UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 0 2 2020

REPLY TO THE ATTENTION OF

WW-16J

Glenn Skuta, Watershed Division Director
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Dear Mr. Skuta:

The U.S. Environmental Protection Agency has conducted a complete review of the three final Total Maximum Daily Loads (TMDLs) for the Lake of the Woods Watershed, located in Lake of the Woods and Roseau Counties, Minnesota. The TMDLs are calculated for Total Suspended Solids and address impairments to Aquatic Life designated uses.

EPA has determined that these TMDLs meet the requirements of Section 303(d) of the Clean Water Act and EPA's implementing regulations at 40 C.F.R. Part 130. Therefore, EPA hereby approves Minnesota's three TMDLs for the Lake of the Woods Watershed. The statutory and regulatory requirements, and EPA's review of Minnesota's compliance with each requirement, are described in the enclosed decision document.

We wish to acknowledge Minnesota's effort in submitting these TMDLs, and look forward to future submissions by the State of Minnesota. If you have any questions, please contact James Ruppel of the Watersheds and Wetlands Branch at ruppel.james@epa.gov or 312-886-1823.

Sincerely,

Thomas R. Short Jr.
Acting Director, Water Division

Enclosure

cc: Celine Lyman, MPCA

wq-iw10-09g

Lake of the Woods Watershed

Total Maximum Daily Load

EPA Final Review and Decision - Draft

Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 C.F.R. Part 130 describe the statutory and regulatory requirements for approvable TMDLs. Additional information is generally necessary for EPA to determine if a submitted TMDL fulfills the legal requirements for approval under Section 303(d) and EPA regulations, and should be included in the submittal package. Use of the verb "must" below denotes information that is required to be submitted because it relates to elements of the TMDL required by the CWA and by regulation. Use of the term "should" below denotes information that is generally necessary for EPA to determine if a submitted TMDL is approvable. These TMDL review guidelines are not themselves regulations. They are an attempt to summarize and provide guidance regarding currently effective statutory and regulatory requirements relating to TMDLs. Any differences between these guidelines and EPA's TMDL regulations should be resolved in favor of the regulations themselves.

Language referring to "the TMDL document" in this Decision Document is understood to mean the;

Final Lake of the Woods Watershed Total Maximum Daily Load Study
February 2020

Section 1. Identification of Waterbody, Pollutant of Concern, Pollutant Sources, and Priority Ranking

The TMDL submittal should identify the waterbody as it appears on the State's/Tribe's 303(d) list. The waterbody should be identified/georeferenced using the National Hydrography Dataset (NHD), and the TMDL should clearly identify the pollutant for which the TMDL is being established. In addition, the TMDL should identify the priority ranking of the waterbody and specify the link between the pollutant of concern and the water quality standard (WQS) (see Section 2 below).

The TMDL submittal should include an identification of the point and nonpoint sources of the pollutant of concern, including location of the source(s) and the quantity of the loading, e.g., lbs/per day. The TMDL should provide the identification numbers of the National Pollutant Discharge Elimination System (NPDES) permits within the waterbody. Where it is possible to separate natural background from nonpoint sources, the TMDL should include a description of the natural background. This information is necessary for EPA's review of the load and wasteload allocations, which are required by regulation.

The TMDL submittal should also contain a description of any important assumptions made in developing the TMDL, such as:

(1) The spatial extent of the watershed in which the impaired waterbody is located;
(2) The assumed distribution of land use in the watershed (e.g., urban, forested, agriculture);
(3) population characteristics, wildlife resources, and other relevant information affecting the characterization of the pollutant of concern and its allocation to sources;
(4) Present and future growth trends, if taken into consideration in preparing the TMDL (e.g., the TMDL could include the design capacity of a wastewater treatment facility); and
(5) An explanation and analytical basis for expressing the TMDL through *surrogate measures*, if applicable. *Surrogate measures* are parameters such as percent fines and turbidity for sediment impairments; chlorophyll *a* and phosphorus loadings for excess algae; length of riparian buffer; or number of acres of best management practices.

Section 1 Review Comments:

The waterbody(s) are identified as they appear on the 303(d) list.

Table 1 of the TMDL document identifies six aquatic life use impairments that are addressed by three TMDLs for total suspended solids (TSS). The three assessment units (AUID)s for which TSS TMDLs are calculated as part of this TMDL study are:

1. Williams Creek, Headwaters to Zippel Creek (AUID: 09030009-501),
2. Zippel Creek, West Branch (County Ditch 1), Headwaters to Zippel Bay (Lake of the Woods) (AUID: 09030009-515),
   and
3. Unnamed ditch, Unnamed ditch to Unnamed ditch (AUID: 09030009-523).

The waterbodies and associated impairments are discussed in Section 1.2 of the TMDL document and listed in Table 1 of the TMDL document. A comparison of information found in the MN Impaired Waters List shows the waterbodies are identified as they appear on the 2018 list.

Table 1: Lake of the Wood Watershed impairments

Assessment Unit ID	Waterbody	Impairment/Parameter	Beneficial Use	Listing Year	Addressed in this TMDL?
09030009-501	Williams Creek, Headwaters to Zippel Cr	Fish Bioassessment	Aquatic Life	2016	No
		Dissolved Oxygen	Aquatic Life	2016	No†
		Macroinvertebrate Bioassessment	Aquatic Life	2016	Yes (TSS*)
		Total Suspended Solids	Aquatic Life	2016	Yes
09030009-503	Warroad River, West Branch, Headwaters to Warroad R	*Escherichia coli*	Aquatic Recreation	2016	No†
09030009-504	Warroad River, East Branch, Headwaters to Warroad R	Macroinvertebrate Bioassessment	Aquatic Life	2016	No
09030009-505	Willow Creek, Headwaters to Lake of the Woods	Dissolved Oxygen	Aquatic Life	2010	No†
		Fish Bioassessment	Aquatic Life	2016	No
09030009-515	Zippel Creek, West Branch (County Ditch 1), Headwaters to Zippel Bay (Lake of the Woods)	Dissolved Oxygen	Aquatic Life	2016	No†
		Fish Bioassessment	Aquatic Life	2016	No
		Macroinvertebrate Bioassessment	Aquatic Life	2016	Yes (TSS*)
		Total Suspended Solids	Aquatic Life	2016	Yes
09030009-523	Unnamed ditch, Unnamed ditch to Unnamed ditch	Macroinvertebrate Bioassessment	Aquatic Life	2016	Yes (TSS*)
		Fish Bioassessment	Aquatic Life	2016	Yes (TSS*)
09030009-560	County Ditch 20, Headwaters to Lake of the Woods	Macroinvertebrate Bioassessment	Aquatic Life	2016	No

*TSS was identified as a stressor and a TSS TMDL was calculated to partially address the bioassessment impairment. See **Section 2.2** for more details.

