MINNESOTA POLLUTION CONTROL AGENCY

National Pollutant Discharge Elimination System (NPDES)/

State Disposal System (SDS) Permit Program Fact Sheet

Reissuance

MN0064190

Permittee:	City Of Otsego 13400 90th St NE Otsego, MN 55330-7259
Facility name:	Otsego East Wastewater Treatment Facility 5850 Randolph Ave NE Otsego, MN 55374-4904
Current permit expiration date:	March 31, 2025
Public comment period begins:	April 27, 2026
Public comment period ends:	June 26, 2026
Receiving water:	Crow River - Class 2Bg, 3, 4A, 4B, 5, 6 water
Permitting contact:	Ashley Wahl 504 Fairgrounds Rd Ste 200 Marshall MN 562581688 507-476-4264 ashley.wahl@state.mn.us

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Purpose and participation

Applicable statutes
This fact sheet has been prepared according to the 40 C.F.R. § 124.8 and 124.56 and Minn. R. 7001.0100, subp. 3, in regards to a draft National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permit to construct and/or operate wastewater treatment facilities and to discharge into waters of the State of Minnesota.

Purpose
This fact sheet outlines the principal issues related to the preparation of this draft permit and documents the decisions that were made in the determination of the effluent limitations and conditions of this permit.

The primary reason for reissuing the permit is due to permit expiration.

Public participation
You may submit written comments on the terms of the draft permit or on the Commissioner's preliminary determination. Your written comments must include the following:

1. A statement of your interest in the permit application or the draft permit.
2. A statement of the action you wish the Minnesota Pollution Control Agency (MPCA) to take, including specific references to sections of the draft permit that you believe should be changed.
3. The reasons supporting your position, stated with sufficient specificity as to allow the Commissioner to investigate the merits of your position.

You may also request that the MPCA Commissioner hold a public informational meeting. A public informational meeting is an informal meeting which the MPCA may hold to help clarify and resolve issues.

In accordance with Minn. R. 7000.0650 and Minn. R. 7001.0110, your petition requesting a public informational meeting must identify the matter of concern and must include the following: items one through three identified above; a statement of the reasons the MPCA should hold the meeting; and the issues you would like the MPCA to address at the meeting.

In addition, you may submit a petition for a contested case hearing. A contested case hearing is a formal hearing before an administrative law judge. Your petition requesting a contested case hearing must include a statement of reasons or proposed findings supporting the MPCA decision to hold a contested case hearing pursuant to the criteria identified in Minn. R. 7000.1900, subp. 1, and a statement of the issues proposed to be addressed by a contested case hearing and the specific relief requested. To the extent known, your petition should include a proposed list of witnesses to be presented at the hearing, a proposed list of publications, references, or studies to be introduced at the hearing, and an estimate of time required for you to present the matter at hearing.

You must submit all comments, requests, and petitions during the public comment period identified on page one of this notice. All written comments, requests, and petitions received during the public comment period will be considered in the final decisions regarding the permit. If the MPCA does not receive any written comments, requests, or petitions during the public comment period, the Commissioner or other MPCA staff as authorized by the Commissioner will make the final decision concerning the draft permit.

Comments, petitions, and/or requests must be submitted by the last day of the public comment period to:

Ashley Wahl
Minnesota Pollution Control Agency
504 Fairgrounds Rd Ste 200
Marshall MN 562581688

The permit will be reissued if the 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.

General information

The permit is based on an NPDES/SDS permit application dated September 30, 2024 and additional documents found in the administrative record.

Description of permitted facility

Existing Facility

The existing facility has a continuous discharge from SD 001. The facility is a Class A.

The facility is designed to treat:

- an average wet weather (AWW) flow of 1.1 million gallons per day (mgd);
- an average dry weather (ADW) flow of 0.9 mgd;
- a peak hourly wet weather (PHWW) flow of 3.294 mgd;
- a peak instantaneous wet weather (PIWW) flow of 4.032 mgd; and
- five-day biochemical oxygen demand (BOD_5) of 2,082 pounds per day (lb/d).

The facility consists of a bar screen, a parshall flume, a mechanical fine screen, a grit chamber, a flow splitter, three anaerobic/anoxic selector basins, three oxidation ditches, a flow splitter, chemical addition for phosphorus removal, two final clarifiers, ultraviolet disinfection, and effluent aeration.

Biosolids treatment consists of three aerated sludge storage tanks, sludge storage tanks, gravity belt thickening, centrifuge dewatering, a centrate storage tank, and Schwing Bioset reactor technology. Thickened waste activated sludge is received from the Otsego West WWTF for treatment. Biosolids are land applied and landfilled.

Proposed Facility

The proposed facility will have a continuous discharge from SD 001. The facility is a Class A.

The facility will be designed to treat:

- an AWW flow of 1.65 mgd;
- an ADW flow of 1.35 mgd; and
- BOD_5 of 3,124 lb/d.

The facility modifications will consist of an expansion of screening and UV disinfection capacity, equipping an additional existing oxidation ditch structure, and plumbing/HVAC/electrical/SCADA improvements.

Facility location

The facility is located in the ¼ of Section 01, Township 120 North, Range 26 West, City of Otsego, Wright County, Minnesota (latitude: 45.23694131, longitude: -93.53381650). The address for the facility is 5850 Randolph Ave NE Otsego, MN 55374-4904.

Outfall location

The outfall (SD 001) for the facility is located in the NW ¼ of Section 01, Township 120 North, Range 23 West, City of Otsego, Wright County, Minnesota. The outfall is approximately 0.34 miles south of the facility and has a continuous discharge to the Crow River - Class 2Bg, 3, 4A, 4B, 5, 6 water. The latitude and longitude of the outfall SD 001 is [45.23165171 and -93.5357949].

