Revision of the 2017 Buffalo River Watershed Total Maximum Daily Load, April 2026

A review of the Buffalo River Watershed Total Maximum Daily Load (TMDL; HUC-8 09020106), which was completed in December 2016 and approved in February 2017, discovered errors in the assignment of *Escherichia coli* (*E. coli*) and total suspended solids (TSS) wasteload allocations (WLAs). In summary, *E. coli* WLAs were incorrectly included for three permitted wastewater treatment facilities (WWTFs) in the TMDL tables for four impaired stream segments and incorrectly excluded for one permitted WWTF in the TMDL table for one impaired stream segment. Additionally, TSS WLAs were incorrectly included for two permitted WWTFs in the TMDL tables for two impaired stream segments and incorrectly excluded for one permitted WWTF in the TMDL table for one impaired stream segment. Finally, the operator and permit holder for one permitted industrial facility has changed since the 2017 TMDL approval. These are summarized in Table 1 below.

Table 1 presents the permitted facilities included in these revisions, the approved *E. coli* and TSS WLAs for each facility, and the impaired stream segments being assigned each WLA. Original and revised TMDL tables follow. Table 1 of this revision memo provides revisions to Table 3 and Table 5 of the Buffalo River Watershed TMDL: U.S. Environmental Protection Agency (EPA) Approval Letter and Decision Document. The revised TMDL tables in this memo replace those respective tables in Sections 4.2 and 4.3 of the 2017 approved TMDL report and provide revisions to Attachment #1 and Attachment #3 of the Buffalo River Watershed TMDL: EPA Approval Letter and Decision Document.

The basis for the original TMDL report remains the same: water quality standards, pollutant source assessment, and load duration curve approach to TMDL calculation. The approaches to calculating wastewater WLAs, load allocations (LAs), and margins of safety (MOS) in the original TMDL report (Sections 3.3.1, 3.3.2, 3.4, and 3.5, respectively) are unchanged and were used to recalculate the revised TMDL tables presented below. The loading capacity (LC, Section 3.2) and the WLAs for Confined Animal Feeding Operations (CAFOs, Section 3.3.3) and construction and industrial stormwater (Section 3.3.4) did not change in the following TMDL tables.

Table 1: Permitted facilities included in these revisions of the 2017 approved Buffalo River Watershed TMDL.

Facility	Permit number[1]	EPA-approved *E. coli* WLA (billions of bacteria/day)[2]	EPA-approved TSS WLA (tons/day)[3]	Original TMDL report - impaired segment (09020106-XXX)[4]	Revised impaired segment (09020106-XXX)
Callaway WWTF	MNT022985	2.70	0.11	-501, -515, -594, -595	None
Glyndon WWTF	MN0020630	7.90	0.31	-595	-501, -595
Lake Park WWTF	MNG580157	6.30	0.25	-501, -511, -594, -595	-501, -511, -595
Spring Prairie Colony WWTF	MN0070467	1.00	0.04	-501, -556	-501
Holcim-MWR Inc. – Pit 21[5]	MN0069515	Not applicable	0.21	-501, -595	-501, -595

1. Permit numbers as provided in the original Buffalo River Watershed TMDL. The permit number for Lake Park WWTF has since changed to MNG585157; the permit for Spring Prairie Colony WWTF is in the process of reissuance as MNG585387.
2. As provided in Table 14 of the Buffalo River Watershed TMDL: EPA Approval Letter and Decision Document.
3. As provided in Table 15 of the Buffalo River Watershed TMDL: EPA Approval Letter and Decision Document
4. As provided in Table 3 and Table 4 of the Buffalo River Watershed TMDL: EPA Approval Letter and Decision Document.
5. The operator and permit holder for this facility has changed since the 2017 TMDL approval from Aggregate Industries to Holcim-MWR Inc. No other revisions associated with this facility are included in this memo.