†Deferred to a future TMDL study when additional data will be available

Excerpted from the TMDL document

TMDL Review Table 1: Waterbodies as They Appear on the 2018 MN Impaired Waters List				
AUID	Water body name	Water body description	Affected designated use	Pollutant or stressor
09030009-501	Williams Creek	Headwaters to Zippel Cr	Aquatic Life	Aquatic macroinvertebrate bioassessments
09030009-501	Williams Creek	Headwaters to Zippel Cr	Aquatic Life	Total suspended solids
09030009-515	Zippel Creek, West Branch (County Ditch 1)	Headwaters to Zippel Bay (Lake of the Woods)	Aquatic Life	Aquatic macroinvertebrate bioassessments
09030009-515	Zippel Creek, West Branch (County Ditch 1)	Headwaters to Zippel Bay (Lake of the Woods)	Aquatic Life	Total suspended solids
09030009-523	Unnamed ditch	Unnamed ditch to Unnamed ditch	Aquatic Life	Aquatic macroinvertebrate bioassessments
09030009-523	Unnamed ditch	Unnamed ditch to Unnamed ditch	Aquatic Life	Fishes bioassessments

The impaired reaches for which a TMDL is calculated are shown in Figure 19 of the TMDL document.

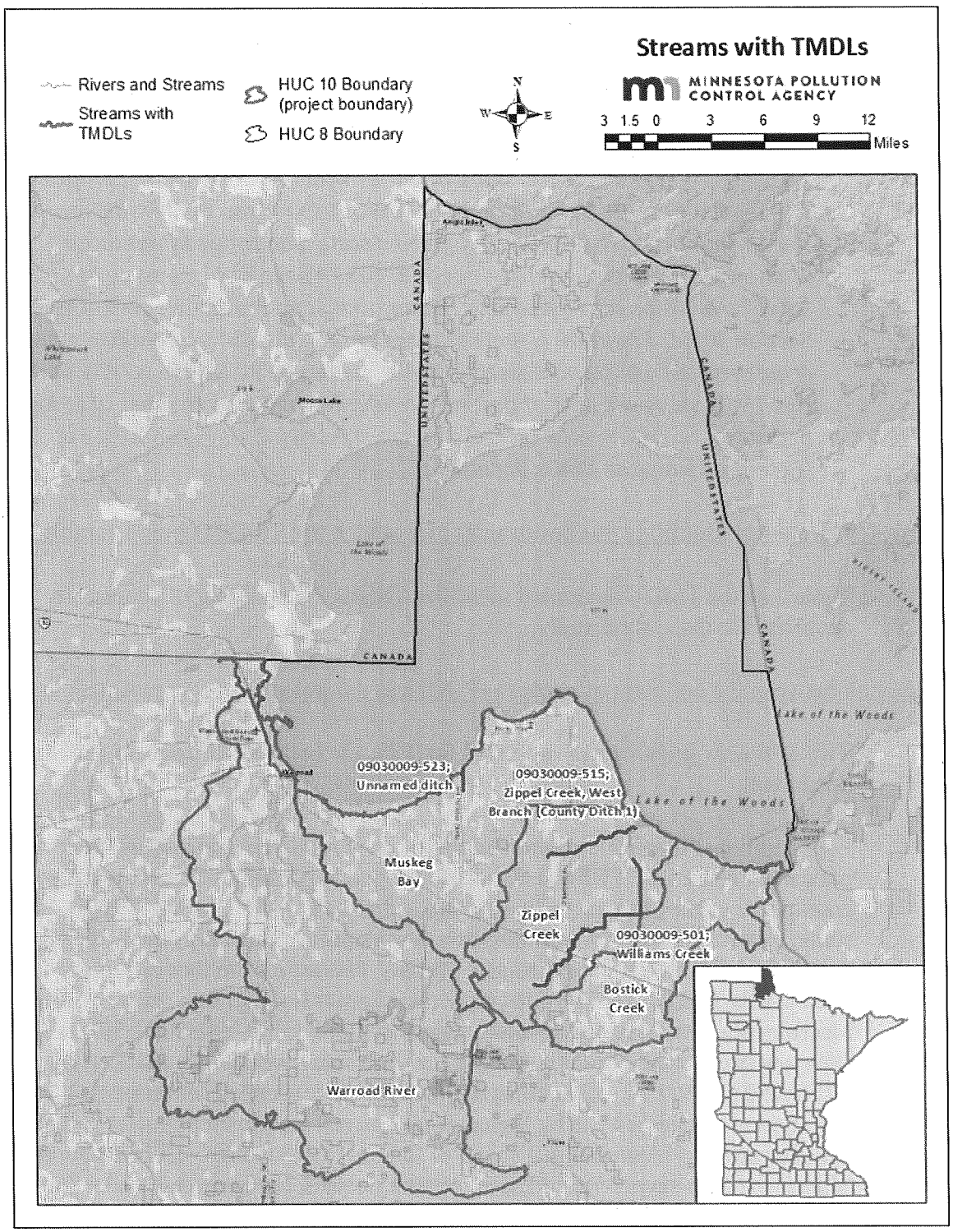


Figure 19: Lake of the Woods Watershed Streams with TMDLs.

Excerpted from the TMDL document

The TMDL identifies the priority ranking of the waterbody.

The priority ranking of the impaired waterbodies in the Lake of the Woods Watershed (LOWW) is discussed in Section 1.3 of the TMDL document.

> *The MPCA's schedule for TMDL study completions, as indicated on Minnesota's Section 303(d) impaired waters list, reflects Minnesota's priority ranking of this TMDL study. The MPCA has aligned its TMDL study priorities with the watershed approach and WRAPS cycle. The schedule for TMDL study completion corresponds to the WRAPS report completion on the 10-year cycle. The MPCA developed a state plan called Minnesota's TMDL Priority Framework Report to meet the needs of USEPA's national measure (WQ-27) under USEPA's Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act Section 303(d) Program. As part of these efforts, the MPCA identified water quality impaired segments that will be addressed in TMDL studies by 2022. The LOWW waters addressed by this TMDL study are part of that MPCA prioritization plan to meet USEPA's national measure.*
> *[Excerpted from the TMDL document]*

The TMDL clearly identifies the pollutant(s) for which the TMDL is being established.

Table 1 of the TMDL document identifies TSS as the pollutant of concern for the TMDLs developed in the current study.

The link between the pollutant of concern (POC) and the water quality impairment is specified.

Two of the six impairments are listed for TSS, the pollutant of concern (Table 1 of the TMDL document).

Four additional impairments are identified based on fish and macroinvertebrate biological indicators, and a TSS TMDL is being developed to partially address the stresses on the biological communities related to excess suspended sediments. Table 3 of the TMDL document provides a summary of the results of a primary stressor identification study conducted by the State. High suspended sediment is identified as a primary stressor for the four biological impairments at issue in this TMDL. Table 3 cites moderate support for TSS as a stressor for the Macroinvertebrate Bioassessment impairments for AUIDs 09030009-501 and 09030009-515 and cites low support for TSS as a stressor for the Macroinvertebrate and Fish Bioassessments for AUID 09030009-523. EPA notes that while high suspended sediment is shown by MPCA to play a role in causing these biological impairments, additional pollutant and pollution related stressors are also identified in Table 3 of the TMDL document. EPA is approving the TMDLs to address the high suspended sediment related stresses, however, it is understood that additional TMDLs may be needed to address the remaining pollutant related stressors and additional restoration work may be needed to address stream flow and channel alterations before these impairments can be considered to be fully addressed.

Section 2.2 of the TMDL document discusses the Index of Biological Integrity and how it is used

in assessing the relative impacts of different potential stressors.