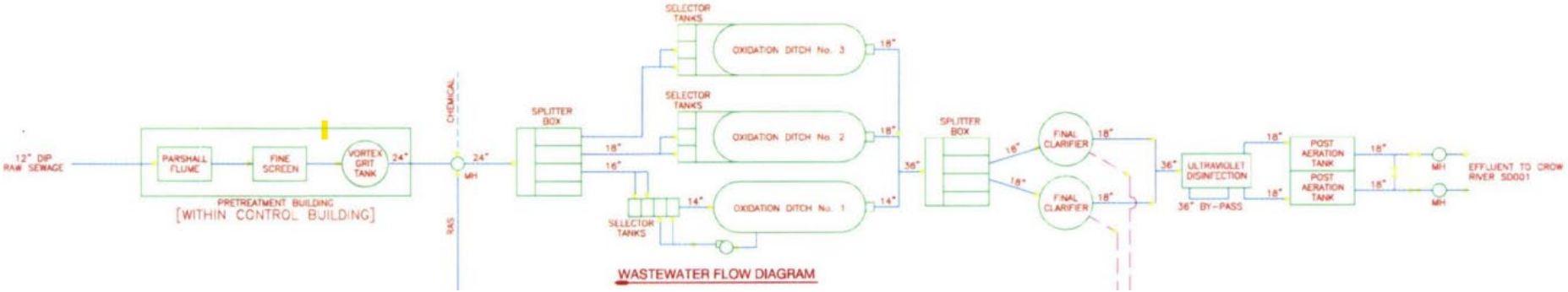
Map of permitted facility

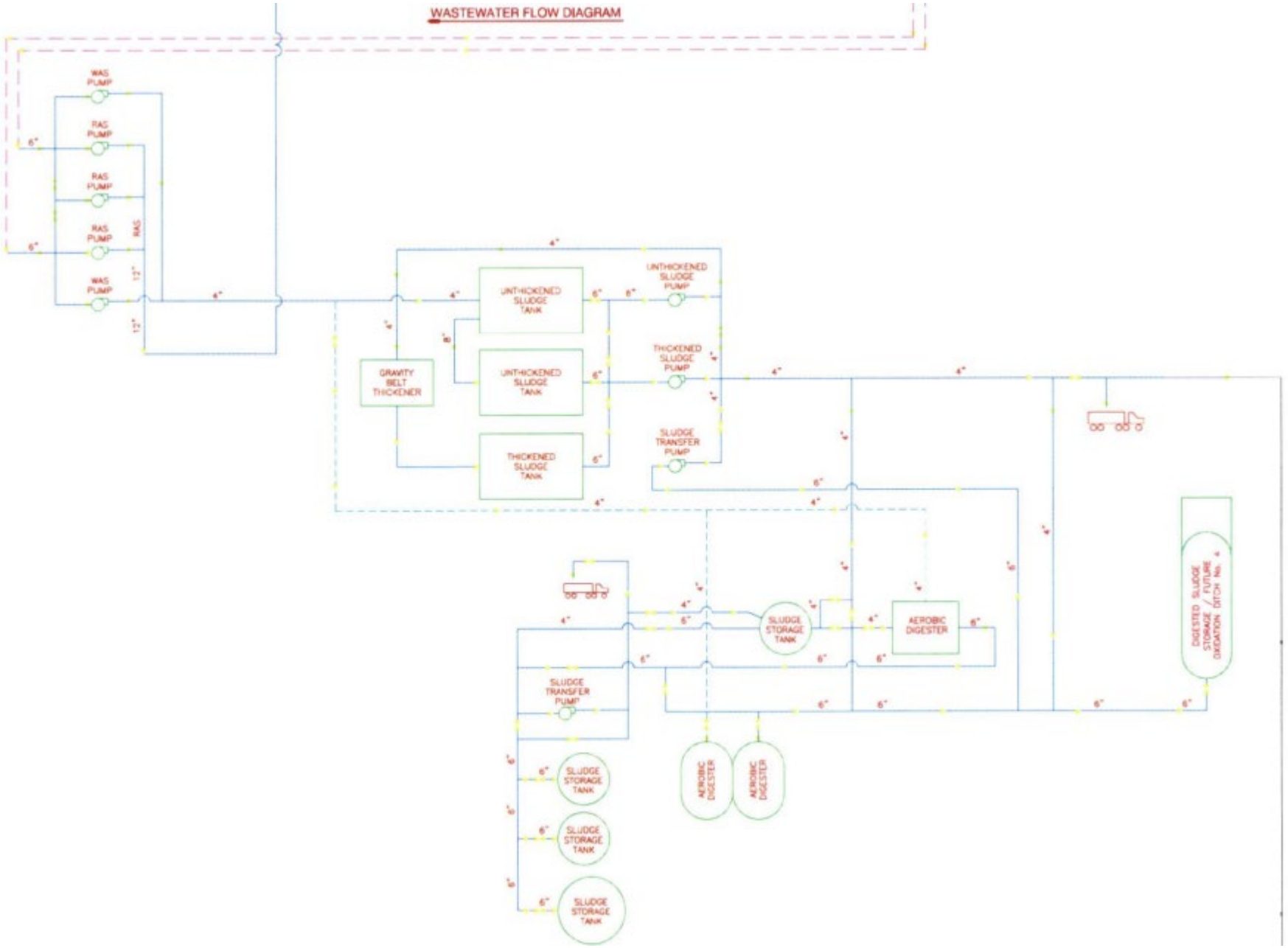
Facility Location Map
Otsego East WWTP: MN0064190
T120N, R26W, Section 01
Otsego, Wright County, Minnesota

Map produced by: MPCA Staff, 10/20/2025
Scale: 1:12,000

0 0.13 0.25 0.5 Miles

Flow schematics




WASTEWATER FLOW DIAGRAM
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UNTHICKENED SLUDGE TANK
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SLUDGE TRANSFER PUMP
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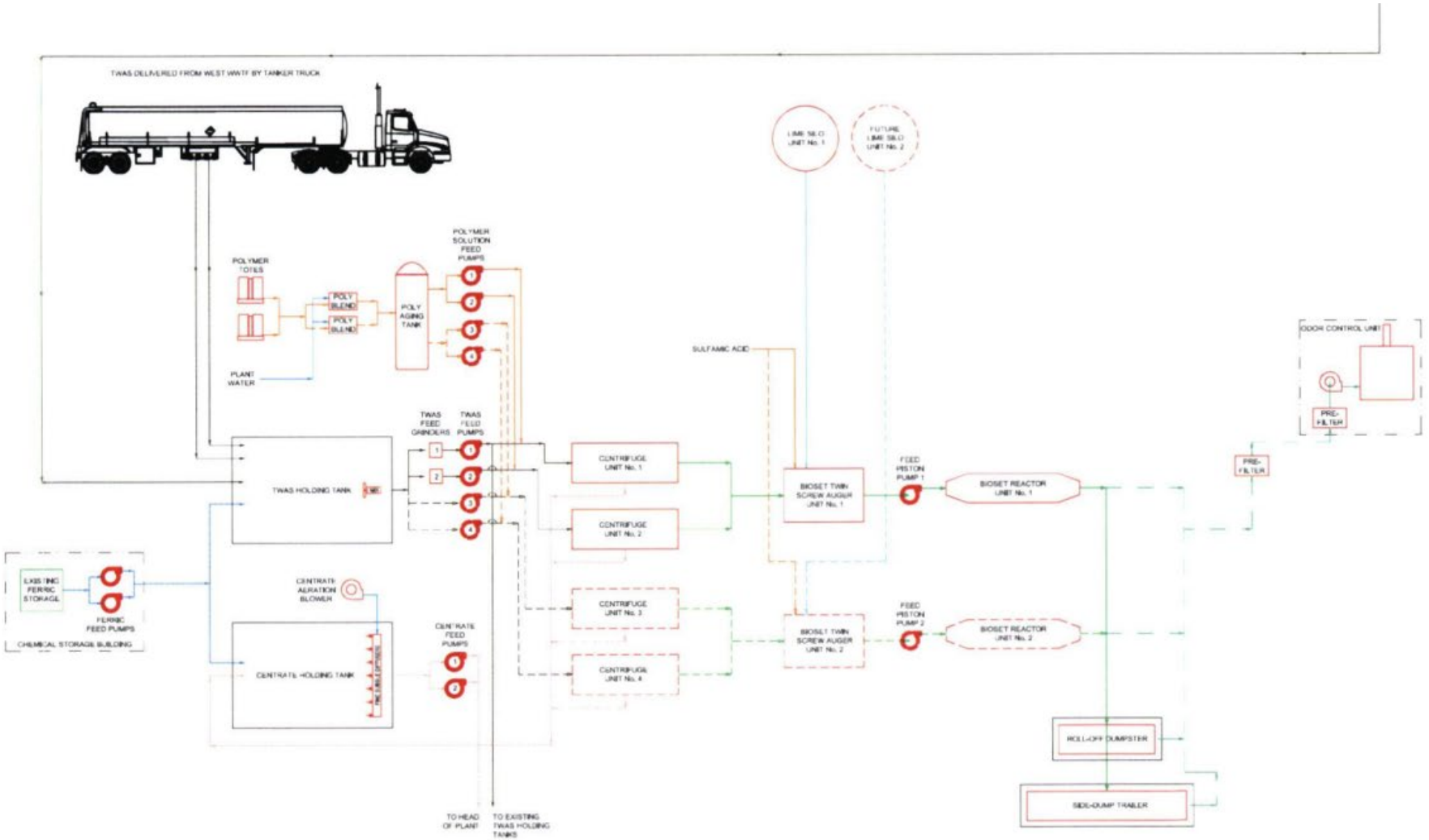

BIOSOLIDS PRODUCTION

Historical changes to facility or operation

During the last permit cycle, the Permittee completed upgrades to the biosolids process as proposed in the permit issued on June 10, 2021. The facility description in this document reflects the upgraded components and processes.

Significant changes from the previous permit

The draft permit contains the following changes from the last issued permit:

- **Limits and Monitoring and Submittal Phases**
    - Phase 1: Applies to the existing facility. Phase 1 is effective upon permit issuance.
    - Phase 2: Applies to the proposed facility as described in the facility description. Phase 2 limits become effective 90 days after initiation of operation of the proposed facility.
    - Limits and monitoring and report requirements without a phase assigned are effective from permit issuance throughout the life of the permit.
- **Waste Stream Station, WS 001:**
    - Mercury: Monitoring has increased from twice per month in the months of March, June, September, and December to twice per month in the months of January, March, May, July, September, and November.
- **Surface Discharge Station, SD 001:**
    - Mercury: Monitoring has increased from twice per month in the months of March, June, September, and December to twice per month in the months of January, March, May, July, September, and November.
    - Total Nitrogen: The sample type for total nitrogen has changed from a 24-hour composite sample to a calculation.
    - Phosphorus: Reporting in kilograms per day will now be required year-round instead of only when the limit is effective (June-September), as previously required.
    - Sulfate: Monitoring has been added at a frequency of once per quarter.
- **Requirements and Submittals:**
    - Mercury Management Plan (MMP): The preparation and submittal of an MMP is no longer required.
    - Voluntary Construction Schedule: The permit contains a voluntary construction schedule. Please refer to the Construction Schedule section of the permit for a full listing of the required actions and report submittals and the associated due dates.
    - Enhanced Nitrogen Management Plan (enhanced NMP): The permit requires the preparation and submittal of an enhanced NMP by 18 months after permit issuance.

Special Conditions

- Drinking Water Intake Requirements: This facility is upstream of a drinking water intake and therefore needs to meet the fecal coliform limit by disinfection prior to discharge year-round. The MPCA also recommends notifying all downstream users in the event of a spill, release, or discharge that could endanger human health, public drinking water supplies, recreational users, or the environment.

Significant Industrial Users (SIUs)

Currently, the facility does not have any SIUs.