The Callaway WWTF is located within the tribal boundaries of the White Earth Band of Ojibwe and operates through an EPA-issued National Pollutant Discharge Elimination System (NPDES) Permit. Therefore, the Minnesota Pollution Control Agency (MPCA) staff determined that Callaway WWTF should not have been assigned WLAs in the original TMDL report because Minnesota cannot establish allocations for other jurisdictions. A boundary condition (BC) load was added to the revised TMDL tables below for each applicable impaired segment to remove the Callaway WWTF WLA and inherently include it within the BC load for the White Earth tribal boundary. The BC load is calculated as the LC * the percentage of acres within the impairment subwatershed that are located within the White Earth tribal boundaries (Table 2, below). The MOS is then calculated as the remaining load (LC – BC) * 10%. Finally, the LA is calculated as the LC – BC – MOS – WLAs. The new TMDL calculations are shown in the revised TMDL tables, and the BC areas are shown in Figure 1.

Table 2: White Earth tribal boundary condition area calculations for the revised TMDL tables.

AUID	Stream name	Total drainage area (acres)[1]	White Earth area (acres)	Boundary condition area (%)[2]
09020106-594	Buffalo River	164,801	63,325	38.4%
09020106-595	Buffalo River	260,181	63,325	24.3%
09020106-515[3]	Becker County Ditch 15	56,027	6,275	11.2%
09020106-501	Buffalo River	724,098	63,325	8.7%

1. From Table 2-3 and Table 2-4 within the 2017 approved Buffalo River Watershed TMDL.
2. BC % area = White Earth area / total drainage area.
3. This stream segment has been “split” into two new assessment units (AUIDs). See explanation below.

The WLAs for Glyndon WWTF had been excluded in the 2017 approved TMDL tables for impaired segment 09020106-501; those TMDL tables include all other permitted WWTFs in the original TMDL report; therefore, MPCA staff determined that WLAs for Glyndon WWTF should be added to those respective TMDL tables. Next, impaired segment 09020106-594 is actually upstream of where the Lake Park WWTF discharge would enter the Buffalo River; therefore, the WLAs for Lake Park WWTF should not have been included in those respective TMDL tables. Finally, the Spring Prairie Colony WWTF does not discharge upstream of impaired segment 09020106-556 (County Ditch 2), it instead discharges to County Ditch 3 (09020106-614 and 09020106-615, formerly 09020106-557). Therefore, the *E. coli* WLA for Spring Prairie Colony should not have been included for impaired segment 09020106-556 but both the *E. coli* and TSS WLAs for Spring Prairie Colony WWTF should remain for impaired segment 09020106-501.

One other permitted WWTF, Forest Hills Golf and RV Resort WWTF (NPDES/State Disposal System (SDS) Permit Number MN0056685, Surface Discharge Station SD 002), is located in the Buffalo River Watershed but was not included in the 2017 approved TMDL report. Wastewater discharge from this facility does not leave the site as surface runoff; instead, discharge is stored in and does not leave on-site ponds. Although it is assumed that treated wastewater does not leave the site, there are still fecal coliform and TSS discharge limits on the permit's surface discharge station. However, WLAs are not assigned to this facility in this revision memo, consistent with the 2021 Otter Tail River Watershed Total Maximum Daily Load Report and the 2016 St. Clair Lake Total Maximum Daily Load.

The TMDL revisions featuring Callaway WWTF, Lake Park WWTF, and Spring Prairie Colony WWTF all result in reductions to the WLA, while the revisions featuring Glyndon WWTF for impaired segment 09020106-501 result in increases to the WLA. The revisions featuring Callaway WWTF also result in reductions to the LA and the MOS due to the addition of the BC load; this is the case for all but one of the revised TMDL tables below. The revisions for the Lake Park WWTF, Spring Prairie Colony WWTF, and Glyndon WWTF are proportional to those individual WLAs being shifted between the WLA and LA.

Finally, one of the impaired stream segments, Becker County Ditch 15 (AUID 09020106-515) was "split" by the MPCA into two new stream segments after the 2017 approval of the Buffalo River Watershed TMDL. The original *E. coli* impairment and the resulting 2017 approved TMDL apply to the current downstream segment (AUID 09020106-607), because the pour point of segment 09020106-607 is co-located with the pour point of retired segment 09020106-515. The upstream segment (09020106-606) and all other stream segments upstream to the Callaway WWTF are not currently assessed for *E. coli* (Figure 1) (i.e., the *E. coli* impairment on segment 09020106-515 was not carried forward to upstream segment 09020106-606). With this revision, MPCA is applying the *E. coli* TMDL for segment 515 to segment 607.

