or disapproval of treatment technology pilot studies are independent, and contain distinct enforceable actions leading to compliance with the WQBEL for sulfate.

Response: The language in NPDES/SDS Permit MN0031879 has been modified to indicate two distinct schedules, with distinct requirements for attainment of compliance with final effluent limitations for each case regarding the MPCA approval or disapproval of a request for full-scale treatment evaluation on representative outfalls.

Comment 5-3: Please revise the schedules so that it is clear that the full scale treatment technology pilot studies are required for a representative outfall of each type of discharge, specifically tailings basin, dewatering pit, and Reservoir 5/sedimentation basins. Please specify that the representative dewatering pit outfall will be one included in draft NPDES/SDS Permit MN0031879 and therefore fall under that schedule.

Response: The compliance schedule has been modified in NPDES/SDS Permit MN0031879 to require evaluation of full-scale treatment evaluation for outfalls representative of wastewater type. The MPCA has not specified the three waste types contained in your comments, due to the possibility of these waste types changing due to operational modifications, dependent on the results of the Water Management Study that is currently in progress. As an equivalent measure, the MPCA is requiring the Permittee to base any request for testing on representative outfalls on consideration of physical condition of the wastewater, wastewater chemistry, and the size/frequency of the discharge within the Sulfate Reduction Plan. The permit language has also been modified to

specify compliance dates based on the type of wastewater discharged as requested.

Comment 5-4: The schedules of compliance require successful full-scale pilot treatment of outfalls representing the various types of discharges at the facility. The schedules should require interim limits for sulfate at each outfall selected for the full-scale pilot studies, effective upon completion of the testing phases specified in paragraphs 1.11, 1.12, and 1.13 of draft NPDES/SDS Permit MN0031879 and paragraphs 1.5, 1.6, and 1.7 of draft NPDES/SDS Permit MN0055948.

Response: The language has been modified to require compliance with an interim effluent limitation for total sulfate of 14 mg/L as a calendar quarter average. This effluent limitation will be applied on any outfalls for which full scale treatment evaluation is approved, following the completion of those evaluations, to ensure continued progress toward compliance with final effluent limitations.

Comment 5-5: Please correct the dates specified in the draft permits to reflect that the sulfate WQBELs shall be attained as soon as possible but no later than August 17, 2018, as opposed to the August 2019 date specified in draft NPDES/SDS Permit MN0031879 permit. Draft NPDES/SDS Permit MN0055948 also appears to specify the incorrect date. Please revise the dates specified in both draft permits to correct the discrepancy.

Response: The final compliance dates have been corrected to require compliance with final effluent limitations as soon as possible and in no case later than August 17, 2018, for non-tailings basin discharges, and August 17, 2019, for tailings basin discharges.

Comment 5-6: There is significant public interest in this facility and both of these permits. MPCA should upload the facility discharge monitoring reports (DMRs) and permit compliance status and history for both permits to EPA's Integrated Compliance Information System (ICIS) database.

Response: At this time, the MPCA is not uploading the Permittee's DMRs and compliance status to the ICIS database. The MPCA recognizes the public interest in this facility, and the associated NPDES/SDS permits, and has noted EPA's comments regarding this issue. Please note that all public information regarding NPDES/SDS Permits MN0031879 and MN0055948, as well as the Permittee's compliance with these permits, is available for inspection and copying by any person pursuant to Minn. R. 7000.1200.

Comment 5-7: The data provided with the applications indicate that selenium has been detected at several outfalls. Selenium monitoring requirements are included in the draft permits for SD009 only. At a minimum, please add a monitoring requirement for selenium at SD005 in accordance with 40 CFR §§ 122.44 and 122.48.

Response: The MPCA has added a monitoring requirement for selenium at SD005 as requested.

6. <u>Comment by Paula Goodman Maccabee, Esq., Just Change Law Offices, WaterLegacy. Letter received electronically August 18, 2011.</u>

Comment 6-1: The draft permits for the Keetac Mine Area and Keetac Tailings Basin result from a major expansion of mining activity requiring a comprehensive nondegradation analysis.

Response: As a point of clarification, note that expansion of industrial activity does not trigger a requirement for a nondegradation analysis. The requirement to complete a nondegradation analysis is based on an increase in permitted discharge flow. Although the Permittee has proposed an expansion to the industrial activity conducted at the Keetac facility, the MPCA has determined that a nondegradation analysis is not required for most of the changes to the operation of the permitted disposal systems and the wastewater discharges associated with those systems as a result of the proposed expansion.

The comments correctly note that the applications, which were used for the reissuance of the permits, were originally submitted with the intent to address changes to the permitted operations at the Keetac facility as a result of the proposed mining expansion. It is also correct to state that there will be an increase in the area used for stockpiling, the volume of tailings and associated process wastewater sent from the processing facility to the tailings basin, wastewater discharges from the tailings basin system and dewatering waste streams, and chemical usage associated with taconite processing. However, the proposed changes to operations regulated by permits are primarily within the range currently allowed by the permits, and therefore would not require nondegradation review. In accordance with Minnesota Rules, nondegradation review was completed to the extent that the discharges authorized by the draft Permits constitute significant new or expanded discharges, as discussed in greater detail below.

As indicated in the comments, Minn. R. 7050.0185 subp. 4 require a nondegradation analysis for any new or expanded discharge that is a significant discharge as defined in Minn. R. 7050.0185 subp. 2.G. in order for the MPCA to determine whether additional control measures can reasonably be taken to minimize the impact of the discharge on the receiving water. As detailed in Minn. R. 7050.0185 subp. 5, for discharges of industrial and other wastes, the flow rate to be used to determine whether the discharge is significant is the design maximum daily flow rate. With the exception of the Permittee's proposal to discharge dewatering effluent from the Sargent Pit directly to an unnamed ditch flowing to Reservoir 2, the maximum design discharge flow rates anticipated for this permitting action are equivalent to or lower than the currently permitted flow rates, as indicated in the applications for the permits. For that reason, nondegradation analysis was not completed for the permitted wastewater outfalls that do not meet the definition of significant new or expanded discharges. Pursuant to Minn. R. 7050.0185, a nondegradation analysis was completed for the new discharge of Sargent Pit dewatering effluent to the unnamed ditch to the extent that the new discharge will impact the receiving water bodies, as indicated in the Statement of Basis for NPDES/SDS Permit MN0055948.

The comments further indicate that WaterLegacy believes that the draft Permits will result in degradation of downstream receiving waters, including ORVWs. As discussed in greater detail in the response to Comments 6-2 and 6-3, the MPCA has verified that the draft Permits prevent degradation of downstream receiving waters as required by the provisions of Minn. R. 7050.0180-7050.0185.

Comment 6-2: The Keetac mine expansion nondegradation review should analyze potential impacts to downstream waters of outstanding resource value and Lake Superior Basin waters.

Response: As previously discussed, a nondegradation review was completed for the new discharge of Sargent Pit dewatering effluent to an unnamed ditch leading to Reservoir 2, in accordance with Minn. R. 7050.0185, and that nondegradation review for the other permitted discharges was

determined by the MPCA not to be necessary as they do not meet the definition of a significant discharge. The comment indicates that additional nondegradation review is required to address impacts to water bodies downstream of the immediate water body that are Outstanding Resource Value Waters (ORVWs) as defined in Minn. R. 7050.0180.

The comments correctly state that the MPCA is required to control new and expanded discharges upstream of an ORVW to assure no deterioration in the quality of the downstream ORVW, pursuant to Minn. R. 7050.0180 subp. 9. The comments indicate that the MPCA has failed to apply this requirement based on a discretionary decision for the permits, citing a statement from the application for NPDES/SDS Permit MN0055948 reading "MPCA personnel indicated that for the purposes of this application, the MPCA would not apply ORVW nondegradation review, but would rely on the "all waters" classification of the water bodies discharged into and nearby downstream points." This statement should not be interpreted to mean that the MPCA has elected to selectively apply only Minn. R. 7050.0185 for nondegradation requirements applying to all waters, but rather that the MPCA has determined that the water bodies to which the nondegradation review must apply are limited to non-ORVW water bodies, specifically those between the immediate discharge and the O'Brien Diversion Channel, as discussed below.

As documented in the final EIS for the proposed Keetac mining expansion, and as indicated by the wastewater flow diagram in Appendix A, Figure 2 of the permit application for NPDES/SDS Permit MN0055948 illustrating current conditions, dewatering effluent from the Sargent Pit is currently discharged to O'Brien Creek via the Mesabi Chief Pit, as authorized by NPDES/SDS Permit MN0031879. Wastewater discharged via this outfall flows through the O'Brien Reservoir to the O'Brien Diversion Channel. The proposed direct discharge of Sargent Pit dewatering under NPDES/SDS Permit MN0055948 will also eventually discharge to the O'Brien Diversion Channel after flowing through Reservoir 2. Therefore, given that the effluent from this dewatering operation already reaches the proposed receiving waters downstream of Reservoir 2, the discharge does not constitute a new or expanded discharge to the O'Brien Diversion Channel, or any of the receiving waters downstream from that point, including the downstream ORVW water bodies. Therefore, the nondegradation analysis has been completed for the unnamed ditch to which Sargent Pit dewatering effluent will be discharged, as well as Reservoir 2, as they are the only water bodies that will be receiving a new or expanded discharge. Minn. R. 7050.0185 for Nondegradation for All Waters is the applicable rule governing nondegradation for these water bodies. Given that the proposed discharge is not a new or expanded discharge to water bodies downstream of the O'Brien Diversion Channel, the discharge is not expected to affect the water quality of downstream ORVWs, therefore additional controls to prevent degradation of downstream ORVWs pursuant to Minn. R. 7050.0180 subp. 9 are not warranted.

The comments further indicate that nondegradation analysis should be completed to determine impacts resulting from the expansion on Outstanding International Resource Waters (OIRWs) in the Lake Superior Basin due to some portions of the Keetac facility's operations being located within the Lake Superior watershed. As discussed in the EIS for the Keetac expansion, water transfers between basins and rerouting of surface runoff as a result of mining activity are regulated by the Department of Natural Resources, and are outside the scope of the permits. Furthermore, the additional runoff to the Lake Superior Basin resulting from the additional stockpiling activities meets the definition of an expanded discharge of industrial stormwater as described in Minn. R. 7052.0310. Therefore, the MPCA has determined that the requirements to maintain best management practices for the control of industrial stormwater as detailed in the

permits are adequate to protect the water quality of the Lake Superior Basin, and further analysis beyond the potential impacts evaluated in the EIS for the proposed Keetac expansion is not required.

Comment 6-3: The Keetac Mine and Tailings Basin permits should set maximum discharge loading limits and require conditions for treatment efficacy needed to prevent degradation of Minnesota Waters.

Response: The comments indicate that the permits should require mass loading limits and internal treatment improvements in order to ensure compliance with nondegradation requirements for hardness and sulfate. The baseline flows and associated pollutant loadings described in Minn. R. 7050.0185 are not intended to be effluent limitations, but instead are triggers for the evaluation of the need for additional requirements in the event that the Permittee proposes to expand their permitted discharge in such a way that it becomes a significant discharge as defined in the rule. The draft Permits do not authorize increased pollutant loading in the permitted discharges in such a way that the permitted discharge flows and baseline effluent quality as defined under Minn. R. 7050.0185 subp. 2.C. would be exceeded, and failure to maintain discharge loading below these values is a violation of the Permits due to incorporation of nondegradation rules by reference. The Permittee has proposed installation of treatment technology to ensure compliance with nondegradation rules, and the MPCA believes that the monitoring requirements for sulfate and hardness related parameters in the draft Permits are sufficient to verify that nondegradation rules are not violated following the operational changes associated with the proposed expansion of mining activity, therefore additional limitations and monitoring requirements have not been added.

Additionally, the comments identify the requirement to comply with final effluent limitations as an outcome following additional sulfate loading. As a point of clarification, the schedules for compliance with final effluent limitations for sulfate are not related to the Permittee's proposal to install additional treatment equipment to reduce sulfate loading to the tailings basin. The Permittee will be required to maintain sulfate loading in the tailings basin discharge below the baseline quality established by Minn. R. 7050.0185 immediately, and must manage water quality in the discharge as necessary to ensure compliance with the nondegradation requirements that are incorporated by reference in the permits. The schedules of compliance included in the permits are for additional reductions that the Permittee is required to make in order to comply with final effluent limitations for sulfate that are based on ambient water quality standards for the protection of wild rice.

The comments also request evaluation of the potential for iron and mercury to degrade water quality, and indicate a request for the inclusion of effluent limitations to restrict mass loading for these parameters to ensure compliance with nondegradation rules. As previously discussed, a nondegradation review was completed in accordance with Minn. R. 7050.0185 for the proposed new direct discharge of Sargent Pit dewatering effluent, in which the MPCA determined that the monitoring requirements for mercury, and the effluent limitations and related monitoring requirements for iron, are adequate to ensure that the water quality standards for the receiving waters will be met in accordance with Minn. R. 7050.0185 subp. 3, and that additional controls to prevent degradation of the receiving waters pursuant to Minn. R. 7050.0185 subp. 4 are not warranted. For the remaining Keetac discharges, as discussed on page 4-52 of the EIS for the proposed mining expansion, water quality associated with wastewater discharges is not anticipated to change for typical parameters of concern with the exception of the impacts associated with the scrubber blowdown waste stream and the treatment of that waste stream. Given that the pollutant

concentrations for iron and mercury are expected to remain within the ranges currently observed under the Keetac facility's existing operations, and, as previously discussed, the proposed changes to wastewater flows do not trigger nondegradation review for any discharges other than the Sargent Pit dewatering outfall, the MPCA has determined that the effluent limitations for iron and the monitoring requirements for mercury are sufficient to ensure compliance with the nondegradation requirements that are incorporated by reference in the permits.

Comment 6-4: The Keetac Mine and Tailings Basin permits should impose current effluent limits for sulfate. The schedules of compliance in the draft permits are inconsistent with applicable law.

Response: The comments correctly note the rule citations describing the requirements for schedules of compliance contained in NPDES/SDS permits. The MPCA has applied the state rules and federal regulations that are detailed in the comments in the permits.

The comments indicate that there is not necessarily a connection between the Water Management Study and the Sulfate Reduction Strategy Study (Studies) that are currently in progress pursuant to the requirements of the current NPDES/SDS Permit MN0031879 and a change in sulfate effluent. This is incorrect, as the express purpose of the Studies is to inform the required development of a Sulfate Reduction Plan, which the Permittee is required to implement following MPCA review and approval. The Sulfate Reduction Plan must identify the actions that will be taken by the Permittee with the specific purpose of complying with the final effluent limitations for sulfate. The comments further indicate that the permits do not meet the requirements of state and federal law by failing to require compliance as soon as possible. Please note that the language in the permits explicitly states that "compliance with final effluent limitations shall be attained as soon as possible…" The Permits are structured to require compliance based on a series of actions that could potentially last through August of 2018 for non-tailings basin discharges, and 2019 for tailings basin discharges; however the Permittee is required to comply with the final limitations more expeditiously if possible.

The comments indicate that the MPCA must require immediate compliance with effluent limitations that are based on water quality standards adopted before July 1, 1977. However, EPA precedent indicates that compliance schedules may be allowed for discharges subject to water quality-based effluent limitations derived from standards that are new, revised, or reinterpreted after July 1, 1977. The waters downstream from the Keetac facility's discharges are not specifically named in Minnesota Rules as waters used for the production of wild rice. Based on case-specific review of the information currently available, the MPCA newly interpreted the 10 mg/L sulfate standard in Minn. R. 7050.0224 subp. 2 to be applicable to water bodies downstream from the Keetac discharges in 2010. Therefore, compliance schedules have been determined to be allowed pursuant to Minn. R. 7001.0150.

Comment 6-5: Permits for the Keetac Mine and Tailings Basin should contain WQBELs for selenium, specific conductance, hardness and mercury.

Response: The comment correctly notes that the statement of basis for NPDES/SDS Permit MN0055948 indicates that limits are included in the draft permit for selenium and specific conductance. This statement was included in error, as the MPCA policy is not to include effluent limitations based on limited data. The MPCA has reviewed the data from the permit application for NPDES/SDS Permit MN0055948, and determined that additional monitoring is warranted for selenium and specific conductance at outfall SD009, however there is not sufficient data to determine whether or not reasonable potential exists to exceed water quality standards to warrant an effluent limitation for

either of these parameters.

The comments indicate that the MPCA has maximized the potential for dilution in evaluating the reasonable potential to exceed water quality standards by applying maximum design flow in the analysis. In fact, by applying the maximum design flow for the facility's discharge, and the 7Q10 low flow condition for the receiving stream, the MPCA has maximized the potential impact of the discharge on the receiving water concentration as required for these analyses. The critical conditions utilized in these analyses effectively model the reasonable potential to exceed water quality standards in the receiving stream assuming the highest predicted pollutant concentration in the effluent, the highest flow of effluent from the outfall, and the lowest dilution potential in the receiving stream.

The comments regarding hardness indicate that the reasonable potential analysis for this parameter is inadequate due to use of maximum dilution and an incorrect water quality standard. Please note that the water quality standard of 250 mg/L for hardness referenced in the comments is not a Class 2B water quality standard, but is a Class 3B water quality standard as detailed in Minn. R. 7050.0223 subp. 3, and is one of three standards referenced in Minn. R. 7050.0220 subp. 5a.A.(8). This standard is not applicable to the receiving waters for the Keetac discharges, as all of the applicable receiving waters have a Class 3C designation, for which the applicable ambient water quality standard for hardness is 500 mg/L, as utilized in the reasonable potential calculations. As previously discussed, the reasonable potential calculations assume critical conditions that model the minimum dilution; therefore the proper conditions have been evaluated.

The comments regarding mercury suggest that effluent limitations for mercury must be included in the Permits, and recommend an effluent limitation of 6.9 ng/L for the permitted discharges, and 1.3 ng/L for any discharges to the Lake Superior Basin. Please note that reasonable potential analyses have been completed for total mercury at all outfalls authorized by the Permits utilizing a waste load allocation of 6.9 ng/L based on the applicable water quality standards for the water bodies receiving the permitted discharges. None of the permitted discharges are to the Lake Superior Basin, therefore the 1.3 ng/L standard is not applicable. As previously discussed, the critical flow conditions used in the reasonable potential analyses do not maximize dilution potential, but rather account for minimal receiving water dilution. Given that the procedures used to account for mercury water quality standards in the Permits, as described in the final EIS, have not shown reasonable potential, effluent limitations have not been included in the draft Permits. Effluent monitoring requirements have been applied in the Permits, consistent with MPCA policy and the implementation plan for the state-wide mercury Total Maximum Daily Loads.

Comment 6-6: Permits for the Keetac Mine and Tailings Basin should require additional monitoring for hardness (calcium and magnesium), aluminum and manganese and multiple monitoring sites should be required to identify impacts of mine expansion.

Response: The comments indicate that monitoring requirements should be required for calcium in the tailings basin based on nondegradation concerns as previously discussed. As previously noted, the MPCA has included monitoring requirements on the influent waste stream to the tailings basin that is anticipated to contribute to additional hardness, which is believed to be adequate to ensure that nondegradation requirements are met for discharges from the tailings basin. Therefore, additional monitoring requirements have not been included.

The comments further indicate that hardness monitoring should be required on discharges from the Keetac mining area due to anticipated increased use of magnesium chloride as a dust suppressant as a result of the increased footprint of the mine following the proposed expansion. Please note that the mechanism by which this additive contributes to hardness is from precipitation runoff. The increase in the amount of the dust suppressant applied based is anticipated to be accompanied by an equivalent increase in runoff volume, therefore the hardness concentrations observed in the currently discharges are not anticipated to be affected by the proposed expansion, therefore additional monitoring requirements have not been included in the draft Permits.

The comments indicate that aluminum monitoring must be required due to the use of aluminum chlorhydrate in the turbidity treatment system that is used for discharges via SD002. Due to the use of this additive as a flocculent, the aluminum associated with the product becomes bound to the suspended solids from the wastewater. Due to the high removal of solids associated with the turbidity treatment system, aluminum concentrations are not anticipated to increase appreciably, therefore additional monitoring has not been required.

The comments request ongoing monitoring for manganese due to measured concentrations for that parameter in the Keetac tailings basin in excess of the Minnesota Health Risk Limit (HRL), and monitoring data from other mine facilities. Please note that the HRL referenced in the comments is not a water quality standard applicable to the discharges authorized by the Permits, therefore monitoring requirements have not been included in the draft Permits based on this comparison.

The comments express concerns regarding the monitoring frequency required for the permitted discharges. Monitoring requirements have been assigned consistent with MPCA practices for NPDES/SDS permits throughout Minnesota based on consideration of the detention times for the wastewater discharges authorized by the Permits, and the variability in concentrations associated with the industrial activities at the Keetac facility. Additionally, with regard to the comments on the sampling frequency required for mercury, the quarterly sampling requirement is included based on MPCA policy for mercury monitoring for industrial discharges.

Based on review of site-specific information from the Keetac expansion EIS and the data received to support the permit reissuance process, the MPCA has determined that the monitoring requirements are sufficient to characterize the permitted disposal systems and the associated discharges.

Comment 6-7: The permit review process should address additional concerns: mercury methylation, rating of mine expansion permits as "minor," and accessibility of public information.

Response: Your comments indicate concern that sulfate discharges from the Keetac facility will result in additional mercury methylation in receiving waters. Please note that, as previously discussed, the levels of sulfate in the permitted discharges are not authorized to exceed the currently permitted levels due to rules governing nondegradation. Futhermore, the compliance schedule for sulfate in the draft Permits requires that the Permittee further reduce sulfate loading to receiving waters, thereby further reducing the impact of sulfate on mercury methylation over the long-term. The ongoing monitoring requirements for both mercury and sulfate are consistent with MPCA policies for reducing mercury impacts in waters of the state.

Your comments regarding the process for rating NPDES permits as "major" or "minor" have been noted. Please note that the rating worksheet used by the MPCA is the same used for NPDES permits

issued by the U.S. Environmental Protection Agency (EPA), and that the EPA's ability to review NPDES/SDS permits issued by the MPCA is not affected by the permit rating.

Your comments regarding public process have been noted. Please note that all public information regarding NPDES/SDS Permits MN0031879 and MN0055948, as well as the Permittee's compliance with these permits, is available for inspection and copying by any person pursuant Minn. R. 7000.1200. Information regarding the presentation of the draft permits for final determination by the MPCA Citizens Board will be made available online at the following address: http://www.pca.state.mn.us/index.php/about-mpca/mpca-overview/mpca-citizens-board/mpca-citizens-board.html.

7. Comment by Nick Axtell, 1854 Treaty Authority. Letter received electronically August 12, 2011.

Comment 7-1: The 1854 Treaty Authority would like to see the reasonable potential analysis that was used to determine this average concentration level rather than the standard of 10 mg/L sulfate.

Response: Refer to the response to comment 1-1. In addition, the statement of basis supporting documents for each permit presents information on the reasonable potential analyses for sulfate.

Comment 7-2: The 1854 Treaty Authority is concerned with the length of time the compliance schedules will take and would like to see limitations on sulfate levels prior to the final effluent limits in 2019.

Response: Please refer to the response to comment 5-4.

8. Comment by Mason C and Gwen S Myers, Minnetonka Citizens, Letter received electronically August 19, 2011.

Comment 8-1: The permit will exceed air quality standards without treating wastewater.

Response: Comments have been noted by the MPCA, however, please note that air related comments do not pertain to the Keetac Mine and Keetac Tailings Basin permits identified in your e-mail, and the comments were received following completion of the public comment period for the air emissions permit.

Comment 8-2: The proposed permits are discouraging, given the mercury-related fish consumption restrictions on Minnesota lakes and rivers.

Response: Please refer to the responses to comments 1-3 and 3-1.

9. Comment by Susan Stewart, Mahtomedi Citizen, Letter received electronically August 18, 2011.

Comment 9-1: The commenter voices concern regarding water quality and the fragile nature of wild rice and the impact that mining operations have on these resources.

Response: Comment noted.

10. Comment by Christine Hoffman, Alexandria Citizen, Letter received electronically August 14, 2011.

Comment 10-1: The commenter voiced concerns regarding the natural resources of the area and the impact that mining activities have on the area.

Response: Comment noted.

11. Comment by Gale Havrilla, Silver Bay Citizen, Letter received electronically August 12, 2011.

Comment 11-1: Limits on mercury and other toxic metals should be set in accordance with existing regulations.

Response: Please refer to the response to comment 3-1.

Comment 11-2: The commenter is concerned about the levels of pollution in fish and wild rice in the area.

Response: Please refer to the response to comment 1-3.

12. Comments from Group of Concerned Citizens – Extension Request, Letters received electronically August 10, 2011, to August 20, 2011.

Comment 12-1: The public notices do not explain the proposed mining expansion at the Keetac facility.

Response: The Public Notice of Intent documents for each of the Permits that were distributed in accordance with Minnesota Rules on June 27, 2011, and again on July 27, 2011, when the public comment period was extended to August 12, 2011, to account for business days lost due to the Minnesota government shutdown, explicitly state "The facility has proposed an expansion to their mining and pellet production operations, which will increase production from 6.0 million short tons of pellets per year to 9.6 million short tons per year. The conditions of this permit reflect the changes associated with that expansion." Further, the permits and the statements of basis identify the changes in permitted activities that are anticipated for each of the permits as a result of the proposed mining expansion. As a point of clarification, it should be noted that the permits do not authorize an expansion of mining, but rather authorize the operation of disposal systems and the wastewater discharges associated with those systems. The expected changes associated with the permitted wastewater operations at the Keetac facility following the mining expansion have been well documented in the EIS for the Keetac expansion project, and the conditions in the draft permits are reflective of those changes, as detailed the statements of basis.

Comment 12-2: The draft permits do not explain how the effluent limitations that have been set will be protective of water quality following the proposed mining expansion.

Response: It is not common practice to include the specific details for setting effluent limitations within the text of NPDES/SDS permits, but rather to document this information in the associated statement of basis documents. The effluent limitations that have been included in the draft permits have been calculated in consideration of water quality impacts, consistent with state and federal requirements, as well as MPCA policy for all point source discharge permits in Minnesota.

The effluent limitations have been calculated using the methodology developed from the EPA "Technical Support Document for Water Quality-based Toxics Control," based on consideration of effluent data from the Keetac facility, the applicable ambient water quality standards for the water bodies receiving the Keetac discharges, and expected changes resulting from the Keetac expansion. The water quality considerations documented in the EIS and the statements of basis illustrate how the permits will be protective of water quality. Additionally, these documents address the basis for not including effluent limitations and monitoring requirements for the mining-related pollutants listed in your comments, based on site-specific data for the Keetac facility.

Comment 12-3: Comments were made relating to legislative action associated with the ambient water quality standard for total sulfate applicable to waters used for the production of wild rice.

Response: The MPCA wishes to clarify that the bill referenced in your comments did not result in any changes to the applicability of the current ambient water quality standards. Therefore, the draft permits do include the appropriate final effluent limitations for total sulfate based on all current state and federal regulations, and do require the Permittee to comply with the final effluent limitations based on the existing standard as soon as possible in accordance with the regulations governing compliance schedules in NPDES/SDS permits.

Comment 12-4: The commenter requested additional time to comment on the draft permits.

Response: The MPCA extended the public comment period to end on August 19, 2011, in order to allow for review of the information contained in this response. Please note that much of the information related to your comments has previously been available for public review during the public notice of intent to major modify NPDES/SDS Permit MN0031879, which was open from May 14, 2010, to June 14, 2010; the public comment period for the EIS scoping process, which was open from September 8, 2008, to October 8, 2008; the public comment period for the draft EIS, which was open for 45 days, ending on January 26, 2010; the public comment period for the final EIS, which was open from November 12, 2010, to December 20, 2010; and public meetings regarding the EIS on October 1, 2008, and January 11, 2010.

13. Comments from Group of Concerned Citizens. Letters received electronically August 15, 2011 to September 8, 2011.

Comment 13-1: The comments indicate that the draft permits does not explain how the effluent limitations that have been set will be protective of water quality following the proposed mining expansion.

Response: It is not common practice to include the specific details for setting effluent limitations within the text of NPDES/SDS permits, but rather to document this information in the associated statement of basis documents. As detailed in the statement of basis documents, the effluent limitations that have been included in the draft permits have been calculated in consideration of water quality impacts, consistent with state and federal requirements, as well as the MPCA policy for all point source discharge permits in Minnesota. The effluent limitations have been calculated using the methodology developed from the EPA "Technical Support Document for Water Quality-based Toxics Control," based on consideration of effluent data from the Keetac facility, the applicable ambient water quality standards for the water bodies receiving the Keetac discharges, and expected changes resulting from the Keetac expansion. The water quality considerations documented in the EIS and

the statements of basis illustrate how the permits will be protective of water quality. Additionally, these documents address the basis for not including effluent limitations and monitoring requirements for the mining-related pollutants listed in the comments, based on site-specific data for the Keetac facility. Additionally, the comments indicate that the draft permits do not set limits on the total amount of pollutants that will be discharged from the Keetac facility. This is incorrect, as both the water quality and technology-based effluent limitations contained in the permits restrict the concentrations for specific pollutants that can be discharged. These limitations on effluent concentration work in conjunction with Minnesota Rules regarding nondegradation, which are included by reference in the permits, ensure that the total loading of pollutants in the discharges authorized by the permits meets all applicable state and federal regulations.

Comment 13-2: The Keetac Air Emissions permit will allow more than 75 pounds of additional mercury to be emitted into the air.

Response: Comments have been noted by the MPCA, however, please note that these comments have no bearing on the Keetac Mine and Keetac Tailings Basin permits identified in your e-mail, and the comments were received following completion of the public comment period for the air emissions permit. As for mercury discharges associated with the discharges in the permits, please note that the mercury concentrations in the Keetac facility's wastewater discharges have not been shown to exhibit reasonable potential to cause or contribute to excursions above the ambient water quality standard for this pollutant.

Comment 13-3: The permits do not set any limits on the amount of sulfate allowed to be discharged as the Keetac facility expands.

Response: This is incorrect, due to the fact that the rules governing nondegradation incorporated in the permits require the Permittee to maintain discharge loading consistent the baseline quality authorized under the current Permits given that the Permits do not authorize expansion of discharge beyond this level. The Permittee is required to restrict sulfate loading in accordance with nondegradation requirements. Additionally, the permits require further reductions of sulfate loads in the permitted discharges in accordance with schedules of compliance, which specifically require the Permittee to make reductions in sulfate discharge concentrations to the extent practical prior to attaining compliance with final effluent limitations. It is important to note that the compliance schedules are not limited to studies, but require implementation of a Sulfate Reduction Plan, which is specifically required to result in compliance with final effluent limitations for total sulfate as soon as possible. The language in the permits has been updated to more clearly reflect the means by which the compliance schedules will lead to compliance with final effluent limitations.

APPENDIX C

Permit	Location	Original Permit Condition	Change	Comment
MN0031879	Compliance Schedule	Pilot studies use the same schedule	Two distinct schedules with requirements for attainment of compliance written into MN0031879	Performed upon request of USEPA
MN0031879	Compliance Schedule	Proposes treatment evaluation of multiple outfalls	Require full-scale treatment evaluation for outfalls representative of wastewater type	Performed upon request of USEPA
MN0031879	Compliance Schedule	No interim effluent limits	Addition of interim effluent limits within 36 months of approval of the Sulfate Reduction Plan for non-tailings basin discharges	Performed upon request of USEPA
MN0031879	Compliance Schedule	No interim effluent limits	Addition of interim effluent limits within 42 months of approval of the Sulfate Reduction Plan for representative tailings basin discharges	Performed upon request of USEPA
MN0031879	Compliance Schedule	No interim effluent limits	Interim sulfate limit for total sulfate of 14 mg/L as a calendar quarter average for outfalls where full scale treatment evaluation is approved	Performed upon request of USEPA
MN0031879	Compliance Schedule	Sulfate effluent limits to be attained as soon as possible but no later than August 17, 2019	Sulfate effluent limits to be attained as soon as possible but no later than August 17, 2018 for non-tailings basin discharges	Performed upon request of USEPA
MN0055948	Compliance Schedule	Compliance schedule only in MN0031879	Include compliance schedule from MN0031879 by reference in to MN0055948	Performed upon request of USEPA
MN0055948	Compliance Schedule	Pilot studies use the same schedule	Two distinct schedules with requirements for attainment of compliance written into MN0031879	Performed upon request of USEPA
MN0055948	Compliance Schedule	Proposes treatment evaluation of multiple outfalls	Require full-scale treatment evaluation for outfalls representative of wastewater type	Performed upon request of USEPA
MN0055948	Compliance Schedule	No interim effluent limits	Addition of interim effluent limits within 36 months of approval of the Sulfate Reduction Plan for non-tailings basin discharges	Performed upon request of USEPA
MN0055948	Compliance Schedule	No interim effluent limits	Addition of interim effluent limits within 42 months of approval of the Sulfate Reduction Plan for representative tailings basin discharges	Performed upon request of USEPA

MN0055948	Compliance Schedule	No interim effluent limits	Interim sulfate limit for total sulfate of 14 mg/L as a calendar quarter average for outfalls where full scale treatment evaluation is approved	Performed upon request of USEPA
MN0055948	Compliance Schedule	Sulfate effluent limits to be attained as soon as possible but no later than August 17, 2019	Sulfate effluent limits to be attained as soon as possible but no later than August 17, 2018 for non-tailings basin discharges	Performed upon request of USEPA
MN0055948 MN0031879	Monitoring		Additional Monitoring for selenium	

STATE OF MINNESOTA

Minnesota Pollution Control Agency

Industrial Division

National Pollutant Discharge Elimination System (NPDES)/
State Disposal System (SDS) Permit MN0031879

PERMITTEE:	United States Steel Corporation
FACILITY NAME:	Minnesota Ore Operations – Keetac – Mining
RECEIVING WATER:	Welcome Lake; Welcome Creek to Reservoir 2 North; Unnamed wetlands and creeks tributary to O'Brien Reservoir

CITY OR TOWNSHIP:	Keewatin	**COUNTY:**	Itasca
ISSUANCE DATE:		**EXPIRATION DATE:**	

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to construct, install and operate a disposal system at the facility named above and to discharge from this facility to the receiving water named above, in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with Minnesota and U.S. statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7050, 7053, 7060, 7090.3000 through 7090.3080, and the U.S. Clean Water Act.

This permit is effective on the issuance date identified above, and supersedes the previous permit that was issued for this facility on June 15, 2006. This permit expires at midnight on the expiration date identified above.

Signature: _____

Jeff Udd, P.E. *for* The Minnesota Pollution Control Agency
Acting Supervisor, Water Quality Permits Unit
Land and Water Quality Permits Section
Industrial Division

Submit DMRs to:
Attention: Discharge Monitoring Reports
Minnesota Pollution Control Agency
520 Lafayette Rd N
St Paul, MN 55155-4194

Submit Other WQ Reports to:
Attention: WQ Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Rd N
St Paul, MN 55155-4194

Questions on this permit?

- For DMR and other permit reporting issues, contact: Belinda Nicholas, 651-757-2613.
- For specific permit requirements or permit compliance status, contact: John Thomas, 218-302-6616.
- General permit or NPDES program questions, contact: MPCA, 651-282-6143 or 1-800-657-3938.

Table of Contents

Facility Description

The principal activity at this facility is the open pit mining of taconite (Biwabik Iron Formation) for processing into taconite pellets. The facility consists of the United States Steel Corporation, Minnesota Ore Operations – Keetac plant area, all mine excavations, mining waste disposal areas, plant areas, materials and equipment storage areas, and wastewater disposal facilities. The facility has proposed an expansion to their mining and pellet production operations, which will increase production from 6.0 million short tons of pellets per year to 9.6 million short tons per year. The conditions of this permit reflect the changes associated with that expansion.

The plant area includes the above-mentioned shops as well as several equipment storage buildings, the general office building, the water supply treatment plant, fuel storage area, crude ore storage building, concentrator, pellet plant, various processing thickeners, laboratory, power substation, coal, concentrate and pellet stockpile areas, and the pellet rail load-out area. Yard and roof run-off from the plant area is routed either to the Bennett Pit, Welcome Lake, or to the Diversion Ditch System. The water supply treatment plant, located just north of Welcome Lake, uses potassium permanganate and potassium hydroxide for iron removal. The water treatment plant backwash wastewater from the sand filters currently discharges on a periodic basis through culvert outfall SD001, at a rate of less than 0.010 MGD, to Welcome Lake (class 2B, 3B, 4A, 4B, 5 and 6 waters). Filter backwash solids from the water treatment plant are land applied on a site within the inactive Bennett tailings basin (SW ¼ of Section 17, T57N, R21W).

Most surface drainage from mining waste disposal and excavation areas in the facility is collected in mine pit sumps and then pumped to Reservoir 5. The Bennett Pit water overflows to the Russell Pit, which is pumped at an average rate of 4.0 million gallons per day (MGD) to Reservoir 5. This treatment basin also receives surface flow from inactive stockpiles and tailings basins. Reservoir 5 also provides some make-up water for processing in the Keewatin Taconite plant. Reservoir 5 outflows through a decant control structure to the Diversion Ditch System, constructed as a series of sedimentation basins and a conveyance channel. These basins help to treat run-off from the Keewatin Taconite plant area, as well as some active and inactive stockpile areas. The ditch system discharges through weir outfall SD002 at an average rate of 2.3 MGD to Welcome Creek (class 2C, 3C, 4A, 4B, 5 and 6 waters).

Mine pit dewatering from the Mesabi Chief Pit may be pumped and discharged through pipe outfall SD003, at an average rate of 5.85 MGD, to O'Brien Creek (2C, 3C, 4A, 4B, 5 and 6 water) which flows to the O'Brien Reservoir (class 2B, 3B, 4A, 4B, 5 and 6 water). Some mining waste stockpile drainage from the northwestern side of the facility flows to unnamed wetlands and creeks tributary to O'Brien Reservoir.

Stormwater from stripping and stockpiling activities west of the Mesabi Chief mining area flows into the Perry Pit. This permit authorizes discharges of mine pit dewatering from the Perry Pit through pipe outfall SD012 at rate of up to 4.32 MGD to O'Brien Creek.

Wastewater drainage is collected in the bottom of the two coarse crushers located in the Section 18 Pit. Crusher #1 wastewater is pumped at an average rate of 2.6 MGD to Sump #1, then to Reservoir 5. Crusher #2 wastewater is pumped to the Section 18 Pit, then to Reservoir 5. A septic tank/drainfield system handles the sanitary wastewater generated at the two coarse crushers, at a rate of less than 10,000 gallons per day (gpd). Dry storage buildings, which generate no process or sanitary wastewaters, are located at the facility north of Reservoir 5, south of the coarse crushers and east of the main plant area. A shovel repair area located on the northwest side of the Russell Pit, in the NW ¼, Section 13, T57N, R22W, also generates no process or sanitary wastewaters.

The combined floor drain overflow from the concentrator and the pellet plant is routed to the Bennett Pit. This overflow may include emergency overflow process wastewater from the concentrator if a power failure occurs. All steam cleaning and floor drain wastewater from the truck shops and the plant/machine/welding shops is treated by an oil/water separator and sedimentation tank before overflowing to a drainage pipe to the Bennett Pit. Sludge from the shop areas are taken off-site for treatment or disposal. Oils removed by the oil/water separator are reclaimed for reuse.

Two recirculating wet scrubbers treat waste gas from the Phase II indurating grate-kiln. Blowdown water from these wet scrubbers is sent to a wastewater treatment system. The treatment system is used when the indurating grate-kiln is using coal as a fuel source. The wastewater treatment system includes lime addition to promote calcium sulfate (gypsum) precipitation and solids settling in an existing thickener (old indurating thickener). Solids from the thickener are dewatered using two filter presses and disposed off-site. Overflow from the thickener and filtrate from the filter presses are sent to the tailings basin. Waste station WS011 is located at the plant water make-up to the scrubber system and waste station WS012 is located on the overflow from the indurating thickener prior to being sent to the tailings basin.

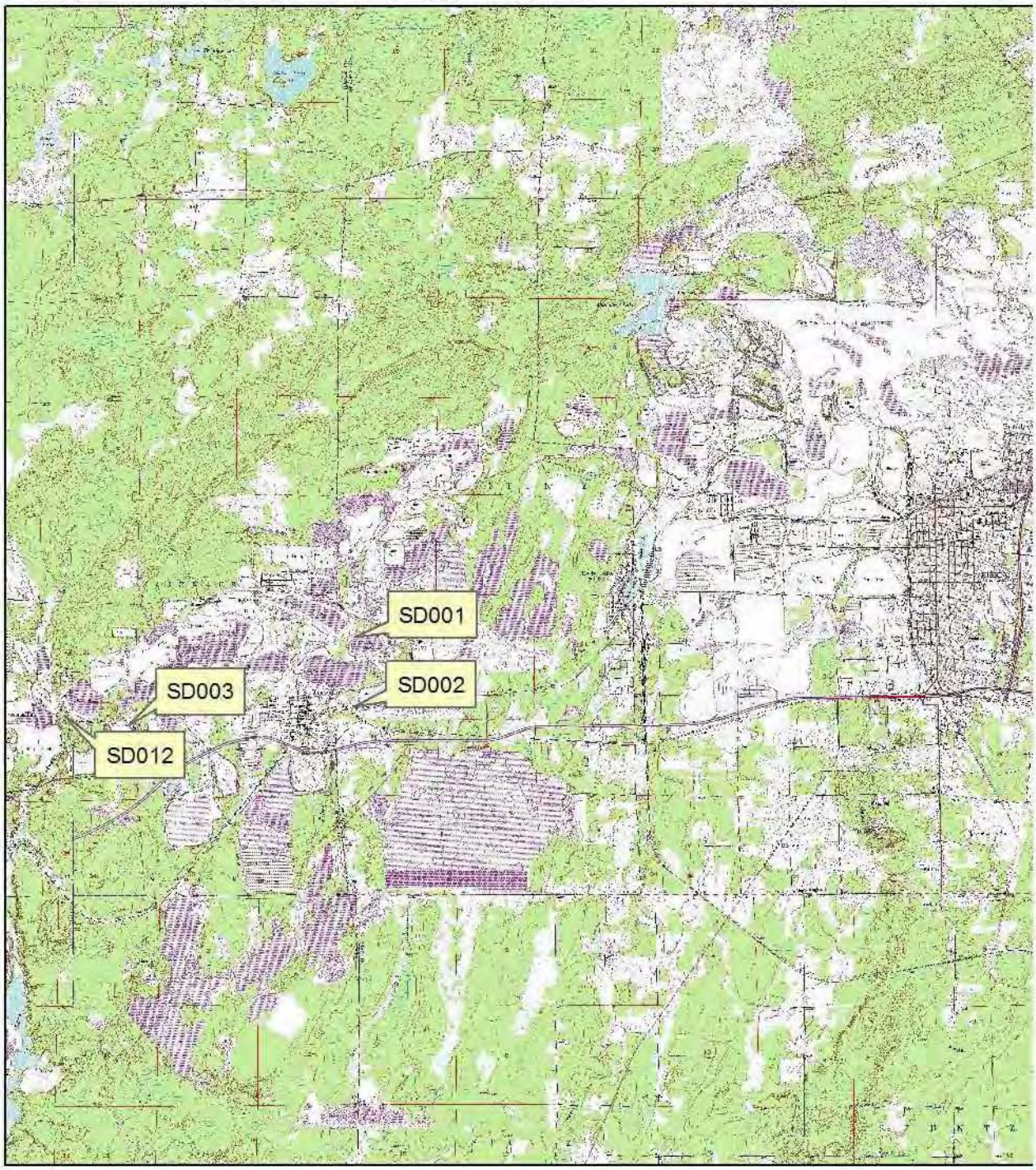
An activated sludge package plant consisting of a bar screen, comminutor, diffused aeration tank, sludge holding tank, and chlorination contact tank is used for the treatment of domestic wastewater. The sewage plant is designed to treat an average flow of 0.040 MGD with five-day carbonaceous biochemical oxygen demand (CBOD5) strength of 140 milligrams per liter (mg/l). No active dechlorination treatment is provided. The treated sanitary wastewater effluent is routed through weir station WS005 to Reservoir 5. The biosolids are transferred off-site to a permitted wastewater treatment facility.

Parallel tailings pipelines exit the north side of the concentrator and approximately follow the Diversion Ditch System east and south before crossing Highway 169 toward the Keewatin Taconite Tailings Basin Area. Segments of these pipelines do not have spill containment berms, and some leaks from pipelines north of Highway 169 may flow toward the Diversion Ditch. The tailings are pumped through the pipelines, which include three dump valve drainage points north of Highway 169. These dump valve points include detention basins and ponds used to contain tailings and process wastewater that is drained during normal maintenance and emergency shutdown situations. Dump Points 1 and 2 overflow to the Diversion Ditch System, while Dump Point 3 drains to a non-discharging infiltration basin. The tailings that do accumulate in these detention basins and ponds are typically removed every two years and hauled by truck for disposal in the Keewatin Taconite Tailings Basin, which is covered by permit MN0055948.

Chemical dust suppressants are occasionally applied on roads in the immediate plant area. Currently, magnesium chloride and lignosulfanate are used at a maximum rate of 11,000 gallons per year. This does not restrict the use of other acceptable dust suppressants at the facility.

Topographic Map of Permitted Facility

MN003189, US Steel - Keewatin Taconite Operations, Mining
St. Louis County & Itasca County, Minnesota



Map produced by: MPCA Staff, 4/15/2010
Source: USGS Nashwauk, Keewatin, Hibbing, Pengilly, Silica, Riley Quads
Scale: 1:24,000

0 0.5 1 2 Miles

N

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Waste Stream Stations

Station	Type of Station	Local Name	PLS Location
WS302	Solids to Land Treatment/Application	Shop wastewater treatment sludges	
WS303	Solids to Land Treatment/Application	WTP filter backwash treatment sludges	SW Quarter of the NW Quarter of the Section 19, Township 57 North, Range 21 West

Surface Discharge Stations

Station	Type of Station	Local Name	PLS Location
SD001	Effluent To Surface Water	WTP Backwash Outfall 040	SE Quarter of the SW Quarter of the NW Quarter of Section 19, Township 57 North, Range 21 West
SD002	Effluent To Surface Water	Weir Outfall 050	NE Quarter of the NW Quarter of the NW Quarter of Section 30, Township 57 North, Range 21 West
SD003	Effluent To Surface Water	Pipe Outfall 080	SW Quarter of the NE Quarter of the NE Quarter of Section 27, Township 57 North, Range 22 West
SD012	Effluent To Surface Water	Perry Pit Dewatering	

Waste Stream Stations

Station	Type of Station	Local Name	PLS Location
WS005	Internal Waste Stream	Station 901	NW Quarter of the NW Quarter of Section 19, Township 57 North, Range 21 West
WS011	Internal Waste Stream	Plant water to scrubber system	NW Quarter of Section 19, Township 57 North, Range 21 West
WS012	Internal Waste Stream	Scrubber blowdown after treatment	NW Quarter of Section 19, Township 57 North, Range 21 West

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period

SD 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Quarter Average	Jan-Dec	Measurement, Instantaneous	1 x Quarter	1
Flow	Monitor Only	MG	Calendar Quarter Total	Jan-Dec	Measurement, Instantaneous	1 x Quarter	1
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Quarter	1
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Quarter	1
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Quarter	1

SD 002

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	2 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
Nitrogen, Ammonia, Un-ionized (as N)	0.04	mg/L	Calendar Month Average	Mar-Oct	Calculation	1 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	Monitor Only	mg/L	Daily Maximum	Mar-Oct	Calculation	1 x Month	
Oil & Grease, Total Recoverable (Hexane Extraction)	0.5	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	1
Oil & Grease, Total Recoverable (Hexane Extraction)	5.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Quarter	1
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Single Value	Jan-Dec	Grab	1 x Quarter	1
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	
Temperature, Water (F)	Monitor Only	Deg F	Calendar Month Average	Mar-Oct	Estimate, Instantaneous	1 x Month	
Temperature, Water (F)	Monitor Only	Deg F	Daily Maximum	Mar-Oct	Estimate, Instantaneous	1 x Month	
Turbidity	25	NTU	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Turbidity	Monitor Only	NTU	Daily Maximum	Jan-Dec	Grab	2 x Month	

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period

SD 003

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
Oil & Grease, Total Recoverable (Hexane Extraction)	0.5	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	1
Oil & Grease, Total Recoverable (Hexane Extraction)	5.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Quarter	1
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	20	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	1
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Quarter	1
Specific Conductance	Monitor Only	umh/cm	Single Value	Jan-Dec	Grab	1 x Quarter	1
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Year Maximum	Jan-Dec	Grab	2 x Month	
Turbidity	25	NTU	Calendar Month Average	Jan-Dec	Grab	1 x Month	

SD 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	Monitor Only	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	3
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	3
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period

SD 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	3
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

WS 005

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	3.8	kg/day	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	6.0	kg/day	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100ml	Calendar Month Geometric Mean	Apr-Oct	Grab	2 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	mgd	Maximum Calendar Week Average	Jan-Dec	Measurement, Continuous	1 x Day	
Nitrogen, Total (as N)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	4.5	kg/day	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	6.8	kg/day	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	45	mg/L	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	

WS 011

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Calcium, Total (as Ca)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period

WS 011

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Fluoride, Total (as F)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	
pH	Monitor Only	SU	Single Value	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Single Value	Jan-Dec	Grab	1 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	

WS 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Calcium, Total (as Ca)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Fluoride, Total (as F)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
pH	Monitor Only	SU	Single Value	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Single Value	Jan-Dec	Grab	1 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	

Period: Limits Applicable in the Final Period

SD 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Quarter Average	Jan-Dec	Measurement, Instantaneous	1 x Quarter	1
Flow	Monitor Only	MG	Calendar Quarter Total	Jan-Dec	Measurement, Instantaneous	1 x Quarter	1
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Quarter	1
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Quarter	1
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Quarter	1

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Final Period

SD 002

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	2 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	2 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
Nitrogen, Ammonia, Un-ionized (as N)	0.04	mg/L	Calendar Month Average	Mar-Oct	Calculation	1 x Month	
Nitrogen, Ammonia, Un-ionized (as N)	Monitor Only	mg/L	Daily Maximum	Mar-Oct	Calculation	1 x Month	
Oil & Grease, Total Recoverable (Hexane Extraction)	0.5	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	1
Oil & Grease, Total Recoverable (Hexane Extraction)	5.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Quarter	1
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Single Value	Jan-Dec	Grab	1 x Quarter	1
Sulfate, Total (as SO4)	14	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	24	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	
Temperature, Water (F)	Monitor Only	Deg F	Calendar Month Average	Mar-Oct	Estimate, Instantaneous	1 x Month	
Temperature, Water (F)	Monitor Only	Deg F	Daily Maximum	Mar-Oct	Estimate, Instantaneous	1 x Month	
Turbidity	25	NTU	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Turbidity	Monitor Only	NTU	Daily Maximum	Jan-Dec	Grab	2 x Month	

SD 003

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Final Period

SD 003

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Oil & Grease, Total Recoverable (Hexane Extraction)	0.5	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	1
Oil & Grease, Total Recoverable (Hexane Extraction)	5.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Quarter	1
pH	8.5	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.5	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	20	mg/L	Calendar Quarter Average	Jan-Dec	Grab	1 x Quarter	1
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Quarter	1
Specific Conductance	Monitor Only	umh/cm	Single Value	Jan-Dec	Grab	1 x Quarter	1
Sulfate, Total (as SO4)	14	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	24	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	
Turbidity	25	NTU	Calendar Month Average	Jan-Dec	Grab	1 x Month	

SD 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Hardness, Calcium & Magnesium, Calculated (as CaCO3)	Monitor Only	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	3
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	3
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Quarter Maximum	Jan-Dec	Grab	1 x Quarter	3
Sulfate, Total (as SO4)	14	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	24	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Final Period

WS 005

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
BOD, Carbonaceous 05 Day (20 Deg C)	3.8	kg/day	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	25	mg/L	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	6.0	kg/day	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
BOD, Carbonaceous 05 Day (20 Deg C)	40	mg/L	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Fecal Coliform, MPN or Membrane Filter 44.5C	200	#100ml	Calendar Month Geometric Mean	Apr-Oct	Grab	2 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Day	
Flow	Monitor Only	mgd	Maximum Calendar Week Average	Jan-Dec	Measurement, Continuous	1 x Day	
Nitrogen, Total (as N)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	2 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	2 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Phosphorus, Total (as P)	Monitor Only	mg/L	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	4.5	kg/day	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Calendar Month Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	6.8	kg/day	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	
Solids, Total Suspended (TSS)	45	mg/L	Maximum Calendar Week Average	Jan-Dec	8-Hour Flow Composite	2 x Month	

WS 011

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Calcium, Total (as Ca)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Fluoride, Total (as F)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	
pH	Monitor Only	SU	Single Value	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Single Value	Jan-Dec	Grab	1 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Final Period

WS 012

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Calcium, Total (as Ca)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Fluoride, Total (as F)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
pH	Monitor Only	SU	Single Value	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Single Value	Jan-Dec	Grab	1 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	1 x Month	

Notes:
1 -- Samples may be taken any time during each calendar quarter but must be reported on the DMR for the last month of each quarter (e.g. the sample for the first calendar quarter of Jan - Mar should be reported on the March DMR).
2 -- Samples may be taken any time during each calendar quarter but must be reported on the DMR for the last month of each quarter (e.g. the sample for the first calendar quarter of Jan - Mar should be reported on the March DMR). Use EPA method 1631, with clean techniques method 1669, and any revisionsto this methods.
3 -- Samples may be taken any time during each calendar quarter but must be reported on the DMR for the last month of each quarter (e.g. the sample for the first calendar quarter of Jan - Mar should be reported on the March DMR). The permittee may request to modify this permit after 12 months of monitoring data have been submitted to MPCA, in order to remove or modify limits or monitoring requirements.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 1. Special Requirements

1. Compliance Schedule

Compliance Schedule for Sulfate

1.1 The Permittee shall meet the terms of the compliance schedule detailed below in order to attain compliance with the final effluent limitations contained in this permit and NPDES/SDS Permit MN0055948 for total sulfate.

The Permittee shall continue to work toward minimizing sulfate in the discharges to the extent practical prior to the compliance date. Compliance with the final effluent limitations shall be attained as soon as possible, and in no case shall compliance be attained later than August 17, 2018 for non-tailings basin discharges, and August 17, 2019 for tailings basin discharges, unless the permit is modified pursuant to 40 CFR 122.62.

Water Management Study

1.2 The Permittee has submitted a Water Management Study Plan to refine the water mass balance, and evaluate water discharge and water consumption alternatives that may lead to compliance. The Water Management Study Plan was approved by the MPCA on October 6, 2010.

1.3 The Water Management Study shall be completed within 18 months of MPCA approval of the Water Management Study Plan. The Permittee, upon approval from the MPCA, may make revisions to the Water Management Study Plan as new alternatives and information emerge and as deemed appropriate. The Permittee shall notify the MPCA within 14 days of completion of the Water Management Study.

1.4 The Permittee shall provide written progress updates on the Water Management Study to the MPCA every six months, at minimum, following MPCA approval of the Water Management Study Plan. Additional updates can be provided in the form of electronic transmittals, conference calls or meetings.

1.5 The Permittee shall provide the results of the Water Management Study to the MPCA within three months of completion of the Water Management Study.

Sulfate Reduction Strategy Study

1.6 The Permittee has submitted a Sulfate Reduction Strategy Study Plan for water quantity and quality data review, and evaluation of source control strategies and sulfate treatment technologies that may lead to compliance. The Sulfate Reduction Strategy Study Plan was approved by the MPCA on October 6, 2010.

1.7 The Sulfate Reduction Strategy Study shall be completed within 18 months of MPCA approval of the Sulfate Reduction Strategy Study Plan. The Permittee, upon approval from the MPCA, may make revisions to the Sulfate Reduction Strategy Study Plan as new alternatives and information emerge and as deemed appropriate. The Permittee shall notify the MPCA within 14 days of completion of the Sulfate Reduction Strategy Study.

1.8 The Permittee shall provide written progress updates on the Sulfate Reduction Strategy Study to the MPCA every six months, at minimum, following MPCA approval of the Sulfate Reduction Strategy Study Plan. Additional updates can be provided in the form of electronic transmittals, conference calls or meetings.

1.9 The Permittee shall provide the results of the Sulfate Reduction Strategy Study to the MPCA within three months of completion of the study.

Chapter 1. Special Requirements

1. Compliance Schedule

Sulfate Reduction Plan

1.10 Based on the results of the Water Management Study and the Sulfate Reduction Strategy Study, and within three months of submittal of the results of both studies, the Permittee shall provide a Sulfate Reduction Plan for MPCA review and approval. The Sulfate Reduction Plan shall, at minimum, detail the actions the Permittee proposes to take in order to comply with the final effluent limitations for total sulfate at each outfall under this permit and NPDES/SDS Permit MN0055948. The actions proposed in the Sulfate Reduction Plan must lead to compliance with final effluent limitations as soon as possible, and the plan must include a schedule for implementation of the proposed actions, as well as a justification for the proposed schedule that addresses the timing associated with each of the specific actions proposed in the plan. If treatment technology for sulfate is proposed in the Sulfate Reduction Plan, applications for any necessary permit modifications, as well as plans and specifications for the proposed treatment technology shall be submitted to the MPCA along with the Plan.

1.11 The Sulfate Reduction Plan may include a request for evaluation of treatment effectiveness at full scale on representative outfalls prior to installation of the same technology on similar outfalls if the following conditions are met:
1. The request categorizes all permitted outfalls into groups based on similar wastewater chemistry and physical conditions.
2. The results of the Water Management Study and Sulfate Reduction Strategy Study indicate that additional evaluation is necessary to determine treatment effectiveness at full scale for one or more of the outfall groups.
3. The treatment technology proposed in the Sulfate Reduction Plan is the same for the representative outfalls selected as the technology proposed for the other outfalls in the same waste group, and the results of the Sulfate Reduction Strategy Study do not show a significant difference in treatment effectiveness between the representative waste stream and the other waste streams of its type.
4. The representative outfall for each waste group has the highest volume and/or highest frequency of discharge of all outfalls in that group, and is therefore the most beneficial for evaluation.

1.12 Following approval of the Sulfate Reduction Plan by the MPCA, the Permittee shall complete the actions proposed in the Sulfate Reduction Plan and attain compliance with the final effluent limitations as detailed in Parts 1.13 and 1.14 of this Chapter, whichever is applicable.

1.13 If the approved Sulfate Reduction Plan includes approval of a request for full scale treatment evaluation pursuant to Part 1.11 of this Chapter, the Permittee shall attain compliance with final effluent limitations according to the following schedule:
1. The permitting, installation of equipment, and evaluation of treatment effectiveness on representative outfalls shall be completed within 36 months of MPCA approval of the Sulfate Reduction Plan for representative non-tailings basin discharges. The Permittee shall notify the MPCA within 14 days of completing this evaluation.
2. The permitting, installation of equipment, and evaluation of treatment effectiveness on representative outfalls shall be completed within 42 months of MPCA approval of the Sulfate Reduction Plan for representative tailings basin discharges. The Permittee shall notify the MPCA within 14 days of completing this evaluation.
3. Following completion of the full-scale treatment evaluation on the approved representative outfalls, the Permittee shall comply with an interim calendar quarter average effluent limitation of 14 mg/L total sulfate for all of the representative outfalls to ensure continued progress toward compliance with final effluent limitations.
4. The Permittee shall attain compliance with final effluent limitations for total sulfate on all non-tailings basin outfalls within 30 months of completing treatment evaluations on the representative outfalls for those waste types.
5. The Permittee shall attain compliance with final effluent limitations for total sulfate on all tailings basin outfalls within 36 months of completing treatment evaluations on the representative outfalls for those waste types.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 1. Special Requirements

1. Compliance Schedule

1.14 If the approved Sulfate Reduction Plan does not include approval of a request for full scale treatment evaluation pursuant to Part 1.11 of this Chapter, the Permittee shall attain compliance with final effluent limitations according to the following schedule:
1. The Permittee shall attain compliance with final effluent limitations for total sulfate on all non-tailings basin outfalls within 30 months of MPCA approval of the Sulfate Reduction Plan.
2. The Permittee shall attain compliance with final effluent limitations for total sulfate on all tailings basin outfalls within 36 months of MPCA approval of the Sulfate Reduction Plan.

1.15 The Permittee shall provide written progress reports on the implementation of the Sulfate Reduction Plan to the MPCA every six months, at minimum, following MPCA approval of the Sulfate Reduction Plan. Additional updates can be provided in the form of electronic transmittals, conference calls or meetings.

1.16 The Permittee shall submit written notification of compliance to the MPCA within 14 days of completing all of the actions required for the attainment of compliance with final effluent limitations. The notification of compliance shall include a notification that installation and startup of treatment equipment has been completed, or shall include a submission of a representative effluent monitoring data set if equipment is not determined to be necessary. The MPCA will submit notification to the Permittee that final effluent limitations apply.

2. Special Requirements

Effluent Limit Study

2.1 The Permittee may opt to conduct a study to gather data and information that would support a total sulfate limit other than the final limitations included in this permit.

2.2 When cause exists according to state and federal law regarding modification of permits, this permit may be reopened for modification of effluent limitations, discharge restrictions, monitoring requirements, and or conditions of a schedule of compliance. Any modified permit conditions shall be consistent with all applicable state and federal requirements. MPCA shall comply with all procedural requirements under state and federal law prior to reopening and modifying this permit.

Chapter 2. Industrial Process Wastewater

1. Prohibited Discharges

1.1 This permit does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.

1.2 The Permittee shall prevent the routing of pollutants from the facility to a municipal wastewater treatment system in any manner unless authorized by the pretreatment standards of the MPCA and the municipal authority.

1.3 The Permittee shall not transport pollutants to a municipal wastewater treatment system that will interfere with the operation of the treatment system or cause pass-through violations of effluent limits or water quality standards.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 2. Industrial Process Wastewater

2. Toxic Substance Reporting

2.1 The Permittee shall notify the MPCA immediately of any knowledge or reason to believe that an activity has occurred that would result in the discharge of a toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10 or listed below that is not limited in the permit, if the discharge of this toxic pollutant has exceeded or is expected to exceed the following levels:

a. for acrolein and acrylonitrile, 200 ug/L;

b. for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol, 500 ug/L;

c. for antimony, 1mg/L;

d. for any other toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10, 100 ug/L; or

e. five times the maximum concentration value identified and reported for that pollutant in the permit application. (Minnesota Rules, pt. 7001.1090, subp. 2.A)

2.2 The Permittee shall notify the MPCA immediately if the Permittee has begun or expects to begin to use or manufacture as an intermediate or final by-product a toxic pollutant that was not reported in the permit application under Minnesota Rules, pt. 7001.1050, subp. 2.J. (Minnesota Rules, pt. 7001.1090, subp. 2.B)

3. Hydrotest Discharges

3.1 The Permittee shall notify the MPCA prior to discharging hydrostatic test waters. The Permittee shall provide information necessary to evaluate the potential impact of this discharge and to ensure compliance with this permit. This information shall include:

a. the proposed discharge dates;

b. the name and location of receiving waters, including city or township, county, and township/range location;

c. an evaluation of the impact of the discharge on the receiving waters in relation to the water quality standards;

d. a map identifying discharge location(s) and monitoring point(s);

e. the estimated average and maximum discharge rates;

f. the estimated total flow volume of discharge;

g. the water supply for the test water, with a copy of the appropriate Minnesota Department of Natural Resources (DNR) water appropriation permit;

h. water quality data for the water supply;

i. proposed treatment method(s) before discharge; and

j. methods to be used to prevent scouring and erosion due to the discharge.

3.2 This permit does not authorize the construction or installation of pipeline facilities.

4. Polychlorinated Biphenyls (PCBs)

4.1 PCBs, including but not limited to those used in electrical transformers and capacitors, shall not be discharged or released to the environment.

Chapter 2. Industrial Process Wastewater

5. New Proposed Dewatering

5.1 The Permittee shall obtain a permit modification before discharging from a new dewatering outfall.

5.2 In addition to the requirements in the Permit Modifications section of this permit, the Permittee shall submit to the MPCA detailed plans and specifications for the proposed methods of achieving discharge limits for turbidity and total suspended solids, based in part upon representative water quality data for untreated wastewater and a detailed map and diagram description of the proposed design for the flow control structures, and route of the discharge to receiving waters.

6. Application for Permit Reissuance

6.1 The permit application shall include analytical data as part of the application for reissuance of this permit. These analyses shall be done on individual samples taken during the twelve-month period before the reissuance application is submitted.

6.2 The permit application shall include analytical data for at least the following parameters at monitoring station SD002:

a. biochemical oxygen demand, chemical oxygen demand, total organic carbon, gasoline range organics, diesel range organics, fecal coliform, ammonia, temperature;

b. color, fluoride, nitrate-nitrite (as nitrogen), total organic nitrogen, oil and grease, total phosphorus, chloride, sulfate, sulfide (as sulfur), surfactants, bicarbonates, alkalinity, total salinity, total dissolved solids, specific conductance;

c. aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silver, sodium, strontium, thallium, tin, titanium, vanadium, zinc (all in total form) using atomic absorption (AA) furnace methods according to 40 CFR Part 136.3;

d. total mercury using EPA Method 1631;

e. gross alpha particles, radium-226, radium-228, radon-222, uranium;

f. PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, PCB-1260; and

g. a scan of constituents using EPA Methods 624 and 625, in 40 CFR Part 136.

The Permittee shall identify, in addition to those pollutants noted in Methods 624 and 625 (Appendix D, Table II), the concentrations of at least ten of the most abundant constituents of the acid and base/neutral organic fractions shown to be present by peaks on the total ion plots (reconstructed gas chromatograms) within ten percent of the nearest internal standard. Identification shall be through the use of U.S. EPA/NIH computerized library of mass spectra, with visual confirmation and potential quantification.

Chapter 3. Domestic Wastewater (non-POTW)

1. Authorization

1.1 The sanitary wastewater generated at the facility shall be disposed of:

a. Through the activated sludge sewage treatment plant at the facility monitored by station WS005;

b. To portable units, and then transported from the facility for proper disposal; and/or

c. To permitted septic tank-drainfield systems that treat sanitary wastewater only, at a rate of less than 10,000 gallons/day each.

1.2 The Permittee shall prevent the introduction of the following to its domestic wastewater treatment system:

a. pollutants which create a fire or explosion hazard, including any discharge with a flash point less than 60 degrees C (140 degrees F);

b. pollutants which would cause corrosive structural damage, including any waste stream with a pH of less than 5.0;

c. solid or viscous pollutants which would obstruct flow;

d. heat that would inhibit biological activity, including any introduction of wastewater that would cause the temperature of the waste stream at the domestic wastewater treatment system to exceed 40 degrees C (104 degrees F);

e. pollutants which produce toxic gases, vapors, or fumes that may endanger the health or safety of workers;

f. non-contact cooling waters, unless there are no cost-effective alternatives; and

g. hazardous wastes.

The flushing or disposal of solvents and petroleum products is prohibited. Employee training shall be provided on the proper disposal of solvents and petroleum products.

2. Operator Certification

2.1 The Permittee shall provide a Class C state certified operator who is in direct responsible charge of the operation, maintenance and testing functions required to ensure compliance with the terms and conditions of this permit.

2.2 If applicable, the Permittee shall provide the appropriate number of operators with a Type IV certification to be responsible for the land application of the biosolids generated by the facility.

2.3 If the Permittee chooses to meet operator certification requirements through a contractual agreement, the Permittee shall provide a copy of the contract to the MPCA. The contract shall include the certified operator's name, certificate number, company name if appropriate, and evidence that the operation is being adequately supervised by a properly certified operator.

2.4 The Permittee shall notify the MPCA within 30 days of a change in operator certification or contract status.

3. Sanitary Sewer Extension Permit

3.1 The Permittee is required to obtain a Sanitary Sewer Extension Permit from the MPCA before the start of construction of any addition, extension or replacement to the sanitary sewer.

Chapter 3. Domestic Wastewater (non-POTW)

4. Solids Management

Septage

4.1 Any accumulation of solids in pump stations, distribution devices, valve boxes or drop boxes shall be considered septage.

4.2 Septage shall be disposed of according to state, federal and local requirements.

Domestic Biosolids

4.3 The Permittee shall provide the information needed to comply with the biosolids requirements of Minn. R. ch. 7041 to others who treat, store, prepare or use the biosolids.

4.4 The Permittee shall keep records of the information necessary to show compliance with pollutant concentrations and loadings, pathogen reduction requirements, vector attraction reduction requirements and management practices as specified in Minn. R. 7041.1600, subp. 3.

Chapter 4. Metallic Mining

1. Mobile and Rail Equipment Service Areas

1.1 Mobile equipment and rail equipment service areas in the facility shall be operated in compliance with the following:

a. The Permittee shall collect and dispose of locomotive traction sand, degreasing wastes, motor oil, oil filters, oil sorbent pads and booms, transmission fluids, power steering fluids, brake fluids, coolant/antifreeze, radiator flush wastewater and spent solvents in accordance with applicable solid and hazardous waste management rules. These materials shall not be discharged to surface or ground waters of the state.

b. The steam-cleaning of mobile equipment and rail equipment, except for limited outdoor cleaning of large drills and shovels, shall be conducted in wash bays that drain to wastewater treatment systems that include the removal of suspended solids and flammable liquids. The only washing of mobile equipment done in outside areas shall be to remove mud and dirt that has accumulated during outside work.

c. The Permittee shall not use solvent-based cleaners, such as those available for brake cleaning and degreasing, to wash mobile and rail equipment unless the cleaning fluids are completely contained and not allowed to flow to surface or ground waters of the state. Soaps and detergents used in washing shall be biodegradable.

d. Mobile and rail equipment maintenance and repairs shall not be conducted in wash bays.

e. Hazardous materials shall not be stored or handled in wash bays.

f. The Permittee shall inspect wastewater containment systems regularly, and repair any leaks that are detected immediately.

g. If the Permittee discovers that recoverable amounts of petroleum products have entered wastewater containment systems, they shall be recovered immediately and reported to the MPCA.

h. Spill cleanup procedures shall be posted in mobile and rail equipment maintenance and repair areas.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 5. Water Treatment

1. Residual Solids Management

1.1 The Permittee shall provide for the effective management and/or disposal of residual solids, or other substances resulting from treatment of potable water.

1.2 The Permittee shall dispose of residual solids in such a manner and at such locations that disposal practices shall not result in unlawful pollution of the air, surface water or ground water, or create nuisance conditions.

2. Waste Materials - Stockpiling

2.1 Stockpiling residual solids is prohibited unless authorized by the MPCA. If the Permittee proposes to stockpile residual solids, the Permittee shall submit a description of the type and amount of solids to be stockpiled and the proposed location of the stockpiles for review and approval.

3. Waste Materials - Nuisance Conditions

3.1 The Permittee shall notify the MPCA of any nuisance conditions, such as wind blown lime residual solids dust, immediately and take necessary actions to control and abate these conditions. (Minnesota Statutes, section 115.061)

4. Waste Materials - Land Application Restrictions

4.1 The Permittee shall not apply residual solids within 200 feet of any place of habitation or recreational area or within 100 feet of intermittent streams.

4.2 The Permittee shall apply residual solids uniformly over the entire site.

4.3 The Permittee shall regulate surface application rates to prevent surface runoff from the land application site.

4.4 The residual solids application rate shall be based on the University of Minnesota, College of Agriculture recommended application rates for Agricultural Liming Material (ALM).

4.5 Land application is not allowed when radium concentration in the waste product exceeds 50 pci per gram on a dry weight basis. Wastes with radium concentrations not exceeding 50 pci per gram may be land applied if the resulting radium concentration of the soil can be shown to not exceed 5 pci per gram. Testing shall be done according to nationally accepted laboratory procedures, such as the U.S. Department of Energy procedures manual.

4.6 Residual solids shall not be applied on any land without the owner's permission.

Chapter 6. Stormwater Management

1. Authorization

1.1 This chapter authorizes the Permittee to discharge stormwater associated with industrial activity in accordance with the terms and conditions of this chapter. The MPCA may initiate modification of this chapter in accordance with Minn. R. 7001.0170 and Minn. R. 7001.0190 Subp. 1 to incorporate revised requirements in response to the reissuance or modification of the General Stormwater Permit for Industrial Activity (MNG611000).

2. Prohibited Discharges

2.1 This permit, unless specifically authorized by another chapter, does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.

2.2 This permit does not authorize discharges from sites for which Environmental Assessment Worksheets or Environmental Impact Statements are required, in accordance with Minn. R. ch. 4410, until that environmental review is completed.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 6. Stormwater Management

3. Water Quality Standards

3.1 The Permittee shall operate and maintain the facility and shall control runoff, including stormwater, from the facility to prevent the exceedance of water quality standards specified in Minnesota Rules, chs. 7050 and 7060.

3.2 The Permittee shall limit and control the use of materials at the facility that may cause exceedances of ground water standards specified in Minnesota Rules, ch. 7060. These materials include, but are not limited to, detergents and cleaning agents, solvents, chemical dust suppressants, lubricants, fuels, drilling fluids, oils, fertilizers, explosives and blasting agents.

4. Stormwater Pollution Prevention Plan

4.1 The Permittee shall develop and implement a Stormwater Pollution Prevention Plan (Plan) to address the specific conditions at the industrial facility. The goal of the Plan is to eliminate or minimize contact of stormwater with significant materials that may result in pollution of the runoff. If contact cannot be eliminated or reduced, stormwater that has contacted significant material should be treated before it is discharged from the site. The Plan shall apply to those areas of the facility where industrial activities occur or significant materials are stored, and stormwater runoff does not receive treatment prior to discharge via a permitted surface discharge station. In addition, the Plan should indentify all areas of the facility where the necessary treatment of stormwater is addressed by a permitted surface discharge station.

4.2 The Plan shall be implemented at the site before the Permittee is covered under this permit.

4.3 The Stormwater Pollution Prevention Plan shall include a description of appropriate Best Management Practices for protection of surface and ground water quality at the facility, and a schedule for implementing the practices. The Plan shall also include the procedures to be followed by designated staff employed by the Permittee to implement the plan.

4.4 The Permittee shall comply with its Stormwater Pollution Prevention Plan.

4.5 The Permittee shall submit the Stormwater Pollution Prevention Plan to MPCA upon request.

Plan Contents

4.6 Complete a drainage map. The map should indicate the following items at or adjacent to the facility:

a. drainage areas and directions of stormwater runoff (indicated by arrows);

b. discharge outfalls from the site (structures that carry stormwater runoff from the facility such as ditches or storm sewers);

c. the name and location of waters of the state that receive facility stormwater runoff (if waters of the state are too distant from the facility to be indicated on the site map, indicate the name, direction and shortest distance to the lake, river, stream or wetland that receives runoff from your site);

d. areas where significant materials are exposed to stormwater;

e. locations of storm sewer inlets and an indication of which, if any, structures have floor drains or loading dock drains that are connected to storm sewers; and

f. locations and types of Best Management Practices (BMPs) currently installed at the facility to reduce or eliminate pollutants to stormwater.

Chapter 6. Stormwater Management

4. Stormwater Pollution Prevention Plan

4.7 Complete an inventory of exposed significant materials. Indicate the types of significant materials handled or stored at the site that may potentially contact stormwater. The following are examples of materials that, if exposed to stormwater, must be included in the inventory:

a. raw materials, such as fuels; solvents; petroleum products; detergents; plastic pellets; materials used in food processing or production; stockpiled sand, salt or coal;

b. by-products or intermediate products, such as wood dust, chips or bark; screened limestone, taconite or gravel by-product, recycled blacktop;

c. finished materials, such as metallic products, including scrap metal and recycled or scrap motor vehicle parts, old process equipment/machinery, taconite pellets;

d. waste products, such as ashes, sludge, solid and liquid waste, slag;

e. hazardous substances designated under section 101(14) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA);

f. any chemical the facility is required to report under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA).

4.8 Evaluate facility areas for exposure of significant materials to stormwater. In creating the inventory of exposed significant materials, the Permittee must, at a minimum, evaluate the following areas at the industrial site (as well as other areas where appropriate) to determine whether or not significant materials are exposed in these areas:

a. vehicle and equipment maintenance, parking and storage areas including fueling and washing/cleaning areas, to determine if there is discolored soil in these areas as a result of fuel and lubricant leaks and spills;

b. liquid storage tanks and other bulk material stockpile areas;

c. loading and unloading areas;

d. outdoor manufacturing, processing or storage areas and industrial plant yards, to determine if there is discolored soil in these areas as a result of leaked or spilled solvents, fuels, or lubricants;

e. dust or particulate generating areas including dust collection devices that may release dust;

f. rooftops contaminated by industrial activity or operation of a pollution control device;

g. on-site waste disposal areas, such as waste ponds, dumpsters, solid waste storage or management areas; and

h. exposed (non-vegetated) soil areas where there is a potential for erosion to occur.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 6. Stormwater Management

4. Stormwater Pollution Prevention Plan

4.9 Describe appropriate BMPs, including structural and non-structural BMPs, that will be used at the facility to minimize or eliminate pollution of stormwater at the site. The description must include an objective for each BMP, as well as a description of how to evaluate proper functioning of the BMP and any maintenance requirements of the BMP. BMPs should target significant materials and areas identified in subparts 7 and 8 of this part. The following general categories of BMPs shall be considered and one or more shall be incorporated into the facility's Plan if significant materials are exposed to stormwater on-site:

a. Source reduction: reduce or eliminate the significant materials that are exposed to stormwater. Materials management practices should be evaluated to determine whether inventories of exposed materials can be reduced or eliminated. This can include clean-up of equipment yards, periodic checking of dust control equipment to ensure minimal accumulation of dust in the area of control equipment, removal and treatment of petroleum contaminated soil, consolidation of materials from multiple areas into one area, and training employees regarding proper handling and disposal of materials. Significant materials may also be moved indoors or covered with a tarp or structure to eliminate contact with precipitation.

b. Diversion: divert stormwater drainage away from exposed significant materials through use of curbing, berms, sewers or other forms of drainage control or elevate exposed significant material above surrounding drainage.

c. Treatment: where contact of stormwater with significant materials is unavoidable, use treatment devices to reduce the concentration and amount of pollutants in the discharge. Such devices include oil/water separators, stormwater detention/retention ponds, and vegetative swales.

4.10 Evaluate all discharge conveyances from the site (storm sewers, pipes, tile lines, ditches, etc.) to determine if liquids other than stormwater are being discharged from these devices. This should be done during dry weather when stormwater discharge is not occurring. The evaluation should cover sewer inlets and floor drains to determine which inlets/drains are connected to sanitary sewer lines, storm sewer lines, or septic tanks/drainage fields; appropriate methods such as dye or smoke testing or video imaging should be used to determine the source of discharges.

The Plan must certify that discharges from the site have been evaluated for the presence of non-stormwater discharges. The certification shall indicate the date of testing, location of testing, describe the method used to determine the source of discharges and the results of testing. Discharge of non-stormwater (such as sanitary sewer or floor drain connections to storm sewers) is not authorized by this permit; before such discharge may continue, authorization under an appropriate NPDES permit must be obtained.

4.11 Develop a preventive maintenance program. The program must require regular inspection and maintenance of stormwater management devices (e.g. cleaning oil/water separators and catch basins), as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants (e.g. hydraulic leaks, torn bag-house filters) to surface waters.

4.12 Develop a spill prevention and response procedure. In order to develop this procedure, Permittees should evaluate where spills have occurred and where they have the potential to occur. Determine drainage points for potential spill areas and develop appropriate spill prevention and containment measures, should a spill occur. Detailed procedures for cleaning-up spills shall be identified and made available to appropriate personnel. If your facility has any other spill contingency plan that satisfies the above requirements, that plan may be incorporated by reference into this Plan to satisfy this requirement.

4.13 Develop and implement an employee training program to inform appropriate personnel of the components and goals of the Plan. Training shall address spill response, good housekeeping and materials management practices. The Plan shall identify periodic dates for such training.

4.14 Identify personnel responsible for managing and implementing the Plan as well as those responsible for the reporting requirements of this permit. This should include the facility contact person as indicated on the permit application. Identified personnel must be available at reasonable times of operation.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 6. Stormwater Management

5. Temporary Protection and Permanent Cover

5.1 The Permittee shall provide and maintain temporary protection or permanent cover for the exposed areas at the facility.

5.2 Temporary protection methods are used to prevent erosion on a short-term basis, such as the placement of mulching straw, wood fiber blankets, wood chips, erosion control netting, or temporary seeding.

5.3 Permanent cover or final stabilization methods are used to prevent erosion, such as the placement of rip rap, sodding, or permanent seeding or planting. Permanent seeding and planting must have a uniform perennial vegetation cover of at least 70 percent density to constitute final stabilization.

6. Inspection and Maintenance

6.1 Site inspections shall be conducted at least once every two months throughout the calendar year. During winter months, the inspections shall be conducted during non-frozen conditions. Inspections shall be conducted by an appropriately trained personnel at the facility site, as identified in part 4.13 of this chapter. The purpose of inspections is to: 1) determine whether structural and non-structural BMPs require maintenance or changes, and 2) evaluate the completeness and accuracy of the Plan.

At least one inspection during a reporting period shall be conducted while stormwater is discharging from the facility. Inspections may be documented using an inspection form provided by the MPCA. A Storm Water Site Inspection Form is provided in the appendices section of this permit.

6.2 Inspections shall be documented and a copy of all documentation shall remain on the permitted site whenever Permittee staff are availbale on the site, and be available upon request. The inspection form developed for the General Storm Water Permit for Industrial Activity may be used for recording inspection results, and is included in the appendices section of this permit.

6.3 The following compliance items will be inspected, and documented where appropriate:

a. evaluate the facility to determine that the Plan accurately reflects site conditions as described in subpart 6 of this part, and document any inaccuracies;

b. evaluate the facility to determine whether new exposed materials have been added to the site since completion of the Plan, and document any new significant materials;

c. during the inspection conducted during the runoff event, observe the runoff to determine if it is discolored or otherwise visibly contaminated, and document observations; and,

d. determine if the non-structural and structural BMPs as indicated in the Plan are installed and functioning properly.

6.4 The Permittee shall ensure that temporary protection and permanent cover for the exposed areas at the site are maintained.