Recent compliance history

A Compliance Evaluation Inspection (CEI) occurred on March 28, 2024, by Cara Omana and Lu Berry of the MPCA. The CEI consisted of a visual inspection of the facility and a discussion with facility staff. There was also a review of the monthly discharge monitoring reports (DMRs) for the time-period of July 2022 to March 2024.

Based on the results of the inspection, the following violation was noted:

- the one-year certification form, revised O&M manual certification of completion form, and as-built plans had not been submitted.

The Permittee completed the corrective actions (submittal of missing forms and information) on May 15, 2024.

Recent and existing monitoring tables

The tables below list the last 12 months of monitoring data submitted by the facility and the existing monitoring parameters.

Table 1: Surface Discharge Stations, SD 001, Recent monitoring history, November 2024 – November 2025

Parameter	Statistical Basis	Limit	Units	24-Nov	24-Dec	25-Jan	25-Feb	25-Mar	25-Apr	25-May	25-Jun	25-Jul	25-Aug	25-Sep	25-Oct	25-Nov
BOD, Carbonaceous 05 Day (20 Deg C)	CalMoAvg	15	mg/L		0.39	1	1.4	1.1								
BOD, Carbonaceous 05 Day (20 Deg C)	CalMoAvg	25	mg/L	0.48					0.92	0.72	1.5	0.5	0.78	0.52	0.46	0.76
BOD, Carbonaceous 05 Day (20 Deg C)	CalMoAvg	62	kg/d		0.73	2.02	2.53	2								
BOD, Carbonaceous 05 Day (20 Deg C)	CalMoAvg	104	kg/d	0.86					1.73	1.38	2.86	0.97	1.52	0.97	0.86	1.43
BOD, Carbonaceous 05 Day (20 Deg C)	MxCalWkAvg	25	mg/L		1.1	1.3	2.5	1.4								
BOD, Carbonaceous 05 Day (20 Deg C)	MxCalWkAvg	40	mg/L	1.1					1.4	1.2	3.1	0.53	1.1	0.7	1	1.5
BOD, Carbonaceous 05 Day (20 Deg C)	MxCalWkAvg	104	kg/d		2.1	2.6	4.47	2.7								
BOD, Carbonaceous 05 Day (20 Deg C)	MxCalWkAvg	166	kg/d	1.97					2.57	2.23	5.83	1.07	2.2	1.33	2.03	2.83
BOD, Carbonaceous 05 Day (20 Deg C) Percent Removal	MnCalMoAvg	85	%	99	99	99	99	99	99	99	99	100	99	100	100	99
Fecal Coliform, MPN or Membrane Filter 44.5C	CalMoGeoMn	200	#/100ml	1	1	1.2	1.2	1	1.1	1.3	0.1	1.2	1	1.1	1	1.1
Flow	CalMoAvg		mgd	0.471	0.501	0.505	0.506	0.492	0.494	0.502	0.508	0.501	0.514	0.508	0.496	0.502
Flow	CalMoMax		mgd	0.569	0.58	0.555	0.606	0.57	0.541	0.558	0.546	0.553	0.603	0.579	0.555	0.567

Parameter	Statistical Basis	Limit	Units	24-Nov	24-Dec	25-Jan	25-Feb	25-Mar	25-Apr	25-May	25-Jun	25-Jul	25-Aug	25-Sep	25-Oct	25-Nov
Flow	CalMoTot		Mgal	14.119	15.522	15.648	14.166	15.264	14.813	15.551	15.234	15.524	15.935	15.246	15.386	15.054
Mercury, Dissolved (as Hg)	CalMoAvg		ng/L		0			0			0			0		
Mercury, Dissolved (as Hg)	DailyMax		ng/L		0			0			0			0		
Mercury, Total (as Hg)	CalMoAvg	10	ng/L		0			0			0			0		
Mercury, Total (as Hg)	DailyMax	17	ng/L		0			0			0			0		
Nitrite Plus Nitrate, Total (as N)	CalMoAvg		mg/L	11	10	8.61	8.51	11	7.64	7.78	9.48	7.73	11	11	9.88	0.58
Nitrogen, Ammonia, Total (as N)	CalMoAvg		kg/d						0	0						
Nitrogen, Ammonia, Total (as N)	CalMoAvg		mg/L						0	0						
Nitrogen, Ammonia, Total (as N)	CalMoAvg	5	mg/L		0.48	1.1	2.12	0.08								
Nitrogen, Ammonia, Total (as N)	CalMoAvg	9.9	mg/L								0.7	0.04	0.11	0.1		
Nitrogen, Ammonia, Total (as N)	CalMoAvg	14	mg/L	0.05											0.87	9.6
Nitrogen, Ammonia, Total (as N)	CalMoAvg	21	kg/d		0.88	2.11	3.97	0.15								
Nitrogen, Ammonia, Total (as N)	CalMoAvg	41	kg/d								1.3	0.08	0.05	0.02		
Nitrogen, Ammonia, Total (as N)	CalMoAvg	58	kg/d	0.08											1.62	18.08
Nitrogen, Kjeldahl, Total	CalMoAvg		mg/L	1.14	0.74	1.52	2.73	1.8	1.06	1.41	1.21	0.87	1.02	1.16	1.31	23
Nitrogen, Total (as N)	CalMoAvg		mg/L	12	11	10	11	13	8.7	9.19	11	8.6	12	13	11	24
Oxygen, Dissolved	CalMoMin		mg/L	2					2.5	2.2	2.6	2.5	3.8	3.4	2.6	0.6

Parameter	Statistical Basis	Limit	Units	24-Nov	24-Dec	25-Jan	25-Feb	25-Mar	25-Apr	25-May	25-Jun	25-Jul	25-Aug	25-Sep	25-Oct	25-Nov
Oxygen, Dissolved	CalMoMin	6	mg/L		10.5	9.1	7.6	10.6								
pH	CalMoMax	9	SU	7.9	7.7	7.8	7.8	7.2	8.2	7.8	7.8	7.5	7.8	7.8	7.4	7.4
pH	CalMoMin	6	SU	7.3	7	7.1	7	7	7	6.9	7	6.8	7.4	6.7	7.2	7.2
Phosphorus, Total (as P)	12MoMovAve	1	mg/L	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4
Phosphorus, Total (as P)	12MoTotal	2,114	kg/yr	258.2	245.85	226.7	212.3	208.45	217.23	238.34	261.4	306	297.57	279.24	269.3	279.8
Phosphorus, Total (as P)	CalMoAvg		mg/L	0.23	0.08	0.11	0.15	0.2	0.38	0.65	0.73	1.19	0.3	0.3	0.33	0.4
Phosphorus, Total (as P)	CalMoAvg	3.5	kg/d								1.4	2.4	0.6	0.6		
Solids, Total Dissolved (TDS)	CalMoAvg		mg/L					1020						942		
Solids, Total Suspended (TSS)	CalMoAvg	30	mg/L	0.67	0.23	1.4	0.75	0	0.64	0.23	0.58	0.67	0.25	0.46	0	0
Solids, Total Suspended (TSS)	CalMoAvg	125	kg/d	1.2	0.45	2.7	1.3	0	1.2	0.45	1.2	1.3	0.52	0.92	0	0
Solids, Total Suspended (TSS)	MxCalWkAvg	45	mg/L	3	3	3	3.7	0	0	3	3	3	3	3	0	0
Solids, Total Suspended (TSS)	MxCalWkAvg	187	kg/d	5.9	5.8	5.9	7	0	0	6.1	5.7	5.9	6.5	5.7	0	0
Solids, Total Suspended (TSS) Percent Removal	MnCalMoAvg	85	%	99	99	99	99	99	99	99	99	99	99	99	99	99
Solids, Total Suspended (TSS), grab (Mercury)	CalMoAvg		mg/L		0			0			0			0		
Solids, Total Suspended (TSS), grab (Mercury)	DailyMax		mg/L		0			0			0			0		

Table 2: Influent Waste Stream Station, WS 001, Recent monitoring history, November 2024 – November 2025