In addition to TSS, there are two types of biological impairments (fish and macroinvertebrate bioassessments) based on Index of Biological Integrity (IBI) scores. The IBI scores assess the health of fish (F-IBI) and macroinvertebrate (M-IBI) communities. Unlike conventional pollutants, TMDLs for biological impairment listings cannot be directly calculated. However, a TMDL to address a biological impairment can be computed if a stressor causing the impairment can be quantified (e.g., conventional pollutant such as TSS). The primary stressors investigated for biological impairments in the LOWW include loss of longitudinal connectivity, insufficient base flow, insufficient physical habitat, high suspended sediment, and low DO (MPCA 2016b). A list of the stressors for the biological impairments is provided in Table 3. The stressors listed in Table 3 are scaled on the level of support identifying the stressor as a cause of the biological impairment, ranging from no support (blank) to high support.
[Excerpted from the TMDL document]

Table 3: Primary stressors to aquatic life in biologically impaired reaches in the LOWW

AUID	Stream	Biological Impairment	Primary Stressor*			
			Low Dissolved Oxygen	High Suspended Sediment	Insufficient Base Flow	Insufficient Physical Habitat
09030009-501	Williams Creek, Headwaters to Zippel Cr	Fish	○		◎	
		Macroinvertebrate	◎	◎	◎	○
09030009-504	Warroad River, East Branch, Headwaters to Warroad R	Macroinvertebrate	○	○	○	○
09030009-505	Willow Creek, Headwaters to Lake of the Woods	Fish	◎	○	◎	◎
09030009-515	Zippel Creek, West Branch (County Ditch 1), Headwaters to Zippel Bay (Lake of the Woods)	Fish	◎		○	
		Macroinvertebrate	●	◎	◎	○
09030009-523	Unnamed ditch, Unnamed ditch to Unnamed ditch,	Fish	○	○	◎	◎
		Macroinvertebrate	◎	○	◎	◎
09030009-560	County Ditch 20, Headwaters to Lake of the Woods	Macroinvertebrate	◎	○	◎	◎

*● = high support, ◎ = medium support, ○ = low support; based on Table 23 in Stressor Identification Report (MPCA, 2016b)

Excerpted from the TMDL document

Waters within Indian Country, (as defined in 18 U.S.C. Section 1151) are identified and discussed.

Section 1.1 of the TMDL document discusses the presence and jurisdictional issues associated with tribal lands in the watershed.

Some of the land in LOWW is tribal land (see Figure 2). This includes various areas of the Red Lake Reservation in the southern portion of the watershed owned by the Red Lake Band of Chippewa. These areas are not under the state's jurisdiction and TMDLs in this study do not apply to any tribal lands and/or tribal waters within the watershed.
[Excerpted from the TMDL document]

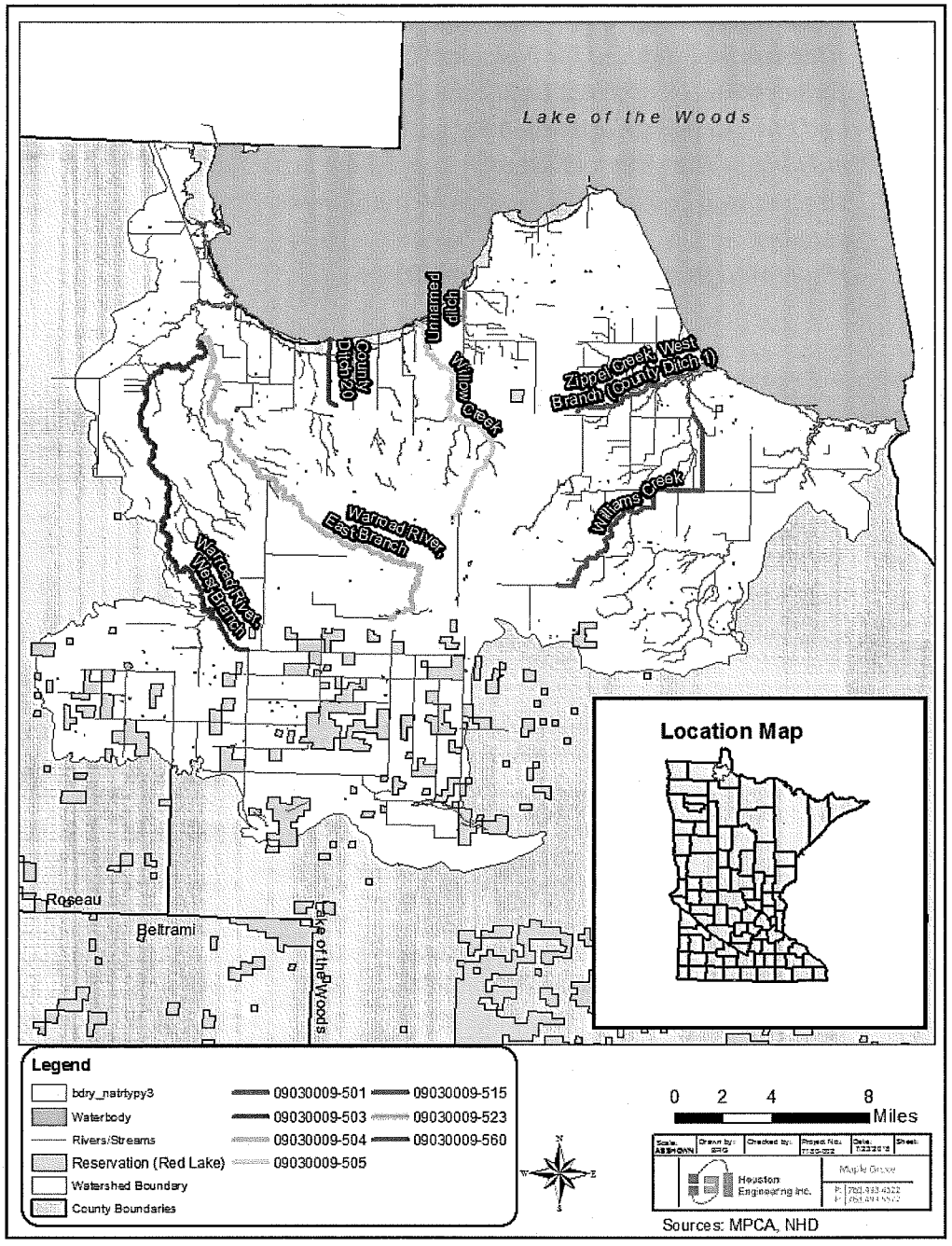


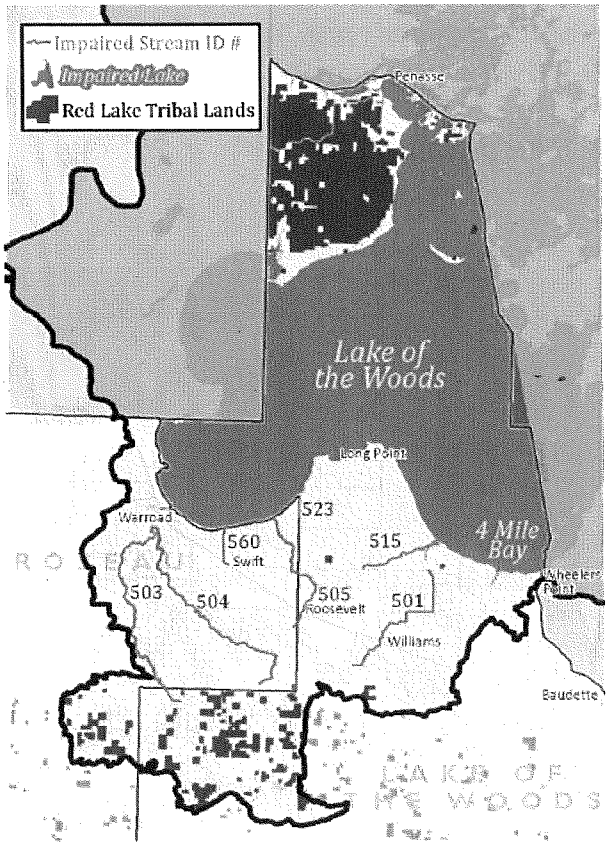
Figure 2: Impaired Waterbodies in the Lake of the Woods Watershed
Excerpted from the TMDL document