6.5 Indicate the date and time of the inspection as well as the name of the inspector on the inspection form.

6.6 When the depth of sediment collected in the final sedimentation basin above the outfall reaches one-half of the riser height, or one-half of the basin design hydraulic storage volume, the Permittee shall drain the basin and remove the sediment within sixty (60) days of discovery. No outflow from the sedimentation basin shall occur while sediment is being removed from that basin. The sediment removed from the basin shall be disposed of at a site which drains to sedimentation basin(s) at the facility.

6.7 If conditions are observed at the site that require changes in the Plan, such changes shall be made to the Plan prior to submission of the annual report for that calendar year.

6.8 The Permittee shall minimize vehicle tracking of gravel, soil or mud onto paved surfaces at the facility.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 6. Stormwater Management

6. Inspection and Maintenance

6.9 If the findings of a site inspection indicate that BMPs are not meeting the objectives as identified in subpart 9 of this part, corrective actions must be initiated within 30 days and the BMP restored to full operation as soon as field conditions allow.

6.10 The Permittee shall remove tracked material from the road surface and return it to the facility within one (1) day of discovery so that the materials drain to sedimentation basin(s) at the facility.

7. Sedimentation Basin Design and Construction

New Sedimentation Basins

7.1 Sedimentation basins shall be designed by a registered professional engineer, and installed under the direct supervision of a registered professional engineer.

7.2 The basin shall provide at least 1800 cubic feet, per acre drained, of hydraulic storage volume below the top of the outlet riser pipe.

7.3 Inlet(s) and outlet(s) shall be designed to prevent short circuiting and the discharge of floating debris.

7.4 The inlet(s) shall be placed at an elevation at least above one-half of the basin design hydraulic storage volume.

7.5 The outlet(s) shall consist of a perforated riser pipe wrapped with filter fabric and covered with crushed gravel. The perforated riser pipe shall be designed to allow complete drawdown of the basin(s).

7.6 Permanent erosion control, such as rip rap, splash pads or gabions shall be installed at the outlet(s) to prevent downstream erosion.

7.7 The basins shall be designed to allow for regular removal of accumulated sediment by a backhoe or other suitable equipment.

8. Application of Chemical Dust Suppressants

8.1 If chemical dust suppressants are applied, the Permittee shall submit a Chemical Dust Suppressant Annual Report due 31 days after the end of each calendar year following the application of a chemical dust suppressant.

8.2 The Chemical Dust Suppressant Annual Report shall include:

a. a record of the dates, methods, locations and amounts by volume of chemical application at the facility;

b. whether the product was applied in the preceding year; and,

c. the results of a chemical analysis of the materials applied each year.

8.3 If a material applied is mixed with water or another solvent before application, the chemical analysis shall be done on the aqueous or other mixture that is representative of the solution applied. This analysis shall be conducted during the same calendar year of application. This analysis shall include the parameters that may be determined by U.S. Environmental Protection Agency (EPA) Methods 624 and 625 which are described in 40 CFR Part 136.

8.4 Chemical dust suppressants, if used, shall not be applied within 100 feet of the surface receiving waters identified in the 'Facility Description' section of this permit. These materials also shall not be applied within 100 feet of ditches that conduct surface flow to the surface receiving waters identified on Page 1 of this permit.

9. Reporting

9.1 Submit a Stormwater Annual Report by March 31 of each year following permit issuance. A copy of the Stormwater Annual Report Form is provided in the appendices section of this permit.

Chapter 6. Stormwater Management

9. Reporting

9.2 The Permittee shall, upon request of the Agency, submit within a reasonable time the information and reports that are relevant to compliance with this Chapter, including the Plan, inspection reports, annual reports, original laboratory sheets from analyses conducted on the waste stream, and BMP plans and specifications.

10. Records

10.1 The Plan shall be retained for the duration of the permit. A copy of the Plan shall remain on the permitted site whenever Permittee staff are available on the site, and be available upon request. The Permittee shall maintain the following records for the period of permit coverage:

a. dates of inspections;

b. findings of inspections;

c. corrective actions taken;

d. documentation of all changes to the Plan; and,

e. a copy of annual reports.

11. Notification

11.1 If the Permittee discharges stormwater into a municipal storm sewer, the Permittee shall notify the operator of the municipal storm sewer of the existence of this permit.

12. Request for Termination of Stormwater Permit Coverage

12.1 All Permittees regulated by 40 CFR 122.26(b)(14)(i) through (ix) and (xi) may request termination of permit coverage by applying for the no exposure exclusion from permitting. The Permittee must submit (form provided by the Agency) a written certification that a condition of no exposure exists at the facility and that the facility meets the definition of no exposure of industrial activities and materials to storm water.

The application for the no exposure exclusion must be completed by the Permittee and sent to: MPCA, Industrial Storm Water Program, 520 Lafayette Rd N, St Paul, MN 55155-4194.

Failure to complete an accurate application will result in the facility being denied the no exposure exclusion from permitting. The facility must submit the application to the Agency once every five years.

12.2 The no exposure exclusion is conditional. The Permittee must maintain a condition of no exposure at the facility in order for the no exposure exclusion to remain applicable. In the event of any change or circumstance that causes exposure of industrial activities or materials to stormwater, the Permittee must comply with the stormwater requirements of this chapter.

12.3 The no exposure certification is non-transferrable. In the event that the facility operator changes, then the new operator must submit a new no exposure certification to the MPCA, Industrial Stormwater Program, 520 Lafayette Rd N, St Paul, MN 55155-4194.

12.4 The MPCA retains the authority to require the facility operator to comply with the requirements of this chapter, even when an industrial operator certifies no exposure, if the MPCA has determined that the discharge is contributing to the violation of, or interfering with the attainment or maintenance of water quality standards, including designated uses.

Chapter 6. Stormwater Management

13. Definitions

13.1 "No exposure" means all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snow melt, and/or runoff. Industrial activities or materials include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products.

13.2 "Non-stormwater discharge" means any discharge not comprised entirely of stormwater discharges authorized by a NPDES permit.

13.3 "Runoff" means any liquid that drains over land from any part of a facility.

Chapter 7. Surface Discharge Stations

1. Requirements for Specific Stations

1.1 SD 001: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

1.2 SD 002: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

1.3 SD 003: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

1.4 SD 012: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

2. Special Requirements

Elimination of SD001

2.1 The Permittee currently discharges filter backwash from the Potable Water Plant via SD001. The filter backwash flows west through a ditch alongside the north side of the railroad tracks and ultimately into Welcome Lake, located on the south side of the railroad tracks, via a culvert. It is the Permittee's intent to re-route the filter backwash so that it does not discharge into Welcome Lake, if possible, by directing the waste stream to an alternative location within the facility's water system.

The Permittee shall notify the MPCA within 14 days of completing any rerouting the filter backwash stream currently discharged via SD001. The notification shall include a description of the new route for the backwash wastewater, and the final point of discharge for this wastewater. Following this notification, the MPCA may minor modify the permit to eliminate SD001 from the regulated outfalls.

During the interim period between completing the rerouting of SD001 wastewater and minor modification of the permit, the Permittee shall report No Discharge for SD001.

3. Sampling Location

3.1 Samples for Station SD001 shall be taken at the culvert flowing south under the railroad tracks towards Welcome Lake during a period of discharge. If a discharge from the culvert occurs at any time during the sampling quarter, a sample must be obtained for analysis.

3.2 Samples for Station SD002 shall be taken at the weir outfall at the old Highway 169 road crossing in the NW 1/4 of the NW 1/4 of Section 30, T57N, R21W.

3.3 Samples for Station SD003 shall be taken at the pipe outfall southwest of the Mesabi Chief Mine Pit.

3.4 Samples for SD012 shall be taken at the outfall of Perry Pit dewatering to O'Brien Creek.

Chapter 7. Surface Discharge Stations

3. Sampling Location

3.5 Samples and measurements required by this permit shall be representative of the monitored activity.

4. Surface Discharges

4.1 Floating solids or visible foam shall not be discharged in other than trace amounts.

4.2 Oil or other substances shall not be discharged in amounts that create a visible color film.

4.3 The Permittee shall install and maintain outlet protection measures at the discharge stations to prevent erosion.

5. Winter Sampling Conditions

5.1 The Permittee shall sample flows at the designated monitoring stations including when this requires removing ice to sample the water. If the station is completely frozen throughout a designated sampling month, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR) and note the ice conditions in Comments on the DMR.

6. Discharge Monitoring Reports

6.1 The Permittee shall submit monitoring results for discharges in accordance with the limits and monitoring requirements for this station. If no discharge occurred during the reporting period, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR).

Chapter 8. Waste Stream Stations

1. Requirements for Specific Stations

1.1 WS 005: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

1.2 WS 011: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

1.3 WS 012: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

2. Sampling Location

2.1 Samples for Stations WS005 shall be taken at weir station 901 following the chlorination tank.

2.2 Samples for Station WS011 shall be representative of the plant water to the scrubber system. Samples for Station WS012 shall be taken at a point representative of the treated scrubber blowdown flow to the tailings basin.

3. Sampling Frequency

3.1 Monitoring frequency for WS011 and WS012 shall be taken in accordance with the limits and montioring requirements of this permit, including when coal is not being used as a fuel source in the Phase II indurating grate-kiln.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 9. Total Facility Requirements

1. General Requirements

General Requirements

1.1 Incorporation by Reference. The following applicable federal and state laws are incorporated by reference in this permit, are applicable to the Permittee, and are enforceable parts of this permit: 40 CFR pts. 122.41, 122.42, 136, 403 and 503; Minn. R. pts. 7001, 7041, 7045, 7050, 7052, 7053, 7060, and 7080; and Minn. Stat. Sec. 115 and 116.

1.2 Permittee Responsibility. The Permittee shall perform the actions or conduct the activity authorized by the permit in compliance with the conditions of the permit and, if required, in accordance with the plans and specifications approved by the Agency. (Minn. R. 7001.0150, subp. 3, item E)

1.3 Toxic Discharges Prohibited. Whether or not this permit includes effluent limitations for toxic pollutants, the Permittee shall not discharge a toxic pollutant except according to Code of Federal Regulations, Title 40, sections 400 to 460 and Minnesota Rules 7050, 7052, 7053 and any other applicable MPCA rules. (Minn. R. 7001.1090, subp.1, item A)

1.4 Nuisance Conditions Prohibited. The Permittee's discharge shall not cause any nuisance conditions including, but not limited to: floating solids, scum and visible oil film, acutely toxic conditions to aquatic life, or other adverse impact on the receiving water. (Minn. R. 7050.0210 subp. 2)

1.5 Property Rights. This permit does not convey a property right or an exclusive privilege. (Minn. R. 7001.0150, subp. 3, item C)

1.6 Liability Exemption. In issuing this permit, the state and the MPCA assume no responsibility for damage to persons, property, or the environment caused by the activities of the Permittee in the conduct of its actions, including those activities authorized, directed, or undertaken under this permit. To the extent the state and the MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act. (Minn. R. 7001.0150, subp. 3, item O)

1.7 The MPCA's issuance of this permit does not obligate the MPCA to enforce local laws, rules, or plans beyond what is authorized by Minnesota Statutes. (Minn. R. 7001.0150, subp.3, item D)

1.8 Liabilities. The MPCA's issuance of this permit does not release the Permittee from any liability, penalty or duty imposed by Minnesota or federal statutes or rules or local ordinances, except the obligation to obtain the permit. (Minn. R. 7001.0150, subp.3, item A)

1.9 The issuance of this permit does not prevent the future adoption by the MPCA of pollution control rules, standards, or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or orders against the Permittee. (Minn. R. 7001.0150, subp.3, item B)

1.10 Severability. The provisions of this permit are severable and, if any provisions of this permit or the application of any provision of this permit to any circumstance are held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

1.11 Compliance with Other Rules and Statutes. The Permittee shall comply with all applicable air quality, solid waste, and hazardous waste statutes and rules in the operation and maintenance of the facility.

1.12 Inspection and Entry. When authorized by Minn. Stat. Sec. 115.04; 115B.17, subd. 4; and 116.091, and upon presentation of proper credentials, the agency, or an authorized employee or agent of the agency, shall be allowed by the Permittee to enter at reasonable times upon the property of the Permittee to examine and copy books, papers, records, or memoranda pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit; and to conduct surveys and investigations, including sampling or monitoring, pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit. (Minn. R. 7001.0150, subp.3, item I)

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 9. Total Facility Requirements

1. General Requirements

1.13 Control Users. The Permittee shall regulate the users of its wastewater treatment facility so as to prevent the introduction of pollutants or materials that may result in the inhibition or disruption of the conveyance system, treatment facility or processes, or disposal system that would contribute to the violation of the conditions of this permit or any federal, state or local law or regulation.

Sampling

1.14 Representative Sampling. Samples and measurements required by this permit shall be conducted as specified in this permit and shall be representative of the discharge or monitored activity. (40 CFR 122.41 (j)(1))

1.15 Additional Sampling. If the Permittee monitors more frequently than required, the results and the frequency of monitoring shall be reported on the Discharge Monitoring Report (DMR) or another MPCA-approved form for that reporting period. (Minn. R. 7001.1090, subp. 1, item E)

1.16 Certified Laboratory. A laboratory certified by the Minnesota Department of Health shall conduct analyses required by this permit. Analyses of dissolved oxygen, pH, temperature and total residual oxidants (chlorine, bromine) do not need to be completed by a certified laboratory but shall comply with manufacturers specifications for equipment calibration and use. (Minn. Stat. Sec. 144.97 through 144.98 and Minn. R. 4740.2010 and 4740.2050 through 4740.2120) (Minn. R. 4740.2010 and 4740.2050 through 2120)

1.17 Sample Preservation and Procedure. Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minn. R. 7041.3200.

1.18 Equipment Calibration: Flow meters, pumps, flumes, lift stations or other flow monitoring equipment used for purposes of determining compliance with permit shall be checked and/or calibrated for accuracy at least twice annually. (Minn. R. 7001.0150, subp. 2, items B and C)

1.19 Maintain Records. The Permittee shall keep the records required by this permit for at least three years, including any calculations, original recordings from automatic monitoring instruments, and laboratory sheets. The Permittee shall extend these record retention periods upon request of the MPCA. The Permittee shall maintain records for each sample and measurement. The records shall include the following information (Minn. R. 7001.0150, subp. 2, item C):

a. The exact place, date, and time of the sample or measurement;

b. The date of analysis;

c. The name of the person who performed the sample collection, measurement, analysis, or calculation; and

d. The analytical techniques, procedures and methods used; and

e. The results of the analysis.

Chapter 9. Total Facility Requirements

1. General Requirements

1.20 Completing Reports. The Permittee shall submit the results of the required sampling and monitoring activities on the forms provided, specified, or approved by the MPCA. The information shall be recorded in the specified areas on those forms and in the units specified. (Minn. R. 7001.1090, subp. 1, item D; Minn. R. 7001.0150, subp. 2, item B)

Required forms may include:

DMR Supplemental Form
Individual values for each sample and measurement must be recorded on the DMR Supplemental Form which, if required, will be provided by the MPCA. DMR Supplemental Forms shall be submitted with the appropriate DMRs. You may design and use your own supplemental form; however it must be approved by the MPCA. Note: Required summary information MUST also be recorded on the DMR. Summary information that is submitted ONLY on the DMR Supplemental Form does not comply with the reporting requirements.

1.21 Submitting Reports. DMRs and DMR Supplemental Forms shall be submitted to:

MPCA
Attn: Discharge Monitoring Reports
520 Lafayette Road North
St. Paul, Minnesota 55155-4194.

DMRs and DMR Supplemental Forms shall be postmarked by the 21st day of the month following the sampling period or as otherwise specified in this permit. A DMR shall be submitted for each required station even if no discharge occurred during the reporting period. (Minn. R. 7001.0150, subps. 2.B and 3.H)

Other reports required by this permit shall be postmarked by the date specified in the permit to:

MPCA
Attn: WQ Submittals Center
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

1.22 Incomplete or Incorrect Reports. The Permittee shall immediately submit an amended report or DMR to the MPCA upon discovery by the Permittee or notification by the MPCA that it has submitted an incomplete or incorrect report or DMR. The amended report or DMR shall contain the missing or corrected data along with a cover letter explaining the circumstances of the incomplete or incorrect report. (Minn. R. 7001.0150 subp. 3, item G)

1.23 Required Signatures. All DMRs, forms, reports, and other documents submitted to the MPCA shall be signed by the Permittee or the duly authorized representative of the Permittee. Minn. R. 7001.0150, subp. 2, item D. The person or persons that sign the DMRs, forms, reports or other documents must certify that he or she understands and complies with the certification requirements of Minn. R. 7001.0070 and 7001.0540, including the penalties for submitting false information. Technical documents, such as design drawings and specifications and engineering studies required to be submitted as part of a permit application or by permit conditions, must be certified by a registered professional engineer. (Minn. R. 7001.0540)

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 9. Total Facility Requirements

1. General Requirements

1.24 Detection Level. The Permittee shall report monitoring results below the reporting limit (RL) of a particular instrument as "<" the value of the RL. For example, if an instrument has a RL of 0.1 mg/L and a parameter is not detected at a value of 0.1 mg/L or greater, the concentration shall be reported as "<0.1 mg/L." "Non-detected," "undetected," "below detection limit," and "zero" are unacceptable reporting results, and are permit reporting violations. (Minn. R. 7001.0150, subp. 2, item B)

Where sample values are less than the level of detection and the permit requires reporting of an average, the Permittee shall calculate the average as follows:

a. If one or more values are greater than the level of detection, substitute zero for all nondetectable values to use in the average calculation.

b. If all values are below the level of detection, report the averages as "<" the corresponding level of detection.

c. Where one or more sample values are less than the level of detection, and the permit requires reporting of a mass, usually expressed as kg/day, the Permittee shall substitute zero for all nondetectable values. (Minn. R. 7001.0150, subp. 2, item B)

1.25 Records. The Permittee shall, when requested by the Agency, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit. (Minn. R. 7001.0150, subp. 3, item H)

1.26 Confidential Information. Except for data determined to be confidential according to Minn. Stat. Sec. 116.075, subd. 2, all reports required by this permit shall be available for public inspection. Effluent data shall not be considered confidential. To request the Agency maintain data as confidential, the Permittee must follow Minn. R. 7000.1300.

Noncompliance and Enforcement

1.27 Subject to Enforcement Action and Penalties. Noncompliance with a term or condition of this permit subjects the Permittee to penalties provided by federal and state law set forth in section 309 of the Clean Water Act; United States Code, title 33, section 1319, as amended; and in Minn. Stat. Sec. 115.071 and 116.072, including monetary penalties, imprisonment, or both. (Minn. R. 7001.1090, subp. 1, item B)

1.28 Criminal Activity. The Permittee may not knowingly make a false statement, representation, or certification in a record or other document submitted to the Agency. A person who falsifies a report or document submitted to the Agency, or tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this permit is subject to criminal and civil penalties provided by federal and state law. (Minn. R. 7001.0150, subp.3, item G., 7001.1090, subps. 1, items G and H and Minn. Stat. Sec. 609.671)

1.29 Noncompliance Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 CFR 122.41(c))

1.30 Effluent Violations. If sampling by the Permittee indicates a violation of any discharge limitation specified in this permit, the Permittee shall immediately make every effort to verify the violation by collecting additional samples, if appropriate, investigate the cause of the violation, and take action to prevent future violations. Violations that are determined to pose a threat to human health or a drinking water supply, or represent a significant risk to the environment shall be immediately reported to the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 (toll free) or (651)649-5451 (metro area). In addition, you may also contact the MPCA during business hours. Otherwise the violations and the results of any additional sampling shall be recorded on the next appropriate DMR or report.

Chapter 9. Total Facility Requirements

1. General Requirements

1.31 Unauthorized Releases of Wastewater Prohibited. Except for conditions specifically described in Minn. R. 7001.1090, subp. 1, items J and K, all unauthorized bypasses, overflows, discharges, spills, or other releases of wastewater or materials to the environment, whether intentional or not, are prohibited. However, the MPCA will consider the Permittee's compliance with permit requirements, frequency of release, quantity, type, location, and other relevant factors when determining appropriate action. (40 CFR 122.41 and Minn. Stat. Sec 115.061)

1.32 Discovery of a release. Upon discovery of a release, the Permittee shall:

a. Take all reasonable steps to immediately end the release.

b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon discovery of the release. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area).

c. Recover as rapidly and as thoroughly as possible all substances and materials released or immediately take other action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If the released materials or substances cannot be immediately or completely recovered, the Permittee shall contact the MPCA. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies (such as the Minnesota Department of Natural Resources and/or the Wetland Conservation Act authority) for implementation of additional clean-up or remediation activities in wetland or other sensitive areas.

d. Collect representative samples of the release. The Permittee shall sample the release for parameters of concern immediately following discovery of the release. The Permittee may contact the MPCA during business hours to discuss the sampling parameters and protocol. In addition, Fecal Coliform Bacteria samples shall be collected where it is determined by the Permittee that the release contains or may contain sewage. If the release cannot be immediately stopped, the Permittee shall consult with MPCA regarding additional sampling requirements. Samples shall be collected at least, but not limited to, two times per week for as long as the release continues.

e. Submit the sampling results as directed by the MPCA. At a minimum, the results shall be submitted to the MPCA with the next DMR.

1.33 Upset Defense. In the event of temporary noncompliance by the Permittee with an applicable effluent limitation resulting from an upset at the Permittee's facility due to factors beyond the control of the Permittee, the Permittee has an affirmative defense to an enforcement action brought by the Agency as a result of the noncompliance if the Permittee demonstrates by a preponderance of competent evidence:

a. The specific cause of the upset;

b. That the upset was unintentional;

c. That the upset resulted from factors beyond the reasonable control of the Permittee and did not result from operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or increases in production which are beyond the design capability of the treatment facilities;

d. That at the time of the upset the facility was being properly operated;

e. That the Permittee properly notified the Commissioner of the upset in accordance with Minn. R. 7001.1090, subp. 1, item I; and

f. That the Permittee implemented the remedial measures required by Minn. R. 7001.0150, subp. 3, item J.

Chapter 9. Total Facility Requirements

1. General Requirements

Operation and Maintenance

1.34 The Permittee shall at all times properly operate and maintain the facilities and systems of treatment and control, and the appurtenances related to them which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible Minn. R. 7001.0150. subp. 3, item F.

1.35 In the event of a reduction or loss of effective treatment of wastewater at the facility, the Permittee shall control production or curtail its discharges to the extent necessary to maintain compliance with the terms and conditions of this permit. The Permittee shall continue this control or curtailment until the wastewater treatment facility has been restored or until an alternative method of treatment is provided. (Minn. R. 7001.1090, subp. 1, item C)

1.36 Solids Management. The Permittee shall properly store, transport, and dispose of biosolids, septage, sediments, residual solids, filter backwash, screenings, oil, grease, and other substances so that pollutants do not enter surface waters or ground waters of the state. Solids should be disposed of in accordance with local, state and federal requirements. (40 CFR 503 and Minn. R. 7041 and applicable federal and state solid waste rules)

1.37 Scheduled Maintenance. The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent degradation of water quality, except where emergency maintenance is required to prevent a condition that would be detrimental to water quality or human health. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)

1.38 Control Tests. In-plant control tests shall be conducted at a frequency adequate to ensure compliance with the conditions of this permit. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)

Changes to the Facility or Permit

1.39 Permit Modifications. No person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted, nor shall a person commence an activity for which a permit is required by statute or rule until the Agency has issued a written permit for the facility or activity. (Minn. R. 7001.0030)

Permittees that propose to make a change to the facility or discharge that requires a permit modification must follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee must contact the MPCA prior to any action. It is recommended that the application for permit modification be submitted to the MPCA at least 180 days prior to the planned change.

1.40 Construction. No construction shall begin until the Permittee receives written approval of plans and specifications from the MPCA (Minn. Stat. Sec. 115.03(f)).

Plans, specifications and MPCA approval are not necessary when maintenance dictates the need for installation of new equipment, provided the equipment is the same design size and has the same design intent. For instance, a broken pipe, lift station pump, aerator, or blower can be replaced with the same design-sized equipment without MPCA approval.

If the proposed construction is not expressly authorized by this permit, it may require a permit modification. If the construction project requires an Environmental Assessment Worksheet under Minn. R. 4410, no construction shall begin until a negative declaration is issued and all approvals are received or implemented.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 9. Total Facility Requirements

1. General Requirements

1.41 Report Changes. The Permittee shall give advance notice as soon as possible to the MPCA of any substantial changes in operational procedures, activities that may alter the nature or frequency of the discharge, and/or material factors that may affect compliance with the conditions of this permit. (Minn. R. 7001.0150, subp. 3, item M)

1.42 Chemical Additives. The Permittee shall receive prior written approval from the MPCA before increasing the use of a chemical additive authorized by this permit, or using a chemical additive not authorized by this permit, in quantities or concentrations that have the potential to change the characteristics, nature and/or quality of the discharge.

The Permittee shall request approval for an increased or new use of a chemical additive at least 60 days, or as soon as possible, before the proposed increased or new use.

This written request shall include at least the following information for the proposed additive:

a. The process for which the additive will be used;
b. Material Safety Data Sheet (MSDS) which shall include aquatic toxicity, human health, and environmental fate information for the proposed additive;
c. A complete product use and instruction label;
d. The commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive (If the MSDS does not include information on chemical composition, including percentages for each ingredient totaling to 100%, the Permittee shall contact the supplier to have this information provided); and
e. The proposed method of application, application frequency, concentration, and daily average and maximum rates of use.

Upon review of the information submitted regarding the proposed chemical additive, the MPCA may require additional information be submitted for consideration. This permit may be modified to restrict the use or discharge of a chemical additive and include additional influent and effluent monitoring requirements.

Approval for the use of an additive shall not justify the exceedance of any effluent limitation nor shall it be used as a defense against pollutant levels in the discharge causing or contributing to the violation of a water quality standard. (Minn. R. 7001.0170)

1.43 MPCA Initiated Permit Modification, Suspension, or Revocation. The MPCA may modify or revoke and reissue this permit pursuant to Minn. R. 7001.0170. The MPCA may revoke without reissuance this permit pursuant to Minn. R. 7001.0180.

1.44 TMDL Impacts. Facilities that discharge to an impaired surface water, watershed or drainage basin may be required to comply with additional permits or permit requirements, including additional restriction or relaxation of limits and monitoring as authorized by the CWA 303(d)(4)(A) and 40 CFR 122.44.l.2.i., necessary to ensure consistency with the assumptions and requirements of any applicable US EPA approved wasteload allocations resulting from Total Maximum Daily Load (TMDL) studies.

1.45 Permit Transfer. The permit is not transferable to any person without the express written approval of the Agency after compliance with the requirements of Minn. R. 7001.0190. A person to whom the permit has been transferred shall comply with the conditions of the permit. (Minn. R., 7001.0150, subp. 3, item N)

Chapter 9. Total Facility Requirements

1. General Requirements

1.46 Facility Closure. The Permittee is responsible for closure and postclosure care of the facility. The Permittee shall notify the MPCA of a significant reduction or cessation of the activities described in this permit at least 180 days before the reduction or cessation. The MPCA may require the Permittee to provide to the MPCA a facility Closure Plan for approval.

Facility closure that could result in a potential long-term water quality concern, such as the ongoing discharge of wastewater to surface or ground water, may require a permit modification or reissuance.

The MPCA may require the Permittee to establish and maintain financial assurance to ensure performance of certain obligations under this permit, including closure, postclosure care and remedial action at the facility. If financial assurance is required, the amount and type of financial assurance, and proposed modifications to previously MPCA-approved financial assurance, shall be approved by the MPCA. (Minn. Stat. Sec. 116.07, subd. 4)

1.47 Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for reissuance at least 180 days before permit expiration. If the Permittee does not intend to continue the activities authorized by this permit after the expiration date of this permit, the Permittee shall notify the MPCA in writing at least 180 days before permit expiration.

If the Permittee has submitted a timely application for permit reissuance, the Permittee may continue to conduct the activities authorized by this permit, in compliance with the requirements of this permit, until the MPCA takes final action on the application, unless the MPCA determines any of the following (Minn. R. 7001.0040 and 7001.0160):

a. The Permittee is not in substantial compliance with the requirements of this permit, or with a stipulation agreement or compliance schedule designed to bring the Permittee into compliance with this permit;

b. The MPCA, as a result of an action or failure to act by the Permittee, has been unable to take final action on the application on or before the expiration date of the permit;

c. The Permittee has submitted an application with major deficiencies or has failed to properly supplement the application in a timely manner after being informed of deficiencies.

STATE OF MINNESOTA

Minnesota Pollution Control Agency

Industrial Division

National Pollutant Discharge Elimination System (NPDES)/
State Disposal System (SDS) Permit MN0055948

PERMITTEE:	United States Steel Corporation
FACILITY NAME:	Minnesota Ore Operations – Keetac – Tailings Basin
RECEIVING WATER:	Reservoir 2, Welcome Creek

CITY OR TOWNSHIP:	Keewatin	**COUNTY:**	Itasca
ISSUANCE DATE:		**EXPIRATION DATE:**	

The state of Minnesota, on behalf of its citizens through the Minnesota Pollution Control Agency (MPCA), authorizes the Permittee to construct, install and operate a disposal system at the facility named above and to discharge from this facility to the receiving water named above, in accordance with the requirements of this permit.

The goal of this permit is to reduce pollutant levels in point source discharges and protect water quality in accordance with Minnesota and U.S. statutes and rules, including Minn. Stat. chs. 115 and 116, Minn. R. chs. 7001, 7050, 7053, 7060, 7090.3000 through 7090.3080, and the U.S. Clean Water Act.

This permit is effective on the issuance date identified above, and supersedes the previous permit that was issued for this facility on March 10, 2006. This permit expires at midnight on the expiration date identified above.

Signature: _____

Jeff Udd, P.E. *for* The Minnesota Pollution Control Agency
Acting Supervisor, Water Quality Permits Unit
Land and Water Quality Permits Section
Industrial Division

Submit DMRs to:
Attention: Discharge Monitoring Reports
Minnesota Pollution Control Agency
520 Lafayette Rd N
St Paul, MN 55155-4194

Submit Other WQ Reports to:
Attention: WQ Submittals Center
Minnesota Pollution Control Agency
520 Lafayette Rd N
St Paul, MN 55155-4194

Questions on this permit?

- For DMR and other permit reporting issues, contact: Belinda Nicholas, 651-757-2613.
- For specific permit requirements or permit compliance status, contact: John Thomas, 218-302-6616.
- General permit or NPDES program questions, contact: MPCA, 651-282-6143 or 1-800-657-3938.

Table of Contents

Facility Description

The principal activity at this facility is the disposal of taconite tailings and related wastewater from the U.S. Steel Corporation – Keewatin Taconite Operations plant. The facility consists of the Keewatin Taconite tailings basin, the drainage area contributing surface run-off to the basin, and all non-sewage wastewater disposal systems within the permitted area. The facility has proposed an expansion of the mining and taconite pellet manufacturing operations at the processing plant associated with this tailings basin. The conditions of this permit reflect the changes associated with this expansion.

The tailings and related wastewater that are disposed of in the tailings basin are generated by the Keewatin Taconite plant, which is located north of Highway 169. The plant consists of a series of crushers and screens, a concentrator, and an agglomerator. The concentrator consists of a series of mills, magnetic separators, hydroseparators, hydroclones, screens, and thickeners. A flocculant is added to the concentrator tailings slurry before the thickening stage, at a maximum rate of 250,000 lbs/yr. The agglomerator receives the concentrate, which is mixed with limestone then dewatered by disc filters. The filter cake is then mixed with bentonite and formed into pellets in balling drums. The agglomerator wastewater, as well as wet scrubber, recirculating non-contact cooling water, and normal floor drain wastewater that is generated at the plant, is recirculated as process water within the plant. The make-up water for the recirculating non-contact cooling water system in the plant is treated with softening, along with chemical additives, such as corrosion inhibitors, descalers, and microbiocides are also added. Chemicals used in the wet scrubber system are added for pH control, clarification, and coagulation aid. Corrosion inhibitor/descaler chemicals are used in the vacuum seal water system. A kiln slag inhibitor chemical is used at approximately 1,175 pounds per day or 430,000 pounds per year.

The wastewater flow to the tailings basin consists only of the tailings slurry, associated concentrator process wastewater, and wet scrubber blowdown water for a total average flow rate of 20 MGD. The tailings slurry and plant process wastewater is piped under pressure from the plant across Highway 169 and is spigotted into the tailings basin. The dual tailings pipelines have several gravity flow drainage points along their route that are used during routine maintenance, winter operations, and emergency situations, such as pump failure. Dump valve drainage points 4, 5, 6W, 6E, 7, and 8 flow by gravity directly to the tailings basin. An average of 13 million long tons of dry tailings are disposed of each year in the basin. The tailings are generated from the plant thickeners. The basin is divided into several parts, principally the older Stage 1 and the active Stage 2 basins. Much of the Stage 1 basin has undergone re-vegetation. Water is occasionally pumped from Reservoir 2 to Reservoir 6 for water level maintenance, at an average rate of 814 million gallons per year. The tailings basin is principally underlain by glacial till and glaciofluvial deposits.

The interior tailings basin dikes are constructed of coarse tailings which are spigotted from the tailings pipelines. The exterior basin dikes are constructed of clay starter dikes with a coarser sand and gravel chimney drain. A decant tower on the south side of the second stage interior tailings basin drains basin wastewater to the second stage exterior pond for additional sedimentation. A decant tower on the west side of the basin area drains water from the second stage exterior to Reservoir 6 for reuse. Return water for the plant water supply is pumped from a

station on Reservoir 6. This reservoir discharges through siphon outfall SD001, at a combined maximum rate of 9.4 MGD, to Reservoir 2. Outfall SD005 was established to discharge to Reservoir 2 North and Welcome Creek, to Reservoir 2, at a maximum flow of approximately 23 MGD. The proposed expansion to the mining and pellet manufacturing process will result in a vertical expansion of the tailings basin, and changes to the volumes discharged to and from the tailings basin. Discharges to surface water from the tailings basin following the expansion will not exceed the pre-expansion volumes.

Due to the proposed discharge location, direct discharge of mine pit dewatering from the Sargent Pit to an unnamed ditch is authorized under this permit. This activity is similar to other mine pit dewatering operations authorized in NPDES/SDS Permit MN0031879.

Surface drainage from the tailings basin area, in the form of surface run-off from the exterior dikes, flows to the West Swan River, unnamed wetlands, Hay Creek to Swan Lake, Reservoir 2, Reservoir 2 North, and Welcome Creek. These are all class 2B, 3B, 4A, 4B, 5, and 6 waters, except for Welcome Creek, which is class 2C, 3C, 4A, 4B, 5, and 6 waters.

Surface water station SW001 is located at the weir outlet of Reservoir 2 and was established at the request of the Permittee. No limits are associated with this monitoring station.

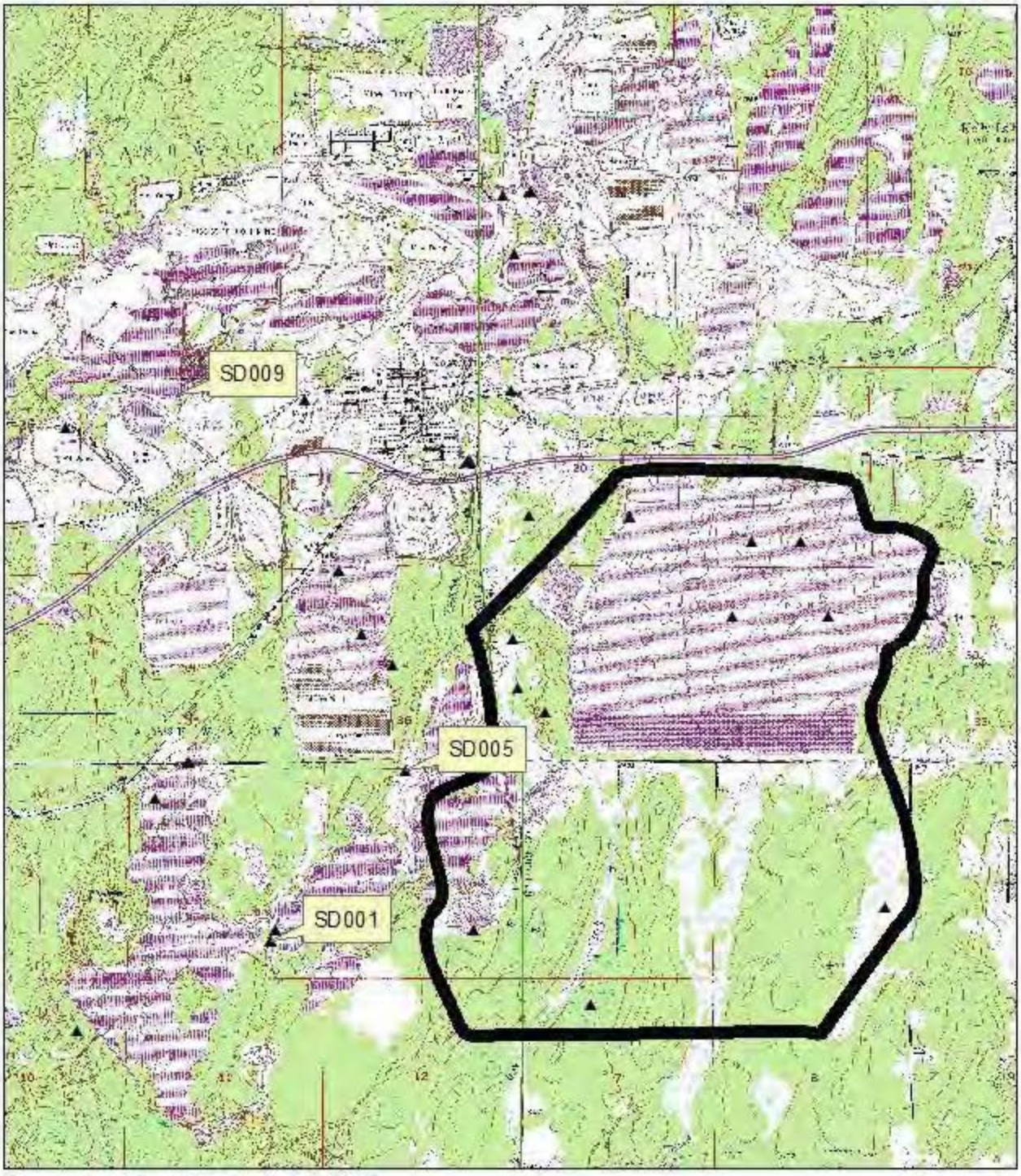
Chemical dust suppressants are occasionally used at the facility in accordance with MPCA approvals.

Repair shops and a garage are located in the Southwest ¼ of the Southeast ¼ of Section 36. Sewage generated at this site is contained in portable units and disposed of in a nearby municipal wastewater treatment facility.

The locations of the facility’s tailings basin discharge sites are shown on the following page.

Topographic Map of Permitted Facility

MN0055948, United States Steel Corporation - Keetac Tailings Basin
St. Louis & Itasca County, Minnesota



Map produced by: MPCA Staff, 6/23/2011
Source: USGS Keewatin, Silica Quad
Scale: 1:50,000

0 0.25 0.5 1 Miles

N

Keewatin Taconite Operations - Tailings
Summary of Stations

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Surface Discharge Stations

Station	Type of Station	Local Name	PLS Location
SD001	Effluent To Surface Water	Siphon Outfalls 011, 012, 013	SE Quarter of Section 2, Township 56 North, Range 22 West
SD005	Effluent To Surface Water	Culvert Outfall from Reservoir 6	NE Quarter of the NE Quarter of the NW Quarter of Section 1, Township 56 North, Range 22 West
SD008	Effluent To Surface Water	Sum of outfalls 011-013, 015	SE Quarter of Section 2, Township 56 North, Range 22 West
SD009	Effluent To Surface Water	Sargent Pit Dewatering to Unnamed Ditch	

Surface Water Stations

Station	Type of Station	Local Name	PLS Location
SW001	Lake/Reservoir	Reservoir 2	NE Quarter of Section 10, Township 56 North, Range 22 West

Waste Stream Stations

Station	Type of Station	Local Name	PLS Location
WS001	Water Intake	Non-pptn water inputs to the facility	SE Quarter of Section 2, Township 56 North, Range 22 West

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period

SD 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Estimate	1 x Month	4
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Estimate	1 x Month	4
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Estimate	1 x Month	4
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	4
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	4
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Month	5
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	4
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	4
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	4
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	4
Specific Conductance	Monitor Only	umh/cm	Calendar Month Average	Jan-Dec	Grab	1 x Month	4
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	4
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	4

SD 005

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Estimate	1 x Week	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Estimate	1 x Week	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Estimate	1 x Week	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Selenium, Total (as Se)	Monitor Only	ug/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	7
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Month Average	Jan-Dec	Grab	1 x Month	

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Interim Period

SD 005

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

SD 009

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Chloride, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	3
Nitrite Plus Nitrate, Total (as N)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	1
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	1
Nitrogen, Kjeldahl, Total	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	1
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Selenium, Total (as Se)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	7
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	1
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Month Average	Jan-Dec	Grab	1 x Month	7
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

Period: Limits Applicable in the Final Period

SD 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Estimate	1 x Month	4
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Estimate	1 x Month	4

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Final Period

SD 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Estimate	1 x Month	4
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	4
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	4
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Month	5
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	4
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	4
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	4
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	4
Specific Conductance	Monitor Only	umh/cm	Calendar Month Average	Jan-Dec	Grab	1 x Month	4
Sulfate, Total (as SO4)	14	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	4
Sulfate, Total (as SO4)	24	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	4

SD 005

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Estimate	1 x Week	
Flow	Monitor Only	mgd	Calendar Month Maximum	Jan-Dec	Estimate	1 x Week	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Estimate	1 x Week	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	2
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Selenium, Total (as Se)	Monitor Only	ug/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	7
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Sulfate, Total (as SO4)	14	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	24	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Final Period

SD 008

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Evaporation, Accumulated	Monitor Only	in	Calendar Month Total	Jan-Dec	Calculation	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Calculation	1 x Month	6
Precipitation	Monitor Only	in	Calendar Month Total	Jan-Dec	Measurement, Continuous	1 x Month	

SD 009

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Chloride, Total	Monitor Only	mg/L	Calendar Month Maximum	Jan-Dec	Grab	1 x Month	
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Measurement	1 x Month	
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	
Iron, Dissolved (as Fe)	1.0	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Iron, Dissolved (as Fe)	2.0	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Mercury, Total (as Hg)	Monitor Only	ng/L	Single Value	Jan-Dec	Grab	1 x Quarter	3
Nitrite Plus Nitrate, Total (as N)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	1
Nitrogen, Ammonia, Total (as N)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	1
Nitrogen, Kjeldahl, Total	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	1
pH	9.0	SU	Instantaneous Maximum	Jan-Dec	Grab	1 x Month	
pH	6.0	SU	Instantaneous Minimum	Jan-Dec	Grab	1 x Month	
Selenium, Total (as Se)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	7
Solids, Total Dissolved (TDS)	Monitor Only	mg/L	Single Value	Jan-Dec	Grab	2 x Year	1
Solids, Total Suspended (TSS)	20	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Solids, Total Suspended (TSS)	30	mg/L	Daily Maximum	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Month Average	Jan-Dec	Grab	1 x Month	7
Sulfate, Total (as SO4)	14	mg/L	Calendar Month Average	Jan-Dec	Grab	2 x Month	
Sulfate, Total (as SO4)	24	mg/L	Calendar Month Maximum	Jan-Dec	Grab	2 x Month	

SW 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	mgd	Calendar Month Average	Jan-Dec	Estimate	1 x Month	

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

The Permittee shall comply with the limits and monitoring requirements as specified below.

Period: Limits Applicable in the Final Period

SW 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Estimate	1 x Month	
Solids, Total Suspended (TSS)	Monitor Only	mg/L	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Specific Conductance	Monitor Only	umh/cm	Calendar Month Average	Jan-Dec	Grab	1 x Month	
Turbidity	Monitor Only	NTU	Calendar Month Average	Jan-Dec	Grab	1 x Month	

WS 001

Parameter	Limit	Units	Limit Type	Effective Period	Sample Type	Frequency	Notes
Flow	Monitor Only	MG	Calendar Month Total	Jan-Dec	Measurement	1 x Month	8

Notes:
1 -- At least one sample shall be collected in each April and September.
2 -- Samples may be taken any time during each calendar quarter but must be reported on the DMR for the last month of each quarter (e.g. the sample for the first calendar quarter of Jan - Mar should be reported on the March DMR). Use EPA method 1631, with clean techniques method 1669, and any revisions to those methods.
3 -- Samples may be taken any time during each calendar quarter but must be reported on the DMR for the last month of each quarter (e.g. the sample for the first calendar quarter of Jan - Mar should be reported on the March DMR). Use EPA method 1631, with clean techniques method 1669, and any revisionsto this methods.
4 -- Sampling shall be conducted in accordance with Chapter 5 of this permit.
5 -- Sampling shall be conducted in accordance with Chapter 5 of this permit. Use EPA method 1631, with clean techniques method 1669, and any revisions to those methods.
6 -- Sum of annual discharge from outfalls 010, 011, 012, 013 and 015 shall not exceed the annual net precipitation at the facility as calculated according to PART I, C.8.
7 -- The permittee may request to modify this requirement after 12 months of monitoring data have been submitted to MPCA.
8 -- Volume of non-precipitation water inputs to the facility (for example, from Reservoir 2 or from Reservoir 5).

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 1. Special Requirements

1. Compliance Schedule

Compliance Schedule for Sulfate

1.1 The Permittee is operating under a schedule of compliance pursuant to NPDES/SDS Permit MN0031879 to attain compliance with final effluent limitations for total sulfate. The Permittee shall comply with the schedule of compliance contained in Chapter 1 of NPDES/SDS Permit MN0031879. Pursuant to that schedule, the MPCA will submit notification to the Permittee that the final effluent limitations for total sulfate contained in this permit apply.

2. Special Requirements

Effluent Limit Study

2.1 The Permittee may opt to conduct a study to gather data and information that would support a total sulfate limit other than the final limitations included in this permit.

2.2 When cause exists according to state and federal law regarding modification of permits, this permit may be reopened for modification of effluent limitations, discharge restrictions, monitoring requirements, and or conditions of a schedule of compliance. Any modified permit conditions shall be consistent with all applicable state and federal requirements. MPCA shall comply with all procedural requirements under state and federal law prior to reopening and modifying this permit.

Chapter 2. Industrial Process Wastewater

1. Prohibited Discharges

1.1 This permit does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.

1.2 The Permittee shall prevent the routing of pollutants from the facility to a municipal wastewater treatment system in any manner unless authorized by the pretreatment standards of the MPCA and the municipal authority.

1.3 The Permittee shall not transport pollutants to a municipal wastewater treatment system that will interfere with the operation of the treatment system or cause pass-through violations of effluent limits or water quality standards.

2. Toxic Substance Reporting

2.1 The Permittee shall notify the MPCA immediately of any knowledge or reason to believe that an activity has occurred that would result in the discharge of a toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10 or listed below that is not limited in the permit, if the discharge of this toxic pollutant has exceeded or is expected to exceed the following levels:

a. for acrolein and acrylonitrile, 200 ug/L;

b. for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol, 500 ug/L;

c. for antimony, 1mg/L;

d. for any other toxic pollutant listed in Minnesota Rules, pt. 7001.1060, subp. 4 to 10, 100 ug/L; or

e. five times the maximum concentration value identified and reported for that pollutant in the permit application. (Minnesota Rules, pt. 7001.1090, subp. 2.A)

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 2. Industrial Process Wastewater

2. Toxic Substance Reporting

2.2 The Permittee shall notify the MPCA immediately if the Permittee has begun or expects to begin to use or manufacture as an intermediate or final by-product a toxic pollutant that was not reported in the permit application under Minnesota Rules, pt. 7001.1050, subp. 2.J. (Minnesota Rules, pt. 7001.1090, subp. 2.B)

3. Hydrotest Discharges

3.1 The Permittee shall notify the MPCA prior to discharging hydrostatic test waters. The Permittee shall provide information necessary to evaluate the potential impact of this discharge and to ensure compliance with this permit. This information shall include:

a. the proposed discharge dates;

b. the name and location of receiving waters, including city or township, county, and township/range location;

c. an evaluation of the impact of the discharge on the receiving waters in relation to the water quality standards;

d. a map identifying discharge location(s) and monitoring point(s);

e. the estimated average and maximum discharge rates;

f. the estimated total flow volume of discharge;

g. the water supply for the test water, with a copy of the appropriate Minnesota Department of Natural Resources (DNR) water appropriation permit;

h. water quality data for the water supply;

i. proposed treatment method(s) before discharge; and

j. methods to be used to prevent scouring and erosion due to the discharge.

3.2 This permit does not authorize the construction or installation of pipeline facilities.

4. Polychlorinated Biphenyls (PCBs)

4.1 PCBs, including but not limited to those used in electrical transformers and capacitors, shall not be discharged or released to the environment.

5. New Proposed Dewatering

5.1 The Permittee shall obtain a permit modification before discharging from a new dewatering outfall.

5.2 In addition to the requirements in the Permit Modifications section of this permit, the Permittee shall submit to the MPCA detailed plans and specifications for the proposed methods of achieving discharge limits for turbidity and total suspended solids, based in part upon representative water quality data for untreated wastewater and a detailed map and diagram description of the proposed design for the flow control structures, and route of the discharge to receiving waters.

6. Application for Permit Reissuance

6.1 The permit application shall include analytical data as part of the application for reissuance of this permit. These analyses shall be done on individual samples taken during the twelve-month period before the reissuance application is submitted.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 2. Industrial Process Wastewater

6. Application for Permit Reissuance

6.2 The permit application shall include analytical data for at least the following parameters at monitoring station SD005:

a. biochemical oxygen demand, chemical oxygen demand, total organic carbon, gasoline range organics, diesel range organics, fecal coliform, ammonia, temperature;

b. color, fluoride, nitrate-nitrite (as nitrogen), total organic nitrogen, oil and grease, total phosphorus, chloride, sulfate, sulfide (as sulfur), surfactants, bicarbonates, alkalinity, total salinity, total dissolved solids, specific conductance;

c. aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, selenium, silver, sodium, strontium, thallium, tin, titanium, vanadium, zinc (all in total form) using approved methods according to 40 CFR Part 136.3;

d. total mercury using EPA Method 1631;

e. gross alpha particles, radium-226, radium-228, radon-222, uranium;

f. PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, PCB-1260; and

g. a scan of constituents using EPA Methods 624 and 625, in 40 CFR Part 136.

The Permittee shall identify, in addition to those pollutants noted in Methods 624 and 625 (Appendix D, Table II), the concentrations of at least ten of the most abundant constituents of the acid and base/neutral organic fractions shown to be present by peaks on the total ion plots (reconstructed gas chromatograms) within ten percent of the nearest internal standard. Identification shall be through the use of U.S. EPA/NIH computerized library of mass spectra, with visual confirmation and potential quantification.

6.3 The Permittee shall include, as part of the application for reissuance of this permit, and updated Operating Plan for the tailings basin for the next five (5) years.

Chapter 3. Metallic Mining

1. Mine Tailings Basin

1.1 To summarize the status of the tailings basin, the Permittee shall submit an Annual Report by January 31 of year following permit issuance.

1.2 The Annual Report shall include a current map of the tailings basin area that details the dikes, berms, dams, roads and cells, as well as the current topographic and water level elevations.

1.3 The Annual Report for the tailings basin shall also report the annual net precipitation determined from the previous calendar year and the annual flow volume discharged via outfalls SD001 and SD005.

1.4 The Permittee shall conduct a detailed field survey of seepage zones from the perimeter dikes of the tailings basin during October of each year.

Chapter 3. Metallic Mining

1. Mine Tailings Basin

1.5 The Annual Report shall include a Dike Seepage Survey Report. The Dike Seepage Survey Report shall summarize the field survey and include the following information:

a. a clearly labeled map indicating the locations of the visible seepage zones;

b. the estimated flow rates for the seepage zones;

c. the specific conductance, pH and temperature values for the seepage zones;

d. a brief description of the changes in the nature of the seepage from previous observations; and

e. photographs as needed to document items a. - d.

1.6 The Permittee shall discharge through outfalls SD001 and SD005 no more than the annual net precipitation from the tailings basin during each calendar year. The annual net precipitation shall be determined as follows:

$Y = (Af * P) - (At * E)$

where:

Y = annual net precipitation
Af = area of the tailings basin plus the drainage area contributing surface runoff to the tailings basin
P = total annual precipitation
At = open water area of the tailings basin plus Reservoir 6, and
E = annual lake evaporation.

The total annual precipitation and the annual lake evaporation shall be based on the sum of the data reported through station SD008.

1.7 If the Permittee does not discharge through outfalls SD001 and SD005 the volume equivalent to the annual net precipitation in a given calendar year, then the Permittee may carry over the difference between the annual net precipitation and the actual volume discharged as a credit to the annual net precipitation for the following calendar year. Such credit may be carried over only to that calendar year immediately following the year in which not all of the allowable discharge volume was utilized.

1.8 The Permittee shall notify the Commissioner in writing at least 180 days in advance of any expansion of the area covered by mine tailings beyond the area enclosed by the perimeter basin dams on the date of issuance of this permit.

1.9 The Permittee shall notify the Commissioner in writing at least 30 days prior to the addition or modification of hydraulic relief features, such as granular blanket and filter drains, relief wells and relief trenches, other than those described in the Facility Description.

1.10 The Permittee shall make every effort to prevent and contain any breaks in or spills from the tailings pipeline which runs from the Keewatin Taconite plant to the tailings basin. In particular, the Permittee shall comply with the requirements of the Noncompliance, Upset Defense and Duty to Notify and Avoid Pollution requirements of the Total facility section of the permit, as well as the Tailings Spill Response Plan, should a pipeline break or spill occur.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 3. Metallic Mining

2. Mobile and Rail Equipment Service Areas

2.1 Mobile equipment and rail equipment service areas in the facility shall be operated in compliance with the following:

a. The Permittee shall collect and dispose of locomotive traction sand, degreasing wastes, motor oil, oil filters, oil sorbent pads and booms, transmission fluids, power steering fluids, brake fluids, coolant/antifreeze, radiator flush wastewater and spent solvents in accordance with applicable solid and hazardous waste management rules. These materials shall not be discharged to surface or ground waters of the state.

b. The steam-cleaning of mobile equipment and rail equipment, except for limited outdoor cleaning of large drills and shovels, shall be conducted in wash bays that drain to wastewater treatment systems that include the removal of suspended solids and flammable liquids. The only washing of mobile equipment done in outside areas shall be to remove mud and dirt that has accumulated during outside work.

c. The Permittee shall not use solvent-based cleaners, such as those available for brake cleaning and degreasing, to wash mobile and rail equipment unless the cleaning fluids are completely contained and not allowed to flow to surface or ground waters of the state. Soaps and detergents used in washing shall be biodegradable.

d. Mobile and rail equipment maintenance and repairs shall not be conducted in wash bays.

e. Hazardous materials shall not be stored or handled in wash bays.

f. The Permittee shall inspect wastewater containment systems regularly, and repair any leaks that are detected immediately.

g. If the Permittee discovers that recoverable amounts of petroleum products have entered wastewater containment systems, they shall be recovered immediately and reported to the MPCA.

h. Spill cleanup procedures shall be posted in mobile and rail equipment maintenance and repair areas.

Chapter 4. Stormwater Management

1. Authorization

1.1 This chapter authorizes the Permittee to discharge stormwater associated with industrial activity in accordance with the terms and conditions of this chapter. The MPCA may initiate modification of this chapter in accordance with Minn. R. 7001.0170 and Minn. R. 7001.0190 Subp. 1 to incorporate revised requirements in response to the reissuance or modification of the General Stormwater Permit for Industrial Activity (MNG611000).

2. Prohibited Discharges

2.1 This permit, unless specifically authorized by another chapter, does not authorize the discharge of sewage, wash water, scrubber water, spills, oil, hazardous substances, or equipment/vehicle cleaning and maintenance wastewaters to ditches, wetlands or other surface waters of the state.

2.2 This permit does not authorize discharges from sites for which Environmental Assessment Worksheets or Environmental Impact Statements are required, in accordance with Minn. R. ch. 4410, until that environmental review is completed.

3. Water Quality Standards

3.1 The Permittee shall operate and maintain the facility and shall control runoff, including stormwater, from the facility to prevent the exceedance of water quality standards specified in Minnesota Rules, chs. 7050 and 7060.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 4. Stormwater Management

3. Water Quality Standards

3.2 The Permittee shall limit and control the use of materials at the facility that may cause exceedances of ground water standards specified in Minnesota Rules, ch. 7060. These materials include, but are not limited to, detergents and cleaning agents, solvents, chemical dust suppressants, lubricants, fuels, drilling fluids, oils, fertilizers, explosives and blasting agents.

4. Stormwater Pollution Prevention Plan

4.1 The Permittee shall develop and implement a Stormwater Pollution Prevention Plan (Plan) to address the specific conditions at the industrial facility. The goal of the Plan is to eliminate or minimize contact of stormwater with significant materials that may result in pollution of the runoff. If contact cannot be eliminated or reduced, stormwater that has contacted significant material should be treated before it is discharged from the site. The Plan shall apply to those areas of the facility where industrial activities occur or significant materials are stored, and stormwater runoff does not receive treatment prior to discharge via a permitted surface discharge station. In addition, the Plan should indentify all areas of the facility where the necessary treatment of stormwater is addressed by a permitted surface discharge station.

4.2 The Plan shall be implemented at the site before the Permittee is covered under this permit.

4.3 The Stormwater Pollution Prevention Plan shall include a description of appropriate Best Management Practices for protection of surface and ground water quality at the facility, and a schedule for implementing the practices. The Plan shall also include the procedures to be followed by designated staff employed by the Permittee to implement the plan.

4.4 The Permittee shall comply with its Stormwater Pollution Prevention Plan.

4.5 The Permittee shall submit the Stormwater Pollution Prevention Plan to MPCA upon request.

Plan Contents

4.6 Complete a drainage map. The map should indicate the following items at or adjacent to the facility:

a. drainage areas and directions of stormwater runoff (indicated by arrows);

b. discharge outfalls from the site (structures that carry stormwater runoff from the facility such as ditches or storm sewers);

c. the name and location of waters of the state that receive facility stormwater runoff (if waters of the state are too distant from the facility to be indicated on the site map, indicate the name, direction and shortest distance to the lake, river, stream or wetland that receives runoff from your site);

d. areas where significant materials are exposed to stormwater;

e. locations of storm sewer inlets and an indication of which, if any, structures have floor drains or loading dock drains that are connected to storm sewers; and

f. locations and types of Best Management Practices (BMPs) currently installed at the facility to reduce or eliminate pollutants to stormwater.

Chapter 4. Stormwater Management

4. Stormwater Pollution Prevention Plan

4.7 Complete an inventory of exposed significant materials. Indicate the types of significant materials handled or stored at the site that may potentially contact stormwater. The following are examples of materials that, if exposed to stormwater, must be included in the inventory:

a. raw materials, such as fuels; solvents; petroleum products; detergents; plastic pellets; materials used in food processing or production; stockpiled sand, salt or coal;

b. by-products or intermediate products, such as wood dust, chips or bark; screened limestone, taconite or gravel by-product, recycled blacktop;

c. finished materials, such as metallic products, including scrap metal and recycled or scrap motor vehicle parts, old process equipment/machinery, taconite pellets;

d. waste products, such as ashes, sludge, solid and liquid waste, slag;

e. hazardous substances designated under section 101(14) of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA);

f. any chemical the facility is required to report under section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA).

4.8 Evaluate facility areas for exposure of significant materials to stormwater. In creating the inventory of exposed significant materials, the Permittee must, at a minimum, evaluate the following areas at the industrial site (as well as other areas where appropriate) to determine whether or not significant materials are exposed in these areas:

a. vehicle and equipment maintenance, parking and storage areas including fueling and washing/cleaning areas, to determine if there is discolored soil in these areas as a result of fuel and lubricant leaks and spills;

b. liquid storage tanks and other bulk material stockpile areas;

c. loading and unloading areas;

d. outdoor manufacturing, processing or storage areas and industrial plant yards, to determine if there is discolored soil in these areas as a result of leaked or spilled solvents, fuels, or lubricants;

e. dust or particulate generating areas including dust collection devices that may release dust;

f. rooftops contaminated by industrial activity or operation of a pollution control device;

g. on-site waste disposal areas, such as waste ponds, dumpsters, solid waste storage or management areas; and

h. exposed (non-vegetated) soil areas where there is a potential for erosion to occur.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 4. Stormwater Management

4. Stormwater Pollution Prevention Plan

4.9 Describe appropriate BMPs, including structural and non-structural BMPs, that will be used at the facility to minimize or eliminate pollution of stormwater at the site. The description must include an objective for each BMP, as well as a description of how to evaluate proper functioning of the BMP and any maintenance requirements of the BMP. BMPs should target significant materials and areas identified in subparts 7 and 8 of this part. The following general categories of BMPs shall be considered and one or more shall be incorporated into the facility's Plan if significant materials are exposed to stormwater on-site:

a. Source reduction: reduce or eliminate the significant materials that are exposed to stormwater. Materials management practices should be evaluated to determine whether inventories of exposed materials can be reduced or eliminated. This can include clean-up of equipment yards, periodic checking of dust control equipment to ensure minimal accumulation of dust in the area of control equipment, removal and treatment of petroleum contaminated soil, consolidation of materials from multiple areas into one area, and training employees regarding proper handling and disposal of materials. Significant materials may also be moved indoors or covered with a tarp or structure to eliminate contact with precipitation.

b. Diversion: divert stormwater drainage away from exposed significant materials through use of curbing, berms, sewers or other forms of drainage control or elevate exposed significant material above surrounding drainage.

c. Treatment: where contact of stormwater with significant materials is unavoidable, use treatment devices to reduce the concentration and amount of pollutants in the discharge. Such devices include oil/water separators, stormwater detention/retention ponds, and vegetative swales.

4.10 Evaluate all discharge conveyances from the site (storm sewers, pipes, tile lines, ditches, etc.) to determine if liquids other than stormwater are being discharged from these devices. This should be done during dry weather when stormwater discharge is not occurring. The evaluation should cover sewer inlets and floor drains to determine which inlets/drains are connected to sanitary sewer lines, storm sewer lines, or septic tanks/drainage fields; appropriate methods such as dye or smoke testing or video imaging should be used to determine the source of discharges.

The Plan must certify that discharges from the site have been evaluated for the presence of non-stormwater discharges. The certification shall indicate the date of testing, location of testing, describe the method used to determine the source of discharges and the results of testing. Discharge of non-stormwater (such as sanitary sewer or floor drain connections to storm sewers) is not authorized by this permit; before such discharge may continue, authorization under an appropriate NPDES permit must be obtained.

4.11 Develop a preventive maintenance program. The program must require regular inspection and maintenance of stormwater management devices (e.g. cleaning oil/water separators and catch basins), as well as inspecting and testing plant equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants (e.g. hydraulic leaks, torn bag-house filters) to surface waters.

4.12 Develop a spill prevention and response procedure. In order to develop this procedure, Permittees should evaluate where spills have occurred and where they have the potential to occur. Determine drainage points for potential spill areas and develop appropriate spill prevention and containment measures, should a spill occur. Detailed procedures for cleaning-up spills shall be identified and made available to appropriate personnel. If your facility has any other spill contingency plan that satisfies the above requirements, that plan may be incorporated by reference into this Plan to satisfy this requirement.

4.13 Develop and implement an employee training program to inform appropriate personnel of the components and goals of the Plan. Training shall address spill response, good housekeeping and materials management practices. The Plan shall identify periodic dates for such training.

4.14 Identify personnel responsible for managing and implementing the Plan as well as those responsible for the reporting requirements of this permit. This should include the facility contact person as indicated on the permit application. Identified personnel must be available at reasonable times of operation.

Chapter 4. Stormwater Management

5. Temporary Protection and Permanent Cover

5.1 The Permittee shall provide and maintain temporary protection or permanent cover for the exposed areas at the facility.

5.2 Temporary protection methods are used to prevent erosion on a short-term basis, such as the placement of mulching straw, wood fiber blankets, wood chips, erosion control netting, or temporary seeding.

5.3 Permanent cover or final stabilization methods are used to prevent erosion, such as the placement of rip rap, sodding, or permanent seeding or planting. Permanent seeding and planting must have a uniform perennial vegetation cover of at least 70 percent density to constitute final stabilization.

6. Inspection and Maintenance

6.1 Site inspections shall be conducted at least once every two months throughout the calendar year. During winter months, the inspections shall be conducted during non-frozen conditions. Inspections shall be conducted by an appropriately trained personnel at the facility site, as identified in part 4.13 of this chapter. The purpose of inspections is to: 1) determine whether structural and non-structural BMPs require maintenance or changes, and 2) evaluate the completeness and accuracy of the Plan.

At least one inspection during a reporting period shall be conducted while stormwater is discharging from the facility. Inspections may be documented using an inspection form provided by the MPCA. A Storm Water Site Inspection Form is provided in the appendices section of this permit.

6.2 Inspections shall be documented and a copy of all documentation shall remain on the permitted site whenever Permittee staff are availbale on the site, and be available upon request. The inspection form developed for the General Storm Water Permit for Industrial Activity may be used for recording inspection results, and is included in the appendices section of this permit.

6.3 The following compliance items will be inspected, and documented where appropriate:

a. evaluate the facility to determine that the Plan accurately reflects site conditions as described in subpart 6 of this part, and document any inaccuracies;

b. evaluate the facility to determine whether new exposed materials have been added to the site since completion of the Plan, and document any new significant materials;

c. during the inspection conducted during the runoff event, observe the runoff to determine if it is discolored or otherwise visibly contaminated, and document observations; and,

d. determine if the non-structural and structural BMPs as indicated in the Plan are installed and functioning properly.

6.4 The Permittee shall ensure that temporary protection and permanent cover for the exposed areas at the site are maintained.

6.5 Indicate the date and time of the inspection as well as the name of the inspector on the inspection form.

6.6 When the depth of sediment collected in the final sedimentation basin above the outfall reaches one-half of the riser height, or one-half of the basin design hydraulic storage volume, the Permittee shall drain the basin and remove the sediment within sixty (60) days of discovery. No outflow from the sedimentation basin shall occur while sediment is being removed from that basin. The sediment removed from the basin shall be disposed of at a site which drains to sedimentation basin(s) at the facility.

6.7 If conditions are observed at the site that require changes in the Plan, such changes shall be made to the Plan prior to submission of the annual report for that calendar year.

6.8 The Permittee shall minimize vehicle tracking of gravel, soil or mud onto paved surfaces at the facility.

Chapter 4. Stormwater Management

6. Inspection and Maintenance

6.9 If the findings of a site inspection indicate that BMPs are not meeting the objectives as identified in subpart 9 of this part, corrective actions must be initiated within 30 days and the BMP restored to full operation as soon as field conditions allow.

6.10 The Permittee shall remove tracked material from the road surface and return it to the facility within one (1) day of discovery so that the materials drain to sedimentation basin(s) at the facility.

7. Sedimentation Basin Design and Construction

New Sedimentation Basins

7.1 Sedimentation basins shall be designed by a registered professional engineer, and installed under the direct supervision of a registered professional engineer.

7.2 The basin shall provide at least 1800 cubic feet, per acre drained, of hydraulic storage volume below the top of the outlet riser pipe.

7.3 Inlet(s) and outlet(s) shall be designed to prevent short circuiting and the discharge of floating debris.

7.4 The inlet(s) shall be placed at an elevation at least above one-half of the basin design hydraulic storage volume.

7.5 The outlet(s) shall consist of a perforated riser pipe wrapped with filter fabric and covered with crushed gravel. The perforated riser pipe shall be designed to allow complete drawdown of the basin(s).

7.6 Permanent erosion control, such as rip rap, splash pads or gabions shall be installed at the outlet(s) to prevent downstream erosion.

7.7 The basins shall be designed to allow for regular removal of accumulated sediment by a backhoe or other suitable equipment.

8. Application of Chemical Dust Suppressants

8.1 If chemical dust suppressants are applied, the Permittee shall submit a Chemical Dust Suppressant Annual Report due 31 days after the end of each calendar year following the application of a chemical dust suppressant.

8.2 The Chemical Dust Suppressant Annual Report shall include:

a. a record of the dates, methods, locations and amounts by volume of chemical application at the facility;

b. whether the product was applied in the preceding year; and,

c. the results of a chemical analysis of the materials applied each year.

8.3 If a material applied is mixed with water or another solvent before application, the chemical analysis shall be done on the aqueous or other mixture that is representative of the solution applied. This analysis shall be conducted during the same calendar year of application. This analysis shall include the parameters that may be determined by U.S. Environmental Protection Agency (EPA) Methods 624 and 625 which are described in 40 CFR Part 136.

8.4 Chemical dust suppressants, if used, shall not be applied within 100 feet of the surface receiving waters identified in the 'Facility Description' section of this permit. These materials also shall not be applied within 100 feet of ditches that conduct surface flow to the surface receiving waters identified on Page 1 of this permit.

9. Reporting

9.1 Submit a Stormwater Annual Report by March 31 of each year following permit issuance. A copy of the Stormwater Annual Report Form is provided in the appendices section of this permit.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 4. Stormwater Management

9. Reporting

9.2 The Permittee shall, upon request of the Agency, submit within a reasonable time the information and reports that are relevant to compliance with this Chapter, including the Plan, inspection reports, annual reports, original laboratory sheets from analyses conducted on the waste stream, and BMP plans and specifications.

10. Records

10.1 The Plan shall be retained for the duration of the permit. A copy of the Plan shall remain on the permitted site whenever Permittee staff are available on the site, and be available upon request. The Permittee shall maintain the following records for the period of permit coverage:

a. dates of inspections;

b. findings of inspections;

c. corrective actions taken;

d. documentation of all changes to the Plan; and,

e. a copy of annual reports.

11. Notification

11.1 If the Permittee discharges stormwater into a municipal storm sewer, the Permittee shall notify the operator of the municipal storm sewer of the existence of this permit.

12. Request for Termination of Stormwater Permit Coverage

12.1 All Permittees regulated by 40 CFR 122.26(b)(14)(i) through (ix) and (xi) may request termination of permit coverage by applying for the no exposure exclusion from permitting. The Permittee must submit (form provided by the Agency) a written certification that a condition of no exposure exists at the facility and that the facility meets the definition of no exposure of industrial activities and materials to storm water.

The application for the no exposure exclusion must be completed by the Permittee and sent to: MPCA, Industrial Storm Water Program, 520 Lafayette Rd N, St Paul, MN 55155-4194.

Failure to complete an accurate application will result in the facility being denied the no exposure exclusion from permitting. The facility must submit the application to the Agency once every five years.

12.2 The no exposure exclusion is conditional. The Permittee must maintain a condition of no exposure at the facility in order for the no exposure exclusion to remain applicable. In the event of any change or circumstance that causes exposure of industrial activities or materials to stormwater, the Permittee must comply with the stormwater requirements of this chapter.

12.3 The no exposure certification is non-transferrable. In the event that the facility operator changes, then the new operator must submit a new no exposure certification to the MPCA, Industrial Stormwater Program, 520 Lafayette Rd N, St Paul, MN 55155-4194.

12.4 The MPCA retains the authority to require the facility operator to comply with the requirements of this chapter, even when an industrial operator certifies no exposure, if the MPCA has determined that the discharge is contributing to the violation of, or interfering with the attainment or maintenance of water quality standards, including designated uses.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 4. Stormwater Management

13. Definitions

13.1 "No exposure" means all industrial materials and activities are protected by a storm resistant shelter to prevent exposure to rain, snow, snow melt, and/or runoff. Industrial activities or materials include, but are not limited to, material handling equipment or activities, industrial machinery, raw materials, intermediate products, by-products, final products, or waste products.

13.2 "Non-stormwater discharge" means any discharge not comprised entirely of stormwater discharges authorized by a NPDES permit.

13.3 "Runoff" means any liquid that drains over land from any part of a facility.

Chapter 5. Surface Discharge Stations

1. Requirements for Specific Stations

1.1 SD 001, SD 005, SD 008, SD 009: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

2. Special Requirements

2.1 Samples shall be taken at SD001 during any and all discharge events. The time, date, and duration of each discharge event shall be submitted with the appropriate Discharge Monitoring Report.

3. Sampling Location

3.1 Samples for Station SD001 shall be taken at one of the four siphon outfall points which has the greatest flow at the time of sampling.

3.2 Samples for Station SD005 shall be taken at the culvert prior to combination with Reservoir 2 North waters, during a period of discharge from Reservoir 6. If a discharge from Reservoir 6 occurs at any time during the sampling month, a sample must be obtained for analysis.

3.3 Samples for SD009 shall be taken at a point representative of the discharge of dewatering effluent from Sargent Pit to the unnamed ditch.

3.4 Samples and measurements required by this permit shall be representative of the monitored activity.

4. Surface Discharges

4.1 Floating solids or visible foam shall not be discharged in other than trace amounts.

4.2 Oil or other substances shall not be discharged in amounts that create a visible color film.

4.3 The Permittee shall install and maintain outlet protection measures at the discharge stations to prevent erosion.

5. Winter Sampling Conditions

5.1 The Permittee shall sample flows at the designated monitoring stations including when this requires removing ice to sample the water. If the station is completely frozen throughout a designated sampling month, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR) and note the ice conditions in Comments on the DMR.

6. Discharge Monitoring Reports

6.1 The Permittee shall submit monitoring results for discharges in accordance with the limits and monitoring requirements for this station. If no discharge occurred during the reporting period, the Permittee shall check the "No Discharge" box on the Discharge Monitoring Report (DMR).

Chapter 6. Surface Water Stations

1. Requirements for Specific Stations

1.1 SW 001: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

2. Special Requirements

2.1 Station SW001 was established at the request of the Permittee.

3. Discharge Monitoring Reports

3.1 The Permittee shall submit monitoring results in accordance with the limits and monitoring requirements for this station. If flow conditions are such that no sample could be acquired, the Permittee shall check the "No Flow" box and note the conditions on the Discharge Monitoring Report (DMR).

4. Sampling Location

4.1 Samples for Station SW001 shall be taken at the weir outlet on Reservoir 2.

5. Sampling Protocol

5.1 All instruments used for field measurements shall be maintained and calibrated to insure accuracy of measurements.

5.2 Sample water shall be preserved according to lab instructions and delivered to a certified lab within the minimum holding times.

6. Winter Sampling Conditions

6.1 The Permittee shall sample flows at the designated monitoring stations including when this requires removing ice to sample the water. If the station is completely frozen throughout a designated sampling month, the Permittee shall check the "No Flow" box on the Discharge Monitoring Report (DMR) and note the ice conditions in Comments on the DMR.

Chapter 7. Waste Stream Stations

1. Requirements for Specific Stations

1.1 WS 001: Submit a monthly DMR monthly by 21 days after the end of each calendar month following permit issuance.

2. Sampling Location

2.1 Flow measurements for Station WS001 shall be representative of the non-precipitation inputs to the facility (for example, from Reservoir 2 and/or from Reservoir 6).

Chapter 8. Total Facility Requirements

1. General Requirements

General Requirements

1.1 Incorporation by Reference. The following applicable federal and state laws are incorporated by reference in this permit, are applicable to the Permittee, and are enforceable parts of this permit: 40 CFR pts. 122.41, 122.42, 136, 403 and 503; Minn. R. pts. 7001, 7041, 7045, 7050, 7052, 7053, 7060, and 7080; and Minn. Stat. Sec. 115 and 116.

Chapter 8. Total Facility Requirements

1. General Requirements

1.2 Permittee Responsibility. The Permittee shall perform the actions or conduct the activity authorized by the permit in compliance with the conditions of the permit and, if required, in accordance with the plans and specifications approved by the Agency. (Minn. R. 7001.0150, subp. 3, item E)

1.3 Toxic Discharges Prohibited. Whether or not this permit includes effluent limitations for toxic pollutants, the Permittee shall not discharge a toxic pollutant except according to Code of Federal Regulations, Title 40, sections 400 to 460 and Minnesota Rules 7050, 7052, 7053 and any other applicable MPCA rules. (Minn. R. 7001.1090, subp.1, item A)

1.4 Nuisance Conditions Prohibited. The Permittee's discharge shall not cause any nuisance conditions including, but not limited to: floating solids, scum and visible oil film, acutely toxic conditions to aquatic life, or other adverse impact on the receiving water. (Minn. R. 7050.0210 subp. 2)

1.5 Property Rights. This permit does not convey a property right or an exclusive privilege. (Minn. R. 7001.0150, subp. 3, item C)

1.6 Liability Exemption. In issuing this permit, the state and the MPCA assume no responsibility for damage to persons, property, or the environment caused by the activities of the Permittee in the conduct of its actions, including those activities authorized, directed, or undertaken under this permit. To the extent the state and the MPCA may be liable for the activities of its employees, that liability is explicitly limited to that provided in the Tort Claims Act. (Minn. R. 7001.0150, subp. 3, item O)

1.7 The MPCA's issuance of this permit does not obligate the MPCA to enforce local laws, rules, or plans beyond what is authorized by Minnesota Statutes. (Minn. R. 7001.0150, subp.3, item D)

1.8 Liabilities. The MPCA's issuance of this permit does not release the Permittee from any liability, penalty or duty imposed by Minnesota or federal statutes or rules or local ordinances, except the obligation to obtain the permit. (Minn. R. 7001.0150, subp.3, item A)

1.9 The issuance of this permit does not prevent the future adoption by the MPCA of pollution control rules, standards, or orders more stringent than those now in existence and does not prevent the enforcement of these rules, standards, or orders against the Permittee. (Minn. R. 7001.0150, subp.3, item B)

1.10 Severability. The provisions of this permit are severable and, if any provisions of this permit or the application of any provision of this permit to any circumstance are held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

1.11 Compliance with Other Rules and Statutes. The Permittee shall comply with all applicable air quality, solid waste, and hazardous waste statutes and rules in the operation and maintenance of the facility.

1.12 Inspection and Entry. When authorized by Minn. Stat. Sec. 115.04; 115B.17, subd. 4; and 116.091, and upon presentation of proper credentials, the agency, or an authorized employee or agent of the agency, shall be allowed by the Permittee to enter at reasonable times upon the property of the Permittee to examine and copy books, papers, records, or memoranda pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit; and to conduct surveys and investigations, including sampling or monitoring, pertaining to the construction, modification, or operation of the facility covered by the permit or pertaining to the activity covered by the permit. (Minn. R. 7001.0150, subp.3, item I)

1.13 Control Users. The Permittee shall regulate the users of its wastewater treatment facility so as to prevent the introduction of pollutants or materials that may result in the inhibition or disruption of the conveyance system, treatment facility or processes, or disposal system that would contribute to the violation of the conditions of this permit or any federal, state or local law or regulation.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 8. Total Facility Requirements

1. General Requirements

Sampling

1.14 Representative Sampling. Samples and measurements required by this permit shall be conducted as specified in this permit and shall be representative of the discharge or monitored activity. (40 CFR 122.41 (j)(1))

1.15 Additional Sampling. If the Permittee monitors more frequently than required, the results and the frequency of monitoring shall be reported on the Discharge Monitoring Report (DMR) or another MPCA-approved form for that reporting period. (Minn. R. 7001.1090, subp. 1, item E)

1.16 Certified Laboratory. A laboratory certified by the Minnesota Department of Health shall conduct analyses required by this permit. Analyses of dissolved oxygen, pH, temperature and total residual oxidants (chlorine, bromine) do not need to be completed by a certified laboratory but shall comply with manufacturers specifications for equipment calibration and use. (Minn. Stat. Sec. 144.97 through 144.98 and Minn. R. 4740.2010 and 4740.2050 through 4740.2120) (Minn. R. 4740.2010 and 4740.2050 through 2120)

1.17 Sample Preservation and Procedure. Sample preservation and test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 and Minn. R. 7041.3200.

1.18 Equipment Calibration: Flow meters, pumps, flumes, lift stations or other flow monitoring equipment used for purposes of determining compliance with permit shall be checked and/or calibrated for accuracy at least twice annually. (Minn. R. 7001.0150, subp. 2, items B and C)

1.19 Maintain Records. The Permittee shall keep the records required by this permit for at least three years, including any calculations, original recordings from automatic monitoring instruments, and laboratory sheets. The Permittee shall extend these record retention periods upon request of the MPCA. The Permittee shall maintain records for each sample and measurement. The records shall include the following information (Minn. R. 7001.0150, subp. 2, item C):

a. The exact place, date, and time of the sample or measurement;

b. The date of analysis;

c. The name of the person who performed the sample collection, measurement, analysis, or calculation; and

d. The analytical techniques, procedures and methods used; and

e. The results of the analysis.

1.20 Completing Reports. The Permittee shall submit the results of the required sampling and monitoring activities on the forms provided, specified, or approved by the MPCA. The information shall be recorded in the specified areas on those forms and in the units specified. (Minn. R. 7001.1090, subp. 1, item D; Minn. R. 7001.0150, subp. 2, item B)

Required forms may include:

DMR Supplemental Form
Individual values for each sample and measurement must be recorded on the DMR Supplemental Form which, if required, will be provided by the MPCA. DMR Supplemental Forms shall be submitted with the appropriate DMRs. You may design and use your own supplemental form; however it must be approved by the MPCA. Note: Required summary information MUST also be recorded on the DMR. Summary information that is submitted ONLY on the DMR Supplemental Form does not comply with the reporting requirements.

Chapter 8. Total Facility Requirements

1. General Requirements

1.21 Submitting Reports. DMRs and DMR Supplemental Forms shall be submitted to:

MPCA
Attn: Discharge Monitoring Reports
520 Lafayette Road North
St. Paul, Minnesota 55155-4194.