Parameter	Statistical Basis	Limit	Units	24-Nov	24-Dec	25-Jan	25-Feb	25-Mar	25-Apr	25-May	25-Jun	25-Jul	25-Aug	25-Sep	25-Oct	25-Nov
BOD, Carbonaceous 05 Day (20 Deg C)	CalMoAvg		mg/L	244	192	193	218	206	196	186	174	159	178	175	203	217
BOD, Carbonaceous 05 Day (20 Deg C)	CalMoMax		mg/L	739	273	223	322	304	267	222	212	200	211	213	259	329
Flow	CalMoAvg		mgd	0.489	0.505	0.506	0.507	0.495	0.506	0.518	0.521	0.516	0.516	0.523	0.52	0.524
Flow	CalMoMax		mgd	0.553	0.564	0.57	0.597	0.598	0.568	0.596	0.582	0.552	0.574	0.604	0.581	0.593
Flow	CalMoTot		Mgal	14.668	15.66	15.697	14.209	15.35	15.181	16.052	15.623	15.995	15.982	15.701	16.107	15.724
Mercury, Total (as Hg)	CalMoAvg		ng/L		18			20.68			46			18		
Nitrite Plus Nitrate, Total (as N)	CalMoAvg		mg/L	0	0	0	0.12	0.06	0.06	0	0.2	0	0.1	0	0	0.07
Nitrogen, Kjeldahl, Total	CalMoAvg		mg/L	65	54	63	71	64	57	63	66	71	70	58	59	59
Nitrogen, Total (as N)	CalMoAvg		mg/L	65	54	63	71	64	57	63	66	71	70	58	59	59
pH	CalMoMax		SU	7.6	7.7	8.4	7.9	7.5	8	8.7	7.3	7.3	7.6	8	8.2	8.2
pH	CalMoMin		SU	6.7	6.7	7.2	6.6	6.7	6.1	6.9	6.1	6.5	6.8	6.8	7	5.5
Phosphorus, Total (as P)	CalMoAvg		mg/L	8.49	7.48	7.68	7.66	7.41	8.06	7.78	7.89	6.96	8.57	8.34	7.96	7.62
Precipitation	CalMoTot		in	2.63	0.89	0.24	0.72	1.96	2.43	4.7	7.48	5.4	2.91	2.52	1.81	0.95
Solids, Total Suspended (TSS)	CalMoAvg		mg/L	288	203	281	259	249	267	235	291	291	324	320	310	291
Solids, Total Suspended (TSS)	CalMoMax		mg/L	420	310	820	307	400	634	314	380	480	533	488	543	469

Receiving waters

Use classification

Minn. R. 7053.0205, subp. 8, authorizes the MPCA to develop WQBELs for point source discharges to waters of the state of Minnesota to protect receiving waters for the applicable use classifications.

The facility has a continuous discharge via surface discharge station SD 001 to the Crow River - Class 2Bg, 3, 4A, 4B, 5, 6 water
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.

Class 2 waters, aquatic life and recreation. Aquatic life and recreation includes all waters of the state that support or may support aquatic biota, bathing, boating, or other recreational purposes and for which quality control is or may be necessary to protect aquatic or terrestrial life or their habitats or the public health, safety, or welfare.

Class 3 waters, industrial consumption. Industrial consumption includes all waters of the state that are or may be used as a source of supply for industrial process or cooling water, or any other industrial or commercial purposes, and for which quality control is or may be necessary to protect the public health, safety, or welfare.

Class 4 waters, agriculture and wildlife. Agriculture and wildlife includes all waters of the state that are or may be used for any agricultural purposes, including stock watering and irrigation, or by waterfowl or other wildlife and for which quality control is or may be necessary to protect terrestrial life and its habitat or the public health, safety, or welfare.

Class 5 waters, aesthetic enjoyment and navigation. Aesthetic enjoyment and navigation includes all waters of the state that are or may be used for any form of water transportation or navigation or fire prevention and for which quality control is or may be necessary to protect the public health, safety, or welfare.

Class 6 waters, other uses and protection of border wars. Other uses includes all waters of the state that serve or may serve the uses in subparts 2 to 6 or any other beneficial uses not listed in this part, including without limitation any such uses in this or any other state, province, or nation of any waters flowing through or originating in this state, and for which quality control is or may be necessary for the declared purposes in this part, to conform with the requirements of the legally constituted state or national agencies having jurisdiction over such waters, or for any other considerations the agency may deem proper.

The beneficial use subclass designators "e," "g," and "m" are added to the Class 2 designator as specific additional designators. The additional subclass designators do not replace the Class 2 designator. All requirements for Class 2 stream and river habitats in Minn. R. 7050.0222 and 7052.0100 continue to apply in addition to requirements for Class 2Bg stream and river habitats in Minn. R. 7050.0222. These subclass designators are applied to lotic waters only.

There are no endangered or threatened species living in the receiving water.

More information on the classification of waters can be found in Minn. R. 7050.0140.

Existing permit effluent limits

Please see the Recent and Existing Monitoring Table for a summary of existing permit effluent limits.

Technology-Based Effluent Limits (TBELs)

Limits are applied pursuant to Minn. R. 7053.0215, subp. 1, for five-day carbonaceous biochemical oxygen demand ($CBOD_5$), $CBOD_5$ percent removal, total suspended solids (TSS), TSS percent removal, and potential of hydrogen (pH).

The $CBOD_5$ and the TSS monthly average limits are used to determine the calendar week average maximum limits.

Table 3: TBELs in existing permit for Phase 1.

Pollutant	Calendar month average	Calendar week maximum	Calendar month max/ Calendar month min	Minimum calendar month average
$CBOD_5$	25 mg/L[1] 104 kg/day[1]	40 mg/L[1] 166 kg/day[1]		
$CBOD_5$ % Removal				85%[2]
pH			9.0 SU[2] 6.0 SU[2]	
TSS	30 mg/L[2] 125 kg/day[2]	45 mg/L[2] 187 kg/day[2]		
TSS % Removal				85%[2]

[1] Limits apply April-November.
[2]Limits apply January-December.

Table 4: TBELs in existing permit for Phase 2.

Pollutant	Calendar month average	Calendar week maximum	Calendar month max/ Calendar month min	Minimum calendar month average
$CBOD_5$	25 mg/L[1] 156 kg/day[1]	40 mg/L[1] 250 kg/day[1]		
$CBOD_5$ % Removal				85%[2]
pH			9.0 SU[2] 6.0 SU[2]	
TSS	30 mg/L[2] 187 kg/day[2]	45 mg/L[2] 281 kg/day[2]		
TSS % Removal				85%[2]

[1] Limits apply April-November.
[2]Limits apply January-December.

Water Quality-Based Effluent Limits (WQBELs)

Limits for total phosphorus are applied pursuant to Minn. R. 7053.0205, subp. 8, and Minn. R. 7050.0222 to protect for lake and river eutrophication standards. Limits for $CBOD_5$ and ammonia nitrogen are applied based on 7053.0205, subp. 8, and 7050.0220 to protect for ammonia and/or DO standards. Limits for total mercury are based on 7053.0205, subp. 8, and 7050.0220.

Table 5: WQBELs in existing permit for Phase 1.

Pollutant	Calendar month average Phase	Maximum calendar week average	Daily maximum	Calendar Month Minimum	12 Month moving total
$CBOD_5$	15 mg/L [1] 62 kg/day[1]	25 mg/L[1] 104 kg/day[1]			

Pollutant	Calendar month average Phase	Maximum calendar week average	Daily maximum	Calendar Month Minimum	12 Month moving total
Nitrogen, Ammonia, Total (as N)	5 mg/L[1] 21 kg/day[1]				
	9.9 mg/L[2] 41 kg/day[2]				
	14 mg/L[3] 58 kg/day[3]				
Oxygen, Dissolved				6.0 mg/L[1]	
Phosphorus, Total (as P)	3.5 kg/day[2]				2,114 kg/yr[4]
Mercury, Total (as Hg)	10.0 ng/L[4]		17.0 ng/L[4]		

[1]Limit applies December-March.
[2]Limit applies June-September.
[3]Limit applies October-November.
[4]Limit applies January-December.

Table 6: WQBELs in existing permit for Phase 2.

Pollutant	Calendar month average Phase 2	Maximum calendar week average	Daily Maximum	Calendar Month Minimum	12 Month moving total
$CBOD_5$	15 mg/L [1] 93 kg/day[1]	25 mg/L[1] 156 kg/day[1]			
Nitrogen, Ammonia, Total (as N)	5 mg/L[1] 31 kg/day[1]				
	9.9 mg/L[2] 62 kg/day[2]				
	14 mg/L[3] 87 kg/day[3]				
Oxygen, Dissolved				6.0 mg/L[1]	
Phosphorus, Total (as P)	3.5 kg/day[2]				2,114 kg/yr[4]
Mercury, Total (as Hg)	10.0 ng/L[4]		17.0 ng/L[4]		

[1]Limit applies December-March.
[2]Limit applies June-September.
[3]Limit applies October-November.
[4]Limit applies January-December.

State Discharge Restrictions (SDRs)

SDRs are not considered WQBELs. The MPCA requires secondary treatment or the equivalent as a minimum to protect water quality and maintain in-stream water quality standards (WQS)[1]. Therefore, the restrictions are generally stringent enough to protect WQS, except where there is inadequate dispersion, or dilution at applicable minimum stream flows.

The 200 organisms per 100 milliliters (orgs/100mL) for fecal coliform is based on Minn. R. 7053.0215, subp.1. The 1.0 mg/L limit for total phosphorus is based on Minn. R. 7053.0255, subp. 4.