Table 3: Assessment Unit information for Becker County Ditch 15.

Parent AUID	Child AUID	Change reason	Lineage comments	Parent retired	*E. coli* TMDL applied to child?
09020106-509-RF1	09020106-515	Reach File 1		01/01/2001	NA
09020106-515	09020106-606	Request	Split for TALU	12/22/2017	No
09020106-515	09020106-607	Request	Split for TALU	12/22/2017	Yes

The TMDL revisions do not change the implementation strategy in Section 7 or the reasonable assurance in Section 8 of the 2017 approved TMDL report. The MPCA is also developing the *Buffalo River and Upper Red River of the North Watersheds Total Maximum Daily Load Report 2026*, being co-noticed with this revision memo. The 2026 TMDL report presents TSS and phosphorus TMDLs for additional impairments, provides more examples of reasonable assurance including activities of nonpoint source reduction programs, and suggests funding sources and strategies for implementation projects.

An opportunity for public comment on this *Revision of the 2017 Buffalo River Watershed Total Maximum Daily Load* and the draft *Buffalo River and Upper Red River of the North Watersheds Total Maximum Daily Load Report 2026,* was provided via a public notice in the State Register from April 6, 2026, through May 21, 2026. There were xx comment letters received and responded to as a result of the public comment period.

Revised TMDL tables:

- Table 4-5: *E. coli* loading capacities and allocations for AUID 09020106-594 using geometric mean criteria.
- Table 4-6: *E. coli* loading capacities and allocations for AUID 09020106-595 using geometric mean criteria.
- Table 4-8: *E. coli* loading capacities and allocations for AUID 09020106-501 using geometric mean criteria.
- Table 4-9: *E. coli* loading capacities and allocations for AUID 09020106-556 using geometric mean criteria.
- Table 4-25: *E. coli* loading capacities and allocations for AUID 09020106-607 *(child of retired parent AUID 09020106-515)* using geometric mean criteria.
- Table 4-27: TSS loading capacities and allocations for AUID 09020106-594.
- Table 4-28: TSS loading capacities and allocations for AUID 09020106-595.
- Table 4-29: TSS loading capacities and allocations for AUID 09020106-501.

The 17 remaining tables in Section 4.2 TMDL Allocations for *E. coli*, the 10 remaining tables in Section 4.3 TMDL Allocations for TSS, and all 15 tables in Section 5.2 TMDL Allocations for Lakes are not revised.

Original 2017 approved and revised TMDL report tables

Buffalo River (09020106-594) *E. coli* TMDL

Original 2017 approved TMDL

Table 4-5: *E. coli* loading capacities and allocations for AUID 09020106-594 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity	1,031.1	338.5	201.7	118.0	56.4
Wasteload Allocation					
Callaway WWTF	2.7	2.7	2.7	2.7	2.7
Lake Park WWTF	6.3	6.3	6.3	6.3	6.3
Audubon WWTF	6.8	6.8	6.8	6.8	6.8
Baers Poultry Co – Old Barn Site	0.0	0.0	0.0	0.0	0.0
Jona Baer Inc.	0.0	0.0	0.0	0.0	0.0
Load Allocation	912.2	288.9	165.7	90.4	35.0
Margin of Safety	103.1	33.8	20.2	11.8	5.6

Revised TMDL

Table 4-5: *E. coli* loading capacities and allocations for AUID 09020106-594 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity (LC)	1,031.1	338.5	201.7	118.0	56.4
Boundary Condition (BC): White Earth Reservation*	396.2	130.1	77.5	45.3	21.7
State Loading Capacity (LC – BC)	634.9	208.4	124.2	72.7	34.7
Wasteload Allocation					
Audubon WWTF	6.8	6.8	6.8	6.8	6.8
Baers Poultry Co – Old Barn Site	0.0	0.0	0.0	0.0	0.0
Jona Baer Inc.	0.0	0.0	0.0	0.0	0.0
Load Allocation	564.6	180.8	105.0	58.6	24.4
Margin of Safety (RL * 10%)	63.5	20.8	12.4	7.3	3.5