Additional information regarding Red Lake Nation tribal lands and their distribution in the watershed is provided in Section 3 and Figure 3 of the TMDL document.

> *The Red Lake Nation has tribal lands located within the boundary of the LOWW (Figure 3). None of the impaired waterbodies are within the boundaries of the Red Lake Nation's tribal lands. Therefore, no tribal lands are impacted by LOWW TMDL Study.*
> *[Excerpted from the TMDL document]*

This TMDL approval by the EPA does not address any Tribal waters or lands within the LOWW.

Figure 3: Red Lake Tribal Lands



Excerpted from the TMDL document

The location and quantity of point and non-point sources are identified.

Section 3.5 of the TMDL document discusses sources of sediment to the impaired reaches.

Permitted Sources

There are no Municipal Separate Storm Sewer Systems (MS4)s located within the study area. Section 3.5.1.1 of the TMDL document identifies one NPDES permitted Waste Water Treatment

Facility (WWTF) as a source of TSS. Construction and industrial site stormwater are also included as potential sources of TSS. All permitted sources of TSS combined represent a small fraction of the overall loading of TSS to the impaired reaches.

The LOWW contains one WWTF (Williams WWTF, NPDES/SDS Permit Number: MN0021679) that contributes to one reach impaired by TSS (09030009-501). The WWTF is a pond-type wastewater treatment plant containing a discharge monitoring station and a 3-cell stabilization pond system (Table 11). General operations for WWTFs such as this are to discharge their treated wastewater into the surface water in the spring/early summer and again in the late fall of each year. The permitted windows for discharges are March through June and September through December. This TMDL study assumes that a portion of the discharge will contain suspended solids from the treatment ponds; therefore, a portion of the WLA is assigned to the WWTF. Table 11 identifies the permitted WWTF in the LOWW that contributes to the TSS impaired reach, and the permitted daily discharge flow. The TSS TMDL for 09030009-501 does not require any change to Williams WWTF's permitted TSS limit.
[Excerpted from the TMDL document]

Table 11: Relevant WWTF permit in the Lake of the Woods Watershed.

Facility	Secondary Pond Size (acres)	Average Wet Weather Design Flow (gpd)[1] /Permitted Max Daily Discharge (gpd)[1] (A*0.163*106)	Liters per Gallon	Permitted Max Daily Discharge (liters/day)[1] (B*C)	Average # of Days Discharging per Year	Permitted TSS Conc. (mg/L)	WLA-TSS (kg/day) (D*F/106)	Kg per Ton	WLA-TSS (tons/ day)	WLA-TSS (tons/yr)
Williams (SD003)	3.4	553,947	3.785	2,096,919	16	45	94.2	907.2	0.1	1.6

Excerpted from the TMDL document

Non-Point Sources

Nonpoint sources of TSS are identified as erosion from stream beds and banks due to stream channel modifications and sediment contributions from agricultural activities in the watersheds. The Hydrologic Simulation Program FORTRAN (HSPF) model was used to estimate non-point source loads.

Hydrologic modification within the LOWW is a major source of TSS. Per the Minnesota Statewide Altered Watercourse Project dataset, 64% of the watercourses in the LOWW have been channelized, ditched, or impounded leading to increased channel instability and creation of unstable substrates. This degree of hydrologic alteration results in increased and quicker peak flows, creating a "flashy" or unstable flow regime and unstable stream channels. Streams managed for drainage also tend to contribute significant sediment loads downstream (MPCA, 2016a; HEI, 2016a). Moreover, climatic variation may also impact

channel stability within the LOWW.
[Excerpted from the TMDL document]

The output from the HSPF model is used to identify those locations where yields are greatest on average at the subwatershed outlet. Figure 17 displays LOWW HSPF subwatershed priority using Total Sediment. Figure 18 shows the average annual sediment yields (tons/acre/year) by land segments in the LOWW. More information on the LOWW HSPF model's development and calibration can be found in the modeling report (HEI, 2015a).
[Excerpted from the TMDL document]

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the first criterion.

Section 2. Description of the Applicable Water Quality Standards and Numeric Water Quality Target

The TMDL submittal must include a description of the applicable State/Tribal water quality standard, including the designated use(s) of the waterbody, the applicable numeric or narrative water quality criterion, and the antidegradation policy. (40 C.F.R. §130.7(c)(1)). EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

The TMDL submittal must identify a numeric water quality target(s) – a quantitative value used to measure whether or not the applicable water quality standard is attained. Generally, the pollutant of concern and the numeric water quality target are, respectively, the chemical causing the impairment and the numeric criteria for that chemical (e.g., chromium) contained in the water quality standard. The TMDL expresses the relationship between any necessary reduction of the pollutant of concern and the attainment of the numeric water quality target. Occasionally, the pollutant of concern is different from the pollutant that is the subject of the numeric water quality target (e.g., when the pollutant of concern is phosphorus and the numeric water quality target is expressed as Dissolved Oxygen (DO) criteria). In such cases, the TMDL submittal should explain the linkage between the pollutant of concern and the chosen numeric water quality target.

Section 2 Review Comments:

Applicable WQS are identified, described, and a numerical water quality target is included. The TMDL expresses the relationship between any necessary reduction of the pollutant of concern and the attainment of the numeric water quality target. If the target is not the pollutant of concern, the linkage between the surrogate and POC is described.

Sections 2.2 of the TMDL document discuss the applicable Northern Nutrient Region TSS water

quality standards that apply to the three TSS impaired stream reaches. The WQS require that a TSS concentration of 15 mg/L not be exceeded more than 10% of the time between April 1st and September 30th.