[1] Minnesota Regulation WPC 15, Criteria for the Classification of the Interstate Waters of the State and the Establishment of Standard of Quality and Purity. Minnesota Pollution Control Agency, April 8, 1969.

Table 7: SDRs in existing permit

Pollutant	Calendar month average	Calendar month geometric mean
Fecal Coliform, MPN or Membrane Filter 44.5 C		200 orgs/100mL[1]
Phosphorus, Total (as P)	1.0 mg/L[1]	

[1] Limit applies January-December

Proposed permit effluent limits

Limits and monitoring requirements for surface water discharges are set in consideration of Minnesota state water discharge criteria also known as SDRs. SDRs are based on Minn. R. ch. 7053, Minnesota state WQBELs for the receiving water use classification, federal TBEL limits applicable to specific discharge types, or a combination of these limits to regulate the discharge of wastewater. When limits overlap for a particular pollutant, the most restrictive limit is applied in the permit. In addition, MPCA may derive limits that are specific to a particular discharge. These limits may be based on toxicity studies, professional judgment analysis, technology-based standards, and in some instances, standards developed by other U.S. states or regulatory agencies.

Waste stream stations

Limits and monitoring requirements for waste streams are assigned to ascertain their impact on wastewater treatment processes, contributions to other treatment facilities, and/or land treatment/discharge sites. Requirements are based on Minnesota Pollution Control Agency (MPCA) sampling policies and/or state health requirements.

This permit contains one waste stream station, WS 001, for influent monitoring and reporting purposes. The proposed limit and monitoring requirements for the waste stream station are found in the limits and monitoring table in the accompanying draft permit document.

Surface water discharge stations

The monitoring frequencies for outfall SD 001 are based on MPCA guidelines for Class A municipal discharges that are greater than one million gallons per day. The monitoring frequencies are set to achieve sufficient data to determine compliance with established limits. The proposed limit and monitoring requirements for the surface discharge stations are found in the limits and monitoring table in the accompanying draft permit document.

Technology-Based Effluent Limits (TBELs)

Limits are applied pursuant to Minn. R. 7053.0215, subp. 1, for $CBOD_5$ percent removal, TSS, TSS percent removal, and potential of hydrogen (pH).

Maximum calendar week average limits are calculated based on the facility type.

- Mechanical facilities' limits are calculated using an equation that takes into consideration the facility's average wet weather design flow, the calendar month average concentration limits and a conversion factor.

Table 8: TBELs in proposed permit for Phase 1.

Pollutant	Calendar month average	Calendar week maximum	Calendar month max/ Calendar month min	Minimum calendar month average
$CBOD_5$	25 mg/L[1] 104 kg/day[1]	40 mg/L[1] 166 kg/day[1]		
$CBOD_5$ % Removal				85%[2]
pH			9.0 SU[2] 6.0 SU[2]	
TSS	30 mg/L[2] 125 kg/day[2]	45 mg/L[2] 187 kg/day[2]		
TSS % Removal				85%[2]

[1] Limits apply April-November.
[2]Limits apply January-December.

Table 9: TBELs in proposed permit for Phase 2.

Pollutant	Calendar month average	Calendar week maximum	Calendar month max/ Calendar month min	Minimum calendar month average
$CBOD_5$	25 mg/L[1] 156 kg/day[1]	40 mg/L[1] 250 kg/day[1]		
$CBOD_5$ % Removal				85%[2]
pH			9.0 SU[2] 6.0 SU[2]	
TSS	30 mg/L[2] 187 kg/day[2]	45 mg/L[2] 281 kg/day[2]		
TSS % Removal				85%[2]

[1] Limits apply April-November.
[2]Limits apply January-December.

Water Quality-Based Effluent Limits (WQBELs)

Minn. R. 7053.0205, subp. 8, authorizes the MPCA to develop WQBELs for point source discharges to waters of the state of Minnesota to protect receiving waters for the applicable use classifications.

Minn. R. 7050.0155 requires that all waters must maintain a level of water quality that provides for the attainment and maintenance of the water quality standards of downstream waters, including the waters of another state.

WQBELs for total residual chlorine and phosphorus (Minn. R. 7053.0255) are based on Class 2B waters (Minn. R. 7050.0222). See the 'Explanation of Total Phosphorus Review' section below for additional information regarding the development of the total phosphorus limit(s).

The quality of Class 2B surface waters shall be such as to permit the propagation and maintenance of a healthy community of cool or warm water aquatic biota, and their habitats. These waters shall be suitable for aquatic recreation of all kinds, including bathing, for which the waters may be usable. This class of surface water is not protected as a source of drinking water (Minn. R. 7050.0222, subp. 4).

The beneficial use subclass designators "e," "g," and "m" are added to the Class 2 designator as specific additional designators. The additional subclass designators do not replace the Class 2 designator. All requirements for Class 2 stream and river habitats in Minn. R. 7050.0222 and 7052.0100 continue to apply in addition to requirements for Class 2Bg stream and river habitats in Minn. R. 7050.0222. These subclass designators are applied to lotic waters only.

Limits are applied pursuant to Minn. R. 7050.0220 for the seasonal ammonia limits. Limits for dissolved oxygen are applied pursuant to Minn. R. 7053.0205, subp. 8. The 15 mg/L limit for $CBOD_5$ is applied pursuant to and Minn. R. 7053.0205, subp.8, and Minn. R. 7050.0220 for ammonia and/or DO standards. The limits for TP are applied pursuant to Minn. R. 7053.0205, subp. 8, and Minn. R. 7050.0222 to protect for lake and/or river eutrophication standards.

Table 10: WQBELs in proposed permit for Phase 1.

Pollutant	Calendar month average Phase	Maximum calendar week average	Daily maximum	Calendar Month Minimum	12 Month moving total
$CBOD_5$	15 mg/L [1] 62 kg/day[1]	25 mg/L[1] 104 kg/day[1]			
Nitrogen, Ammonia, Total (as N)	5 mg/L[1] 21 kg/day[1]				
	9.9 mg/L[2] 41 kg/day[2]				
	14 mg/L[3] 58 kg/day[3]				
Oxygen, Dissolved				6.0 mg/L[1]	
Phosphorus, Total (as P)	3.5 kg/day[2]				2,114 kg/yr[4]
Mercury, Total (as Hg)	10.0 ng/L[4]		17.0 ng/L[4]		

[1]Limit applies December-March.
[2]Limit applies June-September.
[3]Limit applies October-November.
[4]Limit applies January-December.

Table 11: WQBELs in proposed permit for Phase 2.

Pollutant	Calendar month average Phase 2	Maximum calendar week average	Daily Maximum	Calendar Month Minimum	12 Month moving total
$CBOD_5$	15 mg/L [1] 93 kg/day[1]	25 mg/L[1] 156 kg/day[1]			
Nitrogen, Ammonia, Total (as N)	5 mg/L[1] 31 kg/day[1]				
	9.9 mg/L[2] 62 kg/day[2]				
	14 mg/L[3] 87 kg/day[3]				
Oxygen, Dissolved				6.0 mg/L[1]	
Phosphorus, Total (as P)	3.5 kg/day[2]				2,114 kg/yr[4]
Mercury, Total (as Hg)	10.0 ng/L[4]		17.0 ng/L[4]		

[1]Limit applies December-March.
[2]Limit applies June-September.
[3]Limit applies October-November.
[4]Limit applies January-December.

State Discharge Restrictions (SDRs)

SDRs are not considered WQBELs. The MPCA requires secondary treatment or the equivalent as a minimum to protect water quality and maintain in-stream WQS. Therefore, the restrictions are generally stringent enough to protect WQS, except where there is inadequate dispersion, or dilution at applicable minimum stream flows.

The 200 organisms per 100 milliliters (orgs/100mL) for fecal coliform is based on Minn. R. 7053.0215, subp. 1. The 1.0 mg/L limit for total phosphorus is based on Minn. R. 7053.0255, subp. 4.

[1] Minnesota Regulation WPC 15, Criteria for the Classification of the Interstate Waters of the State and the Establishment of Standard of Quality and Purity. Minnesota Pollution Control Agency, April 8, 1969.

Table 12: SDRs in proposed permit

Pollutant	12-month moving average	Calendar month geometric mean
Fecal Coliform, MPN or Membrane Filter 44.5 C		200 orgs/100mL[1]
Phosphorus, Total (as P)	1.0 mg/L[1]	

[1]Limit applies January-December

Summary of proposed effluent limit and monitoring requirements

The following table lists the all the proposed limits and monitoring requirements for station SD 001.