*This BC load is calculated for the portion of the watershed in the White Earth Reservation and is not a TMDL allocation. Minnesota cannot establish allocations for other jurisdictions, and any reductions noted in this TMDL that are needed from the watershed area in the White Earth Reservation are consistent with Minnesota's WQSs and not more stringent. The remaining load in this table after the BC is removed represents the Minnesota allocations.

Buffalo River (09020106-595) *E. coli* TMDL

Original 2017 approved TMDL

Table 4-6: *E. coli* loading capacities and allocations for AUID 09020106-595 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity	1,719.0	586.7	382.3	243.4	114.0
Wasteload Allocation					
Callaway WWTF	2.7	2.7	2.7	2.7	2.7
Hawley WWTF	10.3	10.3	10.3	10.3	10.3
Glyndon WWTF	7.9	7.9	7.9	7.9	7.9
Lake Park WWTF	6.3	6.3	6.3	6.3	6.3
Audubon WWTF	6.8	6.8	6.8	6.8	6.8
Livestock facilities requiring NPDES permit	0.0	0.0	0.0	0.0	0.0
Load Allocation	1,513.1	494.0	310.1	185.1	68.6
Margin of Safety	171.9	58.7	38.2	24.3	11.4

Revised TMDL

Table 4-6: *E. coli* loading capacities and allocations for AUID 09020106-595 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity (LC)	1,719.0	586.7	382.3	243.4	114.0
Boundary Condition (BC): White Earth Reservation*	418.4	142.8	93.0	59.2	27.7
State Loading Capacity (LC – BC)	1,300.6	443.9	289.3	184.2	86.3
Wasteload Allocation					
Hawley WWTF	10.3	10.3	10.3	10.3	10.3
Glyndon WWTF	7.9	7.9	7.9	7.9	7.9
Lake Park WWTF	6.3	6.3	6.3	6.3	6.3
Audubon WWTF	6.8	6.8	6.8	6.8	6.8
Livestock facilities requiring NPDES permit	0.0	0.0	0.0	0.0	0.0
Load Allocation	1,139.2	368.2	229.1	134.4	46.4
Margin of Safety (RL * 10%)	130.1	44.4	28.9	18.4	8.6

*This BC load is calculated for the portion of the watershed in the White Earth Reservation and is not a TMDL allocation. Minnesota cannot establish allocations for other jurisdictions, and any reductions noted in this TMDL that are needed from the watershed area in the White Earth Reservation are consistent with Minnesota's WQSs and not more stringent. The remaining load in this table after the BC is removed represents the Minnesota allocations.

Buffalo River (09020106-501) *E. coli* TMDL

Original 2017 approved TMDL

Table 4-8: *E. coli* loading capacities and allocations for AUID 09020106-501 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity	4,834.0	840.4	397.6	204.5	97.9
Wasteload Allocation					
Callaway WWTF	2.7	2.7	2.7	2.7	2.7
Hawley WWTF	10.3	10.3	10.3	10.3	10.3
Lake Park WWTF	6.3	6.3	6.3	6.3	6.3
Audubon WWTF	6.8	6.8	6.8	6.8	6.8
Hitterdal WWTF	2.3	2.3	2.3	2.3	2.3
Spring Prairie Colony WWTF	1.0	1.0	1.0	1.0	1.0
Barnesville WWTF	18.7	18.7	18.7	18.7	18.7
Livestock facilities requiring NPDES permit	0.0	0.0	0.0	0.0	0.0
Load Allocation	4,302.5	708.3	309.7	135.9	40.0
Margin of Safety	483.4	84.0	39.8	20.5	9.8