The Minnesota narrative water quality standard for all Class 2 waters (Minn. R. 7050.0150, Subp. 3) states that:

> *The aquatic habitat, which includes the waters of the state and stream bed, shall not be degraded in any material manner, there shall be no material increase in undesirable slime growths or aquatic plants, including algae, nor shall there be any significant increase in harmful pesticide or other residues in the waters, sediments, and aquatic flora and fauna; the normal fishery and lower aquatic biota upon which it is dependent and the use thereof shall not be seriously impaired or endangered, the species composition shall not be altered materially, and the propagation or migration of the fish and other biota normally present shall not be prevented or hindered by the discharge of any sewage, industrial waste, or other wastes to the waters.*

Applicable water quality standards for the LOWW stream impairments addressed in this TMDL study are shown in Table 2, while Table 1 shows the specific water bodies affected. [Excerpted from the TMDL document]

The recently approved Minnesota State TSS standards are based upon nutrient regions, which are loosely based on ecoregions. The LOWW is located in the Northern Nutrient Region. The state TSS standard for this region is 15 milligrams per liter (mg/L) (MPCA, 2016a).
[Excerpted from the TMDL document]

Table 2: Surface Water quality standards for LOWW stream reaches addressed in this report

Parameter	Water Quality Standard	Units	Criteria	Period of Time Standard Applies
Total suspended solids (TSS)-Northern Nutrient Region	Not to exceed 15	mg/L	Upper 10th percentile	April 1 – September 30

Excerpted from the TMDL document

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the second criterion.

Section 3. Loading Capacity - Linking Water Quality and Pollutant Sources

A TMDL must identify the loading capacity of a waterbody for the applicable pollutant. EPA regulations define loading capacity as the greatest amount of a pollutant that a water can receive without violating water quality standards (40 C.F.R. §130.2(f)).

The pollutant loadings may be expressed as either mass-per-time, toxicity or other appropriate measure (40 C.F.R. §130.2(i)). If the TMDL is additionally expressed in terms other than a daily load, e.g., an annual load, the submittal should explain why it is appropriate to express the TMDL in the unit of measurement chosen. The TMDL submittal should describe the method used to establish the cause-and-effect relationship between the numeric target and the identified pollutant sources. In many instances, this method will be a water quality model.

The TMDL submittal should contain documentation supporting the TMDL analysis, including the basis for any assumptions; a discussion of strengths and weaknesses in the analytical process; and results from any water quality modeling. EPA needs this information to review the loading capacity determination, and load and wasteload allocations, which are required by regulation.

TMDLs must take into account critical conditions for steam flow, loading, and water quality parameters as part of the analysis of loading capacity. (40 C.F.R. §130.7(c)(1)). TMDLs should define applicable critical conditions and describe their approach to estimating both point and nonpoint source loadings under such critical conditions. In particular, the TMDL should discuss the approach used to compute and allocate nonpoint source loadings, e.g., meteorological conditions and land use distribution.

Section 3 Review Comments:

The loading capacity is presented for the pollutant of concern (including daily loads).

The loading capacity for the three TSS impaired waterbodies are presented in the form of the load duration curves in Figures 20-22 of the TMDL document, and are also presented in tons of total suspended sediment per day in Tables 16-18 of the TMDL document. The load duration curves represent the loading capacity of the respective waterbodies for TSS continuous with respect to flow, while the Tables present the same information for the midpoints of the five common flow regimes. The Figures and Tables for the waterbodies are presented in the TMDL document as follows.

AUID 09030009-501	Williams Creek	Figure 20 and Table 16.
AUID 09030009-515	Zippel Creek. West Branch	Figure 21 and Table 17.
AUID 09030009-523	Unnamed ditch	Figure 22 and Table 18.

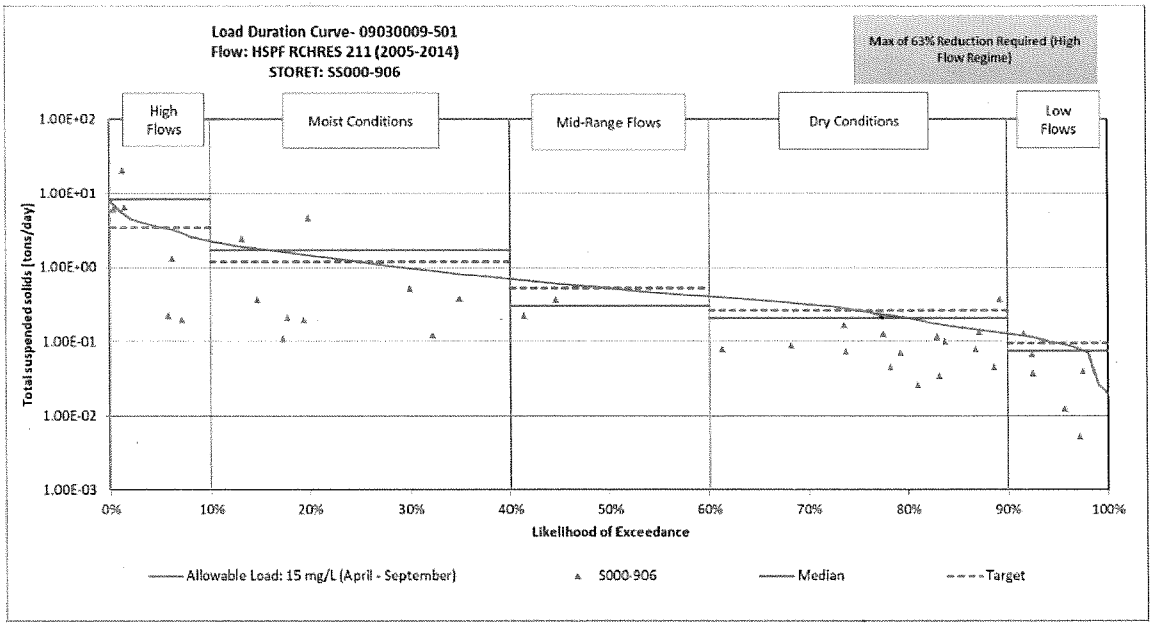


Figure 20: Total Suspended Solids LDC for Williams Creek, Headwaters to Zippel Cr (AUID 09030009-501).

Table 16: Total Suspended Solids loading capacities and allocations for Williams Creek, Headwaters to Zippel Cr (AUID 09030009-501).

Total Suspended Solids		Flow Condition				
		High	Moist Conditions	Mid-Range	Dry Conditions	Low
		[tons/day]				
Loading Capacity		**3.48**	**1.19**	**0.52**	**0.27**	**0.20**
Wasteload Allocation	**Total WLA**	**0.10**	**0.10**	**0.10**	**0.10**	**0.1**
	Williams WWTF	0.1	0.1	0.1	0.1	0.1
	Construction/Industrial Stormwater	0.0035	0.0012	0.0005	0.0003	0.0001
Load Allocation	**Total LA**	**3.03**	**0.97**	**0.37**	**0.14**	**0.09**
Margin of Safety (MOS)		**0.35**	**0.12**	**0.05**	**0.03**	**0.01**
Existing Load		**8.36**	**1.74**	**0.30**	**0.21**	**0.08**
Unallocated Load		**0.00**	**0.00**	**0.22**	**0.06**	**0.12**
Estimated Load Reduction		58%	32%	0%	0%	0%

Loading capacity, WLA, LA, and MOS are part of the TMDL equation (Section 4) The existing load is based on available water quality data; the unallocated load is the load, if any, that remains if the existing load is below the load capacity minus the MOS; and the estimated load reduction is the reduction, as a percentage, of the existing load to meet the numeric water quality standard.