DMRs and DMR Supplemental Forms shall be postmarked by the 21st day of the month following the sampling period or as otherwise specified in this permit. A DMR shall be submitted for each required station even if no discharge occurred during the reporting period. (Minn. R. 7001.0150, subps. 2.B and 3.H)

Other reports required by this permit shall be postmarked by the date specified in the permit to:

MPCA
Attn: WQ Submittals Center
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

1.22 Incomplete or Incorrect Reports. The Permittee shall immediately submit an amended report or DMR to the MPCA upon discovery by the Permittee or notification by the MPCA that it has submitted an incomplete or incorrect report or DMR. The amended report or DMR shall contain the missing or corrected data along with a cover letter explaining the circumstances of the incomplete or incorrect report. (Minn. R. 7001.0150 subp. 3, item G)

1.23 Required Signatures. All DMRs, forms, reports, and other documents submitted to the MPCA shall be signed by the Permittee or the duly authorized representative of the Permittee. Minn. R. 7001.0150, subp. 2, item D. The person or persons that sign the DMRs, forms, reports or other documents must certify that he or she understands and complies with the certification requirements of Minn. R. 7001.0070 and 7001.0540, including the penalties for submitting false information. Technical documents, such as design drawings and specifications and engineering studies required to be submitted as part of a permit application or by permit conditions, must be certified by a registered professional engineer. (Minn. R. 7001.0540)

1.24 Detection Level. The Permittee shall report monitoring results below the reporting limit (RL) of a particular instrument as "<" the value of the RL. For example, if an instrument has a RL of 0.1 mg/L and a parameter is not detected at a value of 0.1 mg/L or greater, the concentration shall be reported as "<0.1 mg/L." "Non-detected," "undetected," "below detection limit," and "zero" are unacceptable reporting results, and are permit reporting violations. (Minn. R. 7001.0150, subp. 2, item B)

Where sample values are less than the level of detection and the permit requires reporting of an average, the Permittee shall calculate the average as follows:

a. If one or more values are greater than the level of detection, substitute zero for all nondetectable values to use in the average calculation.

b. If all values are below the level of detection, report the averages as "<" the corresponding level of detection.

c. Where one or more sample values are less than the level of detection, and the permit requires reporting of a mass, usually expressed as kg/day, the Permittee shall substitute zero for all nondetectable values.
(Minn. R. 7001.0150, subp. 2, item B)

Chapter 8. Total Facility Requirements

1. General Requirements

1.25 Records. The Permittee shall, when requested by the Agency, submit within a reasonable time the information and reports that are relevant to the control of pollution regarding the construction, modification, or operation of the facility covered by the permit or regarding the conduct of the activity covered by the permit. (Minn. R. 7001.0150, subp. 3, item H)

1.26 Confidential Information. Except for data determined to be confidential according to Minn. Stat. Sec. 116.075, subd. 2, all reports required by this permit shall be available for public inspection. Effluent data shall not be considered confidential. To request the Agency maintain data as confidential, the Permittee must follow Minn. R. 7000.1300.

Noncompliance and Enforcement

1.27 Subject to Enforcement Action and Penalties. Noncompliance with a term or condition of this permit subjects the Permittee to penalties provided by federal and state law set forth in section 309 of the Clean Water Act; United States Code, title 33, section 1319, as amended; and in Minn. Stat. Sec. 115.071 and 116.072, including monetary penalties, imprisonment, or both. (Minn. R. 7001.1090, subp. 1, item B)

1.28 Criminal Activity. The Permittee may not knowingly make a false statement, representation, or certification in a record or other document submitted to the Agency. A person who falsifies a report or document submitted to the Agency, or tampers with, or knowingly renders inaccurate a monitoring device or method required to be maintained under this permit is subject to criminal and civil penalties provided by federal and state law. (Minn. R. 7001.0150, subp.3, item G., 7001.1090, subps. 1, items G and H and Minn. Stat. Sec. 609.671)

1.29 Noncompliance Defense. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. (40 CFR 122.41(c))

1.30 Effluent Violations. If sampling by the Permittee indicates a violation of any discharge limitation specified in this permit, the Permittee shall immediately make every effort to verify the violation by collecting additional samples, if appropriate, investigate the cause of the violation, and take action to prevent future violations. Violations that are determined to pose a threat to human health or a drinking water supply, or represent a significant risk to the environment shall be immediately reported to the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 (toll free) or (651)649-5451 (metro area). In addition, you may also contact the MPCA during business hours. Otherwise the violations and the results of any additional sampling shall be recorded on the next appropriate DMR or report.

1.31 Unauthorized Releases of Wastewater Prohibited. Except for conditions specifically described in Minn. R. 7001.1090, subp. 1, items J and K, all unauthorized bypasses, overflows, discharges, spills, or other releases of wastewater or materials to the environment, whether intentional or not, are prohibited. However, the MPCA will consider the Permittee's compliance with permit requirements, frequency of release, quantity, type, location, and other relevant factors when determining appropriate action. (40 CFR 122.41 and Minn. Stat. Sec 115.061)

Chapter 8. Total Facility Requirements

1. General Requirements

1.32 Discovery of a release. Upon discovery of a release, the Permittee shall:

a. Take all reasonable steps to immediately end the release.

b. Notify the Minnesota Department of Public Safety Duty Officer at 1(800)422-0798 or (651)649-5451 (metro area) immediately upon discovery of the release. You may contact the MPCA during business hours at 1(800)657-3864 or (651)296-6300 (metro area).

c. Recover as rapidly and as thoroughly as possible all substances and materials released or immediately take other action as may be reasonably possible to minimize or abate pollution to waters of the state or potential impacts to human health caused thereby. If the released materials or substances cannot be immediately or completely recovered, the Permittee shall contact the MPCA. If directed by the MPCA, the Permittee shall consult with other local, state or federal agencies (such as the Minnesota Department of Natural Resources and/or the Wetland Conservation Act authority) for implementation of additional clean-up or remediation activities in wetland or other sensitive areas.

d. Collect representative samples of the release. The Permittee shall sample the release for parameters of concern immediately following discovery of the release. The Permittee may contact the MPCA during business hours to discuss the sampling parameters and protocol. In addition, Fecal Coliform Bacteria samples shall be collected where it is determined by the Permittee that the release contains or may contain sewage. If the release cannot be immediately stopped, the Permittee shall consult with MPCA regarding additional sampling requirements. Samples shall be collected at least, but not limited to, two times per week for as long as the release continues.

e. Submit the sampling results as directed by the MPCA. At a minimum, the results shall be submitted to the MPCA with the next DMR.

1.33 Upset Defense. In the event of temporary noncompliance by the Permittee with an applicable effluent limitation resulting from an upset at the Permittee's facility due to factors beyond the control of the Permittee, the Permittee has an affirmative defense to an enforcement action brought by the Agency as a result of the noncompliance if the Permittee demonstrates by a preponderance of competent evidence:

a. The specific cause of the upset;

b. That the upset was unintentional;

c. That the upset resulted from factors beyond the reasonable control of the Permittee and did not result from operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or increases in production which are beyond the design capability of the treatment facilities;

d. That at the time of the upset the facility was being properly operated;

e. That the Permittee properly notified the Commissioner of the upset in accordance with Minn. R. 7001.1090, subp. 1, item I; and

f. That the Permittee implemented the remedial measures required by Minn. R. 7001.0150, subp. 3, item J.

DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT DRAFT

Chapter 8. Total Facility Requirements

1. General Requirements

Operation and Maintenance

1.34 The Permittee shall at all times properly operate and maintain the facilities and systems of treatment and control, and the appurtenances related to them which are installed or used by the Permittee to achieve compliance with the conditions of the permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. The Permittee shall install and maintain appropriate backup or auxiliary facilities if they are necessary to achieve compliance with the conditions of the permit and, for all permits other than hazardous waste facility permits, if these backup or auxiliary facilities are technically and economically feasible Minn. R. 7001.0150. subp. 3, item F.

1.35 In the event of a reduction or loss of effective treatment of wastewater at the facility, the Permittee shall control production or curtail its discharges to the extent necessary to maintain compliance with the terms and conditions of this permit. The Permittee shall continue this control or curtailment until the wastewater treatment facility has been restored or until an alternative method of treatment is provided. (Minn. R. 7001.1090, subp. 1, item C)

1.36 Solids Management. The Permittee shall properly store, transport, and dispose of biosolids, septage, sediments, residual solids, filter backwash, screenings, oil, grease, and other substances so that pollutants do not enter surface waters or ground waters of the state. Solids should be disposed of in accordance with local, state and federal requirements. (40 CFR 503 and Minn. R. 7041 and applicable federal and state solid waste rules)

1.37 Scheduled Maintenance. The Permittee shall schedule maintenance of the treatment works during non-critical water quality periods to prevent degradation of water quality, except where emergency maintenance is required to prevent a condition that would be detrimental to water quality or human health. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)

1.38 Control Tests. In-plant control tests shall be conducted at a frequency adequate to ensure compliance with the conditions of this permit. (Minn. R. 7001.0150. subp. 3, item F and Minn. R. 7001.0150. subp. 2, item B)

Changes to the Facility or Permit

1.39 Permit Modifications. No person required by statute or rule to obtain a permit may construct, install, modify, or operate the facility to be permitted, nor shall a person commence an activity for which a permit is required by statute or rule until the Agency has issued a written permit for the facility or activity. (Minn. R. 7001.0030)

Permittees that propose to make a change to the facility or discharge that requires a permit modification must follow Minn. R. 7001.0190. If the Permittee cannot determine whether a permit modification is needed, the Permittee must contact the MPCA prior to any action. It is recommended that the application for permit modification be submitted to the MPCA at least 180 days prior to the planned change.

1.40 Construction. No construction shall begin until the Permittee receives written approval of plans and specifications from the MPCA (Minn. Stat. Sec. 115.03(f)).

Plans, specifications and MPCA approval are not necessary when maintenance dictates the need for installation of new equipment, provided the equipment is the same design size and has the same design intent. For instance, a broken pipe, lift station pump, aerator, or blower can be replaced with the same design-sized equipment without MPCA approval.

If the proposed construction is not expressly authorized by this permit, it may require a permit modification. If the construction project requires an Environmental Assessment Worksheet under Minn. R. 4410, no construction shall begin until a negative declaration is issued and all approvals are received or implemented.

Chapter 8. Total Facility Requirements

1. General Requirements

1.41 Report Changes. The Permittee shall give advance notice as soon as possible to the MPCA of any substantial changes in operational procedures, activities that may alter the nature or frequency of the discharge, and/or material factors that may affect compliance with the conditions of this permit. (Minn. R. 7001.0150, subp. 3, item M)

1.42 Chemical Additives. The Permittee shall receive prior written approval from the MPCA before increasing the use of a chemical additive authorized by this permit, or using a chemical additive not authorized by this permit, in quantities or concentrations that have the potential to change the characteristics, nature and/or quality of the discharge.

The Permittee shall request approval for an increased or new use of a chemical additive at least 60 days, or as soon as possible, before the proposed increased or new use.

This written request shall include at least the following information for the proposed additive:

a. The process for which the additive will be used;
b. Material Safety Data Sheet (MSDS) which shall include aquatic toxicity, human health, and environmental fate information for the proposed additive;
c. A complete product use and instruction label;
d. The commercial and chemical names and Chemical Abstract Survey (CAS) number for all ingredients in the additive (If the MSDS does not include information on chemical composition, including percentages for each ingredient totaling to 100%, the Permittee shall contact the supplier to have this information provided); and
e. The proposed method of application, application frequency, concentration, and daily average and maximum rates of use.

Upon review of the information submitted regarding the proposed chemical additive, the MPCA may require additional information be submitted for consideration. This permit may be modified to restrict the use or discharge of a chemical additive and include additional influent and effluent monitoring requirements.

Approval for the use of an additive shall not justify the exceedance of any effluent limitation nor shall it be used as a defense against pollutant levels in the discharge causing or contributing to the violation of a water quality standard. (Minn. R. 7001.0170)

1.43 MPCA Initiated Permit Modification, Suspension, or Revocation. The MPCA may modify or revoke and reissue this permit pursuant to Minn. R. 7001.0170. The MPCA may revoke without reissuance this permit pursuant to Minn. R. 7001.0180.

1.44 TMDL Impacts. Facilities that discharge to an impaired surface water, watershed or drainage basin may be required to comply with additional permits or permit requirements, including additional restriction or relaxation of limits and monitoring as authorized by the CWA 303(d)(4)(A) and 40 CFR 122.44.l.2.i., necessary to ensure consistency with the assumptions and requirements of any applicable US EPA approved wasteload allocations resulting from Total Maximum Daily Load (TMDL) studies.

1.45 Permit Transfer. The permit is not transferable to any person without the express written approval of the Agency after compliance with the requirements of Minn. R. 7001.0190. A person to whom the permit has been transferred shall comply with the conditions of the permit. (Minn. R., 7001.0150, subp. 3, item N)

Chapter 8. Total Facility Requirements

1. General Requirements

1.46 Facility Closure. The Permittee is responsible for closure and postclosure care of the facility. The Permittee shall notify the MPCA of a significant reduction or cessation of the activities described in this permit at least 180 days before the reduction or cessation. The MPCA may require the Permittee to provide to the MPCA a facility Closure Plan for approval.

Facility closure that could result in a potential long-term water quality concern, such as the ongoing discharge of wastewater to surface or ground water, may require a permit modification or reissuance.

The MPCA may require the Permittee to establish and maintain financial assurance to ensure performance of certain obligations under this permit, including closure, postclosure care and remedial action at the facility. If financial assurance is required, the amount and type of financial assurance, and proposed modifications to previously MPCA-approved financial assurance, shall be approved by the MPCA. (Minn. Stat. Sec. 116.07, subd. 4)

1.47 Permit Reissuance. If the Permittee desires to continue permit coverage beyond the date of permit expiration, the Permittee shall submit an application for reissuance at least 180 days before permit expiration. If the Permittee does not intend to continue the activities authorized by this permit after the expiration date of this permit, the Permittee shall notify the MPCA in writing at least 180 days before permit expiration.

If the Permittee has submitted a timely application for permit reissuance, the Permittee may continue to conduct the activities authorized by this permit, in compliance with the requirements of this permit, until the MPCA takes final action on the application, unless the MPCA determines any of the following (Minn. R. 7001.0040 and 7001.0160):

a. The Permittee is not in substantial compliance with the requirements of this permit, or with a stipulation agreement or compliance schedule designed to bring the Permittee into compliance with this permit;

b. The MPCA, as a result of an action or failure to act by the Permittee, has been unable to take final action on the application on or before the expiration date of the permit;

c. The Permittee has submitted an application with major deficiencies or has failed to properly supplement the application in a timely manner after being informed of deficiencies.

Minnesota Pollution Control Agency

National Pollutant Discharge Elimination System /State Disposal System (NPDES/SDS) Permit Program Statement of Basis

Permittee: United States Steel, Minnesota Ore Operations
Name: Keetac – Mining Operations
Permit Number: MN0031879

Current Permit Expiration: May 31, 2011

Public Comment Period Begins: June 27, 2011
Period Ends: August 19, 2011

Receiving Water: Welcome Lake; Welcome Creek to Reservoir 2 North; Unnamed wetlands and creeks tributary to O'Brien Reservoir

Proposed Action: Permit Reissuance

Permitting Contact
Brandon Smith
520 Lafayette Road N.
St. Paul, MN 55155
Phone: 651-757-2740
Fax: 651-296-8717

Table of Contents

Purpose and Participation

Purpose
This Statement of Basis outlines the principal issues related to the preparation of this permit reissuance and documents the decisions that were made in the determination of the effluent limitations and conditions of this permit.

The permit will be reissued if the Minnesota Pollution Control Agency (MPCA) determines that the proposed Permittee or Permittees will, with respect to the facility or activity to be permitted, comply or undertake a schedule to achieve compliance with all applicable state and federal pollution control statutes and rules administered by the MPCA and the conditions of the permit and that all applicable requirements of Minn. Stat. ch. 116D and the rules promulgated thereunder have been fulfilled.

More detail on all requirements placed on the facility may be found in the Permit document.

Facility Description

Background Information
Facility Location
The permitted facility includes the mining and processing operations for the U. S. Steel – Keetac facility, located to the north of Keewatin, Minnesota.

Outfall Locations
SD001: This outfall represents the discharge of filter backwash water from the potable water system to Welcome Lake. PLS coordinates are T57N, R21W, Section 19b.

SD002: The overflow discharge from Reservoir 5 treatment basin and diversion ditch treatment system is to Welcome Creek, south of Welcome Lake. PLS coordinates are T 57 N, R 21 W, Section 30b.

SD003: The Mesabi Chief dewatering outfall is located off the southwestern edge of the Mesabi Chief pit, PLS coordinates are T 57 N, R 22 W, Section 27a.

SD012: The Perry Pit dewatering outfall is located off the southwest side of the Perry Pit. PLS coordinates are T 57 N, R 22 W, Section 27b.

Changes to Facility or Operation
The facility has proposed an expansion of the taconite processing plant with which the permitted operations are associated.

Recent Compliance History
The Facility was inspected on May 10, 2010. No significant compliance issues were found that would affect modification of this permit.

Topographic Map of Permitted Facility

MN003189, US Steel - Keewatin Taconite Operations, Mining
St. Louis County & Itasca County, Minnesota

Map produced by: MPCA Staff, 4/15/2010
Source: USGS Nashwauk, Keewatin, Hibbing, Pengilly, Silica, Riley Quads
Scale: 1:24,000

0 0.5 1 2 Miles

N

Receiving Waters

Use Classification
The receiving waters affected by this permit reissuance include Welcome Lake, Welcome Creek, O'Brien Creek, and the O'Brien Reservoir.

All waters of the state of Minnesota must be classified based on considerations of best usage in the interest of the public and in conformance with the requirements of the applicable statutes, as described in Minn. R. 7050.0140. Based on these considerations, Welcome Creek and O'Brien Creek are classified as Class 2C waters as listed in Minn. R. 7050.0470 subp. 4.A. items (127) and (236), respectively. According to Minn. R.7050.0410, any listed water in Minn. R. 7050.0470 is also classified as a Class 3C, 4A, 4B, 5, and 6 water.

Welcome Lake and O'Brien Reservoir are not listed waters in Minn. R. 7050.0470. As detailed in Minn. R. 7050.0430, all surface waters of the state that are not listed in Minn. R. 7050.0470 and that are not wetlands as defined in Minn. R. 7050.0186, subp. 1a, are classified as Class 2B, 3C, 4A, 4B, 5, and 6 waters.

Based on the applicable classifications, the receiving waters named above are designated for use in the forms of aquatic life and recreation, industrial consumption, agriculture and wildlife, aesthetic enjoyment and navigation, and other uses.

Impairments
Minnesota is required to maintain a list of impaired waters, pursuant to Section 303(d) of the Federal Clean Water Act. Impairments have been identified in the receiving waters affected by this permit modification for mercury. Permit conditions with regard to mercury for this permit modification are discussed later in this statement of basis.

Proposed Permit Effluent Limits

The MPCA may develop effluent limitations based on Minnesota state water quality standards for the receiving water use classification, federal categorical standards applicable to specific industrial categories, or combination of these standards to regulate discharge of industrial wastewater. In addition, the MPCA may derive standards that are specific to a particular discharge. These standards may be based on toxicity studies, best professional judgment analysis, technology based standards, and in some instances standards developed by other U.S. states or regulatory agencies. Minnesota Rules and the U.S. Code of Federal Regulations (CFR) require that the MPCA categorize industrial dischargers consistent with the U.S. Environmental Protection Agency federal categorical standards, and state standards if appropriate.

Technology Based Effluent Limits
Minn. R. 7053.0225 subp. 1.A requires that all point source dischargers of industrial or other wastes shall comply with applicable federal standards, including those listed in 40 CFR pt. 401 through 469. The MPCA has determined that the specific industrial category and federal effluent limitation guidelines (Categorical Standards) applicable to this facility are those described in 40 CFR pt. 440 subp. A, for the iron ore mining and dressing point source category. The facility constitutes an existing source, and is therefore not subject to the New Source Performance Standards for this industry. The Categorical Standards for Best Practicable Control Technology currently available (BPT) and Best Available Technology economically achievable (BAT) have been applied for the conditions in this permit. These standards, along with Minnesota State Water Discharge Restrictions, have been used to develop the effluent limitations for discharge via permitted outfalls as summarized in the tables below.

Table – Technology-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0031879, Surface Discharge Station SD001: Water Treatment Plant Backwash

Effluent Characteristic	*Effluent Limitation*	*Basis*
pH	6.0 Standard Units (SU) Instantaneous Minimum; 9.0 SU Instantaneous Maximum	Minn. R. 7053.0225 subp. 1.B.
Total Suspended Solids	30 mg/L Daily Maximum	Minn. R. 7053.0225 subp. 1.B.

Pursuant to Minn. R. 7053.0225, given that effluent limitations have not been promulgated for treatment plant backwash under 40 CFR 440, Minnesota State Water Discharge Restrictions are applied to ensure adequate treatment is achieved prior to discharge via SD001.

Table – Technology-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0031879, Surface Discharge Stations SD002 and SD003

Effluent Characteristic	*Effluent Limitation*	*Basis*
Iron, dissolved (as Fe)	1.0 mg/L Calendar Month Average, 2.0 mg/L Daily Maximum	40 CFR § 440.12(a), 40 CFR § 440.13(a)
Total Suspended Solids	20 mg/L Calendar Month Average, 30 mg/L Daily Maximum	40 CFR § 440.12(a)

Effluent from SD002 and SD003 consists primarily of industrial stormwater and mine drainage as described in 40 CFR pt. 440. Effluent limitations have been included for total dissolved iron and total suspended solids to ensure that treatment requirements based on BAT and BPT considerations are achieved. Effluent limitations for pH based on water quality considerations have been determined to be more restrictive than the applicable limitations based on BAT and BPT.

Table – Technology-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0031879, Surface Discharge Station SD012: Perry Pit Dewatering

Effluent Characteristic	*Effluent Limitation*	*Basis*
pH	6.0 Standard Units (SU) Instantaneous Minimum; 9.0 SU Instantaneous Maximum	40 CFR § 440.12(a)
Iron, dissolved (as Fe)	1.0 mg/L Calendar Month Average, 2.0 mg/L Daily Maximum	40 CFR § 440.12(a), 40 CFR § 440.13(a)
Total Suspended Solids	20 mg/L Calendar Month Average, 30 mg/L Daily Maximum	40 CFR § 440.12(a)

Effluent from SD012 consists of mine drainage from Perry Pit, which receives surface runoff from stripping and stockpiling activities associated with mining from Keetac operations. Therefore, effluent limitations have been included to reflect BAT and BPT for this waste stream.

Table – Technology-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0031879, Waste Stream Station WS005: Internal Waste Stream

Effluent Characteristic	*Effluent Limitation*	*Basis*
Carbonaceous Biochemical Oxygen Demand, 5 Day	25 mg/L, 3.8 kg/day Calendar Month Average; 40 mg/L, 6.0 kg/day Daily Maximum	Minn. R. 7053.0215 subp. 1
Fecal Coliform	200 Organisms/100 mL Geometric Mean	Minn. R. 7053.0215
pH	6.0 Standard Units (SU) Instantaneous Minimum; 9.0 SU Instantaneous Maximum	Minn. R. 7053.0215
Total Suspended Solids	30 mg/L, 4.5 kg/day Calendar Month Average; 45 mg/L, 6.8 kg/day Daily Maximum	Minn. R. 7053.0215

WS005 consists of treated effluent from an activated sludge package plant that commingles with pit drainage effluent prior to discharge. To ensure adequate treatment is applied prior to discharge as required by Minn. R. 7053.0215, the permit requires that effluent limitations for discharges of sewage are met prior to commingling with other waste sources.

Water Quality Based Limits
Effluent limitations based on Minnesota state water quality standards for the receiving water use classifications previously discussed have been included in the permit for surface discharge stations SD002, SD003, and SD012.

The MPCA has made the determination that, based on the information available at the time of this permit modification, sulfate from the facility's discharges via SD002, SD003, and SD012 reaches waters that are used for the production of wild rice. Pursuant to Minn. R. 7050.0224 subp. 2, the available information at the time of this permit modification, and currently established permitting policies, the MPCA is including final effluent limitations for total sulfate based on a water quality standard of 10 mg/L total sulfate for these outfalls. The effluent limitations and associated reasonable potential calculations are detailed for each outfall in this section. The calculations are based on a zero-dilution factor, due to the fact that the receiving waters are above the currently supported water quality standard of 10 mg/L sulfate.

Table – Water Quality-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0031879, Surface Discharge Station SD002: Weir Outfall

Effluent Characteristic	*Effluent Limitation*	*Basis*
Ammonia, Unionized	0.04 mg/L Calendar Month Average	Minn. R. 7050.0222 subp. 5
Oil and Grease	0.5 mg/L Calendar Quarter Average; 5.0 mg/L Daily Maximum	Minn. R. 7050.0222 Subp. 5
pH	6.5 Standard Units (SU) Instantaneous Minimum; 8.5 SU Instantaneous Maximum	Minn. R. 7050.0222 subp. 5, Minn. R. 7050.0224 subp. 2
Total Sulfate	14 mg/L Calendar Month Average, 24 mg/L Daily Maximum	Minn. R. 7050.0224 subp. 2, in combination with currently available information
Turbidity	25 Nephelometric Turbidity Units Calendar Month Average	Minn. R. 7050.0222 subp. 5

Effluent limitations are included for the parameters listed in the table above based on reasonable potential analyses completed during previous permit actions. Reasonable potential analysis completed utilizing data collected for mercury and specific conductance indicated that effluent limitations were not necessary for those parameters, as detailed in the following table.

Table – Reasonable Potential Calculations for SD002

PARAMETER	Hg (ng/l)	Sp. Conductance (µmhos/cm)
Maximum measured effluent value	1.9	784
Projected effluent quality (PEQ)	2.66	784
@ n data points	(18)	(38)
Plant design flow (mgd)	15.1	15.1
Receiving water design flow (mgd)	0	0
Background concentration	0	0
Continuous standard (cs)	6.9	700
Maximum standard (ms)	2400	
Final acute value (FAV)	4900	
Mass Balance - cs	6.9	700
Mass Balance - ms	2400	
Coefficient Of Variation (CV)	0.64	0.19
Long Term Average: LTA cs	5.31	924.78
LTA ms	732.48	
Preliminary Effluent Limit (PEL):	17.4	1395
Daily Maximum		
Monthly Average	10	1137
Reasonable Potential PEQ>PEL (Dmax/FAV)	No	No

Table – Water Quality-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0031879, Surface Discharge Station SD003: Mesabi Chief Pit Dewatering

Effluent Characteristic	***Effluent Limitation***	***Basis***
Oil and Grease	0.5 mg/L Calendar Quarter Average; 5.0 mg/L Daily Maximum	Minn. R. 7050.0222 subp. 5
pH	6.5 Standard Units (SU) Instantaneous Minimum; 8.5 SU Instantaneous Maximum	Minn. R. 7050.0222 subp. 5, Minn. R. 7050.0224 subp. 2
Total Sulfate	14 mg/L Calendar Month Average, 24 mg/L Daily Maximum	Minn. R. 7050.0224 subp. 2, in combination with currently available information

Effluent limitations are included for the parameters listed in the table above based on reasonable potential analyses completed during previous permit actions. Reasonable potential analysis completed utilizing data collected for mercury and specific conductance indicated that effluent limitations were not necessary for those parameters, as detailed in the following table.

Table – Reasonable Potential Calculations for SD003

PARAMETER	Hg (ng/l)	Sp. Conductance (µmhos/cm)
Maximum measured effluent value	5.2	702
Projected effluent quality (PEQ)	7.28	702
@ n data points	(18)	(39)
Plant design flow (mgd)	5.85	5.85
Receiving water design flow (mgd)	0	0
Background concentration	0	0
Continuous standard (cs)	6.9	700
Maximum standard (ms)	2400	
Final acute value (FAV)	4900	
Mass Balance - cs	6.9	700
Mass Balance - ms	2400	
Coefficient Of Variation (CV)	0.62	0.15
Long Term Average: LTA cs	5.34	939.41
LTA ms	746.94	
Preliminary Effluent Limit (PEL):	17.1	1309
Daily Maximum		
Monthly Average	10	1109
Reasonable Potential PEQ>PEL (Dmax/FAV)	No	No

Table – Water Quality-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0031879, Surface Discharge Station SD012: Perry Pit Dewatering

Effluent Characteristic	***Effluent Limitation***	***Basis***
Total Sulfate	14 mg/L Calendar Month Average, 24 mg/L Daily Maximum	Minn. R. 7050.0224 subp. 2, in combination with currently available information

With the exception of bicarbonate alkalinity, reasonable potential analyses completed during a permit modification in 2010 were used to determine the need for water quality-based effluent limitations due to the fact that the data are still representative of Perry Pit effluent quality. Effluent limitations are included for total sulfate based on those reasonable potential calculations.

As described in the previous permit, reasonable potential for bicarbonate alkalinity was recalculated following representative monitoring by the Permittee. Based on the new information collected, an effluent limitation for bicarbonates is not warranted in this permit reissuance, as indicated in the table below.

Table – Reasonable Potential Calculations for SD012

PARAMETER	Hardness (mg/L)	TDS (mg/L)	Bicarb (meq/L)	Sp. Cond. (µmhos/cm)	Hg (ng/L)	Sulfate (mg/l)
Maximum measured effluent value	256	345	3.86	702	1.7	23.4
Projected effluent quality (PEQ)	780	1035	5.404	842.4	4.42	60.84
@ n data points	(3)	(3)	(14)	(38)	(4)	(4)
Plant design flow (mgd)	4.32	4.32	4.32	4.32	4.32	4.32
Receiving water design flow (mgd)	0	0	0	0	0	0
Background concentration	0	0	0	0	0	0
Continuous standard (cs)	500	700	5	1000	6.9	10
Maximum standard (ms)					2400	-
Final acute value (FAV)					4900	-
Mass Balance - cs	500	700	5	1000	6.9	10
Mass Balance - ms					2400	-
Coefficient Of Variation (CV)	0.6	0.6	0.45	0.6	0.6	0.6
Long Term Average: LTA cs	390	546	4.15	780	5.4	7.8
LTA ms					771	-
Preliminary Effluent Limit (PEL):	1215	1701	10.21	2430	17	
Daily Maximum						24
Monthly Average	701	982	6.57	1403	10	14
Reasonable Potential PEQ>PEL (Dmax/FAV)	No	No	No	No	No	Yes

Additional Requirements

Compliance Schedule
The permit reissuance includes a schedule for attaining compliance with the final effluent limitations for total sulfate. The schedule requires attainment of compliance as soon as possible and in no case later than August 17, 2019. The term of the compliance schedule is based on the time required for completion of evaluations by the Permittee, as well as time for implementation of any final plans for attaining compliance, including time for obtaining various regulatory approvals. The compliance schedule has been developed in accordance with the requirements of 40 CFR § 122.47.

Nondegredation and Anti-Backsliding

Anti-Backsliding
The effluent limitations contained in this permit modification are not less stringent than the effluent limitations in the existing permit, in accordance with the antibacksliding requirements found in 40 CFR § 122.44(l) and Minn. R. 7053.0275.

Nondegradation
In accordance with the MPCA rules regarding nondegradation for all waters, the design flow of the facility as of January 1, 1988, and associated mass loading are the baseline design flow and mass loading. This baseline flow and mass loading are used to determine whether nondegradation review is required for any change in the discharge. Additional volume and pollutant loading associated with the discharge of Perry Pit dewatering effluent was reviewed in accordance with Minn. R. 7050.0185 as part of a permit modification completed on June 17, 2010, including consideration of the quantity and quality of the proposed discharge and the potential for violating water quality standards in the receiving water.

The Permittee has not proposed expansion of any permitted discharges above the volumes and mass loadings authorized under previous permit actions.

Minnesota Pollution Control Agency

National Pollutant Discharge Elimination System /State Disposal System (NPDES/SDS) Permit Program Statement of Basis

Permittee: United States Steel, Minnesota Ore Operations
Name: Keetac – Tailings Basin
Permit Number: MN0055948

Current Permit Expiration: February 28, 2011

Public Comment Period Begins: June 27, 2011
Period Ends: August 19, 2011

Receiving Water: Reservoir 2; Welcome Creek

Proposed Action: Permit Reissuance

Permitting Contact
Brandon Smith
520 Lafayette Road N.
St. Paul, MN 55155
Phone: 651-757-2740
Fax: 651-296-8717

Table of Contents

Purpose and Participation

Purpose
This Statement of Basis outlines the principal issues related to the preparation of this permit reissuance and documents the decisions that were made in the determination of the effluent limitations and conditions of this permit.

The permit will be reissued if the Minnesota Pollution Control Agency (MPCA) determines that the proposed Permittee or Permittees will, with respect to the facility or activity to be permitted, comply or undertake a schedule to achieve compliance with all applicable state and federal pollution control statutes and rules administered by the MPCA and the conditions of the permit and that all applicable requirements of Minn. Stat. ch. 116D and the rules promulgated thereunder have been fulfilled.

More detail on all requirements placed on the facility may be found in the Permit document.

Facility Description

Background Information
Facility Location
The permitted facility includes the tailings basin and Sargent Pit dewatering operations for the U. S. Steel – Keetac facility, located to the north of Keewatin, Minnesota.

Outfall Locations
SD001: Four siphon outfalls to Reservoir 2. This outfall is used as an emergency discharge to maintain the integrity of the dike system. The outfalls are located at the southwestern edge of Reservoir 6, at PLS coordinates T 56 N, R 22 W, Section 2.

SD005: Weir outfall to Reservoir 2 North/Welcome Creek. This is the primary outfall for discharges from the tailings basin system. The outfall is located at the northeastern edge of Reservoir 6, at PLS coordinates T 56 N, R 22 W, Section 1.

SD008: Combination of discharges from SD001 and SD005. This station is for compliance reporting purposes only.

SD009: Sargent Pit dewatering outfall to unnamed ditch, leading to Welcome Creek. This will be a new outfall constructed to facilitate direct discharge of Sargent Pit dewatering, which is currently directed to other outfalls that are covered under NPDES/SDS Permit MN0031879. The outfall will be located at the edge of the Sargent Pit, at PLS coordinates T 57 N, R 22 W, Section 26.

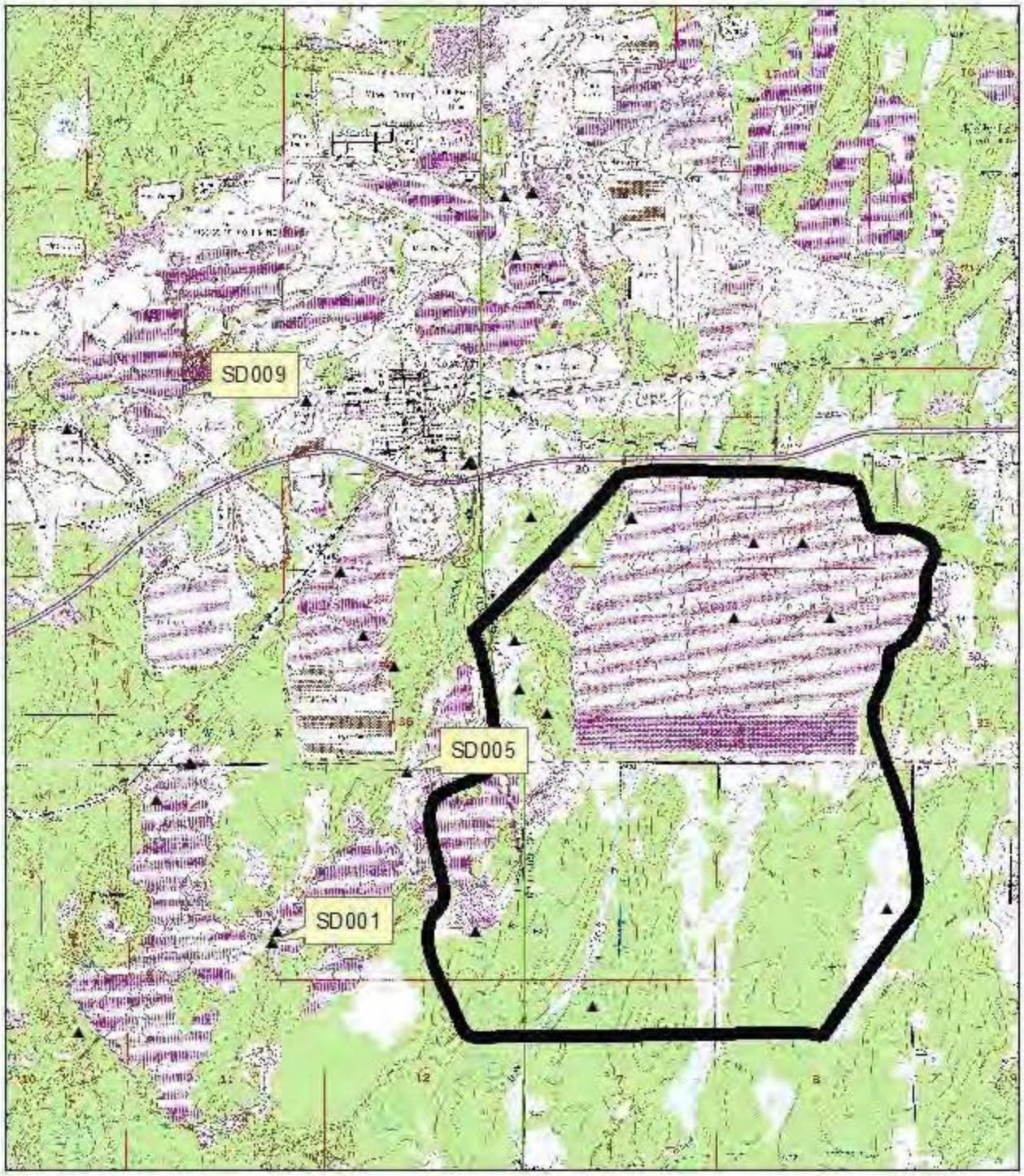
Changes to Facility or Operation
The facility has proposed an expansion of the taconite processing plant with which the permitted operations are associated. As a result, the rate of tailings deposition to the tailings basin will be increased. An increase in the discharge rate of process wastewaters from the tailings basin is not expected to exceed the volumes already permitted.

The facility is proposing to discharge dewatering effluent from the Sargent Pit directly to surface water. This discharge is discussed later in this statement of basis.

Recent Compliance History
The Facility was inspected on May 10, 2010. No significant compliance issues were found that would affect reissuance of this permit.

Topographic Map of Permitted Facility

MN0055948, United States Steel Corporation - Keetac Tailings Basin
St. Louis & Itasca County, Minnesota



Map produced by: MPCA Staff, 6/23/2011
Source: USGS Keewatin, Silica Quad
Scale: 1:50,000

0 0.25 0.5 1 Miles

N

Receiving Waters

Use Classification
The receiving waters affected by this permit reissuance include Reservoir 2, Reservoir 2 North, Welcome Creek, and an unnamed ditch, which discharges to Welcome Creek.

All waters of the state of Minnesota must be classified based on considerations of best usage in the interest of the public and in conformance with the requirements of the applicable statutes, as described in Minn. R. 7050.0140. Based on these considerations, Welcome Creek is classified as Class 2C waters as listed in Minn R. 7050.0470 subp. 4.A. item (236). According to Minn. R. 7050.0410, any listed water in part 7050.0470 is also classified as a Class 3C, 4A, 4B, 5, and 6 water.

Reservoir 2, Reservoir 2 North, and the unnamed ditch leading to Welcome Creek are not listed waters in Minn. R. 7050.0470. As detailed in Minn. R. 7050.0430, all surface waters of the state that are not listed in part 7050.0470 and that are not wetlands as defined in part Minn. R. 7050.0186, subp. 1a, are classified as Class 2B, 3C, 4A, 4B, 5, and 6 waters.

Based on the applicable classifications, the receiving waters named above are designated for use in the forms of aquatic life and recreation, industrial consumption, agriculture and wildlife, aesthetic enjoyment and navigation, and other uses.

Impairments
Minnesota is required to maintain a list of impaired waters, pursuant to Section 303(d) of the Federal Clean Water Act. Impairments have been identified in the receiving waters affected by this permit reissuance for mercury. Permit conditions with regard to mercury for this permit modification are discussed later in this statement of basis.

Proposed Permit Effluent Limits

The MPCA may develop effluent limitations based on Minnesota state water quality standards for the receiving water use classification, federal categorical standards applicable to specific industrial categories, or combination of these standards to regulate discharge of industrial wastewater. In addition, the MPCA may derive standards that are specific to a particular discharge. These standards may be based on toxicity studies, best professional judgment analysis, technology based standards, and in some instances standards developed by other U.S. states or regulatory agencies. Minnesota Rules and the U.S. Code of Federal Regulations (CFR) require that the MPCA categorize industrial dischargers consistent with the U.S. Environmental Protection Agency federal categorical standards, and state standards if appropriate.

Technology Based Effluent Limits
Minn. R. 7053.0225 subp. 1.A requires that all point source dischargers of industrial or other wastes shall comply with applicable federal standards, including those listed in 40 CFR pt. 401 through 469. The MPCA has determined that the specific industrial category and federal effluent limitation guidelines (Categorical Standards) applicable to this facility are those described in 40 CFR pt. 440 subp. A, for the iron ore mining and dressing point source category. The facility constitutes an existing source, and is therefore not subject to the New Source Performance Standards for this industry. The Categorical Standards for Best Practicable Control Technology currently available (BPT) and Best Available Technology economically achievable (BAT) have been applied for the conditions in this permit. These standards have been used to develop the effluent limitations for discharge of process wastewaters and dewatering effluent summarized in the tables below.

Table – Technology-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0055948, Surface Discharge Stations SD001: Siphon Outfalls to Reservoir 2 and SD005: Weir Outfall to Reservoir 2 North

Effluent Characteristic	*Effluent Limitation*	*Basis*
pH	6.0 Standard Units (SU) Instantaneous Minimum; 9.0 SU Instantaneous Maximum	40 CFR § 440.12(c)(2)
Iron, dissolved (as Fe)	1.0 mg/L Calendar Month Average, 2.0 mg/L Daily Maximum	40 CFR § 440.12(c)(2), 40 CFR § 440.13(c)(2)
Total Suspended Solids	20 mg/L Calendar Month Average, 30 mg/L Daily Maximum	40 CFR § 440.12(c)(2)

Stations SD001 and SD005 are both discharges of process wastewater from Reservoir 6 to surface water. Both constitute discharges of process wastewaters from a mill that employs magnetic and physical methods to beneficiate iron ore in the Mesabi Range. Therefore, pursuant to 40 CFR §§ 440.12(c) and 440.13(c), the allowable discharges from these outfalls are limited to the volume associated with the net accumulation of annual precipitation when annual precipitation exceeds evaporation. Compliance with this requirement is monitored for the combination of flows from SD001 and SD005 and reported via station SD008, along with the annual precipitation and annual evaporation.

Table – Technology-Based Effluent Limitations Proposed for NPDES/SDS Permit No. MN0055948, Surface Discharge Station SD009: Sargent Pit Dewatering to Unnamed Ditch

Effluent Characteristic	*Effluent Limitation*	*Basis*
pH	6.0 Standard Units (SU) Instantaneous Minimum; 9.0 SU Instantaneous Maximum	40 CFR § 440.12(a)
Iron, dissolved (as Fe)	1.0 mg/L Calendar Month Average, 2.0 mg/L Daily Maximum	40 CFR § 440.12(a), 40 CFR § 440.13(a)
Total Suspended Solids	20 mg/L Calendar Month Average, 30 mg/L Daily Maximum	40 CFR § 440.12(a)

Water Quality Based Effluent Limits

Stations SD001, SD005, and SD009 have been evaluated to determine the need for effluent limitations to protect the receiving waters for the use classifications previously discussed. Water quality-based effluent limitations have been included for the permit reissuance as discussed below.

The MPCA has made the determination that, based on the information available at the time of this permit reissuance, sulfate from the facility's discharges via SD001, SD005, and SD009 reaches waters that are used for the production of wild rice. Pursuant to Minn. R. 7050.0224 subp. 2, the available information at the time of this permit reissuance, and currently established permitting policies, the MPCA is including final effluent limitations for total sulfate based on a water quality standard of 10 mg/L total sulfate for these outfalls. The effluent limitations and associated reasonable potential calculations are detailed in the two tables below. The calculations are based on a zero-dilution factor, due to the fact that the receiving waters are above the currently supported water quality standard of 10 mg/L sulfate.

Discharges from the tailings basin were evaluated for reasonable potential for water quality parameters as directed by MPCA permitting policy. The discharge indicates reasonable potential for sulfate as previously discussed. None of the additional parameters evaluated indicated reasonable potential to exceed water quality standards in the receiving waters.

Table – Reasonable Potential Calculations for SD001 and SD005

PARAMETER	SO4 AQ. LIFE (mg/l)	SO4 WILD RICE (mg/l)	SPEC. COND. (umohms/cm)	HG (ng/l)	CL- AQ. LIFE (mg/l)	CL- CLASS 3 (mg/l)
Maximum measured effluent value	137	137	958	2.4	24.8	24.8
Projected effluent quality (PEQ) @ n data points	1 (47)	1 (47)	1 (47)	4 (10)	154 (1)	154 (1)
Plant design flow (mgd)	23	23	23	23	23	23
Receiving water design flow (mgd)	0	0	0	0	0	0
Background concentration	0	0	0	6.9	0	0
Continuous standard (cs) @302 Hd	1210	10	1000	6.9	230	250
Maximum standard (ms) @ 302 Hd	1452	Na	Na	2400	860	Na
Final acute value (FAV) @ 302 Hd	2904	Na	Na	4900	1720	Na
Mass Balance – cs	1210	10	1000	6.9	230	250
Mass Balance - ms	1452	-	-	2400	860	-
Coefficient Of Variation (CV)	0.6	0.6	0.1763	0.6	0.6	0.6
Long Term Average: LTA cs	638.2	7.8029	928.3732	5.3840	121.3	195.0737
LTAms	466	-	-	771	276	-
Preliminary Effluent Limit (PEL): Daily Maximum	1452	24.3	1373.3	16.8	378	1607.5
Monthly Average	838	14.0	1130	9.7	218	350.7
Reasonable Potential PEQ>PEL (Dmax/FAV)	No	**Yes**	No	No	No	No

The proposed discharge of Sargent Pit dewatering effluent to an unnamed ditch was evaluated for the potential to exceed water quality standards. The reasonable potential calculations for this discharge are summarized in the table below.

Table – Reasonable Potential Calculations for SD009

PARAMETER	BA (ug/l)	SE (ug/l)	CL-AQ. LIFE (mg/l))	CL-CLASS 3 (mg/l))	SO4 AQ. LIFE (mg/l)	SO4 WILD RICE (mg/l)	AS (ug/l)	HG (ng/l)	SP. COND (umhos/cm)
Maximum measured effluent value	35.6	2.9	8.84	8.84	113	113	12.6	1.2	660
Projected effluent quality (PEQ) @ n data points	220.7 (1)	17.98 (1)	55 (1)	55 (1)	700.6 (1)	700.6 (1)	32.8 (1)	7 (1)	4092 (1)
Plant design flow (mgd)	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75	4.75
Receiving water design flow (mgd)	0	0	0	0	0	0	0	0	0
Background concentration	0	0	0	0	0	0	0	0	0
Continuous standard (cs) @331 Hd	683	5	230	250	908	10	53	6.9	1000
Maximum standard (ms) @ 331 Hd	2758	20	860	Na	1090	Na	360	2400	Na
Final acute value (FAV) @ 331 Hd	5516	40	1720	Na	2179	Na	720	4900	Na
Mass Balance – cs	683	5	230	250	908	10	53	6.9	1000
Mass Balance - ms	2758	20	860	-	1090	-	360	2400	-
Coefficient Of Variation (CV)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
Long Term Average: LTA cs	360.2	2.64	121.31	195.07	478.9	7.803	28	5.384	780.295
LTAms	885.6	6.42	276.14	-	350.0	-	115.6	771	-
Preliminary Effluent Limit (PEL): Daily Maximum	1122	8.2	378	607.5	1090	24.3	87	16.8	2430.1
Monthly Average	647.6	5	218	350.7	629	14.0	50	9.7	1403
Reasonable Potential PEQ>PEL (Dmax/FAV)	No	**Yes**	No	No	No	**Yes**	No	No	**Yes**

The discharge of Sargent Pit dewatering effluent indicated reasonable potential for sulfate as previously discussed. In addition, reasonable potential to exceed water quality standards for selenium and specific conductance was identified; however this indication is based on a limited data set. Therefore, effluent limitations have not been included for the reissuance of this permit; however monitoring requirements have been included to provide additional detail regarding these pollutants as discussed in greater detail later in this statement of basis.

Additional Requirements

Compliance Schedule

The permit reissuance includes a schedule for attaining compliance with the final effluent limitations for total sulfate. The schedule requires attainment of compliance as soon as possible and in no case later than August 17, 2020. The term of the compliance schedule is based on the time required for completion of evaluations by the Permittee, as well as time for implementation of any final plans for attaining compliance, including time for obtaining various regulatory approvals. The compliance schedule has been developed in accordance with the requirements of 40 CFR § 122.47.

Monitoring for Selenium and Specific Conductance
The permit contains effluent limitations for selenium and specific conductance and previously discussed. However, these effluent limitations have been calculated based on a single data point, which may or may not be representative of the actual discharge conditions. The permit includes a requirement to monitor the discharge from Sargent Pit monthly for selenium and specific conductance, and discharges from the tailings basin monthly for selenium. After accumulating a data set that represents at least 12 data points, and characterizes the seasonal variability of these discharges, the Permittee has the option of requesting reduction or elimination of monitoring for these parameters based on a revised reasonable potential analysis.

Nondegredation and Anti-Backsliding

Anti-Backsliding
The effluent limitations contained in this permit modification are not less stringent than the effluent limitations in the existing permit, in accordance with the antibacksliding requirements found in 40 CFR § 122.44(l) and Minn. R. 7053.0275.

Nondegradation
In accordance with the MPCA rules regarding nondegradation for all waters, the design flow of the facility as of January 1, 1988, and associated mass loading are the baseline design flow and mass loading. This baseline flow and mass loading are used to determine whether nondegradation review is required for any change in the discharge.

Given that the new discharge location for Sargent Pit dewatering to the unnamed ditch represents an expansion of the facility's permitted discharge to this receiving water by more than 0.2 mgd, and an increased loading of one or more pollutants over the baseline quality in the receiving water, the discharge of dewatering effluent has been reviewed in accordance with Minn. R. 7050.0185. The review includes consideration of the quantity and quality of the proposed discharge and the potential for violating water quality standards in the receiving water. The statistical reasonable potential analysis discussed previously in this Statement of Basis shows that the proposed project will not impair the designated beneficial uses of the receiving waters. The results of the analysis, including the water quality-based effluent limits for sulfate, selenium, and specific conductance have been included in this modified permit to ensure continued protection of existing beneficial uses.

The permit contains conditions for installation of treatment technology to ensure that sulfate loading associated with inputs to the tailings basin complies with nondegradation requirements following expansion of the facility's taconite processing operations.

The Permittee has provided information for the proposed Sargent Pit dewatering as required under the provisions of the nondegradation rule. Using the information provided and all available data, the MPCA is required to determine appropriate effluent limitations protective of existing beneficial uses and determine whether additional controls can reasonably be taken to minimize the potential for impact on receiving waters. The discharge restrictions and monitoring requirements included in this permit have been designed to maintain water quality and preserve designated beneficial uses of the receiving waters. Additional controls beyond these measures are not warranted. Effluent monitoring and reporting requirements ensure ongoing compliance with the discharge permit conditions. Monitoring without numerical effluent limits is included for those parameters that do not have a reasonable potential to exceed water quality standards.

ATTACHMENT 7

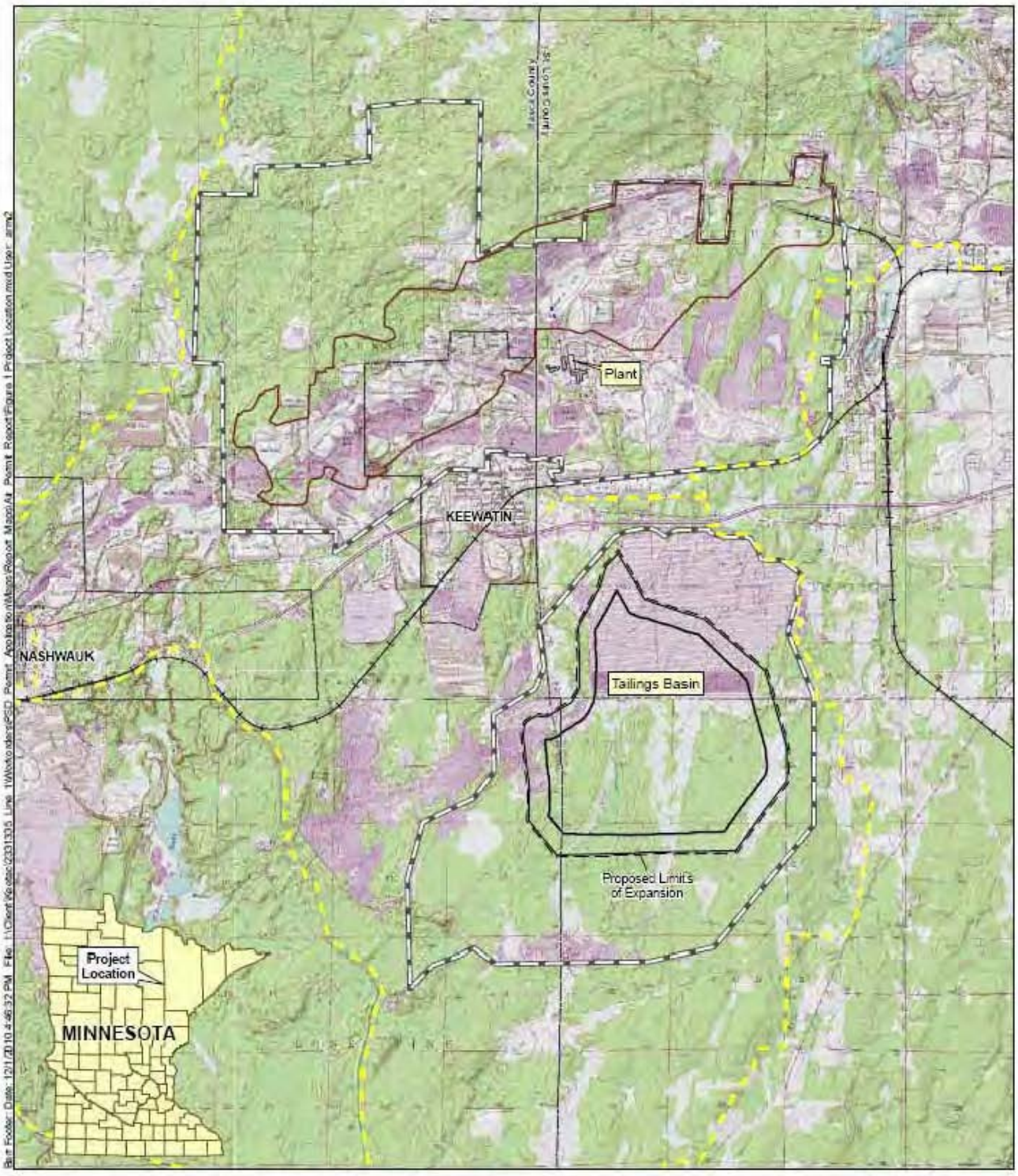


Figure 1
PROJECT LOCATION
Keetac Project
U. S. Steel
Keewatin, Minnesota

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 17

U.S. Steel Keetac Mine (MN0031879) and Tailings Basin (MN0055948) Sulfate Data from MPCA Wastewater Data Browser

United States Steel Corp - Keetac Mine (Permit MN0031879)

Station	Station Description	Year of Mon Er	Month of Mon E	Mon End Date	Parameter	Rpt Value	Units	Limit Type	Huc8 Code	Huc12 Name	Huc12 Code	Longitude	Latitude
SD 002	Weir Outfall 050	2018	September	9/30/2018	Sulfate, Total (as SO4)	122.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						124	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			October	10/31/2018	Sulfate, Total (as SO4)	117	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						125	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			November	11/30/2018	Sulfate, Total (as SO4)	123.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						125	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			December	12/31/2018	Sulfate, Total (as SO4)	120	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						125	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
		2019	January	1/31/2019	Sulfate, Total (as SO4)	132	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						137	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			February	2/28/2019	Sulfate, Total (as SO4)	128.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						132	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			March	3/31/2019	Sulfate, Total (as SO4)	114.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						130	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			April	4/30/2019	Sulfate, Total (as SO4)	123	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						134	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			May	5/31/2019	Sulfate, Total (as SO4)	133	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						136	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			June	6/30/2019	Sulfate, Total (as SO4)	135	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						137	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			July	7/31/2019	Sulfate, Total (as SO4)	132	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						134	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			August	8/31/2019	Sulfate, Total (as SO4)	124	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						125	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			September	9/30/2019	Sulfate, Total (as SO4)	114	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						117	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			October	10/31/2019	Sulfate, Total (as SO4)	114.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						117	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			November	11/30/2019	Sulfate, Total (as SO4)	129.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						132	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			December	12/31/2019	Sulfate, Total (as SO4)	125.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						129	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
		2020	January	1/31/2020	Sulfate, Total (as SO4)	130.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						132	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			February	2/29/2020	Sulfate, Total (as SO4)	135.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						136	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			March	3/31/2020	Sulfate, Total (as SO4)	133	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						140	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			April	4/30/2020	Sulfate, Total (as SO4)	126	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						135	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834

			May	5/31/2020	Sulfate, Total (as SO4)	148	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						150	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			June	6/30/2020	Sulfate, Total (as SO4)	135.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						140	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			July	7/31/2020	Sulfate, Total (as SO4)	141.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						146	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			August	8/31/2020	Sulfate, Total (as SO4)	132	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						136	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			September	9/30/2020	Sulfate, Total (as SO4)	144	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						148	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			October	10/31/2020	Sulfate, Total (as SO4)	142.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						145	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			November	11/30/2020	Sulfate, Total (as SO4)	139.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						141	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			December	12/31/2020	Sulfate, Total (as SO4)	131.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						135	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
		2021	January	1/31/2021	Sulfate, Total (as SO4)	141	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						145	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			February	2/28/2021	Sulfate, Total (as SO4)	140.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						146	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			March	3/31/2021	Sulfate, Total (as SO4)	135	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						139	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			April	4/30/2021	Sulfate, Total (as SO4)	134	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
								CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			May	5/31/2021	Sulfate, Total (as SO4)	146.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						147	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			June	6/30/2021	Sulfate, Total (as SO4)	145.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						148	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			July	7/31/2021	Sulfate, Total (as SO4)	151	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						157	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			August	8/31/2021	Sulfate, Total (as SO4)	143.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						144	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			September	9/30/2021	Sulfate, Total (as SO4)	135	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						142	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			October	10/31/2021	Sulfate, Total (as SO4)	135	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						140	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			November	11/30/2021	Sulfate, Total (as SO4)	143	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						148	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			December	12/31/2021	Sulfate, Total (as SO4)	146	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
								CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
		2022	January	1/31/2022	Sulfate, Total (as SO4)	144.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						146	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834

			February	2/28/2022	Sulfate, Total (as SO4)	145.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						146	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			March	3/31/2022	Sulfate, Total (as SO4)	141	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						145	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			April	4/30/2022	Sulfate, Total (as SO4)	151.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						158	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			May	5/31/2022	Sulfate, Total (as SO4)	154.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						167	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			June	6/30/2022	Sulfate, Total (as SO4)	154	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						155	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			July	7/31/2022	Sulfate, Total (as SO4)	151	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
								CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			August	8/31/2022	Sulfate, Total (as SO4)	152.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						153	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			September	9/30/2022	Sulfate, Total (as SO4)	148.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						149	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			October	10/31/2022	Sulfate, Total (as SO4)	146.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						150	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			November	11/30/2022	Sulfate, Total (as SO4)	132	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						139	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			December	12/31/2022	Sulfate, Total (as SO4)	128.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						136	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
		2023	January	1/31/2023	Sulfate, Total (as SO4)	130	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						134	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			February	2/28/2023	Sulfate, Total (as SO4)	129.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						132.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			March	3/31/2023	Sulfate, Total (as SO4)	132	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						138	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			April	4/30/2023	Sulfate, Total (as SO4)	148.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						165	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			May	5/31/2023	Sulfate, Total (as SO4)	150.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						156	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			June	6/30/2023	Sulfate, Total (as SO4)	139	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						148	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			July	7/31/2023	Sulfate, Total (as SO4)	142	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						144	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			August	8/31/2023	Sulfate, Total (as SO4)	147	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						157	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			September	9/30/2023	Sulfate, Total (as SO4)	126	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						130	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
			October	10/31/2023	Sulfate, Total (as SO4)	132.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.0656662	47.39870834
						134	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.0656662	47.39870834

SD 003	Pipe Outfall 080	2018	September	9/30/2018	Sulfate, Total (as SO4)	55.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						56.7	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			October	10/31/2018	Sulfate, Total (as SO4)	61.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						61.6	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			November	11/30/2018	Sulfate, Total (as SO4)	62.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
								CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			December	12/31/2018	Sulfate, Total (as SO4)	53.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						55.5	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
		2019	January	1/31/2019	Sulfate, Total (as SO4)	51.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						52	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			February	2/28/2019	Sulfate, Total (as SO4)	51.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						53.5	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			March	3/31/2019	Sulfate, Total (as SO4)	52.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						55.9	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			April	4/30/2019	Sulfate, Total (as SO4)	63.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						70.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			May	5/31/2019	Sulfate, Total (as SO4)	71.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						77.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			June	6/30/2019	Sulfate, Total (as SO4)	59.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
								CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			July	7/31/2019	Sulfate, Total (as SO4)	55	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
								CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			August	8/31/2019	Sulfate, Total (as SO4)	59.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						63.5	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			September	9/30/2019	Sulfate, Total (as SO4)	62.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						64.6	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			October	10/31/2019	Sulfate, Total (as SO4)	68.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						73.1	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			November	11/30/2019	Sulfate, Total (as SO4)	62.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						67.9	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			December	12/31/2019	Sulfate, Total (as SO4)	51.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						53.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
		2020	January	1/31/2020	Sulfate, Total (as SO4)	56.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						58.8	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			February	2/29/2020	Sulfate, Total (as SO4)	56.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						56.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			March	3/31/2020	Sulfate, Total (as SO4)	56.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						57.6	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			April	4/30/2020	Sulfate, Total (as SO4)	61.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						64.9	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			May	5/31/2020	Sulfate, Total (as SO4)	59.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883

						59.6	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			June	6/30/2020	Sulfate, Total (as SO4)	62.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						69.4	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			July	7/31/2020	Sulfate, Total (as SO4)	66.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						72.7	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			August	8/31/2020	Sulfate, Total (as SO4)	68.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						69.7	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			September	9/30/2020	Sulfate, Total (as SO4)	61.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						62.8	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			October	10/31/2020	Sulfate, Total (as SO4)	63.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						66.1	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			November	11/30/2020	Sulfate, Total (as SO4)	62.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						63.1	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			December	12/31/2020	Sulfate, Total (as SO4)	59.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						59.4	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
		2021	January	1/31/2021	Sulfate, Total (as SO4)	60.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						61.6	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			February	2/28/2021	Sulfate, Total (as SO4)	60.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						61.4	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			March	3/31/2021	Sulfate, Total (as SO4)	62.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						64.7	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			April	4/30/2021	Sulfate, Total (as SO4)	69.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						74.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			May	5/31/2021	Sulfate, Total (as SO4)	66.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						70	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			June	6/30/2021	Sulfate, Total (as SO4)	66.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						70	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			July	7/31/2021	Sulfate, Total (as SO4)	68.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						70.7	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			August	8/31/2021	Sulfate, Total (as SO4)	65.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						67	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			September	9/30/2021	Sulfate, Total (as SO4)	74.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						84.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			October	10/31/2021	Sulfate, Total (as SO4)	69.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						72.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			November	11/30/2021	Sulfate, Total (as SO4)	69.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						73.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			December	12/31/2021	Sulfate, Total (as SO4)	65.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						68.8	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
		2022	January	1/31/2022	Sulfate, Total (as SO4)	65.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						66	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			February	2/28/2022	Sulfate, Total (as SO4)	63.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883

						64	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			March	3/31/2022	Sulfate, Total (as SO4)	66.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						68	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			April	4/30/2022	Sulfate, Total (as SO4)	73.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						76.5	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			May	5/31/2022	Sulfate, Total (as SO4)	61.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						72.6	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			June	6/30/2022	Sulfate, Total (as SO4)	71.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						72.2	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			July	7/31/2022	Sulfate, Total (as SO4)	71.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						72.2	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			August	8/31/2022	Sulfate, Total (as SO4)	73.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						76	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			September	9/30/2022	Sulfate, Total (as SO4)	66.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						66.5	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			October	10/31/2022	Sulfate, Total (as SO4)	61.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						61.8	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			November	11/30/2022	Sulfate, Total (as SO4)	62.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						63.4	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			December	12/31/2022	Sulfate, Total (as SO4)	59.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						61.7	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
		2023	January	1/31/2023	Sulfate, Total (as SO4)	62.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						65	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			February	2/28/2023	Sulfate, Total (as SO4)	60.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						61.1	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			March	3/31/2023	Sulfate, Total (as SO4)	64.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						67.1	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			April	4/30/2023	Sulfate, Total (as SO4)	66.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						73.4	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			May	5/31/2023	Sulfate, Total (as SO4)	69.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						69.8	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			June	6/30/2023	Sulfate, Total (as SO4)	67.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						68.3	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			July	7/31/2023	Sulfate, Total (as SO4)	66.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						68.8	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			August	8/31/2023	Sulfate, Total (as SO4)	63.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
								CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			September	9/30/2023	Sulfate, Total (as SO4)	62.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						64.9	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
			October	10/31/2023	Sulfate, Total (as SO4)	67.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.11796975	47.39607883
						72.5	mg/L	CalYrMax	07010103	Hay Creek	070101030401	-93.11796975	47.39607883

SD 012	Perry Pit Dewatering	2018	September	9/30/2018	Sulfate, Total (as SO4)	21.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						21.7	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			October	10/31/2018	Sulfate, Total (as SO4)	22.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						23	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			November	11/30/2018	Sulfate, Total (as SO4)	22.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						22.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			December	12/31/2018	Sulfate, Total (as SO4)	21.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						21.4	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		2019	January	1/31/2019	Sulfate, Total (as SO4)	24.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						25.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			February	2/28/2019	Sulfate, Total (as SO4)	25.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						25.3	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			March	3/31/2019	Sulfate, Total (as SO4)	25.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						26.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			April	4/30/2019	Sulfate, Total (as SO4)	25.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						26.5	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			May	5/31/2019	Sulfate, Total (as SO4)	23.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						24.1	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			June	6/30/2019	Sulfate, Total (as SO4)	24.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						24.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			July	7/31/2019	Sulfate, Total (as SO4)	22.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						22.6	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			August	8/31/2019	Sulfate, Total (as SO4)	22.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						22.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			September	9/30/2019	Sulfate, Total (as SO4)	20.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						20.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			October	10/31/2019	Sulfate, Total (as SO4)	19.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						20.1	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			November	11/30/2019	Sulfate, Total (as SO4)	20.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						21.5	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			December	12/31/2019	Sulfate, Total (as SO4)	20.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						20.9	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		2020	January	1/31/2020	Sulfate, Total (as SO4)	24.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						25.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			February	2/29/2020	Sulfate, Total (as SO4)	25.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						25.5	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			March	3/31/2020	Sulfate, Total (as SO4)	25.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						25.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			April	4/30/2020	Sulfate, Total (as SO4)	27.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						28.1	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			May	5/31/2020	Sulfate, Total (as SO4)	24.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						24.7	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525

		June	6/30/2020	Sulfate, Total (as SO4)	24.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					25.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		July	7/31/2020	Sulfate, Total (as SO4)	25.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
							CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		August	8/31/2020	Sulfate, Total (as SO4)	23.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
							CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		September	9/30/2020	Sulfate, Total (as SO4)	21.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					21.5	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		October	10/31/2020	Sulfate, Total (as SO4)	21.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					22.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		November	11/30/2020	Sulfate, Total (as SO4)	21.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					21.6	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		December	12/31/2020	Sulfate, Total (as SO4)	22.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					24	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
	2021	January	1/31/2021	Sulfate, Total (as SO4)	26.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					26.5	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		February	2/28/2021	Sulfate, Total (as SO4)	26.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					26.3	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		March	3/31/2021	Sulfate, Total (as SO4)	26	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
							CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		April	4/30/2021	Sulfate, Total (as SO4)	24.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					25.3	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		May	5/31/2021	Sulfate, Total (as SO4)	21.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					22.1	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		June	6/30/2021	Sulfate, Total (as SO4)	22.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					22.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		July	7/31/2021	Sulfate, Total (as SO4)	24.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					24.5	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		August	8/31/2021	Sulfate, Total (as SO4)	23.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					24.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		September	9/30/2021	Sulfate, Total (as SO4)	22	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
							CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		October	10/31/2021	Sulfate, Total (as SO4)	23.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					23.3	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		November	11/30/2021	Sulfate, Total (as SO4)	22.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					23	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		December	12/31/2021	Sulfate, Total (as SO4)	22.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
							CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
	2022	January	1/31/2022	Sulfate, Total (as SO4)	24.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					24.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		February	2/28/2022	Sulfate, Total (as SO4)	24.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
					24.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525

			March	3/31/2022	Sulfate, Total (as SO4)	25.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						26.1	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			April	4/30/2022	Sulfate, Total (as SO4)	26.1	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						26.5	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			May	5/31/2022	Sulfate, Total (as SO4)	27.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						27.9	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			June	6/30/2022	Sulfate, Total (as SO4)	26.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
								CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			July	7/31/2022	Sulfate, Total (as SO4)	26	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
								CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			August	8/31/2022	Sulfate, Total (as SO4)	26.5	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
								CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			September	9/30/2022	Sulfate, Total (as SO4)	23.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						25.2	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			October	10/31/2022	Sulfate, Total (as SO4)	23	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						24.7	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			November	11/30/2022	Sulfate, Total (as SO4)	24.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						24.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			December	12/31/2022	Sulfate, Total (as SO4)	24.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						25	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
		2023	January	1/31/2023	Sulfate, Total (as SO4)	25.3	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						25.6	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			February	2/28/2023	Sulfate, Total (as SO4)	24.6	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						24.9	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			March	3/31/2023	Sulfate, Total (as SO4)	25.9	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
								CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			April	4/30/2023	Sulfate, Total (as SO4)	26.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						26.6	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			May	5/31/2023	Sulfate, Total (as SO4)	25.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						26.8	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			June	6/30/2023	Sulfate, Total (as SO4)	26	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						26.5	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			July	7/31/2023	Sulfate, Total (as SO4)	27.7	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						28.4	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			August	8/31/2023	Sulfate, Total (as SO4)	26.2	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
								CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			September	9/30/2023	Sulfate, Total (as SO4)	23.4	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						23.6	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
			October	10/31/2023	Sulfate, Total (as SO4)	22.8	mg/L	CalMoAvg	07010103	Hay Creek	070101030401	-93.12782874	47.39803525
						23	mg/L	CalMoMax	07010103	Hay Creek	070101030401	-93.12782874	47.39803525

U.S. Steel Corp. Keetac Tailings Basin (Permit MN0055948)

Station	Station Description	Year of Mon End Date	Month of Mon End Date	Mon End Date	Parameter	Rpt Value	Units	Limit Type	No Discharge Flag	Huc8 Code	Huc12 Name	Huc12 Code	Longitude	Latitude
SD 005	Weir Outfall 015	2019	September	9/30/2019	Sulfate, Total (as SO4)	95.5	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						95.6	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			October	10/31/2019	Sulfate, Total (as SO4)	92.3	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						97.5	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			November	11/30/2019	Sulfate, Total (as SO4)	103.5	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						104	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			December	12/31/2019	Sulfate, Total (as SO4)	102	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						105	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		2020	January	1/31/2020	Sulfate, Total (as SO4)	111.5	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						115	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			February	2/29/2020	Sulfate, Total (as SO4)	123	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						130	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			March	3/31/2020	Sulfate, Total (as SO4)	124.5	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						125	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			April	4/30/2020	Sulfate, Total (as SO4)	102	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						107	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			May	5/31/2020	Sulfate, Total (as SO4)	110	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			June	6/30/2020	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			July	7/31/2020	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			August	8/31/2020	Sulfate, Total (as SO4)	103.5	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						106	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			September	9/30/2020	Sulfate, Total (as SO4)	96	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						96.8	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			October	10/31/2020	Sulfate, Total (as SO4)	95.6	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						95.7	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			November	11/30/2020	Sulfate, Total (as SO4)	96.6	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						97.9	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			December	12/31/2020	Sulfate, Total (as SO4)	102.5	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						104	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		2021	January	1/31/2021	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			February	2/28/2021	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			March	3/31/2021	Sulfate, Total (as SO4)	112	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						120	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			April	4/30/2021	Sulfate, Total (as SO4)	106.5	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393

					107	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		May	5/31/2021	Sulfate, Total (as SO4)	109.5	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
					112	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		June	6/30/2021	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		July	7/31/2021	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		August	8/31/2021	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		September	9/30/2021	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		October	10/31/2021	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		November	11/30/2021	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		December	12/31/2021	Sulfate, Total (as SO4)	131	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
	2022	January	1/31/2022	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		February	2/28/2022	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		March	3/31/2022	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		April	4/30/2022	Sulfate, Total (as SO4)	105.2	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
					123	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		May	5/31/2022	Sulfate, Total (as SO4)	94.9	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
					102	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		June	6/30/2022	Sulfate, Total (as SO4)	95.4	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
					95.6	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		July	7/31/2022	Sulfate, Total (as SO4)	95.1	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
					95.5	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		August	8/31/2022	Sulfate, Total (as SO4)		mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		September	9/30/2022	Sulfate, Total (as SO4)	93.6	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		October	10/31/2022	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		November	11/30/2022	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
		December	12/31/2022	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
							CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393

		2023	January	1/31/2023	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			February	2/28/2023	Sulfate, Total (as SO4)	105.558	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						106.383	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			March	3/31/2023	Sulfate, Total (as SO4)	126	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						136	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			April	4/30/2023	Sulfate, Total (as SO4)	111.2	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						133	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			May	5/31/2023	Sulfate, Total (as SO4)	86.1	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						87.5	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			June	6/30/2023	Sulfate, Total (as SO4)	89	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
						90.4	mg/L	CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			July	7/31/2023	Sulfate, Total (as SO4)	91.1	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			August	8/31/2023	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			September	9/30/2023	Sulfate, Total (as SO4)		mg/L	CalMoAvg	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	Y	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
			October	10/31/2023	Sulfate, Total (as SO4)	98.7	mg/L	CalMoAvg	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393
								CalMoMax	N	07010103	Hay Creek	070101030401	-93.08849836	47.36287393

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 18

MPCA and EPA Mining Permits [Schedule] (2012-2016)
and FFY 2014 Report on the 2012-2016 Mining Permits [Schedule]

Mining Permits

October 1, 2012 – September 30, 2016

(FFY 2013-2016)

Objective:
Complete timely NPDES permitting actions for metallic mining projects in Minnesota to address outstanding environmental issues, eliminate permit backlog, and issue permit decisions for construction projects.

Statement of Problem/Issue:
Water quality permits for the metallic mining sector are critical to the protection of surface waters. These permits are often associated with economic development, are under increasing public scrutiny, and involve complex permitting situations. As a result, NPDES permits for the metallic mining sector have a higher than average reissuance backlog and permit decisions for new or expanding facilities are often delayed.

Scope:
All new, expanding and existing metallic mining operations in Minnesota needing NPDES permits.

Strategy:
Complete a workload analysis and schedule for pursuing staffing revisions; identify permit priorities and schedules; identify necessary process improvements based on past experience and implement process revisions; develop standard operating procedure(s) to expeditiously move to final permit decisions.

The Metallic Mining Joint Priority will include identification and prioritization of metallic mining permitting projects, and streamlining/improving the permitting process to assure NPDES permit decisions in a timely manner and eliminate the permit backlog over a 5 year period.

Work Load Analysis and Staffing

It is anticipated that significant additional staff resources will be needed to meet performance measures for this joint priority. The commitments in this joint priority are based on the assumption that the following activities are successfully completed:

By March 29, 2013 a work load analysis will be developed – MPCA lead. The work load analysis will include projections necessary to eliminate the metallic mining permit backlog to zero by July 1, 2018 and assure timely permit decisions for new construction (new and expanded mines) projects. The work load analysis will include known significant barriers to permit issuance and resources needed to address these barriers.

By April 30, 2013, EPA and MPCA will each independently develop staffing initiatives

that reflect the work load analysis and meet the commitments of the joint priority.

By June 30, 2013, EPA and MPCA will each independently achieve approval of staffing initiatives.

By September 30, EPA and MPCA will complete hiring or assignment of staff identified in the respective staffing initiatives.

By December 31, 2013, newly assigned EPA and MPCA staffs will complete permit writer training and other training, as appropriate to achieve a level of expertise needed to issue metallic mining permits.

Permit Project Prioritization and Scheduling

By April 1, 2013 MPCA and EPA will develop a Metallic Mining Permit Priority List that will focus staff resources on critical construction projects and permit reissuances necessary to eliminate the permit backlog by July 1, 2018 (5 years). The Priority List will include tiered goals and performance measures based on staffing (fewer projects under current staffing levels and more projects under the level identified in the staffing initiatives). Assuming the scope including the 25 existing metallic mining permits identified below, performance measures should achieve an average of 1) work on 2 new permits, 2) complete 5 permit modifications, and 3) complete 5 permit reissuances per year over the next 5 years to achieve a 20% backlog reduction per year and issue construction permits. This prioritization and schedule will be evaluated and updated by EPA and MPCA by October 1, 2013 and annually thereafter.

MPCA will lead the development of the Metallic Mining Permit Priority List and proposed schedule for completing each of the active permitting projects. The initial Metallic Mining Permit Priority List is provided below and will be updated every 12 months. Permit project schedules will be reviewed and revised monthly via MPCA/EPA conference calls.

Metallic Mining Permit Priority List (Preliminary)

NPDES ID	Permit Name	Current Major Minor Status	Issue Date	Expiration Date
NEW	POLYMET	TBD		
MN0054089	CLIFFS ERIE, LLC-HOYT LAKES (combining 2 permits)	Minor	5/4/2001	11/30/2005
MN0042579	CLIFFS ERIE LLC-DUNKA	Minor	8/3/2000	6/30/2005

MN0055301	NORTHSHORE MINING/SILVER BAY P	Major	1/26/2004	9/30/2008
MN0057207	US STEEL/MINNTAC TAILINGS BASI	Minor	9/30/1987	7/31/1992
MN0050504	US STEEL CORP-MINNTAC WWTF	Minor	12/31/1984	12/31/1989
MN0069078	MESABI MINING/STEEL DYNAMICS	Minor	11/30/2007	6/30/2010
NEW	ESSAR EXPANSION	TBD		
NEW	TWIN METALS	TBD		
NEW	TECK	TBD		
NEW	DIRECT REDUCED IRON	TBD		
MN0070378	Magnetation LLC - Plant 4			NEW
	TOP PRIORITIES ARE ABOVE THIS LINE			
MN0044946	EVELETH MINES LLC DBA EVTAC	Minor	6/30/1999	5/31/2004
MN0055964	ISPAT INLAND MINING CO-MINORCA	Minor	9/29/2000	7/31/2005
MN0042536	CLEVELAND CLIFFS LLC	Minor	5/4/2001	11/30/2005
MN0052116	UNITED TACONITE, LLC	Minor	8/25/2005	7/31/2010
MN0052493	US STEEL CORP-RESERVOIR	Minor	1/7/2004	11/30/2008
MN0049760	Hibbing Taconite Co - Tails Basin Area			4/30/2000
MN0044946	United Taconite LLC - Thunderbird Mine			5/31/2004
MN0060151	MDNR Soudan State Park			9/30/2008
MN0059633	ArcelorMittal Minorca Mine Inc - Laurentian			12/31/2011
MN0001465	Hibbing Taconite Co - Mining Area			5/31/2013
MN0069221	Magnetation Plant 1 & Mesabi Chief Tailings Basins			6/30/2013
MN0069400	Northshore Mining Co - Silver Bay Dredge Disposal			2/28/2014
MN0046981	Northshore Mining Co - Peter Mitchell			7/31/2014
MN0069868	Magnetation Plant 2			9/30/2015
MN0020249	Midland Research Center			7/31/2016
MN0055948	Keewatin Taconite Operations - Tailings			10/31/2016
MN0031879	US Steel Corp - Keetac			10/31/2016
MN0070050	Mining Resources LLC			10/31/2016
MN0068241	Essar Steel Minnesota LLC			9/30/2017

Process Improvement

By June 30, 2013, EPA and MPCA will work together to develop Standard Operating Procedure(s) (SOP) for the development and review of Metallic Mining permits. The SOP shall include EPA and MPCA roles and responsibilities, and include generic time commitments for each step. The SOP shall describe EPA's early consultation on TMDL implementation, pre-TMDL impaired waters, compliance schedules, and complex effluent limit determinations. EPA and PCA will continue to work together on the variance process improvement effort currently underway.

To maximize permit decision making and processing, EPA and MPCA will work jointly on process improvement activities throughout the term of the PPA. Process improvement activities will include, but not be limited to, EPA/MPCA communications, communication with external parties, and addressing tribal concern. Initial improvements will focus on improved EPA/MPCA collaboration, development and improvement to permit templates, and avoiding duplication of work efforts.

As process impediments are identified EPA and MPCA agree to evaluate and resolve the impediment in a fixed period of time. If an issue is not resolved within the established period it will be elevated to the Division Director (EPA) level and Assistant Commissioner (MPCA) level for resolution.

Additional information:

For more information on the Mining Permits Joint Priority, contact:
At MPCA: Jeff Stollenwerk, 218-302-6612, jeff.stollenwerk@state.mn.us
At EPA Region 5: Kevin Pierard, 312-886-4448, pierard.kevin@epa.gov

Mining Permits

October 1, 2012 – September 30, 2016 (FFY 2013-2016)

FFY 2014 REPORT

Objective:
Complete timely NPDES permitting actions for metallic mining projects in Minnesota to address outstanding environmental issues, eliminate permit backlog, and issue permit decisions for construction projects.

Statement of Problem/Issue:
Water quality permits for the metallic mining sector are critical to the protection of surface waters. These permits are often associated with economic development, are under increasing public scrutiny, and involve complex permitting situations. As a result, NPDES permits for the metallic mining sector have a higher than average reissuance backlog and permit decisions for new or expanding facilities are often delayed.

Scope:
All new, expanding and existing metallic mining operations in Minnesota needing NPDES permits.

Strategy:
Complete a workload analysis and schedule for pursuing staffing revisions; identify permit priorities and schedules; identify necessary process improvements based on past experience and implement process revisions; develop standard operating procedure(s) to expeditiously move to final permit decisions.

The Metallic Mining Joint Priority will include identification and prioritization of metallic mining permitting projects, and streamlining/improving the permitting process to assure NPDES permit decisions in a timely manner and eliminate the permit backlog over a 5 year period.