Revised TMDL

Table 4-8: *E. coli* loading capacities and allocations for AUID 09020106-501 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity (LC)	4,834.0	840.4	397.6	204.5	97.9
Boundary Condition (BC): White Earth Reservation*	422.8	73.5	34.8	17.9	8.6
State Loading Capacity (LC – BC)	4,411.2	766.9	362.8	186.6	89.3
Wasteload Allocation					
Hawley WWTF	10.3	10.3	10.3	10.3	10.3
Glyndon WWTF	7.9	7.9	7.9	7.9	7.9
Lake Park WWTF	6.3	6.3	6.3	6.3	6.3
Audubon WWTF	6.8	6.8	6.8	6.8	6.8
Hitterdal WWTF	2.3	2.3	2.3	2.3	2.3
Spring Prairie Colony WWTF	1.0	1.0	1.0	1.0	1.0
Barnesville WWTF	18.7	18.7	18.7	18.7	18.7
Livestock facilities requiring NPDES permit	0.0	0.0	0.0	0.0	0.0
Load Allocation	3,916.8	636.9	273.2	114.6	27.1
Margin of Safety (RL * 10%)	441.1	76.7	36.3	18.7	8.9

*This boundary condition load is calculated for the portion of the watershed in the White Earth Reservation and is not a TMDL allocation. Minnesota cannot establish allocations for other jurisdictions, and any reductions noted in this TMDL that are needed from the watershed area in the White Earth Reservation are consistent with Minnesota's WQSs and not more stringent. The remaining load in this table after the boundary condition is removed represents the Minnesota allocations.

County Ditch 2 (09020106-556) *E. coli* TMDL

Original 2017 approved TMDL

Table 4-9: *E. coli* loading capacities and allocations for AUID 09020106-556 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity	355.4	49.5	13.9	4.9	0.2
Wasteload Allocation					
Spring Prairie Colony WWTF	1.0	1.0	1.0	1.0	*
Livestock facilities requiring NPDES permit	0.0	0.0	0.0	0.0	0.0
Load Allocation	318.9	43.6	11.5	3.4	0.2
Margin of Safety	35.5	4.9	1.4	0.5	0.0

* The outflows from WWTFs will be greater than the median flows under these flow conditions. Since outflow is a portion of the streamflow, load under these conditions is unlikely to occur. If outflows from WWTF during these flow conditions, the WLA will be the permitted outflow concentration times to flow rate. See Section 3.3 for further detail.

Revised TMDL

Table 4-9: *E. coli* loading capacities and allocations for AUID 09020106-556 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity	355.4	49.5	13.9	4.9	0.2
Wasteload Allocation					
Livestock facilities requiring NPDES permit	0.0	0.0	0.0	0.0	0.0
Load Allocation	319.9	44.6	12.5	4.4	0.2
Margin of Safety	35.5	4.9	1.4	0.5	0.0

Becker County Ditch 15 (09020106-515) *E. coli* TMDL

Original 2017 approved TMDL

*Parent AUID 09020106-515 split for TALU and retired on 12/22/2017.

Table 4-25: *E. coli* loading capacities and allocations for AUID 09020106-515 using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity	434.3	102.4	70.4	45.2	23.9
Wasteload Allocation					
Audubon WWTF	6.8	6.8	6.8	6.8	6.8
Callaway WWTF	2.7	2.7	2.7	2.7	2.7
Load Allocation	381.4	82.7	53.9	31.2	12.0
Margin of Safety	43.4	10.2	7.0	4.5	2.4

Revised TMDL

*TMDL from parent AUID 09020106-515 now applied to child AUID 09020106-607 as a result of the split for TALU.

Table 4-25: *E. coli* loading capacities and allocations for AUID 09020106-607 *(child of retired parent AUID 09020106-515)* using geometric mean criteria.