Table 13: Proposed Effluent Limit and Monitoring Requirements

		Discharge limitations							Monitoring requirements		
Phase	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**
Phase 1	BOD, Carbonaceous 05 Day (20 Deg C)	104 calendar month average	166 maximum calendar week average	kilograms per day		25 calendar month average	40 maximum calendar week average	milligrams per liter	3 times per week	24-Hour Flow Composite	Apr-Nov
Phase 1	BOD, Carbonaceous 05 Day (20 Deg C)	62 calendar month average	104 maximum calendar week average	kilograms per day		15 calendar month average	25 maximum calendar week average	milligrams per liter	3 times per week	24-Hour Flow Composite	Dec-Mar
Phase 2	BOD, Carbonaceous 05 Day (20 Deg C)	156 calendar month average	250 maximum calendar week average	kilograms per day		25 calendar month average	40 maximum calendar week average	milligrams per liter	3 times per week	24-Hour Flow Composite	Apr-Nov
Phase 2	BOD, Carbonaceous 05 Day (20 Deg C)	93 calendar month average	156 maximum calendar week average	kilograms per day		15 calendar month average	25 maximum calendar week average	milligrams per liter	3 times per week	24-Hour Flow Composite	Dec-Mar
All	BOD, Carbonaceous 05 Day (20 Deg C) Percent Removal				85 minimum calendar month average			percent	once per month	Calculation	Jan-Dec
All	Fecal Coliform, MPN or Membrane Filter 44.5C					200 calendar month geometric mean		organisms per 100 milliliter	3 times per week	Grab	Jan-Dec
All	Flow		Monitor only. calendar month total	million gallons		Monitor only. calendar month average	Monitor only. calendar month maximum	million gallons per day	once per day	Measurement, Continuous	Jan-Dec

		Discharge limitations							Monitoring requirements		
Phase	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**
All	Mercury, Dissolved (as Hg)						Monitor only. calendar month maximum	nanograms per liter	twice per month	Grab	Jan, Mar, May, Jul, Sep, Nov
All	Mercury, Total (as Hg)					10.0 calendar month average	17.0 daily maximum	nanograms per liter	twice per month	Grab	Jan, Mar, May, Jul, Sep, Nov
All	Nitrite Plus Nitrate, Total (as N)					Monitor only. calendar month average		milligrams per liter	once per month	24-Hour Flow Composite	Jan-Dec
Phase 1	Nitrogen, Ammonia, Total (as N)	41 calendar month average		kilograms per day		9.9 calendar month average		milligrams per liter	3 times per week	24-Hour Flow Composite	Jun-Sep
Phase 1	Nitrogen, Ammonia, Total (as N)	21 calendar month average		kilograms per day		5 calendar month average		milligrams per liter	3 times per week	24-Hour Flow Composite	Dec-Mar
Phase 1	Nitrogen, Ammonia, Total (as N)	58 calendar month average		kilograms per day		14 calendar month average		milligrams per liter	3 times per week	24-Hour Flow Composite	Oct-Nov
Phase 2	Nitrogen, Ammonia, Total (as N)	31 calendar month average		kilograms per day		5 calendar month average		milligrams per liter	3 times per week	24-Hour Flow Composite	Dec-Mar
Phase 2	Nitrogen, Ammonia, Total (as N)	62 calendar month average		kilograms per day		9.9 calendar month average		milligrams per liter	3 times per week	24-Hour Flow Composite	Jun-Sep

		Discharge limitations							**Monitoring requirements**		
Phase	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**
Phase 2	Nitrogen, Ammonia, Total (as N)	87 calendar month average		kilograms per day		14 calendar month average		milligrams per liter	3 times per week	24-Hour Flow Composite	Oct-Nov
All	Nitrogen, Ammonia, Total (as N)	Monitor only. calendar month average		kilograms per day		Monitor only. calendar month average		milligrams per liter	3 times per week	24-Hour Flow Composite	Apr-May
All	Nitrogen, Kjeldahl, Total					Monitor only. calendar month average		milligrams per liter	once per month	24-Hour Flow Composite	Jan-Dec
All	Nitrogen, Total (as N)					Monitor only. calendar month average		milligrams per liter	once per month	Calculation	Jan-Dec
All	Oxygen, Dissolved				6.0 calendar month minimum			milligrams per liter	once per day	Grab	Dec-Mar
All	Oxygen, Dissolved				Monitor only. calendar month minimum			milligrams per liter	once per day	Grab	Apr-Nov
All	pH				6.0 calendar month minimum		9.0 calendar month maximum	standard units	once per day	Grab	Jan-Dec

		Discharge limitations							**Monitoring requirements**		
Phase	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**
All	Phosphorus, Total (as P)	Monitor only. calendar month average		kilograms per day		Monitor only. calendar month average		milligrams per liter	3 times per week	24-Hour Flow Composite	Oct-May
All	Phosphorus, Total (as P)		2114 12-month moving total	kilograms per year		1.0 12-month moving average		milligrams per liter	once per month	Calculation	Jan-Dec
All	Phosphorus, Total (as P)	3.5 calendar month average		kilograms per day		Monitor only. calendar month average		milligrams per liter	once per week	24-Hour Flow Composite	Jun-Sep
All	Solids, Total Dissolved (TDS)					Monitor only. calendar month average		milligrams per liter	once per month	24-Hour Flow Composite	Mar, Sep
Phase 1	Solids, Total Suspended (TSS)	125 calendar month average	187 maximum calendar week average	kilograms per day		30 calendar month average	45 maximum calendar week average	milligrams per liter	3 times per week	24-Hour Flow Composite	Jan-Dec
Phase 2	Solids, Total Suspended (TSS)	187 calendar month average	281 maximum calendar week average	kilograms per day		30 calendar month average	45 maximum calendar week average	milligrams per liter	3 times per week	24-Hour Flow Composite	Jan-Dec
All	Solids, Total Suspended (TSS) Percent Removal				85 minimum calendar month average			percent	once per month	Calculation	Jan-Dec

		Discharge limitations							Monitoring requirements		
Phase	**Parameter**	**Quantity /Loading avg.**	**Quantity /Loading max.**	**Quantity /Loading units**	**Quality /Conc. min.**	**Quality /Conc. avg.**	**Quality /Conc. max.**	**Quality/ Conc. units**	**Frequency**	**Sample type**	**Effective period**
All	Solids, Total Suspended (TSS), grab (Mercury)						Monitor only. calendar month maximum	milligrams per liter	twice per month	Grab	Jan, Mar, May, Jul, Sep, Nov
All	Sulfate, Total (as SO4)						Monitor only. calendar month maximum	milligrams per liter	once per quarter	24-Hour Flow Composite	Mar, Jun, Sep, Dec

Explanation of total phosphorus limit review

Total phosphorus WQBEL

Federal law [40 C.F.R. § 122.44(d)] restricts mass increases of pollutants upstream of an impaired water and requires WQBEL(s) to be established for pollutant parameters where it is found that a NPDES/SDS discharger has the reasonable potential (RP) to cause or contribute to an excursion above a state WQS. An effluent limits analysis was completed to determine if the facility's discharge has RP to cause or contribute to an exceedance of a state WQS or contribute to any downstream impairment. As a result of the analysis, total phosphorus effluent limits were established for the facility to ensure protection of downstream waters and to comply with Lake Eutrophication Standards and River Eutrophication Standards. For additional details regarding the effluent limits analysis, please see the "*Phosphorus Effluent Review for the Greater Crow River Watershed v1.17."* A copy of the MPCA memorandum is available upon request.

Lake Eutrophication Standards

The TP effluent limit assigned to the facility to protect for eutrophication impairment in Lake Pepin is 2,114 kg/yr as a 12-month moving total.

River Eutrophication Standards (RES)

The permit includes a proposed monthly total phosphorus WQBEL of 3.5 kg/day, June - September, to protect for eutrophication impairments in the Crow River and is consistent with river RES. The WQBEL of 3.5 kg/day is based off a five-year long-term average wasteload allocation (WLA) of 1.7 kg/day, June-September. The long-term average WLA of 1.7 kg/day is based on achieving RES 125 µg/L in the Crow River. The MPCA projects that by complying with the 3.5 kg/day monthly limit, the facility will have to average 1.7 kg/day, June-September, over a five-year/long-term period. After the five-year permit cycle, MPCA will evaluate the facility's discharge and the downstream water quality, and if necessary, adjust the facility's 3.5 kg/day monthly average limit down to ensure that the long-term average WLA of 1.7 kg/day is achieved during the June-September effective period.

Reasonable potential for chemical specific pollutants [40 C.F.R. § 122.44 (d)(1)]

Background for reasonable potential review.

The facility discharges to (the) Crow River - Class 2Bg, 3, 4A, 4B, 5, 6 water.

Federal regulations require the MPCA to evaluate the discharge to determine whether the discharge has the reasonable potential (RP) to cause or contribute to a violation of water quality standards. The MPCA must use acceptable technical procedures, accounting for variability (coefficient of variation, or CV), when determining whether the effluent causes, has the reasonable potential to cause, or contribute to an excursion of an applicable water quality standard. Projected effluent quality (PEQ) derived from effluent monitoring data is compared to Preliminary Effluent Limits (PELs) determined from mass balance inputs. Both determinations account for effluent variability. Where PEQ exceeds the PEL, there is reasonable potential to cause or contribute to a water quality standards excursion. When RP is indicated, the permit must contain a WQBEL for that pollutant.