Work Load Analysis and Staffing

It is anticipated that significant additional staff resources will be needed to meet performance measures for this joint priority. The commitments in this joint priority are based on the assumption that the following activities are successfully completed:

By March 29, 2013 a work load analysis will be developed – MPCA lead. The work load analysis will include projections necessary to eliminate the metallic mining permit backlog to zero by July 1, 2018 and assure timely permit decisions for new construction (new and expanded mines) projects. The work load analysis will include known significant barriers to permit issuance and resources needed to address these barriers.

By April 30, 2013, EPA and MPCA will each independently develop staffing initiatives that reflect

the work load analysis and meet the commitments of the joint priority.

By June 30, 2013, EPA and MPCA will each independently achieve approval of staffing initiatives.

By September 30, EPA and MPCA will complete hiring or assignment of staff identified in the respective staffing initiatives.

By December 31, 2013, newly assigned EPA and MPCA staffs will complete permit writer training and other training, as appropriate to achieve a level of expertise needed to issue metallic mining permits.

Permit Project Prioritization and Scheduling

By April 1, 2013 MPCA and EPA will develop a Metallic Mining Permit Priority List that will focus staff resources on critical construction projects and permit reissuances necessary to eliminate the permit backlog by July 1, 2018 (5 years). The Priority List will include tiered goals and performance measures based on staffing (fewer projects under current staffing levels and more projects under the level identified in the staffing initiatives). Assuming the scope including the 25 existing metallic mining permits identified below, performance measures should achieve an average of 1) work on 2 new permits, 2) complete 5 permit modifications, and 3) complete 5 permit reissuances per year over the next 5 years to achieve a 20% backlog reduction per year and issue construction permits. This prioritization and schedule will be evaluated and updated by EPA and MPCA by October 1, 2013 and annually thereafter.

MPCA will lead the development of the Metallic Mining Permit Priority List and proposed schedule for completing each of the active permitting projects. The initial Metallic Mining Permit Priority List is provided below and will be updated every 12 months. Permit project schedules will be reviewed and revised monthly via MPCA/EPA conference calls.

Metallic Mining Permit Priority List (Preliminary)

NPDES ID	Permit Name	Current Major Minor Status	Issue Date	Expiration Date
NEW	POLYMET	TBD		
MN0054089	CLIFFS ERIE, LLC-HOYT LAKES (combining 2 permits)	Minor	5/4/2001	11/30/2005
MN0042579	CLIFFS ERIE LLC-DUNKA	Minor	8/3/2000	6/30/2005
MN0055301	NORTHSHORE MINING/SILVER BAY P	Major	1/26/2004	9/30/2008
MN0057207	US STEEL/MINNTAC TAILINGS BASI	Minor	9/30/1987	7/31/1992

MN0050504	US STEEL CORP-MINNTAC WWTF	Minor	12/31/1984	12/31/1989
MN0069078	MESABI MINING/STEEL DYNAMICS	Minor	11/30/2007	6/30/2010
NEW	ESSAR EXPANSION	TBD		
NEW	TWIN METALS	TBD		
NEW	TECK	TBD		
NEW	DIRECT REDUCED IRON	TBD		
MN0070378	Magnetation LLC - Plant 4			NEW
	TOP PRIORITIES ARE ABOVE THIS LINE			
MN0044946	EVELETH MINES LLC DBA EVTAC	Minor	6/30/1999	5/31/2004
MN0055964	ISPAT INLAND MINING CO-MINORCA	Minor	9/29/2000	7/31/2005
MN0042536	CLEVELAND CLIFFS LLC	Minor	5/4/2001	11/30/2005
MN0052116	UNITED TACONITE, LLC	Minor	8/25/2005	7/31/2010
MN0052493	US STEEL CORP-RESERVOIR	Minor	1/7/2004	11/30/2008
MN0049760	Hibbing Taconite Co - Tails Basin Area			4/30/2000
MN0044946	United Taconite LLC - Thunderbird Mine			5/31/2004
MN0060151	MDNR Soudan State Park			9/30/2008
MN0059633	ArcelorMittal Minorca Mine Inc. - Laurentian			12/31/2011
MN0001465	Hibbing Taconite Co - Mining Area			5/31/2013
MN0069221	Magnetation Plant 1 & Mesabi Chief Tailings Basins			6/30/2013
MN0069400	Northshore Mining Co - Silver Bay Dredge Disposal			2/28/2014
MN0046981	Northshore Mining Co - Peter Mitchell			7/31/2014
MN0069868	Magnetation Plant 2			9/30/2015
MN0020249	Midland Research Center			7/31/2016
MN0055948	Keewatin Taconite Operations - Tailings			10/31/2016
MN0031879	US Steel Corp - Keetac			10/31/2016
MN0070050	Mining Resources LLC			10/31/2016
MN0068241	Essar Steel Minnesota LLC			9/30/2017

FFY 2013 Report:

MPCA's staffing initiative was only partially funded and also delayed until July 2014. We expect funding for one additional FTE for water quality permitting. In the meantime, we are shifting resources to the extent possible and continuing work to eliminate the mining permit backlog. The Metallic Mining Permit Priority List has been developed and is up to date. The Magnetation Plant 4 was reissued in May. EPA and MPCA staff toured the US Steel Minntac and Cliffs Erie sites in mid-August 2013. We continue to work through various issues in an effort to get these permits developed and on public notice. The Polymet supplemental draft EIS is nearing public notice and the various media permits are being developed concurrently. EPA is a cooperating agency and participates in biweekly update meetings

Process Improvement

By June 30, 2013, EPA and MPCA will work together to develop Standard Operating Procedure(s) (SOP) for the development and review of Metallic Mining permits. The SOP shall include EPA and MPCA roles and responsibilities, and include generic time commitments for each step. The SOP shall describe EPA's early consultation on TMDL implementation, pre-TMDL impaired waters, compliance schedules, and complex effluent limit determinations. EPA and PCA will continue to work together on the variance process improvement effort currently underway.

To maximize permit decision making and processing, EPA and MPCA will work jointly on process improvement activities throughout the term of the PPA. Process improvement activities will include, but not be limited to, EPA/MPCA communications, communication with external parties, and addressing tribal concern. Initial improvements will focus on improved EPA/MPCA collaboration, development and improvement to permit templates, and avoiding duplication of work efforts.

As process impediments are identified EPA and MPCA agree to evaluate and resolve the impediment in a fixed period of time. If an issue is not resolved within the established period it will be elevated to the Division Director (EPA) level and Assistant Commissioner (MPCA) level for resolution.

EPA Comments:

EPA developed a draft SOP and sent it to the MPCA on July 1, 2013. MPCA provided brief verbal feedback later that month. MPCA provided written revisions to EPA's draft SOP on December 23, 2013. Additional negotiation is needed to finalize the SOP. MPCA will work with EPA to schedule further discussions on this issue.

FFY 2014 Report:

Staffing – Adequate staffing continues to be a challenge. MPCA received funding for one additional FTE in water quality permitting beginning July 2014. This funding was delayed from original expectations when the joint priority was developed. In addition, it has been difficult to find qualified candidate that is willing to accept this position. Additional candidate interviews are scheduled with the hope of filling the position in the next 2 months. MPCA also lost a key mining unit supervisor who recently transferred to a private sector position. The supervisor position was filled internally.

Mining Permit Priority List – MPCA and EPA staff remain focused on several permit reissuances as well as new permits and permit modifications. By the end of 2014 we expect to have the US Steel Minntac Tailings Basin permit (which will include the WWTF) on public notice. We are also actively working on two permit modifications. MPCA proposes to update the Metallic Mining Permit Priority List as follows:

Kuefler, Patrick 1/26/2015 4:41 PM

Comment [1]: The report identifies that the level of effort to date has not been sufficient to meet the joint priority objective and eliminate the permit backlog over a 5 year period nor does it provide significant actions or enhanced strategies intended to improve program performance or meet the joint priority objective going forward. MPCA should provide an enhanced strategy such as redeploying permitting staff from other NPDES industrial sector permitting groups to assist with processing the permits timely in accordance with the Joint priority.

Kuefler, Patrick 1/26/2015 4:48 PM

Comment [2]: The priority list presented should be adjusted to reflect the goal of the joint priority. EPA recommends a revision to the list of permits/sites to ensure the objective of the priority is met. Mine permits that are not NPDES permits should be removed from the list for purposes of the joint priority and the remaining permits should be prioritized to reflect the need to address active discharges, potential environmental impact of those discharges and the duration of which the permit has been expired. EPA provides a recommended table of priority permits.

Metallic Mining Permit Priority List (Proposed Updates 11/1/14)

NPDES ID	Permit Name	Current Major Minor Status	Issue Date	Expiration Date
NEW	POLYMET	TBD		
MN0057207	US STEEL/MINNTAC TAILINGS BASI	Minor	9/30/1987	7/31/199
MN0050504	US STEEL CORP-MINNTAC WWTF	Minor	12/31/1984	12/31/1989
MN0052493	US STEEL CORP-RESERVOIR	Minor	1/7/2004	11/30/2008
MN0046981	Northshore Mining Co - Peter Mitchell			7/31/2014
MN0055301	NORTHSHORE MINING/SILVER BAY P	Major	1/26/2004	9/30/200
MN0049760	Hibbing Taconite Co - Tails Basin Area			4/30/200
MN0001465	Hibbing Taconite Co - Mining Area			5/31/201
MN0052116	UNITED TACONITE, LLC	Minor	8/25/2005	7/31/201
MN0044946	United Taconite LLC - Thunderbird Mine			5/31/200
MN0054089	CLIFFS ERIE, LLC-HOYT LAKES (combining 2 permits)	Minor	5/4/2001	11/30/20
MN0042579	CLIFFS ERIE LLC-DUNKA	Minor	8/3/2000	6/30/200
MN0069078	MESABI MINING/STEEL DYNAMICS	Minor	11/30/2007	6/30/201
NEW	ESSAR EXPANSION	TBD		
NEW	TWIN METALS	TBD		
NEW	TECK	TBD		
	TOP PRIORITIES ARE ABOVE THIS LINE			
MN0044946	EVELETH MINES LLC DBA EVTAC	Minor	6/30/1999	5/31/200
MN0055964	ISPAT INLAND MINING CO-MINORCA	Minor	9/29/2000	7/31/200
MN0042536	CLEVELAND CLIFFS LLC	Minor	5/4/2001	11/30/20

McKim, Krista 1/20/2015 10:09 AM
Formatted Table

McKim, Krista 1/20/2015 9:06 AM
Moved down [3]: MN0054089

McKim, Krista 1/20/2015 9:06 AM
Moved down [4]: MN0042579

McKim, Krista 1/20/2015 9:06 AM
Moved down [5]: MN0055301

McKim, Krista 1/20/2015 9:06 AM
Moved (insertion) [5]

McKim, Krista 1/20/2015 9:06 AM
Moved (insertion) [3]

McKim, Krista 1/20/2015 9:06 AM
Moved (insertion) [4]

McKim, Krista 1/20/2015 10:09 AM
Deleted: MN0054089 ... [1]

McKim, Krista 1/20/2015 10:09 AM
Formatted Table

McKim, Krista 1/20/2015 9:03 AM
Deleted: MN0070378

McKim, Krista 1/20/2015 9:03 AM
Deleted: Magnetation LLC - Plant 4 MODIFICATION

McKim, Krista 1/20/2015 9:03 AM
Deleted: 5/22/2013

McKim, Krista 1/20/2015 9:03 AM
Deleted: 4/30/2018

McKim, Krista 1/20/2015 9:46 AM
Deleted: MN0070050

McKim, Krista 1/20/2015 9:46 AM
Deleted: Mining Resources LLC MODIFICATION

McKim, Krista 1/20/2015 9:46 AM
Deleted: 8/01/2014 (mod)

McKim, Krista 1/20/2015 9:46 AM
Deleted: 10/31/2016

MN0060151	MDNR Soudan State Park			9/30/2008
MN0059633	ArcelorMittal Minorca Mine Inc. - Laurentian			12/31/201
MN0069400	Northshore Mining Co - Silver Bay Dredge Disposal			2/28/2014
MN0020249	Midland Research Center			7/31/2016
MN0055948	Keewatin Taconite Operations - Tailings			10/31/201
MN0031879	US Steel Corp - Keetac			10/31/201
MN0068241	Essar Steel Minnesota LLC			9/30/2011

Additional information:

For more information on the Mining Permits Joint Priority, contact:
At MPCA: Jeff Stollenwerk, 218-302-6612, jeff.stollenwerk@state.mn.us
At EPA Region 5: Kevin Pierard, 312-886-4448, pierard.kevin@epa.gov

McKim, Krista 1/20/2015 10:02 AM
Deleted: MN0052116

McKim, Krista 1/20/2015 10:02 AM
Deleted: UNITED TACONITE, LLC

McKim, Krista 1/20/2015 10:02 AM
Deleted: Minor

McKim, Krista 1/20/2015 10:02 AM
Deleted: 8/25/2005

McKim, Krista 1/20/2015 10:02 AM
Deleted: 7/31/2010

McKim, Krista 1/20/2015 9:05 AM
Deleted: MN0052493

McKim, Krista 1/20/2015 9:05 AM
Deleted: US STEEL CORP-RESERVOIR

McKim, Krista 1/20/2015 9:05 AM
Deleted: Minor

McKim, Krista 1/20/2015 9:05 AM
Deleted: 1/7/2004

McKim, Krista 1/20/2015 9:05 AM
Deleted: 11/30/2008

McKim, Krista 1/20/2015 10:02 AM
Deleted: MN0049760

McKim, Krista 1/20/2015 10:02 AM
Deleted: Hibbing Taconite Co - Tails Basin Area

McKim, Krista 1/20/2015 10:02 AM
Deleted: 4/30/2000

McKim, Krista 1/20/2015 10:02 AM
Deleted: MN0044946

McKim, Krista 1/20/2015 10:02 AM
Deleted: United Taconite LLC - Thunderbird Mine

McKim, Krista 1/20/2015 10:02 AM
Deleted: 5/31/2004

McKim, Krista 1/20/2015 10:03 AM
Deleted: MN0001465

McKim, Krista 1/20/2015 10:03 AM
Deleted: Hibbing Taconite Co - Mining Area

McKim, Krista 1/20/2015 10:03 AM
Deleted: 5/31/2013

McKim, Krista 1/20/2015 9:04 AM
Deleted: MN0069221

McKim, Krista 1/20/2015 9:04 AM
Deleted: Magnetation Plant 1 & Mesabi Ch ... [2]

McKim, Krista 1/20/2015 9:04 AM
Deleted: 6/30/2013

McKim, Krista 1/20/2015 9:06 AM
Deleted: MN0046981

McKim, Krista 1/20/2015 9:06 AM
Deleted: Northshore Mining Co - Peter Mitchell

McKim, Krista 1/20/2015 9:06 AM
Deleted: 7/31/2014

McKim, Krista 1/20/2015 9:04 AM
Deleted: MN0069868

McKim, Krista 1/20/2015 9:04 AM
Deleted: Magnetation Plant 2

McKim, Krista 1/20/2015 9:04 AM
Deleted: 9/30/2015

McKim, Krista 1/20/2015 10:04 AM
Deleted: MN0070050

McKim, Krista 1/20/2015 10:04 AM
Deleted: Mining Resources LLC

McKim, Krista 1/20/2015 10:04 AM

McKim, Krista 1/20/2015 9:04 AM

McKim, Krista 1/20/2015 9:04 AM

McKim, Krista 1/20/2015 9:04 AM

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 19

MPCA Draft 2024 Impaired Waters List—Mercury Waters on 2024 TMDL List
(All Category 5 Mercury Impaired Waters)

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Water body name+A1:P428	Water body description	Water body type	Year added to List	Basin	AUID	Use Class	County	HUC 8	Watershed name	Affected designated use	Pollutant or stressor	TMDL Commitment Group	EPA category	Mercury TMDL region
2	Alden	Lake or Reservoir	Lake	2004	Lake Superior	69-0131-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
3	Big Bear	Lake or Reservoir	Lake	2004	Lake Superior	69-0113-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
4	Cloquet	Lake or Reservoir	Lake	1998	Lake Superior	38-0539-00	2B	Lake	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
5	Cloquet River	Us-kab-wan-ka R to St Louis R	Stream	2016	Lake Superior	04010202-501	2Bg	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
6	Cloquet River	Beaver R to Us-kab-wan-ka R	Stream	2016	Lake Superior	04010202-502	2Bg	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
7	Cloquet River	Island Lake Reservoir to Beaver R	Stream	2016	Lake Superior	04010202-504	2Bg	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
8	Cloquet River	Us-kab-wan-ka R to St Louis R	Stream	2016	Lake Superior	04010202-501	2Bg	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in water column	1	5	NE
9	Colby	Lake or Reservoir	Lake	1998	Lake Superior	69-0249-00	1B, 2Bd	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
10	East Two River	Unnamed branch to St Louis R	Stream	2016	Lake Superior	04010201-555	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
11	Elbow	Lake or Reservoir	Lake	2010	Lake Superior	69-0717-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
12	Ely	Lake or Reservoir	Lake	1998	Lake Superior	69-0660-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
13	Embarrass	Lake or Reservoir	Lake	2002	Lake Superior	69-0496-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
14	Embarrass River	Headwaters to Embarrass Lk	Stream	2022	Lake Superior	04010201-579	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
15	Esquagama	Lake or Reservoir	Lake	1998	Lake Superior	69-0565-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
16	Floodwood River	Headwaters (Floodwood Lk 69-0884-00) to St Louis R	Stream	2016	Lake Superior	04010201-560	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
17	Grand	Lake or Reservoir	Lake	2012	Lake Superior	69-0511-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
18	Island Lake Rsvr(E.Basin)	Lake or Reservoir	Lake	1998	Lake Superior	69-0372-02	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
19	Island Lake Rsvr(W.Basin)	Lake or Reservoir	Lake	1998	Lake Superior	69-0372-01	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
20	Long	Lake or Reservoir	Lake	2018	Lake Superior	69-0495-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
21	Loon	Lake or Reservoir	Lake	1998	Lake Superior	69-0426-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
22	Lower Comstock	Lake or Reservoir	Lake	2002	Lake Superior	69-0412-02	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
23	Otto	Lake or Reservoir	Lake	1998	Lake Superior	69-0144-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
24	Partridge River	Headwaters to St Louis R	Stream	2016	Lake Superior	04010201-552	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
25	Partridge River	Headwaters to St Louis R	Stream	2016	Lake Superior	04010201-552	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
26	Sabin	Lake or Reservoir	Lake	1998	Lake Superior	69-0434-01	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
27	Sabin	Lake or Reservoir	Lake	2014	Lake Superior	69-0434-01	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
28	Sink	Lake or Reservoir	Lake	2018	Lake Superior	38-0540-00	2B	Lake	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
29	South Twin	Lake or Reservoir	Lake	2006	Lake Superior	69-0420-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
30	Spirit Lake	Lake or Reservoir	Lake	2004	Lake Superior	69-1291-03	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
31	St Louis River	East Two R to West Two R	Stream	2004	Lake Superior	04010201-554	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
32	St Louis River	Cloquet R to Pine R	Stream	1998	Lake Superior	04010201-503	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
33	St Louis River	Stoney Bk to Cloquet R	Stream	1998	Lake Superior	04010201-504	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
34	St Louis River	Artichoke R to Stoney Bk	Stream	1998	Lake Superior	04010201-505	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
35	St Louis River	East Savanna R to Artichoke R	Stream	1998	Lake Superior	04010201-506	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
36	St Louis River	Floodwood R to East Savanna R	Stream	1998	Lake Superior	04010201-507	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
37	St Louis River	Whiteface R to Floodwood R	Stream	1998	Lake Superior	04010201-508	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
38	St Louis River	West Two R to Swan R	Stream	1998	Lake Superior	04010201-510	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
39	St Louis River	Embarrass R to East Two R	Stream	1998	Lake Superior	04010201-511	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
40	St Louis River	Scanlon Dam to Thomson Reservoir	Stream	1998	Lake Superior	04010201-515	2Bg	Carlton	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
41	St Louis River	Potlatch Dam to Scanlon Dam	Stream	1998	Lake Superior	04010201-516	2Bg	Carlton	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
42	St Louis River	Pine R to Knife Dam	Stream	1998	Lake Superior	04010201-517	2Bg	Carlton	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
43	St Louis River	Thomson Reservoir to Fond du Lac Dam	Stream	1998	Lake Superior	04010201-523	2Bg	Carlton	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
44	St Louis River	Knife Dam to Potlatch Dam	Stream	1998	Lake Superior	04010201-524	2Bg	Carlton	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
45	St Louis River	Swan R to Whiteface R	Stream	1998	Lake Superior	04010201-525	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
46	St Louis River	Partridge R to Embarrass R	Stream	1998	Lake Superior	04010201-526	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
47	St Louis River	Headwaters (Seven Beaver Lk 69-0002-00) to T58 R13W S36, west line	Stream	1998	Lake Superior	04010201-631	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
48	St Louis River	T58 R13W S35, east line to Partridge R	Stream	1998	Lake Superior	04010201-644	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
49	St Louis River	Fond du Lac dam to beginning of estuary	Stream	1998	Lake Superior	04010201-B66	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	
50	St Louis River	Scanlon Dam to Thomson Reservoir	Stream	2022	Lake Superior	04010201-515	2Bg	Carlton	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
51	St Louis River	Embarrass R to East Two R	Stream	2016	Lake Superior	04010201-511	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
52	St Louis River	Pine R to Knife Dam	Stream	2016	Lake Superior	04010201-517	2Bg	Carlton	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
53	St Louis River	T58 R13W S35, east line to Partridge R	Stream	2016	Lake Superior	04010201-644	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
54	St Louis River	Cloquet R to Pine R	Stream	1998	Lake Superior	04010201-503	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
55	St Louis River	Fond du Lac dam to beginning of estuary	Stream	1998	Lake Superior	04010201-B66	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	
56	St. Louis Bay	Lake or Reservoir	Lake	1998	Lake Superior	69-1291-02	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
57	St. Louis Bay	Lake or Reservoir	Lake	1998	Lake Superior	69-1291-02	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
58	Stony Creek	Unnamed cr to Unnamed cr	Stream	2016	Lake Superior	04010201-963	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
59	Strand	Lake or Reservoir	Lake	2002	Lake Superior	69-0529-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
60	Superior Bay	Mouth of St Louis Bay at Blatnik bridge to Duluth Ship Channel	Stream	1998	Lake Superior	04010201-530	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
61	Superior Bay	Mouth of St Louis Bay at Blatnik bridge to Superior Entry	Stream	1998	Lake Superior	04010201-531	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
62	Superior Bay	Mouth of St Louis Bay at Blatnik bridge to Duluth Ship Channel	Stream	1998	Lake Superior	04010201-530	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
63	Superior Bay	Mouth of St Louis Bay at Blatnik bridge to Superior Entry	Stream	1998	Lake Superior	04010201-531	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
64	Swan River	Confluence of East and West Swan R to St Louis R	Stream	2016	Lake Superior	04010201-557	1B, 2Bdg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
65	Thomson Reservoir	Lake or Reservoir	Lake	1998	Lake Superior	09-0001-00	2B	Carlton	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
66	Trimble Creek	-92.13 47.647 to Embarrass R	Stream	2022	Lake Superior	04010201-A41	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
67	Unnamed creek (Mud Lake Creek)	Wetland to Unnamed cr	Stream	2022	Lake Superior	04010201-B50	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
68	Upper Comstock	Lake or Reservoir	Lake	2002	Lake Superior	69-0412-01	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
69	Upper Estuary	Lake or Reservoir	Lake	1998	Lake Superior	69-1291-04	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
70	Upper Estuary	Lake or Reservoir	Lake	1998	Lake Superior	69-1291-04	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
71	West Two River	McQuade Lk outlet to St Louis R	Stream	2016	Lake Superior	04010201-534	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
72	White	Lake or Reservoir	Lake	2020	Lake Superior	69-0030-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
73	Whiteface Reservoir	Lake or Reservoir	Lake	1998	Lake Superior	69-0375-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
74	Wolf	Lake or Reservoir	Lake	1998	Lake Superior	69-0143-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
75	Wynne	Lake or Reservoir	Lake	1998	Lake Superior	69-0434-02	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	1	5	NE
76	Wynne	Lake or Reservoir	Lake	2014	Lake Superior	69-0434-02	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column	1	5	NE
77															
78	Ball Club	Lake or Reservoir	Lake	1998	Lake Superior	16-0182-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
79	Ball Club	Lake or Reservoir	Lake	1998	Lake Superior	16-0182-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column	2	5	NE
80	Baptism River	W Br Baptism R to Lk Superior	Stream	2016	Lake Superior	04010101-508	1B, 2Ag	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column	2	5	NE
81	Beaver River	Headwaters to Lk Superior	Stream	1998	Lake Superior	04010102-501	1B, 2Ag	Lake	04010102	Lake Superior - South	Aquatic Consumption	Mercury in water column	2	5	NE
82	Bone	Lake or Reservoir	Lake	2010	Lake Superior	38-0065-00	1B, 2A	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
83	Brule River	Greenwood R to Lk Superior	Stream	1998	Lake Superior	04010101-502	1B, 2Ag	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column	2	5	NE
84	Cedar Island (N.Portion)	Lake or Reservoir	Lake	2024	Lake Superior	69-0568-01	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
85	Cedar Island (S.Portion)	Lake or Reservoir	Lake	2024	Lake Superior	69-0568-02	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
86	Cross River	Lake or Reservoir	Lake	1998	Lake Superior	38-0002-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
87	Duluth/Superior Harbor	Lake or Reservoir	Lake	2024	Lake Superior	69-1291-01	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
88	East Fox	Lake or Reservoir	Lake	2010	Lake Superior	16-0636-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
89	Frear	Lake or Reservoir	Lake	1998	Lake Superior	16-0806-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
90	Hand	Lake or Reservoir	Lake	2004	Lake Superior	16-0238-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
91	Holly	Lake or Reservoir	Lake	2010	Lake Superior	16-0366-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
92	Juno	Lake or Reservoir	Lake	2002	Lake Superior	16-0402-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
93	Knife River	Headwaters to Lk Superior	Stream	1998	Lake Superior	04010102-504	1B, 2Ag	Lake	04010102	Lake Superior - South	Aquatic Consumption	Mercury in water column	2	5	NE
94	Kowalski	Lake or Reservoir	Lake	2010	Lake Superior	38-0016-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
95	Little Cascade	Lake or Reservoir	Lake	1998	Lake Superior	16-0347-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
96	Lost	Lake or Reservoir	Lake	2012	Lake Superior	38-0003-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
97	Mountain	Lake or Reservoir	Lake	1998	Lake Superior	16-0093-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
98	Musquash	Lake or Reservoir	Lake	1998	Lake Superior	16-0104-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column	2	5	NE
99	Otter	Lake or Reservoir	Lake	2010	Lake Superior	16-0032-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
100	Poplar River	Superior Hiking Trail bridge to Lk Superior	Stream	1998	Lake Superior	04010101-613	1B, 2Ag	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column	2	5	NE
101	Sand	Lake or Reservoir	Lake	1998	Lake Superior	09-0016-00	2B	Carlton	04010301	Nemadji River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
102	Star	Lake or Reservoir	Lake	2002	Lake Superior	16-0405-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
103	Superior	Lake or Reservoir	Lake	1998	Lake Superior	16-0001-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
104	Vista	Lake or Reservoir	Lake	1998	Lake Superior	16-0224-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue	2	5	NE
105															
106	Aaron	Lake or Reservoir	Lake	2018	Minnesota River	21-0242-00	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
107	Bavaria	Lake or Reservoir	Lake	2006	Minnesota River	10-0019-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
108	Clear	Lake or Reservoir	Lake	2020	Minnesota River	56-0559-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue	2	5	SW

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
109	Crystal	Lake or Reservoir	Lake	1998	Minnesota River	19-0027-00	2B	Dakota	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
110	Eagle	Lake or Reservoir	Lake	2012	Minnesota River	56-0253-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
111	Fish	Lake or Reservoir	Lake	2006	Minnesota River	70-0069-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
112	Fish	Lake or Reservoir	Lake	2002	Minnesota River	19-0057-00	2B	Dakota	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
113	George	Lake or Reservoir	Lake	2002	Minnesota River	07-0047-00	2B	Blue Earth	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue	2	5	SW
114	Henderson	Lake or Reservoir	Lake	2002	Minnesota River	34-0116-00	2B	Kandiyohi	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
115	Little Cobb River	Bull Run Cr to Cobb R	Stream	2002	Minnesota River	07020011-504	2Bg	Blue Earth	07020011	Le Sueur River	Aquatic Consumption	Mercury in water column	2	5	SW
116	Marietta Kids Fishing Pond	Lake or Reservoir	Lake	2016	Minnesota River	37-0355-00	2B	Lac Qui Parle	07020003	Lac Qui Parle River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
117	Miller	Lake or Reservoir	Lake	2012	Minnesota River	10-0029-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
118	Moses	Lake or Reservoir	Lake	2012	Minnesota River	21-0245-00	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
119	Pelican	Lake or Reservoir	Lake	2018	Minnesota River	61-0111-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
120	Riley	Lake or Reservoir	Lake	2002	Minnesota River	10-0002-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
121	South Turtle	Lake or Reservoir	Lake	2014	Minnesota River	56-0377-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
122	Staring	Lake or Reservoir	Lake	1998	Minnesota River	27-0078-00	2B	Hennepin	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
123	Unnamed creek (Little Beauford Ditch)	Headwaters to Victory Dr (MN22)	Stream	2002	Minnesota River	07020011-642	2Bg	Blue Earth	07020011	Le Sueur River	Aquatic Consumption	Mercury in water column	2	5	SW
124	Agnes	Lake or Reservoir	Lake	1998	Rainy River	69-0830-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
125	Alpine	Lake or Reservoir	Lake	1998	Rainy River	16-0759-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
126	Amoeber	Lake or Reservoir	Lake	2020	Rainy River	38-0227-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
127	Astrid	Lake or Reservoir	Lake	1998	Rainy River	69-0589-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
128	August	Lake or Reservoir	Lake	1998	Rainy River	38-0691-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
129	Ban	Lake or Reservoir	Lake	1998	Rainy River	69-0742-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
130	Bear Island	Lake or Reservoir	Lake	1998	Rainy River	69-0115-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
131	Beast	Lake or Reservoir	Lake	2004	Rainy River	69-0837-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
132	Beaver Hut	Lake or Reservoir	Lake	1998	Rainy River	38-0737-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
133	Bell	Lake or Reservoir	Lake	2012	Rainy River	69-0805-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
134	Big Moose	Lake or Reservoir	Lake	1998	Rainy River	69-0316-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
135	Birch	Lake or Reservoir	Lake	1998	Rainy River	69-0003-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
136	Black River	Unnamed cr to W Fk Black R	Stream	2006	Rainy River	09030008-547	2Bg	Koochiching	09030008	Lower Rainy River	Aquatic Consumption	Mercury in water column	2	5	NE
137	Boot	Lake or Reservoir	Lake	2002	Rainy River	69-0868-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
138	Brown	Lake or Reservoir	Lake	2002	Rainy River	69-0839-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
139	Bunny	Lake or Reservoir	Lake	2002	Rainy River	38-0293-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
140	Burntside	Lake or Reservoir	Lake	1998	Rainy River	69-0118-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
141	Cherry	Lake or Reservoir	Lake	2020	Rainy River	38-0166-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
142	Clubhouse	Lake or Reservoir	Lake	2016	Rainy River	31-0540-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
143	Comfort	Lake or Reservoir	Lake	2018	Rainy River	38-0290-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
144	Coon	Lake or Reservoir	Lake	2016	Rainy River	31-0524-01	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
145	Crab	Lake or Reservoir	Lake	2004	Rainy River	69-0220-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
146	Crane	Lake or Reservoir	Lake	1998	Rainy River	69-0616-00	1B, 2A	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
147	Crellin	Lake or Reservoir	Lake	1998	Rainy River	69-0459-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
148	Dark	Lake or Reservoir	Lake	1998	Rainy River	69-0790-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
149	Deep	Lake or Reservoir	Lake	1998	Rainy River	38-0668-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
150	Dovre	Lake or Reservoir	Lake	1998	Rainy River	69-0604-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
151	Dunnigan	Lake or Reservoir	Lake	1998	Rainy River	38-0664-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
152	East Pope	Lake or Reservoir	Lake	2010	Rainy River	16-0342-00	2B	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
153	East Twin	Lake or Reservoir	Lake	2002	Rainy River	69-0174-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
154	Echo	Lake or Reservoir	Lake	1998	Rainy River	69-0615-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
155	Ed Shave	Lake or Reservoir	Lake	1998	Rainy River	69-0199-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
156	Elbow	Lake or Reservoir	Lake	1998	Rainy River	69-0744-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
157	Ensign	Lake or Reservoir	Lake	2006	Rainy River	38-0498-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
158	Eugene	Lake or Reservoir	Lake	2004	Rainy River	69-0473-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
159	Everett	Lake or Reservoir	Lake	1998	Rainy River	69-0120-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
160	Fall	Lake or Reservoir	Lake	1998	Rainy River	38-0811-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
161	Farm	Lake or Reservoir	Lake	2008	Rainy River	38-0779-00	1C, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
162	Fenske	Lake or Reservoir	Lake	2002	Rainy River	69-0085-00	1C, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
163	Fourtown	Lake or Reservoir	Lake	1998	Rainy River	38-0813-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
164	Franklin	Lake or Reservoir	Lake	1998	Rainy River	69-0754-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
165	Gabbro	Lake or Reservoir	Lake	2018	Rainy River	38-0701-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
166	Gander	Lake or Reservoir	Lake	1998	Rainy River	38-0554-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
167	Gannon	Lake or Reservoir	Lake	2010	Rainy River	69-0819-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
168	Garden	Lake or Reservoir	Lake	1998	Rainy River	38-0782-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
169	Ge-Be-On-Equat	Lake or Reservoir	Lake	1998	Rainy River	69-0350-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
170	Gegoka	Lake or Reservoir	Lake	2010	Rainy River	38-0573-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
171	Grassy	Lake or Reservoir	Lake	2002	Rainy River	69-0082-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
172	Greenwood	Lake or Reservoir	Lake	1998	Rainy River	38-0656-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
173	Grouse	Lake or Reservoir	Lake	1998	Rainy River	38-0557-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
174	GULL (MAIN BASIN)	Lake or Reservoir	Lake	2002	Rainy River	16-0632-01	1C, 2Bd	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
175	Gun	Lake or Reservoir	Lake	1998	Rainy River	69-0487-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
176	Gunflint	Lake or Reservoir	Lake	1998	Rainy River	16-0356-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
177	Hanson	Lake or Reservoir	Lake	2020	Rainy River	38-0206-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
178	Harris	Lake or Reservoir	Lake	1998	Rainy River	38-0736-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
179	Heritage	Lake or Reservoir	Lake	2006	Rainy River	69-0469-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
180	Hog	Lake or Reservoir	Lake	1998	Rainy River	16-0653-00	2B	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
181	Horse	Lake or Reservoir	Lake	1998	Rainy River	38-0792-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
182	Hustler	Lake or Reservoir	Lake	1998	Rainy River	69-0343-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
183	Hustler	Lake or Reservoir	Lake	1998	Rainy River	69-0343-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in water column	2	5	NE
184	Insula	Lake or Reservoir	Lake	2004	Rainy River	38-0397-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
185	Iron	Lake or Reservoir	Lake	2020	Rainy River	69-0121-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
186	Johnson	Lake or Reservoir	Lake	1998	Rainy River	69-0691-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
187	Jorgens	Lake or Reservoir	Lake	2002	Rainy River	69-0867-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
188	Kekekabic	Lake or Reservoir	Lake	2020	Rainy River	38-0226-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
189	Kjostad	Lake or Reservoir	Lake	1998	Rainy River	69-0748-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
190	Lac la Croix	Lake or Reservoir	Lake	1998	Rainy River	69-0224-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
191	Little	Lake or Reservoir	Lake	1998	Rainy River	69-0056-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
192	Little Loon	Lake or Reservoir	Lake	2012	Rainy River	69-0484-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
193	Little Sand	Lake or Reservoir	Lake	1998	Rainy River	69-0732-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
194	Little Vermilion	Lake or Reservoir	Lake	1998	Rainy River	69-0608-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
195	Locator	Lake or Reservoir	Lake	1998	Rainy River	69-0936-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
196	Loiten	Lake or Reservoir	Lake	2004	Rainy River	69-0872-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
197	Long Island	Lake or Reservoir	Lake	2022	Rainy River	16-0460-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
198	Loon	Lake or Reservoir	Lake	1998	Rainy River	16-0448-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
199	Loon	Lake or Reservoir	Lake	1998	Rainy River	69-0470-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
200	Lynx	Lake or Reservoir	Lake	2006	Rainy River	69-0383-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
201	Maude	Lake or Reservoir	Lake	1998	Rainy River	69-0590-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
202	Mesaba	Lake or Reservoir	Lake	1998	Rainy River	16-0673-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
203	Minister	Lake or Reservoir	Lake	1998	Rainy River	69-0065-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
204	Moose	Lake or Reservoir	Lake	1998	Rainy River	36-0008-00	2B	Koochiching	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
205	Moose	Lake or Reservoir	Lake	1998	Rainy River	69-0806-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
206	Mudro	Lake or Reservoir	Lake	2016	Rainy River	69-0078-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
207	Namakan	Lake or Reservoir	Lake	1998	Rainy River	69-0693-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
208	Nels	Lake or Reservoir	Lake	1998	Rainy River	69-0080-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
209	Net	Lake or Reservoir	Lake	2002	Rainy River	69-0757-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
210	Nickel	Lake or Reservoir	Lake	2002	Rainy River	38-0705-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
211	Nigh	Lake or Reservoir	Lake	2002	Rainy River	69-0457-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
212	North Branch Kawishiwi	Lake or Reservoir	Lake	2008	Rainy River	38-0738-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
213	North McDougal	Lake or Reservoir	Lake	2002	Rainy River	38-0686-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
214	North Star	Lake or Reservoir	Lake	2012	Rainy River	31-0653-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
215	Ojibway	Lake or Reservoir	Lake	1998	Rainy River	38-0640-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
216	Ole	Lake or Reservoir	Lake	2004	Rainy River	69-0175-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
217	One Pine	Lake or Reservoir	Lake	1998	Rainy River	69-0061-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
218	Organ	Lake or Reservoir	Lake	2002	Rainy River	38-0067-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
219	Oslo	Lake or Reservoir	Lake	2002	Rainy River	69-0838-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
220	Ottertrack	Lake or Reservoir	Lake	2002	Rainy River	38-0211-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
221	Oyster	Lake or Reservoir	Lake	1998	Rainy River	69-0330-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
222	Pauline	Lake or Reservoir	Lake	1998	Rainy River	69-0588-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
223	Perch	Lake or Reservoir	Lake	2012	Rainy River	69-0932-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
224	Perch	Lake or Reservoir	Lake	1998	Rainy River	69-0058-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
225	Phoebe	Lake or Reservoir	Lake	2002	Rainy River	16-0808-00	1B, 2Bd	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
226	Picket	Lake or Reservoir	Lake	2002	Rainy River	69-0079-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
227	Pike River Flowage	Lake or Reservoir	Lake	1998	Rainy River	69-0580-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
228	Polly	Lake or Reservoir	Lake	2006	Rainy River	38-0104-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
229	Rainy	Lake or Reservoir	Lake	1998	Rainy River	69-0694-00	1B, 2Bd	Koochiching	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
230	Ruby	Lake or Reservoir	Lake	2012	Rainy River	31-0422-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
231	Sand	Lake or Reservoir	Lake	1998	Rainy River	38-0735-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
232	Sand Point	Lake or Reservoir	Lake	1998	Rainy River	69-0617-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
233	Sandpit	Lake or Reservoir	Lake	1998	Rainy River	38-0786-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
234	Sea Gull	Lake or Reservoir	Lake	1998	Rainy River	16-0629-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
235	Shoepack	Lake or Reservoir	Lake	1998	Rainy River	69-0870-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
236	Slate	Lake or Reservoir	Lake	1998	Rainy River	38-0666-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
237	Slim	Lake or Reservoir	Lake	1998	Rainy River	69-0181-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
238	South Farm	Lake or Reservoir	Lake	2008	Rainy River	38-0778-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
239	South McDougal	Lake or Reservoir	Lake	2002	Rainy River	38-0659-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
240	Spring	Lake or Reservoir	Lake	1998	Rainy River	69-0761-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
241	Stuart	Lake or Reservoir	Lake	1998	Rainy River	69-0205-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
242	Sucker	Lake or Reservoir	Lake	1998	Rainy River	38-0530-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
243	Sylvania	Lake or Reservoir	Lake	2002	Rainy River	38-0395-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
244	Three	Lake or Reservoir	Lake	1998	Rainy River	38-0600-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
245	Tooth	Lake or Reservoir	Lake	1998	Rainy River	69-0756-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
246	Unnamed	Lake or Reservoir	Lake	2002	Rainy River	69-0869-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
247	Unnamed	Lake or Reservoir	Lake	2002	Rainy River	69-0835-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
248	Upper Pauness	Lake or Reservoir	Lake	2008	Rainy River	69-0465-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
249	Vermilion River	Vermilion Lk to Hilda Cr	Stream	2004	Rainy River	09030002-527	2Bg	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
250	Vermilion River	Hilda Cr to Pelican R	Stream	2004	Rainy River	09030002-529	2Bg	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
251	Vermilion River	Pelican R to Crane Lk	Stream	2004	Rainy River	09030002-531	2Bg	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
252	Wanless	Lake or Reservoir	Lake	1998	Rainy River	38-0049-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
253	War Club	Lake or Reservoir	Lake	1998	Rainy River	69-0937-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue	2	5	NE
254	Watonwan	Lake or Reservoir	Lake	1998	Rainy River	38-0079-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
255	White Iron	Lake or Reservoir	Lake	1998	Rainy River	69-0004-00	1C, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
256	Windy	Lake or Reservoir	Lake	1998	Rainy River	38-0068-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
257	Wine	Lake or Reservoir	Lake	1998	Rainy River	16-0686-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
258	Wolf	Lake or Reservoir	Lake	1998	Rainy River	69-0161-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
259	Bronson	Lake or Reservoir	Lake	2016	Red River of the North	35-0003-00	1C, 2Bd	Kittson	09020312	Two Rivers	Aquatic Consumption	Mercury in fish tissue	2	5	SW
260	Crystal	Lake or Reservoir	Lake	2012	Red River of the North	56-0749-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
261	East Battle	Lake or Reservoir	Lake	2002	Red River of the North	56-0138-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
262	East Loon	Lake or Reservoir	Lake	2016	Red River of the North	56-0523-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
263	East Lost (North Bay)	Lake or Reservoir	Lake	2016	Red River of the North	56-0378-01	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
264	East Lost (South Bay)	Lake or Reservoir	Lake	2016	Red River of the North	56-0378-02	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
265	Fish	Lake or Reservoir	Lake	2006	Red River of the North	56-0684-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
266	Franklin	Lake or Reservoir	Lake	2010	Red River of the North	56-0759-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
267	Leif	Lake or Reservoir	Lake	2010	Red River of the North	03-0575-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
268	Little Floyd	Lake or Reservoir	Lake	1998	Red River of the North	03-0386-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
269	Lizzie (north portion)	Lake or Reservoir	Lake	1998	Red River of the North	56-0760-01	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
270	Long	Lake or Reservoir	Lake	2024	Red River of the North	03-0383-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
271	Long	Lake or Reservoir	Lake	2010	Red River of the North	56-0784-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
272	Maud	Lake or Reservoir	Lake	2012	Red River of the North	03-0500-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
273	Melissa	Lake or Reservoir	Lake	2008	Red River of the North	03-0475-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
274	Pine	Lake or Reservoir	Lake	2006	Red River of the North	15-0149-00	2B	Clearwater	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
275	Red Lake River Reservoir	Lake or Reservoir	Lake	2012	Red River of the North	57-0051-00	2B	Pennington	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
276	Red River of the North	English Coulee (ND) to Turtle R (ND)	Stream	1998	Red River of the North	09020306-523	1C, 2Bdg	Polk	09020306	Red River of the North - Grand Marais Creek	Aquatic Consumption	Mercury in fish tissue	2	5	SW
277	Red River of the North	Turtle R (ND) to Park R (ND)	Stream	1998	Red River of the North	09020306-524	1C, 2Bdg	Marshall	09020306	Red River of the North - Grand Marais Creek	Aquatic Consumption	Mercury in fish tissue	2	5	SW
278	Red River of the North	English Coulee (ND) to Turtle R (ND)	Stream	2008	Red River of the North	09020306-523	1C, 2Bdg	Polk	09020306	Red River of the North - Grand Marais Creek	Aquatic Consumption	Mercury in water column	2	5	SW
279	Red River of the North	Turtle R (ND) to Park R (ND)	Stream	2008	Red River of the North	09020306-524	1C, 2Bdg	Marshall	09020306	Red River of the North - Grand Marais Creek	Aquatic Consumption	Mercury in water column	2	5	SW
280	Red River of the North	Buffalo R to Elm R (ND)	Stream	1998	Red River of the North	09020107-501	1C, 2Bdg	Norman	09020107	Red River of the North - Marsh River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
281	Red River of the North	Elm R (ND) to Marsh R	Stream	1998	Red River of the North	09020107-522	1C, 2Bdg	Norman	09020107	Red River of the North - Marsh River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
282	Red River of the North	Buffalo R to Elm R (ND)	Stream	2008	Red River of the North	09020107-501	1C, 2Bdg	Norman	09020107	Red River of the North - Marsh River	Aquatic Consumption	Mercury in water column	2	5	SW
283	Red River of the North	Marsh R to Buffalo Coulee (ND)	Stream	1998	Red River of the North	09020301-543	1C, 2Bdg	Polk	09020301	Red River of the North - Sandhill River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
284	Red River of the North	Buffalo Coulee (ND) to English Coulee (ND)	Stream	1998	Red River of the North	09020301-544	1C, 2Bdg	Polk	09020301	Red River of the North - Sandhill River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
285	Red River of the North	Park R (ND) to Unnamed cr (ND)	Stream	1998	Red River of the North	09020311-560	1C, 2Bdg	Kittson	09020311	Red River of the North - Tamarack River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
286	Red River of the North	Unnamed cr (ND) to MN/Canada border	Stream	1998	Red River of the North	09020311-561	1C, 2Bdg	Kittson	09020311	Red River of the North - Tamarack River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
287	Red River of the North	Park R (ND) to Unnamed cr (ND)	Stream	2008	Red River of the North	09020311-560	1C, 2Bdg	Kittson	09020311	Red River of the North - Tamarack River	Aquatic Consumption	Mercury in water column	2	5	SW
288	Red River of the North	Unnamed cr (ND) to MN/Canada border	Stream	2008	Red River of the North	09020311-561	1C, 2Bdg	Kittson	09020311	Red River of the North - Tamarack River	Aquatic Consumption	Mercury in water column	2	5	SW
289	Red River of the North	Otter Tail R to Wild Rice R (ND)	Stream	1998	Red River of the North	09020104-543	1C, 2Bdg	Wilkin	09020104	Upper Red River of the North	Aquatic Consumption	Mercury in fish tissue	2	5	SW
290	Red River of the North	Wild Rice R (ND) to Buffalo R	Stream	1998	Red River of the North	09020104-544	1C, 2Bdg	Clay	09020104	Upper Red River of the North	Aquatic Consumption	Mercury in fish tissue	2	5	SW
291	Roseau River	Hay Cr to MN/Canada border	Stream	1998	Red River of the North	09020314-501	2Bg	Roseau	09020314	Roseau River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
292	Roseau River	S Fk Roseau R to Hay Cr	Stream	1998	Red River of the North	09020314-502	2Bg	Roseau	09020314	Roseau River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
293	Roseau River	Headwaters to S Fk Roseau R	Stream	1998	Red River of the North	09020314-504	2Bg	Roseau	09020314	Roseau River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
294	Rush-Lizzie(south portion)	Lake or Reservoir	Lake	1998	Red River of the North	56-0760-02	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
295	Sand Hill River	Kittleson Cr to Unnamed cr	Stream	2014	Red River of the North	09020301-536	2Bg	Polk	09020301	Red River of the North - Sandhill River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
296	Sand Hill River	Unnamed cr to Red R	Stream	2014	Red River of the North	09020301-537	2Bg	Polk	09020301	Red River of the North - Sandhill River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
297	Snake River	Middle R to Red R	Stream	2016	Red River of the North	09020309-501	2Bg	Marshall	09020309	Snake River - Red River Basin	Aquatic Consumption	Mercury in water column	2	5	SW
298	South Lida	Lake or Reservoir	Lake	2012	Red River of the North	56-0747-02	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
299	Stuart (Little West Bay)	Lake or Reservoir	Lake	2012	Red River of the North	56-0191-02	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
300	STUART (MAIN BASIN)	Lake or Reservoir	Lake	2012	Red River of the North	56-0191-01	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
301	West Silent	Lake or Reservoir	Lake	2008	Red River of the North	56-0519-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
302	Wild Rice River	S Br Wild Rice R to Red R	Stream	2016	Red River of the North	09020108-501	2Bg	Norman	09020108	Wild Rice River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
303	Wild Rice River	S Br Wild Rice R to Red R	Stream	2018	Red River of the North	09020108-501	2Bg	Norman	09020108	Wild Rice River	Aquatic Consumption	Mercury in water column	2	5	SW
304	Bass	Lake or Reservoir	Lake	1998	St. Croix River	58-0128-00	2B	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
305	Cross	Lake or Reservoir	Lake	2012	St. Croix River	58-0119-00	2B	Pine	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue	2	5	SW
306	Eddy	Lake or Reservoir	Lake	2002	St. Croix River	09-0039-00	2B	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
307	Goose	Lake or Reservoir	Lake	2012	St. Croix River	82-0059-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
308	GOOSE (NORTH BAY)	Lake or Reservoir	Lake	2010	St. Croix River	13-0083-01	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
309	GOOSE (SOUTH BAY)	Lake or Reservoir	Lake	2010	St. Croix River	13-0083-02	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue	2	5	SW

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
310	Hanging Horn	Lake or Reservoir	Lake	1998	St. Croix River	09-0038-00	2B	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
311	Jane	Lake or Reservoir	Lake	2006	St. Croix River	82-0104-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
312	Kettle River	Grindstone R to St Croix R	Stream	1998	St. Croix River	07030003-502	2Bg	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
313	Kettle River	Willow R to Pine R	Stream	1998	St. Croix River	07030003-503	2Be	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
314	Kettle River	Moose Horn R to Willow R	Stream	1998	St. Croix River	07030003-505	2Be	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
315	Kettle River	Birch Cr to Moose Horn R	Stream	1998	St. Croix River	07030003-506	2Be	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
316	Kettle River	Gillespie Bk to Split Rock R	Stream	1998	St. Croix River	07030003-508	2Bg	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
317	Kettle River	Dead Moose R to Gillespie Bk	Stream	1998	St. Croix River	07030003-510	2Bg	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
318	Kettle River	Headwaters to W Br Kettle R	Stream	1998	St. Croix River	07030003-511	2Bg	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
319	Kettle River	Skunk Cr to Grindstone R	Stream	1998	St. Croix River	07030003-517	2Bg	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
320	Kettle River	Former Dam (at Sandstone) to Skunk Cr	Stream	1998	St. Croix River	07030003-519	2Bg	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
321	Kettle River	Pine R to former Dam (at Sandstone)	Stream	1998	St. Croix River	07030003-526	2Bg	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
322	Kettle River	W Br Kettle R to Dead Moose R	Stream	1998	St. Croix River	07030003-529	2Bg	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
323	Kettle River	Split Rock R to Carlton/Pine County line	Stream	1998	St. Croix River	07030003-551	2Bg	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
324	Kettle River	Carlton/Pine County line to Birch Cr	Stream	1998	St. Croix River	07030003-552	2Bg	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
325	Moosehead	Lake or Reservoir	Lake	2010	St. Croix River	09-0041-00	2B	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
326	Mazaska	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	66-0039-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
327	Sabre	Lake or Reservoir	Lake	2012	Upper Mississippi River, Lower Portion	40-0014-00	2B	Le Sueur	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
328	Volney	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	40-0033-00	2B	Le Sueur	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
329	Agate	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	11-0216-00	2B	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
330	Balsam	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	31-0259-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
331	Bde Maka Ska	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0031-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue	2	5	SW
332	Beauty	Lake or Reservoir	Lake	2004	Upper Mississippi River, Upper Portion	29-0292-00	2B	Hubbard	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
333	Benedict	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	29-0048-00	1B, 2A	Hubbard	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
334	Big	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	73-0159-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
335	Big Pine	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	01-0157-00	2B	Aitkin	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
336	Big Spunk	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	73-0117-00	2B	Stearns	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue	2	5	SW
337	Blue	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0184-00	1B, 2A	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
338	Boot	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	03-0030-00	2B	Becker	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
339	Boy	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	11-0143-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
340	Carlos	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0057-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
341	Carr	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	04-0141-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
342	Cedar	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0039-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue	2	5	SW
343	Charlotte	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	86-0011-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
344	Clearwater (East)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0252-01	2B	Stearns	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue	2	5	SW
345	Clearwater (West)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0252-02	2B	Stearns	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue	2	5	SW
346	Cokato	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	86-0263-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
347	Crooked	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0193-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
348	CROOKED (MAIN BAY)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0041-02	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
349	CROOKED (SUGAR BAY)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0041-01	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
350	Cross	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	09-0062-00	2B	Carlton	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
351	Crow River Mill Pond (East)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	34-0158-03	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
352	Crow River Mill Pond (West)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	34-0158-05	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
353	Crow River Mill Pond(Middle)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	34-0158-04	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
354	East Crooked	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	29-0101-01	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
355	Eden	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	73-0150-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
356	Esquagamah	Lake or Reservoir	Lake	2022	Upper Mississippi River, Upper Portion	01-0147-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
357	Frontenac	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	29-0241-00	2B	Hubbard	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
358	Gilstad	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	04-0024-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
359	Glacier	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	01-0042-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
360	Green	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	34-0079-00	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
361	Hafften	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	27-0199-00	2B	Hennepin	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
362	Hanks	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0044-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
363	Harriet	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0016-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue	2	5	SW
364	ISLAND (BASIN N. OF I-694)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0075-02	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue	2	5	SW
365	Island (Basin S.of I-694)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0075-01	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue	2	5	SW
366	Jay Gould	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	31-0565-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
367	Kabekona	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0075-00	1B, 2A	Hubbard	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
368	Kimball	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0361-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
369	Lake Monongalia - main basin	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	34-0158-01	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
370	Lake Monongalia - Middle Fork Crow River	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	34-0158-02	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
371	Lawrence	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	31-0231-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
372	Lawrence	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0053-00	2B	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
373	Lewis	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	33-0032-00	2B	Kanabec	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
374	Little Mantrap	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	29-0313-00	2B	Becker	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
375	Little Pelican	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0351-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
376	Little Sand	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	29-0150-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
377	Little Swan	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	47-0025-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
378	Long	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	01-0089-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
379	Long	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	77-0027-00	2B	Todd	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	SW
380	Long	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	31-0570-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
381	Lower Hay	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	18-0378-00	1B, 2A	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
382	Lower Twin	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	80-0030-00	2B	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
383	Maple (Northeast Bay)	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	86-0134-03	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
384	Mill	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	21-0180-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
385	Mina	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	21-0108-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue	2	5	SW

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
386	Mississippi River	Headwaters to Schoolcraft R	Stream	2016	Upper Mississippi River, Upper Portion	07010101-753	2Bg	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
387	Mississippi River	Schoolcraft R thru Cass Lk (04-0030-00)	Stream	2016	Upper Mississippi River, Upper Portion	07010101-754	2Bg	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
388	Moose	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	04-0011-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
389	Moulton	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	01-0212-00	2B	Aitkin	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
390	Nokasippi River	Little Nokasippi R to Mississippi R	Stream	2018	Upper Mississippi River, Upper Portion	07010104-504	2Bg	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
391	Nokasippi River	Headwaters (Clearwater Lk 18-0038-00) to Daggett Bk	Stream	2018	Upper Mississippi River, Upper Portion	07010104-509	2Bg	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
392	Nokasippi River	Daggett Bk to Hay Cr	Stream	2018	Upper Mississippi River, Upper Portion	07010104-510	2Bg	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
393	Nokasippi River	Hay Cr to Little Nokasippi R	Stream	2018	Upper Mississippi River, Upper Portion	07010104-511	2Bg	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
394	North Brown's	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	73-0147-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
395	O'Brien (north portion)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0032-01	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
396	O'Brien (south portion)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0032-02	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
397	Ossawinnamakee	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	18-0352-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
398	Parkers	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0107-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue	2	5	SW
399	Perch	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	18-0371-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
400	Portage	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0476-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
401	Prairie	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	69-0848-00	2B	St. Louis	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
402	Remote	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	01-0038-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
403	Rice	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0717-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
404	Ripple	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	01-0146-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
405	Roosevelt - North	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	11-0043-01	1B, 2A	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
406	Roosevelt - South	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	11-0043-02	1B, 2A	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
407	Round	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0070-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
408	Rush	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	18-0311-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
409	Savanna	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	01-0014-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
410	Smith	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	21-0016-00	2B	Douglas	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
411	Snowball	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0108-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
412	Somers	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	86-0230-00	2B	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue	2	5	SW
413	Steamboat	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	11-0504-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
414	Steiger	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	10-0045-00	2B	Carver	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue	2	5	SW
415	Stella	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	47-0068-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
416	Stevens	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0116-00	2B	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
417	Sugar	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	01-0087-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue	2	5	NE
418	Tamarack	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	09-0067-00	2B	Carlton	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
419	Ten Mile	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	11-0413-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
420	Tenth Crow Wing	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0045-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue	2	5	NE

Mercury Impaired Waters
on MPCA's Draft 2024 "TMDL List"

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
421	Three Island	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	04-0134-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
422	Trout	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0216-00	1B, 2A	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
423	Turtle	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0061-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue	2	5	SW
424	Upper Maple	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	86-0134-01	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue	2	5	SW
425	Vermillion	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0029-00	2B	Cass	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue	2	5	NE
426	Wakefield	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	01-0036-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE
427	Williams	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0015-00	2B	Hubbard	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue	2	5	NE
428	Wolf	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0152-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue	2	5	NE

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 20

MPCA Draft 2024 Impaired Waters List—Mercury TMDL App A
(All Category 4A Mercury Impaired Waters)

Water body name	Water body description	Water body type	Year added to List	Basin	AUID	Use Class	County	HUC 8	Watershed name	Affected designated use	Pollutant or stressor	TMDL Commitment Group	EPA category	Mercury TMDL region	Year TMDL plan approved	TMDL ID
Buffalo	Lake or Reservoir	Lake	2024	Des Moines River	51-0018-00	2B	Murray	07100001	Des Moines River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
McFarland	Lake or Reservoir	Lake	2024	Lake Superior	16-0027-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE		PRJ07770-001
Rice	Lake or Reservoir	Lake	2024	Lake Superior	16-0453-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE		PRJ07770-001
Emily	Lake or Reservoir	Lake	2024	Minnesota River	61-0180-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Hyland	Lake or Reservoir	Lake	2024	Minnesota River	27-0048-00	2B	Hennepin	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
St. James	Lake or Reservoir	Lake	2024	Minnesota River	83-0043-00	2B	Watonwan	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Shallow Pond	Lake or Reservoir	Lake	2024	Rainy River	31-0910-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE		PRJ07770-001
Buffalo	Lake or Reservoir	Lake	2024	Red River of the North	03-0350-00	2B	Becker	09020106	Buffalo River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Cannon River	Little Cannon R to Pine Cr	Stream	2024	Upper Mississippi River, Lower Portion	07040002-538	2Bg	Goodhue	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
German	Lake or Reservoir	Lake	2024	Upper Mississippi River, Lower Portion	40-0063-00	2B	Le Sueur	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Winona (Northwest Bay)	Lake or Reservoir	Lake	2024	Upper Mississippi River, Lower Portion	85-0011-02	2B	Winona	07040003	Mississippi River - Winona	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Winona (Southeast Bay)	Lake or Reservoir	Lake	2024	Upper Mississippi River, Lower Portion	85-0011-01	2B	Winona	07040003	Mississippi River - Winona	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Carrie	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	34-0032-00	2B	Kandiyohi	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Coal	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	77-0046-00	2B	Todd	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Crow River	S Fk Crow R to Mississippi R	Stream	2024	Upper Mississippi River, Upper Portion	07010204-502	2Bg	Hennepin	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Latimer	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	77-0105-00	2B	Todd	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Platte River	Unnamed cr (above RR bridge) to Mississippi R	Stream	2024	Upper Mississippi River, Upper Portion	07010201-545	2Be	Morrison	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Sugar	Lake or Reservoir	Lake	2024	Upper Mississippi River, Upper Portion	86-0233-00	2B	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW		PRJ07770-001
Shell Rock River	Albert Lea Lk to Goose Cr	Stream	2022	Cedar River	07080202-501	2Bg	Freeborn	07080202	Shell Rock River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2022	PRJ07770-001
Le Sueur River	Maple R to Blue Earth R	Stream	2022	Minnesota River	07020011-501	2Bg	Blue Earth	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2022	PRJ07770-001
Le Sueur River	Cobb R to Maple R	Stream	2022	Minnesota River	07020011-506	2Bg	Blue Earth	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2022	PRJ07770-001
Le Sueur River	CD 6 to Cobb R	Stream	2022	Minnesota River	07020011-507	2Bg	Blue Earth	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2022	PRJ07770-001
Le Sueur River	Boot Cr to CD 6	Stream	2022	Minnesota River	07020011-620	2Bg	Waseca	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2022	PRJ07770-001
Le Sueur River	Headwaters to Freeborn/Steele County border	Stream	2022	Minnesota River	07020011-664	2Bg	Freeborn	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2022	PRJ07770-001
Le Sueur River	Freeborn/Steele County border to Boot Cr	Stream	2022	Minnesota River	07020011-665	2Bg	Waseca	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2022	PRJ07770-001
Island	Lake or Reservoir	Lake	2022	St. Croix River	58-0062-00	2B	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2022	PRJ07770-001
Divide	Lake or Reservoir	Lake	2020	Lake Superior	38-0256-00	1B, 2A	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Nichols	Lake or Reservoir	Lake	2020	Lake Superior	69-0627-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
School Grove	Lake or Reservoir	Lake	2020	Minnesota River	42-0002-00	2B	Lyon	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Ester	Lake or Reservoir	Lake	2020	Rainy River	38-0207-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Four	Lake or Reservoir	Lake	2020	Rainy River	38-0528-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Big McDonald	Lake or Reservoir	Lake	2020	Red River of the North	56-0386-01	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Little Cormorant	Lake or Reservoir	Lake	2020	Red River of the North	03-0506-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Pickerel	Lake or Reservoir	Lake	2020	Red River of the North	03-0287-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
DeMontreville	Lake or Reservoir	Lake	2020	St. Croix River	82-0101-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Kroon	Lake or Reservoir	Lake	2020	St. Croix River	13-0013-00	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Fox	Lake or Reservoir	Lake	2020	Upper Mississippi River, Lower Portion	66-0029-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Clear	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	47-0095-00	2B	Meeker	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
East Twin	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	18-0407-00	2B	Crow Wing	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Hardy	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	11-0209-00	2B	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Larue Pit	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	31-1326-01	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Little Swan	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	77-0034-00	2B	Todd	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Long (Main Bay)	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	31-0266-01	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Loon	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	11-0226-00	2B	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Louise	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	21-0094-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Mary	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	86-0156-00	2B	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001

Platte River	Rice-Skunk Lakes Dam to Unnamed cr (above RR bridge)	Stream	2020	Upper Mississippi River, Upper Portion	07010201-546	2Bg	Morrison	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2021	PRJ07770-001
Rock	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	01-0072-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Sissabagamah	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	01-0129-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Whitefish	Lake or Reservoir	Lake	2020	Upper Mississippi River, Upper Portion	18-0001-00	2B	Crow Wing	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2021	PRJ07770-001
Independence	Lake or Reservoir	Lake	2018	Minnesota River	32-0017-00	2B	Jackson	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Johanna	Lake or Reservoir	Lake	2018	Minnesota River	61-0006-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
St. Olaf	Lake or Reservoir	Lake	2018	Minnesota River	81-0003-00	2B	Waseca	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Cook	Lake or Reservoir	Lake	2018	Rainy River	38-0004-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Shell	Lake or Reservoir	Lake	2018	Rainy River	69-0461-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
West Lost	Lake or Reservoir	Lake	2018	Red River of the North	56-0481-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Ann	Lake or Reservoir	Lake	2018	St. Croix River	33-0040-00	2B	Kanabec	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Linwood	Lake or Reservoir	Lake	2018	St. Croix River	02-0026-00	2B	Anoka	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Martin	Lake or Reservoir	Lake	2018	St. Croix River	02-0034-00	2B	Anoka	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Aitkin	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	01-0040-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Big Watab	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	73-0102-00	1B, 2A	Stearns	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Briggs	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	71-0146-00	2B	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Campbell	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	04-0196-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Chase	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	31-0749-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Little Turtle	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	04-0155-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Mink	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	86-0229-00	2B	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Prairie River	Prairie Lk to Mississippi R	Stream	2018	Upper Mississippi River, Upper Portion	07010103-508	2Bg	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Prairie River	Headwaters to Day Bk	Stream	2018	Upper Mississippi River, Upper Portion	07010103-543	2Bg	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Prairie River	Day Bk to Balsam Cr	Stream	2018	Upper Mississippi River, Upper Portion	07010103-759	2Be	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Prairie River	Balsam Cr to Prairie Lk	Stream	2018	Upper Mississippi River, Upper Portion	07010103-760	2Bg	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Preston	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	65-0002-00	2B	Renville	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Ripley (west portion)	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	47-0134-02	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Scrapper	Lake or Reservoir	Lake	2018	Upper Mississippi River, Upper Portion	31-0345-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Pickeral	Lake or Reservoir	Lake	2016	Cedar River	24-0025-00	2B	Freeborn	07080202	Shell Rock River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Des Moines River	Jackson Dam to JD 66	Stream	2016	Des Moines River	07100001-541	2Bg	Jackson	07100001	Des Moines River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Des Moines River	JD 66 to MN/IA border	Stream	2016	Des Moines River	07100002-501	2Bg	Jackson	07100002	Lower Des Moines River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Embarrass River	Embarrass Lk thru Esquagama Lk	Stream	2016	Lake Superior	04010201-A99	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Embarrass River	Esquagama Lk to St Louis R	Stream	2016	Lake Superior	04010201-B00	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column		4A	NE	2018	PRJ07770-001
Embarrass River	Esquagama Lk to St Louis R	Stream	2016	Lake Superior	04010201-B00	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Goldeneye	Lake or Reservoir	Lake	2016	Lake Superior	38-0029-00	1B, 2A	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Whiteface River	Paleface R to St Louis R	Stream	2016	Lake Superior	04010201-509	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in water column		4A	NE	2018	PRJ07770-001
Rush River	S Br Rush R to Minnesota R	Stream	2016	Minnesota River	07020012-521	2Bg	Sibley	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Watonwan River	Perch Cr to Blue Earth R	Stream	2016	Minnesota River	07020010-501	2Bg	Blue Earth	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Watonwan River	S Fk Watonwan R to Perch Cr	Stream	2016	Minnesota River	07020010-510	2Bg	Watonwan	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Watonwan River	Butterfield Cr to S Fk Watonwan R	Stream	2016	Minnesota River	07020010-511	2Bg	Watonwan	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Watonwan River	N Fk Watonwan R to T107 R32W S13, east line	Stream	2016	Minnesota River	07020010-562	2Bg	Watonwan	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Watonwan River	T107 R31W S18, west line to Butterfield Cr	Stream	2016	Minnesota River	07020010-563	2Bg	Watonwan	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Watonwan River	Headwaters to T107 R33W S33, east line	Stream	2016	Minnesota River	07020010-566	2Bg	Cottonwood	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Watonwan River	T107 R33W S34, west line to N Fk Watonwan R	Stream	2016	Minnesota River	07020010-567	2Bm	Watonwan	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Bass	Lake or Reservoir	Lake	2016	Rainy River	69-0446-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
North Grave	Lake or Reservoir	Lake	2016	Rainy River	31-0624-01	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A		2018	PRJ07770-001
South Grave	Lake or Reservoir	Lake	2016	Rainy River	31-0624-02	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A		2018	PRJ07770-001
Blackduck River	Blackduck Lk to O'Brien Cr	Stream	2016	Red River of the North	09020302-510	2Bg	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Blackduck River	O'Brien Cr to South Cormorant R	Stream	2016	Red River of the North	09020302-511	2Bg	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Blackduck River	South Cormorant R to North Cormorant R	Stream	2016	Red River of the North	09020302-512	2Bg	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001

Blackduck River	North Cormorant R to Lower Red Lk	Stream	2016	Red River of the North	09020302-513	2Bg	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
East Spirit	Lake or Reservoir	Lake	2016	Red River of the North	56-0501-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Leek	Lake or Reservoir	Lake	2016	Red River of the North	56-0532-02	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Marsh River	Headwaters to Red R	Stream	2016	Red River of the North	09020107-503	2Bg	Norman	09020107	Red River of the North - Marsh River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Trowbridge	Lake or Reservoir	Lake	2016	Red River of the North	56-0532-01	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Alexander	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	49-0079-00	2B	Morrison	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Boulder	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	29-0162-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Erie	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	47-0064-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Evergreen	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	29-0227-00	2B	Hubbard	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Hennepin	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	29-0246-00	2B	Hubbard	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Hubert	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	18-0375-00	2B	Crow Wing	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Island	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	31-0754-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Little Waverly	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	86-0106-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Long	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	73-0139-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Pine River	Little Pine R to Mississippi R	Stream	2016	Upper Mississippi River, Upper Portion	07010105-504	2Bg	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Seventh Crow Wing	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	29-0091-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Sixth Crow Wing	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	29-0093-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
South Long	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	18-0136-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Sylvan (Main Basin)	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	49-0036-01	2B	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Sylvan (North Basin)	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	49-0036-02	2B	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Upper Mission	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	18-0242-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Upper South Long	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	18-0096-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Willie	Lake or Reservoir	Lake	2016	Upper Mississippi River, Upper Portion	47-0061-00	2B	Meeker	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2018	PRJ07770-001
Half Moon	Lake or Reservoir	Lake	2014	Lake Superior	69-0657-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Hare	Lake or Reservoir	Lake	2014	Lake Superior	38-0026-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Lester River	Headwaters to T52 R14W S14, south line	Stream	2014	Lake Superior	04010102-548	2Bg	St. Louis	04010102	Lake Superior - South	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Lester River	T52 R14W S23, north line to Lk Superior	Stream	2014	Lake Superior	04010102-549	1B, 2Ag	St. Louis	04010102	Lake Superior - South	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Nemadji Creek	Headwaters to Nemadji R	Stream	2014	Lake Superior	04010301-545	1B, 2Ag	Carlton	04010301	Nemadji River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Nemadji River	Headwaters (Maheu Lk 58-0033-00) to T45 R17W S4, north line	Stream	2014	Lake Superior	04010301-556	2Bg	Pine	04010301	Nemadji River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Nemadji River	T46 R17W S33, south line to Unnamed cr	Stream	2014	Lake Superior	04010301-757	1B, 2Bdg	Carlton	04010301	Nemadji River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Nemadji River	Unnamed cr to MN/WI border	Stream	2014	Lake Superior	04010301-758	1B, 2Ag	Carlton	04010301	Nemadji River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
St. Mary's	Lake or Reservoir	Lake	2014	Lake Superior	69-0651-00	1C, 2Bd	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Gilchrist	Lake or Reservoir	Lake	2014	Minnesota River	61-0072-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Hattie	Lake or Reservoir	Lake	2014	Minnesota River	75-0200-00	2B	Stevens	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Moon	Lake or Reservoir	Lake	2014	Minnesota River	21-0226-00	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Page	Lake or Reservoir	Lake	2014	Minnesota River	75-0019-00	2B	Stevens	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Perkins	Lake or Reservoir	Lake	2014	Minnesota River	75-0075-00	2B	Stevens	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Joseph	Lake or Reservoir	Lake	2014	Rainy River	69-0157-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Lost	Lake or Reservoir	Lake	2014	Rainy River	69-0581-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Two Deer	Lake or Reservoir	Lake	2014	Rainy River	38-0671-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Warroad River	W & E Br Warroad R to Lake of the Woods	Stream	2014	Rainy River	09030009-502	2Bg	Roseau	09030009	Lake of the Woods	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Warroad River, East Branch	Headwaters to Warroad R	Stream	2014	Rainy River	09030009-504	2Bg	Roseau	09030009	Lake of the Woods	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Warroad River, West Branch	Headwaters to Warroad R	Stream	2014	Rainy River	09030009-503	2Bg	Roseau	09030009	Lake of the Woods	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Wind	Lake or Reservoir	Lake	2014	Rainy River	38-0642-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Thief River	Agassiz Pool to Red Lake R	Stream	2014	Red River of the North	09020304-501	2Bg	Marshall	09020304	Thief River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Union	Lake or Reservoir	Lake	2014	Red River of the North	60-0217-00	2B	Polk	09020301	Red River of the North - Sandhill River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Grindstone	Lake or Reservoir	Lake	2014	St. Croix River	58-0123-00	1B, 2A	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Knife	Lake or Reservoir	Lake	2014	St. Croix River	33-0028-00	2B	Kanabec	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Sand	Lake or Reservoir	Lake	2014	St. Croix River	58-0081-00	2B	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001

Ball Bluff	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	01-0046-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Big Trout	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	18-0315-00	1B, 2A	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Eagle	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	29-0256-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
French	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	01-0104-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Ida	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	86-0146-00	2B	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Irving	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	04-0140-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Leech Lake River	Mud-Goose Lk Dam to Mississippi R	Stream	2014	Upper Mississippi River, Upper Portion	07010102-606	2Bg	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Lost (North West Bay)	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	82-0134-01	2B	Washington	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Lost (South East Bay)	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	82-0134-02	2B	Washington	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Palmer	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	29-0087-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Redeye River	Hay Cr to Leaf R	Stream	2014	Upper Mississippi River, Upper Portion	07010107-502	2Bg	Wadena	07010107	Redeye River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Redeye River	Headwaters (Wolf Lk 03-0101-00) to Hay Cr	Stream	2014	Upper Mississippi River, Upper Portion	07010107-503	2Bg	Wadena	07010107	Redeye River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2014	PRJ07770-001
Round	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	01-0023-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Round	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	01-0137-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Sunset	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	01-0208-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Thunder	Lake or Reservoir	Lake	2014	Upper Mississippi River, Upper Portion	11-0062-00	2B	Cass	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2014	PRJ07770-001
Fountain (East Bay)	Lake or Reservoir	Lake	2012	Cedar River	24-0018-01	2B	Freeborn	07080202	Shell Rock River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Fountain (North Bay)	Lake or Reservoir	Lake	2012	Cedar River	24-0018-03	2B	Freeborn	07080202	Shell Rock River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Fountain (West Bay)	Lake or Reservoir	Lake	2012	Cedar River	24-0018-02	2B	Freeborn	07080202	Shell Rock River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Dinham	Lake or Reservoir	Lake	2012	Lake Superior	69-0544-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Little John	Lake or Reservoir	Lake	2012	Lake Superior	16-0026-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Nicado	Lake or Reservoir	Lake	2012	Lake Superior	38-0230-00	2B	Lake	04010102	Lake Superior - South	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Camp	Lake or Reservoir	Lake	2012	Minnesota River	76-0072-00	2B	Swift	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Duck	Lake or Reservoir	Lake	2012	Minnesota River	07-0053-00	2B	Blue Earth	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
East Solomon	Lake or Reservoir	Lake	2012	Minnesota River	34-0246-00	2B	Kandiyohi	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Games	Lake or Reservoir	Lake	2012	Minnesota River	34-0224-00	2B	Kandiyohi	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
McMahon	Lake or Reservoir	Lake	2012	Minnesota River	70-0050-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
North Oscar	Lake or Reservoir	Lake	2012	Minnesota River	21-0257-01	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Red Rock	Lake or Reservoir	Lake	2012	Minnesota River	21-0291-00	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Reeds	Lake or Reservoir	Lake	2012	Minnesota River	81-0055-00	2B	Waseca	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Reno	Lake or Reservoir	Lake	2012	Minnesota River	61-0078-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
South Oscar	Lake or Reservoir	Lake	2012	Minnesota River	21-0257-02	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River	Spring Cr to Minnesota R	Stream	2012	Minnesota River	07020004-502	2Bg	Yellow Medicine	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River	S Br Yellow Medicine R to Spring Cr	Stream	2012	Minnesota River	07020004-513	2Bg	Yellow Medicine	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River	Mud Cr to S Br Yellow Medicine R	Stream	2012	Minnesota River	07020004-541	2Bg	Lyon	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River	-96.265 44.459 to -96.247 44.505	Stream	2012	Minnesota River	07020004-783	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River	-96.247 44.505 to Mud Cr	Stream	2012	Minnesota River	07020004-784	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River	Headwaters to -96.342 44.443	Stream	2012	Minnesota River	07020004-801	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River	-96.342 44.443 to T111 R45W S4, north line	Stream	2012	Minnesota River	07020004-802	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River	T110 R45W S33, south line to -96.265 44.459	Stream	2012	Minnesota River	07020004-803	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River, North Branch	CD 8 to Yellow Medicine R	Stream	2012	Minnesota River	07020004-542	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River, South Branch (County Ditch 35)	Headwaters to -96.231 44.412	Stream	2012	Minnesota River	07020004-762	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River, South Branch (County Ditch 35)	-96.231 44.412 to T111 R45W S12, north line	Stream	2012	Minnesota River	07020004-763	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River, South Branch (County Ditch 35)	T111 R45W S1, south line to -96.156 44.448	Stream	2012	Minnesota River	07020004-764	2Bg	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Yellow Medicine River, South Branch (County Ditch 35)	-96.156 44.448 to Yellow Medicine R	Stream	2012	Minnesota River	07020004-765	2Bg	Lyon	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Big Fork River	Bear R to Rainy R	Stream	2012	Rainy River	09030006-501	2Bg	Koochiching	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Big Fork River	Sturgeon R to Bear R	Stream	2012	Rainy River	09030006-502	2Bg	Koochiching	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Bog	Lake or Reservoir	Lake	2012	Rainy River	38-0443-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Teufer	Lake or Reservoir	Lake	2012	Rainy River	36-0019-00	2B	Koochiching	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001

Thistledew	Lake or Reservoir	Lake	2012	Rainy River	31-0158-00	2B	Itasca	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
West Robinson	Lake or Reservoir	Lake	2012	Rainy River	69-0217-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Wye	Lake or Reservoir	Lake	2012	Rainy River	38-0042-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Blanche	Lake or Reservoir	Lake	2012	Red River of the North	56-0240-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Bois de Sioux River	Rabbit R to Otter Tail R	Stream	2012	Red River of the North	09020101-501	2Bg	Wilkin	09020101	Bois de Sioux River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Bois de Sioux River	Mud Lk to Rabbit R	Stream	2012	Red River of the North	09020101-503	2Bg	Traverse	09020101	Bois de Sioux River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Buffalo River	S Br Buffalo R to Red R	Stream	2012	Red River of the North	09020106-501	2Bg	Clay	09020106	Buffalo River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Dellwater	Lake or Reservoir	Lake	2012	Red River of the North	04-0331-00	2B	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Height of Land	Lake or Reservoir	Lake	2012	Red River of the North	03-0195-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Rose	Lake or Reservoir	Lake	2012	Red River of the North	56-0360-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Chisago (north portion)	Lake or Reservoir	Lake	2012	St. Croix River	13-0012-01	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Chisago (south portion)	Lake or Reservoir	Lake	2012	St. Croix River	13-0012-02	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Green (Little Green)	Lake or Reservoir	Lake	2012	St. Croix River	13-0041-01	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
GREEN (MAIN BASIN)	Lake or Reservoir	Lake	2012	St. Croix River	13-0041-02	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
North Center Lake	Lake or Reservoir	Lake	2012	St. Croix River	13-0032-01	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
North Center Pond	Lake or Reservoir	Lake	2012	St. Croix River	13-0032-02	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Oak	Lake or Reservoir	Lake	2012	St. Croix River	58-0048-00	2B	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Pokegama	Lake or Reservoir	Lake	2012	St. Croix River	58-0142-00	2B	Pine	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Sunrise River	Kost Dam to N Br Sunrise R	Stream	2012	St. Croix River	07030005-542	2Bg	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Sunrise River	N Br Sunrise R to St Croix R	Stream	2012	St. Croix River	07030005-543	2Bg	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Sunrise River, North Branch	Headwaters to Keystone Ave	Stream	2012	St. Croix River	07030005-797	2Bg	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Sunrise River, North Branch	Keystone Ave to Sunrise R	Stream	2012	St. Croix River	07030005-798	2Bg	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Cannon	Lake or Reservoir	Lake	2012	Upper Mississippi River, Lower Portion	66-0008-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Gorman	Lake or Reservoir	Lake	2012	Upper Mississippi River, Lower Portion	40-0032-00	2B	Le Sueur	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Lower Sakatah	Lake or Reservoir	Lake	2012	Upper Mississippi River, Lower Portion	66-0044-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Upper Sakatah	Lake or Reservoir	Lake	2012	Upper Mississippi River, Lower Portion	40-0002-00	2B	Le Sueur	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Vermillion River	T114 R19W S30, south line to S Br Vermillion R	Stream	2012	Upper Mississippi River, Lower Portion	07040001-507	1B, 2Ag	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Vermillion River	Headwaters to T113 R20W S8, east line	Stream	2012	Upper Mississippi River, Lower Portion	07040001-516	2Bg	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Vermillion River	T113 R20W S9, west line to T114 R19W S31, north line	Stream	2012	Upper Mississippi River, Lower Portion	07040001-517	1B, 2Ag	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Vermillion River	S Br Vermillion R to T114 R18W S20, east line	Stream	2012	Upper Mississippi River, Lower Portion	07040001-691	1B, 2Ag	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Vermillion River	T114 R18W S21, west line to Hastings Dam	Stream	2012	Upper Mississippi River, Lower Portion	07040001-692	2Bg	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Wells	Lake or Reservoir	Lake	2012	Upper Mississippi River, Lower Portion	66-0010-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Alstead Mine	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0440-06	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Arco Mine	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0440-07	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Battle Creek	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	82-0091-00	2B	Washington	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Bennett	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0048-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Big Sand	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0077-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Blind	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	01-0188-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Crow Wing	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0155-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Deer	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	04-0230-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Dixon	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	31-0921-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
East Leaf	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	56-0116-02	2B	Otter Tail	07010107	Redeye River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Fish	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	56-0066-00	2B	Otter Tail	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Fourth Crow Wing	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	29-0078-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Garfield	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	29-0061-00	2B	Hubbard	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Half Moon	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	27-0152-00	2B	Hennepin	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Hickory	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	01-0179-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001