E. coli	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Billion organisms per day				
Loading Capacity (LC)	434.3	102.4	70.4	45.2	23.9
Boundary Condition (BC): White Earth Reservation*	48.6	11.5	7.9	5.1	2.7
State Loading Capacity (LC – BC)	385.7	90.9	62.5	40.1	21.2
Wasteload Allocation					
Audubon WWTF	6.8	6.8	6.8	6.8	6.8
Load Allocation	340.3	75.0	49.4	29.3	12.3
Margin of Safety (RL * 10%)	38.6	9.1	6.3	4.0	2.1

*This boundary condition load is calculated for the portion of the watershed in the White Earth Reservation and is not a TMDL allocation. Minnesota cannot establish allocations for other jurisdictions, and any reductions noted in this TMDL that are needed from the watershed area in the White Earth Reservation are consistent with Minnesota's WQSs and not more stringent. The remaining load in this table after the boundary condition is removed represents the Minnesota allocations.

Buffalo River (09020106-594) TSS TMDL

Original 2017 approved TMDL

Table 4-27: TSS loading capacities and allocations for AUID 09020106-594.

Total Suspended Solids	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Tons per day				
Loading Capacity	57.95	19.84	11.48	6.35	3.07
Wasteload Allocation					
Callaway WWTF	0.11	0.11	0.11	0.11	0.11
Lake Park WWTF	0.25	0.25	0.25	0.25	0.25
Audubon WWTF	0.27	0.27	0.27	0.27	0.27
Construction/Industrial Stormwater	0.05	0.02	0.01	0.005	0.002
Load Allocation	51.48	17.21	9.69	5.08	2.13
Margin of Safety	5.79	1.98	1.15	0.63	0.31

Revised TMDL

Table 4-27: TSS loading capacities and allocations for AUID 09020106-594.

Total Suspended Solids	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Tons per day				
Loading Capacity (LC)	57.95	19.84	11.48	6.35	3.07
Boundary Condition (BC): White Earth Reservation*	22.27	7.62	4.41	2.44	1.18
State Loading Capacity (LC – BC)	35.68	12.22	7.07	3.91	1.89
Wasteload Allocation					
Audubon WWTF	0.27	0.27	0.27	0.27	0.27
Construction/Industrial Stormwater	0.05	0.02	0.01	0.005	0.002
Load Allocation	31.79	10.71	6.08	3.245	1.428
Margin of Safety (RL * 10%)	3.57	1.22	0.71	0.39	0.19

*This boundary condition load is calculated for the portion of the watershed in the White Earth Reservation and is not a TMDL allocation. Minnesota cannot establish allocations for other jurisdictions, and any reductions noted in this TMDL that are needed from the watershed area in the White Earth Reservation are consistent with Minnesota's WQSs and not more stringent. The remaining load in this table after the boundary condition is removed represents the Minnesota allocations.

Buffalo River (09020106-595) TSS TMDL

Original 2017 approved TMDL

Table 4-28: TSS loading capacities and allocations for AUID 09020106-595.

Total Suspended Solids	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Tons per day				
Loading Capacity	96.49	34.50	22.41	14.12	6.27
Wasteload Allocation					
Callaway WWTF	0.11	0.11	0.11	0.11	0.11
Hawley WWTF	0.40	0.40	0.40	0.40	0.40
Glyndon WWTF	0.31	0.31	0.31	0.31	0.31
Lake Park WWTF	0.25	0.25	0.25	0.25	0.25
Audubon WWTF	0.27	0.27	0.27	0.27	0.27
Aggregate Industries – Pit 21	0.21	0.21	0.21	0.21	0.21
Construction/Industrial Stormwater	0.09	0.03	0.02	0.01	0.00
Load Allocation	85.20	29.47	18.60	11.15	4.09
Margin of Safety	9.65	3.45	2.24	1.41	0.63

Revised TMDL

Table 4-28: TSS loading capacities and allocations for AUID 09020106-595.