Excerpted from the TMDL document

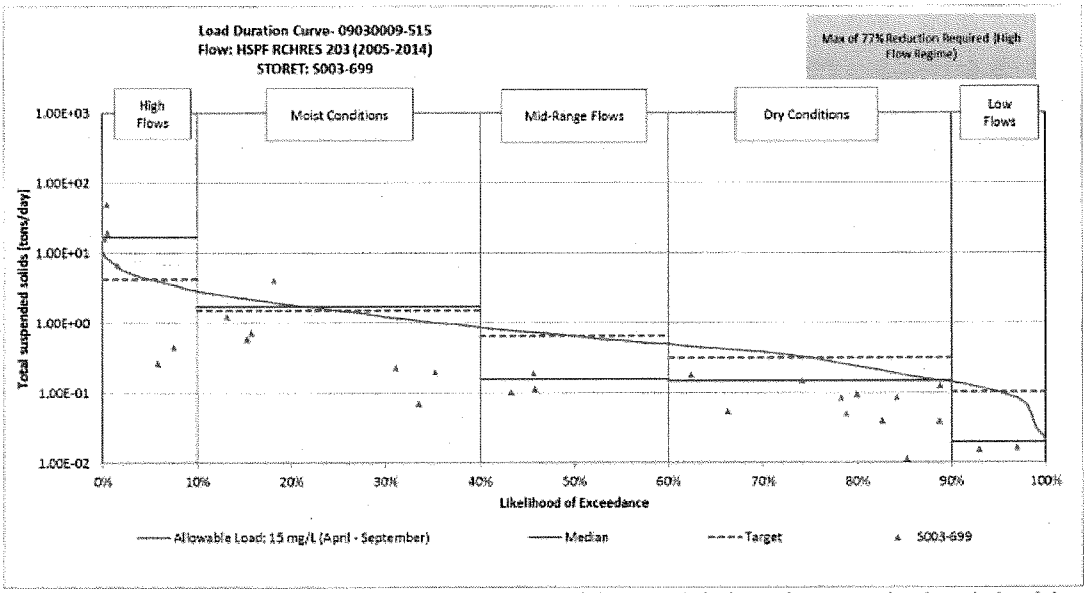


Figure 21: Total Suspended Solids LDC for Zippel Creek, West Branch (County Ditch 1), Headwaters to Zippel Bay (Lake of the Woods) (AUID 09030009-515).

Table 17: TSS loading capacities and allocations for Zippel Creek, West Branch (County Ditch 1), Headwaters to Zippel Bay (Lake of the Woods) (AUID 09030009-515).

Total Suspended Solids		Flow Condition				
		High	Moist Conditions	Mid-Range	Dry Conditions	Low
		[tons/day]				
Loading Capacity		4.31	1.50	0.64	0.32	0.10
Wasteload Allocation	Total WLA	0.0043	0.0015	0.0006	0.0003	0.0001
	Construction/Industrial Stormwater	*0.0043*	*0.0015*	*0.0006*	*0.0003*	*0.0001*
Load Allocation	Total LA	3.87	1.35	0.58	0.28	0.09
Margin of Safety (MOS)		0.43	0.15	0.06	0.03	0.01
Existing Load		17.0	1.74	0.16	0.15	0.02
Unallocated Load		0.0	0.0	0.49	0.17	0.08
Estimated Load Reduction		75%	13%	0%	0%	0%

Loading capacity, WLA, LA, and MOS are part of the TMDL equation (Section 4) The existing load is based on available water quality data; the unallocated load is the load, if any, that remains if the existing load is below the load capacity minus the MOS; and the estimated load reduction is the reduction, as a percentage, of the existing load to meet the numeric water quality standard.

Excerpted from the TMDL document

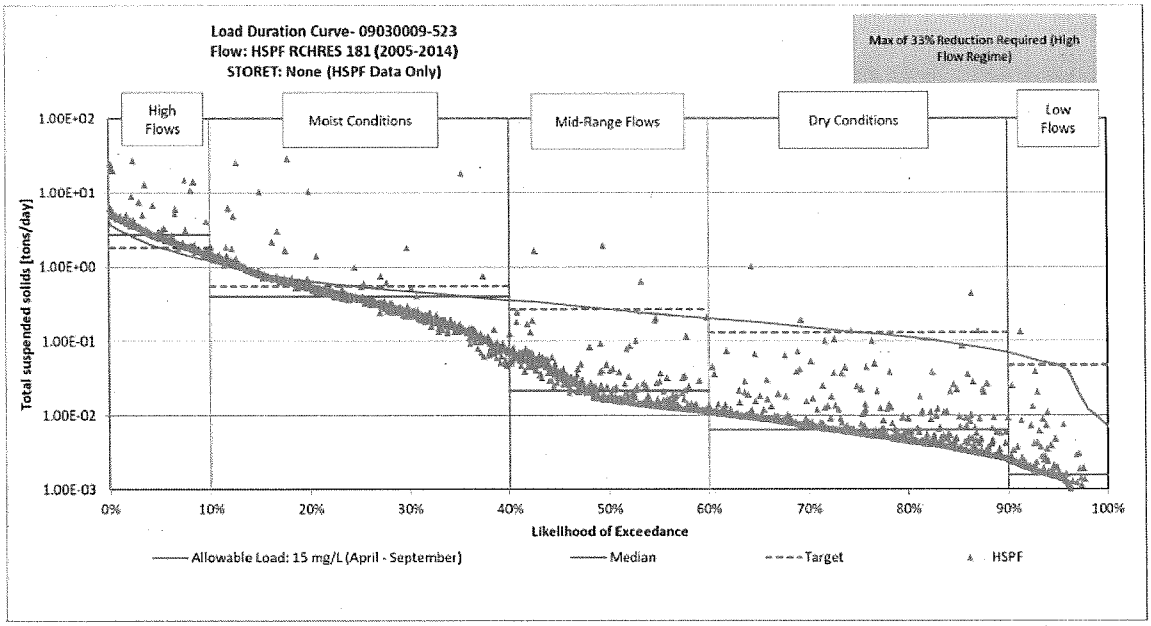


Figure 22: Total Suspended Solids LDC for Unnamed ditch, Unnamed ditch to Unnamed ditch (AUID 09030009-523).

Table 18: TSS loading capacities and allocations for Unnamed ditch, Unnamed ditch to Unnamed ditch (AUID 09030009-523).

Total Suspended Solids		Flow Condition				
		High	Moist Conditions	Mid-Range	Dry Conditions	Low
		[tons/day]				
Loading Capacity		**1.83**	**0.54**	**0.27**	**0.13**	**0.05**
Wasteload Allocation	**Total WLA**	**0.0018**	**0.0005**	**0.0003**	**0.0001**	**0.00005**
	Construction/Industrial Stormwater	*0.0018*	*0.0005*	*0.0003*	*0.0001*	*0.00005*
Load Allocation	**Total LA**	**1.65**	**0.49**	**0.24**	**0.117**	**0.04**
Margin of Safety (MOS)		**0.18**	**0.05**	**0.03**	**0.013**	**0.005**
Existing Load		**2.7**	**0.40**	**0.02**	**0.01**	**0.002**
Unallocated Load		**0.0**	**0.1**	**0.25**	**0.12**	**0.046**
Estimated Load Reduction		32%	**0%**	**0%**	**0%**	**0%**

Loading capacity, WLA, LA, and MOS are part of the TMDL equation (Section 4) The existing load is based on available water quality data; the unallocated load is the load, if any, that remains if the existing load is below the load capacity minus the MOS; and the estimated load reduction is the reduction, as a percentage, of the existing load to meet the numeric water quality standard.