Horseshoe (East Bay)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0251-01	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Horseshoe (West Bay)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0251-02	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Lone	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	01-0125-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Louise Mine	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0440-04	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Lower Trelipe	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0129-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Mahnomen Mine #1	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0440-01	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Mahnomen Mine #2	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0440-02	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Mahnomen Mine #3	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0440-03	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Midge	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	29-0066-00	2B	Hubbard	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
North Whaletail	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	27-0184-01	2B	Hennepin	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Oak	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	10-0093-00	2B	Carver	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Pearl	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	73-0037-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Pelican	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	73-0118-00	2B	Stearns	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Phalen	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0013-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Pickerel	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	29-0178-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Portage	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0050-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Portsmouth Mine	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0437-00	1B, 2A	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Schoolcraft	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	29-0215-00	2B	Hubbard	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Shallow	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	31-0084-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Shamineau	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	49-0127-00	2B	Morrison	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Silver	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	62-0083-00	2B	Anoka	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
South Whaletail	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	27-0184-02	2B	Hennepin	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Spirit	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	01-0178-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Sugar	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0026-00	2B	Cass	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Upper Dean	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	18-0170-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Wabedo (North East Bay)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0171-01	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Wabedo (South West Bay)	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0171-02	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Waboose	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	29-0098-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Webb	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	11-0311-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
West Leaf	Lake or Reservoir	Lake	2012	Upper Mississippi River, Upper Portion	56-0114-00	2B	Otter Tail	07010107	Redeye River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Bouder	Lake or Reservoir	Lake	2010	Lake Superior	16-0383-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Caribou	Lake or Reservoir	Lake	2010	Lake Superior	69-0489-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Chub	Lake or Reservoir	Lake	2010	Lake Superior	09-0008-00	2B	Carlton	04010301	Nemadji River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Coe	Lake or Reservoir	Lake	2010	Lake Superior	69-0562-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Delay	Lake or Reservoir	Lake	2010	Lake Superior	38-0415-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Kelso	Lake or Reservoir	Lake	2010	Lake Superior	16-0706-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Lax	Lake or Reservoir	Lake	2010	Lake Superior	38-0406-00	2B	Lake	04010102	Lake Superior - South	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Amelia	Lake or Reservoir	Lake	2010	Minnesota River	61-0064-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Lac qui Parle River, West Branch	Unnamed cr to Unnamed ditch	Stream	2010	Minnesota River	07020003-512	2Bg	Lac Qui Parle	07020003	Lac Qui Parle River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Lac qui Parle River, West Branch	Florida Cr to Unnamed cr	Stream	2010	Minnesota River	07020003-515	2Bg	Lac Qui Parle	07020003	Lac Qui Parle River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Lac qui Parle River, West Branch	Lost Cr to Florida Cr	Stream	2010	Minnesota River	07020003-516	2Bg	Lac Qui Parle	07020003	Lac Qui Parle River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Lac qui Parle River, West Branch	MN/SD border to Lost Cr	Stream	2010	Minnesota River	07020003-519	2Bg	Lac Qui Parle	07020003	Lac Qui Parle River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001

Spitzer	Lake or Reservoir	Lake	2010	Minnesota River	56-0160-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Villard	Lake or Reservoir	Lake	2010	Minnesota River	61-0067-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Little Spirit	Lake or Reservoir	Lake	2010	Missouri River	32-0024-00	2B	Jackson	10230003	Little Sioux River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Bass	Lake or Reservoir	Lake	2010	Rainy River	31-0316-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Bello	Lake or Reservoir	Lake	2010	Rainy River	31-0726-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Eagles Nest No. Four	Lake or Reservoir	Lake	2010	Rainy River	69-0218-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Jouppi	Lake or Reservoir	Lake	2010	Rainy River	38-0909-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Mernegwesi	Lake or Reservoir	Lake	2010	Rainy River	38-0440-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Side	Lake or Reservoir	Lake	2010	Rainy River	69-0933-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Buchanan	Lake or Reservoir	Lake	2010	Red River of the North	56-0209-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Island	Lake or Reservoir	Lake	2010	Red River of the North	03-0153-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Murphy	Lake or Reservoir	Lake	2010	Red River of the North	56-0229-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Otter Tail	Lake or Reservoir	Lake	2010	Red River of the North	56-0242-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Sallie	Lake or Reservoir	Lake	2010	Red River of the North	03-0359-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Little	Lake or Reservoir	Lake	2010	St. Croix River	13-0033-00	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
South Center	Lake or Reservoir	Lake	2010	St. Croix River	13-0027-00	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Byllesby	Lake or Reservoir	Lake	2010	Upper Mississippi River, Lower Portion	19-0006-00	2B	Dakota	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Cedar	Lake or Reservoir	Lake	2010	Upper Mississippi River, Lower Portion	66-0052-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Circle	Lake or Reservoir	Lake	2010	Upper Mississippi River, Lower Portion	66-0027-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River	Thompson Cr to Mississippi R	Stream	2010	Upper Mississippi River, Lower Portion	07040008-501	2Bg	Houston	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River	S Fk Root R to Thompson Cr	Stream	2010	Upper Mississippi River, Lower Portion	07040008-502	2Bg	Houston	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River	Money Cr to S Fk Root R	Stream	2010	Upper Mississippi River, Lower Portion	07040008-520	2Bg	Houston	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River	Rush Cr to Money Cr	Stream	2010	Upper Mississippi River, Lower Portion	07040008-522	2Bg	Houston	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River	M Br Root R to Rush Cr	Stream	2010	Upper Mississippi River, Lower Portion	07040008-527	2Bg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River, South Fork	Beaver Cr to Root R	Stream	2010	Upper Mississippi River, Lower Portion	07040008-508	2Bg	Houston	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River, South Fork	Riceford Cr to Beaver Cr	Stream	2010	Upper Mississippi River, Lower Portion	07040008-509	2Bg	Houston	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River, South Fork	Wisel Cr to T102 R8W S2, east line	Stream	2010	Upper Mississippi River, Lower Portion	07040008-510	1B, 2Ag	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River, South Fork	T102 R9W S26, west line to Wisel Cr	Stream	2010	Upper Mississippi River, Lower Portion	07040008-511	1B, 2Ag	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River, South Fork	T102 R8W S1, west line to Riceford Cr	Stream	2010	Upper Mississippi River, Lower Portion	07040008-572	2Bg	Houston	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Root River, South Fork	Headwaters to T102 R9W S27, east line	Stream	2010	Upper Mississippi River, Lower Portion	07040008-573	2Bg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Bass	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	31-0576-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Betty	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	47-0042-00	2B	Meeker	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Big Portage (East Bay)	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	11-0308-02	2B	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Big Portage (West Bay)	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	11-0308-01	2B	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Blackwater	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	11-0274-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Blackwater	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	31-0561-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Blueberry	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	80-0034-00	2B	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Clearwater	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	18-0038-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Deer	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	31-0719-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Eighth Crow Wing	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	29-0072-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Elm Island	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	01-0123-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Fish	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	27-0118-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Geneva	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	21-0052-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Golden	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	02-0045-00	2B	Anoka	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Gull	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	04-0120-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001

Gun	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	01-0099-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Ham	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	29-0017-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Hammal	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	01-0161-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Hanging Kettle	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	01-0170-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Little Birch	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	77-0089-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Lower Orono	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	71-0013-02	2B	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Marquette	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	04-0142-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
McCarron	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	62-0054-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Mississippi River	Lk Winnibigoshish (11-0147-00) to Cohasset Dam	Stream	2010	Upper Mississippi River, Upper Portion	07010101-756	2Bg	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Movil	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	04-0152-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Nokay	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	18-0104-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Otter	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	02-0003-00	1C, 2Bd	Anoka	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Pickerel	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	19-0079-00	2B	Dakota	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Pimushe	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	04-0032-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Rabideau	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	04-0034-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Red Sand	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	18-0386-00	2B	Crow Wing	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
SAUK (NORTH BAY)	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	77-0150-02	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Sauk (Southwest Bay)	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	77-0150-01	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Sebie	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	18-0161-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Serpent	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	18-0090-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Stahl's	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	43-0104-00	2B	McLeod	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Stony	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	11-0371-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Union	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	86-0298-00	2B	Meeker	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Upper Bottle	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	29-0148-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Upper Hay	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	18-0412-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Upper Orono	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	71-0013-01	2B	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Upper Twin	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	29-0157-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2010	PRJ07770-001
Wabana	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	31-0392-00	1B, 2A	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Waukenabo	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	01-0136-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
West Fox	Lake or Reservoir	Lake	2010	Upper Mississippi River, Upper Portion	18-0297-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2010	PRJ07770-001
Murphy	Lake or Reservoir	Lake	2008	Minnesota River	70-0010-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
North Turtle	Lake or Reservoir	Lake	2008	Minnesota River	56-0379-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Reitz	Lake or Reservoir	Lake	2008	Minnesota River	10-0052-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Schneider	Lake or Reservoir	Lake	2008	Minnesota River	70-0120-02	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Smetana	Lake or Reservoir	Lake	2008	Minnesota River	27-0073-00	2B	Hennepin	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Swan	Lake or Reservoir	Lake	2008	Minnesota River	56-0781-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Thole	Lake or Reservoir	Lake	2008	Minnesota River	70-0120-01	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Unnamed	Lake or Reservoir	Lake	2008	Minnesota River	19-0136-00	2B	Dakota	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Lower Pauness	Lake or Reservoir	Lake	2008	Rainy River	69-0464-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Balm	Lake or Reservoir	Lake	2008	Red River of the North	04-0329-00	2B	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Orwell	Lake or Reservoir	Lake	2008	Red River of the North	56-0945-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sybil	Lake or Reservoir	Lake	2008	Red River of the North	56-0387-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
West Indian Creek	T110 R11W S31, south line to Zumbro R	Stream	2008	Upper Mississippi River, Lower Portion	07040004-509	2Bg	Wabasha	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

West Indian Creek	Headwaters to T109 R11W S28, north line	Stream	2008	Upper Mississippi River, Lower Portion	07040004-541	2Bg	Wabasha	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
West Indian Creek	T109 R11W S21, south line to T109 R11W S6, north line	Stream	2008	Upper Mississippi River, Lower Portion	07040004-542	1B, 2Ag	Wabasha	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Ada	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	11-0250-00	2B	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Arvilla	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	47-0023-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Beaver	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	62-0016-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Beltrami	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	04-0135-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Big	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	71-0082-00	2B	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crooked	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	02-0084-00	2B	Anoka	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cross Lake Reservoir (Main Basin)	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	18-0312-01	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Cross Lake Reservoir (Southeast Bay)	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	18-0312-02	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Cross Lake Reservoir (Unnamed Bay)	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	18-0312-03	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Crystal	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	11-0502-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Darling	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	21-0080-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
East Twin	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	02-0133-00	2B	Anoka	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Fifth Crow Wing	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	29-0092-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Ham	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	02-0053-00	2B	Anoka	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Irene	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	21-0076-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Long Lost	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	15-0068-00	2B	Clearwater	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Maple	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	77-0181-00	2B	Todd	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Mitchell	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	71-0081-00	2B	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Peltier	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	02-0004-00	2B	Anoka	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Unnamed	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	62-0237-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Waverly	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	86-0114-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Winsted	Lake or Reservoir	Lake	2008	Upper Mississippi River, Upper Portion	43-0012-00	2B	McLeod	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Kinogami	Lake or Reservoir	Lake	2006	Lake Superior	16-0378-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Trout	Lake or Reservoir	Lake	2006	Lake Superior	16-0170-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Pleasant	Lake or Reservoir	Lake	2006	Lake Superior	69-0655-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Big Stone	Lake or Reservoir	Lake	2006	Minnesota River	06-0152-00	2B	Big Stone	07020001	Minnesota River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blackhawk	Lake or Reservoir	Lake	2006	Minnesota River	19-0059-00	2B	Dakota	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hawk Creek	T119 R35W S19, north line to T118 R37W S31, south line	Stream	2006	Minnesota River	07020004-508	7	Kandiyohi	07020004	Minnesota River - Yellow Medicine River	Limited Resource Value	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hawk Creek	T117 R37W S6, north line to Chetomba Cr	Stream	2006	Minnesota River	07020004-510	2Bg	Chippewa	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hawk Creek	Unnamed cr to Unnamed cr	Stream	2006	Minnesota River	07020004-568	2Bg	Renville	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hawk Creek	Unnamed cr to Unnamed cr	Stream	2006	Minnesota River	07020004-569	2Bg	Renville	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hawk Creek	Unnamed cr to Spring Cr	Stream	2006	Minnesota River	07020004-570	2Bg	Renville	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hawk Creek	Spring Cr to Minnesota R	Stream	2006	Minnesota River	07020004-587	2Bg	Renville	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hawk Creek	Chetomba Cr to Unnamed cr	Stream	2006	Minnesota River	07020004-591	2Bg	Chippewa	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hawk Creek	Headwaters (Foot Lk 34-0181-00) to T119 R35W S18, south line	Stream	2006	Minnesota River	07020004-627	2Bg	Kandiyohi	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Lady Slipper	Lake or Reservoir	Lake	2006	Minnesota River	42-0020-00	2B	Lyon	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pomme de Terre	Lake or Reservoir	Lake	2006	Minnesota River	26-0097-00	2B	Grant	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Pomme de Terre River	Muddy (Mud) Cr to Minnesota R (Marsh Lk)	Stream	2006	Minnesota River	07020002-501	2Bg	Swift	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pomme de Terre River	Pelican Cr to Pomme de Terre Lk	Stream	2006	Minnesota River	07020002-504	2Bg	Grant	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pomme de Terre River	Tenmile Lk to Pelican Cr	Stream	2006	Minnesota River	07020002-505	2Bg	Grant	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pomme de Terre River	Stalker Lk to Tenmile Lk	Stream	2006	Minnesota River	07020002-514	2Bg	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pomme de Terre River	North Pomme de Terre Lk to Middle Pomme de Terre Lk	Stream	2006	Minnesota River	07020002-558	2Bg	Stevens	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pomme de Terre River	Middle Pomme de Terre Lk to Perkins Lk	Stream	2006	Minnesota River	07020002-560	2Bg	Stevens	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001

Pomme de Terre River	Perkins Lk to Muddy (Mud) Cr	Stream	2006	Minnesota River	07020002-562	2Bg	Stevens	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pomme de Terre River	Barrett Lk to North Pomme de Terre Lk	Stream	2006	Minnesota River	07020002-563	2Bg	Grant	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pomme de Terre River	Pomme de Terre Lk to Barrett Lk	Stream	2006	Minnesota River	07020002-565	2Bg	Grant	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Sewell	Lake or Reservoir	Lake	2006	Minnesota River	56-0408-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Oriniack	Lake or Reservoir	Lake	2006	Rainy River	69-0587-00	1B, 2Bd	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Quill	Lake or Reservoir	Lake	2006	Rainy River	69-0871-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Jewett	Lake or Reservoir	Lake	2006	Red River of the North	56-0877-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Marion	Lake or Reservoir	Lake	2006	Red River of the North	56-0243-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Sandy	Lake or Reservoir	Lake	2006	Red River of the North	04-0124-00	2B	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Coon	Lake or Reservoir	Lake	2006	St. Croix River	02-0042-00	2B	Anoka	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Root River, Middle Branch (Deer Creek)	Spring Valley Cr to Bear Cr	Stream	2006	Upper Mississippi River, Lower Portion	07040008-545	1B, 2Bdg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Willow Reservoir 6A	Lake or Reservoir	Lake	2006	Upper Mississippi River, Lower Portion	55-0021-00	2B	Olmsted	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Zumbro River	Zumbro Lk to N Fk Zumbro R	Stream	2006	Upper Mississippi River, Lower Portion	07040004-506	2Bg	Wabasha	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Big Bass (east basin)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	04-0132-02	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Big Bass (west basin)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	04-0132-01	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Big Swan	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	47-0038-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Borden	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	18-0020-00	2B	Crow Wing	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Calhoun	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	34-0062-00	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar Island (East Lk)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	73-0133-04	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar Island (Koetter Lk)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	73-0133-03	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar Island (Main Bay)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	73-0133-01	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar Island (Mud Lk)	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	73-0133-02	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, North Fork	Rice Lk to Lk Koronis	Stream	2006	Upper Mississippi River, Upper Portion	07010204-687	2Bg	Stearns	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, North Fork	Headwaters (Grove Lk 61-0023-00) to CD 32	Stream	2006	Upper Mississippi River, Upper Portion	07010204-763	2Bm	Stearns	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, North Fork	CD 32 to Rice Lk	Stream	2006	Upper Mississippi River, Upper Portion	07010204-764	2Bg	Stearns	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Eagle	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	10-0121-00	2B	Carver	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Long	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	34-0066-00	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Platte	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	18-0088-00	2B	Crow Wing	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Portage	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	29-0250-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Powderhorn	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	27-0014-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Spurzem	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	27-0149-00	2B	Hennepin	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Turtle	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	04-0159-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Virginia	Lake or Reservoir	Lake	2006	Upper Mississippi River, Upper Portion	10-0015-00	2B	Carver	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Duncan	Lake or Reservoir	Lake	2004	Lake Superior	16-0232-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Alden	Lake or Reservoir	Lake	2004	Lake Superior	69-0130-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mashkenode	Lake or Reservoir	Lake	2004	Lake Superior	69-0725-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Blue Earth River	Coon Cr to Badger Cr	Stream	2004	Minnesota River	07020009-518	2Bg	Faribault	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Del Clark	Lake or Reservoir	Lake	2004	Minnesota River	87-0180-00	2B	Yellow Medicine	07020003	Lac Qui Parle River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hydes	Lake or Reservoir	Lake	2004	Minnesota River	10-0088-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hobo	Lake or Reservoir	Lake	2004	Rainy River	69-0062-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Ogishkemuncie	Lake or Reservoir	Lake	2004	Rainy River	38-0180-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Picket	Lake or Reservoir	Lake	2004	Rainy River	69-0591-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Sturgeon River	Bear R to Little Fork R	Stream	2004	Rainy River	09030005-514	2Bg	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sturgeon River	E Br Sturgeon R to Dark R	Stream	2004	Rainy River	09030005-523	2Bg	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sturgeon River	Dark R to Bear R	Stream	2004	Rainy River	09030005-524	2Bg	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sturgeon River	Headwaters (Little Sturgeon Lk 69-1290-00) to E Br Sturgeon R	Stream	2004	Rainy River	09030005-527	2Bg	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Winchester	Lake or Reservoir	Lake	2004	Rainy River	69-0690-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Clearwater River	Beau Gerlot Cr to Lower Badger Cr	Stream	2004	Red River of the North	09020305-519	2Bg	Red Lake	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

East Toqua	Lake or Reservoir	Lake	2004	Red River of the North	06-0138-00	2B	Big Stone	09020102	Mustinka River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Prairie	Lake or Reservoir	Lake	2004	Red River of the North	56-0915-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Hunt	Lake or Reservoir	Lake	2004	Upper Mississippi River, Lower Portion	66-0047-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Mississippi River	St Croix R to Chippewa R (WI)	Stream	2004	Upper Mississippi River, Lower Portion	07040001-531	2Bg	Goodhue	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in water column		4A	SW	2007	PRJ07770-001
Root River, Middle Branch	Trout Run Cr to S Br Root R	Stream	2004	Upper Mississippi River, Lower Portion	07040008-528	2Bg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Root River, Middle Branch	Rice Cr to Trout Run Cr	Stream	2004	Upper Mississippi River, Lower Portion	07040008-530	2Bg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Root River, Middle Branch	Lynch Cr to Rice Cr	Stream	2004	Upper Mississippi River, Lower Portion	07040008-532	2Bg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Root River, Middle Branch	N Br Root R to Lynch Cr	Stream	2004	Upper Mississippi River, Lower Portion	07040008-534	2Bg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Shields	Lake or Reservoir	Lake	2004	Upper Mississippi River, Lower Portion	66-0055-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Elk River	Orono Lk to Mississippi R	Stream	2004	Upper Mississippi River, Upper Portion	07010203-525	2Bg	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Independence	Lake or Reservoir	Lake	2004	Upper Mississippi River, Upper Portion	27-0176-00	2B	Hennepin	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mary	Lake or Reservoir	Lake	2004	Upper Mississippi River, Upper Portion	86-0193-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Minnewashta	Lake or Reservoir	Lake	2004	Upper Mississippi River, Upper Portion	10-0009-00	2B	Carver	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Two Inlets	Lake or Reservoir	Lake	2004	Upper Mississippi River, Upper Portion	03-0017-00	2B	Becker	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Balsam	Lake or Reservoir	Lake	2002	Lake Superior	38-0245-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Bass	Lake or Reservoir	Lake	2002	Lake Superior	69-0553-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Deep	Lake or Reservoir	Lake	2002	Lake Superior	69-0666-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Dyers	Lake or Reservoir	Lake	2002	Lake Superior	16-0634-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
East	Lake or Reservoir	Lake	2002	Lake Superior	38-0020-00	1B, 2A	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Fish Lk Flowage(East Bay)	Lake or Reservoir	Lake	2002	Lake Superior	69-0491-02	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Fish Lk Flowage(Main Bay)	Lake or Reservoir	Lake	2002	Lake Superior	69-0491-01	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Johnson	Lake or Reservoir	Lake	2002	Lake Superior	38-0242-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Leora	Lake or Reservoir	Lake	2002	Lake Superior	69-0521-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Lost	Lake or Reservoir	Lake	2002	Lake Superior	69-0556-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Lupus	Lake or Reservoir	Lake	2002	Lake Superior	38-0038-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Nipisiquit	Lake or Reservoir	Lake	2002	Lake Superior	38-0232-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
North Fowl	Lake or Reservoir	Lake	2002	Lake Superior	16-0036-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pike	Lake or Reservoir	Lake	2002	Lake Superior	69-0490-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Pine	Lake or Reservoir	Lake	2002	Lake Superior	16-0041-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Tetagouche	Lake or Reservoir	Lake	2002	Lake Superior	38-0231-00	2B	Lake	04010102	Lake Superior - South	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
White Pine	Lake or Reservoir	Lake	2002	Lake Superior	16-0369-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Whiteface River	Paleface R to St Louis R	Stream	2002	Lake Superior	04010201-509	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Whiteface River	Bug Cr to Paleface R	Stream	2002	Lake Superior	04010201-528	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Whiteface River	Whiteface Reservoir to Palo Cr	Stream	2002	Lake Superior	04010201-B01	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Whiteface River	Palo Cr to Bug Cr	Stream	2002	Lake Superior	04010201-B63	2Bg	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Ann	Lake or Reservoir	Lake	2002	Minnesota River	10-0012-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Big Twin	Lake or Reservoir	Lake	2002	Minnesota River	46-0133-00	2B	Martin	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Blue Earth River	Le Sueur R to Minnesota R	Stream	2002	Minnesota River	07020009-501	2Bg	Blue Earth	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	Le Sueur R to Minnesota R	Stream	2002	Minnesota River	07020009-501	2Bg	Blue Earth	07020009	Blue Earth River	Aquatic Consumption	Mercury in water column		4A	SW	2007	PRJ07770-001
Blue Earth River	Rapidan Dam to Le Sueur R	Stream	2002	Minnesota River	07020009-509	2Bg	Blue Earth	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	Rapidan Dam to Le Sueur R	Stream	2002	Minnesota River	07020009-509	2Bg	Blue Earth	07020009	Blue Earth River	Aquatic Consumption	Mercury in water column		4A	SW	2007	PRJ07770-001
Bryant	Lake or Reservoir	Lake	2002	Minnesota River	27-0067-00	2B	Hennepin	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa River	Watson Sag to Minnesota R	Stream	2002	Minnesota River	07020005-501	2Bg	Chippewa	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa River	Dry Weather Cr to Watson Sag	Stream	2002	Minnesota River	07020005-502	2Bg	Chippewa	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa River	Stowe Lk to Little Chippewa R	Stream	2002	Minnesota River	07020005-503	2Bg	Grant	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa River	Little Chippewa R to Unnamed cr	Stream	2002	Minnesota River	07020005-504	2Bg	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa River	Unnamed cr to E Br Chippewa R	Stream	2002	Minnesota River	07020005-505	2Bg	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa River	E Br Chippewa R to Shakopee Cr	Stream	2002	Minnesota River	07020005-506	2Bg	Swift	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa River	Shakopee Cr to Cottonwood Cr	Stream	2002	Minnesota River	07020005-507	2Bg	Swift	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa River	Cottonwood Cr to Dry Weather Cr	Stream	2002	Minnesota River	07020005-508	2Bg	Chippewa	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Christina	Lake or Reservoir	Lake	2002	Minnesota River	21-0375-00	2B	Douglas	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Fish (Bullhead Bay)	Lake or Reservoir	Lake	2002	Minnesota River	32-0018-02	2B	Cottonwood	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Fish (Main Lake)	Lake or Reservoir	Lake	2002	Minnesota River	32-0018-03	2B	Cottonwood	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Le Sueur River	Maple R to Blue Earth R	Stream	2002	Minnesota River	07020011-501	2Bg	Blue Earth	07020011	Le Sueur River	Aquatic Consumption	Mercury in water column		4A	SW	2022	PRJ07770-001
Lotus	Lake or Reservoir	Lake	2002	Minnesota River	10-0006-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Lower Prior	Lake or Reservoir	Lake	2002	Minnesota River	70-0026-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

Lucy	Lake or Reservoir	Lake	2002	Minnesota River	10-0007-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Lura	Lake or Reservoir	Lake	2002	Minnesota River	07-0079-00	2B	Blue Earth	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Blue Earth R to Cherry Cr	Stream	2002	Minnesota River	07020007-723	2Bg	Nicollet	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in water column		4A	SW	2008	PRJ07770-001
Northwest Bay	Lake or Reservoir	Lake	2002	Minnesota River	32-0018-01	2B	Cottonwood	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Oliver (east portion)	Lake or Reservoir	Lake	2002	Minnesota River	76-0146-01	2B	Swift	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Oliver (west portion)	Lake or Reservoir	Lake	2002	Minnesota River	76-0146-02	2B	Swift	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Perch	Lake or Reservoir	Lake	2002	Minnesota River	41-0067-00	2B	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Rock	Lake or Reservoir	Lake	2002	Minnesota River	27-0076-00	2B	Hennepin	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Round	Lake or Reservoir	Lake	2002	Minnesota River	27-0071-00	2B	Hennepin	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Stalker	Lake or Reservoir	Lake	2002	Minnesota River	56-0437-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Ten Mile	Lake or Reservoir	Lake	2002	Minnesota River	56-0613-00	2B	Otter Tail	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Upper Prior	Lake or Reservoir	Lake	2002	Minnesota River	70-0072-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Watonwan River	Perch Cr to Blue Earth R	Stream	2002	Minnesota River	07020010-501	2Bg	Blue Earth	07020010	Watonwan River	Aquatic Consumption	Mercury in water column		4A	SW	2018	PRJ07770-001
Whiskey	Lake or Reservoir	Lake	2002	Minnesota River	21-0216-00	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Armstrong	Lake or Reservoir	Lake	2002	Rainy River	69-0278-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Auto	Lake or Reservoir	Lake	2002	Rainy River	69-0731-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Bass	Lake or Reservoir	Lake	2002	Rainy River	69-0063-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Black Duck	Lake or Reservoir	Lake	2002	Rainy River	69-0842-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Clear	Lake or Reservoir	Lake	2002	Rainy River	38-0722-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Extortion	Lake or Reservoir	Lake	2002	Rainy River	16-0450-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Fishmouth	Lake or Reservoir	Lake	2002	Rainy River	69-0834-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Ima	Lake or Reservoir	Lake	2002	Rainy River	38-0400-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Iron	Lake or Reservoir	Lake	2002	Rainy River	16-0328-00	2B	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Island	Lake or Reservoir	Lake	2002	Rainy River	31-0913-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Jack	Lake or Reservoir	Lake	2002	Rainy River	38-0441-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Kabustasa	Lake or Reservoir	Lake	2002	Rainy River	69-0679-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Kawishiwi River	South Kawishiwi R to Farm Lk	Stream	2002	Rainy River	09030001-512	1B, 2Bdg	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Kawishiwi River	Headwaters (Kawishiwi Lk 38-0080-00) to Kawasachong Lk	Stream	2002	Rainy River	09030001-988	1B, 2Bdg	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Kawishiwi River	Kawasachong Lk to Lk Polly	Stream	2002	Rainy River	09030001-990	1B, 2Bdg	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Kawishiwi River	Lk Polly to South Kawishiwi R	Stream	2002	Rainy River	09030001-992	1B, 2Bdg	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Iron	Lake or Reservoir	Lake	2002	Rainy River	16-0355-00	2B	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Long	Lake or Reservoir	Lake	2002	Rainy River	69-0765-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Meditation	Lake or Reservoir	Lake	2002	Rainy River	16-0583-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Middle McDougal	Lake or Reservoir	Lake	2002	Rainy River	38-0658-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Pfeiffer	Lake or Reservoir	Lake	2002	Rainy River	69-0671-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Pickerel	Lake or Reservoir	Lake	2002	Rainy River	38-0741-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sand	Lake or Reservoir	Lake	2002	Rainy River	69-0736-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Section Twelve	Lake or Reservoir	Lake	2002	Rainy River	38-0714-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Surprise	Lake or Reservoir	Lake	2002	Rainy River	38-0550-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Takucmich	Lake or Reservoir	Lake	2002	Rainy River	69-0369-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Tee	Lake or Reservoir	Lake	2002	Rainy River	69-0083-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
West Pope	Lake or Reservoir	Lake	2002	Rainy River	16-0341-00	2B	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
East Olaf	Lake or Reservoir	Lake	2002	Red River of the North	56-0950-02	2B	Otter Tail	09020106	Buffalo River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Floyd (south bay)	Lake or Reservoir	Lake	2002	Red River of the North	03-0387-02	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Little Pine	Lake or Reservoir	Lake	2002	Red River of the North	56-0142-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Long	Lake or Reservoir	Lake	2002	Red River of the North	56-0388-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mud	Lake or Reservoir	Lake	2002	Red River of the North	03-0387-01	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
RED (UPPER RED)	Lake or Reservoir	Lake	2002	Red River of the North	04-0035-01	2B	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
West Battle	Lake or Reservoir	Lake	2002	Red River of the North	56-0239-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
West Olaf	Lake or Reservoir	Lake	2002	Red River of the North	56-0950-01	2B	Otter Tail	09020106	Buffalo River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
East Rush	Lake or Reservoir	Lake	2002	St. Croix River	13-0069-01	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Lily	Lake or Reservoir	Lake	2002	St. Croix River	82-0023-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Little Carnelian	Lake or Reservoir	Lake	2002	St. Croix River	82-0014-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Little Hanging Horn	Lake or Reservoir	Lake	2002	St. Croix River	09-0035-00	2B	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Long	Lake or Reservoir	Lake	2002	St. Croix River	58-0107-00	2B	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Park	Lake or Reservoir	Lake	2002	St. Croix River	09-0029-00	2B	Carlton	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Square	Lake or Reservoir	Lake	2002	St. Croix River	82-0046-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
West Rush	Lake or Reservoir	Lake	2002	St. Croix River	13-0069-02	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Root River, Middle Branch	Upper Bear Cr to N Br Root R	Stream	2002	Upper Mississippi River, Lower Portion	07040008-506	2Bg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Root River, Middle Branch	Bear Cr to T103 R12W S9, north line	Stream	2002	Upper Mississippi River, Lower Portion	07040008-B95	1B, 2Bdg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Root River, Middle Branch	T103 R12W S4, south line to Upper Bear Cr	Stream	2002	Upper Mississippi River, Lower Portion	07040008-B96	2Bg	Fillmore	07040008	Root River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

Adley	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	56-0031-00	2B	Otter Tail	07010107	Redeye River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Beebe	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	86-0023-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cedar	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	49-0140-00	2B	Morrison	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Clear	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	82-0163-00	2B	Washington	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow River, North Fork	Mill Cr to S Fk Crow R	Stream	2002	Upper Mississippi River, Upper Portion	07010204-503	2Bg	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, North Fork	Lk Koronis to M Fk Crow R	Stream	2002	Upper Mississippi River, Upper Portion	07010204-504	2Bg	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, North Fork	Jewitts Cr to Washington Cr	Stream	2002	Upper Mississippi River, Upper Portion	07010204-506	2Bg	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, North Fork	M Fk Crow R to Jewitts Cr	Stream	2002	Upper Mississippi River, Upper Portion	07010204-507	2Bg	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, North Fork	Washington Cr to Meeker/Wright County line	Stream	2002	Upper Mississippi River, Upper Portion	07010204-555	2Bg	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, North Fork	Meeker/Wright County line to Mill Cr	Stream	2002	Upper Mississippi River, Upper Portion	07010204-556	2Bg	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Eleventh Crow Wing (East)	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0036-02	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Eleventh Crow Wing (Main)	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0036-01	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Elk River	Mayhew Cr to Rice Cr	Stream	2002	Upper Mississippi River, Upper Portion	07010203-507	2Bg	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Elk River	Headwaters to Mayhew Cr	Stream	2002	Upper Mississippi River, Upper Portion	07010203-508	2Bg	Benton	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Elk River	St Francis R to Orono Lk	Stream	2002	Upper Mississippi River, Upper Portion	07010203-548	2Bg	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Elk River	Elk Lk to St Francis R	Stream	2002	Upper Mississippi River, Upper Portion	07010203-579	2Bg	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Elk River	Rice Cr to Elk Lk	Stream	2002	Upper Mississippi River, Upper Portion	07010203-581	2Bg	Sherburne	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Forsythe	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	31-0560-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
George	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	34-0142-00	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Grand	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	73-0055-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Granite	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	86-0217-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Guile	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	31-0569-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Hook	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	43-0073-00	2B	McLeod	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Kreigle	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	73-0097-00	2B	Stearns	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Little Bass	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	31-0575-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Long	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0161-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Loon	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	31-0571-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Lower Bottle	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0180-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Lower Cullen	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	18-0403-00	2B	Crow Wing	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Lower Panasa	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	31-0112-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mary	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	77-0019-00	2B	Stearns	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
North Little Long	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	27-0179-01	2B	Hennepin	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Plantagenet	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0156-00	2B	Hubbard	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Pleasant	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0046-00	1C, 2Bd	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Potato	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0243-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Rabbit (East Portion)	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	18-0093-01	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Rabbit (West Portion)	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	18-0093-02	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sagatagan	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	73-0092-00	2B	Stearns	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Shingobee	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0043-00	2B	Hubbard	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001

Snail	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	62-0073-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
South Little Long	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	27-0179-02	2B	Hennepin	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Third Crow Wing	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	29-0077-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Trillium	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	11-0270-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Wolf	Lake or Reservoir	Lake	2002	Upper Mississippi River, Upper Portion	04-0079-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Cedar River	Rose Cr to Woodbury Cr	Stream	1998	Cedar River	07080201-501	2Bg	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar River	Roberts Cr to Upper Austin Dam	Stream	1998	Cedar River	07080201-502	2Bg	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar River	Headwaters to Roberts Cr	Stream	1998	Cedar River	07080201-503	2Bg	Dodge	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar River	Upper Austin Dam to Wolf Cr	Stream	1998	Cedar River	07080201-511	2Bg	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar River	Wolf Cr to Lower Austin Dam	Stream	1998	Cedar River	07080201-512	2Bg	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar River	Lower Austin Dam to Dobbins Cr	Stream	1998	Cedar River	07080201-513	2Bg	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar River	Dobbins Cr to Turtle Cr	Stream	1998	Cedar River	07080201-514	2Bg	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar River	Turtle Cr to Rose Cr	Stream	1998	Cedar River	07080201-515	2Bg	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar River	Woodbury Cr to MN/IA border	Stream	1998	Cedar River	07080201-516	2Bg	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
East Side	Lake or Reservoir	Lake	1998	Cedar River	50-0002-00	2B	Mower	07080201	Cedar River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Alder	Lake or Reservoir	Lake	1998	Lake Superior	16-0114-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Alton	Lake or Reservoir	Lake	1998	Lake Superior	16-0622-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Aspen	Lake or Reservoir	Lake	1998	Lake Superior	16-0204-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Barker	Lake or Reservoir	Lake	1998	Lake Superior	16-0358-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Bassett	Lake or Reservoir	Lake	1998	Lake Superior	69-0041-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Bearskin	Lake or Reservoir	Lake	1998	Lake Superior	16-0228-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Beauty	Lake or Reservoir	Lake	1998	Lake Superior	31-0028-00	2B	Itasca	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Benson	Lake or Reservoir	Lake	1998	Lake Superior	38-0018-00	1B, 2A	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Boulder	Lake or Reservoir	Lake	1998	Lake Superior	69-0373-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Brule	Lake or Reservoir	Lake	1998	Lake Superior	16-0348-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Cadotte	Lake or Reservoir	Lake	1998	Lake Superior	69-0114-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Caribou	Lake or Reservoir	Lake	1998	Lake Superior	16-0360-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Carrot	Lake or Reservoir	Lake	1998	Lake Superior	16-0071-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Cascade	Lake or Reservoir	Lake	1998	Lake Superior	16-0346-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Chester	Lake or Reservoir	Lake	1998	Lake Superior	16-0033-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Christine	Lake or Reservoir	Lake	1998	Lake Superior	16-0373-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Clara	Lake or Reservoir	Lake	1998	Lake Superior	16-0365-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Clearwater	Lake or Reservoir	Lake	1998	Lake Superior	16-0139-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Crescent	Lake or Reservoir	Lake	1998	Lake Superior	16-0454-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Crocodile	Lake or Reservoir	Lake	1998	Lake Superior	16-0119-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
CROOKED (EAST BAY)	Lake or Reservoir	Lake	1998	Lake Superior	38-0024-01	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
CROOKED (WEST BAY)	Lake or Reservoir	Lake	1998	Lake Superior	38-0024-02	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Dam Five	Lake or Reservoir	Lake	1998	Lake Superior	38-0053-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Deer Yard	Lake or Reservoir	Lake	1998	Lake Superior	16-0253-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Devil Track	Lake or Reservoir	Lake	1998	Lake Superior	16-0143-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column		4A	NE	2008	PRJ07770-001
Devil Track	Lake or Reservoir	Lake	1998	Lake Superior	16-0143-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Dunn	Lake or Reservoir	Lake	1998	Lake Superior	16-0245-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
East Bearskin	Lake or Reservoir	Lake	1998	Lake Superior	16-0146-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
East Pike	Lake or Reservoir	Lake	1998	Lake Superior	16-0042-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Elbow	Lake or Reservoir	Lake	1998	Lake Superior	16-0096-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column		4A	NE	2007	PRJ07770-001
Elbow	Lake or Reservoir	Lake	1998	Lake Superior	16-0096-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
ELBOW (MAIN BASIN)	Lake or Reservoir	Lake	1998	Lake Superior	16-0805-01	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
ELBOW (NORTH BAY)	Lake or Reservoir	Lake	1998	Lake Superior	16-0805-02	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Esther	Lake or Reservoir	Lake	1998	Lake Superior	16-0023-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Finger	Lake or Reservoir	Lake	1998	Lake Superior	16-0646-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Flour	Lake or Reservoir	Lake	1998	Lake Superior	16-0147-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Four Mile	Lake or Reservoir	Lake	1998	Lake Superior	16-0639-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Gilbert Pit	Lake or Reservoir	Lake	1998	Lake Superior	69-1306-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Golf Course Pond	Lake or Reservoir	Lake	1998	Lake Superior	69-1345-00	1B, 2Bd	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Greenwood	Lake or Reservoir	Lake	1998	Lake Superior	16-0077-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column		4A	NE	2007	PRJ07770-001
Greenwood	Lake or Reservoir	Lake	1998	Lake Superior	16-0077-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Gust	Lake or Reservoir	Lake	1998	Lake Superior	16-0380-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Homer	Lake or Reservoir	Lake	1998	Lake Superior	16-0406-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column		4A	NE	2007	PRJ07770-001
Homer	Lake or Reservoir	Lake	1998	Lake Superior	16-0406-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Hungry Jack	Lake or Reservoir	Lake	1998	Lake Superior	16-0227-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Jim	Lake or Reservoir	Lake	1998	Lake Superior	16-0135-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001

John	Lake or Reservoir	Lake	1998	Lake Superior	16-0035-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Katherine	Lake or Reservoir	Lake	1998	Lake Superior	38-0538-00	2B	Lake	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Kelly	Lake or Reservoir	Lake	1998	Lake Superior	69-0901-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Kemo	Lake or Reservoir	Lake	1998	Lake Superior	16-0188-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Lester River	T52 R14W S23, north line to Lk Superior	Stream	1998	Lake Superior	04010102-549	1B, 2Ag	St. Louis	04010102	Lake Superior - South	Aquatic Consumption	Mercury in water column		4A	NE	2014	PRJ07770-001
Lichen	Lake or Reservoir	Lake	1998	Lake Superior	16-0382-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Linwood	Lake or Reservoir	Lake	1998	Lake Superior	69-0248-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Wilson	Lake or Reservoir	Lake	1998	Lake Superior	38-0051-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Longyear (North)	Lake or Reservoir	Lake	1998	Lake Superior	69-0857-01	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Longyear (South)	Lake or Reservoir	Lake	1998	Lake Superior	69-0857-02	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mark	Lake or Reservoir	Lake	1998	Lake Superior	16-0250-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
McDonald	Lake or Reservoir	Lake	1998	Lake Superior	16-0235-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column		4A	NE	2007	PRJ07770-001
McDonald	Lake or Reservoir	Lake	1998	Lake Superior	16-0235-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Moore	Lake or Reservoir	Lake	1998	Lake Superior	16-0489-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Moose	Lake or Reservoir	Lake	1998	Lake Superior	16-0043-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Moosehorn	Lake or Reservoir	Lake	1998	Lake Superior	16-0015-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Murphy	Lake or Reservoir	Lake	1998	Lake Superior	69-0646-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Ninemile	Lake or Reservoir	Lake	1998	Lake Superior	38-0033-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
North Twin	Lake or Reservoir	Lake	1998	Lake Superior	69-0419-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Northern Light	Lake or Reservoir	Lake	1998	Lake Superior	16-0089-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Northern Light	Lake or Reservoir	Lake	1998	Lake Superior	16-0089-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column		4A	NE	2007	PRJ07770-001
Pequaywan	Lake or Reservoir	Lake	1998	Lake Superior	69-0011-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pike	Lake or Reservoir	Lake	1998	Lake Superior	16-0252-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pine	Lake or Reservoir	Lake	1998	Lake Superior	16-0194-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pine	Lake or Reservoir	Lake	1998	Lake Superior	69-0001-00	2B	Lake	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pit	Lake or Reservoir	Lake	1998	Lake Superior	16-0155-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Poplar	Lake or Reservoir	Lake	1998	Lake Superior	16-0239-00	1C, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Salo	Lake or Reservoir	Lake	1998	Lake Superior	69-0036-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sawbill	Lake or Reservoir	Lake	1998	Lake Superior	16-0496-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column		4A	NE	2008	PRJ07770-001
Sawbill	Lake or Reservoir	Lake	1998	Lake Superior	16-0496-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Seven Beaver	Lake or Reservoir	Lake	1998	Lake Superior	69-0002-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Silver	Lake or Reservoir	Lake	1998	Lake Superior	69-0662-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Six Mile	Lake or Reservoir	Lake	1998	Lake Superior	69-0840-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
South Fowl	Lake or Reservoir	Lake	1998	Lake Superior	16-0034-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Swamp	Lake or Reservoir	Lake	1998	Lake Superior	16-0215-00	1B, 2Bd	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Swamper	Lake or Reservoir	Lake	1998	Lake Superior	16-0128-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Tait	Lake or Reservoir	Lake	1998	Lake Superior	16-0384-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Thrasher	Lake or Reservoir	Lake	1998	Lake Superior	16-0192-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Thrush	Lake or Reservoir	Lake	1998	Lake Superior	16-0191-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Thunderbird	Lake or Reservoir	Lake	1998	Lake Superior	38-0031-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Tom	Lake or Reservoir	Lake	1998	Lake Superior	16-0019-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in water column		4A	NE	2007	PRJ07770-001
Tom	Lake or Reservoir	Lake	1998	Lake Superior	16-0019-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Toohey	Lake or Reservoir	Lake	1998	Lake Superior	16-0645-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Trout	Lake or Reservoir	Lake	1998	Lake Superior	16-0049-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Two Island	Lake or Reservoir	Lake	1998	Lake Superior	16-0156-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Virginia	Lake or Reservoir	Lake	1998	Lake Superior	69-0663-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Wampus	Lake or Reservoir	Lake	1998	Lake Superior	16-0196-00	2B	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
West Pike	Lake or Reservoir	Lake	1998	Lake Superior	16-0086-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
West Two Rivers Reservoir	Lake or Reservoir	Lake	1998	Lake Superior	69-0994-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Whitefish	Lake or Reservoir	Lake	1998	Lake Superior	38-0060-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Whitewater	Lake or Reservoir	Lake	1998	Lake Superior	69-0376-00	2B	St. Louis	04010201	St. Louis River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Wild Rice	Lake or Reservoir	Lake	1998	Lake Superior	69-0371-00	2B	St. Louis	04010202	Cloquet River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Wilson	Lake or Reservoir	Lake	1998	Lake Superior	38-0047-00	2B	Lake	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Winchell	Lake or Reservoir	Lake	1998	Lake Superior	16-0354-00	1B, 2A	Cook	04010101	Lake Superior - North	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Andrew	Lake or Reservoir	Lake	1998	Minnesota River	34-0206-00	2B	Kandiyohi	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Artichoke	Lake or Reservoir	Lake	1998	Minnesota River	06-0002-00	2B	Big Stone	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Barrett	Lake or Reservoir	Lake	1998	Minnesota River	26-0095-00	2B	Grant	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Bass	Lake or Reservoir	Lake	1998	Minnesota River	22-0074-00	2B	Faribault	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Benton	Lake or Reservoir	Lake	1998	Minnesota River	41-0043-00	2B	Lincoln	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	W Br Blue Earth R to Coon Cr	Stream	1998	Minnesota River	07020009-504	2Bg	Faribault	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	Willow Cr to Watonwan R	Stream	1998	Minnesota River	07020009-507	2Bg	Blue Earth	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	E Br Blue Earth R to South Cr	Stream	1998	Minnesota River	07020009-508	2Bg	Faribault	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	Watonwan R to Rapidan Dam	Stream	1998	Minnesota River	07020009-510	2Bg	Blue Earth	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001

Blue Earth River	Center Cr to Elm Cr	Stream	1998	Minnesota River	07020009-514	2Bg	Faribault	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	Elm Cr to Willow Cr	Stream	1998	Minnesota River	07020009-515	2Bg	Blue Earth	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	South Cr to Center Cr	Stream	1998	Minnesota River	07020009-516	2Bg	Faribault	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Blue Earth River	Badger Cr to E Br Blue Earth R	Stream	1998	Minnesota River	07020009-565	2Bg	Faribault	07020009	Blue Earth River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Bush	Lake or Reservoir	Lake	1998	Minnesota River	27-0047-00	2B	Hennepin	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cedar	Lake or Reservoir	Lake	1998	Minnesota River	70-0091-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Chippewa	Lake or Reservoir	Lake	1998	Minnesota River	21-0145-00	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cleary	Lake or Reservoir	Lake	1998	Minnesota River	70-0022-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cottonwood River	JD 30 to Minnesota R	Stream	1998	Minnesota River	07020008-501	2Bg	Brown	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cottonwood River	Headwaters to Meadow Cr	Stream	1998	Minnesota River	07020008-502	2Bg	Lyon	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cottonwood River	Meadow Cr to Plum Cr	Stream	1998	Minnesota River	07020008-503	2Bg	Redwood	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cottonwood River	Plum Cr to Dutch Charley Cr	Stream	1998	Minnesota River	07020008-504	2Bg	Redwood	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cottonwood River	Dutch Charley Cr to Dry Cr	Stream	1998	Minnesota River	07020008-505	2Bg	Redwood	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cottonwood River	Dry Cr to Mound Cr	Stream	1998	Minnesota River	07020008-506	2Bg	Redwood	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cottonwood River	Mound Cr to Coal Mine Cr	Stream	1998	Minnesota River	07020008-507	2Bg	Brown	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cottonwood River	Coal Mine Cr to Sleepy Eye Cr	Stream	1998	Minnesota River	07020008-508	2Bg	Brown	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cottonwood River	Sleepy Eye Cr to JD 30	Stream	1998	Minnesota River	07020008-509	2Bg	Brown	07020008	Cottonwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Dead Coon (Main Lake)	Lake or Reservoir	Lake	1998	Minnesota River	41-0021-01	2B	Lincoln	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Eagle	Lake or Reservoir	Lake	1998	Minnesota River	34-0171-00	2B	Kandiyohi	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Florida	Lake or Reservoir	Lake	1998	Minnesota River	34-0217-00	2B	Kandiyohi	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Hendricks	Lake or Reservoir	Lake	1998	Minnesota River	41-0110-00	2B	Lincoln	07020003	Lac Qui Parle River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Hiniker Pond	Lake or Reservoir	Lake	1998	Minnesota River	07-0147-00	2B	Blue Earth	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Lac Lavon	Lake or Reservoir	Lake	1998	Minnesota River	19-0446-00	2B	Dakota	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Lac Qui Parle (NW Bay)	Lake or Reservoir	Lake	1998	Minnesota River	37-0046-02	2B	Chippewa	07020001	Minnesota River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Lac Qui Parle (SE Bay)	Lake or Reservoir	Lake	1998	Minnesota River	37-0046-01	2B	Chippewa	07020001	Minnesota River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Long	Lake or Reservoir	Lake	1998	Minnesota River	34-0192-00	2B	Kandiyohi	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Loon	Lake or Reservoir	Lake	1998	Minnesota River	07-0096-00	2B	Blue Earth	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Madison	Lake or Reservoir	Lake	1998	Minnesota River	07-0044-00	2B	Blue Earth	07020011	Le Sueur River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Maple	Lake or Reservoir	Lake	1998	Minnesota River	21-0079-00	2B	Douglas	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Marsh	Lake or Reservoir	Lake	1998	Minnesota River	06-0001-00	2B	Big Stone	07020001	Minnesota River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Minnesota River	Big Stone Lk to Marsh Lk Dam	Stream	1998	Minnesota River	07020001-552	1C, 2Bdg	Big Stone	07020001	Minnesota River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Lac qui Parle dam to Granite Falls Dam	Stream	1998	Minnesota River	07020004-747	1C, 2Bdg	Chippewa	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Granite Falls Dam to Yellow Medicine R	Stream	1998	Minnesota River	07020004-748	2Bg	Yellow Medicine	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Yellow Medicine R to Echo Cr	Stream	1998	Minnesota River	07020004-749	2Bg	Renville	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Echo Cr to Beaver Cr	Stream	1998	Minnesota River	07020004-750	2Bg	Renville	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Beaver Cr to Little Rock Cr	Stream	1998	Minnesota River	07020007-720	2Bg	Brown	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Little Rock Cr to Cottonwood R	Stream	1998	Minnesota River	07020007-721	2Bg	Nicollet	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Cottonwood R to Blue Earth R	Stream	1998	Minnesota River	07020007-722	2Bg	Nicollet	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in water column		4A	SW	2008	PRJ07770-001
Minnesota River	Cottonwood R to Blue Earth R	Stream	1998	Minnesota River	07020007-722	2Bg	Nicollet	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Blue Earth R to Cherry Cr	Stream	1998	Minnesota River	07020007-723	2Bg	Nicollet	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	RM 22 to Mississippi R	Stream	1998	Minnesota River	07020012-505	2Bg	Dakota	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in water column		4A	SW	2008	PRJ07770-001
Minnesota River	RM 22 to Mississippi R	Stream	1998	Minnesota River	07020012-505	2Bg	Dakota	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Carver Cr to RM 22	Stream	1998	Minnesota River	07020012-506	2Bg	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Carver Cr to RM 22	Stream	1998	Minnesota River	07020012-506	2Bg	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in water column		4A	SW	2008	PRJ07770-001
Minnesota River	Cherry Cr to High Island Cr	Stream	1998	Minnesota River	07020012-799	2Bg	Le Sueur	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	Cherry Cr to High Island Cr	Stream	1998	Minnesota River	07020012-799	2Bg	Le Sueur	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in water column		4A	SW	2008	PRJ07770-001
Minnesota River	High Island Cr to Carver Cr	Stream	1998	Minnesota River	07020012-800	2Bg	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnesota River	High Island Cr to Carver Cr	Stream	1998	Minnesota River	07020012-800	2Bg	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in water column		4A	SW	2008	PRJ07770-001
Minnewaska	Lake or Reservoir	Lake	1998	Minnesota River	61-0130-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Mountain	Lake or Reservoir	Lake	1998	Minnesota River	17-0003-00	2B	Cottonwood	07020010	Watonwan River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Norway (Northwest)	Lake or Reservoir	Lake	1998	Minnesota River	34-0251-01	2B	Kandiyohi	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Norway (Southern)	Lake or Reservoir	Lake	1998	Minnesota River	34-0251-02	2B	Kandiyohi	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
O'Dowd	Lake or Reservoir	Lake	1998	Minnesota River	70-0095-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Orchard	Lake or Reservoir	Lake	1998	Minnesota River	19-0031-00	2B	Dakota	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pelican	Lake or Reservoir	Lake	1998	Minnesota River	26-0002-00	2B	Grant	07020002	Pomme de Terre River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Redwood	Lake or Reservoir	Lake	1998	Minnesota River	64-0058-00	2B	Redwood	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Redwood River	Ramsey Cr to Minnesota R	Stream	1998	Minnesota River	07020006-501	2Bg	Redwood	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Redwood River	T111 R42W S33, west line to Threemile Cr	Stream	1998	Minnesota River	07020006-502	2Bg	Lyon	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Redwood River	Threemile Cr to Clear Cr	Stream	1998	Minnesota River	07020006-503	2Bg	Redwood	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Redwood River	Headwaters to Coon Cr	Stream	1998	Minnesota River	07020006-505	2Bg	Lyon	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Redwood River	Dam to Ramsey Cr	Stream	1998	Minnesota River	07020006-508	2Bg	Redwood	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Redwood River	Clear Cr to Redwood Lk	Stream	1998	Minnesota River	07020006-509	2Bg	Redwood	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

Redwood River	Coon Cr to T110 R42W S20, north line	Stream	1998	Minnesota River	07020006-510	2Bg	Lyon	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Redwood River	T110 R42W S17, south line to T111 R42W S32, east line	Stream	1998	Minnesota River	07020006-513	1B, 2Bdg	Lyon	07020006	Redwood River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Scandinavian	Lake or Reservoir	Lake	1998	Minnesota River	61-0041-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Shaokatan	Lake or Reservoir	Lake	1998	Minnesota River	41-0089-00	2B	Lincoln	07020004	Minnesota River - Yellow Medicine River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Signalness	Lake or Reservoir	Lake	1998	Minnesota River	61-0149-00	2B	Pope	07020005	Chippewa River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Snelling	Lake or Reservoir	Lake	1998	Minnesota River	27-0001-00	2B	Hennepin	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Spring	Lake or Reservoir	Lake	1998	Minnesota River	70-0054-00	2B	Scott	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Susan	Lake or Reservoir	Lake	1998	Minnesota River	10-0013-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Waconia	Lake or Reservoir	Lake	1998	Minnesota River	10-0059-00	2B	Carver	07020012	Lower Minnesota River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Washington	Lake or Reservoir	Lake	1998	Minnesota River	40-0117-00	2B	Le Sueur	07020007	Minnesota River - Mankato	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Adams	Lake or Reservoir	Lake	1998	Rainy River	38-0153-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Ash	Lake or Reservoir	Lake	1998	Rainy River	69-0864-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Basswood	Lake or Reservoir	Lake	1998	Rainy River	38-0645-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Basswood River	Basswood Lk to Crooked Lk	Stream	1998	Rainy River	09030001-505	1B, 2Bdg	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Bearhead	Lake or Reservoir	Lake	1998	Rainy River	69-0254-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Big	Lake or Reservoir	Lake	1998	Rainy River	69-0190-00	1C, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Big Fork River	Reilly Bk to Sturgeon R	Stream	1998	Rainy River	09030006-503	2Bg	Koochiching	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Big Fork River	Deer Cr to Caldwell Bk	Stream	1998	Rainy River	09030006-504	2Bg	Koochiching	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Big Fork River	Moose Bk to Coon Cr	Stream	1998	Rainy River	09030006-505	2Bg	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Big Fork River	Coon Cr to Deer Cr	Stream	1998	Rainy River	09030006-506	2Bg	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Big Fork River	Caldwell Bk to Reilly Bk	Stream	1998	Rainy River	09030006-507	2Bg	Koochiching	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2013	PRJ07770-001
Birch	Lake or Reservoir	Lake	1998	Rainy River	38-0532-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Border waters	Saganaga Lk to Basswood Lk	Stream	1998	Rainy River	09030001-503	1B, 2Bdg	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Border waters	Namakan Lk to Rainy Lk	Stream	1998	Rainy River	09030001-812	2Bg	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Bottle River and Iron Lake	Crooked Lk to Lac la Croix	Stream	1998	Rainy River	09030001-507	1B, 2Bdg	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Browns	Lake or Reservoir	Lake	1998	Rainy River	38-0780-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Caribou	Lake or Reservoir	Lake	1998	Rainy River	31-0620-00	1B, 2A	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Cedar	Lake or Reservoir	Lake	1998	Rainy River	38-0810-00	1C, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Clear	Lake or Reservoir	Lake	1998	Rainy River	69-0799-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Coffee	Lake or Reservoir	Lake	1998	Rainy River	38-0064-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Crooked	Lake or Reservoir	Lake	1998	Rainy River	16-0723-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Crooked	Lake or Reservoir	Lake	1998	Rainy River	38-0817-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Cruiser	Lake or Reservoir	Lake	1998	Rainy River	69-0832-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Deer	Lake or Reservoir	Lake	1998	Rainy River	31-0334-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Disappointment	Lake or Reservoir	Lake	1998	Rainy River	38-0488-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Dumbbell	Lake or Reservoir	Lake	1998	Rainy River	38-0393-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Eagles Nest #3	Lake or Reservoir	Lake	1998	Rainy River	69-0285-03	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
East Chub	Lake or Reservoir	Lake	1998	Rainy River	38-0674-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
East Twin	Lake or Reservoir	Lake	1998	Rainy River	69-0163-01	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
East Vermilion	Lake or Reservoir	Lake	1998	Rainy River	69-0378-01	1C, 2Bd	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Eighteen	Lake or Reservoir	Lake	1998	Rainy River	38-0432-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Ek	Lake or Reservoir	Lake	1998	Rainy River	69-0843-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Elephant	Lake or Reservoir	Lake	1998	Rainy River	69-0810-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Fat	Lake or Reservoir	Lake	1998	Rainy River	69-0481-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Flash	Lake or Reservoir	Lake	1998	Rainy River	38-0630-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Flat Horn	Lake or Reservoir	Lake	1998	Rainy River	38-0568-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Fourteen	Lake or Reservoir	Lake	1998	Rainy River	69-0793-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Fraser	Lake or Reservoir	Lake	1998	Rainy River	38-0372-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Frost	Lake or Reservoir	Lake	1998	Rainy River	16-0571-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Gabimichigami	Lake or Reservoir	Lake	1998	Rainy River	16-0811-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Gillis	Lake or Reservoir	Lake	1998	Rainy River	16-0753-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Grass	Lake or Reservoir	Lake	1998	Rainy River	38-0635-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Greenstone	Lake or Reservoir	Lake	1998	Rainy River	38-0718-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Harriet	Lake or Reservoir	Lake	1998	Rainy River	38-0048-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Highlife	Lake or Reservoir	Lake	1998	Rainy River	38-0673-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Isabella	Lake or Reservoir	Lake	1998	Rainy River	38-0396-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Jasper	Lake or Reservoir	Lake	1998	Rainy River	16-0768-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Jeanette	Lake or Reservoir	Lake	1998	Rainy River	69-0456-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Johnson	Lake or Reservoir	Lake	1998	Rainy River	69-0117-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Kabetogama	Lake or Reservoir	Lake	1998	Rainy River	69-0845-00	1B, 2Bd	Koochiching	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Kawishiwi	Lake or Reservoir	Lake	1998	Rainy River	38-0080-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Knife	Lake or Reservoir	Lake	1998	Rainy River	38-0404-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001

Lake of the Woods (Main)	Lake or Reservoir	Lake	1998	Rainy River	39-0002-01	1B, 2Bd	Lake of the Woods	09030009	Lake of the Woods	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
LAKE OF THE WOODS(4 MI BAY)	Lake or Reservoir	Lake	1998	Rainy River	39-0002-02	1B, 2Bd	Lake of the Woods	09030009	Lake of the Woods	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Leander	Lake or Reservoir	Lake	1998	Rainy River	69-0796-00	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Bear	Lake or Reservoir	Lake	1998	Rainy River	31-0156-00	2B	Itasca	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Fork River	Beaver Bk to Rainy R	Stream	1998	Rainy River	09030005-501	2Bg	Koochiching	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Headwaters to Rice R	Stream	1998	Rainy River	09030005-502	2Bg	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Rice R to Beaver Cr	Stream	1998	Rainy River	09030005-503	2Bg	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Beaver Cr to Sturgeon R	Stream	1998	Rainy River	09030005-504	2Bg	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Sturgeon R to Willow R	Stream	1998	Rainy River	09030005-505	2Bg	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Willow R to Valley R	Stream	1998	Rainy River	09030005-506	2Bg	Koochiching	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Valley R to Prairie Cr	Stream	1998	Rainy River	09030005-507	2Bg	Koochiching	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Prairie Cr to Nett Lake R	Stream	1998	Rainy River	09030005-508	2Bg	Koochiching	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Nett Lake R to Cross R	Stream	1998	Rainy River	09030005-509	2Bg	Koochiching	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Fork River	Cross R to Beaver Bk	Stream	1998	Rainy River	09030005-510	2Bg	Koochiching	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Johnson	Lake or Reservoir	Lake	1998	Rainy River	69-0760-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Knife	Lake or Reservoir	Lake	1998	Rainy River	38-0229-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Long	Lake or Reservoir	Lake	1998	Rainy River	69-0066-00	1C, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Saganaga	Lake or Reservoir	Lake	1998	Rainy River	16-0809-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little Trout	Lake or Reservoir	Lake	1998	Rainy River	69-0455-00	1B, 2Bd	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Trout	Lake or Reservoir	Lake	1998	Rainy River	69-0682-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
LONG (MAIN BASIN)	Lake or Reservoir	Lake	1998	Rainy River	69-0859-01	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
LONG (NORTH BASIN)	Lake or Reservoir	Lake	1998	Rainy River	69-0859-02	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Loon River and Little Vermilion Lk	Lac la Croix to Sand Point Lk	Stream	1998	Rainy River	09030001-509	1B, 2Bdg	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Low	Lake or Reservoir	Lake	1998	Rainy River	69-0070-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Marion	Lake or Reservoir	Lake	1998	Rainy River	69-0755-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Mayhew	Lake or Reservoir	Lake	1998	Rainy River	16-0337-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Middle Sturgeon	Lake or Reservoir	Lake	1998	Rainy River	69-0939-02	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Moose	Lake or Reservoir	Lake	1998	Rainy River	38-0644-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Moose	Lake or Reservoir	Lake	1998	Rainy River	69-0750-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Muckwa	Lake or Reservoir	Lake	1998	Rainy River	69-0159-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mukooda	Lake or Reservoir	Lake	1998	Rainy River	69-0684-00	1B, 2A	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Myrtle	Lake or Reservoir	Lake	1998	Rainy River	69-0749-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Namakan Narrows	Sand Point Lk to Namakan Lk	Stream	1998	Rainy River	09030001-813	2Bg	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Newfound	Lake or Reservoir	Lake	1998	Rainy River	38-0619-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Newton	Lake or Reservoir	Lake	1998	Rainy River	38-0784-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
North	Lake or Reservoir	Lake	1998	Rainy River	16-0331-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
O'Leary	Lake or Reservoir	Lake	1998	Rainy River	69-0685-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
One	Lake or Reservoir	Lake	1998	Rainy River	38-0605-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Parent	Lake or Reservoir	Lake	1998	Rainy River	38-0526-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Peary	Lake or Reservoir	Lake	1998	Rainy River	69-0833-00	2B	St. Louis	09030003	Rainy River - Rainy Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Pelican	Lake or Reservoir	Lake	1998	Rainy River	69-0841-00	1C, 2Bd	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Perent	Lake or Reservoir	Lake	1998	Rainy River	38-0220-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pike	Lake or Reservoir	Lake	1998	Rainy River	38-0670-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Quadga	Lake or Reservoir	Lake	1998	Rainy River	38-0596-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Rainy River	Rainy Lk to International Falls Dam	Stream	1998	Rainy River	09030008-539	1B, 2Bdg	Koochiching	09030008	Lower Rainy River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Rainy River	International Falls Dam to Little Fork R	Stream	1998	Rainy River	09030008-540	1C, 2Bdg	Koochiching	09030008	Lower Rainy River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Rainy River	Little Fork R to Rapid R	Stream	1998	Rainy River	09030008-559	1C, 2Bdg	Koochiching	09030008	Lower Rainy River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Rainy River	Rapid R to RR bridge in Baudette	Stream	1998	Rainy River	09030008-560	1C, 2Bdg	Lake of the Woods	09030008	Lower Rainy River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Rainy River	RR bridge in Baudette to Lake of the Woods	Stream	1998	Rainy River	09030008-561	2Bg	Lake of the Woods	09030008	Lower Rainy River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Ramshead	Lake or Reservoir	Lake	1998	Rainy River	69-0339-00	1B, 2Bd	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Red Rock	Lake or Reservoir	Lake	1998	Rainy River	16-0793-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Round	Lake or Reservoir	Lake	1998	Rainy River	16-0606-00	2B	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Saganaga	Lake or Reservoir	Lake	1998	Rainy River	16-0633-00	1B, 2A	Cook	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Section 29	Lake or Reservoir	Lake	1998	Rainy River	38-0292-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Shagawa	Lake or Reservoir	Lake	1998	Rainy River	69-0069-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Silver Island	Lake or Reservoir	Lake	1998	Rainy River	38-0219-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Snowbank	Lake or Reservoir	Lake	1998	Rainy River	38-0529-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Square	Lake or Reservoir	Lake	1998	Rainy River	38-0074-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sturgeon	Lake or Reservoir	Lake	1998	Rainy River	69-0939-01	2B	St. Louis	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Susan	Lake or Reservoir	Lake	1998	Rainy River	69-0741-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001

T	Lake or Reservoir	Lake	1998	Rainy River	38-0066-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Thomas	Lake or Reservoir	Lake	1998	Rainy River	38-0351-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Triangle	Lake or Reservoir	Lake	1998	Rainy River	38-0715-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Trout	Lake or Reservoir	Lake	1998	Rainy River	69-0498-00	1B, 2A	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Turtle	Lake or Reservoir	Lake	1998	Rainy River	31-0725-00	2B	Itasca	09030006	Big Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Two	Lake or Reservoir	Lake	1998	Rainy River	38-0608-00	1B, 2Bd	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Vera	Lake or Reservoir	Lake	1998	Rainy River	38-0491-00	1B, 2A	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Vermilion - Pike Bay	Lake or Reservoir	Lake	1998	Rainy River	69-0378-03	1C, 2Bd	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
West Chub	Lake or Reservoir	Lake	1998	Rainy River	38-0675-00	2B	Lake	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
West Sturgeon	Lake or Reservoir	Lake	1998	Rainy River	69-0939-03	2B	Itasca	09030005	Little Fork River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
West Twin	Lake or Reservoir	Lake	1998	Rainy River	69-0163-02	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
West Vermilion	Lake or Reservoir	Lake	1998	Rainy River	69-0378-02	1C, 2Bd	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Whisper	Lake or Reservoir	Lake	1998	Rainy River	69-0059-00	2B	St. Louis	09030001	Rainy River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Wolf	Lake or Reservoir	Lake	1998	Rainy River	69-0582-00	2B	St. Louis	09030002	Vermilion River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Big Cormorant	Lake or Reservoir	Lake	1998	Red River of the North	03-0576-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Big Pine	Lake or Reservoir	Lake	1998	Red River of the North	56-0130-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Blackduck	Lake or Reservoir	Lake	1998	Red River of the North	04-0069-00	2B	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Clear	Lake or Reservoir	Lake	1998	Red River of the North	36-0011-00	2B	Koochiching	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Clearwater	Lake or Reservoir	Lake	1998	Red River of the North	04-0343-00	2B	Beltrami	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Clearwater River	Lower Badger Cr to Red Lake R	Stream	1998	Red River of the North	09020305-501	2Bg	Red Lake	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Clearwater River	Lost R to Beau Gerlot Cr	Stream	1998	Red River of the North	09020305-511	2Bg	Red Lake	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Clearwater River	Headwaters to T148 R36W S36, east line	Stream	1998	Red River of the North	09020305-517	2Bg	Clearwater	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Clearwater River	Ruffy Bk to JD 1	Stream	1998	Red River of the North	09020305-647	2Bg	Clearwater	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Clearwater River	JD 1 to Lost R	Stream	1998	Red River of the North	09020305-648	2Bg	Red Lake	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Clearwater River	Clearwater Lk to Unnamed cr	Stream	1998	Red River of the North	09020305-649	2Bg	Clearwater	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Clearwater River	Unnamed cr to Ruffy Bk	Stream	1998	Red River of the North	09020305-650	2Bg	Clearwater	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Clearwater River	T148 R35W S31, west line to Unnamed cr	Stream	1998	Red River of the North	09020305-653	1B, 2Ag	Beltrami	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Clearwater River	Unnamed cr to Clearwater Lk	Stream	1998	Red River of the North	09020305-654	1B, 2Bdg	Beltrami	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Clitherall	Lake or Reservoir	Lake	1998	Red River of the North	56-0238-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cotton	Lake or Reservoir	Lake	1998	Red River of the North	03-0286-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Dark	Lake or Reservoir	Lake	1998	Red River of the North	36-0014-00	2B	Koochiching	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Dead	Lake or Reservoir	Lake	1998	Red River of the North	56-0383-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Detroit	Lake or Reservoir	Lake	1998	Red River of the North	03-0381-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Hayes	Lake or Reservoir	Lake	1998	Red River of the North	68-0004-00	2B	Roseau	09020314	Roseau River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Ida	Lake or Reservoir	Lake	1998	Red River of the North	03-0582-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Julia	Lake or Reservoir	Lake	1998	Red River of the North	04-0166-00	2B	Beltrami	09020302	Upper/Lower Red Lake	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Little McDonald	Lake or Reservoir	Lake	1998	Red River of the North	56-0328-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Lomond	Lake or Reservoir	Lake	1998	Red River of the North	15-0081-00	2B	Clearwater	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Maple	Lake or Reservoir	Lake	1998	Red River of the North	60-0305-00	2B	Polk	09020305	Clearwater River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minerva	Lake or Reservoir	Lake	1998	Red River of the North	15-0079-00	2B	Clearwater	09020108	Wild Rice River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Muskrat	Lake or Reservoir	Lake	1998	Red River of the North	03-0360-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
North Lida	Lake or Reservoir	Lake	1998	Red River of the North	56-0747-01	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Pebble	Lake or Reservoir	Lake	1998	Red River of the North	56-0829-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Pelican	Lake or Reservoir	Lake	1998	Red River of the North	56-0786-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Pickerel	Lake or Reservoir	Lake	1998	Red River of the North	56-0475-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Red Lake River	Burnham Cr to Unnamed cr	Stream	1998	Red River of the North	09020303-501	1C, 2Bdg	Polk	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	Black R to Gentilly R	Stream	1998	Red River of the North	09020303-502	1C, 2Bdg	Red Lake	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	Unnamed cr to Red R	Stream	1998	Red River of the North	09020303-503	1C, 2Bdg	Polk	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	County Ditch 96 to Clearwater R	Stream	1998	Red River of the North	09020303-504	1C, 2Bdg	Red Lake	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	County Ditch 99 to Burnham Cr	Stream	1998	Red River of the North	09020303-506	1C, 2Bdg	Polk	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	Thief R to Thief River Falls Dam	Stream	1998	Red River of the North	09020303-509	1C, 2Bdg	Pennington	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	Clearwater R to Cyr Cr	Stream	1998	Red River of the North	09020303-510	1C, 2Bdg	Red Lake	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	Cyr Cr to Black R	Stream	1998	Red River of the North	09020303-511	1C, 2Bdg	Red Lake	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	Gentilly R to County Ditch 99	Stream	1998	Red River of the North	09020303-512	1C, 2Bdg	Polk	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	Thief River Falls Dam to County Ditch 96	Stream	1998	Red River of the North	09020303-513	1C, 2Bdg	Pennington	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	Clearwater/Pennington Co line to CD 39	Stream	1998	Red River of the North	09020303-561	1C, 2Bdg	Pennington	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Red Lake River	CD 39 to Thief R	Stream	1998	Red River of the North	09020303-562	1C, 2Bdg	Pennington	09020303	Red Lake River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rush	Lake or Reservoir	Lake	1998	Red River of the North	56-0141-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Star	Lake or Reservoir	Lake	1998	Red River of the North	56-0385-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Toad	Lake or Reservoir	Lake	1998	Red River of the North	03-0107-00	2B	Becker	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Traverse	Lake or Reservoir	Lake	1998	Red River of the North	78-0025-00	2B	Traverse	09020101	Bois de Sioux River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001

Unnamed	Lake or Reservoir	Lake	1998	Red River of the North	45-0119-00	2B	Marshall	09020311	Red River of the North - Tamarack River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Walker	Lake or Reservoir	Lake	1998	Red River of the North	56-0310-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Wall	Lake or Reservoir	Lake	1998	Red River of the North	56-0658-00	2B	Otter Tail	09020103	Otter Tail River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Big Carnelian	Lake or Reservoir	Lake	1998	St. Croix River	82-0049-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Big Marine (Main Lake)	Lake or Reservoir	Lake	1998	St. Croix River	82-0052-04	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Big Pine	Lake or Reservoir	Lake	1998	St. Croix River	58-0138-00	2B	Aitkin	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Bone	Lake or Reservoir	Lake	1998	St. Croix River	82-0054-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Comfort	Lake or Reservoir	Lake	1998	St. Croix River	13-0053-00	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Elmo	Lake or Reservoir	Lake	1998	St. Croix River	82-0106-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Fish	Lake or Reservoir	Lake	1998	St. Croix River	13-0068-00	2B	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Fish	Lake or Reservoir	Lake	1998	St. Croix River	33-0036-00	2B	Kanabec	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Snake River	Mud Cr to Mission Cr	Stream	1998	St. Croix River	07030004-503	2Bg	Pine	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Snake River	Fish Lk outlet to Groundhouse R	Stream	1998	St. Croix River	07030004-505	2Bg	Kanabec	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Snake River	Chelsey Bk to Knife R	Stream	1998	St. Croix River	07030004-506	2Bg	Kanabec	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Snake River	Headwaters to Hay Cr	Stream	1998	St. Croix River	07030004-508	2Bg	Aitkin	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Snake River	Hay Cr to Chelsey Bk	Stream	1998	St. Croix River	07030004-523	2Bg	Kanabec	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Snake River	Groundhouse R to Mud Cr	Stream	1998	St. Croix River	07030004-524	2Bg	Kanabec	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Snake River	Knife R to Fish Lk outlet	Stream	1998	St. Croix River	07030004-525	2Bg	Kanabec	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Snake River	Mission Cr to Cross Lk	Stream	1998	St. Croix River	07030004-586	2Bg	Pine	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Snake River	Cross Lk to St Croix R	Stream	1998	St. Croix River	07030004-587	2Bg	Pine	07030004	Snake River - St. Croix Basin	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
St Croix River	MN/WI border to Snake R	Stream	1998	St. Croix River	07030001-619	1B, 2Bdg	Pine	07030001	Upper St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
St Croix River	Snake R to Sunrise R	Stream	1998	St. Croix River	07030005-782	1B, 2Bdg	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
St Croix River	Sunrise R to Taylors Falls Dam	Stream	1998	St. Croix River	07030005-783	1B, 2Bdg	Chisago	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
St Croix River	Taylors Falls Dam to Lk St Croix (82-0001-00)	Stream	1998	St. Croix River	07030005-784	1C, 2Bdg	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
St. Croix	Lake or Reservoir	Lake	1998	St. Croix River	82-0001-00	2B	Washington	07030005	Lower St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Sturgeon	Lake or Reservoir	Lake	1998	St. Croix River	58-0067-00	2B	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Tamarack	Lake or Reservoir	Lake	1998	St. Croix River	58-0024-00	2B	Pine	07030001	Upper St. Croix River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Upper Pine	Lake or Reservoir	Lake	1998	St. Croix River	58-0130-00	2B	Pine	07030003	Kettle River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Cannon River	Wolf Cr to Heath Cr	Stream	1998	Upper Mississippi River, Lower Portion	07040002-507	2Bg	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cannon River	Heath Cr to Northfield Dam	Stream	1998	Upper Mississippi River, Lower Portion	07040002-508	2Bg	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cannon River	Northfield Dam to Lk Byllesby inlet	Stream	1998	Upper Mississippi River, Lower Portion	07040002-509	2Bg	Dakota	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cannon River	Straight R to T110 R20W S19, SE1/4 line	Stream	1998	Upper Mississippi River, Lower Portion	07040002-581	2Bg	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cannon River	T110 R20W S19, NE1/4 line to Wolf Cr	Stream	1998	Upper Mississippi River, Lower Portion	07040002-582	2Bg	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Clear	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	81-0014-01	2B	Waseca	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Frances	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	40-0057-00	2B	Le Sueur	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
French	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	66-0038-00	2B	Rice	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Loon	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	81-0015-00	2B	Waseca	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
MARION (EAST BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	19-0026-01	2B	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
MARION (MIDDLE BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	19-0026-02	2B	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
MARION (WEST BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	19-0026-03	2B	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	St Croix R to Chippewa R (WI)	Stream	1998	Upper Mississippi River, Lower Portion	07040001-531	2Bg	Goodhue	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	Chippewa R (WI) to L & D #6	Stream	1998	Upper Mississippi River, Lower Portion	07040003-627	2Bg	Wabasha	07040003	Mississippi River - Winona	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	L & D #6 to Root R	Stream	1998	Upper Mississippi River, Lower Portion	07040006-515	2Bg	Winona	07040006	Mississippi River - La Crescent	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	Root R to MN/IA border	Stream	1998	Upper Mississippi River, Lower Portion	07060001-509	2Bg	Houston	07060001	Mississippi River - Reno	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Silver	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	55-0003-00	2B	Olmsted	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Tetonka	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	40-0031-00	2B	Le Sueur	07040002	Cannon River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Vermillion River	Vermillion R/Vermillion Slough, Hastings Dam to Mississippi R	Stream	1998	Upper Mississippi River, Lower Portion	07040001-504	2Bg	Dakota	07040001	Mississippi River - Lake Pepin	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Whitewater River	S Fk Whitewater R to Beaver Cr	Stream	1998	Upper Mississippi River, Lower Portion	07040003-537	1B, 2Ag	Winona	07040003	Mississippi River - Winona	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Whitewater River	Beaver Cr to T108 R10W S1, north line	Stream	1998	Upper Mississippi River, Lower Portion	07040003-538	1B, 2Ag	Winona	07040003	Mississippi River - Winona	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

Whitewater River	T109 R10W S36, south line to Mississippi R	Stream	1998	Upper Mississippi River, Lower Portion	07040003-539	2Bg	Wabasha	07040003	Mississippi River - Winona	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Zumbro	Lake or Reservoir	Lake	1998	Upper Mississippi River, Lower Portion	55-0004-00	2B	Olmsted	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Zumbro River	West Indian Cr to Mississippi R	Stream	1998	Upper Mississippi River, Lower Portion	07040004-501	2Bg	Wabasha	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Zumbro River	Cold Cr to West Indian Cr	Stream	1998	Upper Mississippi River, Lower Portion	07040004-502	2Bg	Wabasha	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Zumbro River	N Fk Zumbro R to Cold Cr	Stream	1998	Upper Mississippi River, Lower Portion	07040004-504	2Bg	Wabasha	07040004	Zumbro River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Agnes	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0053-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Andrew	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0085-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Ann	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0190-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Baby	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0283-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Bald Eagle	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0002-00	1C, 2Bd	Anoka	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0034-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Belle Taine	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0146-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Bemidji (main lake)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	04-0130-02	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Big Birch (NE portion)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	77-0084-01	2B	Todd	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Big Birch (S portion)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	77-0084-02	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Big Fish	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	73-0106-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Big Kandiyohi	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	34-0086-00	2B	Kandiyohi	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Big Sand	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0185-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Big Sandy	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0062-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Big Swan	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	77-0023-00	2B	Todd	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Black Hoof	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0117-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Blandin	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0533-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Brownie	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0038-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Buck	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0069-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Buffalo	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0090-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Burgen	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0049-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Carver	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	82-0166-00	2B	Washington	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Cedar	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0227-00	2B	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Cedar (Main Basin)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0209-01	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Cedar (N.E. Arm)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0209-02	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Cedar (West Bay)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0209-03	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Christmas	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0137-00	2B	Carver	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Clear	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0093-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Collinwood	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0293-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Como	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0055-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow River, South Fork	Buffalo Cr to N Fk Crow R	Stream	1998	Upper Mississippi River, Upper Portion	07010205-508	2Bg	Carver	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, South Fork	Hutchinson Dam to Bear Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010205-510	2Bg	McLeod	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, South Fork	Bear Cr to Otter Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010205-511	2Bg	McLeod	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, South Fork	Otter Cr to Buffalo Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010205-512	2Bg	Carver	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001