Pollutants of concern

Mercury

This permit contains requirements for mercury monitoring and limits. These requirements were added in response to the EPA approval of the Minnesota statewide Mercury Total Maximum Daily Load (TMDL) plan. More information on the TMDL can be found on the MPCA's website at https://www.pca.state.mn.us/business-with-us/statewide-mercury-tmdl. Specific mercury monitoring requirements are found in the Waste Stream Stations and/or Surface Discharge Stations sections of this permit. Those requirements include sampling for TSS via a grab sample taken at the same time as the total and dissolved mercury grab samples are taken.

The mercury monitoring at outfall SD 001 is consistent with the MPCA *Permitting Strategy for Addressing Mercury in Municipal and Industrial Wastewater Permits* (2013) located on the MPCA's website at https://www.pca.state.mn.us/sites/default/files/wq-wwprm1-16.pdf.

Nitrogen

Nitrogen is a pollutant that can negatively impact the quality of Minnesota's water resources, including water used for drinking. Studies have shown that nitrogen in lakes and streams has a toxic effect on aquatic life such as fish. Like phosphorus, nitrogen is a nutrient that promotes algae and aquatic plant growth, often resulting in decreased water clarity and oxygen levels. The Statewide Nutrient Reduction Strategy (https://www.pca.state.mn.us/air-water-land-climate/reducing-nutrients-in-waters) identifies goals and milestones for nitrogen reductions for both point and non-point nitrogen sources in Minnesota. To gain a better understanding of the current nitrogen concentrations and loadings received by and discharged from the facility, effluent nitrogen monitoring is required in accordance with Minn. Stat. § 115.03.

The permit includes influent and effluent monitoring for total nitrogen, total nitrite plus nitrate-nitrogen, and total Kjeldahl nitrogen at a frequency of once per month. The permit includes effluent monitoring for total dissolved solids at a frequency of once per month in the months of March and September. The permit also contains seasonal nitrogen ammonia limits.

This nitrogen monitoring continues to provide the data necessary to develop a better understanding of the total nitrogen concentrations and loadings that are discharged. The changes and/or increases in total nitrogen monitoring in wastewater permits as a result of the *Statewide Nutrient Reduction Strategy* are outlined in the *Minnesota NPDES Wastewater Permit Nitrogen Monitoring Implementation Plan* document located on the MPCA's website at https://www.pca.state.mn.us/sites/default/files/wq-wwprm1-22.pdf.

(Voluntary) Nitrogen Reduction Strategy Optimization Incentive

An optimization incentive is being offered to all NPDES/SDS permitted wastewater treatment facilities (WWTFs) to encourage WWTFs to start making nitrogen reductions now. In return, pending successful rulemaking, implementation of a potential state discharge restriction limit (SDR) may be deferred within their individual permits.

Rulemaking efforts will be undertaken to adopt a 10 mg/L nitrogen SDR for all major municipal WWTFs, high concentration minor municipal WWTFs, and high concentration industrial dischargers. Permittees will need to optimize their existing plant operations to achieve a 15 mg/L total nitrogen concentration or lower, as a 12-month moving average, for a 12-month period, during the Nitrogen Reduction Strategy's phase 1 efforts (now until adoption of an SDR).

The success of optimization efforts will be determined post-SDR adoption during the effluent limit review process. The review will factor in the following:

- Beginning April 1, 2024, if the facility's effluent concentration is already at or below 15 mg/L, as a 12-month rolling average, that facility will need to operate below their existing levels consistently for a minimum of 12 months.
- Once facilities have started to optimize their wastewater treatment to reduce their nitrogen concentrations, they should continue optimization efforts until the SDR limit is applied in their permits.

The following should be noted:

- The SDR limit is proposed for all major municipal and high concentration industrial dischargers; if you are not currently a major facility but may be prior to SDR adoption, you may still have the opportunity to participate in this optimization incentive so long as the optimization period is at least 12-months long.
- The optimization incentive is included in the rulemaking effort for the SDR limit however, the deferral of the SDR limit for another permit cycle is dependent on successful rulemaking efforts. If this incentive is not successful during SDR rulemaking efforts, the SDR limit will not be able to be deferred an additional permit cycle.

Enhanced Nitrogen Management Plan

The permittee is required to prepare and submit an enhanced NMP.

This permit requires the development of an enhanced Nitrogen Management Plan due to the facility causing, or having a reasonable potential to cause or contribute, to nitrate concentrations in downstream waterbodies causing biological stress to aquatic organisms. Specific nitrogen monitoring requirements are detailed in the limits and monitoring section of this permit. Information gained through the enhanced NMP process can be used to reduce influent and effluent nitrogen concentrations and loads. The Permittee shall consider selecting activities based on the potential of those activities to reduce influent and effluent nitrogen loadings as part of its nitrogen management strategy.

The Permittee should refer to the corresponding section of their permit for further direction and information in completing their NMP.

Phosphorus

Phosphorus is a common constituent in many wastewater discharges and a pollutant that has the potential to negatively impact the quality of Minnesota's lakes, wetlands, rivers, and streams. Phosphorus promotes algae and aquatic plant growth, often resulting in decreased water clarity and oxygen levels. In addition to creating general aesthetic problems, these conditions can also impact a water body's ability to support healthy fish and other aquatic species. Therefore, phosphorus discharges are being carefully evaluated throughout the state.

The Permittee is required to meet a phosphorus limit as specified in the limits and monitoring section of this permit. Although the Permittee is not required to prepare a Phosphorus Management Plan, elimination or reduction of phosphorus at the source will decrease the influent load to the wastewater treatment facility and has the potential to improve treatment efficiency and reduce treatment costs. The MPCA strongly encourages the Permittee to identify and eliminate/reduce sources of phosphorus to, and optimize phosphorus management within, the facility.

All phosphorus samples must be analyzed by a certified laboratory and the data submitted to the MPCA. If the laboratory would like more information about becoming certified, please call the Environmental Laboratory Certification Unit at 612-676-5200. Samples must be collected in a clean bottle (preferably cleaned by a certified laboratory) that was not washed with phosphate detergent. Also, a sulfuric acid preservative must be added immediately after the sample is collected, and it must be stored at four degrees Celsius until analysis. If a contract laboratory is used, the bottle and preservative would typically be provided by the laboratory analyzing the sample.

Sulfate

Sulfate monitoring for protection of wild rice waters

In 1973 Minnesota adopted a sulfate water quality standard to protect wild rice. In a February 16, 2022, letter to the MPCA, the US Environmental Protection Agency (EPA) stated their expectations that MPCA issued NPDES/SDS permits are required to comply with the federally-approved sulfate water quality standard and Minnesota Rules.

In order to comply with the total sulfate water quality standard, MPCA is including total sulfate limits (if applicable) and monitoring requirements in permits that are upstream of waters used for the production of wild rice. There are currently approximately 2400 waters within the state of Minnesota have been identified as waters used for the production of wild rice (this includes the 35 waters identified on the 303(d) impaired waters list).

Total Suspended Solids (TSS)

Suspended solids may include both organic and inorganic matter. The inorganic compounds may include sand, silt, clay and precipitated metals. The organic fraction may include such materials as wood fibers and unsettled biomass from biological treatment systems.

These solids may settle out rapidly and bottom deposits are often a mixture of both organic and inorganic solids. Solids may be suspended in water for a time and then settle to the bed of the stream or lake. They may be inert, slowly biodegradable materials, or rapidly decomposable substances. While in suspension they increase the turbidity of the water, reduce light penetration, and impair the photosynthetic activity of aquatic plants. Suspended solids may kill fish and shellfish by causing abrasive injuries, by clogging gills and respiratory passages, by screening out light and by promoting and maintaining the development of noxious conditions through oxygen depletion. Suspended solids also reduce the recreational value of water.

The outfall monthly average 30 mg/L TSS limit is more protective than the 32 mg/L reach-specific TSS standard determined for the South Metro Mississippi River (MPCA, 2015). The South Metro Mississippi River Total Suspended Solids TMDL contains a WLA for the facility; the daily mass limit of 125 kg/day is applied at SD 001 in the permit.

Impairments

A recent impaired waters review was completed on October 8, 2025. The following information is a summary of the recent impaired waters review; the full impaired waters review memo is available upon request.

The facility discharges to the North Fork of the Crow River. There are 34 downstream impairments for the following parameters: aluminum, benthic macroinvertebrates bioassessments, fecal coliform, fish bioassessments, mercury in fish tissue, mercury in water column, nutrients, PCBs in fish tissue, perfluorooctane sulfonate in fish tissue (PFOS-F) and water (PFOS-W), sulfate, total suspended solids (TSS), and turbidity.