Excerpted from the TMDL document

The method to establish a cause and effect relationship between the POC and the numerical target is described, and the TMDL analysis is documented and supported

Section 4.1.1 of the TMDL document discusses the use of the load duration curve methodology to determine the loading capacity of the waterbodies.

The LDC approach was used to compute needed sediment load reductions in the LOWW. To adequately capture different types of flow events and pollutant loading during these events, five flow regimes were identified per EPA guidance: High flow (0% to 10%), Moist Conditions (10% to 40%), Mid-range Flows (40% to 60%), Dry Conditions (60% to 90%), and Low Flow (90% to 100%). Development of the LDCs is discussed in Appendix A.
[Excerpted from the TMDL document]

The HSPF model was used to simulate flow data where continuous daily streamflow monitoring data was not available.

This TMDL study developed LDCs for three AUIDs (Table 12 and Figure 19) in the LOWW. No observed, continuous daily streamflow data or USGS gauging stations were available in the LDC reaches. Therefore, simulated daily mean flows from the LOWW HSPF model (RESPEC 2013) were used to create the LDCs. The HSPF model simulates flows from 1995 through 2014. To capture the most recent assessment period, the period 2005 through 2014 was used to develop the LDCs and captures the most recent water quality data in the LOWW.
[Excerpted from the TMDL document]

The TSS LDCs were created using the Northern Region TSS standard of 15 mg/L. The TSS LDCs were calculated using the TSS data collected during the assessment period, April through September. Individual loading estimates were calculated by combining the observed TSS concentration and simulated mean daily flow value on each sampling date. The load estimates were separated by station, mainly for purposes of display on the curve. "Allowable" loading curves were created for the TSS criteria by multiplying each "allowable" concentration (15 mg/L) by the simulated mean daily flow values and ranking the flows. A 10% MOS was applied to each of the "allowable" loading curves. Conversion factors for this work are shown in Table 13. Water quality sites used to develop TSS LDCs were shown previously in Table 10.
[Excerpted from the TMDL document]

Table 12: Water quality sites used to develop load duration curves by AUID.

AUID (09030009-XXX)	Water Quality Monitoring Locations	Turbidity/ TSS Data
501	S000-795, S000-906, S003-697	2004-2013
515	S003-699	2004-2013
523	No Water Quality Sites Available (HSPF Model Data)	2005-2014

Excerpted from the TMDL document

Table 13: Converting flow and concentration to sediment load.

Load (tons/day) = TSS standard (mg/L) * Flow (cfs) * Conversion Factor			
For each flow regime			
Multiply **flow** (cfs) by **28.31** (L/ft^3) and **86,400** (sec/day) to convert	cfs	→	L/day
Multiply **TSS standard** (65 mg/L) by **L/day** to convert	L/day	→	mg/day
Divide **mg/day** by **907,184,740** (mg/ton) to convert	mg/day	→	tons/day

Excerpted from the TMDL document

The critical conditions for meeting WQS are described and accounted for.

> Critical conditions are accounted for through the use of load duration curves which directly calculate the loading capacity of the waterbody for all flow conditions.

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the third criterion.

Section 4. Load Allocations (LAs)

EPA regulations require that a TMDL include LAs, which identify the portion of the loading capacity attributed to existing and future nonpoint sources and to natural background. Load allocations may range from reasonably accurate estimates to gross allotments (40 C.F.R. §130.2(g)). Where possible, load allocations should be described separately for natural background and nonpoint sources.

Section 4 Review Comments

The load allocations for existing NPS are accounted for (and future if applicable).

The methodology for determining the load allocation is discussed in Section 4.1.2 of the TMDL document. The load allocations are presented in Tables 16 through 18 of the TMDL document in units of tons/day.

> *The LA represent the portion of the loading capacity designated for nonpoint sources of TSS. The LA is the remaining load once the WLA, reserve capacity, and MOS are determined and subtracted from the loading capacity. The LA includes all sources of TSS that do not require NPDES/SDS permit coverage, including unregulated watershed runoff, internal loading, groundwater, and atmospheric deposition and a consideration for "natural background" conditions.*
> *[Excerpted from the TMDL document]*

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the forth criterion.

Section 5. Wasteload Allocations (WLAs)

EPA regulations require that a TMDL include WLAs, which identify the portion of the loading capacity allocated to individual existing and future point source(s) (40 C.F.R. §130.2(h), 40 C.F.R. §130.2(i)). In some cases, WLAs may cover more than one discharger, e.g., if the source is contained within a general permit.

The individual WLAs may take the form of uniform percentage reductions or individual mass based limitations for dischargers where it can be shown that this solution meets WQSs and does not result in localized impairments. These individual WLAs may be adjusted during the NPDES permitting process. If the WLAs are adjusted, the individual effluent limits for each permit issued to a discharger on the impaired water must be consistent with the assumptions and requirements of the adjusted WLAs in the TMDL. If the WLAs are not adjusted, effluent limits contained in the permit must be consistent with the individual WLAs specified in the TMDL. If a draft permit provides for a higher load for a discharger than the corresponding individual WLA in the TMDL, the State/Tribe must demonstrate that the total WLA in the TMDL will be achieved through reductions in the remaining individual WLAs and that localized impairments

will not result. All permitees should be notified of any deviations from the initial individual WLAs contained in the TMDL. EPA does not require the establishment of a new TMDL to reflect these revised allocations as long as the total WLA, as expressed in the TMDL, remains the same or decreases, and there is no reallocation between the total WLA and the total LA.

Section 5 Review Comments

The waste load allocations are properly assigned

The methodology used to determine and assign the waste load allocations is discussed in Section 4.1.3 of the TMDL document. The waste load allocations are presented in Tables 16 through 18 of the TMDL document in units of tons/day.

The WLA represents the regulated portion of the loading capacity, requiring a NPDES/SDS permit. Regulated sources may include construction stormwater, industrial stormwater, Municipal Separate Storm Sewer Systems (MS4) permitted areas, NPDES/SDS permitted feedlots, and wastewater treatment facilities (WWTF). The regulated TSS contributing sources with WLAs in the LOWW impaired stream reaches are the Williams WWTF and possible construction stormwater and industrial stormwater sources. There are no MS4s or NPDES/SDS permitted feedlots. [Excerpted from the TMDL document]

NPDES Permitted Waste Water Treatment Plants and Industrial Point Sources

The Williams WWTF (NPDES/SDS Permit Number: MN0021679) is the only WWTF located in the drainage area of an impaired reach, Williams Creek (AUID 09030009-501). The Williams WWTF is limited to discharging from a secondary treatment cell. The general operation of these facilities is to discharge their treated wastewater into the surface water system in the spring/early summer and again in the late fall of each year. The permitted windows for discharges are in March through June and September through December. The maximum daily permitted WLA was calculated for the WWTF discharging to a HUC-10 with a TSS impaired reach based on a maximum discharge of six inches per day, per MPCA guidance. The WLA was computed for TSS based on the maximum permitted daily flow rate from the WWTF. The maximum permitted daily and annual TSS WLAs for the WWTF contributing to the TSS impairments are shown in Table 14. The Williams Creek TSS TMDL will not require any change to the WWTF's permitted TSS limit.
[Excerpted from the TMDL document]

Table 14: Annual and daily TSS WLAs for LOWW WWTFs contributing to TSS impaired reaches.