Crow River, South Fork	Headwaters to 145th St	Stream	1998	Upper Mississippi River, Upper Portion	07010205-658	2Bm	Kandiyohi	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Crow River, South Fork	145th St to Hutchinson Dam	Stream	1998	Upper Mississippi River, Upper Portion	07010205-659	2Bg	Meeker	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Mosquito Cr to Long Prairie R	Stream	1998	Upper Mississippi River, Upper Portion	07010106-508	2Bg	Morrison	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Crow Wing River	Swan Cr to Mosquito Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010106-509	2Bg	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Partridge R to Swan Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010106-510	2Bg	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Leaf R to Partridge R	Stream	1998	Upper Mississippi River, Upper Portion	07010106-511	2Bg	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Farnham Cr to Leaf R	Stream	1998	Upper Mississippi River, Upper Portion	07010106-512	2Bg	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Beaver Cr to Farnham Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010106-513	2Bg	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Cat R to Beaver Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010106-514	2Bg	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Big Swamp Cr to Cat R	Stream	1998	Upper Mississippi River, Upper Portion	07010106-515	2Bg	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Shell R to Big Swamp Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010106-516	2Bg	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Headwaters (Eleventh Crow Wing Lk 29-0036-00) to Shell R	Stream	1998	Upper Mississippi River, Upper Portion	07010106-523	2Bg	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Crow Wing River	Long Prairie R to Mississippi R	Stream	1998	Upper Mississippi River, Upper Portion	07010106-721	2Bg	Morrison	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Cutaway	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0429-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Dam	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0096-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Diamond	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	34-0044-00	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Eagle	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	09-0057-00	2B	Carlton	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Eagle	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0111-01	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
East Lake Sylvia	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0289-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
East Sarah	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0191-02	2B	Hennepin	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
East Vadnais	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0038-01	1C, 2Bd	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Edward	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0305-00	2B	Crow Wing	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Elizabeth (Main Lake)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	34-0022-02	2B	Kandiyohi	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Elk	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	15-0010-00	2B	Clearwater	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Farm Island	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0159-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Fish Hook	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0242-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Francis	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	47-0002-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
French	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0273-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
George	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	02-0091-00	2B	Anoka	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
George	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0216-00	2B	Hubbard	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Gervais	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0007-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Girl	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0174-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Grace	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0071-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Green	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	30-0136-00	2B	Isanti	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Grove	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	61-0023-00	2B	Pope	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Gull	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0305-00	2B	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Hill (North Basin)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0142-01	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Hill (South Basin)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0142-02	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Horseshoe	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	73-0157-00	2B	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

Howard	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0199-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Ida	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0123-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
INGUADONA (N. BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0120-01	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
INGUADONA (S. BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0120-02	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Island	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0254-00	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Itasca	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	15-0016-00	2B	Clearwater	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
John	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0288-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Josephine	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0057-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Koronis (main lake)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	73-0200-02	2B	Stearns	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Lake of the Isles	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0040-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
LATOKA (NORTH BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0106-01	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
LATOKA (SOUTH BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0106-02	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Le Homme Dieu	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0056-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Leech (Ah-Gwah-Chin)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0203-03	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
LEECH (KABEKONA BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0203-02	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
LEECH (MAIN BASIN)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0203-01	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
LEECH (SHINGOBEE BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0203-04	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Boy	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0167-00	2B	Cass	07010102	Leech Lake River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Little Rock	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	05-0013-00	2B	Benton	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
LOBSTER (EAST BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0144-01	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
LOBSTER (WEST BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0144-02	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2013	PRJ07770-001
Long	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0160-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Long	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	47-0026-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Long Prairie River	Fish Trap Cr to Crow Wing R	Stream	1998	Upper Mississippi River, Upper Portion	07010108-501	2Bg	Morrison	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Long Prairie River	Moran Cr to Fish Trap Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010108-502	2Bg	Todd	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Long Prairie River	Turtle Cr to Moran Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010108-503	2Bg	Todd	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Long Prairie River	Eagle Cr to Turtle Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010108-504	2Bg	Todd	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Long Prairie River	Spruce Cr to Eagle Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010108-505	2Bg	Todd	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Long Prairie River	Headwaters (Lk Carlos 21-0057-00) to end of Wetland (CSAH 65)	Stream	1998	Upper Mississippi River, Upper Portion	07010108-534	2Bg	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Long Prairie River	End of Wetland (CSAH 65) to Spruce Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010108-535	2Bg	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Lower Prairie	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0384-01	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Lower Twin	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0042-03	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
MANTRAP (EAST BASIN)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0151-01	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
MANTRAP (HOME BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0151-05	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mantrap (Middle Basin	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0151-02	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
MANTRAP (MIRROR BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0151-03	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
MANTRAP (WEST ARM)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0151-04	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Marion	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	43-0084-00	2B	McLeod	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Mary	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0092-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

Mayhew	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	05-0007-00	2B	Benton	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Medicine	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0104-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Middle Twin	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0042-02	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mille Lacs	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	48-0002-00	2B	Aitkin	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Miltona	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0083-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Black Lake	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-06	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Carsons Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-03	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Crystal Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-10	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Emerald Lake	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-08	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Grays Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-01	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Halsteds Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-09	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Jennings Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-15	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Lower Lake	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-02	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Maxwell Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-11	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-North Arm	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-13	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Seton Lake	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-07	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-St. Albans Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-04	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Stubbs Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-12	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-Upper Lake	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-05	2B	Carver	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnetonka-West Arm	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0133-14	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Minnewawa	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0033-00	2B	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Minnie-Belle	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	47-0119-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Mississippi River	Cohasset Dam to Swan R	Stream	1998	Upper Mississippi River, Upper Portion	07010103-707	2Bg	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mississippi River	Swan R to Willow R	Stream	1998	Upper Mississippi River, Upper Portion	07010103-708	2Bg	Aitkin	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mississippi River	Willow R to Pine R	Stream	1998	Upper Mississippi River, Upper Portion	07010104-655	2Bg	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mississippi River	Pine R to Crow Wing R	Stream	1998	Upper Mississippi River, Upper Portion	07010104-656	2Bg	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mississippi River	Crow Wing R to Crow Wing/Morrison County border	Stream	1998	Upper Mississippi River, Upper Portion	07010104-657	2Bg	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Mississippi River	Crow Wing/Morrison County border to Swan R	Stream	1998	Upper Mississippi River, Upper Portion	07010104-658	1C, 2Bdg	Morrison	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	Swan R to Sauk R	Stream	1998	Upper Mississippi River, Upper Portion	07010201-631	1C, 2Bdg	Stearns	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	Sauk R to Clearwater R	Stream	1998	Upper Mississippi River, Upper Portion	07010203-728	1C, 2Bdg	Stearns	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	Clearwater R to Crow R	Stream	1998	Upper Mississippi River, Upper Portion	07010203-729	1C, 2Bdg	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	Crow R to Upper St Anthony Falls	Stream	1998	Upper Mississippi River, Upper Portion	07010206-805	1C, 2Bdg	Anoka	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	1998	Upper Mississippi River, Upper Portion	07010206-814	2Bg	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in water column		4A	SW	2007	PRJ07770-001
Mississippi River	Upper St Anthony Falls to St Croix R	Stream	1998	Upper Mississippi River, Upper Portion	07010206-814	2Bg	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Moose	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0722-00	2B	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Mud	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	73-0200-01	2B	Stearns	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Nest	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	34-0154-00	2B	Kandiyohi	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Nokomis	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0019-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
North Long	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0372-00	2B	Crow Wing	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001

North Long	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0067-01	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Osakis	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	77-0215-00	2B	Douglas	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Ox Hide	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0106-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Pelican	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0308-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pickerel	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0182-00	2B	Aitkin	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pike	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0111-02	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Pine Mountain	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0411-00	2B	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Plantation	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0439-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Pleasant	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0251-00	2B	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
POKEGAMA (MAIN BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0532-01	1B, 2A	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
POKEGAMA (WENDIGO)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0532-02	1B, 2A	Itasca	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Prairie (main bay)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0384-02	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Pulaski (main bay)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0053-02	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rebecca	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	19-0003-00	2B	Dakota	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rebecca	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0192-00	2B	Hennepin	07010205	South Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rice	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0145-00	2B	Crow Wing	07010104	Mississippi River - Brainerd	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Rice	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	73-0196-00	2B	Stearns	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Richardson	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	47-0088-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Round	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	01-0204-00	2B	Aitkin	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Round	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0373-00	2B	Crow Wing	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Rum River	Cedar Cr to Trott Bk	Stream	1998	Upper Mississippi River, Upper Portion	07010207-502	2Bg	Anoka	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rum River	Seelye Bk to Cedar Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010207-503	2Bg	Anoka	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rum River	Stanchfield Cr to Seelye Bk	Stream	1998	Upper Mississippi River, Upper Portion	07010207-504	2Bg	Isanti	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rum River	Lk Onamia to Tibbetts Bk	Stream	1998	Upper Mississippi River, Upper Portion	07010207-509	2Bg	Mille Lacs	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Rum River	Tibbetts Bk to Bogus Bk	Stream	1998	Upper Mississippi River, Upper Portion	07010207-510	2Bg	Mille Lacs	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rum River	Bogus Bk to W Br Rum R	Stream	1998	Upper Mississippi River, Upper Portion	07010207-511	2Bg	Mille Lacs	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rum River	W Br Rum R to Stanchfield Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010207-512	2Bg	Isanti	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rum River	Madison/Rice St in Anoka to Mississippi R	Stream	1998	Upper Mississippi River, Upper Portion	07010207-556	2Bg	Anoka	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rum River	Anoka Dam to Madison/Rice St in Anoka	Stream	1998	Upper Mississippi River, Upper Portion	07010207-665	2Bg	Anoka	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Rum River	Trott Bk to Anoka Dam	Stream	1998	Upper Mississippi River, Upper Portion	07010207-666	2Bg	Anoka	07010207	Rum River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Ruth	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0212-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Sauk River	Mill Cr to Mississippi R	Stream	1998	Upper Mississippi River, Upper Portion	07010202-501	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Adley Cr to Getchell Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010202-505	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Melrose Dam to Adley Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010202-506	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Sauk Lk to Melrose Dam	Stream	1998	Upper Mississippi River, Upper Portion	07010202-507	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Getchell Cr to State Hwy 23	Stream	1998	Upper Mississippi River, Upper Portion	07010202-508	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Knaus Lk to Cold Spring Dam	Stream	1998	Upper Mississippi River, Upper Portion	07010202-517	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Cold Spring Dam to Cold Spring WWTP	Stream	1998	Upper Mississippi River, Upper Portion	07010202-519	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Cold Spring WWTP to Mill Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010202-520	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

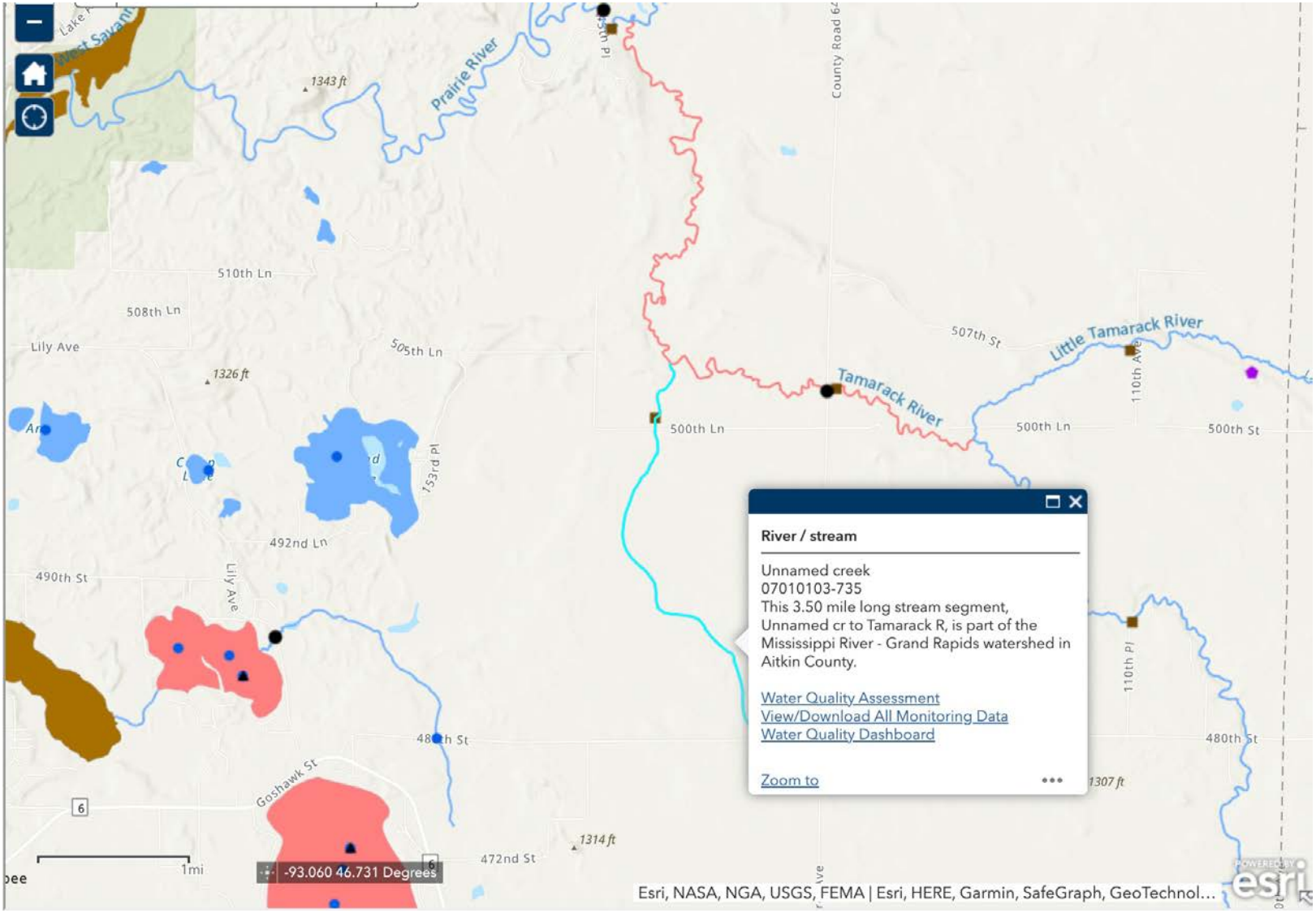
Sauk River	State Hwy 23 to Horseshoe Lk	Stream	1998	Upper Mississippi River, Upper Portion	07010202-557	2Bg	Stearns	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Headwaters (Lk Osakis 77-0215-00) to Guernsey Lk	Stream	1998	Upper Mississippi River, Upper Portion	07010202-667	2Bg	Todd	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Guernsey Lk to Little Sauk Lk	Stream	1998	Upper Mississippi River, Upper Portion	07010202-669	2Bg	Todd	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Little Sauk Lk to Juergens Lk	Stream	1998	Upper Mississippi River, Upper Portion	07010202-671	2Bg	Todd	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Sauk River	Juergens Lk to Sauk Lk	Stream	1998	Upper Mississippi River, Upper Portion	07010202-673	2Bg	Todd	07010202	Sauk River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Silver	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0140-00	2B	Wright	07010203	Mississippi River - St. Cloud	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
South Long	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0067-02	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
South Twin	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	04-0053-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
SPIDER (EAST BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0117-02	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
SPIDER (NE/SW BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	29-0117-01	2B	Hubbard	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Spring	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	47-0032-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Stocking	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	80-0037-00	2B	Wadena	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Straight	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	03-0010-00	2B	Becker	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Stump	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	04-0130-01	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sucker	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	62-0028-00	1C, 2Bd	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Sullivan	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	49-0016-00	2B	Morrison	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
SWAN (MAIN BASIN)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0067-02	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
SWAN (WEST BAY)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0067-01	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Swan Lake Southwest Bay	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0067-03	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Swan River	Swan Lk to Trout Cr	Stream	1998	Upper Mississippi River, Upper Portion	07010103-753	2Bg	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Swan River	Trout Cr to Mississippi R	Stream	1998	Upper Mississippi River, Upper Portion	07010103-754	2Bg	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Swenson	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	04-0085-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Sylvan (Northeast Bay)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0304-02	2B	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Sylvan (Southwest Bay)	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0304-01	2B	Cass	07010106	Crow Wing River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Trout	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0410-00	1B, 2A	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Turtle River	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	04-0111-00	2B	Beltrami	07010101	Mississippi River - Headwaters	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Two Rivers	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	73-0138-00	2B	Stearns	07010201	Mississippi River - Sartell	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Unnamed	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-1225-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Upper Panasa	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0111-00	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Upper Prairie	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	31-0384-03	2B	Itasca	07010103	Mississippi River - Grand Rapids	Aquatic Consumption	Mercury in fish tissue		4A	NE	2018	PRJ07770-001
Upper Twin	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0042-01	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
Victoria	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	21-0054-00	2B	Douglas	07010108	Long Prairie River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Washburn	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	11-0059-00	2B	Cass	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2007	PRJ07770-001
Washington	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	47-0046-00	2B	Meeker	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Wassermann	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	10-0048-00	2B	Carver	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Weaver	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0117-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
West Lake Sylvia	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	86-0279-00	2B	Wright	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
West Sarah	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0191-01	2B	Hennepin	07010204	North Fork Crow River	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001
White Bear	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	82-0167-00	2B	Ramsey	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2007	PRJ07770-001

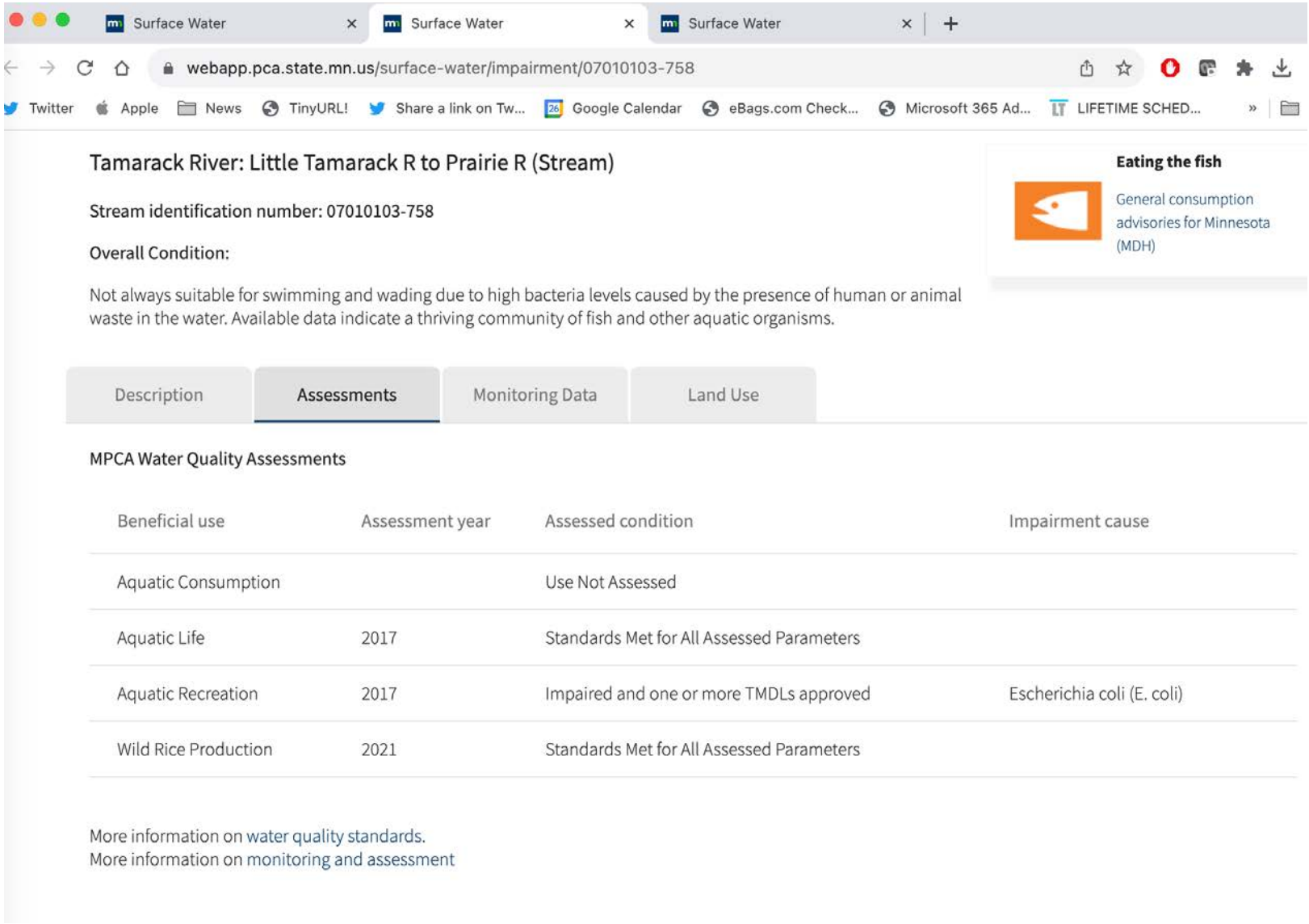
Whitefish	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	18-0310-00	2B	Crow Wing	07010105	Pine River	Aquatic Consumption	Mercury in fish tissue		4A	NE	2008	PRJ07770-001
Wirth	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	27-0037-00	2B	Hennepin	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001
Zumbra-Sunny	Lake or Reservoir	Lake	1998	Upper Mississippi River, Upper Portion	10-0041-00	2B	Carver	07010206	Mississippi River - Twin Cities	Aquatic Consumption	Mercury in fish tissue		4A	SW	2008	PRJ07770-001

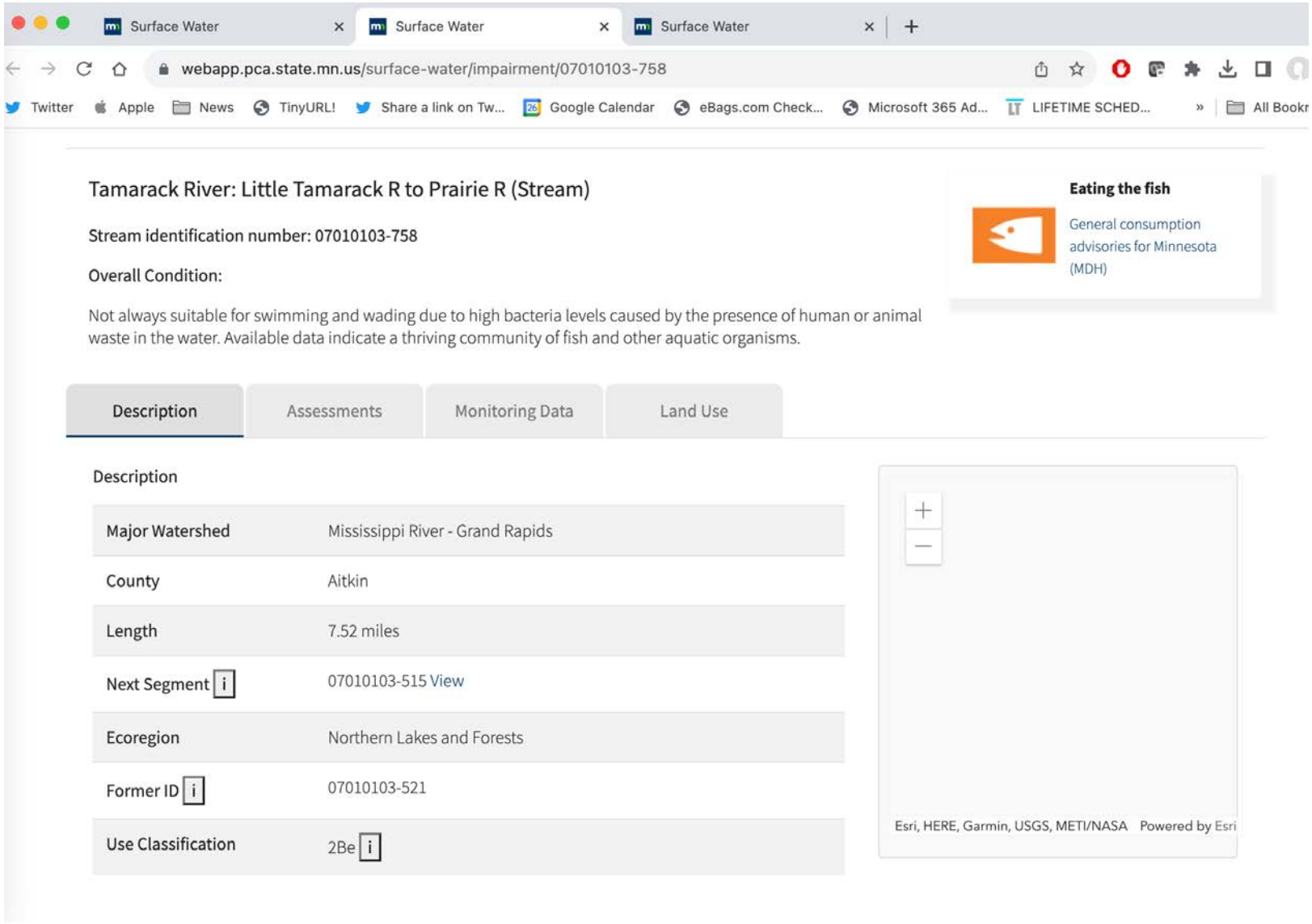
WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

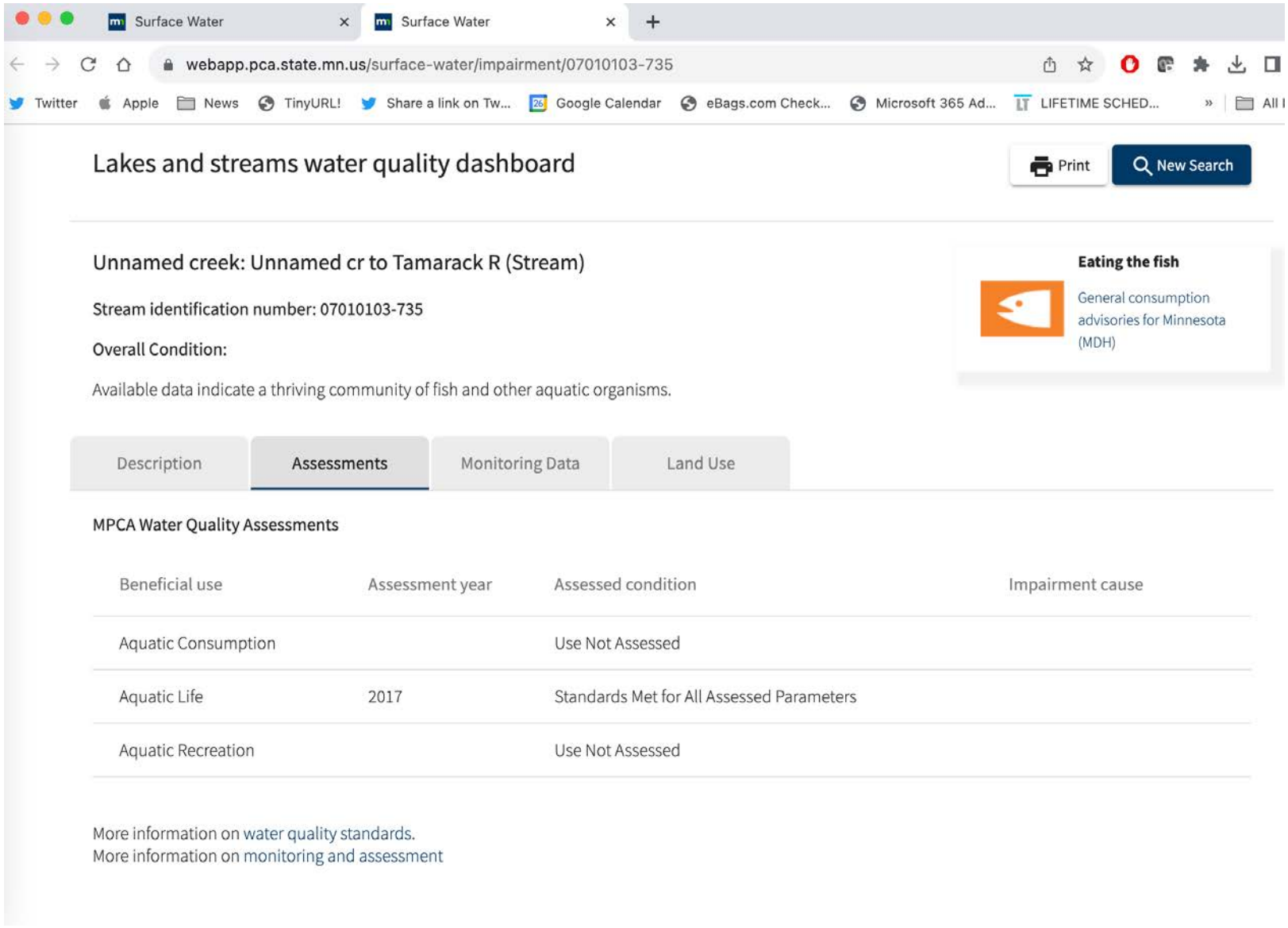
EXHIBIT 21

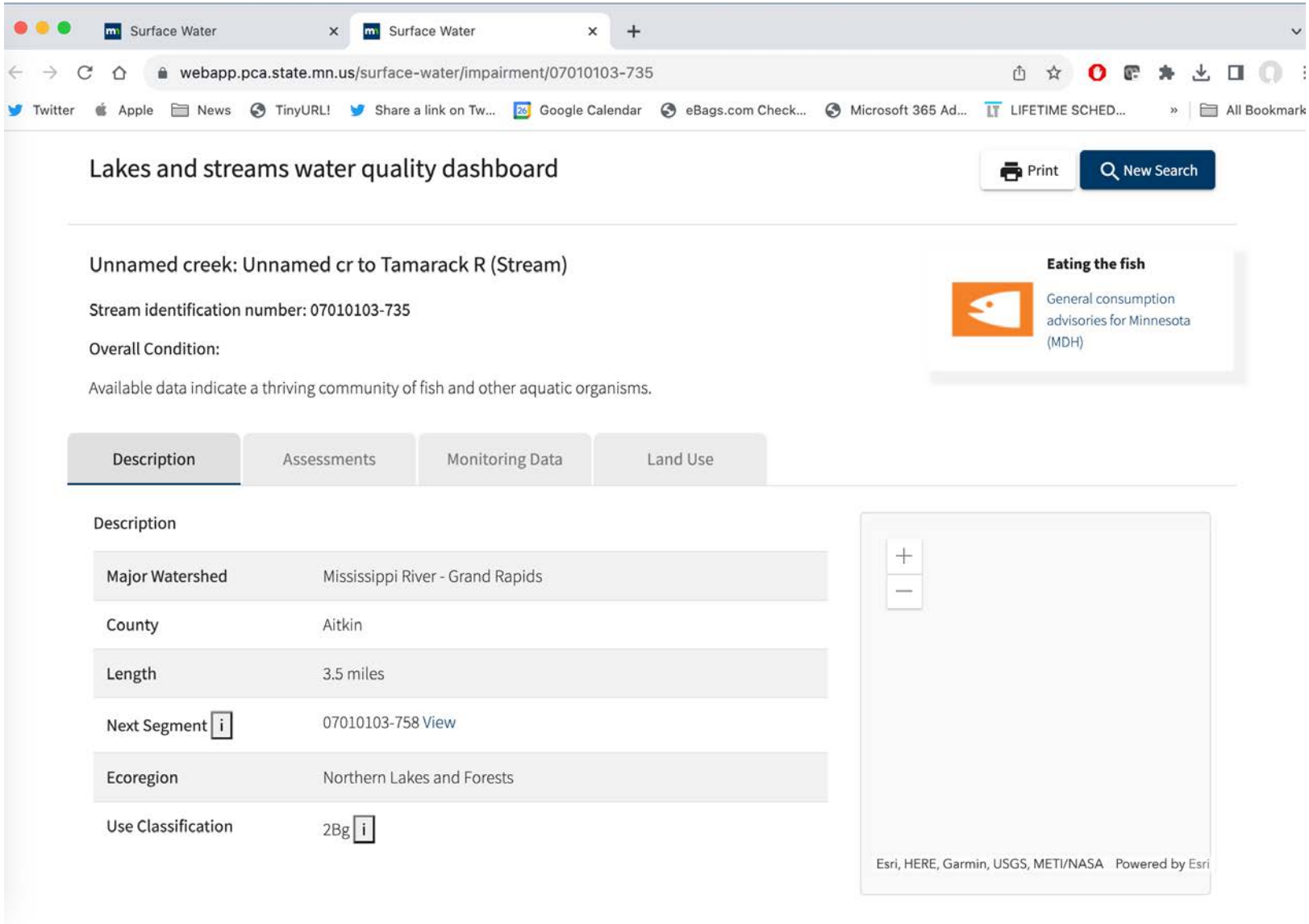
MPCA Surface Water Data —Tamarack River Segment and Tributary Assessment


Prairie River
1343 ft
510th Ln
508th Ln
Lily Ave
505th Ln
1326 ft
153rd Pl
492nd Ln
490th St
Lily Ave
480th St
Goshawk St
6
1mi
-93.060 46.731 Degrees
472nd St
1314 ft
County Road 64
507th St
Little Tamarack River
Tamarack River
500th Ln
500th Ln
110th Ave
500th St
110th Pl
480th St
1307 ft
River / stream
Unnamed creek
07010103-735
This 3.50 mile long stream segment, Unnamed cr to Tamarack R, is part of the Mississippi River - Grand Rapids watershed in Aitkin County.
Water Quality Assessment
View/Download All Monitoring Data
Water Quality Dashboard
Zoom to
Esri, NASA, NGA, USGS, FEMA | Esri, HERE, Garmin, SafeGraph, GeoTechnol...


Surface Water
Surface Water
Surface Water
webapp.pca.state.mn.us/surface-water/impairment/07010103-758
Twitter
Apple
News
TinyURL!
Share a link on Tw...
Google Calendar
eBags.com Check...
Microsoft 365 Ad...
LIFETIME SCHED...
Tamarack River: Little Tamarack R to Prairie R (Stream)
Stream identification number: 07010103-758
Overall Condition:
Not always suitable for swimming and wading due to high bacteria levels caused by the presence of human or animal waste in the water. Available data indicate a thriving community of fish and other aquatic organisms.
Eating the fish
General consumption advisories for Minnesota (MDH)
Description
Assessments
Monitoring Data
Land Use
MPCA Water Quality Assessments
Beneficial use
Assessment year
Assessed condition
Impairment cause
Aquatic Consumption
Use Not Assessed
Aquatic Life
2017
Standards Met for All Assessed Parameters
Aquatic Recreation
2017
Impaired and one or more TMDLs approved
Escherichia coli (E. coli)
Wild Rice Production
2021
Standards Met for All Assessed Parameters
More information on water quality standards.
More information on monitoring and assessment


Surface Water
Surface Water
Surface Water
webapp.pca.state.mn.us/surface-water/impairment/07010103-758
Twitter
Apple
News
TinyURL!
Share a link on Tw...
Google Calendar
eBags.com Check...
Microsoft 365 Ad...
LIFETIME SCHED...
All Bookr
Tamarack River: Little Tamarack R to Prairie R (Stream)
Stream identification number: 07010103-758
Overall Condition:
Not always suitable for swimming and wading due to high bacteria levels caused by the presence of human or animal waste in the water. Available data indicate a thriving community of fish and other aquatic organisms.
Eating the fish
General consumption advisories for Minnesota (MDH)
Description
Assessments
Monitoring Data
Land Use
Description
Major Watershed
Mississippi River - Grand Rapids
County
Aitkin
Length
7.52 miles
Next Segment
07010103-515 View
Ecoregion
Northern Lakes and Forests
Former ID
07010103-521
Use Classification
2Be
Esri, HERE, Garmin, USGS, METI/NASA
Powered by Esri


Surface Water
Surface Water
webapp.pca.state.mn.us/surface-water/impairment/07010103-735
Twitter
Apple
News
TinyURL!
Share a link on Tw...
Google Calendar
eBags.com Check...
Microsoft 365 Ad...
LIFETIME SCHED...
Lakes and streams water quality dashboard
Print
New Search
Unnamed creek: Unnamed cr to Tamarack R (Stream)
Stream identification number: 07010103-735
Overall Condition:
Available data indicate a thriving community of fish and other aquatic organisms.
Eating the fish
General consumption advisories for Minnesota (MDH)
Description
Assessments
Monitoring Data
Land Use
MPCA Water Quality Assessments
Beneficial use
Assessment year
Assessed condition
Impairment cause
Aquatic Consumption
Use Not Assessed
Aquatic Life
2017
Standards Met for All Assessed Parameters
Aquatic Recreation
Use Not Assessed
More information on water quality standards.
More information on monitoring and assessment


Surface Water
Surface Water
webapp.pca.state.mn.us/surface-water/impairment/07010103-735
Twitter
Apple
News
TinyURL!
Share a link on Tw...
Google Calendar
eBags.com Check...
Microsoft 365 Ad...
LIFETIME SCHED...
All Bookmark
Lakes and streams water quality dashboard
Print
New Search
Unnamed creek: Unnamed cr to Tamarack R (Stream)
Stream identification number: 07010103-735
Overall Condition:
Available data indicate a thriving community of fish and other aquatic organisms.
Eating the fish
General consumption advisories for Minnesota (MDH)
Description
Assessments
Monitoring Data
Land Use
Description
Major Watershed
Mississippi River - Grand Rapids
County
Aitkin
Length
3.5 miles
Next Segment
07010103-758 View
Ecoregion
Northern Lakes and Forests
Use Classification
2Bg
Esri, HERE, Garmin, USGS, METI/NASA
Powered by Esri

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 22

MPCA Strategy to Address Indirect Effects of Elevated Sulfate on Methylmercury Production and Phosphorus Availability (2006)

Final 10/19/06

MPCA Strategy to Address Indirect Effects of Elevated Sulfate on Methylmercury Production and Phosphorus Availability

Summary: Although there is evidence that elevated sulfate loading can increase methylmercury production and phosphorus mobilization, it is premature to develop specific sulfate concentration limits or other regulatory responses based on these effects. The deleterious effects of sulfate may be restricted to certain areas of the state, certain background sulfate concentrations, or other environmental controlling factors. These factors will be explored in a multi-year data collection effort combined with ongoing data analysis. It is anticipated that sensitive areas of the state will be identified and appropriate controls on sulfate discharges will be developed if necessary. The primary focus of the strategy is to pursue research to further understand impacts from sulfate on methylmercury production and phosphorus mobilization and to use the research to guide the future need for additional requirements or controls in environmental review and NPDES permits. This strategy was approved by the MPCA Risk Managers on August 28, 2006 and the MPCA WQ Policy Forum on October 19, 2006.

Problem Statement: Research indicates a correlation between sulfate loading and methylmercury (MeHg) production and phosphorus (P) mobilization under certain conditions. Many waters of the state are impaired as a result of MeHg in fish tissues and excess nutrients. MPCA staff need to better understand the relationship between sulfate concentration and MeHg production/P mobilization so that appropriate responses, if necessary, can be developed. Sulfate is a common constituent in domestic and industrial wastewaters. Additional information is needed so that the MPCA can develop a permitting strategy for existing, expanding and new domestic and industrial process wastewater discharges. The strategy must reflect varying MeHg production and P availability under differing environmental conditions.

MPCA Actions to Monitor & Evaluate Sulfate Impacts

MPCA staff will evaluate the following hypotheses over three to five years.

1) Elevated sulfate discharge into low-sulfate receiving waters significantly increases MeHg concentrations (as percent of total mercury) and P concentrations.
2) Elevated sulfate discharge into high-sulfate receiving waters has no significant effect on MeHg concentrations (as percent of total mercury) and P concentrations.
3) Elevated sulfate discharge into low-sulfate waters has greater effect on P concentrations when the iron to P ratio is low in the sediments of the receiving water.

Environmental Analysis and Outcomes Division will coordinate the following activities to evaluate the above hypotheses and support eventual changes in the environmental review and permitting practices:

1) Continued research at Wetland 6 in the Marcell Experimental Forest north of Grand Rapids;
2) Milestone Monitoring – permanently add sulfate, TOC, total mercury, and MeHg to the MPCA's ambient water quality monitoring sites; (In FY07 Milestones did include THg, MeHg, sulfate, and TOC, through use of the Mercury Trends allotment).

3) Continue to track and participate in the research of national / international work groups;
4) Compile and map existing surface water sulfate concentration data in Minnesota;
5) Compile and map existing effluent sulfate concentration data in Minnesota;
6) Compile and map existing stormwater sulfate concentration data in Minnesota (if few data have been collected, consider obtaining representative data);
7) Fish Consumption Advisory Monitoring - Work with DNR and MDH to collect fish for mercury analysis of fish tissue at a subset of sites where environmental data is being collected on water or sediments;
8) Implement the Environmental Review and NPDES Permitting actions (below) Regional, Municipal and Industrial Divisions will lead as appropriate; and
9) Compile data from the above activities and complete an evaluation of the hypotheses.

Environmental Review and NPDES Permitting

While research shows a relationship between sulfate concentration and MeHg production/P mobilization, there is currently insufficient information to reach firm conclusions on whether specific point source (non-stormwater) discharges containing sulfate may impact water quality or cause/contribute to water quality impairments. The following information will guide the development of programmatic direction and procedures to address sulfate discharges. This approach includes 1) further characterization of the problem, 2) development of interim permitting and environmental review procedures, 3) research of sulfate impacts from point source dischargers, and 4) annual incorporation of new knowledge into the permitting and environmental review procedures. Prior to development of the interim procedures, NPDES permit writers and environmental review staff will need to manage projects on a case-by-case basis. They will use the current knowledge (as outlined below and in Appendix A) and work with the program supervisor and Ed Swain to assess and respond to the environmental risk from sulfate discharges.

Environmental Review

If a new or expanding domestic or industrial process wastewater discharge triggers environmental review for a wastewater-related threshold (not a non-wastewater related threshold) or if wet air controls that contribute sulfate to a wastewater stream are proposed the impact from sulfate must be evaluated in the environmental review document. The environmental review should include available data on projected effluent design flow rate, sulfate concentration, and sulfate load as well as best estimates of receiving water flow rate (7Q10 and other statistics) and concentrations of sulfate, mercury, MeHg, iron, ortho-P, total P, and, as a measure of organic matter in the water, TOC and/or DOC. If receiving water flow was measured concurrently with water sampling, flow data should also be included. The environmental review must also include available data on the organic matter, mercury, iron, and P content of the sediments of receiving waters and lakes or impoundments downstream. It is understood that available data may be limited. To the extent possible, qualitative discussion of downstream conditions and mitigative options should also be included.

NPDES Permitting

If a new, expanding or existing domestic or industrial wastewater discharge for "high risk" situations is encountered, 1) the need for effluent and/or receiving water monitoring for sulfate, mercury, MeHg, iron, ortho-P and/or total P should be considered; and 2) if research or other information supports a likely impact from sulfate in a specific situation an evaluation of the treatment technologies and pollution prevention opportunities should be included with the permit application. Existing discharges will be addressed at the time of reissuance. A guidance for project proposers and NPDES permit writers will be developed by June 2007 to explain the procedures for addressing sulfate discharges. In the interim, permit writers will work with the program supervisor and Ed Swain to assess and respond to the environmental risk from sulfate discharges.

Currently, high-risk situations may include:

- Discharge of elevated sulfate concentrations into high-organic aquatic environments (e.g., wetlands that drain to fisheries, lakes with organic sediment, rivers with slow-moving back waters, ponds where rising water might inundate vegetation).
- Discharge of elevated sulfate into low-sulfate waters (< 40 ppm or so) where sulfate may be a limiting factor in the activity of sulfate-reducing bacteria (SRB).
- Discharge of elevated sulfate into streams with fluctuating water levels and bordering wetlands. Rising water levels would introduce sulfate into the high-organic wetland matrix, followed by falling water levels that hydraulically deliver elevated MeHg and/or phosphate to the stream.
- Discharge of elevated sulfate to waters that flow to a lake or impoundment downstream that may thermally stratify even temporarily in the summer or be cut off from the atmosphere from ice cover in the winter. Either stratification or ice cover can produce anoxic water, in which sulfate can be converted to sulfide, potentially enhancing both mercury methylation and phosphate release.

Conditions that decrease the risk that elevated sulfate loading may enhance mercury methylation:

- Discharge of elevated sulfate to waters with high background sulfate (>100 ppm or so), including downstream waters.
- Discharge of elevated sulfate to highly oxygenated, turbulent waters with low-organic sediment and no adjacent riparian or lacustrine wetlands, and none downstream.

Research Impacts of Sulfate from Domestic and Industrial Process Wastewater Discharges

MPCA staff will pursue funding to study specific impacts from domestic and industrial process wastewater discharges of sulfate on MeHg production and P availability in receiving waters. The study (or series of smaller studies) will include site-specific evaluations at facilities representing the various high risk situations identified in "Environmental Review and NPDES Permitting" above. This work may include effluent and receiving water monitoring for sulfate, mercury, MeHg, iron, ortho-P, total P, and supporting parameters that may reveal biogeochemical mechanisms, such as DOC, pH, oxygen, nitrate, and potassium. The work will include an evaluation of the data to determine whether domestic and industrial process wastewater discharges are impacting receiving waters during any time of the year with a particular focus on the summer months. Some of the study work may need to be contracted out to a research entity

(i.e. UMD, NRRI, U of M St. Anthony, U of Toronto). Funding sources may include Legislative Initiative, CW Legacy Act, GLNPO, salary savings, or other related project savings.

Action Items / Resource Needs

1) Risk Managers need to select an EAO Division representative to coordinate the overall Sulfate Strategy **by August 28, 2006**. Action Complete: Marvin Hora will be overall coordinator.

2) Sulfate Strategy Coordinator (Marvin Hora) will work with the appropriate managers to recommend staff team members to develop guidance documents described in the Environmental Review and NPDES Permitting action items below **by September 25, 2006**. Recommendation: Team should include Ed Swain, Jeff Stollenwerk, Deb Lindlief, Dana Vanderbosch, Bruce Wilson and a GIS specialist (see MPCA Actions 4 & 5 above).

3) Water Policy Team reviews and approves the Sulfate Strategy including staff assignments **by October 31, 2006**. Jeff Stollenwerk will coordinate.

4) EAO staff should develop funding requests, detailed plans and funding applications, RFPs and conduct study oversight necessary to complete research on impacts of sulfate from domestic and industrial process wastewater discharges. **Ed Swain - Ongoing.**

5) The Sulfate ER/NPDES Permitting staff team (from item 2 above) further defines and characterizes high-risk situations/criteria and develops interim procedures for environmental review and NPDES permitting activities. This action should be completed **by February 28, 2007**. Estimated time commitment – 40 to 80 hours for each team member.

6) The Sulfate ER/NPDES Permitting staff team (from item 2 above) develops brief guidance for project proposers and MPCA staff that provides background on the sulfate issue and factors that will need to be evaluated as part of the environmental review and/or permit process. Guidance should also address permitting projects that do not require environmental review. The team should develop procedure documents that will be included in the program manual for the environmental review and the NPDES Permit Writers' Manual. This document will provide background on the sulfate issue and issues that will need to be evaluated as part of the environmental review and/or permit process. These actions should be completed and presented to the WQ Policy Forum for review and approval **by June 29, 2007**. Estimated time commitment – 30 to 40 hours for each team member.

7) If necessary, revise the Illuminated EAW document and NPDES permit application to include background on the sulfate issue and issues that will need to be evaluated as part of the environmental review and NPDES permitting. These actions should be completed **by July 31, 2007.** ER Staff, Permit Staff and EAO staff – 10 hours each.

8) Complete technical review of environmental review submittals and NPDES permit applications. Develop responses to comments on specific projects. **Timeline is project-specific.** Environmental Review, Municipal/Industrial engineers and permit writers lead, and EAO staff support – workload could vary greatly.

9) Review research findings and if necessary incorporate into permitting and environmental review procedures. Sulfate ER/NPDES Permitting staff team (from item 2 above) 10 to 20 hours – **Annually.**

10) Provide technical assistance to permit writers regarding high-risk case-specific monitoring requirements and information protocols for targeted facilities or facility types. – EAO staff **as needed** – 40 to 80 hours per year.

11) Update agency managers on policy development needs, including needs to revise the sulfate standard - Strategy Coordinator **– Annually.**

Attachment A

MPCA Strategy
to Address Indirect Effects of Elevated Sulfate on
Methylmercury Production and Phosphorus Availability

Technical Background

Sulfur naturally cycles in aquatic systems between sulfate and sulfide, depending on multiple factors, including oxygen availability, hydrologic fluctuations, and organic matter degradation. Sulfate is a relatively inert chemical species, but its conversion to sulfide has a number of undesirable indirect effects that this strategy ultimately seeks to minimize. Under certain as-yet undefined environmental conditions, additional sulfate may enhance MeHg production and the availability of P for algal growth. The mechanisms associated with enhanced MeHg production and P availability are different, but are both associated with the tendency during decay of organic matter for natural bacteria to convert sulfate to sulfide after oxygen is depleted. This group of bacteria is called sulfate-reducing bacteria (SRB).

The initial tasks of the strategy involve collecting and interpreting data so that defensible quantitative permitting limits on sulfate discharge can be established. For instance, aquatic systems that are naturally elevated in sulfate due to local geological sources may not be sensitive to moderate increases in sulfate concentration. Other environmental attributes may make some systems more or less sensitive to added sulfate, including existence of wetlands and background dissolved iron concentrations.

Elevated sulfate can enhance MeHg production because SRBs are known to convert inorganic mercury (which is widely available due to atmospheric pollution) to MeHg, the only form that accumulates in fish. When the availability of sulfate controls the activity of SRBs, then additional sulfate may cause additional fish contamination. Recent research (Jeremiason et al. 2006) has documented increased MeHg production through increased sulfate concentrations in a wetland environment. SRBs produce MeHg when certain environmental factors coincide: low oxygen and adequate levels of bioavailable inorganic mercury, sulfate, and decaying organic matter. High organic matter can, of course, cause low oxygen because other bacteria will consume available oxygen in the first phases of organic matter degradation. SRBs are most active in aquatic systems because water decreases atmospheric oxygen availability and maintains a moist environment in which bacteria can thrive. SRB production of MeHg can be constrained by low mercury, low sulfate, low organic matter, or high oxygen. There is also a hypothesis that continued production of sulfide by SRBs can produce negative feedback by reducing mercury availability through the formation of sulfide-mercury chemical bonds. However, it is not clear how to model such negative feedback, and the production of sulfide is not necessarily permanent, as sulfide can oxidize back to sulfate. So, at this point, trying to maintain high sulfide does not seem like a viable strategy. However, data collection will provide empirical information on this hypothesis.

Elevated sulfate can enhance P availability because of an indirect effect of sulfide production. When aquatic systems become anoxic (common in both hypolimnia and wetlands) there is a tendency for enhanced P release from sediment to the water. While anoxic, iron oxides become soluble, which causes the dissolution of phosphate that had co-precipitated with the iron during an oxygenated phase. The phosphate will largely re-precipitate with the iron when the water is

oxygenated, unless the iron to phosphate ratio is too low. During anoxia, sulfide may be produced, which has the unfortunate ability to form a precipitate with the dissolved iron—unfortunate because elevated levels of sulfide can decrease the amount of iron that is available to co-precipitate the P. If the P is not precipitated upon oxygenation (either turnover of a lake or hydraulic movement in a wetland), then the additional P will likely stimulate algal growth above the historical range for that waterbody (Caraco et al. 1993).

Both of these indirect effects of elevated sulfate are difficult to model in a quantitative manner. One impediment is that the conversion to sulfide may be downstream from the site of sulfate discharge because the required combination of low oxygen and elevated organic matter may not occur immediately below the discharge. Sulfate conversion may occur when water flows laterally into adjacent wetlands or when the water reaches an impoundment or lake deep enough to have a hypolimnion. Enhanced loading of P and MeHg would occur when the anoxic water mixes back into surface water. This mixing would occur in a lake when the hypolimnion mixes with the epilimnion, and in rivers with lateral wetlands during a falling hydrograph.

Sulfate comes from a variety of sources. Generally, natural background sources result from marine rock and glacial till containing some marine rock such as limestone or shale. Surface water and ground water in the granitic Canadian Shield area is expected to have relatively low sulfate concentrations while waters in other parts of the state are expected to have relatively higher sulfate concentrations. Anthropogenic sources include air deposition (typically less than 1 mg/l) and domestic and industrial wastewater discharges. Wastewater sulfate concentrations can be elevated above surface water concentrations simply because of use of high-sulfate groundwater. In addition, sulfate may be elevated in wastewater by concentration through evaporation, capture of sulfur compounds by air pollution control equipment, or various industrial processes (e.g. lime addition in taconite production).

It is important to minimize the effect of sulfate on MeHg and P because Minnesota's water quality is threatened by these chemicals state-wide. Federal NPDES permitting regulations prohibit the authorization of wastewater discharges that may cause or contribute to water quality impairments. Numerous water bodies in the state are listed as impaired because the MeHg concentrations in fish tissues make the fish unsuitable for frequent human consumption. Similarly, numerous water bodies are impaired because of excess P concentrations.

Treatment technologies for sulfate removal from wastewaters are limited. Reverse osmosis and evaporation are energy intensive and generally considered infeasible. A new treatment technology, submerged packed bed, has shown potential but there is an unevaluated risk of MeHg production within the treatment system. Land application or rapid infiltration basins may be effective but must be evaluated on a case-by-case basis.

While research indicates a strong correlation between sulfate loading and MeHg production in a sulfate-poor wetland, the factors that control MeHg production and P release in other surface waters are not documented. The research results do not, however, tell us how aquatic systems higher in sulfate react to increased sulfate loading. We have not reached a sufficient level of confidence with our understanding of the controlling factors such that firm effluent limitations based on these phenomena can be established. Therefore, a permitting strategy will need regulatory and study/monitoring components to reflect our varying levels of understanding of MeHg production under differing environmental scenarios. MeHg study and control is further complicated by the lack of a standard EPA analytical method and limited commercial laboratories that are prepared to conduct MeHg analyses. EPA has developed Draft Method 1630 (January 2001) for MeHg analyses. The draft method can be found at:

http://www.epa.gov/nerleerd/108Complete.pdf#search=%22mercury%20method%20methyl%201630%20site%3Aepa.gov%22
and
http://www.brooksrand.com/FileLib/1630.pdf

MPCA staff have used Frontier Geosciences in Seattle, WA for recent analyses. It is anticipated that the MDH lab, and possibly other labs in Minnesota, would gear-up to run Draft Method 1630 if demand for this work increased.

Notes: [since this note does not seem to be referred to anywhere, perhaps it should be moved up into the text.—otherwise, it is not contributing to the appendix]

1) As a general rule, the order of depletion of electron acceptors during bacterial metabolism in aquatic systems is O_2, NO_3, Fe_2O_3, MnO_2, then SO_4. SRBs are known to produce MeHg and it is thought that iron-reducing bacteria may also methylate mercury under certain conditions. In any given environmental setting, it is not easy to determine which bacteria are dominating degradation of organic matter. To achieve an understanding of biogeochemical mechanisms of the effects of elevated sulfate, it may be desirable to measure a number of parameters, including sulfate, total mercury, MeHg, iron, ortho-P, total P, and supporting parameters such as DOC, pH, oxygen, nitrate, and potassium (for an example of the utility of measuring this suite of parameters, see Balogh et al. 2004). For instance, elevated nitrate or oxidized iron could negate the effect of elevated sulfate because the bacterial community likely finds it energetically advantageous to consume either of those two chemicals as electron acceptors before consuming sulfate. Without information on nitrate and iron, the effect of elevated sulfate may appear to be inexplicably unpredictable. Potassium data may be useful in a different way—elevated potassium can be an indicator of a hydraulic source area in decaying organic matter such as a wetland. When potassium is correlated over time with DOC, MeHg, and P, then the weight of evidence tends toward wetlands as the source area for all of the materials.

Literature Cited:

Balogh, S.J., Y. Nollet, and E.B. Swain. 2004. Redox Chemistry in Minnesota Streams during Episodes of Increased Methylmercury Discharge. Environmental Science & Technology. 38:4921-4927.

Caraco, N.F., J. J. Cole, and G. E. Likens. Sulfate control of phosphorus availability in lakes. Hydrobiologia. 253:275-280.

Jeremiason et al. 2006. Sulfate addition increases methylmercury production in an experimental wetland. Environmental Science & Technology. 40:3800-3806.

WaterLegacy Comments January 12, 2024
Minnesota Pollution Control Agency (MPCA) Clean Water Act Section 303(d)
Draft 2024 Impaired Waters List & Related Materials

EXHIBIT 23

Peer-reviewed Sulfate and Mercury Articles:

Myrbo, A., *et al.*, Increase in Nutrients, Mercury, and Methylmercury as a Consequence of Elevated Sulfate Reduction to Sulfide in Experimental Wetland Mesocosms, *J. Geophysical Res.: Biogeosciences*, 2017

Coleman Wasik, J., *et al.*, Methylmercury Declines in a Boreal Peatland When Experimental Sulfate Deposition Decreases, *Env. Sci. & Tech*., 2012

Jeremiason, J. *et al*., Sulfate Addition Increases Methylmercury Production in an Experimental Wetland, *Environ. Sci. Technol*., 2006

AGU PUBLICATIONS

JGR

Journal of Geophysical Research: Biogeosciences

RESEARCH ARTICLE
10.1002/2017JG003788

This article is a companion to Myrbo et al. (2017), https://doi.org/10.10022017JG003787 and Pollman et al. (2017), https://doi.org/10.10022017JG003785.

Key Points:
- Sulfate addition increased organic matter mineralization in wetland sediment, releasing C, N, P, and Hg to the water column
- Sulfate reduction caused not only higher methylmercury concentrations but higher total mercury concentrations in the surface water
- Increased sulfate loading to freshwaters can cause deleterious effects separate from direct sulfide toxicity to organisms

Supporting Information:
- Supporting Information S1
- Figure S1
- Data Set S1

Correspondence to:
A. Myrbo,
amyrbo@umn.edu

Citation:
Myrbo, A., Swain, E. B., Johnson, N. W., Engstrom, D. R., Pastor, J., Dewey, B., … Peters, E. B. (2017). Increase in nutrients, mercury, and methylmercury as a consequence of elevated sulfate reduction to sulfide in experimental wetland mesocosms. *Journal of Geophysical Research: Biogeosciences*, *122*, 2769–2785. https://doi.org/10.1002/2017JG003788

Received 25 JAN 2017
Accepted 6 SEP 2017
Accepted article online 25 SEP 2017
Published online 2 NOV 2017

Increase in Nutrients, Mercury, and Methylmercury as a Consequence of Elevated Sulfate Reduction to Sulfide in Experimental Wetland Mesocosms

A. Myrbo[1], E. B. Swain[2], N. W. Johnson[3], D. R. Engstrom[4], J. Pastor[5], B. Dewey[5], P. Monson[2], J. Brenner[6], M. Dykhuizen Shore[2,7], and E. B. Peters[2,8]

[1]LacCore/CSDCO and Department Earth Sciences, University of Minnesota, Minneapolis, MN, USA, [2]Minnesota Pollution Control Agency, St. Paul, MN, USA, [3]Department Civil Engineering, University of Minnesota, Duluth, MN, USA, [4]St.Croix Watershed Research Station, Science Museum of Minnesota, St. Paul, MN, USA, [5]Biology Department, University of Minnesota, Duluth, MN, USA, [6]Minnesota Department of Health, St. Paul, MN, USA, [7]Now at Biostatistics Division, School of Public Health, University of Minnesota, MN, USA, [8]Now at Minnesota Department of Natural Resources, St. Paul, MN, USA

Abstract Microbial sulfate reduction (MSR) in both freshwater and marine ecosystems is a pathway for the decomposition of sedimentary organic matter (OM) after oxygen has been consumed. In experimental freshwater wetland mesocosms, sulfate additions allowed MSR to mineralize OM that would not otherwise have been decomposed. The mineralization of OM by MSR increased surface water concentrations of ecologically important constituents of OM: dissolved inorganic carbon, dissolved organic carbon, phosphorus, nitrogen, total mercury, and methylmercury. Increases in surface water concentrations, except for methylmercury, were in proportion to cumulative sulfate reduction, which was estimated by sulfate loss from the surface water into the sediments. Stoichiometric analysis shows that the increases were less than would be predicted from ratios with carbon in sediment, indicating that there are processes that limit P, N, and Hg mobilization to, or retention in, surface water. The highest sulfate treatment produced high levels of sulfide that retarded the methylation of mercury but simultaneously mobilized sedimentary inorganic mercury into surface water. As a result, the proportion of mercury in the surface water as methylmercury peaked at intermediate pore water sulfide concentrations. The mesocosms have a relatively high ratio of wall and sediment surfaces to the volume of overlying water, perhaps enhancing the removal of nutrients and mercury to periphyton. The presence of wild rice decreased sediment sulfide concentrations by 30%, which was most likely a result of oxygen release from the wild rice roots. An additional consequence of the enhanced MSR was that sulfate additions produced phytotoxic levels of sulfide in sediment pore water.

Plain Language Summary In the water-saturated soils of wetlands, which are usually anoxic, decomposition of dead plants and other organic matter is greatly retarded by the absence of oxygen. However, the addition of sulfate can allow bacteria that respire sulfate, instead of oxygen, to decompose organic matter that would not otherwise decay. The accelerated decay has multiple consequences that are concerning. The bacteria that respire sulfate "breathe out" hydrogen sulfide (also called sulfide), analogous to the conversion or respiration of oxygen to CO_2. Sulfide is very reactive with metals, which makes it toxic at higher concentrations. In addition to the release of sulfide, the sulfate-accelerated decomposition of plants releases phosphorus and nitrogen, fertilizing the waterbody. Decomposition also mobilizes mercury (which is everywhere, thanks to atmospheric transport) into the surface water. The microbes that convert sulfate to sulfide also methylate mercury, producing methylmercury, the only form of mercury that contaminates fish. This study demonstrates that adding sulfate to a wetland can not only produce toxic levels of sulfide but also increase the surface water concentrations of nitrogen, phosphorus, mercury, and methylmercury.

1. Introduction

Organic matter (OM) accumulates in the sediments of aquatic systems when sediment concentrations of terminal electron acceptors (TEAs) are too low for microbes to completely decompose OM, especially when the supply of the most energy-efficient TEA, oxygen, is low. In water-saturated, organic-rich sediment, microbial sulfate reduction (MSR) can be a dominant pathway for the respiration of OM because oxygen is depleted in the uppermost sediment (Boye et al., 2017). Dissolved sulfate (SO_4) concentrations in continental surface

waters are often low (less than 50 mgL^{-1} or 0.5 mmol L^{-1}) (e.g., Gorham et al., 1983) compared to ocean concentrations (2,800 mg L^{-1} or 29 mmol L^{-1}). Because of lower SO_4 concentrations, and because MSR rates can be limited by SO_4 concentrations (Holmer & Storkholm, 2001), the biogeochemical significance of MSR is often considered minimal in freshwater and low-salinity systems (e.g., Capone & Kiene, 1988; Nielsen et al., 2003; Stagg et al., 2017). However, absolute rates of MSR are not clearly lower in freshwater systems than in marine systems (Pallud & Van Cappellen, 2006), and in some cases, rapid cycling between oxidized and reduced forms of S can occur (Hansel et al., 2015).

In this study, we investigated the cascade of biogeochemical effects associated with increased MSR that result from increased surface water SO_4. We simultaneously quantified three different categories of biogeochemical responses related to MSR: (1) mineralization of organic matter and associated release of dissolved C, N, P, and Hg; (2) methylation of Hg; and (3) production of sulfide.

The stoichiometric release of the constituents of OM during MSR, notably C, N, and P, is a phenomenon long recognized by marine scientists. For instance, Boudreau and Westrich (1984) constructed a model of the MSR-mediated decomposition of marine sediment. They showed that SO_4 is reduced to sulfide (H_2S) in stoichiometric proportion to the mineralization of C, N, and P according to the reaction

$$2(CH_2O)_x(NH_3)_y(H_3PO_4)_z + xSO_4^{2-} \rightarrow 2xHCO_3^- + xH_2S + 2yNH_3 + 2zH_3PO_4 \quad (1)$$

C is released as both dissolved inorganic carbon (DIC, from complete oxidation, produced as bicarbonate alkalinity in stoichiometric proportion to sulfide (reaction (1); Boudreau & Westrich, 1984)) and dissolved organic carbon (DOC, from partial oxidation). The nutrients N and P are released in forms that are readily taken up by plants; N is released as ammonia, and P as phosphate. The mineralization of sediment organic matter associated with MSR releases sulfide (S^{2-}) into sediment pore water, which speciates, depending on the pH, into hydrogen sulfide (H_2S) and bisulfide (HS^-), henceforth collectively termed sulfide. If reduced S compounds accumulate in the sediment, there may be additional consequences to an aquatic system, such as toxic concentrations of sulfide in pore water (Lamers et al., 2013; Pastor et al., 2017; Myrbo et al., 2017) or conversion of sediment Fe(III) to FeS compounds, which enhances the mobilization of P (Curtis, 1989; Maynard et al., 2011).

The multiple biogeochemical consequences of MSR in freshwater systems have been investigated and documented in more than two dozen publications (Table S1 in the supporting information), which typically address a single issue, such as the production of alkalinity that neutralizes atmospherically deposited H_2SO_4 (Baker et al., 1986; Cook et al., 1986; and others) or the methylation of Hg (Gilmour et al., 1992; Branfireun et al., 1999, 2001; and others). Experimental studies addressing SO_4 reduction, sulfide production, associated OM mineralization, and release of nutrients have been broader (Lamers et al., 2001, 2002; Weston et al., 2006, 2011; and others), but aside from the results reported in this paper, only the experiments of Gilmour, Krabbenhoft, et al. (2007) and Gilmour, Orem, et al. (2007) have investigated all three categories of biogeochemical consequences of SO_4 reduction: OM mineralization, Hg methylation, and sulfide accumulation (Table S1). We also investigated the potential for Hg to be released by mineralization, a phenomenon proposed by Regnell and Hammar (2004).

Sulfate-driven enhanced mineralization of sediment OM and release of dissolved sulfide, N, P, DOC, DIC, and associated increases in alkalinity and pH have the potential to change the nature of an aquatic ecosystem. The immediate release is to the sediment pore water, but these dissolved materials can diffuse into the surface water. Increased internal loading of N and P can drive a system toward eutrophy, which can increase carbon fixation and amplify the cascade of biogeochemical effects associated with increased MSR. Increases in DOC also have the potential to fundamentally change the nature of a waterbody. DOC influences many processes in freshwater ecosystems, including light availability for macrophyte growth, thermal stratification, and bioavailability of metals, P, and C. In addition, DOC interferes with drinking water purification (Williamson et al., 1999). Increases in DIC, alkalinity, and pH can also change the nature of a system. Aquatic macrophyte and algal species often have different optimal alkalinity concentrations (e.g., Moyle, 1945; Vestergaard & Sand-Jensen, 2000), so increases in alkalinity may change aquatic community composition. Because pH is a master variable in aquatic systems (Stumm & Morgan, 2012), increases in pH can cause changes in both aquatic chemistry and the biota that dominate a system, as best documented by changes in diatom assemblages (Patrick et al., 1968).

The release of sulfide into sediment pore water has multiple biological and geochemical consequences, several of which are related to the reactivity of sulfide with metals. If dissolved sulfide accumulates in pore water, it can negatively affect multicellular organisms inhabiting the sediment because sulfide can denature a range of metal-containing biomolecules, including cytochrome C oxidase, which is essential for respiration by both animals and plants (Bagarinao, 1992). Because aquatic sediment is a primary site of sulfide production, plants that root in sediment are vulnerable to toxic sulfide concentrations (Lamers et al., 2013; Pastor et al., 2017). However, if the watershed supplies sufficiently high loading of reactive Fe or other metals to the sediment, pore water sulfide concentrations may stay below toxic levels even while MSR proceeds as an important mineralization process (Pollman et al., 2017). The formation of FeS compounds effectively detoxifies sulfide (e.g., Marbà et al., 2007; Van der Welle et al., 2007). When Fe availability exceeds the production of sulfide, the accumulation of FeS is a measure of cumulative SO_4 reduction, which can be quantified as acid-volatile sulfide (AVS) (Heijs & van Gemerden, 2000). In addition, phosphorus is mobilized when oxidized Fe compounds with significant capacity to bind phosphate are converted to FeS compounds, which are incapable of binding phosphate (Lamers et al., 1998; Maynard et al., 2011). Thus, MSR mobilizes P both by mineralization of P-containing OM and by changing the form of Fe in sediment.

In addition to releasing C, N, and P, producing potentially toxic concentrations of sulfide, and reducing the solubility of metals, MSR is a primary process leading to the formation of MeHg, the bioaccumulative form of Hg (Gilmour et al., 1992; Hsu-Kim et al., 2013), although other microbial groups can also methylate Hg (Podar et al., 2015). In some cases, MSR can lead to toxic levels of MeHg higher in the food chain. The relationship between SO_4 concentrations and MeHg production is complex, however, and both field and laboratory studies in freshwater and saline ecosystems suggest that there is a dual effect of S on Hg methylation. At low SO_4 concentrations, the addition of SO_4 can stimulate MSR and Hg methylation (Jeremiason et al., 2006). At higher SO_4 concentrations, a greater abundance of inorganic sulfide appears to decrease the availability of inorganic Hg for Hg methylation (Hsu-Kim et al., 2013; Johnson et al., 2016). Because it has been observed that low SO_4 additions often increase Hg methylation and higher SO_4 concentrations decrease methylation, it has been proposed that there is a range of SO_4 and sulfide concentrations are optimal for Hg methylation, above which methylation is inhibited (Hsu-Kim et al., 2013). There is some debate regarding the underlying mechanism, but there is substantial evidence suggesting that dissolved inorganic sulfide above concentrations of 300–3,000 $\mu g\ L^{-1}$ has an inhibitory effect on Hg methylation (Bailey et al., 2017).

This study presents results from 30 wetland mesocosms in which the surface waters were treated to maintain a wide range of SO_4 concentrations over the course of 5 years (2011–2015) to assess the impact on wild rice, *Zizania palustris* (Pastor et al., 2017). We took advantage of this experiment to analyze the geochemical conditions in surface and pore water in the mesocosms during late summer 2013, 3 years into the experiment. Pastor et al. (2017) specifically examined the effect of increased SO_4 loading on wild rice, whereas this paper examines the broader biogeochemical impact of augmenting SO_4 to a low-SO_4 system.

2. Materials and Methods

2.1. Experimental Design

The experimental setup (Figure S1 in the supporting information), described in detail by Pastor et al. (2017), consisted of thirty 375 L polyethylene stock tanks containing sediment from a wild rice lake (Rice Portage Lake; +46.6987°, −92.6886°) in which wild rice was grown in self-perpetuating populations at five SO_4 treatment levels (control, 50, 100, 150, and 300 $mg\ L^{-1}$). SO_4 concentrations in six replicate mesocosms were routinely monitored, and amendments of SO_4 were added as Na_2SO_4 during the growing season as SO_4 was removed by MSR (Figure 1). Due to MSR, the mesocosm surface waters actually had time-weighted average concentrations of 7, 27, 59, 93, and 207 $mg\ L^{-1}$, respectively. Local well water containing an average of 10.6 $mg\ L^{-1}$ SO_4 was added as needed to compensate for evapotranspiration. Precipitation in the region contains an average of 2.1 $mg\ L^{-1}$ SO_4, and Rice Portage Lake has an average SO_4 concentration of 2.2 $mg\ L^{-1}$ (Fond du Lac Band, 2016), so the control was slightly elevated above the ambient SO_4 concentration of the sediment source for the experiment. During the ice-free period (generally May through October), the surface water temperature (T) measured in the morning was correlated with the previous day's mean air temperature (mesocosm T = 0.72 air T + 4.4 °C; R^2 = 0.65). Peak air temperature is reached in July, when the average

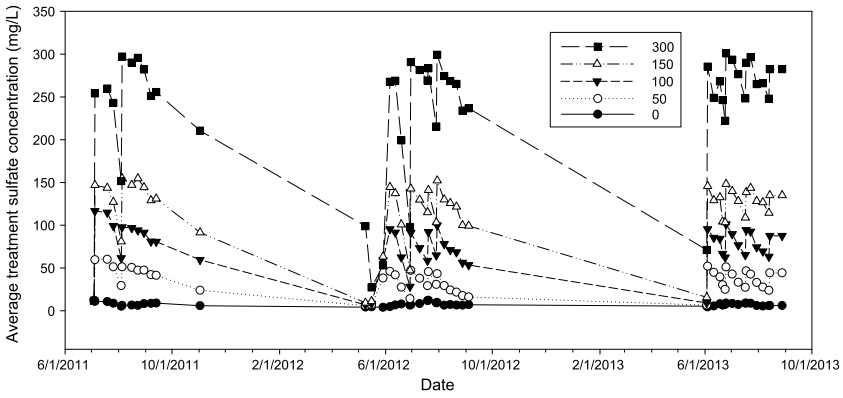


Figure 1. SO_4 concentrations in surface waters of each treatment, showing repetitive depletion and periodic amendment with Na_2SO_4 (average of six mesocosms per treatment on each sampling date).

temperature is 18.8°C (based on 1981–2010 air temperatures measured at the Duluth, Minnesota, airport, 10 km from the experimental site).

The experiments had been in progress for three growing seasons at the time of the sampling for this study, 27 and 28 August 2013, and for five growing seasons at the time of the second, less intensive, sampling (August 2015). The sediment of each mesocosm was divided into two parts for the 2013 growing season by a clear acrylic plate and all wild rice plants removed from one side in order to evaluate the effects of plant root presence on the geochemistry of the sediments. The plate was situated near one end of each mesocosm, such that about 10% of the surface area of 0.6 m^2 was plant-free (Figure S1). The plate was positioned to segregate the sediment without impeding the circulation of the surface water above all of the sediment. Sediment chemistry results presented here are from the side with wild rice plants present, except when analyzing the difference in AVS between the two sides.

2.2. Methods

2.2.1. Sample Collection

Rhizon™ samplers with a 10 cm long, 2.5 mm diameter, cylindrical porous tip (hydrophilic membrane pore size 0.12–0.18 μm (Rhizosphere.com, Netherlands; Shotbolt, 2010)), were connected by Teflon-taped Luer-Lok connectors and silicone tubing to a syringe needle. The sampler was inserted into the sediment, and the needle was then inserted through the 20 mm thick butyl rubber septum of an evacuated serum bottle (Bellco Glass) to initiate pore water draw through the tubing and displace air. After water was observed entering the serum bottle, the needle was removed from the first sacrificial bottle and inserted through the septum of a second evacuated serum bottle to collect the sample. One Rhizon and bottle were used to collect a sample for dissolved iron, preserved with 20% nitric acid. A second Rhizon and evacuated, N_2 gas-flushed sealed bottle, preloaded with 0.2 mL 2 N zinc acetate, 0.5 mL 15 M NaOH, and a stir bar, was used to collect a sample for dissolved sulfide analysis. Each Rhizon was positioned to sample pore water from the top 10 cm of sediment and to avoid collecting water from above the sediment surface. However, it is conceivable that some surface water was able to follow the path of the Rhizon into the sediment and dilute or partially oxidize the pore water sample.

Surface water in each mesocosm was collected for analysis of nitrate + nitrite, TP, TN, DOC, pH, temperature, and alkalinity from 5 cm below the surface of the water. Surface water samples for analysis of total Hg (THg) and MeHg were collected using clean hands/dirty hands protocols in September 2013, filtered through 0.45 μm glass fiber filters, and immediately acidified with 0.5% (by volume) trace metal hydrochloric acid. Samples were stored on ice during transport and at 4°C until analysis.

Pore water P availability was measured with three mixed bed ion exchange bags (Fisher Rexyn 300 resin) placed in the sediment of each tank in spring and harvested at the end of the growing season in 2013. A 3.8 cm diameter piston corer was used to obtain 10 cm long sediment samples for various analyses. Sediment samples for the analysis of AVS were taken monthly from June to October 2013 from replicate mesocosms of four SO_4 treatments (control, 50 150, and 300 mg L^{-1}; no mesocosm was sampled more

than once). Sediment samples were also taken on 8 October 2013 for the analysis of THg in bulk sediment and on 6 October 2015 for the analysis of total organic carbon (TOC).

2.2.2. Laboratory Analyses

Surface water and pore water analyses were conducted by the Minnesota Department of Health Environmental Laboratory (MDHEL). Total P was measured by in-line ultraviolet/persulfate digestion and flow injection (APHA, 2005, 4500 P-I), DOC by persulfate-ultraviolet oxidation and IR CO_2 detection (APHA, 2005, 5310-C), and alkalinity by automated titration (APHA, 2005, 2320-B). Pore water sulfide samples were prepared for inline distillation and flow injection colorimetric analysis using procedures that avoided exposure to oxygen. The sulfide serum bottle was weighed to determine the amount of sample collected and to adjust for the slight dilution factor of an alkaline antioxidant that was added by injection through the stoppers. The sealed samples were then placed on a stir plate for at least 1 h and subsamples withdrawn for analysis through a needle. Reanalysis of sealed, processed samples 12 months later shows no significant difference in sulfide concentrations, indicating that the sulfide samples were stable prior to analysis (data not shown). SO_4 concentration was measured using a Lachat QuikChem 8000 Autoanalyzer (Lachat Method 10-116-10-1-A). The resin was eluted using a KCl solution and analyzed for PO_4 using a Lachat Autoanalyzer, following the methods of Walker et al. (2006).

An aliquot of the nitrate + nitrite/TP/TN/DOC serum bottle was filtered in the lab within 10 days of sampling using a 0.45 μm filter, preserved to a pH $<$ 2 with 10% sulfuric acid, and transferred to a 250 mL polyethylene bottle for DOC analysis. The remaining sample was preserved to a pH $<$ 2, with 10% sulfuric acid and transferred to 250 mL polyethylene bottle for nitrate + nitrite/TP/TN analysis. The contents of the metal serum bottle were transferred to a 250 mL polyethylene bottle and preserved to a pH $<$ 2 with 10% nitric acid. Analyses were conducted within 30 days of sampling.

THg in surface water and bulk sediment were analyzed with EPA method 1631 by MDHEL, and surface water MeHg was analyzed with EPA method 1630 by Frontier Global Sciences (Bothell, Washington). Inorganic Hg (iHg) was calculated as the difference between THg and MeHg. Sediment AVS was analyzed colorimetrically, as above for pore water sulfide, following acid distillation and in-line alkaline trapping (APHA, 2005; SM 4500-S2). Sediment TOC was analyzed following SM5310C (APHA, 2005), using an OI Analytical Aurora 1030 at Pace Analytical Services, Virginia, Minnesota.

3. Data Analysis

3.1. Sulfate Depletion as the Independent Variable

Because SO_4 is relatively unreactive under oxidized conditions, its loss is attributable to diffusion or transpiration-driven advection (Bachand et al., 2014) into sediment and conversion to sulfide by bacteria. Surface water SO_4 concentrations decreased partly due to dilution by precipitation but largely from loss after movement into the sediment and reduction to sulfide. Sulfide would largely be retained in the sediment as FeS compounds, although some could be lost to the atmosphere as H_2S gas (Bagarinao, 1992) or as volatile organic sulfur compounds (Lomans et al., 2002). The cumulative SO_4 lost from surface water was calculated from a mass balance for each mesocosm from the inception of the experiment in spring 2011 through fall 2013; this quantity, termed here SO_4 depletion, $(SO_4)_{Depl}$, is used as a proxy for net MSR, following Weston et al. (2006). The surface water remained frozen from approximately 1 December to 1 April each winter, and the mesocosms were covered with plastic from November to late April each year and not amended with SO_4. SO_4 reduction was the major biogeochemical process altered by the experimental treatments, and therefore, $(SO_4)_{Depl}$ is the independent variable used in subsequent data analyses. It was only possible to perform a complete mass balance for SO_4, the only parameter consistently quantified in source water, precipitation, and overflow water.

3.2. Calculation of DIC From Measured Alkalinity

Dissolved inorganic carbon (DIC ≡ $[CO_3^{2-}]$ + $[HCO_3^-]$ + $[CO_2^*]$, where $[CO_2^*] = [CO_{2(g)}] + [H_2CO_3]$) was calculated from measured alkalinity and speciated using pH, temperature, and specific conductance of the surface water. At the pH range of the mesocosms (7.60–8.84), 95–98% of DIC is in the form of HCO_3^-, so DIC concentration on a molar basis is nearly the same as alkalinity (ALK) on an equivalent basis (DIC = 0.988 ALK + 0.077, R^2 = 0.995). In studies of freshwater, most inorganic carbon data are presented in terms of alkalinity because

alkalinity is a familiar metric; however, in comparisons with DOC, inorganic carbon data are presented as DIC so that the units are directly comparable. PHREEQC version 3 geochemical modeling software (Parkhurst & Appelo, 2013) was used to calculate saturation indices for carbonate minerals.

3.3. Statistical Analysis

Statistical analysis was conducted with R version 3.2.3 and STATA (StataCorp, 2015). The effect of increased sulfate availability was assessed through both categorical analysis of the sulfate treatments (Kruskal-Wallis ANOVA test, followed by Dunn's test for multiple comparisons with Holm-Sidak corrections) and through linear regression and nonparametric Spearman rank correlations. We rely primarily on regressions against SO_4 depletion to detect the effects of enhanced sulfate-reduction driven mineralization, rather than categorical analysis of the sulfate treatment results, because (a) biogeochemical changes are not driven directly by SO_4 concentration, but rather by MSR, quantified as SO_4 depletion; (b) although SO_4 depletion may be highly correlated to SO_4 concentration, deviations between experimental mesocosms develop over time, so cumulative SO_4 depletion values eventually no longer align exactly with treatment categories, but rather become continuous variables; and (c) regression provides more statistical power than ANOVA and builds models that allowed us to describe the relationships between SO_4 depletion and response variables (Cottingham et al., 2005). However, when the relationship is not linear, ANOVA and comparison of treatments through Dunn's analysis can help describe the nature of a relationship.