Wasteload Allocations (WLAs)

Statewide Mercury TMDL - Mercury in Fish Tissue and Mercury in Water Column Impairments

- Mercury limits, monitoring, and MMP requirements in the permit are in accordance with *MPCA Permitting Strategy for Addressing Mercury in Municipal and Industrial Wastewater Permits* (2013).

North Fork Crow River Watershed TMDL 2023

Total Phosphorus

- WLA = 3.66 pounds per day (lbs/day) (page 88, Table 43)
- The WLA is based on the AWW design flow of 1.1 mgd.
- Note 1 at the end of the table is applicable to this facility. 1. RES Effluent limits applicable June-September = WLA X 2.1 variability multiplier.
- The current permit includes total phosphorus limits of 1.0 mg/L 12 month moving average, 3.5 kg/day calendar moth average, and 2114 kg/yr 12 month moving total.

North Fork Crow and Lower Crow Bacteria, Turbidity, and Low Dissolved Oxygen TMDL

E. coli

- WLA = 7.9 billion organisms per day (b-org/day) (page 2-8, Table 2.6)
- The WLA is based on the facility's proposed AWW design flow of 1.65 mgd and the *E. coli* standard of 126 colony forming units per 100 milliliters (cfu/100 mL)
- The WLA is equivalent to the current permitted effluent fecal coliform limit of 200 organisms per 100 milliliters (org/100 mL.)

Total Suspended Solids

- WLA = 0.138 tons per day (page 3-10, Table 3.6)
- The WLA is based on the facility's AWW design flow of 1.1 mgd and the current permitted effluent TSS concentration limit of 30 mg/L.
- The WLA is equivalent to 125 kg/day.
- During the previous permitting process, the facility planned an increase in AWW design flow from 1.1 mgd to 1.65 mgd. Because of this increase, a Modified WLA Justification Memo was completed in 2020. The expansion was documented in the previous public notice and EPA notified.
- The expanded TSS WLA for this facility is 187 kg/day, which is equivalent to the current permitted effluent mass limit.

South Metro Mississippi TMDL Turbidity Impairment

- WLA = 45,625 kg/year and 125.00 kg/day (Appendix A, page 98)
- The WLA was based on the AWW design flow of 1.1 mgd and is more stringent than the current permitted effluent TSS mass limit of 187 kg/day.
- This facility is included in Appendix A.1. Minnesota Wastewater Permits with TSS Limits ≤ 32 mg/L and Eligible for Future WLA Increase.
- During the previous permitting process, the facility planned an increase in AWWDF from 1.1 mgd to 1.65 mgd. Because of this increase, a Modified WLA Justification Memo was completed in 2020. The expansion was documented in the previous public notice and EPA notified.
- The expanded TSS WLA for this facility is 187 kg/day, which is equivalent to the current permitted effluent mass limit.

Lake Pepin and Mississippi River Eutrophication TMDL

Total Phosphorus

- WLA = 1,824 kg/year and 5.00 kg/day and 1.66 kg/day Jun-Sep (RES WLA Seasonal)(Appendix B, page 124)
- The current permit includes total phosphorus limits of 1.0 mg/L 12 month moving average, 3.5 kg/day calendar month average, and 2114 kg/yr 12 month moving total.

Additional Information:

This facility discharges upstream of waters used in the production of wild rice.

Table 14: Waters downstream of the facility that are used in the production of wild rice:

WID	Water Name	Reach Description
07040003-627	Mississippi River	Chippewa R (WI) to L & D #6
07060001-509	Mississippi River	Root R to MN/IA border

There are sulfate, aluminum, PCB-F, PFOS in fish and PFOS in water impairments that were not specifically outlined in this review. TMDLs are not underway for these impairments at this time.

Chemical additives

Chemical additives are addressed by the additive limits and associated monitoring in the permit.

Table 15: Chemical additives currently approved for use at this facility consist of the following:

Chemical	Purpose	Location of chemical addition in process	Amount/duration/frequency of addition	Average rate of use	Maximum rate of use
Ferric Chloride	Phosphorus treatment	Prior to Clarifiers and/or into centrate tank in biosolids process.	1 day a week facility feeds 30-50 gallons over an 8-hour period to the Centrate Tank to reduce phosphorus load being sent to the oxidation ditch from the biosolids process centrate material. Some months facility feeds 20-40 GPD to the pre-clarification location. Multiple months facility feeds more.	16.26 GPD	170 Gal Max
Polymer Zetag 8868	Dewatering	Added to WAS as it enters the centrifuge in the biosolids building.	115 gallons a week is used to dewater WAS with the centrifuge. this is done over an 8-hour period weekly.	115 gal/ week or 16.43 GPD.	200 GPD
Polymer Aquahawk 1124	Thickening	Added to WAS prior to gravity belt thickener.	6 gallons per week, usually over 2-3 days of running gravity belt thickener.	6 Gallons / week or 1.16 GPD	10 GPD
High Calcium Quicklime	PH and temperature adjustment of biosolids	Added to dewatered WAS in the Bioset process prior to reactor and loadout containers.	Biosolids process is operated 1 day a week currently over about 8 hours and uses 6,960 lbs in that time.	6,960 lbs/week or 994lbs/Day	8,000 lbs

Biosolids and septage

Biosolids land application

This permit section requires biosolids to be treated to meet specific standards, and specifies monitoring, recordkeeping, reporting, and general requirements for biosolids that are applied to the land. Unless they are exceptional quality biosolids, sites to which biosolids are applied are approved by the MPCA by the procedures found in Minn. R. 7041.0800.

Industrial stormwater management

On June 1, 2025, the Industrial Stormwater (ISW) General Permit (MNR050000) was reissued. The general permit addresses stormwater discharges associated with industrial activity for facilities that discharge stormwater to waters of the state, including Municipal Separate Storm Sewer Systems. The general permit also addresses stormwater discharges associated with industrial activities at facilities that provide onsite infiltration of industrial stormwater discharges associated with the facility.

This facility has applied for and obtained a Certification of No Exposure with the Industrial Stormwater Program in accordance with ISW General Permit.

The provisions for runoff control are based on Minn. Stat. ch. 115 and state WQS, according to Minn. R. 7001.1080, 7050.0210 and 7050.0220, and 40 C.F.R. § 122.26. The best management practices requirements are based on Minn. R. 7001.1080.

Total facility requirements

Certified laboratory

Effective January 1, 2013, all Minnesota municipal, county, or industrial laboratories that analyze wastewater per Clean Water Act requirements must be certified by the MPCA or the Minnesota Department of Health. Information regarding MPCA laboratory certification is located on the MPCA's website at https://www.pca.state.mn.us/business-with-us/mpca-laboratory-certification. If there are any questions concerning MPCA laboratory certification, please contact the MPCA at 800-657-3864 or by email at qa.questions.mpca@state.mn.us. Commercial laboratories doing these analyses must maintain Minnesota Department of Health certification.

Electronic Discharge Monitoring Reports (eDMRs)

The eDMRs, Sample Values/Operational Spreadsheets, and related attachments shall be electronically submitted via the MPCA e-Services (https://rsp.pca.state.mn.us/TEMPO_RSP/Orchestrate.do?initiate=true). Paper copies of DMRs will no longer be accepted. The eDMR and Sample Value/Operational Spreadsheets are generated directly from the limits and monitoring requirements in permit for the facility. They are generated by the Pollution Control Data Specialist assigned to manage the data for the facility and will be available online within 30 days of the permit action, please make sure to download the most recent version of the eDMR and Sample Value/Operational Spreadsheet prior to submitting the next monthly eDMRs.

Construction projects

Separate written approval of plans and specifications, in addition to the final issued permit, must be obtained from the MPCA before construction can begin for any planned construction projects.

Antidegradation and anti-backsliding

Antidegradation: Changes to the facility may result in an increase in pollutant loading to surface waters or other causes of degradation to surface waters. If a change to the facility will result in a net increase in pollutant loading or other causes of degradation that exceed the maximum loading authorized through conditions specified in the existing permit, the changes to the facility are subject to antidegradation requirements found in Minn. R. 7050.0250 to 7050.0335. The permit does not propose to allow a new or increased discharge and does not trigger antidegradation.

Anti-backsliding: Any point source discharger of sewage, industrial, or other wastes for which a NPDES Permit has been issued by the MPCA that contains effluent limits more protective than those that would be established by Minn. R. 7053.0215 to 7053.0265 shall continue to meet the effluent limits established by the permit, unless the permittee establishes that less protective effluent limits are allowable pursuant to federal law, under section 402(o) of the Clean Water Act, United States Code, title 33, section 1342. The permit complies with Minn. R. 7053.0275 regarding anti-backsliding.

Term of permit

The MPCA has made a preliminary determination to reissue this NPDES/SDS permit for a term of approximately five years.

The effective date of the permit and the permit expiration date will be determined at the time of issuance.