Total Suspended Solids	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Tons per day				
Loading Capacity (LC)	96.49	34.50	22.41	14.12	6.27
Boundary Condition (BC): White Earth Reservation*	23.48	8.40	5.45	3.44	1.53
State Loading Capacity (LC – BC)	73.01	26.10	16.96	10.68	4.74
Wasteload Allocation					
Hawley WWTF	0.40	0.40	0.40	0.40	0.40
Glyndon WWTF	0.31	0.31	0.31	0.31	0.31
Lake Park WWTF	0.25	0.25	0.25	0.25	0.25
Audubon WWTF	0.27	0.27	0.27	0.27	0.27
Holcim-MWR Inc. – Pit 21	0.21	0.21	0.21	0.21	0.21
Construction/Industrial Stormwater	0.09	0.03	0.02	0.01	0.00
Load Allocation	64.18	22.02	13.80	8.16	2.83
Margin of Safety (RL * 10%)	7.30	2.61	1.70	1.07	0.47

*This boundary condition load is calculated for the portion of the watershed in the White Earth Reservation and is not a TMDL allocation. Minnesota cannot establish allocations for other jurisdictions, and any reductions noted in this TMDL that are needed from the watershed area in the White Earth Reservation are consistent with Minnesota's WQSs and not more stringent. The remaining load in this table after the boundary condition is removed represents the Minnesota allocations.

Buffalo River (09020106-501) TSS TMDL

Original 2017 approved TMDL

Table 4-29: TSS loading capacities and allocations for AUID 09020106-501.

Total Suspended Solids	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Tons per day				
Loading Capacity	462.71	78.35	37.55	18.73	9.59
Wasteload Allocation					
Callaway WWTF	0.11	0.11	0.11	0.11	0.11
Hawley WWTF	0.40	0.40	0.40	0.40	0.40
Lake Park WWTF	0.25	0.25	0.25	0.25	0.25
Audubon WWTF	0.27	0.27	0.27	0.27	0.27
Hitterdal WWTF	0.09	0.09	0.09	0.09	0.09
Spring Prairie Colony WWTF	0.04	0.04	0.04	0.04	0.04
Barnesville WWTF	0.73	0.73	0.73	0.73	0.73
Aggregate Industries – Pit 21	0.21	0.21	0.21	0.21	0.21
Construction/Industrial Stormwater	0.41	0.07	0.03	0.01	0.01
Load Allocation	413.93	68.34	31.66	14.75	6.52
Margin of Safety	46.27	7.84	3.76	1.87	0.96

Revised TMDL

Table 4-29: TSS loading capacities and allocations for AUID 09020106-501.

Total Suspended Solids	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Tons per day				
Loading Capacity (LC)	462.71	78.35	37.55	18.73	9.59
Boundary Condition (BC): White Earth Reservation*	40.47	6.85	3.28	1.64	0.84
State Loading Capacity (LC – BC)	422.24	71.50	34.27	17.09	8.75
Wasteload Allocation					
Hawley WWTF	0.40	0.40	0.40	0.40	0.40
Glyndon WWTF	0.31	0.31	0.31	0.31	0.31
Lake Park WWTF	0.25	0.25	0.25	0.25	0.25
Audubon WWTF	0.27	0.27	0.27	0.27	0.27
Hitterdal WWTF	0.09	0.09	0.09	0.09	0.09
Spring Prairie Colony WWTF	0.04	0.04	0.04	0.04	0.04
Barnesville WWTF	0.73	0.73	0.73	0.73	0.73
Holcim-MWR Inc. – Pit 21	0.21	0.21	0.21	0.21	0.21

Total Suspended Solids	Flow Condition				
	High Flows	Moist Conditions	Mid-range Flows	Dry Conditions	Low Flows
	Tons per day				
Construction/Industrial Stormwater	0.41	0.07	0.03	0.01	0.01
Load Allocation	377.31	61.98	28.51	13.07	5.56
Margin of Safety (RL * 10%)	42.22	7.15	3.43	1.71	0.88

*This boundary condition load is calculated for the portion of the watershed in the White Earth Reservation and is not a TMDL allocation. Minnesota cannot establish allocations for other jurisdictions, and any reductions noted in this TMDL that are needed from the watershed area in the White Earth Reservation are consistent with Minnesota's WQSs and not more stringent. The remaining load in this table after the boundary condition is removed represents the Minnesota allocations.

Figure 1. Boundary condition areas added for the Buffalo River and Becker County Ditch 15 as part of the revisions of the 2017 approved Buffalo River Watershed TMDL.