4. Results and Discussion

4.1. The Impact of SO_4 Reduction on Mineralization of Sediment Organic Matter

Increased concentrations of surface water SO_4 resulted in increased sulfate reduction, which necessarily increased the mineralization of organic carbon, as described by reaction (1). Concentrations of surface water DOC and DIC increased in proportion to sulfate reduction, as measured by $(SO_4)_{Depl}$ (Table 1 and Figure 2). The marine literature generally assumes complete mineralization of particulate organic carbon (POC) to DIC in the water column (e.g., Boudreau & Westrich, 1984) (reaction 1), but in freshwater systems and especially wetlands, not all carbon is completely oxidized during decomposition, and a portion of POC may be mobilized as DOC (Howes et al., 1985; Selvendiran et al., 2008). In principle, the constituents of organic matter, such as the nutrients N and P, are mobilized in proportion to the mass of carbon mineralized as a result of MSR-driven decomposition. Surface water DOC and DIC, and the sum DOC + DIC, are therefore used as indicators of OM mineralization in interpreting the mobilization of N, P, and Hg to surface waters (Figure 2 and Tables 2 and 3).

In contrast to many marine systems, it is likely that SO_4 reduction in these sediments was limited more by SO_4 than by organic carbon, given that $(SO_4)_{Depl}$ was linearly proportional to the average SO_4 concentration (Figure S2a; R^2 = 0.87), without any obvious curvature to the relationship that would indicate saturation of MSR.

Regressions of surface water DOC and DIC against SO_4 depletion demonstrate that, on a net basis, about 60% more DIC than DOC was mobilized to the surface water as a result of MSR-driven mineralization (slope of 0.235 mM C per unit SO_4 depletion compared to 0.148; Table 2). The significantly positive slope of the DIC:DOC ratio against SO_4 depletion (Table 2) indicates that increasingly more DIC than DOC was observed in the surface water as sulfate depletion increased. Some mineralization of DOC to DIC likely occurs in the surface water as a result of exposure to oxygen, aerobic bacteria, and sunlight, processes that could have a larger effect as DOC increases.

Not only did surface water DIC and DOC increase in concert with sulfate reduction, but parallel increases occurred in surface water concentrations of constituents of organic matter: N, P, and Hg (Table 1 and Figure 2). DIC, DOC, total P, total N, ammonia, and total Hg in surface water all had increases from the control to the highest SO_4 addition of about twofold, (2.3, 1.7, 1.9, 1.8, 1.7, and 2.6-fold, respectively, Table 1). However, available phosphate in the sediment, an estimate of P availability in pore water, had a larger increase (7.5-fold). MSR consumes acidity as the DIC-based alkalinity is produced (Baker et al., 1986), which increased the average pH from 7.57 to 7.81, a 44% decrease in hydrogen ion concentration (Table 1). If the sulfide subsequently oxidizes (which could happen in a natural system during drought (Laudon et al., 2004) or intentional dewatering), a proportional quantity of alkalinity is consumed as acid is produced

Table 1
Summary of Effects of Experimentally Increased SO_4 Concentrations on SO_4 Reduction (Quantified as SO_4 Depletion), Organic Matter Mineralization, and Mercury Methylation

		Average of each sulfate treatment (n = 6 for each treatment)						Correlation with SO_4 depletion (Spearman)	
Variable	Matrix	Control	50	100	150	300	Max/Min	Rho	p value
Variables mainly associated with SO_4 reduction									
SO_4 (T-W mean mg SO_4 L^{-1})	sw	6.7^{a}	26.9^{ab}	58.5^{abc}	93.2^{BC}	206.5^{c}	31.0	0.93	<0.0001
SO_4 depletion (mg S cm^{-2})	sw	0.14^{a}	2.52^{ab}	3.63^{abc}	4.28^{BC}	6.90^{c}	48.5	1	
Pore water sulfide (μg S L^{-1})	pw	69^{a}	184^{a}	224^{a}	393^{b}	728^{b}	10.5	0.81	<0.0001
Pore water iron (μg L^{-1})	pw	$12{,}883^{a}$	$11{,}122^{ab}$	$6{,}808^{abc}$	$4{,}483^{BC}$	$3{,}032^{c}$	4.25	−0.82	<0.0001
AVS (mg S kg^{-1})	sed	102^{a}	483^{ab}	NA	826^{ab}	$1{,}413^{b}$	13.8	0.77	<0.0001
pH	pw	7.57^{a}	7.52^{a}	7.55^{a}	7.75^{a}	7.81^{a}	1.03	0.39	=0.03
H^+ ion (μmol L^{-1})	pw	0.027	0.030	0.028	0.018	0.015	1.72	0.39	=0.03
Variables mainly associated with mineralization of organic matter									
TOC (% dry mass)	sed	9.26^{a}	7.90^{a}	8.18^{a}	7.17^{a}	8.22^{a}	1.29	−0.34	=0.065
DIC (mg C L^{-1})	sw	28.9^{a}	47.2^{ab}	56.3^{BC}	56.7^{BC}	66.3^{c}	2.30	0.94	<0.0001
DOC (mg C L^{-1})	sw	16.3^{a}	21.4^{a}	26.8^{BC}	24.0^{abc}	28.3^{bc}	1.74	0.79	<0.0001
Total N (mg N L^{-1})	sw	1.42^{a}	1.75^{a}	2.35^{BC}	2.03^{abc}	2.57^{BC}	1.81	0.77	<0.0001
Ammonia (mg N L^{-1})	sw	0.09^{a}	0.09^{a}	0.10^{a}	0.10^{a}	0.16^{a}	1.70	0.38	=0.04
Total P (μg P L^{-1})	sw	13^{a}	16^{ab}	22^{ab}	21^{ab}	25^{b}	1.92	0.73	<0.0001
Available P (μg P g^{-1} resin)	Resin in sed	0.34^{a}	0.40^{a}	0.59^{ab}	0.92^{ab}	2.56^{b}	7.45	0.86	<0.0001
Total Hg (ng L^{-1})	sw	1.83^{a}	2.09^{a}	3.61^{ab}	3.25^{ab}	4.80^{b}	2.63	0.82	<0.0001
Variables mainly associated with Hg methylation									
Methylmercury (ng Hg L^{-1})	sw	0.20^{a}	0.49^{ab}	1.21^{b}	1.08^{b}	1.18^{b}	5.91	0.66	<0.0001
Inorganic Hg (ng L^{-1})	sw	1.63^{a}	1.60^{ab}	2.40^{abc}	2.17^{BC}	3.62^{c}	2.22	0.80	<0.0001
Percent methylmercury	sw	$11\%^{a}$	$23\%^{ab}$	$30\%^{b}$	$32\%^{b}$	$23\%^{ab}$	2.90	0.45	=0.02

Note. Matrix abbreviations: sw = surface water, pw = pore water, sed = bulk sediment. Averages with superscript letters in common are not significantly different at the 0.05 level.

(Hall et al., 2006). However, the sulfide reoxidation does not reverse the mobilization of the constituents of organic matter (C, N, P, and Hg) or the production of methylmercury (MeHg; see below). Rather, any production of SO_4 from sulfide oxidation creates the potential for additional MSR-driven OM mineralization and Hg methylation (Coleman Wasik et al., 2015; Hansel et al., 2015).

The slope of linear regressions of the C, N, and P in surface water against $(SO_4)_{Depl}$ is an estimate of the increase of that variable in mesocosm surface waters per unit SO_4 reduction (Table 2). The regression slopes provide a basis for estimates of stoichiometric ratios of the constituents mobilized from the sediment solid phase, similar to the calculation that Weston et al. (2006) performed for pore water. The calculation of stoichiometric ratios from the slopes of regressions with $(SO_4)_{Depl}$ is more accurate than calculating ratios from surface water concentrations alone, as the use of slopes accounts for the concentrations of the control (the intercept of the linear regression).

The regression slopes of surface water C versus surface water N, P, and Hg in mesocosms are estimates of the net release of each element relative to that of C (Table 3). These estimates can then be compared to the ratio of these constituents in the primary source material—the sediment—to determine the efficiency of mobilization of sediment N, P, and Hg to surface water, compared to C (Table 3). Although we present efficiency relative to only DOC and only DIC, calculating efficiency relative to the sum of mineralized OM (DOC + DIC) represents the overall net efficiency of mineralization, which ranges from 8% to 38% for the three constituents (Table 3). Although the increases in surface water N, P, and Hg are consistent with the hypothesis that those elements were released to the surface water through sulfate-enhanced mineralization of sediment OM, their lower mobilization efficiencies relative to carbon suggest that other processes were operating to either increase carbon, decrease N, P, and Hg mobilization relative to carbon, and/or increase N, P, and Hg losses. It is likely that some carbon was introduced to the surface waters from sources other than the sediment (e.g., photosynthetic fixation of atmospheric carbon) and that there were losses for N, P, and Hg from the surface water (though adsorption, settling, biological uptake, or atmospheric evasion of N and Hg).

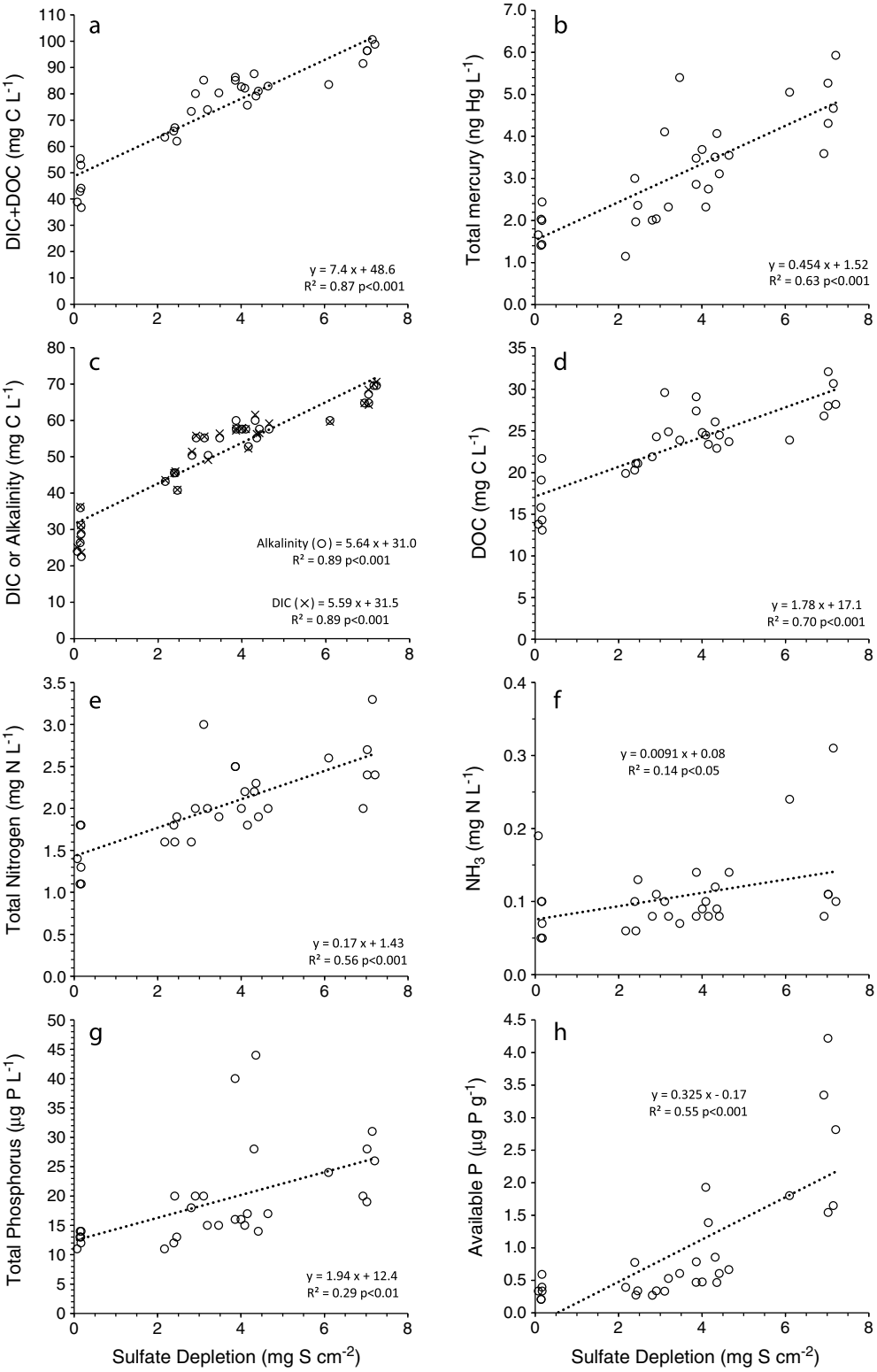


Figure 2. The release of constituents of sedimentary organic matter as a function of SO_4 depletion, showing linear regressions (dotted lines). (a) Sum of surface water DIC and DOC; (b) surface water total mercury; (c) surface water alkalinity and DIC (symbols ○ and ×, respectively; the two regressions are superimposed); (d) surface water DOC; (e) surface water total nitrogen; (f) surface water ammonia; (g) surface water total phosphorus; (h) available phosphate in the sediment, as quantified on ion-exchange resin.

Table 2
Slopes of Regressions of Surface Water Parameters (mM) Against SO_4 Depletion (mg S cm^{-2})

Surface water variable (molar basis)	Regression against $(SO_4)_{Depl}$ (mg S cm^{-2})		
	Slope	R^2	p
DIC	0.235	0.89	<0.0001
DOC	0.148	0.70	<0.0001
DIC + DOC	0.383	0.84	<0.0001
DIC: DOC	0.044	0.56	<0.0001
TN	0.0121	0.56	<0.0001
TN: DIC	−0.0028	0.25	<0.01
TN: DOC	0.0004	0.01	NS
TN: DIC + DOC	−0.0006	0.08	NS
TP	6.26E−05	0.29	<0.002
TP: DIC	−7.00E−06	0.03	NS
TP: DOC	7.00E−06	0.02	NS
TP: DIC + DOC	−1.00E−07	0.00	NS
THg	2.26E−09	0.63	<0.0001
THg: DIC	9.00E−06	0.46	<0.0001
THg: DOC	6.00E−06	0.23	<0.01
THg: DIC + DOC	2.00E−05	0.42	<0.0001

Note. When a sediment constituent's ratio to DIC or DOC has a significant slope against sulfate depletion, it indicates that the constituent was mobilized to the surface water at a significantly different rate than the DIC or DOC.

In addition to increases of TP in the surface water, the sediment pore water in the highest SO_4 treatment contained 7.5-fold greater available phosphate than the controls, as quantified with ion-exchange resin (Table 1 and Figure 2h). In comparison, the increase in surface water TP was only 1.9-fold (Table 1 and Figure 2g). The difference between phosphorus response in the resin and the surface water may be partly due to (a) loss of TP from the surface water after mobilization or (b) irreversible trapping of mobilized P on the resin. If phosphorus is released from sediment en masse in response to an S-induced shift from iron oxides to iron sulfides, the sediment pore water would experience this release first, while release to surface waters would take longer due to diffusion-limited transport and potentially an iron-oxide barrier at the sediment-water (anoxic-oxic) interface.

DIC in surface water is not conservative, being subject to exchange across the air-water interface, carbonate mineral precipitation, and photosynthetic uptake. Surface water pCO_2 in all mesocosms was above saturation with respect to atmospheric equilibrium by a factor of 1.4–15.5 (based on the DIC speciation calculations discussed earlier; data not shown), so the mesocosms were losing, not gaining, C through gas exchange with the atmosphere. The pCO_2 values in the mesocosms are similar to those reported from epilimnia of small, organic-rich, temperate lakes of low to moderate salinity (Cole et al., 1994; Myrbo & Shapley, 2006). With respect to mineral precipitation, based on geochemical equilibrium calculations, surface waters were undersaturated with respect to all carbonate minerals. Thus, although DIC in surface water is subject to several transport and transformation processes, the sustained presence of CO_2 at quantities significantly above saturation with respect to the atmosphere and the observation of increasing DIC and DOC with increasing $(SO_4)_{Depl}$ (Table 1) provide strong evidence of sulfate-induced increases in net carbon mineralization in the mesocosms.

In addition to the carbon originally present in the sediment, organic carbon was also photosynthetically fixed by wild rice and algae in the mesocosms and subsequently subjected to respiration and some decomposition, adding to the DIC and DOC in surface waters. DOC may also have been released into sediment pore water as an exudate from the wild rice roots (Rothenberg et al., 2014; Windham-Myers et al., 2009). Exudate DOC, however, does not account for the observed increase in DOC, since a negative relationship between the number of wild rice plants and DOC was observed (Spearman's rho = −0.63, $p < 0.001$, Table S2).

4.2. Effects of SO_4 Reduction on Mercury and Methylmercury in Surface Water

We interpret Hg mobilization to the surface water in an analogous manner to C, N, and P, as Hg tends to associate strongly with organic matter in sediment (Feyte et al., 2010). In the mesocosm surface waters,

Table 3
Elemental Ratios in Sediment and Surface Water Across the Range of SO_4 Depletion

Molar ratio in sediment[a]		Molar ratio in surface water[b]			Efficiency of mobilization of sediment N, P, or Hg to surface water, relative to carbon		
		DIC	DOC	DOC + DIC	DIC	DOC	DOC + DIC
C: N	12[a]	19	12	32	63%	100%	38%
C: P	463[a]	3,752	2,366	6,118	12%	20%	8%
C: Hg	1.90E + 07	1.04E + 08	6.5E + 07	1.69E + 08	18%	29%	11%

Note. Together, the ratios are used to calculate the efficiency of mobilization of the constituents of particulate organic matter into the surface water.
[a]Sediment data from Hildebrandt, Pastor, and Dewey (2012), a mesocosm study that obtained sediment from the same natural wild rice stand. [b]Regression slopes of C versus N, P, and Hg in mesocosm surface waters; calculations are made based on surface water DIC alone, surface water DOC alone, and the sum of surface water DOC + DIC.

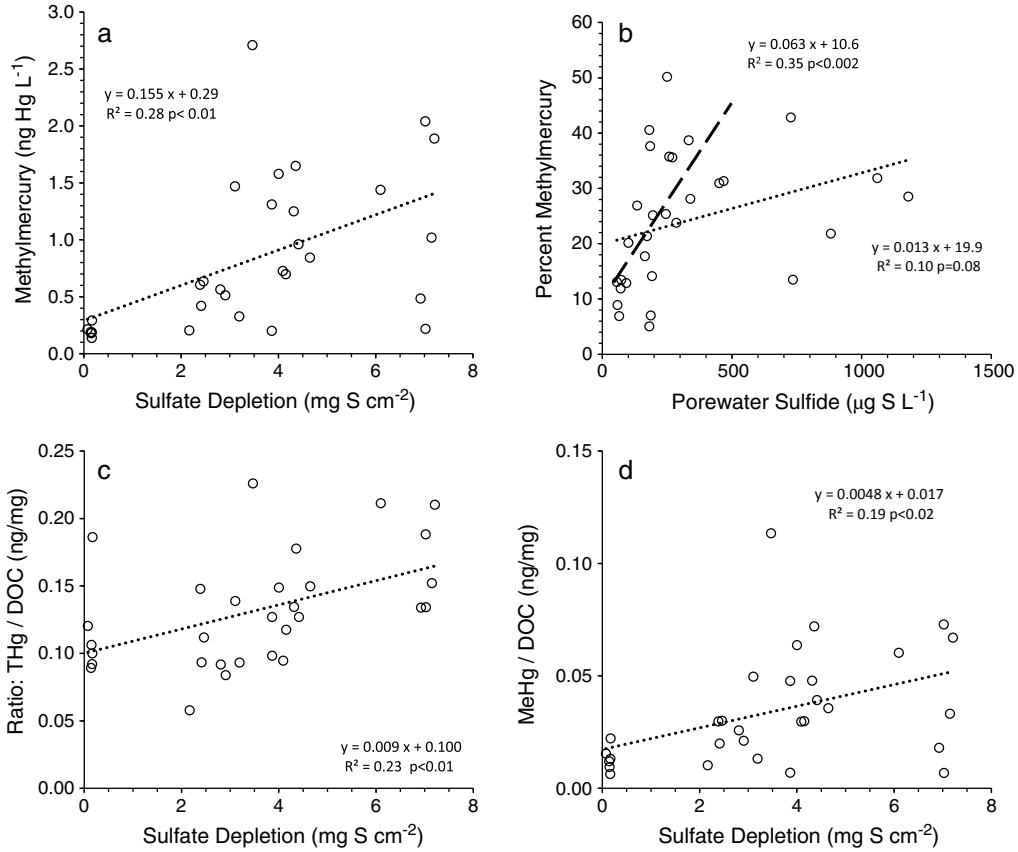


Figure 3. The response of surface water Hg variables to SO_4 depletion and the production of pore water sulfide, showing linear regressions. (a) MeHg as a function of SO_4 depletion; (b) percent MeHg as a function of pore water sulfide, showing regressions for all data (dotted line) and for the subset of data extending only to a pore water sulfide concentration of 468 µg S L^{-1} (dashed line); (c) ratio of THg to DOC as a function of SO_4 depletion; (d) ratio of MeHg to DOC as a function of SO_4 depletion.

THg, inorganic Hg (iHg), and MeHg all increased significantly with increased $(SO_4)_{Depl}$ (Table 1 and Figures 2b and 3a, $p < 0.0001$) and were greater in the highest sulfate amendment by factors of 2.6, 2.2, and 5.9, respectively (Table 1). The relative increase in THg (2.6-fold) is greater than that for DIC, DOC, TN, and TP, which range from 1.7 to 2.3-fold (Table 1). DOC enhances the solubility of both iHg and MeHg and can facilitate the movement of Hg from sediment into surface water (Ravichandran, 2004). The 5.9-fold increase in MeHg indicates that MeHg flux to surface waters was enhanced by sulfate loading disproportionately more than sedimentary release of THg (2.6-fold) and the increase in surface water DOC (1.7-fold).

The genes required to methylate Hg have been found in a wide variety of anaerobic bacteria, including SO_4-reducing bacteria, iron-reducing bacteria, and methanogens (Podar et al., 2015). Though some pure culture and experimental evidence exist for mercury methylation by other bacteria, extensive pure culture, experimental, and landscape-scale observations suggest SO_4-reducing bacteria dominate Hg methylation in many freshwater and marine environments. The relatively large increase in surface water MeHg in response to increased $(SO_4)_{Depl}$ in this experiment supports the assumption that MSR was responsible for most of the observed production of MeHg. It is likely that increased SO_4 loading to low-SO_4 aquatic systems with organic sediment will result in increased Hg methylation even though the relative importance of Hg methylation in the environment by different groups of bacteria is still a subject of debate (Paranjape & Hall, 2017).

If movement of DOC from sediment to surface water were the sole mechanism for the Hg increase in surface water, a constant Hg:DOC ratio would be expected on the $(SO_4)_{Depl}$ gradient. However, THg:DOC, iHg:DOC, and MeHg:DOC ratios in surface water are all significantly correlated with SO_4 depletion (Table S2 and Figures 3c and 3d). Therefore, all forms of Hg (THg, iHg, and MeHg) increase in surface waters more than

does DOC, indicating that a sulfate-induced enhancement of carbon mineralization may act in combination with either enhanced methylation or an enhanced capacity of DOC to carry Hg. Changes to the binding strength of the DOC in heavily S-impacted mesocosm sediment are possible, as thiol groups on DOC are dominant binding sites for Hg (Skyllberg, 2008). The dual role of organic carbon and sulfur in driving both the production of MeHg and the transport of MeHg could be responsible for the substantially larger maximum increase in MeHg:DOC ratio relative to the increase in the THg:DOC ratio (an average 206% increase relative to a 63% increase, Figures 3c and 3d), as postulated by Bailey et al. (2017).

Regnell and Hammar (2004) identified three MSR-driven processes that might cause mobilization of Hg from sediment in a wetland, (1) mineralization of organic matter; (2) extraction of iHg by reduced S compounds, which could be associated with mobilized DOC; and (3) enhanced production of MeHg, which is more mobile than iHg. They argued that enhanced production of MeHg explained THg mobilization in the minerotrophic peat bog that they studied. However, in this study, increases in surface water MeHg concentrations (Figure 3a) are not sufficient to explain the linear increase in THg observed in this experiment (Figure 2b) because most (67%) of the increase is iHg (Table 1). Some of the increase in surface water iHg could be the result of increased production of MeHg that moved to surface water and was subsequently demethylated. Regardless of the underlying mechanism, our observations clearly show increases in surface water Hg that were greater than the increases in C, N, and P (Table 3); this corroborates other studies (Bouchet et al., 2013; Merritt & Amirbahman, 2007; Regnell & Hammar, 2004) that suggest sediment Hg may be synergistically mobilized to surface waters through mineralization, methylation, and enhanced mobility with DOC.

Recent research has shown that in many ecosystems, higher concentrations of pore water sulfide may inhibit MeHg production through either thermodynamically or kinetically controlled reactions with inorganic Hg (Benoit et al., 2003; Hsu-Kim et al., 2013). We plotted %MeHg, rather than the MeHg concentration, against pore water sulfide because we are interested in identifying the pore water sulfide zone of greatest efficiency for the methylation and mobilization of mercury. In this experiment the MSR-driven mineralization of OM released THg to surface water in addition to producing pore water sulfide. Accordingly, because THg is not constant, plotting %MeHg is the most accurate way to identify peak methylation efficiency. In principle, the restricted bioavailability of Hg to methylating bacteria results in a maximum in MeHg production at intermediate concentrations of pore water sulfide. Consistent with previous research in sulfate-impacted freshwater ecosystems (Gilmour et al., 1998; Gilmour, Krabbenhoft, et al., 2007, Gilmour, Orem, et al., 2007; Bailey et al., 2017), MeHg production was most efficient at intermediate sulfide concentrations. In the control, where average sulfide was 69 $\mu g\ S\ L^{-1}$, MeHg averaged only 11% of THg in surface waters. In the intermediate SO_4 treatments, which had average sulfide concentrations of 224 and 393 $\mu g\ S\ L^{-1}$, MeHg production efficiency peaked significantly higher, at averages of 30% and 32%, respectively (Table 1). %MeHg declined to an average of 23% in the highest SO4 treatment, which had an average sulfide concentration of 728 $\mu g\ S\ L^{-1}$. Given the relatively great scatter in the relationship between %MeHg and sulfide (Figure 3b), it would be most defensible to conclude that the decrease in %MeHg began to occur somewhere between 300 and 700 $\mu g\ S\ L^{-1}$. There is a strong positive relationship ($p < 0.001$) between sulfide and %MeHg if the five sulfide concentrations greater than 727 $\mu g\ S\ L^{-1}$ are excluded from the regression (which leaves only sulfide concentrations less than 468 $\mu g\ S\ L^{-1}$, since there is a gap in sulfide concentrations; Figure 3b). Other studies have identified sulfide zones of peak methylation roughly comparable to that found here. In South Florida, Orem et al. (2011) found that sulfide ranging from 5 to 150 $\mu g\ S\ L^{-1}$ did not inhibit methylation but that sulfide concentrations greater than 1,000 $\mu g\ S\ L^{-1}$ did. In a subboreal Minnesota wetland enriched in SO_4 from mining discharge, Bailey et al. (2017) found that sulfide concentrations above ~650 $\mu g\ S\ L^{-1}$ inhibited methylation.

The relationship between surface water SO_4 and Hg methylation can be strongly affected by site-specific conditions. Because of the variable conversion of SO_4 in surface water to sulfide in pore water—primarily due to differences in OM and Fe availability (Pollman et al., 2017)—researchers have found a broad range in the SO_4 concentration associated with maximum efficiency of Hg methylation. For example, Orem et al. (2014) observed that two different areas in the Everglades Protection Area had peak surface water MeHg concentrations at SO_4 concentrations of 2 and 10–15 $mg\ L^{-1}$. In the mesocosms presented here peak surface water %MeHg was observed in the two sulfate treatments that averaged 59 and 93 $mg\ L^{-1}$ (Table 1).

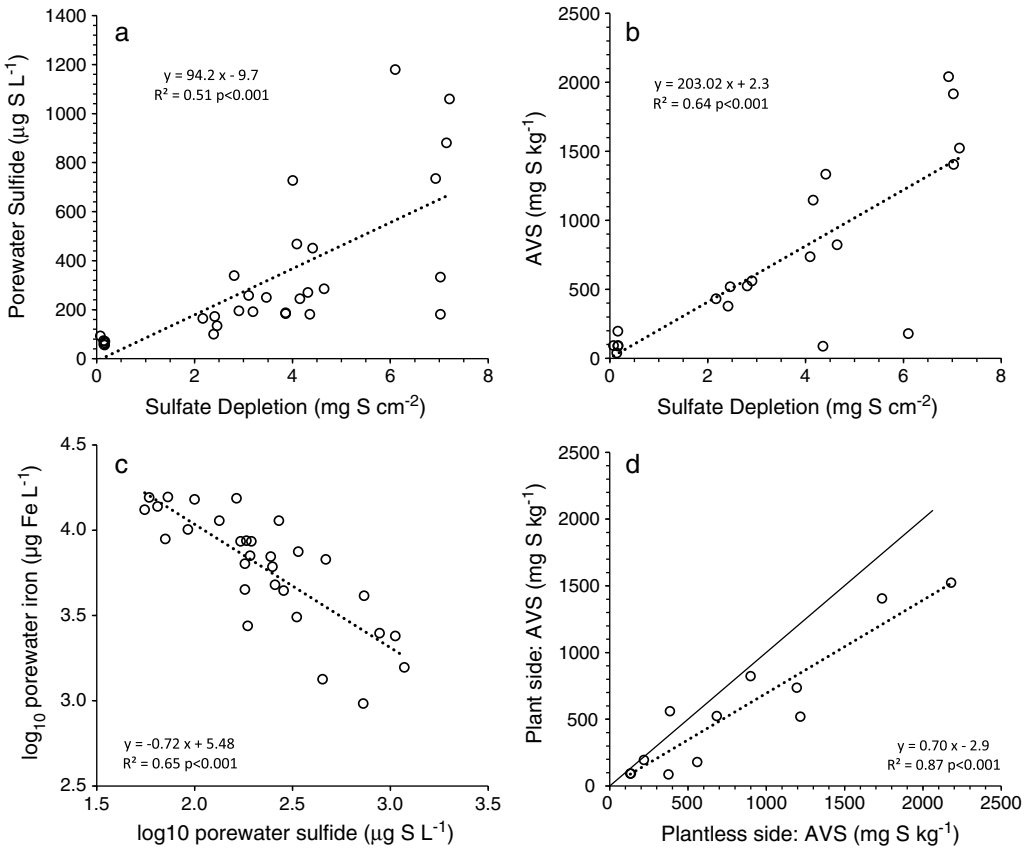


Figure 4. AVS and pore water sulfide, as related to SO_4 depletion, pore water iron, and presence of rooted plants. (a) Pore water sulfide as a function of SO_4 depletion; (b) AVS from the vegetated side of the mesocosms as a function of SO_4 depletion; (c) pore water iron as a function of pore water sulfide; (d) AVS compared between the vegetated side and nonvegetated side. The solid 1:1 line shows that in almost all mesocosms more AVS is found in the side without plants.

4.3. Effects of SO_4 Reduction on Pore Water and Sediment Sulfide

Pore water sulfide increased at higher $(SO_4)_{Depl}$, although with greater variance at higher $(SO_4)_{Depl}$ (Figure 4a), possibly as a result of variable oxidation of sulfide that may depend on the proximity of the Rhizon sampler to plant roots (Schmidt et al., 2011) or of variable bioturbation by invertebrates (Lawrence et al., 1982). When SO_4 is reduced through MSR, the sulfide produced has a number of nonexclusive potential fates: the sulfide could (1) be oxidized within the sediment; (2) remain in the sediment pore water as free sulfide; (3) diffuse into oxygenated surface water, to be oxidized; (4) react with metals in the sediment, forming insoluble precipitates (dominated by iron-sulfide compounds); or (5) be lost to the atmosphere as H_2S gas or as volatile organic sulfur compounds. Because precipitation reactions are fast relative to redox reactions and diffusion, most of the sulfide probably forms metal precipitates if metals are available. When precipitation dominates the fate of sulfide produced from MSR, the continuous reduction of SO_4 and precipitation of iron sulfides form quasi-steady states between surface water SO_4 and pore water sulfide (Figure S2b) and between pore water sulfide and pore water iron (Figures 3 and 4c). The overall mass of sulfide in the mesocosm sediment, quantified through analysis of AVS (from sediment in the vegetated area), is closely correlated with SO_4 depletion (Figure 4b) even though AVS may not include all the reduced sulfide in sediments. It is likely that most of the AVS in these sediments is present as an FeS precipitate because other metals are at low concentrations in these sediments, which came from a relatively pristine (unpolluted) lake (Fond du Lac Band, 2016; Pastor et al., 2017). Note that there are two mesocosms with especially low AVS concentrations (Figure 4b). It is possible that the AVS in the specific location in these mesocosms where sediment core samples were collected was influenced by

a spatially heterogeneous oxidization process (e.g., root oxygen or benthic invertebrates) that limited the accumulation of sulfide.

AVS was 30% lower in the vegetated side of the mesocosms, suggesting that wild rice released oxygen into the sediment, inhibiting the production of sulfide and/or decreasing sulfide concentrations through oxidation (Figure 4d; Wilcoxon paired test, $p = 0.007$). It is notable that this 30% difference developed in just one growing season, despite the previous 2 years of sulfate treatment. Pore water sulfide showed no statistically significant difference between the two sides owing to high variability within treatments. Numerous investigations have found that rooted aquatic plants release oxygen from their roots, a phenomenon that is usually interpreted as an adaptation to limit the toxicity of reduced chemical species in the pore water, especially sulfide (Lamers et al., 2013). Although oxygen release has been observed in white rice, *Oryza sativa* (Colmer, 2002), it has never been documented in wild rice, which is in the same tribe (Oryzeae) of grasses as white rice, and also develops aerenchyma (Jorgenson et al., 2013), plant structures that provide a low-resistance internal pathway for movement of oxygen to the roots. Since the growth and reproduction of rooted plants can be inhibited by sulfide (Pastor et al., 2017), there may be a tipping point of exposure to sulfide above which oxygen release is insufficient to mitigate phytotoxic effects, and the plant population declines over time, possibly to extirpation. In this experiment, in the third treatment year, the increase in pore water sulfide was the apparent cause of a decrease in the average number of wild rice stems from 17 in the control mesocosms to 3 in the highest-sulfate treatment mesocosms (Pastor et al., 2017).

4.4. Mesocosms as Models for Ecosystem-Scale Effects of SO_4 Reduction

Although mesocosms, as contained ecosystems, are useful because they mimic ecological and biogeochemical processes that occur in the field, extrapolating findings to nature is challenging when plastic walls have prevented exchange of water and materials (Petersen et al., 2009). These wall-based challenges are manifest in three phenomena in this experiment, (1) relatively long surface water residence times due to the lack of a constant throughflow; (2) the presence of the wall itself, which provides a surface for periphyton; and (3) lack of either overland or groundwater loading of external materials:

1. Relatively long surface water residence times: the increased loading of N, P, C, Hg, and MeHg to the surface water of the mesocosms was readily detected because the lack of hydraulic loading from a watershed minimized dilution and loss through the outflow. The impact of an increase in SO_4 loading on surface water concentrations of N, P, C, Hg, DIC, and DOC would be lower in waters with shorter residence times. For instance, Baker and Brezonik (1988), in modeling increases in alkalinity from atmospheric SO_4 loading, noted that net increases in alkalinity would be most important in waters with long residence times ($>$5 years) and that there would be little increase in alkalinity in waters with much shorter residence times ($<$1 year). However, the measured concentrations may not represent the maximum impact of MSR-driven mineralization because the mesocosm wall may enhance removal from the surface water (point number 2, below).
2. Presence of the mesocosm wall: the mesocosms have a relatively high ratio of wall and sediment surfaces to the volume of overlying water, enhancing the removal of surface water nutrients and Hg to periphyton or inorganic sinks such as iron oxyhydroxides. Natural aquatic systems have less proportional loss to surfaces. The quantitative estimates of internal loading of N, P, and Hg in response to MSR-induced carbon mineralization may have been underestimated by the measured surface water concentrations, given that significant loss of these constituents to periphyton may have occurred. In addition, THg was filtered prior to analysis, which would have removed any Hg associated with phytoplankton or other suspended particles.
3. Lack of either overland or groundwater loading of particulate and dissolved material, specifically iron: the availability of iron in sediment is a primary controller of the fate of MSR-produced sulfide (Pollman et al., 2017). In natural aquatic systems, iron would be supplied at a relatively constant rate from the system's watershed over the long term, although varying in magnitude from watershed to watershed (Maranger et al., 2006; Winter, 2001). This experiment was not an accurate long-term mimic of pore water sulfide concentrations because the external supply of iron was cut off at the inception of the experiment. With no loading of iron, but continued loading of SO_4, the continued production of sulfide would be expected to eventually consume all available Fe, allowing pore water sulfide levels to exceed those expected in a natural system at equivalent surface water SO_4 concentrations. This mesocosm experiment provides

evidence for just such a result. The experiment continued for 2 years after the 2013 sampling presented here. In the fifth year (August 2015) pore water sulfide was much greater than had been observed in 2013, and disproportionately so in the highest SO_4 treatment, which was most likely to consume available Fe. Between the 2013 and 2015, pore water sulfide increased in the control SO_4 treatment (about 7 mg SO_4 L^{-1}) from an average value of 69 μg L^{-1} in 2013 to 116 μg L^{-1} in 2015, a 68% increase. Pore water sulfide in the highest treatment (nominally 300 mg SO_4 L^{-1}, Table 1) increased from an average value of 728 μg L^{-1}in 2013 to 9,350 μg L^{-1} in 2015, a 1,184% increase (Pastor et al., 2017). In a survey of 108 Minnesota waterbodies with a wide range of surface water sulfate, only two exceeded a pore water sulfide level of 3,200 μg L^{-1} (Myrbo et al., 2017).

5. Conclusions

This study demonstrates that increased SO_4 loading to inland waters with organic-rich sediments can significantly increase the decomposition of sedimentary organic matter, which increases internal loading to surface water of the chemical constituents of organic matter, including DIC, DOC, P, N, and Hg. Associated changes include increased production of sulfide and methylmercury and increased alkalinity and pH. Any one of these changes could alone cause significant secondary changes in the structure of an aquatic ecosystem but, taken together, could cause a cascade of primary and secondary environmental changes: increased availability of nutrients (N and P), which can alter dominant plant species, organic carbon production, oxygen consumption, and redox; increased pore water sulfide, which can be toxic to benthic animals and plants; increased MeHg production, which can affect fish and other consumers in the aquatic food web; increased DOC, which can alter light transmission, thermal stratification, and aquatic chemistry; and increased DIC production, which increases alkalinity and pH, affecting aquatic chemistry and biota. Each of these changes resulting from higher surface water SO_4 and consequent increases in MSR has been documented in the literature, but the entire suite of associated changes in aquatic chemistry has not heretofore been demonstrated in an integrated fashion. The degree to which an increase in SO_4 loading affects the ecological structure of the receiving water will depend on the relative increases in N, P, DIC, DOC, Hg, MeHg, pH, and sulfide, which will be a function of background geochemistry and hydrology of the specific system. In this experiment, the changes in these parameters were linearly proportional to SO_4 reduction, which, in turn, was linearly proportional to the time-weighted average SO_4 concentration. The linear responses of the parameters to SO_4 additions suggest that ecologically significant changes may occur even when SO_4 concentrations are elevated only modestly and that dramatic changes may occur with higher sulfate loading.

Acknowledgments
This work was supported by the Clean Water Fund, created by the Clean Water, Land and Legacy Amendment to Minnesota's constitution; by the Fond du Lac and Grand Portage Bands of Lake Superior Chippewa with band funds and water quality funds provided by the Environmental Protection Agency; by Minnesota Sea Grant; by NSF 0715808 to Pastor and others; and by NSF 0949962 to Myrbo and others. A partial data set is available in the EarthChem database: https://doi.org/10.1594/IEDA/100701. The full data set is available in the Data Repository for U of M (DRUM): https://doi.org/10.13020/D6595Z.

References

Åkerblom, S., Bishop, K., Björn, E., Lambertsson, L., Eriksson, T., & Nilsson, M. B. (2013). Significant interaction effects from sulfate deposition and climate on sulfur concentrations constitute major controls on methylmercury production in peatlands. *Geochimica et Cosmochimica Acta*, *102*, 1–11.

APHA (2005). *Standard Methods for Examination of Water and Wastewater* (21st ed.). Washington, DC: American Public Health Association.

Bachand, P. A. M., Bachand, S., Fleck, J., Anderson, F., & Windham-Myers, L. (2014). Differentiating transpiration from evaporation in seasonal agricultural wetlands and the link to advective fluxes in the root zone. *Science of the Total Environment*, *484*, 232–248.

Bagarinao, T. (1992). Sulfide as an environmental factor and toxicant: Tolerance and adaptations in aquatic organisms. *Aquatic Toxicology*, *24*, 21–62.

Bailey, L. T., Mitchell, C. P. J., Engstrom, D. R., Berndt, M. E., Coleman Wasik, J. K., & Johnson, N. W. (2017). Influence of porewater sulfide on methylmercury production and partitioning in sulfate-impacted lake sediments. *Science of the Total Environment*, *580*, 1,197–1,204.

Baker, L. A., & Brezonik, P. L. (1988). Dynamic model of in-lake alkalinity generation. *Water Resources Research*, *24*, 65–74. https://doi.org/10.1029/WR024i001p00065

Baker, L. A., Brezonik, P. L., & Pollman, C. D. (1986). Model of internal alkalinity generation: Sulfate retention component. *Water, Air, and Soil Pollution*, *31*, 89–94.

Baker, L. A., Pollman, C. D., & Eilers, J. M. (1988). Alkalinity regulation in softwater Florida lakes. *Water Resources Research*, *24*, 1069–1082. https://doi.org/10.1029/WR024i007p01069

Baldwin, D. S., & Mitchell, A. (2012). Impact of sulfate pollution on anaerobic biogeochemical cycles in a wetland sediment. *Water Research*, *46*, 965–974. https://doi.org/10.1016/j.watres.2011.11.065

Benoit, J. M., Gilmour, C. C., Heyes, A., Mason, R. P., & Miller, C. L. (2003). Geochemical and biological controls over methylmercury production and degradation in aquatic ecosystems, Chapter 19. In *Biogeochemistry of Environmentally Important Trace Elements, ACS Symposium Series* (Vol. 835, pp. 262–297). Washington, DC: American Chemical Society.

Bergman, I., Bishop, K., Tu, Q., Frech, W., Åkerblom, S., & Nilsson, M. (2012). The influence of sulphate deposition on the seasonal variation of peat pore water methyl Hg in a boreal mire. *PLoS One*, *7*(9), e45547. https://doi.org/10.1371/journal.pone.0045547

Bouchet, S., Amouroux, D., Rodriguez-Gonzalez, P., Tessier, E., Monperrus, M., Thouzeau, G., … Anschutz, P. (2013). MMHg production and export from intertidal sediments to the water column of a tidal lagoon (Arcachon Bay, France). *Biogeochemistry*, *114*, 341–358.

Boudreau, B. P., & Westrich, J. T. (1984). The dependence of bacterial sulfate reduction on sulfate concentration in marine sediments. *Geochimica et Cosmochimica Acta*, *48*, 2503–2516.

Boye, K., Noël, V., Tfaily, M. M., Bone, S. E., Williams, K. H., Bargar, J. R., & Fendorf, S. (2017). Thermodynamically controlled preservation of organic carbon in floodplains. *Nature Geoscience*, *10*, 415–419. https://doi.org/10.1038/ngeo29

Branfireun, B. A., Bishop, K., Roulet, N. T., Granberg, G., & Nilsson, M. (2001). Mercury cycling in boreal ecosystems: The long-term effect of acid rain constituents on peatland pore water methylmercury concentrations. *Geophysical Research Letters*, *28*, 1227–1230. https://doi.org/10.1029/2000GL011867

Branfireun, B. A., Roulet, N. T., Kelly, C. A., & Rudd, J. W. M. (1999). In situ sulphate stimulation of mercury methylation in a boreal peatland: Toward a link between acid rain and methylmercury contamination in remote environments. *Global Biogeochemical Cycles*, *13*, 743–750. https://doi.org/10.1029/1999GB900033

Capone, D. G., & Kiene, R. P. (1988). Comparison of microbial dynamics in marine and freshwater sediments: Contrasts in anaerobic carbon catabolism. *Limnology and Oceanography*, *33*, 725–749.

Caraco, N. F., Cole, J. J., & Likens, G. E. (1993). Sulfate control of phosphorus availability in lakes. *Hydrobiologia*, *253*, 275–280.

Cole, J. J., Caraco, N. F., Kling, G. W., & Kratz, T. K. (1994). Carbon dioxide supersaturation in the surface waters of lakes. *Science*, *265*, 1,568–1,570.

Coleman Wasik, J. K., Engstrom, D. R., Mitchell, C. P. J., Swain, E. B., Monson, B. A., Balogh, S. J., … Almendinger, J. E. (2015). The effects of hydrologic fluctuation and sulfate regeneration on mercury cycling in an experimental peatland. *Journal of Geophysical Research: Biogeosciences*, *120*, 1697–1715. https://doi.org/10.1002/2015JG002993

Colmer, T. D. (2002). Aerenchyma and an inducible barrier to radial oxygen loss facilitate root aeration in upland, paddy and deep-water rice (*Oryza sativa* L.). *Annals of Botany*, *91*, 301–309.

Cook, R. B., Kelly, C. A., Schindler, D. W., & Turner, M. A. (1986). Mechanisms of hydrogen ion neutralization in an experimentally acidified lake. *Limnology and Oceanography*, *31*, 134–148.

Cottingham, K. L., Lennon, J. T., & Brown, B. L. (2005). Knowing when to draw the line: Designing more informative ecological experiments. *Frontiers in Ecology and the Environment*, *3*(3), 145–152.

Curtis, P. J. (1989). Effects of hydrogen ion and sulphate on the phosphorus cycle of a Precambrian Shield lake. *Nature*, *337*, 156–158.

Feyte, S., Tessier, A., Gobeil, C., & Cossa, D. (2010). In situ adsorption of mercury, methylmercury and other elements by iron oxyhydroxides and organic matter in lake sediments. *Applied Geochemistry*, *25*, 984–995.

Fond du Lac Band (2016). Fond du Lac Lakes and Streams Data Table. Retrieved from: http://www.fdlrez.com/RM/waterquality.htm, accessed 2 Dec 2016.

Geurts, J. J. M., Sarneel, J. M., Willers, B. J. C., Roelofs, J. G. M., Verhoeven, J. T. A., & Lamers, L. P. M. (2009). Interacting effects of sulphate pollution, sulphide toxicity and eutrophication on vegetation development in fens: A mesocosm experiment. *Environmental Pollution*, *157*, 2072–2081.

Giblin, A. E., Likens, G. E., White, D., & Howarth, R. W. (1990). Sulfur storage and alkalinity generation in New England lake sediments. *Limnology and Oceanography*, *35*, 852–869.

Gilmour, C., Krabbenhoft, D., Orem, W., Aiken, G., & Roden, E. (2007). Appendix 3B-2: Status report on ACME studies on the control of mercury methylation and bioaccumulation in the Everglades, 2007 South Florida Environmental Report. South Florida Water Management District, West Palm Beach, FL.

Gilmour, C., Orem, W., Krabbenhoft, D., & Mendelssohn, I. (2007). Appendix 3B-3: Preliminary assessment of sulfur sources, trends and effects in the Everglades. 2007 South Florida Environmental Report. South Florida Water Management District, West Palm Beach, FL.

Gilmour, C. C., Henry, E. A., & Mitchell, R. (1992). Sulfate stimulation of mercury methylation in freshwater sediments. *Environmental Science & Technology*, *26*, 2,281–2,287.

Gilmour, C. C., Riedel, G. S., Ederington, M. C., Bell, J. T., Benoit, J. M., Gill, G. A., & Stordal, M. C. (1998). Methylmercury concentrations and production rates across a trophic gradient in the northern Everglades. *Biogeochemistry*, *40*(2–3), 327–345.

Gorham, E., Dean, W. E., & Sanger, J. E. (1983). The chemical composition of lakes in the north-central United States. *Limnology and Oceanography*, *28*, 287–301.

Hall, K. C., Baldwin, D. S., Rees, G. N., & Richardson, A. J. (2006). Distribution of inland wetlands with sulfidic sediments in the Murray-Darling Basin, Australia. *Science of the Total Environment*, *370*, 235–244.

Hansel, C. M., Lentini, C. J., Tang, Y., Johnson, D. T., Wankel, S. D., & Jardine, P. M. (2015). Dominance of sulfur-fueled iron oxide reduction in low-sulfate freshwater sediments. *The ISME Journal*, *9*, 2400–2412. https://doi.org/10.1038/ismej.2015.50

Harmon, S. M., King, J. K., Gladden, J. B., Chandler, G. T., & Newman, L. A. (2004). Methylmercury formation in a wetland mesocosm amended with sulfate. *Environmental Science & Technology*, *38*, 650–656.

Heijs, S. K., & van Gemerden, H. (2000). Microbiological and environmental variables involved in the sulfide buffering capacity along a eutrophication gradient in a coastal lagoon (Bassin d'Arcachon, France). *Hydrobiologia*, *437*(1–3), 121–131.

Hildebrandt, L., Pastor, J., & Dewey, B. (2012). Effects of external and internal nutrient supplies on decomposition of wild rice, *Zizania palustris*. *Aquatic Botany*, *97*, 35–43.

Holmer, M., & Storkholm, P. (2001). Sulphate reduction and sulphur cycling in lake sediments: A review. *Freshwater Biology*, *46*, 431–451.

Howes, B. L., Dacey, J. W. H., & Teal, J. M. (1985). Annual carbon mineralization and belowground production of Spartina alterniflora in a New England salt marsh. *Ecology*, *66*(2), 595–605.

Hsu-Kim, H., Kucharzyk, K. H., Zhang, T., & Deshusses, M. A. (2013). Mechanisms regulating mercury bioavailability for methylating microorganisms in the aquatic environment: A critical review. *Environmental Science & Technology*, *47*(6), 2,441–2,456.

Jeremiason, J. D., Engstrom, D. R., Swain, E. B., Nater, E. A., Johnson, B. M., Almendinger, J. E., … Kolka, R. K. (2006). Sulfate addition increases methylmercury production in an experimental wetland. *Environmental Science & Technology*, *40*, 3,800–3,806.

Johnson, N. W., Mitchell, C. P., Engstrom, D. R., Bailey, L. T., Coleman Wasik, J. K., & Berndt, M. E. (2016). Methylmercury production in a chronically sulfate-impacted sub-boreal wetland. *Environmental Science: Processes & Impacts*, *18*(6), 725–734.

Jorgenson, K. D., Lee, P. F., & Kanavillil, N. (2013). Ecological relationships of wild rice, *Zizania* spp. 11. Electron microscopy study of iron plaques on the roots of northern wild rice (*Zizania palustris*). *Botany*, *91*, 189–201.

Lamers, L. P. M., Falla, S.-J., Samborska, E. M., Van Dulken, I. A. R., Van Hengstum, G., & Roelofs, J. G. M. (2002). Factors controlling the extent of eutrophication and toxicity in sulfate-polluted freshwater wetlands. *Limnology and Oceanography*, *47*, 585–593.

Lamers, L. P. M., Govers, L. L., Janssen, I. C. J. M., Geurts, J. J. M., Van Der Welle, M. E. W., Van Katwijk, M. M., … Smolders, A. J. P. (2013). Sulfide as a soil phytotoxin. *Frontiers in Plant Science*, *4*, 1–14.

Lamers, L. P. M., Ten Dolle, G. E., Van Den Berg, S. T. G., Van Delft, S. P. J., & Roelofs, J. G. M. (2001). Differential responses of freshwater wetland soils to sulphate pollution. *Biogeochemistry*, *55*, 87–102.

Lamers, L. P. M., Tomassen, H. B. M., & Roelofs, J. G. M. (1998). Sulfate-induced eutrophication and phytotoxicity in freshwater wetlands. *Environmental Science & Technology*, *32*, 199–205.
Laudon, H., Dillon, P. J., Eimers, M. C., Semkin, R. G., & Jeffries, D. S. (2004). Climate-induced episodic acidification of streams in central Ontario. *Environmental Science & Technology*, *38*, 6009–6015.
Lawrence, G. B., Mitchell, M. J., & Landers, D. H. (1982). Effects of the burrowing mayfly, Hexagenia, on nitrogen and sulfur fractions in lake sediment microcosms. *Hydrobiologia*, *87*, 273–283.
Lomans, B. P., van der Drift, C., Pol, A., & Op den Camp, H. J. M. (2002). Microbial cycling of volatile organic sulfur compounds. *Cellular and Molecular Life Sciences*, *59*, 575–588.
Maranger, R., Canham, C. D., Pace, M. L., & Papaik, M. J. (2006). A spatially explicit model of iron loading to lakes. *Limnology and Oceanography*, *51*, 247–256.
Marbà, N., Calleja, M. L., Duarte, C. M., Álvarez, E., Díaz-Almela, E., & Holmer, M. (2007). Iron additions reduce sulfide intrusion and reverse seagrass (Posidonia oceanica) decline in carbonate sediments. *Ecosystems*, *10*, 745–756.
Maynard, J. J., O'Geen, A. T., & Dahlgren, R. A. (2011). Sulfide induced mobilization of wetland phosphorus depends strongly on redox and iron geochemistry. *Soil Science Society of America Journal*, *75*, 1986–1999.
Merritt, K. A., & Amirbahman, A. (2007). Mercury dynamics in sulfide-rich sediments: Geochemical influence on contaminant mobilization with the Penobscot River estuary, Maine, USA. *Geochimica et Cosmochimica Acta*, *71*, 929–941.
Mitchell, C. P. J., Branfireun, B. A., & Kolka, R. K. (2008). Assessing sulfate and carbon controls on net methylmercury production in peatlands: An in situ mesocosm approach. *Applied Geochemistry*, *23*, 503–518.
Moyle, J. B. (1945). Some chemical factors influencing the distribution of aquatic plants in Minnesota. *The American Midland Naturalist*, *34*, 402–420.
Myrbo, A., & Shapley, M. D. (2006). Seasonal water-column dynamics of dissolved inorganic carbon stable isotopic compositions ($\delta^{13}C_{DIC}$) in small hardwater lakes in Minnesota and Montana. *Geochimica et Cosmochimica Acta*, *70*, 2699–2714.
Myrbo, A., Swain, E. B., Engstrom, D. R., Coleman Wasik, J., Brenner, J., Dykhuizen Shore, M., … Blaha, G. (2017). Sulfide generated by sulfate reduction is a primary controller of the occurrence of wild rice (Zizania palustris) in shallow aquatic ecosystems. *Journal of Geophysical Research: Biogeosciences*, *122*. https://doi.org/10.1002/2017JG003787
Nielsen, D. L., Brock, M. A., Rees, G. N., & Baldwin, D. S. (2003). Effects of increasing salinity on freshwater ecosystems in Australia. *Australian Journal of Botany*, *51*, 655–665.
Orem, W., Fitz, H. C., Krabbenhoft, D., Tate, M., Gilmour, C., & Shafer, M. (2014). Modeling sulfate transport and distribution and methylmercury production associated with Aquifer Storage and Recovery implementation in the Everglades Protection Area. *Sustainability Water Quality and Ecology*, *3-4*, 33–46.
Orem, W., Gilmour, C., Axelrad, D., Krabbenhoft, D., Scheidt, D., Kalla, P., … Aiken, G. (2011). Sulfur in the South Florida ecosystem: Distribution, sources, biogeochemistry, impacts, and management for restoration. *Critical Reviews in Environmental Science and Technology*, *41*(S1), 249–288. https://doi.org/10.1080/10643389.2010.531201
Pallud, C., & Van Cappellen, P. (2006). Kinetics of microbial sulfate reduction in estuarine sediments. *Geochimica et Cosmochimica Acta*, *70*, 1,148–1,162.
Paranjape, A. R., & Hall, B. D. (2017). Recent advances in the study of mercury methylation in aquatic systems. *FACETS*, *2*, 85–119. https://doi.org/10.1139/facets-2016-0027
Parkhurst, D. L., & Appelo, C. A. J.(2013). Description of input and examples for PHREEQC version 3—A computer program for speciation, batch-reaction, one-dimensional transport, and inverse geochemical calculations. U.S. Geological Survey Techniques and Methods, book 6, chap. A43, 497 p. Retrieved from: http://pubs.usgs.gov/tm/06/a43/, Accessed 20 Nov 2016.
Pastor, J., Dewey, B., Johnson, N. W., Swain, E. B., Monson, P., Peters, E. B., & Myrbo, A. (2017). Effects of sulfate and sulfide on the life cycle of *Zizania palustris* in hydroponic and mesocosm experiments. *Ecological Applications*, *27*, 321–336.
Patrick, R., Roberts, N. A., & Davis, B. (1968). The effect of changes in pH on the structure of diatom communities. *Notulae Naturae (Philadelphia)*, *416*, 1–16.
Petersen, J. E., Kennedy, V. S., Dennison, W. C., & Kemp, W. M. (Eds.) (2009). *Enclosed Experimental Ecosystems and Scale: Tools for Understanding and Managing Coastal Ecosystems* (pp. 221). New York: Springer.
Podar, M., Gilmour, C. C., Brandt, C. C., Soren, A., Brown, S. D., Crable, B. R., … Elias, D. A. (2015). Global prevalence and distribution of genes and microorganisms involved in mercury methylation. *Science Advances*, *1*, e1500675.
Pollman, C. D., Swain, E. B., Bael, D., Myrbo, A., Monson, P., & Dykhuizen Shore, M. (2017). The evolution of sulfide in shallow aquatic ecosystem sediments—An analysis of the roles of sulfate, organic carbon, iron and feedback constraints using structural equation modeling. *Journal of Geophysical Research: Biogeosciences*, *122*, https://doi.org/10.1002/2017JG003785
Ravichandran, M. (2004). Interactions between mercury and dissolved organic matter—A review. *Chemosphere*, *55*, 319–331.
Regnell, O., & Hammar, T. (2004). Coupling of methyl and total mercury in a minerotrophic peat bog in southeastern Sweden. *Canadian Journal of Fisheries and Aquatic Sciences*, *61*, 2014–2023.
Rothenberg, S. E., Windham-Myers, L., & Creswell, J. E. (2014). Rice methylmercury exposure and mitigation: A comprehensive review. *Environmental Research*, *133*, 407–423.
Schindler, D. W. (1986). The significance of in-lake production of alkalinity. *Water, Air, and Soil Pollution*, *30*, 931–944.
Schindler, D. W., Turner, M. A., Stainton, M. P., & Linsey, G. A. (1986). Natural sources of acid neutralizing capacity in low alkalinity lakes of the Precambrian Shield. *Science*, *232*, 844–847.
Schmidt, H., Eickhorst, T., & Tippkötter, R. (2011). Monitoring of root growth and redox conditions in paddy soil rhizotrons by redox electrodes and image analysis. *Plant and Soil*, *341*, 221–232.
Selvendiran, P., Driscoll, C. T., Bushey, J. T., & Montesdeoca, M. R. (2008). Wetland influence on mercury fate and transport in a temperate forested watershed. *Environmental Pollution*, *154*, 46–55.
Shotbolt, L. (2010). Pore water sampling from lake and estuary sediments using Rhizon samplers. *Journal of Paleolimnology*, *44*(2), 695–700. https://doi.org/10.1007/s10933-008-9301-8
Skyllberg, U. (2008). Competition among thiols and inorganic sulfides and polysulfides for Hg and MeHg in wetland soils and sediments under suboxic conditions: Illumination of controversies and implications for MeHg net production. *Journal of Geophysical Research: Biogeosciences*, *113*, 2005–2012. https://doi.org/10.1029/2008JG000745
Stagg, C. L., Schoolmaster, D. R., Krauss, K. W., Cormier, N., & Conner, W. H. (2017). Causal mechanisms of soil organic matter decomposition: Deconstructing salinity and flooding impacts in coastal wetlands. *Ecology*, *98*, 2003–2018. https://doi.org/10.1002/ecy.1890
StataCorp (2015). *Stata Statistical Software: Release 14*. College Station, TX: StataCorp LP.
Stumm, W., & Morgan, J. J. (2012). *Aquatic Chemistry: Chemical Equilibria and Rates in Natural Waters*. New York: John Wiley.

Van der Welle, M. E. W., Smolders, A. J. P., Op den Camp, H. J. M., Roelofs, J. G. M., & Lamers, L. P. M. (2007). Biogeochemical interactions between iron and sulphate in freshwater wetlands and their implications for interspecific competition between aquatic macrophytes. *Freshwater Biology*, *52*, 434–447.

Vestergaard, O., & Sand-Jensen, K. (2000). Alkalinity and trophic state regulate aquatic plant distribution in Danish lakes. *Aquatic Botany*, *67*, 85–107.

Walker, R. D., Pastor, J., & Dewey, B. W. (2006). Effects of wild rice (*Zizania palustris*) straw on biomass and seed production in northern Minnesota. *Canadian Journal of Botany*, *84*, 1019–1024.

Weston, N. B., Porubsky, W. P., Samarkin, V. A., Erickson, M., Macavoy, S. E., & Joye, S. B. (2006). Porewater stoichiometry of terminal metabolic products, sulfate, and dissolved organic carbon and nitrogen in estuarine intertidal creek-bank sediments. *Biogeochemistry*, *77*, 375–408.

Weston, N. B., Vile, M. A., Neubauer, S. C., & Velinsky, D. J. (2011). Accelerated microbial organic matter mineralization following salt-water intrusion into tidal freshwater marsh soils. *Biogeochemistry*, *102*, 135–151.

Williamson, C. E., Morris, D. P., Pace, M. L., & Olson, O. G. (1999). Dissolved organic carbon and nutrients as regulators of lake ecosystems: Resurrection of a more integrated paradigm. *Limnology and Oceanography*, *44*, 795–803.

Windham-Myers, L., Marvin-Dipasquale, M., Krabbenhoft, D. P., Agee, J. L., Cox, M. H., Heredia-Middleton, P., … Kakouros, E. (2009). Experimental removal of wetland emergent vegetation leads to decreased methylmercury production in surface sediment. *Journal of Geophysical Research*, *114*, G00C05. https://doi.org/10.1029/2008JG000815

Winter, T. C. (2001). The concept of hydrologic landscapes. *Journal of the American Water Resources Association*, *37*, 335–349.

Environmental Science & Technology

Article

pubs.acs.org/est

Methylmercury Declines in a Boreal Peatland When Experimental Sulfate Deposition Decreases

Jill K. Coleman Wasik,*[,†,‡] Carl P. J. Mitchell,[§] Daniel R. Engstrom,[‡] Edward B. Swain,[∥] Bruce A. Monson,[∥] Steven J. Balogh,[⊥] Jeffrey D. Jeremiason,[#] Brian A. Branfireun,[¶] Susan L. Eggert,[$] Randall K. Kolka,[$] and James E. Almendinger[‡]

[†]Water Resources Science Graduate Program, University of Minnesota, 173 McNeal Hall, 1985 Buford Avenue, St. Paul, Minnesota 55108, United States

[‡]St. Croix Watershed Research Station, Science Museum of Minnesota, 16910 152nd Street North, Marine on St. Croix, Minnesota 55047, United States

[§]Department of Physical and Environmental Sciences, University of Toronto—Scarborough, 1265 Military Trail, Toronto, Ontario, Canada M1C 1A4

[∥]Environmental Analysis and Outcomes, Minnesota Pollution Control Agency, 520 Lafayette Road, St. Paul, Minnesota 55155, United States

[⊥]Metropolitan Council Environmental Services, 2400 Childs Road, St. Paul, Minnesota 55106, United States

[#]Department of Chemistry, Gustavus Adolphus College, 800 West College Avenue, St. Peter, Minnesota 56082, United States

[¶]Department of Biology, Biological and Geological Sciences Building 3028, University of Western Ontario, London, Ontario, Canada N6A 5B7

[$]Northern Research Station, USDA Forest Service, 1831 Highway 169 East, Grand Rapids, Minnesota 55744, United States

Supporting Information

ABSTRACT: Between 2001 and 2008 we experimentally manipulated atmospheric sulfate-loading to a small boreal peatland and monitored the resulting short and long-term changes in methylmercury (MeHg) production. MeHg concentrations and %MeHg (fraction of total-Hg (Hg_T) present as MeHg) in the porewaters of the experimental treatment reached peak values within a week of sulfate addition and then declined as the added sulfate disappeared. MeHg increased cumulatively over time in the solid-phase peat, which acted as a sink for newly produced MeHg. In 2006 a "recovery" treatment was created by discontinuing sulfate addition to a portion of the experimentally treated section to assess how MeHg production might respond to decreased sulfate loads. Four years after sulfate additions ceased, MeHg concentrations and %MeHg had declined significantly from 2006 values in porewaters and peat, but remained elevated relative to control levels. Mosquito larvae collected from each treatment at the end of the experiment exhibited Hg_T concentrations reflective of MeHg levels in the peat and porewaters where they were collected. The proportional responses of invertebrate Hg_T to sulfate deposition rates demonstrate that further controls on sulfur emissions may represent an additional means of mitigating Hg contamination in fish and wildlife across low-sulfur landscapes.

Received: March 4, 2012
Revised: May 4, 2012
Accepted: May 11, 2012
Published: May 11, 2012

dx.doi.org/10.1021/es300865f | Environ. Sci. Technol. 2012, 46, 6663−6671

INTRODUCTION

Atmospheric sulfate deposition increased dramatically with the advent of the industrial period, ultimately causing widespread ecosystem acidification, especially downwind of large population centers in North America and Europe.[1,2] Regulatory efforts aimed at controlling sulfur dioxide emissions were very successful at reducing sulfate deposition,[3−5] but ecosystems have responded variably depending on landscape and climatic factors.[6] Whereas most research in sulfate-impacted systems has focused on recovery from environmental acidification,[7,8] sulfate deposition is also of considerable consequence to the production of methylmercury (MeHg),[9] the predominant form of mercury that bioaccumulates in food webs.

Wetlands are a major linchpin in the coupled biogeochemical cycles of sulfur and mercury and serve two potential countervailing roles in ecosystem recovery from sulfate deposition. They are sites of active sulfate reduction and so provide an important sink for legacy sulfate leaching from upland soils toward downstream aquatic systems.[10] Wetlands are also important sites of mercury methylation in the landscape.[11] Augmented sulfate inputs can stimulate MeHg production in sulfur-limited systems due to the increased activity of sulfate-reducing bacteria (SRB), which are known mediators of the methylation process.[9,12−16] Therefore continued inputs of sulfate from uplands may prolong elevated MeHg production in, and export from, wetland systems.[17] Our understanding of how MeHg production in ecosystems responds to declining sulfate deposition, and the subsequent effects on mercury concentrations in biota, is limited to a handful of largely correlative studies in lakes.[18,19] We therefore lack an experimental basis for predicting the rate of ecosystem recovery, the factors that enhance or inhibit it, or the biogeochemical mechanisms involved.

To investigate the in situ response of net MeHg production as an ecosystem recovers from elevated sulfate deposition, we experimentally amended a peatland in northern Minnesota with sulfate for four years and then monitored the system over an equivalent period after sulfate additions ceased. Changes in porewater, peat, and biotic MeHg levels across treatments with differing sulfate depositional histories were used to (1) understand the impacts of increasing and decreasing sulfate deposition on net MeHg production within the peatland, (2) identify mechanisms that promote and inhibit recovery of systems previously impacted by elevated levels of sulfate deposition, and (3) connect changes in sulfate deposition to mercury levels in biota. The extended nature of this project provided an opportunity to study wetland recovery processes against a backdrop of variable climate and hydrology.

MATERIALS AND METHODS

Study Site. This study was performed in the S6 watershed of the Marcell Experimental Forest (MEF), a field-research facility of the Northern Research Station of the USDA Forest Service (Figure 1). The 2.0-ha S6 peatland has an overstory of mature black spruce (*Picea mariana*) and tamarack (*Larex laricina*) within a central bog area and is dominated by alder (*Alnus rugosa*) within its lagg margin.[20] The perched water table in the central bog is hydrologically isolated from the uplands and the lagg, creating a mineral-poor, ombrotrophic system ideal for experimental manipulation of atmospheric deposition.

Sulfate Additions. Long-term atmospheric deposition records from the National Atmospheric Deposition Program (NADP) site (MN-16) at MEF show that sulfate deposition

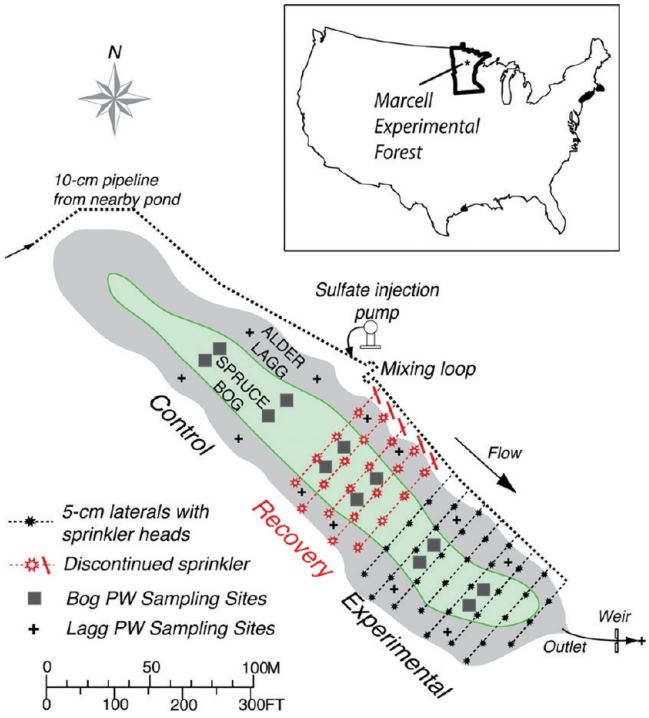


Figure 1. Schematic of the sulfate delivery system illustrating the experimental design within the S6 peatland. Porewater (PW) sampling sites in the bog (■) and lagg (+) were located along transects within each treatment. The first 5 lateral pipelines encompass the recovery treatment. See text for further details. The inset map shows the location of the Marcell Experimental Forest.

decreased by roughly 50%, from 11 kg ha^{-1} yr^{-1} in the early 1980s to approximately 5.5 kg ha^{-1} yr^{-1} in the mid-2000s (Supporting Information Figure S1).[21] Our experimental additions increased sulfate loading to 32 kg ha^{-1} yr^{-1}, or approximately 4× the average ambient 1990s deposition rate at MEF. This rate is representative of late 20th-century sulfate deposition across large areas of eastern North America, and thus provides an appropriate model for the effects of increasing sulfate deposition on MeHg production as well as the recovery processes that a sulfate-impacted peatland would experience as sulfate deposition declined.

The specific details of the initial experimental design and sulfate delivery system for this study were described previously by Jeremiason et al.[9] Briefly, in the summer of 2001 the peatland was divided into control and experimental sections, and a sulfate delivery system was constructed of PVC pipe across the downgradient experimental half (Figure 1). Source water was pumped from a nearby, dilute pond (specific conductivity = 20 μS cm^{-1}), a concentrated sodium sulfate solution was injected into the 10-cm main pipeline just above the experimental treatment, and the sulfate-enriched solution was sprayed onto the peatland surface via sprinkler heads atop 1-m risers. Sulfate amendments began in the fall of 2001 and continued three times each year (spring, summer, and fall) through 2008. Each sulfate addition simulated approximately 6−8 mm of rainfall, which did not significantly alter the peatland water table. In the early spring of 2006 a recovery treatment was created by discontinuing sulfate addition to the upgradient, one-third of the original experimental treatment (Figure 1).

Field Sampling. *Porewaters.* Two porewater sampling transects were established in the control and experimental treatments, with four 1-m^2 sample plots distributed evenly across the

dx.doi.org/10.1021/es300865f | Environ. Sci. Technol. 2012, 46, 6663−6671

central bog area and lagg margins along each transect (Figure 1). To isolate the effect of atmospheric sulfate deposition on MeHg production from effects caused by upland inputs, only data from the central bog sites were considered for this paper. In 2006 two additional transects were established in the newly created recovery treatment, and transects located in the experimental treatment were repositioned down-gradient to ensure sampling occurred well within the treated area. Peat porewater samples were collected from each plot on day −1, +1, +3, and +7 relative to each sulfate addition. Extra sampling days were added to spring and fall samplings on days −7 and +14.

Porewater samples were collected by portable peristaltic pump through a 1.9-cm ID, Teflon probe with a custom-machined tip perforated with 5-mm holes. The probe was inserted into the peat to a depth approximately 5 cm below the water table and porewater was pumped via Teflon tubing through acid-washed, 47-mm Teflon filter-holders (Savillex Co.) pre-loaded with ashed, 0.7-μm, glass-fiber filters directly into new, 125-mL PETG bottles. Bottles were rinsed in triplicate with porewater prior to filling, and samples were preserved with high-purity HCl to 0.5% (v/v). Samples were collected for dissolved Hg_T, MeHg, and major anions on each sampling day throughout the course of the project. Hg_T and MeHg samples were collected using accepted clean sampling techniques.[22] Field duplicates and equipment blanks accounted for 10% of samples.

Peat Samples. Surficial peat cores were collected annually from each treatment in 2003, 2005−2007, and 2009 by coring or cutting and hand-collection (SI Table S2). All peat samples were kept in frozen storage and freeze-dried prior to analysis of Hg_T and MeHg.

Invertebrate Samples. In late spring 2009, near the end of the study, mosquito (*Culex* spp.) larvae were collected in triplicate batches from each treatment by netting with vinyl-coated aquarium nets. Mosquito larvae were hand-picked at the MEF laboratory, placed in vials of deionized water overnight to purge gut contents, and then frozen. Samples were freeze-dried prior to analysis of Hg_T content. Where enough mass remained, samples were also analyzed for MeHg content.

Laboratory Analyses. *Porewaters.* Aqueous Hg_T was analyzed according to EPA method 1631 Revision E.[23] Samples were oxidized overnight with BrCl and then neutralized with NH_2OH. Stannous chloride reduced the oxidized mercury species to Hg^0, which was purged and trapped on gold traps. Mercury was thermally desorbed from the traps in a stream of Ar and analyzed by cold vapor atomic fluorescence spectroscopy (CVAFS) on a Tekran 2600 Automated Total Mercury Analyzer. Daily calibrations were checked with lab-made standards. Each run included 20% deionized-water blanks, 10% sample duplicates, and 5% sample matrix spikes.

Aqueous MeHg was analyzed according to methods described in Bloom[24] and Liang et al.[25] at the Branfireun laboratory (2005 samples), the Jeremiason laboratory (2006 samples), or the Balogh laboratory (2007 and 2008 samples). Samples were distilled with 8 M H_2SO_4 and 20% KCl in an acid-cleaned, Teflon, extraction manifold and distillates were analyzed within 48 h. Mercury species were ethylated with sodium tetraethylborate and then purged from solution and trapped on Tenax traps. Mercury species were thermally desorbed from the traps and carried in a stream of Ar or He through a short chromatographic column. The separated mercury species passed through a pyrolytic trap where they were thermally transformed into Hg^0, and analyzed by CVAFS on a Tekran 2500 spectrometer (Branfireun and Jeremiason laboratories) or a Brooks Rand Model III (Balogh laboratory). Each run included 5% deionized-water blanks, 10% sample duplicates, and 5% sample matrix spikes.

Water samples for major anions (SO_4^{2-}, Cl^-, Br^-) were analyzed on a Dionex DX-500 ion chromatograph according to standard methods by the USFS Northern Research Station laboratory in Grand Rapids, Minnesota. Each run included 10% deionized-water blanks, 10% sample duplicates, and check standards. Replicate standard measures and lab duplicates were within 10% and method detection limits were 0.1 mg L^{-1} each year

Peat Samples. For Hg_T analysis, peat samples were microwave digested in concentrated HNO_3 and diluted prior to analysis by dual gold-trap amalgamation CVAFS, as described above for porewaters. For MeHg analysis, peat samples were distilled as outlined for porewaters, but with the inclusion of a known mass spike of enriched $Me^{199}Hg$ in each vessel. Samples were analyzed by isotope dilution−gas chromatography−inductively coupled plasma mass spectrometry (ID-GC-ICPMS) with mercury detection on an Agilent 7700 ICPMS according to the methods of Hintelmann et al.[26] In addition to blanks and duplicates, certified reference materials (MESS-3 for Hg_T; ERM-CC580 for MeHg) were analyzed in 10% of samples.

Quality assurance and control results for aqueous and solid phase Hg_T and MeHg for each year can be found in Tables S2−S4 of the Supporting Information.

Mosquito Larvae Samples. For Hg_T analysis, mosquito larvae samples were microwave digested in concentrated HNO_3 and diluted prior to analysis by dual gold-trap amalgamation CVAFS, as described for porewaters. MeHg in mosquito larvae samples was heat extracted in a solution of 25% KOH in methanol, with a known mass spike of enriched $Me^{199}Hg$ in each vessel. Samples were analyzed by ID-GC-ICPMS. In addition to blanks and duplicates, the certified reference material DORM-3 was analyzed in 10% of samples.

Numerical Analysis. Weighted means were calculated for annual porewater results because sampling dates were not evenly distributed throughout the season. Annual porewater values from each treatment were calculated by multiplying the mean result on each sampling day within a treatment by a weighting factor and then summing. The weighting factor was equal to the fraction of the season represented by a sample since the previous sampling date (e.g., the day − 1 sample collected for a summer addition had a much larger weighting factor than a sample collected 2 days later on day +1). The season began on the first date on which peat soil temperatures at 10-cm depth were greater than 1 °C, and ended with the last sampling date each year. Bulk density of the peat did not change appreciably within the top 8 cm (one-way Anova, $p = 0.18$), and so mean results for each peat core were calculated by multiplying concentrations for each interval by a weighting factor related to interval thickness (2 or 4 cm) and summing. Treatment means were then calculated from the weighted averages. Mosquito larvae results from each sample batch were averaged for each treatment.

The program R was used for all statistical analyses.[27] The distributions for both porewater and solid data were right-skewed, so each data set was natural-log-transformed prior to statistical analyses to obtain a normal distribution. A linear-least-squares model of the transformed data was fit on treatment and year factors. Residual plots of the transformed data

did not show any systematic bias. General linearized hypothesis tests were used to compare the estimated slopes for each treatment in each year and generate *p*-values. A *p*-value <0.05 was considered significant.

RESULTS AND DISCUSSION

MeHg Response to Sulfate Applications. The short and long-term processes whereby elevated sulfate deposition affected MeHg production within the S6 peatland were explored through intensive sampling of porewaters and periodic collections of peat cores, respectively (Figure 1). Although the MeHg pool in porewaters can be affected by factors other than methylation, such as changes in water chemistry, partitioning between the aqueous and solid phases, and the character and abundance of organic ligands,[13,28,29] MeHg in porewater nevertheless represents the most dynamic and mobile MeHg pool and is thus important for considering downstream effects. The solid peat represented the major sink for MeHg and Hg_T—of the total mercury mass in the upper 8 cm of peat matrix, >99.7% of MeHg and >99.8% of Hg_T was bound to the peat.

Porewaters. An increase in porewater MeHg concentration in response to sulfate addition was clearly evident following spring sulfate application to the central-bog as illustrated here for the spring of 2006 and 2008 (Figure 2), the first and last year of

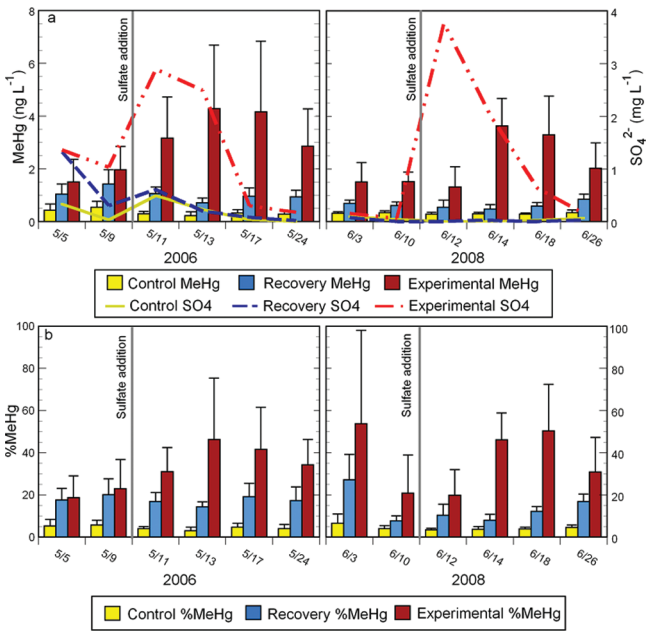


Figure 2. (a) Sulfate and MeHg concentrations (±1 s.d.), and (b) % MeHg (the ratio of MeHg to Hg_T; ± 1 s.d.) in control, recovery, and experimental treatment porewaters of the S6 peatland over the period of spring sulfate addition in 2006 and 2008. The spring 2006 and 2008 addition periods were chosen because they illustrate patterns in the first and last year of recovery, respectively.

recovery, respectively. In each year porewater sulfate concentrations in the experimental treatment peaked one day following the additions (2.9 ± 2.1 mg L^{-1} in 2006 and 3.8 ± 2.2 mg L^{-1} in 2008). As sulfate concentrations declined, the porewater MeHg pool increased dramatically (Figure 2a). MeHg concentrations peaked by the third day post-addition in each year (4.3 ± 2.1 ng L^{-1} in 2006 and 3.6 ± 1.0 ng L^{-1} in 2008). MeHg as percentage of Hg_T (%MeHg) followed a very similar pattern, peaking at 46 ± 29% three days after the addition in 2006 and at 50 ± 22% seven days after the addition in 2008 (Figure 2b). In contrast, mean sulfate and MeHg concentrations and %MeHg in the control area were consistently low each spring (<0.5 mg L^{-1}, < 0.6 ng L^{-1}, and <7%, respectively). MeHg concentrations and %MeHg were significantly higher in the experimental treatment than in the control on each day shown in Figure 2 ($p < 0.05$). Peak MeHg concentrations and %MeHg in the experimental treatment, postaddition, were significantly higher than preaddition levels ($p < 0.05$). Annual, seasonally weighted, average porewater MeHg concentrations and %MeHg in the experimental treatment were 4–9× higher than corresponding levels in the control section (Figure 3).

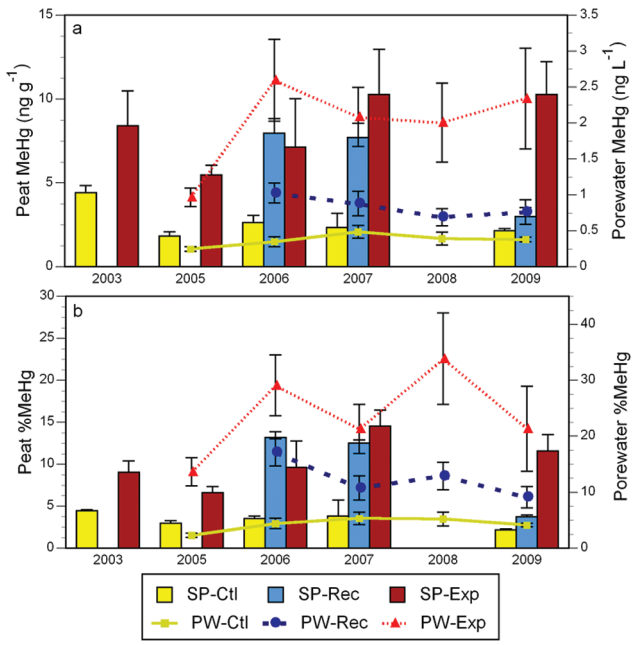


Figure 3. (a) MeHg concentrations and (b) %MeHg levels in the solid peat (SP; interval-weighted average values) and porewaters (PW; annual, seasonally weighted average values) in the control, recovery, and experimental sections of the S6 peatland 2003–2009. Error bars for peat are standard errors of weighted treatment means. Error bars on porewaters are standard deviations calculated from weighted annual means.

The order-of-magnitude increases in MeHg concentrations and %MeHg in porewaters of the experimental treatment following sulfate application are of similar magnitude and timing to the responses reported by Jeremiason et al.[9] for the first year of this study and other mesocosm-scale studies in nutrient-poor, boreal peatlands.[14,30] Our interpretation of these results is that the added sulfate stimulated SRB activity resulting in a net increase in Hg methylation. The steady buildup of a large pool of solid-phase MeHg in the peat matrix (see below) provides strong evidence for this de novo production of MeHg.

An alternative explanation for the observed increase in porewater MeHg is a change in partitioning of MeHg and Hg_T between the aqueous and solid phase resulting from an increase in the dissolved sulfide pool.[28] We modeled mercury speciation in response to increasing dissolved sulfide concentrations and found that the molar ratio of MeHg to Hg peaked at 0.3 μM sulfide and subsequently decreased, which is similar to previously reported findings (model parameters shown in SI Table S6).[28] However, at low sulfide concentrations the model did not accurately predict MeHg and Hg concentrations in the

dx.doi.org/10.1021/es300865f | Environ. Sci. Technol. 2012, 46, 6663–6671

dissolved phase possibly because of uncertainty in the log K value for the reaction between MeHg and thiol groups or because of kinetic limitations controlling adsorption/desorption of MeHg. Many studies have demonstrated the difficulty of accurately representing mercury speciation in the presence of high DOC.[29,31−33] Although we can not rule out the possibility that sulfide-driven changes in solid-phase partitioning caused porewater MeHg to increase, the weakness of the simple equilibrium model and the fact that the total pool of MeHg in the experimental section increased progressively over time argues strongly that increased MeHg production, rather than sorption/desorption reactions, is responsible for the MeHg patterns seen following sulfate addition.

Peat. The solid-phase data integrate the responses to sulfate additions that were noted above for porewater MeHg concentrations and %MeHg in the experimental treatment (Figure 2). In the control section, MeHg concentrations and %MeHg remained consistently low in both peat and porewaters (Figure 3). Average MeHg concentrations and %MeHg in the peat of the experimental treatment were 4−9× greater than the corresponding values in the control section. There was no significant effect of treatment on Hg_T concentrations in peat, which ranged between 63 and 110 ng g^{-1} across the peatland over the 5-year period.

The MeHg pool within a peatland represents a dynamic equilibrium between MeHg production, predominantly through biotic methylation, and removal processes, including biotic and abiotic demethylation, bioaccumulation, and advective transport.[13,14,34] In sulfur-limited systems, such as the experimental peatland in this study, sulfate addition represents an important factor influencing MeHg production and contributes to higher MeHg concentrations in wetland porewaters and soils than would be expected based on atmospheric Hg inputs alone.[12−14,35] The increases in %MeHg in peat and porewaters of the experimental treatment relative to those in the control indicate that experimentally increasing sulfate loads shifts that equilibrium toward greater MeHg production.

Recovery from Elevated Sulfate Deposition. *Porewaters.* The recovery treatment—a subsection of the experimental treatment to which sulfate application was halted—was created in the spring of 2006. Sulfate concentrations in recovery porewaters declined almost immediately thereafter, generally remaining low and following a temporal pattern similar to that of the control in each year (Figure 2a). In contrast to sulfate, MeHg concentrations and %MeHg in recovery treatment porewaters remained elevated well above control levels during the first year of recovery ($p < 0.001$). In 2007 annual, seasonally weighted %MeHg declined 37% from 2006 levels ($p < 0.001$), but then held steady between 2007 and 2009. MeHg concentrations fell more gradually over the recovery period, declining 32% between 2006 and 2008 ($p < 0.001$). Both MeHg concentrations and %MeHg in the recovery section remained elevated relative to control values through the end of the study (Figure 3). The continued difference in porewater MeHg between the control and recovery treatments likely reflects equilibrium with the peat rather than continued elevation of MeHg production.

Peat. MeHg concentrations and %MeHg in recovery treatment peat declined by 62% and 76%, respectively, between 2006 and 2009 ($p < 0.005$ and $p < 0.02$). Demethylation was a more important MeHg loss process than desorption coupled with advective transport out of the system. This conclusion follows from the observation that concentrations of MeHg in porewaters were too low to account for the mass of MeHg lost from the recovery-section peat. Jeremiason et al.[9] found that nearly 1800 μg MeHg was exported from the S6 peatland in 2002. The mass of MeHg lost in the top 8 cm of the recovery treatment alone between 2006 and 2009 was approximately 120 mg, or more than 65× the amount exported in outflow in 2002 from the entire peatland.

Methylmercury concentrations in the peat of the recovery treatment did not show significant declines within the first two years after sulfate additions were halted. This could either imply that the kinetics of desorption of the newly accumulated MeHg from the peat was much slower than the decreases in methylation rates in porewaters, or that elevated MeHg production was sustained for a period of time by internal recycling of the previously added sulfate. Such recycling has been proposed by others[13,14] and would also explain our observed short-term response to sulfate addition in which sulfate disappeared from experimental porewaters within three days of application, while porewater MeHg levels remained elevated two weeks later (Figure 2). Urban et al.[10] investigated sulfur biogeochemistry in a small peatland 1 km from the S6 site and determined that annual recycling of sulfur was equivalent to annual external sulfur inputs. Blodau et al.[36] found evidence that an anaerobic sulfur cycle sustained SRB activity under reducing conditions in an ombrotrophic peatland, providing an explanation for the high sulfur recycling rates observed by Urban et al.[10] Thus one possible mechanism for recovery following the cessation of sulfate addition to the S6 peatland is that sulfur compounds within the peat become more recalcitrant over time. That is, as the pool of added sulfur is repeatedly turned over, labile sulfur compounds are preferentially consumed and progressively converted into refractory organic forms, which are much more slowly cycled by anaerobic and aerobic processes. In line with this hypothesis, differential sulfate release was observed among treatments in the S6 peatland following drying events, which can expose reduced sulfur moieties to oxygen (SI Table S5). The highest sulfate release into porewaters occurred in the experimental treatment, and the lowest release was observed in the control section. Because there was no significant difference among treatments in size of the total sulfur pool in the peat, these results suggest that the newly added sulfate was more susceptible to release/recycling than the pre-existing pool of ambient sulfur.

Interannual Variability. Despite the significant trends in peat MeHg concentrations and %MeHg (increases in the experimental treatment and decreases in the recovery treatment), there is some unexplained variability in the data—for example, the decrease in peat %MeHg between 2003 and 2005 and the fluctuating porewater values in the experimental treatment (Figure 3). These variations are likely the result of year-to-year differences in precipitation and hydrology, such as the series of summer droughts that persisted at the MEF from 2005 to 2007. Hydrologic variability can affect mercury cycling in peatlands by altering peat accumulation and decomposition, redox conditions, and methylation potentials.[37−40] Such effects are most clearly evident in the S6 control treatment where interannual fluctuations in both porewater and peat MeHg cannot be the result of sulfate manipulation. In the experimental and recovery treatments the effects of these large-scale physical processes are superimposed on trends due to sulfate addition alone. For example, the 2007−2009 decline of MeHg in the recovery section can be explained, at least in part, by the cessation of sulfate amendments, but this should not be the case for the experimental treatment where sulfate additions continued. Thus it appears that some of the interannual variability in MeHg

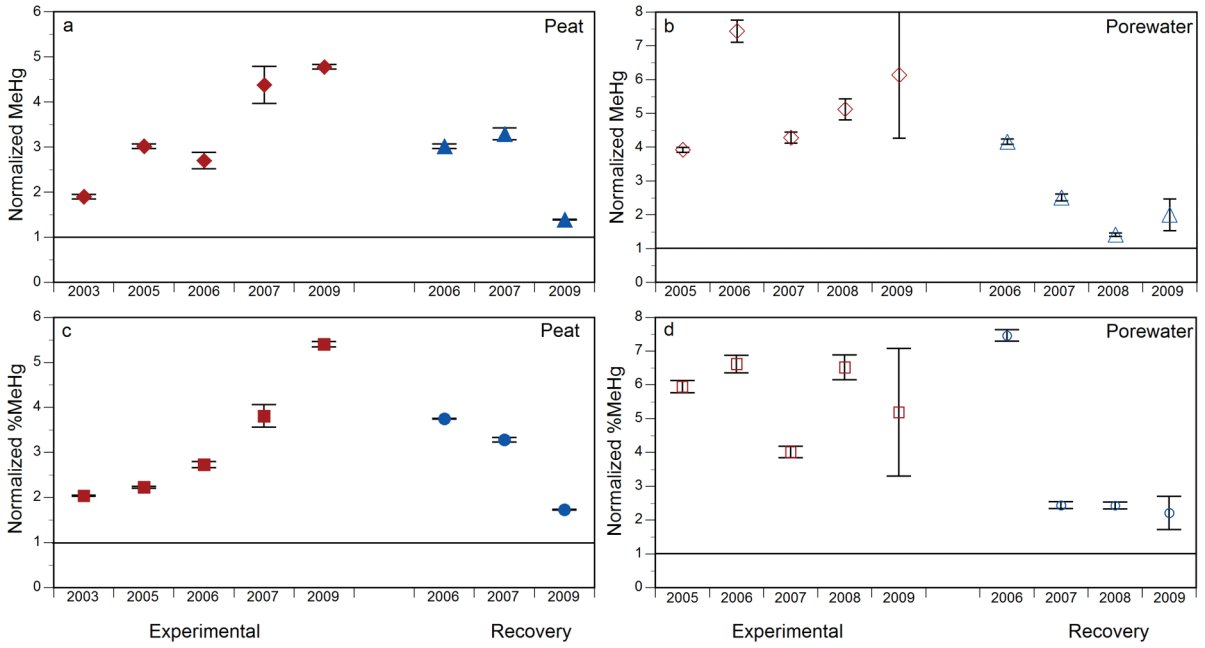


Figure 4. Ratio of [MeHg] and %MeHg in recovery and experimental treatments to [MeHg] and %MeHg in the control treatment in the peat (a and c) 2003–2009 and porewaters (b and d) 2005–2009 ([MeHg] experimental peat (♦), [MeHg] experimental porewater (◊), %MeHg experimental peat (■),%MeHg experimental porewater (□), [MeHg] recovery peat (▲), [MeHg] recovery porewater (Δ), %MeHg recovery peat (●), %MeHg recovery porewater (○)). Peat error propagated from standard errors of mean [MeHg] and %MeHg in control and respective treatment (experimental or recovery). Porewater error propagated from standard deviations for control and respective treatment. The horizontal line at $y = 1$ in each figure represents a ratio of 1:1 or a return to control levels in the treatments.

concentrations and %MeHg in each treatment (Figure 3) was the result of overriding climatic and/or hydrologic effects.

To remove the influence of natural hydrologic variability from the longer-term effects of experimental sulfate addition, we normalized MeHg concentrations and %MeHg in the experimental and recovery treatments to corresponding values in the control treatment for porewaters and peat in each year (Figure 4). Normalized MeHg concentrations and %MeHg in the experimental peat increased cumulatively with time such that by 2009 these values in the experimental treatment were 5–6× higher than those of the control ($p < 0.005$). In the recovery treatment the opposite trend occurred, and by 2009 normalized MeHg concentrations and %MeHg approached a value of 1, indicating a near-return to control levels. However, the trend was not significant ($p = 0.28$) owing to small sample sizes ($n = 4$) from each treatment. Normalized MeHg concentrations in the porewaters of the experimental treatment did not show any discernible trend with time, presumably because most newly produced MeHg accumulated in the peat. The large loss of MeHg from the recovery-section following the discontinuation of sulfate addition indicates that reductions in sulfate deposition could produce a relatively rapid decline in MeHg export to connected lakes and streams.

Biotic Response. In the spring of 2009 mosquito larvae (*Culex* spp.) were collected in the S6 peatland to compare mercury concentrations in biota among treatments, as mosquitoes are sensitive indicators of mercury loading to, and MeHg production within, aquatic systems.[41] Dry-weight, Hg_T concentrations in *Culex* spp. larvae mimicked %MeHg trends in peat samples, with experimental-treatment larvae having significantly elevated mercury concentrations relative to those found in the control and recovery sections ($p < 0.05$; Figure 5). Significant differences in mosquito-larvae Hg_T also persisted between the control and recovery sections ($p < 0.05$). Although sample masses were

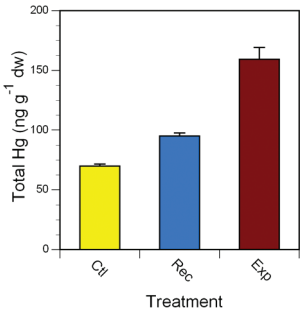


Figure 5. Dry-weight, Hg_T concentrations (±1 s.d.) in mosquito larvae (*Culex* spp.) in control (Ctl), recovery (Rec), and experimental (Exp) treatments in spring 2009.

insufficient to allow MeHg analysis of all mosquito larvae samples, for the six samples measured for both Hg_T and MeHg in this study, MeHg comprised 62 ± 19% of Hg_T in mosquito larvae, and Hg_T explained 75% of the variability in MeHg concentrations (SI Figure S2).

These biotic results provide direct evidence that increasing/decreasing sulfate loading to peatlands translates into significant increases/declines in biotic mercury concentrations. Whereas MeHg in experimental-treatment peat was >4.5× that in the control by 2009, Hg_T in mosquito larvae from the experimental treatment in the same year was just over 2× the levels found in the control. Apparently some of the MeHg produced as a result of sulfate-stimulation became less bioavailable with time. This finding agrees with other studies which have found that recently produced MeHg is more available to biota than older MeHg.[42,43]

Because detritivorous mosquito larvae spend a short time in their aquatic habitat, they present a snapshot of mercury bioaccumulation in the season during which they hatch. Mercury bioaccumulation within sulfate-impacted peatlands may be even

greater for invertebrates with long aquatic larval stages and those higher in the food chain, such that recovery from sulfate deposition may take longer than for mosquito larvae. Although the S6 wetland does not itself support fish, its outflow contributes to the MeHg load of downstream lakes that have susceptible fish populations. Moreover, direct transfer of MeHg to terrestrial foodwebs through the emergence and predation of aquatic insects has been identified as an important trophic pathway that may contribute to lowered reproductive success for insectivorous birds that exploit riparian and wetland habitats.[44,45]

Broader Impacts. Our long-term sulfate-loading experiment created an opportunity to observe the in situ processes whereby sulfate deposition enhanced MeHg production within a peatland, MeHg declined once sulfate additions were discontinued, and mercury levels in biota mirrored changes in sulfate inputs. Increasing sulfate deposition by 4× led to a MeHg increase of similar magnitude in both porewaters and peat. These changes in MeHg production occurred despite flat trends in Hg deposition over the study period.[46] The steady accumulation of MeHg in the peat over time, relative to the control, suggests sustained disequilibrium between methylation and demethylation over the course of the experiment. At what point equilibrium between MeHg production and removal processes would be achieved at these elevated levels of sulfate deposition is an open question. The finding that most of the MeHg lost from the recovery treatment was likely due to in situ demethylation rather than export from the system implies that the majority of the MeHg produced in response to elevated sulfate deposition may not be transported to downstream aquatic systems. This is supported by the finding that peat and porewater MeHg increased by ∼4× in response to a 4× increase in sulfate deposition but MeHg flux from the wetland in the first year of this study only increased by 2×.[9]

The proportional, synchronous decreases in mosquito-larvae mercury with cessation of sulfate addition indicate that declines in sulfate deposition can directly reduce MeHg in biota. Wetland recovery from elevated, anthropogenic sulfate deposition may explain some of the downward trends seen in fish and wildlife mercury across North America and Europe in the late 20th century as regulations on sulfur emissions took effect.[19,47−49] It is important to note that atmospheric mercury deposition declined concurrently with the reductions in sulfate deposition in many areas[50] and may also be responsible for declining mercury concentrations in biota.

In this study MeHg responses to climatic variability were superimposed on the trends caused by sulfate addition alone. The fluctuations in peat MeHg seen in the control section, and the declines in MeHg concentrations in the experimental treatment over the periods 2003−2005 and 2007−2009, demonstrate that physical processes can also alter the balance between methylation and demethylation from year to year. Climatic events such as severe droughts, which lead to oxidation of reduced sulfur species and sulfate formation, may slow or reverse declining MeHg levels in wetlands. The influence of drought on sulfate release from wetlands and sulfate export from watersheds are well documented.[5,51−54] Altered sulfur cycling consequent to climatic shifts may thus explain some of the recently reported reversals in downward fish mercury trends noted above.[49,55]

Sulfate deposition to ecosystems downwind of industrial centers increased by more than an order of magnitude over natural background rates by the mid-20th century.[21] It is reasonable to infer that such large increases in sulfate loading caused comparably large increases in MeHg production in sulfur-limited peatlands—increases above and beyond those arising from the 3−4× rise in mercury deposition during that same time period.[56,57] Subsequent regulations of sulfur emissions, such as the 1970 Clean Air Act and its 1990 amendments in the United States, led to substantial reductions in sulfate deposition across regions once affected by very high levels of atmospheric loading.[5] As of 2009 sulfate deposition across eastern North America remained well above background levels[21] highlighting the potential benefits to additional reductions. Our finding that peatland MeHg responds rapidly to reductions in sulfate inputs implies an opportunity to mitigate mercury contamination through policies aimed at further reducing sulfur emissions and deposition.

■ ASSOCIATED CONTENT

Supporting Information

Information regarding peat sample collection, quality control data for aqueous and solid total- and methyl-mercury analyses, average sulfate concentrations in porewaters during a water table rise in 2007, annual sulfate deposition rates at the Marcell Experimental Forest, the correlation between Hg_T and MeHg concentrations in invertebrates samples, and equilibrium model parameters. This information is available free of charge via the Internet at http://pubs.acs.org.

■ AUTHOR INFORMATION

Corresponding Author

*E-mail: colemajk@umn.edu.

Notes

The authors declare no competing financial interest.

■ ACKNOWLEDGMENTS

Funding for this long-term project came from the U.S. EPA−Science To Achieve Results (STAR) Program, Grant R827630, the Great Lakes Commission, Great Lakes Air Deposition program, and the Minnesota Pollution Control Agency. The USDA Forest Service's Northern Research Station provided access to the study site as well as substantial in-kind support. Many individuals assisted with sulfate additions and sample collection including P. Hoff and D. Helwig (Minnesota Pollution Control Agency), A. Stephens, A. Baczynski, and W. Daniels (St. Croix Watershed Research Station), and J. Heissel, C. Green, and J. Westlake (Northern Research Station). We also gratefully acknowledge the support of the analysts and technicians including Y. Nollet (Metropolitan Council Environmental Services), A. Hong (Univ. of Toronto−Scarborough), D. Nelson and J. Larson (Northern Research Station), and C. Eckley and M. Collins (Univ. of Toronto−Mississauga). Special thanks go to R. Kyllander and C. Dorrance at the Northern Research Station for administrative and field assistance throughout the course of the project.

■ REFERENCES

(1) Likens, G. E.; Bormann, F. H. Acid rain: A serious regional environmental problem. *Science* **1974**, *184* (4142), 1176−1179.

(2) Rodhe, H. Acidification in a global perspective. *Ambio* **1989**, *18* (3), 155−160.

(3) Driscoll, C. T.; Lawrence, G. B.; Bulger, A. J.; Butler, T. J.; Cronan, C. S.; Egar, C.; Lambert, K. F.; Likens, G. E.; Stoddard, J. L.; Weathers, K. C. Acidic deposition in the northeastern United States: Sources and inputs, ecosystem effects, and management strategies. *Bioscience* **2001**, *51* (3), 180−198.

(4) Schopp, W.; Posch, M.; Mylona, S.; Johansson, M. Long-term development of acid deposition (1880−2030) in sensitive freshwater regions in Europe. *Hydrol. Earth Syst. Sci.* **2003**, *7* (4), 436−446.
(5) Mitchell, M. J.; Likens, G. E. Watershed sulfur biogeochemistry: shift from atmospheric deposition dominance to climatic regulation. *Environ. Sci. Technol.* **2011**, *45*, 5267−5271.
(6) Stoddard, J. L.; Jeffries, D. S.; Lukewille, A.; Clair, T. A.; Dillon, P. J.; Driscoll, C. T.; Forsius, M.; Johannessen, M.; Kahl, J. S.; Kellogg, J. H.; Kemp, A.; Mannio, J.; Montieth, D. T.; Murdoch, P. S.; Patrick, S.; Rebsdorf, A.; Skjelkvale, B. L.; Stainton, M. P.; Traaen, T.; van Dam, H. Regional trends in aquatic recovery from acidification in North America and Europe. *Nature* **1999**, *401* (6753), 575−578.
(7) Dillon, P. J.; Somers, K. M.; Findeis, J.; Eimers, M. C. Coherent response of lakes in Ontario, Canada to reductions in sulphur deposition: The effects of climate on sulphate concentration. *Hydrol. Earth Syst. Sci.* **2003**, *7*, 583−595.
(8) Keller, W.; Heneberry, J. H.; Dixit, S. S. Decreased acid deposition and the chemical recovery of Killarney, Ontario, Lakes. *Ambio* **2003**, *32* (3), 183−189.
(9) Jeremiason, J. D.; Engstrom, D. R.; Swain, E. B.; Nater, E. A.; Johnson, B. M.; Almendinger, J. E.; Monson, B. A.; Kolka, R. K. Sulfate addition increases methylmercury production in an experimental wetland. *Environ. Sci. Technol.* **2006**, *40*, 3800−3806.
(10) Urban, N. R.; Eisenreich, S. J.; Grigal, D. F. Sulfur cycling in a forested *Sphagnum* bog in northern Minnesota. *Biogeochemistry* **1989**, *7*, 81−109.
(11) St. Louis, V. L.; Rudd, J. W. M.; Kelly, C. A.; Beaty, K. G.; Bloom, N. S.; Flett, R. J. Importance of Wetlands as Sources of Methyl Mercury to Boreal Forest Ecosystems. *Can. J. Fish. Aquat. Sci.* **1994**, *51* (5), 1065−1076.
(12) Gilmour, C. C.; Henry, E. A.; Mitchell, R. Sulfate stimulation of mercury methylation in freshwater sediments. *Environ. Sci. Technol.* **1992**, *26*, 2281−2287.
(13) Gilmour, C. C.; Riedel, G. S.; Ederington, M. C.; Bell, J. T.; Benoit, J. M.; Gill, G. A.; Stordal, M. C. Methylmercury concentrations and production rates across a trophic gradient in the northern Everglades. *Biogeochemistry* **1998**, *40*, 327−345.
(14) Branfireun, B. A.; Roulet, N. T.; Kelly, C. A.; Rudd, J. W. M. In situ sulphate stimulation of mercury methylation in a boreal peatland: Toward a link between acid rain and methylmercury contamination in remote environments. *Global Biogeochem. Cycles* **1999**, *13* (3), 743−750.
(15) Benoit, J. M.; Gilmour, C. C.; Mason, R. P.; Heyes, A. Sulfide controls on mercury speciation and bioavailability to methylating bacteria in sediment pore waters. *Environ. Sci. Technol.* **1999**, *33*, 951−957.
(16) Branfireun, B. A.; Bishop, K.; Roulet, N. T.; Granberg, G.; Nilsson, M. Mercury cycling in boreal ecosystems: The long-term effect of acid rain constituents on peatland pore water methylmercury concentrations. *Geophys. Res. Lett.* **2001**, *28* (7), 1227−1230.
(17) Mitchell, C. P. J.; Branfireun, B. A.; Kolka, R. K. Spatial characteristics of net methylmercury production hot spots in peatlands. *Environ. Sci. Technol.* **2008**, *42*, 1010−1016.
(18) Hrabik, T. R.; Watras, C. J. Recent declines in mercury concentration in a freshwater fishery: Isolating the effects of de-acidification and decreased atmospheric mercury deposition in Little Rock Lake. *Sci. Total Environ.* **2002**, *297*, 229−237.
(19) Drevnick, P. E.; Canfield, D. E.; Gorski, P. R.; Shinneman, A. L. C.; Engstrom, D. R.; Muir, D. C. G.; Smith, G. R.; Garrison, P. J.; Cleckner, L. B.; Hurely, J. P.; Noble, R. B.; Otter, R. R.; Oris, J. T. Deposition and cycling of sulfur controls mercury accumulation in Isle Royale fish. *Environ. Sci. Technol.* **2007**, *41* (21), 7266−7272.
(20) Kolka, R. K.; Mitchell, C. P. J.; Jeremiason, J. D.; Hines, N. A.; Grigal, D. F.; Engstrom, D. R.; Coleman-Wasik, J. K.; Nater, E. A.; Swain, E. B.; Monson, B. A.; Fleck, J. A.; Johnson, B.; Almendinger, J. E.; Branfireun, B. A.; Brezonik, P. L.; Cotner, J. B. Mercury cycling in peatland watersheds. In *Peatland Biogeochemistry and Watershed Hydrology at the Marcell Experimental Forest*; Kolka, R. K., Sebestyen, S. D., Verry, E. S., Brooks, K. N., Eds.; CRC Press: Boca Raton, FL, 2011; pp 349−370.
(21) National Atmospheric Deposition Program (NRSP-3). NADP Program Office, Illinois State Water Survey, 2204 Griffith Dr., Champaign, IL 61820; 2011; http://nadp.sws.uiuc.edu/.
(22) Bloom, N. S.; Fitzgerald, W. F. Determination of volatile mercury species at the picogram level by low-temperature gas chromatography with cold-vapour atomic fluorescence detection. *Anal. Chim. Acta* **1988**, *208*, 151−161.
(23) U.S.EPA. *Method 1631, Revision E: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluorescence Spectrometry*; Office of Water: Washington, DC, 2002.
(24) Bloom, N. S. Determination of picogram levels of methylmercury by aqueous phase ethylation, followed by cryogenic gas chromatography with cold vapour atomic fluorescence detection. *Can. J. Fish. Aquat. Sci.* **1989**, *46* (7), 1131−1140.
(25) Liang, L.; Horvat, M.; Bloom, N. S. An improved speciation method for mercury by GC/CVAFS after aqueous phase ethylation and room temperature precollection. *Talanta* **1994**, *41* (3), 371−379.
(26) Hintelmann, H.; Evans, R. D.; Villeneuve, J. Y. Measurement of mercury methylation in sediments by using enriched stable mercury isotopes combined with methylmercury determination by gas chromatography-inductively coupled plasma mass spectrometry. *J. Anal. Atom. Spectrom.* **1995**, *10* (9), 619−624.
(27) R-Development-Core-Team R: A Language and Environment for Statistical Computing. http://www.R-project.org.
(28) Skyllberg, U. Competition among thiols and inorganic sulfides and polysulfides for Hg and MeHg in wetland soils and sediments under suboxic conditions: Illumination of controversies and implications for MeHg net production. *J. Geophys. Res.* **2008**, *113*, G00C03.
(29) Miller, C. L.; Mason, R. P.; Gilmour, C. C.; Heyes, A. Influence of dissolved organic matter on the complexation of mercury under sulfidic conditions. *Environ. Toxicol. Chem.* **2007**, *26* (4), 624−633.
(30) Mitchell, C. P. J.; Branfireun, B. A.; Kolka, R. K. Assessing sulfate and carbon controls on net methylmercury production in peatlands: An in situ mesocosm approach. *Appl. Geochem.* **2008**, *23* (3), 503−518.
(31) Drexel, R. T.; Haitzer, M.; Ryan, J. N.; Aiken, G. R.; Nagy, K. L. Mercury (II) sorption to two Florida Everglades peats: Evidence for strong and weak binding and competition by dissolved organic matter released from the peat. *Environ. Sci. Technol.* **2002**, *36* (19), 4058−4064.
(32) Hsu, H.; Sedlak, D. L. Strong Hg(II) Complexation in Municipal Wastewater Effluent and Surface Waters. *Environ. Sci. Technol.* **2003**, *37* (12), 2743−2749.
(33) Ravichandran, M. Interactions between mercury and dissolved organic matter--a review. *Chemosphere* **2004**, *55*, 319−331.
(34) Gilmour, C. C.; Henry, E. A. Mercury methylation in aquatic systems affected by acid deposition. *Environ. Pollut.* **1991**, *71*, 131−169.
(35) Benoit, J. M.; Gilmour, C. C.; Heyes, A.; Mason, R. P.; Miller, C. L. Geochemical and Biological Controls over Methylmercury Production and Degradation in Aquatic Ecosystems. In *Biogeochemistry of Environmentally Important Trace Elements*; American Chemical Society: Washington, DC, 2002; Vol. *835*, pp 262−297.
(36) Blodau, C.; Mayer, B.; Peiffer, S.; Moore, T. R., Support for an anaerobic sulfur cycle in two Canadian peatland soils. *J. Geophys. Res.* **2007**, *112*, G02004, doi:10.1029/2006JG000364.
(37) St. Louis, V. L.; Rudd, J. W. M.; Kelly, C. A.; Bodaly, R. A.; Paterson, M. J.; Beaty, K. G.; Hesslein, R. H.; Heyes, A.; Majewski, A. R. The rise and fall of mercury methylation in an experimental reservoir. *Environ. Sci. Technol.* **2004**, *38* (5), 1348−1358.
(38) Brigham, M. E.; Krabbenhoft, D. P.; Olson, M. L.; DeWild, J. F. Methylmercury in flood-control impoundments and natural waters of northwestern minnesota, 1997−99. *Water, Air, Soil Pollut.* **2002**, *138* (1), 61−78.
(39) Hall, B. D.; St. Louis, V. L.; Rolfhus, K. R.; Bodaly, R. A.; Beaty, K. G.; Paterson, M. J.; Cherewyk, K. A. P. Impacts of reservoir creation

on the biogeochemical cycling of methyl and total mercury in boreal upland forests. *Ecosystems* **2005**, *8* (3), 248−266.
(40) Balogh, S. J.; Swain, E. B.; Nollet, Y. H. Elevated methylmercury concentrations and loadings during flooding in Minnesota rivers. *Sci. Total Environ.* **2006**, *368*, 138−148.
(41) Hammerschmidt, C. R.; Fitzgerald, W. F. Methylmercury in mosquitoes related to atmospheric mercury deposition and contamination. *Environ. Sci. Technol.* **2005**, *39*, 3034−3039.
(42) Orihel, D. M.; Paterson, M. J.; Blanchfield, P. J.; Bodaly, R. A.; Gilmour, C. C.; Hintelmann, H. Temporal changes in the distribution, methylation, and bioaccumulation of newly deposited mercury in an aquatic ecosystem. *Environ. Pollut.* **2008**, *154* (1), 77−88.
(43) Harris, R. C.; Rudd, J. W. M.; Amyot, M.; Babiarz, C. L.; Beaty, K. G.; Blanchfield, P. J.; Bodaly, R. A.; Branfireun, B. A.; Gilmour, C. C.; Graydon, J. A. Whole-ecosystem study shows rapid fish-mercury reponse to changes in deposition. *Proc. Natl. Acad. Sci. U.S.A.* **2007**, *104*, 16586−16591.
(44) Custer, C.; Custer, T.; Hill, E. Mercury exposure and effects on cavity-nesting birds from the carson river, nevada. *Arch. Environ. Contam. Toxicol.* **2007**, *52* (1), 129−136.
(45) Cristol, D. A.; Brasso, R. L.; Condon, A. M.; Fovargue, R. E.; Friedman, S. L.; Hallinger, K. K.; Monroe, A. P.; White, A. E. The movement of aquatic mercury through terrestrial food webs. *Science* **2008**, *320* (5874), 335.
(46) Risch, M. R.; Gay, D. A.; Fowler, K. K.; Keeler, G. J.; Backus, S. M.; Blanchard, P.; Barres, J. A.; Dvonch, J. T. Spatial patterns and temporal trends in mercury concentrations, precipitation depths, and wet deposition in the North American Great Lakes region, 2002−2008. *Environ. Pollut.* **2012**, *161* (0), 261−271.
(47) Monson, B. A.; Staples, D.; Bhavsar, S.; Holsen, T.; Schrank, C.; Moses, S.; McGoldrick, D.; Backus, S.; Williams, K. Spatiotemporal trends of mercury in walleye and largemouth bass from the Laurentian Great Lakes Region. *Ecotoxicology* **2011**, *20* (7), 1555−1567.
(48) Chalmers, A. T.; Argue, D. M.; Gay, D. A.; Brigham, M. E.; Schmitt, C. J.; Lorenz, D. L. Mercury trends in fish from rivers and lakes in the United States, 1969−2005. *Environ. Monit. Assess.* **2011**, *175*, 175−191.
(49) Evers, D.; Wiener, J.; Basu, N.; Bodaly, R.; Morrison, H.; Williams, K. Mercury in the Great Lakes region: bioaccumulation, spatiotemporal patterns, ecological risks, and policy. *Ecotoxicology* **2011**, *20* (7), 1487−1499.
(50) Driscoll, C. T.; Han, Y. J.; Chen, C. Y.; Evers, D. C.; Lambert, K. F.; Holsen, T. M.; Kamman, N. C.; Munson, R. K. Mercury contamination in forest and freshwater ecosystems in the northeastern United States. *Bioscience* **2007**, *57* (1), 17−28.
(51) Bayley, S. E.; Behr, R. S.; Kelly, C. A. Retention and release of S from a freshwater wetland. *Water, Air, Soil Pollut.* **1986**, *31*, 101−114.
(52) Devito, K. J.; Hill, A. R. Sulphate mobilization and pore water chemistry in relation to groundwater hydrology and summer drought in two conifer swamps on the Canadian Shield. *Water, Air, Soil Pollut.* **1999**, *113*, 97−114.
(53) Warren, F. J.; Waddington, J. M.; Bourbonniere, R. A.; Day, S. M. Effect of drought on hydrology and sulphate dynamics in a temperate swamp. *Hydrol. Process.* **2001**, *15*, 3133−3150.
(54) Eimers, M. C.; Watmough, S. A.; Buttle, J. M.; Dillon, P. J. Drought-induced sulphate release from a wetland in south-central Ontario. *Environ. Monit. Assess.* **2007**, *127*, 399−407.
(55) Monson, B. A. Trend reversal of mercury concentrations in piscivorous fish from minnesota lakes: 1982−2006. *Environ. Sci. Technol.* **2009**, *43* (6), 1750−1755.
(56) Lindberg, S.; Bullock, R.; Ebinghaus, R.; Engstrom, D.; Feng, X.; Fitzgerald, W.; Pirrone, N.; Prestbo, E.; Seigneur, C. A synthesis of progress and uncertainties in attributing the sources of mercury in deposition. *Ambio* **2007**, *36* (1), 19−32.
(57) Munthe, J.; Bodaly, R. A.; Branfireun, B. A.; Driscoll, C. T.; Gilmour, C. C.; Harris, R.; Horvat, M.; Lucotte, M.; Malm, O. Recovery of mercury-contaminated fisheries. *Ambio* **2007**, *36* (1), 33−44.

Environ. Sci. Technol. **2006**, *40,* 3800−3806

Sulfate Addition Increases Methylmercury Production in an Experimental Wetland

JEFF D. JEREMIASON,*,† DANIEL R. ENGSTROM,‡ EDWARD B. SWAIN,§ EDWARD A. NATER,|| BRIAN M. JOHNSON,⊥ JAMES E. ALMENDINGER,‡ BRUCE A. MONSON,§ AND RANDY K. KOLKA#

Department of Chemistry, Gustavus Adolphus College, Saint Peter, Minnesota 56082, St. Croix Watershed Research Station, Science Museum of Minnesota, Marine on St. Croix, Minnesota 55047, Minnesota Pollution Control Agency, St. Paul, Minnesota, 55155, Department of Soil, Water, and Climate, University of Minnesota, St. Paul, Minnesota, 55108, Department of Ecology, Evolution, and Behavior, University of Minnesota, St. Paul, Minnesota, 55108, and North Central Forest Experiment Station, United States Forest Service, Grand Rapids, Minnesota 55744

Atmospheric mercury is the dominant Hg source to fish in northern Minnesota and elsewhere. However, atmospherically derived Hg must be methylated prior to accumulating in fish. Sulfate-reducing bacteria are thought to be the primary methylators of Hg in the environment. Previous laboratory and field mesocosm studies have demonstrated an increase in methylmercury (MeHg) levels in sediment and peatland porewaters following additions of sulfate. In the current ecosystem-scale study, sulfate was added to half of an experimental wetland at the Marcell Experimental Forest located in northeastern Minnesota, increasing annual sulfate load by approximately four times relative to the control half of the wetland. Sulfate was added on four separate occasions during 2002 and delivered via a sprinkler system constructed on the southeast half (1.0 ha) of the S6 experimental wetland. MeHg levels were monitored in porewater and in outflow from the wetland. Prior to the first sulfate addition, MeHg concentrations (filtered, 0.7 μm) were not statistically different between the control (0.47 $\pm$ 0.10 ng L^{-1}, $n = 12$; mean $\pm$ one standard error) and experimental 0.52 $\pm$ 0.05 ng L^{-1}, $n = 18$) halves. Following the first addition in May 2002, MeHg porewater concentrations increased to 1.63 $\pm$ 0.27 ng L^{-1} two weeks after the addition, a 3-fold increase. Subsequent additions in July and September 2002 did not raise porewater MeHg, but the applied sulfate was not observed in porewaters 24 h after addition. MeHg concentrations in outflow from the wetland also increased leading to an estimated 2.4× increase of MeHg flux from the wetland. Our results demonstrate enhanced methylation and increased MeHg concentrations within the wetland and in outflow from the wetland suggesting that decreasing sulfate deposition rates would lower MeHg export from wetlands.

* Corresponding author e-mail: jjeremia@gac.edu.
† Gustavus Adolphus College.
‡ St. Croix Watershed Research Station.
§ Minnesota Pollution Control Agency.
|| Department of Soil, Water, and Climate, University of Minnesota.
⊥ Department of Ecology, Evolution, and Behavior, University of Minnesota.
North Central Forest Experiment Station.

Introduction

Efforts to reduce mercury (Hg) emissions in Minnesota and throughout the rest of the world assume change in atmospheric deposition of Hg will ultimately result in a proportional change of methylmercury (MeHg) concentrations in fish, all other things being constant. Accordingly, it is thought that fish now have mercury concentrations that are 3−4 times greater than natural (preindustrial) levels, because there is strong evidence that atmospheric Hg deposition is currently 3−4 times greater than natural rates (*1*−*6*). However, the proportion of Hg that is methylated and bioaccumulated in fish may not have been constant in some aquatic systems over that time period. Higher than expected Hg concentrations in fish may be the result of increased sulfate deposition to sulfate-poor ecosystems, where sulfate availability controls the activity of the bacteria that methylate Hg. A comparison of museum fish from the 1930s collected from low alkalinity lakes in northern Minnesota and fish collected from the same lakes in the 1980s indicated a 10-fold increase in Hg concentrations (*7*), consistent with the sulfate-enhancement hypothesis.

Hg methylation in natural systems is primarily by sulfate-reducing bacteria in sediments (*8*−*11*) and in wetlands (*12*−*16*), but has also been observed in floating macrophytes and periphyton (*17*). Wetlands, being a major source of MeHg to waters where fish exist (*18*−*21*), represent a critical link between atmospheric Hg deposition and accumulation of MeHg in aquatic food chains. The objective of this study is to determine if enhanced sulfate loads elevate MeHg levels in a sub-boreal *Sphagnum*/conifer wetland. Previous studies conducted in the laboratory and in field microcosms demonstrate a link between increased sulfate reduction rates and enhanced Hg methylation (*8, 12*). In this study, we artificially increased sulfate loads to an experimental wetland to examine the impact of increased sulfate deposition on Hg methylation at the watershed scale.

Material and Methods

Site Description. The United States Department of Agriculture Forest Service Marcell Experimental Forest (MEF; Figure 1) is an 890 ha tract of land located 40 km north of Grand Rapids, Minnesota (47°32′N, 93°28′W). The experimental site, wetland S6, is one of seven small watersheds that have been used for long-term study of forest hydrology and Hg cycling at the MEF (*22*−*26*). Climatic and hydrologic data have been collected continuously at monitoring stations since 1959. Two peatland/upland forest watersheds have been instrumented and studied in detail, including hydrology (*27, 28*), nutrient cycling and behavior (*29, 30*), and release of organic carbon and acidity (*31*). A National Atmospheric Deposition Program (NADP) site has been operating at Marcell since 1978 and the first Mercury Deposition Network (MDN) station began operation at the MEF in 1992 (*32, 33*). Hydrologic monitoring and other related research continues at the MEF.

The landscape of the MEF is typical of morainic landscapes in the western Great Lakes region. The S6 watershed contains an elongate 2.0 ha mature black spruce (*Picea mariana*) and

10.1021/es0524144 CCC: $33.50
Published on Web 05/10/2006

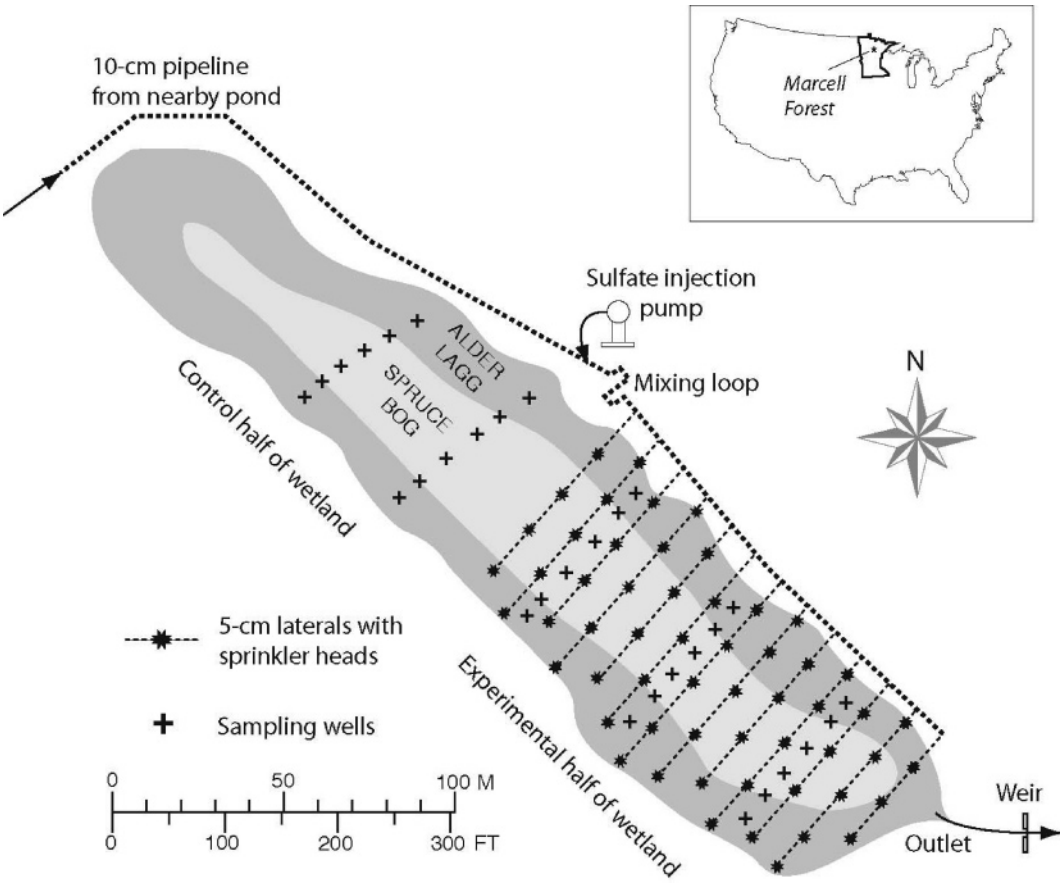


FIGURE 1. The S6 wetland in the Marcell Experimental Forest, northern Minnesota. The irrigation system consists of ~360 m of 10-cm diameter PVC pipe running adjacent to the north side of the S6 wetland. From this main line, thirteen 5-cm diameter laterals, spaced 14 m apart, extend across the experimental half of the wetland. Adjustable sprinkler heads spaced at 16-m intervals along each lateral operate with a spray radius of approximately 8−9 m and rotate on 0.6-m vertical risers. Wells for sampling peat pore waters are arrayed along five transects, each consisting of two lagg wells, two bog wells, and two "transition" wells between the bog and the lagg.

tamarack (*Larix laricina*) wetland. The S6 wetland (Figure 1) is characterized by an alder (*Alnus rugosa*) lagg (a zone of higher pH at the contact with mineral-soil uplands) encircling the slightly raised spruce/*Sphagnum* bog. Outflow from the S6 watershed (pH = 4.9 ± 0.7) has been monitored with a 120° V-notch weir since 1964 (*34*). The 6.9 ha upland was clear-cut in 1980 to convert the upland from predominantly aspen (*Populus tremula*) to white spruce (*Picea glauca*) and red pine (*Pinus resinosa*).

Sulfate Additions. Sulfate was added to the experimental half of the S6 wetland in five simulated rainfall events (6−10 mm) from November 2001 through October 2002 by means of a PVC irrigation system (*35*) constructed in 2001 (Figure 1). The system consists of ~360 m of 10-cm diameter PVC pipe running adjacent to the north side of the wetland. From this main line, thirteen 5-cm diameter laterals, spaced 14 m apart, extend across the experimental half of the wetland. Adjustable sprinkler heads spaced at 16 m intervals along each lateral operate with a spray radius of approximately 8−9 m and rotate on 0.6 m risers. Valves installed on each lateral allowed flow rates to be maintained to operate sprinkler heads at the desired radius. The PVC pipes were glued together at most joints, but flexible hosing at several joints allows for temperature contraction and expansion. Source water for the system was drawn from a dilute (conductivity ~10 μS cm^{-1}), low mercury (<1 ng L^{-1}), rain-fed pond, and a concentrated sodium sulfate solution was injected into the main line resulting in sulfate concentrations in the irrigation water of ~200 mg L^{-1}. A mixing loop after the injection point ensured a homogeneous sulfate solution. When the desired amount of sulfate had been added, a 1-mm rainfall equivalent cleared the lines and "washed" the sulfate off plant surfaces and into the peat porewaters. The 2002 sulfate load delivered by the irrigation system was 32 kg ha^{-1}, equivalent to approximately four times current annual atmospheric deposition and similar to atmospheric sulfate deposition in the northeastern United States (*32, 33*). The sulfate load was seasonally distributed based on historical sulfate deposition rates. Lithium bromide was used as a hydrologic tracer, but it appears to be nonconservative, and was not as useful as hoped.

Field Sampling. Filtered water samples were collected from 30 peat wells 1 day prior to, and 1, 3, 5, 7, 14, 28, and 56 days following, each sulfate addition. The wells were situated along 5 transects designated as experimental (ET1, ET2, and ET3) or control (CT2 and CT3). Each transect consisted of 6 wells: 2 lagg wells (one each in the N and S laggs), 2 bog wells, and 2 transition wells. The bog wells were located in the raised black spruce area of the wetland, the lagg wells were in the alder lagg, and the transition wells were located between the lagg and raised bog portions of the wetland. Unfiltered samples were collected at the S6 and nearby S7a outlet weirs every two weeks and whenever peat well sampling occurred. All mercury samples were collected in acid-cleaned 125 mL Teflon bottles using established protocols (*24*). Peat wells were designed to integrate peat porewater from the surface of the water table down to about 25 cm and by design collected porewater from depths corresponding to greatest hydraulic conductivity. Peat wells consisted of acid-cleaned 5-cm diameter PVC pipes cut to a length of 45 cm and driven approximately 35 cm into the peat. Approximately 40 holes (0.65-cm diameter) were drilled

into the wells to allow porewater to flow freely. A 2.5-cm diameter, finely slotted, acid-cleaned PVC Geoprobe screen, capped on the bottom, was inserted into each well and wells were capped between samplings. Samples were drawn from inside the Geoprobe screen with a hand pump and filtered through 0.7 μm ashed glass fiber filters. Field duplicates and blanks constituted approximately 20% of all samples collected. Experimental results from the November 2001 and October 2002 additions are not presented in this paper because many of the sample wells froze shortly after sulfate additions. Outflows from sampled watersheds were measured at 120° V-notch weirs with individually calibrated stage−discharge relations and hourly stage readings (S7a) or a continuous strip-chart recorder (S6).

Laboratory Methods. Accepted clean methods were utilized throughout the collection and analysis of mercury and methylmercury samples. Samples analyzed for total mercury were first oxidized with 0.2 N bromine monochloride, neutralized with hydroxylamine, and then analyzed using the stannous chloride/cold vapor atomic fluorescence spectroscopic (CVAFS) method (*24, 36*). Analysis of MeHg was performed using the aqueous distillation/CVAFS method (*37, 38*). Briefly, following distillation, water samples were ethylated with sodium tetraethylborate, purged with nitrogen and collected on Tenax TA (Alltech 60−80 mesh) traps. Hg species were thermally desorbed from the Tenax in an argon stream and separated on an OV-1 chromatographic column, converted to elemental mercury in a pyrolytic column, and analyzed on a Tekran 2400 CVAFS. Lab duplicates and performance standards were routinely analyzed as part of the quality assurance plan. Sulfate and other anions were measured by ion chromatography (Dionex ICS 2000), while cations were measured with ICP-MS (Thermalelectric PQ ExCell).

Results and Discussion

Porewater MeHg Concentrations. Dramatic increases in porewater MeHg concentrations were observed following the May 22, 2002 sulfate addition (Figure 2a). One day prior to the addition (Day −1), MeHg levels in the peat porewaters were not significantly different ($p = 0.62$) in the control (0.47 ± 0.10 ng L^{-1}, $n = 12$; mean ± one standard error) versus the experimental (0.52 ± 0.05 ng L^{-1}, $n = 18$) half of the wetland (Figure 2a). In the period between the May and July additions, MeHg porewater levels in the experimental half increased and remained elevated, while the control half exhibited no statistically significant change relative to Day −1. All MeHg concentrations in the experimental half were statistically higher than those of Day −1 at $p < 0.05$ except for Day 56 ($p = 0.13$). Porewater MeHg levels in the experimental half were also higher than the control half at $p < 0.05$ except for Day 1 ($p = 0.06$), demonstrating that the sulfate addition elevated MeHg levels after the May addition and, relative to the control half, maintained them for an extended period of time. Total Hg levels were similar between the experimental and control halves at this time; however, the fraction of total Hg occurring as MeHg increased after the May sulfate addition and remained elevated (Figure 2b). In addition, other water chemistry parameters (cations, anions, pH, and DOC) unimpacted by the sulfate addition behaved similarly between the experimental and control halves.

Changes in MeHg levels in the experimental half were inversely related to sulfate concentration in the peat porewaters in the first four sampling dates following the May addition (Figure 2a). Sulfate levels were undetectable at Day −1 in both the control and experimental halves. Following the May addition the average sulfate concentration increased to 1.09 ± 0.33 mg L^{-1} ($n = 18$) at Day 1 in the experimental half of the wetland and remained undetectable in the control half. As the sulfate reducing bacteria utilized the added sulfate, levels began to drop gradually, until sulfate was undetectable again on June 5 (Day 14) and porewater MeHg concentrations were at a local maximum, 1.63 ± 0.27 ng L^{-1} ($n = 18$). Following June 5 and prior to the July addition, sulfate levels across the wetland were detectable, but lower in the control half, although not statistically ($p > 0.05$). The average sulfate concentration in the control during 2002 was 0.02 ± 0.01 mg L^{-1}.

MeHg levels decreased after the June 5 maximum, but not back to the pre-addition levels. Net methylation (methylation − demethylation) was apparently enhanced in the experimental half of the wetland by the addition of sulfate. Two possible mechanisms for sustaining the elevated MeHg concentrations include the creation of a larger biologically available sulfur pool (*14, 39, 40*) or an increase in sulfate-reducing bacteria that methylate mercury.

The current study employed a large number of sampling wells collecting depth-integrated porewaters dispersed over a large area (2.0 ha). The large scale and experimental design makes it difficult to compare to other studies. However, similar studies done at smaller scales and at specific depth intervals were conducted in the Experimental Lakes Area (ELA), Canada (*12*) and in Degero Stomyr in northern Sweden (*14*). In the current study, MeHg porewater concentrations increased by a factor of 3 (from 0.52 ± 0.05 ng L^{-1} to 1.63 ± 0.27 ng L^{-1}) two weeks after a 4× increase in sulfate load (Figure 2a). Branfireun et al. (*12*) reported MeHg increases of up to 10× following a 20× increase in sulfate load to an experimental mesocosm (0.16 m^2) in a poor fen peatland at ELA. A 2× increase in sulfate load at the ELA study site resulted in a 3−4-fold increase in MeHg levels (*12*). The ELA study was conducted over 5 days and in most cases MeHg in the porewaters returned to pre-addition levels. The study in Sweden (*14*) examined MeHg in porewaters from sedge peatland microcosms (4 m^2) dosed with sulfate for three years. A MeHg increase of approximately 5× was reported in the mesocosm receiving an ∼7× increase in sulfate load.

Rain events influence MeHg levels in S6 not only by supplying sulfate, nutrients, and mercury, but also by transporting added sulfate within the wetland or flushing it from the wetland. The first rainfall after the spring addition—12 mm on May 28 and 17 mm on May 29—was not substantial enough to flush the added sulfate from the wetland. Indeed, the estimated sulfate load transported from the wetland was only 0.36 kg from May 21−June 5 compared to the added sulfate of 14.3 kg. An extremely large rain event (208 mm) occurred on June 22−24, preceded by a smaller event (36 mm) on June 18−19, resulting in record flows from S6 (Figure 3b). The amount of sulfate transported from the wetland at this time was 4.3 kg, still a relatively small amount compared to what was added. Despite this extreme hydrologic event, MeHg in the porewaters of the experimental half of the wetland exceeded those in the controls.

Contrary to expectations from the May sulfate application, MeHg concentrations did not increase in peat porewaters following the July and initially after the September sulfate additions (Figure 2). Moreover, there was no observed increase in porewater sulfate in the experimental peat wells, even 1 day after the applications. However, MeHg concentrations remained elevated in the experimental half relative to the control until late September. The most likely explanation for this seasonal contrast is temperature, which plays a key role in controlling sulfate reduction and methylation/demethylation rates. At the time of the May addition peat temperatures (as measured at the nearby S2 wetland, 0.4 km away), were still quite cool (4.5 °C at 5 cm), the bog having thawed only weeks before, and the added sulfate persisted for two weeks and changes in MeHg were observed. Peat temperatures increased slowly to above 16 °C by the time of the July addition and were still at 15 °C for the third addition

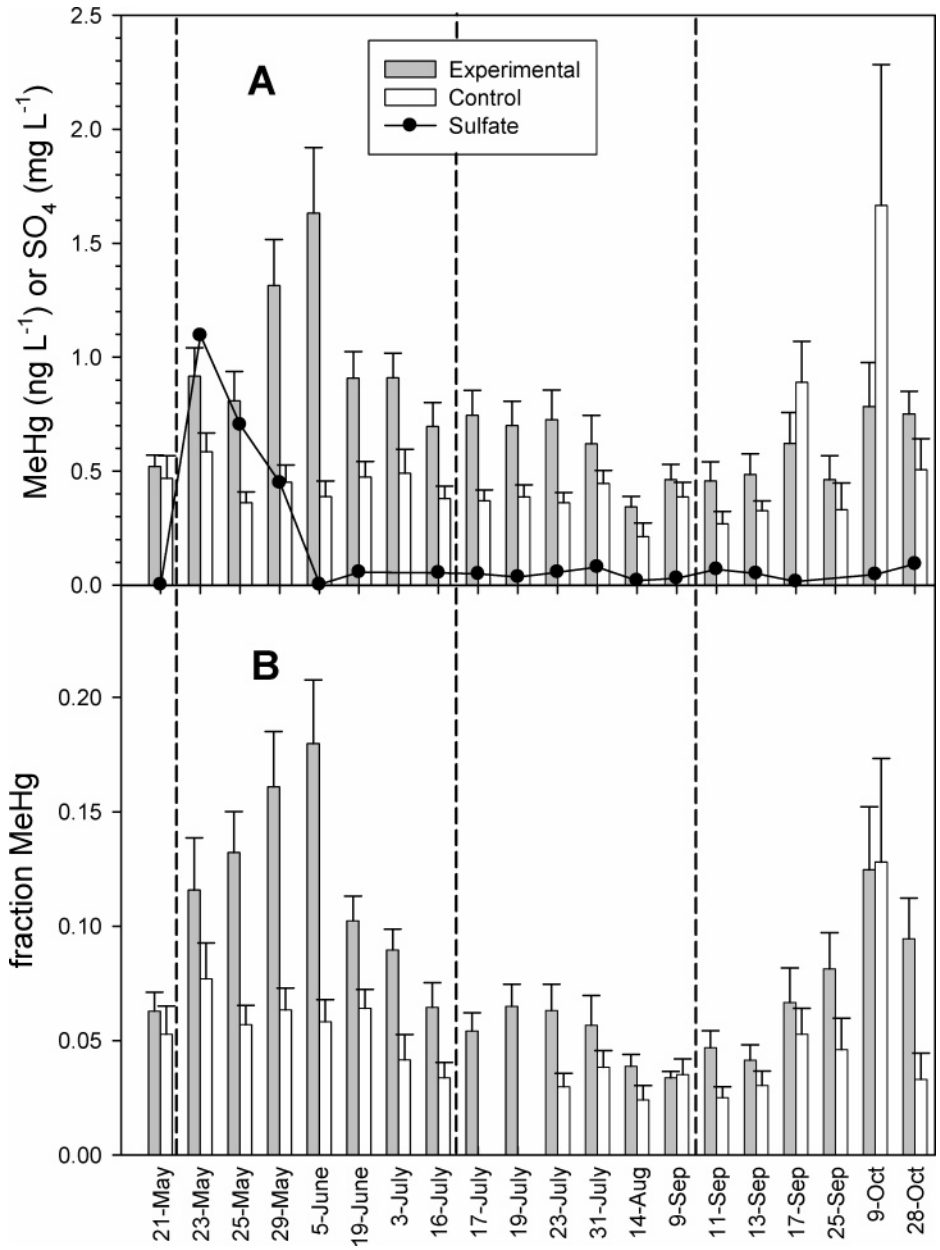


FIGURE 2. (A) MeHg concentrations (±1 standard error) in pore waters from control and experimental peat wells and sulfate concentrations in experimental peat wells only; sulfate was generally below detection (<0.01 mg L^{-1}) in the control wells. Each dotted line represents a sulfate application. (B) The fraction of total Hg existing as MeHg in control and experimental peat wells.

in early September. The warm late-summer peat temperatures likely led to very high sulfate reduction rates such that much of the added sulfate may have been consumed within 24 h (the first sampling day) following the July and September applications. Some of the sulfate may have also been entrained in the more abundant vegetation during the summer additions.

A subsequent decrease in peat temperature and outflow in late September/early October coincided with more variable MeHg concentrations and the control half actually exceeding MeHg levels in the experimental half on a few days, but these differences are not statistically significant (Figure 2). Currently, we cannot explain these observations, but they appear independent of the sulfate addition. The limited MeHg results from after the October 2002 addition (not presented because of extensive well freeze-up) were also highly variable and may be related to decreases in temperature. A few of these samples had MeHg concentrations exceeding 10 ng L^{-1}, however they could not be independently verified by additional late season field collections. Decreased temperatures might have contributed to the increase in MeHg concentrations, but other factors including Hg deposition through litterfall or possibly organic matter oxidation owing to late-season water-level fluctuations could have played a role. Litterfall, which begins in mid-September, is an important component of the total Hg flux to the Marcell wetlands, contributing nearly twice the Hg delivered by wet deposition alone (*41*, *42*). Water level in the wetland was decreasing at this time creating relatively stagnant conditions. Flow from S6 decreased substantially in September 2002 with only a few small rain events (Figure 3b). With the decline in water level, labile organic matter in the surface peat may have been oxidized releasing bound mercury as well as sulfate to the dissolved phase.

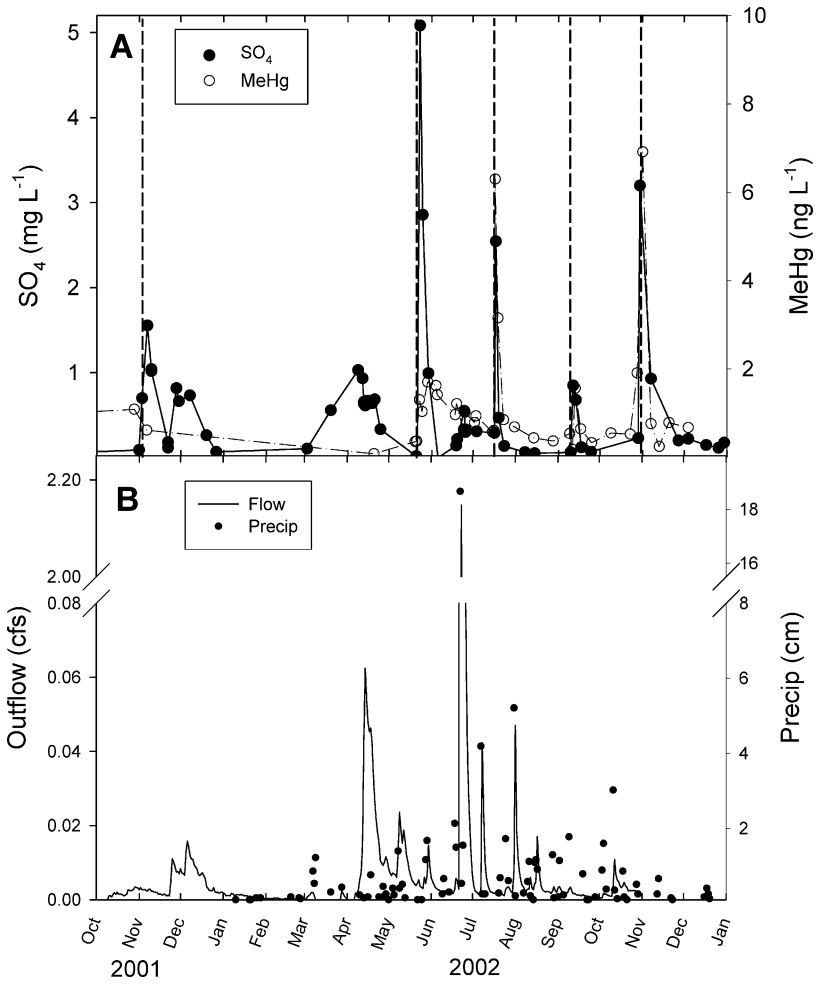


FIGURE 3. (A) MeHg and sulfate concentrations in the outflow from the S6 wetland. (B) Hydrologic outflow and precipitation events at S6. Flows were measured by chart recorder at the S6 weir (in operation since 1964), and precipitation was measured with a rain gauge located near the west end of the S6 wetland.

MeHg Export from S6. MeHg and sulfate concentrations increased at the S6 weir following each sulfate addition (Figure 3a), although the timing of the increases varied over the course of the experiment. Elevated concentrations observed at the weir after the July and September additions are in contrast to the peat wells where increases in sulfate or MeHg were not observed (but MeHg remained elevated relative to the control). Higher sulfate concentrations persisted at the weir following the May and late October additions, consistent with the peat well trends. A small pool impounded behind the weir likely contributed to these trends. Although sulfate was not added directly to the pool, some sulfate flowed into it within hours of each addition, increasing sulfate concentrations. Sulfate levels at the weir then declined over time as the pool was flushed by additional sulfate-depleted water from the wetland. For example, in May the flushing rate, k_f, of the weir pool was 1.37 d^{-1}, (k_f = flow/volume). The observed first-order loss of sulfate from the pool, k_{obs} (0.27 d^{-1}), from Day 1 to Day 7 was significantly less than k_f indicating a substantial flow of sulfate from the wetland to the weir pool. Sulfate levels in the peat porewaters were elevated at this time (Figure 3). In contrast, pool flushing rates following the July (0.48 d^{-1}) and September (0.33 d^{-1}) additions, were similar to k_{obs} for July (0.59 d^{-1}) and September (0.37 d^{-1}) suggesting that a pulse of sulfate was introduced to the weir pool within hours after these additions and then simply flushed out. Presumably due to high sulfate reduction rates or the sulfate never reaching the water table, sulfate in peat porewaters was insignificant during July and September and thus outflow of sulfate from the wetland to the pool was insignificant at this time. Water chemistry samples were not taken frequently enough following the October 2002 addition to calculate k_{obs} accurately.

MeHg trends at the weir closely track those for sulfate (Figure 3a). Following the May addition, MeHg concentration gradually increased at the weir, similar to the peat porewaters (Figure 2). The concentrations at the weir and in the peat porewaters were also similar at this time indicating that the peat porewaters were supplying the MeHg flowing over the weir. However, following the July and September additions, MeHg concentrations at the weir spiked immediately after each addition and the weir concentrations exceeded peat porewater concentrations. It is not clear if these spikes were due to high levels of MeHg flowing from the wetland or MeHg formation in the weir pool itself. However, based on the flushing rate of the pool, it appears that the dominant loss process for sulfate was flushing and that sulfate reduction in the weir pool was negligible.

Empirically modeled MeHg export from S6 without sulfate addition was compared to measured MeHg export in 2002. The observed daily MeHg export exceeded the predicted MeHg export during periods immediately following sulfate additions. To model MeHg export from S6 in the absence of sulfate additions, data from 2001 (prior to the 2002 sulfate additions to S6) showed a strong correlation between flows at the S6 weir and a nearby wetland weir, S7a (r^2 = 0.71).

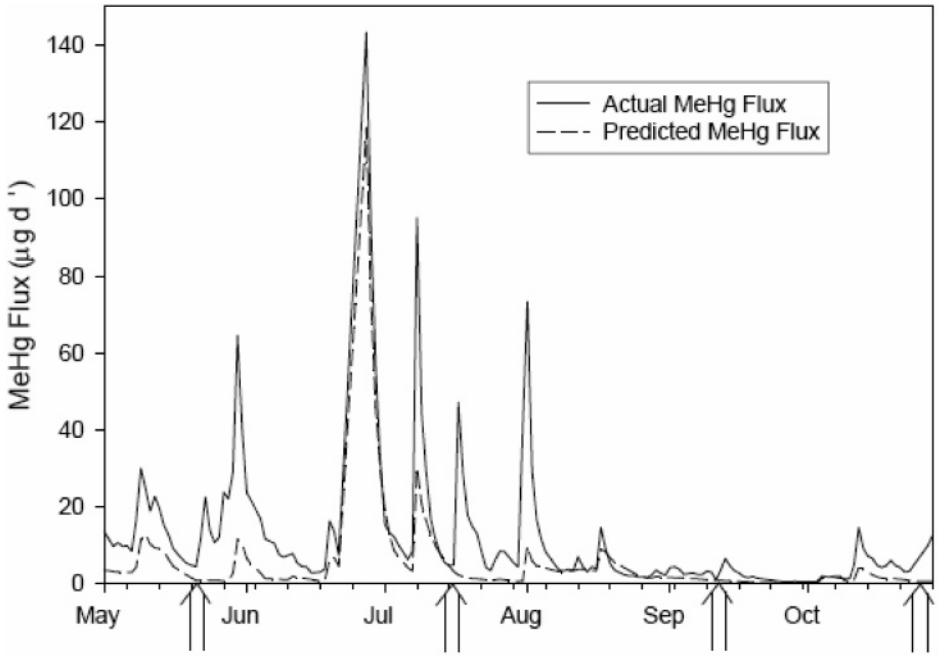


FIGURE 4. Actual and predicted fluxes of MeHg from the S6 wetland for 2002. The predicted flux is that which would have occurred in the absence of sulfate addition and is based on a correlation of 2001 (pretreatment) MeHg fluxes from S6 with those from a nearby reference wetland, S7a (see text). Arrows indicate experimental sulfate applications.

Furthermore, MeHg export from S7a was correlated to MeHg export from S6 in 2001

$$\log \text{Flux}_{S6} = 1.23 \times \log \text{Flux}_{S7a} - 1.62 \ (r^2 = 0.77 \text{ in } 2001) \quad (1)$$

where Flux_{S6} (μg d^{-1}) is the measured MeHg flux out of wetland S6 and Flux_{S7a} (μg d^{-1}) is the measured flux out of wetland S7a. Flux_{S6} and Flux_{S7a} are daily fluxes determined from average daily flows measured at the weirs and MeHg concentrations interpolated between sampling dates (see Supporting Information). In 2001, the weirs were sampled biweekly and in 2002 additional samples were collected from the weir at S6 corresponding to each porewater sampling date. Using eq 1, the MeHg flux for May though October 2002 that would have come from S6 in the absence of sulfate addition was estimated and compared to the actual flux (Figure 4). Excluding the high flow values from the June 22−24 storm event and the unusually high MeHg concentration observed the day after the October 2002 addition (including these values yields an even greater enhancement), the MeHg flux observed in 2002 (1780 μg MeHg) was more than two times greater (144%) than would have occurred without sulfate addition (730 μg MeHg).

In this study, enhanced MeHg concentrations were observed in the experimental peat porewaters and in the flow from the S6 wetland following sulfate addition. Enhanced MeHg concentrations were not observed in peat porewaters following the July and September additions, but the added sulfate did not increase porewater sulfate concentrations due to either rapid sulfate utilization or entrainment in overlying vegetation. Not all MeHg and sulfate trends observed can be readily explained in this initial year of sulfate addition, but sulfate addition enhanced MeHg concentrations in most cases, despite the fact that our addition of sulfur was negligible relative to the sulfur pool in the upper 30 cm of peat. At no point in the study were there any indications that the sulfate load decreased methylation as has been observed in the past in lake enclosures (*43*). The most likely explanation for these observations is that biologically available sulfur is a limiting factor in this system for the methylating bacteria. The addition of the limiting factor, sulfate, increased MeHg levels and may have increased the biologically active sulfur pool in S6. One possible implication of this study is that historic increases in atmospheric sulfate deposition (now on the decline) may have enhanced contemporary MeHg production and export from wetlands, contributing to widespread mercury contamination of aquatic food chains. It follows that decreases in sulfate deposition could result in less export of MeHg from wetlands and possibly result in lower MeHg levels in fish.

Acknowledgments

This research was funded by the U.S. EPA Science to Achieve Results (STAR) Program, Grant R827630. We gratefully acknowledge the assistance of Deacon Kyllander and Art Elling of the U.S. Forest Service for assistance with sample collection and weir-flow monitoring. We thank Daniel Helwig for experimental design assistance, planning, and support. We also thank the Minnesota Department of Natural Resources for equipment usage and those who helped construct the irrigation system: Neal Hines, Kelly O'Hara, Paul Hoff, Howard Markus, and Harold Wiegner.

Supporting Information Available

Additional plots and further information on methods related to eq 1 and Figure 4 used to estimate enhanced export of MeHg from the S6 wetland. This material is available free of charge via the Internet at http://pubs.acs.org.

Literature Cited

(1) Engstrom, D. R.; Swain, E. B. Recent declines in atmospheric mercury deposition in the Upper Midwest. *Environ. Sci. Technol.* **1997**, *31*, 960−967.

(2) Swain, E. B.; Engstrom, D. R.; Brigham, M. E.; Henning, T. A.; Brezonik, P. L. Increasing rates of atmospheric mercury deposition in midcontinental North America. *Science* **1992**, *257*, 784−787.

(3) Benoit, J. M.; Fitzgerald, W. F.; Damman, A. W. H. The biogeochemistry of an ombrotrophic bog: Evaluation of use as an archive of atmospheric mercury deposition. *Environ. Res.* **1998**, *78*, 118−133.

(4) Schuster, P. F.; Krabbenhoft, D. P.; Naftz, D. L.; Cecil, L. D.; Olson, M. L.; Dewild, J. F.; Susong, D. D.; Green, J. R.; Abbott,

M. L. Atmospheric mercury deposition during the last 270 years: A glacial ice core record of natural and anthropogenic sources. *Environ. Sci. Technol.* **2002**, *36*, 2303−2310.
(5) Lamborg, C. H.; Fitzgerald, W. F.; O'Donnell, J.; Torgersen, T. A non-steady-state compartmental model of global-scale mercury biogeochemistry with interhemispheric atmospheric gradients. *Geochim. Cosmochim. Acta* **2002**, *66*, 1105−1118.
(6) Lamborg, C. H.; Fitzgerald, W. F.; Damman, A. W. H.; Benoit, J. M.; Balcom, P. H.; Engstrom, D. R. Modern and historic atmospheric mercury fluxes in both hemispheres: global and regional mercury cycling implications. *Global Biogeochem. Cycles* **2002**, *16*, 1104.
(7) Swain, E. B.; Helwig, D. D. Mercury in fish from northeastern Minnesota lakes: historical trends, environmental correlates, and potential sources. *J. Minn. Acad. Sci.* **1989**, *55*, 103−109.
(8) Gilmour, C.; Henry, E.; Mitchell, R. Sulfate stimulation of mercury methylation in freshwater sediments. *Environ. Sci. Technol.* **1992**, *26*, 2281−2287.
(9) King, J. K.; Saunders, F. M.; Lee, R. F.; Jahnke, R. A. Coupling mercury methylation rates to sulfate reduction rates in marine sediments. *Environ. Toxicol. Chem.* **1999**, *18*, 1362−1369.
(10) Warner, K. A.; Roden, E. E.; Bonzongo, J. C. Microbial mercury transformation in anoxic freshwater sediments under iron-reducing and other electron-accepting conditions. *Environ. Sci. Technol.* **2003**, *37*, 2159−2165.
(11) Hammerschmidt, C. R.; Fitzgerald, W. F. Geochemical controls on the production and distribution of methylmercury in near-shore marine sediments. *Environ. Sci. Technol.* **2004**, *38*, 1487−1495.
(12) Branfireun, B. A.; Roulet, N. T.; Kelly, C. A.; Rudd, J. W. M. In situ sulphate stimulation of mercury methylation in a boreal peatland: toward a link between acid rain and methylmercury contamination in remote environments. *Global Biogeochem. Cycles* **1999**, *13*, 743−750.
(13) Heyes, A.; Moore, T. R.; Rudd, J. W. M.; Dugoua, J. J. Methyl mercury in pristine and impounded boreal peatlands, experimental Lakes Area, Ontario. *Can. J. Fish. Aquat. Sci.* **2000**, *57*, 2211−2222.
(14) Branfireun, B. A.; Bishop, K.; Roulet, N. T.; Granberg, G.; Nilsson, M. Mercury cycling in boreal ecosystems: The long-term effect of acid rain constituents on peatland pore water methylmercury concentrations. *Geophys. Res. Lett.* **2001**, *28*, 1227−1230.
(15) King, J. K.; Harmon, S. M.; Fu, T. T.; Gladden, J. B. Mercury removal, methylmercury formation, and sulfate-reducing bacteria profiles in wetland mesocosms. *Chemosphere* **2002**, *46*, 859−870.
(16) Harmon, S. M.; King, J. K.; Gladden, J. B.; Chandler, G. T.; Newman, L. A. Methylmercury formation in a wetland mesocosm amended with sulfate. *Environ. Sci. Technol.* **2004**, *38*, 650−656.
(17) Mauro, J. B. N.; Guimaraes, J. R. D.; Hintelmann, H.; Watras, C. J.; Haack, E. A.; Coelho-Souza, S. A. Mercury methylation in macrophytes, periphyton, and water − comparative studies with stable and radio-mercury additions. *Anal. Bioanal. Chem.* **2002**, *374*, 983−989.
(18) St. Louis, V.; Rudd, J.; Kelly, C.; Beaty, K.; Bloom, N.; Flett, R. Importance of wetlands as sources of methylmercury to boreal forest ecosystems. *Can. J. Fish. Aquat. Sci.* **1994**, *51*, 1065−1076.
(19) St. Louis, V.; Rudd, J.; Kelly, C.; Beaty, K.; Flett, R.; Roulet, N. T. Production and loss of methylmercury and loss of total mercury from boreal forest catchments containing different types of wetlands. *Environ. Sci. Technol.* **1996**, *30*, 2719−2729.
(20) Krabbenhoft, D.; Benoit, J.; Babiarz, C.; Hurley, J.; Andren, A. Mercury Cycling in the Allequash Creek Watershed, Northern Wisconsin. *Water Air Soil Pollut.* **1995**, *80*, 425−433.
(21) Hurley, J. P.; Benoit, J. M.; Babiarz, C. L.; Shafer, M. M.; Andren, A. W.; Sullivan, J. R.; Hammond, R.; Webb, D. A. Influences of watershed characteristics on mercury levels in Wisconsin rivers. *Environ. Sci. Technol.* **1995**, *29*, 1867−1875.
(22) Kolka, R. K.; Grigal, D. F.; Nater, E. A.; Verry, E. S. Hydrologic cycling of mercury and organic carbon in a forested upland-bog watershed. *Soil Sci. Soc. Am. J.* **2001**, *65*, 897−905.
(23) Grigal, D. F.; Kolka, R. K.; Fleck, J. A.; Nater, E. A. Mercury budget of an upland-peatland watershed. *Biogeochemistry* **2000**, *50*, 95−109.
(24) Kolka, R. K.; Nater, E. A.; Grigal, D. F.; Verry, E. S. Atmospheric inputs of mercury and organic carbon into a forested upland bog watershed. *Water Air Soil Pollut.* **1999**, *113*, 273−294.
(25) Kolka, R. K.; Grigal, D. F.; Verry, E. S.; Nater, E. A. Mercury and organic carbon relationships in streams draining forested upland peatland watersheds. *J. Environ. Qual.* **1999**, *28*, 766−775.
(26) Fleck, J. A.; Grigal, D. F.; Nater, E. A. Mercury uptake by trees: An observational experiment. *Water Air Soil Pollut.* **1999**, *115*, 513−523.
(27) Boelter, D. H.; Verry, E. S. *Peatland and Water in the Northern Lake States*; U.S. Department of Agriculture: St. Paul, MN, 1977.
(28) Nichols, D. S.; Brown, J. M. Evaporation from a sphagnum moss surface. *J. Hydrol.* **1980**, *48*, 289−302.
(29) Verry, E. S.; Timmons, D. R. Waterborne nutrient flow through an upland-peatland watershed in Minnesota. *Ecology* **1982**, *63*, 1456−1467.
(30) Grigal, D. F. Elemental dynamics in forested bogs in northern Minnesota. *Can. J. Bot.* **1991**, *69*, 539−546.
(31) Urban, N. R.; Bayley, S. E.; Eisenreich, S. J. Export of dissolved organic carbon and acidity from peatlands. *Water Resour. Res.* **1989**, *25*, 1619−1628.
(32) Mercury Deposition Network. http://nadp.sws.uiuc.edu/mdn/.
(33) National Atmospheric Deposition Network. http://nadp.sws.uiuc.edu.
(34) Nichols, D. S.; Verry, E. S. Stream flow and ground water recharge from small forested watersheds in north central Minnesota. *J. Hydrol.* **1991**, *245*, 89−103.
(35) Beaty, K. G. *An Irrigation System and Hydrological Network for a Wetland Acidification Project*; Canada Department of Fisheries and Oceans: Ottawa, ON, 1987.
(36) Bloom, N.; Fitzgerald, W. Determination of volatile mercury species at the picogram level by low-temperature gas chromatography with cold-vapour atomic fluorescence detection. *Anal. Chim. Acta* **1988**, *208*, 151−161.
(37) Bloom, N. Determination of picogram levels of methylmercury by aqueous phase ethylation, followed by cryogenic gas chromatography with cold vapour atomic fluorescence detection. *Can. J. Fish. Aquat. Sci.* **1989**, *46*, 1131−1140.
(38) Horvat, M.; Bloom, N.; Liang, L. Comparison of distillation with other current isolation methods for the determination of methyl mercury compounds in low level environmental samples. 1. Sediments. *Anal. Chim. Acta* **1993**, *281*, 135−152.
(39) Gilmour, C.; Riedel, G.; Ederington, M.; Bell, J.; Benoit, J.; Gill, G.; Stordal, M. Methylmercury concentrations and production rates across a trophic gradient in the northern Everglades. *Biogeochemistry* **1998**, *40*, 327−345.
(40) Benoit, J. M.; Gilmour, C. C.; Mason, R. P.; Heyes, A. Sulfide controls on mercury speciation and bioavailability in sediment pore waters. *Environ. Sci. Technol.* **1999**, *33*, 951−957.
(41) St. Louis, V. L.; Rudd, J. W. M.; Kelly, C. A.; Hall, B. D.; Rolfhus, K. R.; Scott, K. J.; Lindberg, S. E.; Dong, W. Importance of the forest canopy to fluxes of methyl mercury and total mercury to boreal ecosystems. *Environ. Sci. Technol.* **2001**, *35*, 3089−3098.
(42) Balogh, S. J.; Huang, Y. B.; Offerman, H. J.; Meyer, M. L.; Johnson, D. K. Episodes of elevated methylmercury concentrations in prairie streams. *Environ. Sci. Technol.* **2002**, *36*, 1665−1670.
(43) Winfrey, M. R.; Rudd, J. W. M. Environmental factors affecting the formation of methylmercury in low pH lakes. *Environ. Toxicol. Chem.* **1990**, *9*, 853−869.

Received for review November 30, 2005. Revised manuscript received March 29, 2006. Accepted April 6, 2006.

ES0524144