Facility	Secondary Pond Size (acres)	Average Wet Weather Design Flow (gpd)[1]/Permitted Max Daily Discharge (gpd)[1] (A*0.163*106)	Liters per Gallon	Permitted Max Daily Discharge (liters/day)[1 (B*C)]	Average # of Days Discharging per Year	Permitted TSS Conc. (mg/L)	WLA-TSS (kg/day) (D*F/106)	Kg per Ton	WLA-TSS (tons/ day) [G/H]	WLA-TSS (tons/yr)
Williams (SD003)	3.4	553,947	3.785	2,096,919	16	45	94.2	907.2	0.1	1.66

Excerpted from the TMDL document

Construction and Industrial Stormwater Sources.

Construction and industrial stormwater discharges expected to contribute TSS in the drainage basins of any impaired stream reach were accounted for as 0.1% of the LA. It is expected that in any given year, about 0.1% of the area in a watershed is covered by construction and/or industrial activities. Therefore, it is assumed that 0.1% of the load capacity is contributed to construction and/or industrial activities covered under the state's general construction and industrial stormwater permits.
[Excerpted from the TMDL document]

Applicable NPDES permit numbers for construction and industrial stormwater sources are provided in Section 8.1.1 and 8.1.2 of the TMDL document.

The BMPs and other stormwater control measures that should be implemented at construction sites are defined in the state's NPDES/SDS General Stormwater Permit for Construction Activity (MNR100001).
[Excerpted from the TMDL document]

The BMPs and other stormwater control measures that should be implemented at the industrial sites are defined in the state's NPDES/SDS Industrial Stormwater Multi-Sector General Permit (MNR050000), or NPDES/SDS General Permit for Construction Sand & Gravel, Rock Quarrying and Hot Mix Asphalt Production facilities (MNG490000).
[Excerpted from the TMDL document]

The EPA finds that the TMDL document submitted by MPCA satisfies the requirements of the fifth criterion.

Section 6. Margin of Safety (MOS)

The statute and regulations require that a TMDL include a margin of safety (MOS) to account for any lack of knowledge concerning the relationship between load and wasteload allocations and water quality (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)). EPA's 1991 TMDL Guidance explains that the MOS may be implicit, i.e., incorporated into the TMDL through conservative assumptions in the analysis, or explicit, i.e., expressed in the TMDL as loadings set aside for the MOS. If the MOS is implicit, the conservative assumptions in the analysis that account for the MOS must be described. If the MOS is explicit, the loading set aside for the MOS must be identified.

Section 6 Review Comments:

Whether the MOS is expressed explicitly and/or implicitly, a justification must be provided that explains why the MOS chosen is believed to be adequate to account for any uncertainties and errors in the data and calculation of the TMDL.

A margin of safety is provided and justified. If an implicit MOS is used, conservative assumptions are identified, and their relative impacts discussed.

An explicit 10% margin of safety is provided for and justified based the accuracy of the observed data.

An explicit 10% of the loading capacity MOS was applied to each flow regime for all LDCs developed for this TMDL study. The explicit 10% MOS accounts for:

- *Uncertainty in the observed daily flow record;*
- *Uncertainty in the observed water quality data, including uncertainty associated with the transformation of turbidity data to a TSS surrogate;*
- *Allocations and loading capacities are based on flow, which varies from high to low. This variability is accounted for using the five flow regimes and the LDCs.*

A 10% margin of safety is deemed suitable since both the MPCA and USGS estimate that at any given time the record/reported data should be within 10% of the actual value. Therefore, it was assumed that the uncertainty in the observed data is 10% and a 10% MOS is suitable for this TMDL study.
[Excerpted from the TMDL document]

The EPA finds that the TMDL document submitted by MPCA contains an appropriate MOS satisfying the requirements of the sixth criterion.

Section 7. Seasonal Variation

The statute and regulations require that a TMDL be established with consideration of seasonal variations. The TMDL must describe the method chosen for including seasonal variations. (CWA §303(d)(1)(C), 40 C.F.R. §130.7(c)(1)).

Section 7 Review Comments:

Seasonal variation in loads and/or effects are described and accounted for.

Seasonal variation is discussed in Section 4.1.5 of the TMDL document. Seasonal variation is accounted for by the use of load duration curves which incorporate seasonal flow variation by determining the loading capacity directly from stream flow rates.

A summary of the TSS load reduction results can be found in Table 15. Results are summarized by indicating the maximum required percent load reduction for each curve and the flow regime and water quality criteria under which this maximum reduction occurred (i.e., the critical flow regime and criteria). The most common critical condition for the TSS standard is high flows.
[Excerpted from the TMDL document]

Table 15: Maximum required TSS load reductions for the Lake of the Woods Watershed.

AUID (09030009-XXX)	TSS Standard	
	Max. % Load Reduction	Critical Flow Regime
501	63%	High Flows
515	77%	High Flows
523	40%	High Flows

Excerpted from the TMDL document

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the seventh criterion.

Section 8. Reasonable Assurances

When a TMDL is developed for waters impaired by point sources only, the issuance of a National Pollutant Discharge Elimination System (NPDES) permit(s) provides the reasonable assurance that the wasteload allocations contained in the TMDL will be achieved. This is because 40 C.F.R. 122.44(d)(1)(vii)(B) requires that effluent limits in permits be consistent with "the assumptions and requirements of any available wasteload allocation" in an approved TMDL. When a TMDL is developed for waters impaired by both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur, EPA's 1991 TMDL Guidance states that the TMDL should provide reasonable assurances that nonpoint source control measures will achieve expected load reductions in order for the TMDL to be approvable. This information is necessary for EPA to determine that the TMDL, including the load and wasteload allocations, has been established at a level necessary to implement water quality standards.

EPA's August 1997 TMDL Guidance also directs Regions to work with States to achieve TMDL

load allocations in waters impaired only by nonpoint sources. However, EPA cannot disapprove a TMDL for nonpoint source-only impaired waters, which do not have a demonstration of reasonable assurance that LAs will be achieved, because such a showing is not required by current regulations.

Section 8 Review Comments:

Reasonable Assurance that point source load reductions will occur is provided in the document.

> Reasonable assurance that NPDES regulated waste load allocations will be achieved is provided by the NPDES permits issued for WWTP and stormwater runoff.
>
> > *The WLAs are assured through the issuance and regulation of NPDES/SDS permits. [Excerpted from the TMDL document]*

Reasonable Assurance that NPS load reductions will occur is provided in the document.

The parties responsible for implementation are identified:

> Section 6 of the TMDL document provides a discussion of the parties who will be responsible for implementing the measures necessary to achieve the non-point source load allocations.

Reasonable assurance of the load reductions and strategies developed under this TMDL study comes from multiple sources. The WLAs are assured through the issuance and regulation of NPDES/SDS permits. The LAs and their associated nonpoint source implementation strategies are reasonably assured by historical and ongoing collaborations in the LOWW. Several agencies and local governmental units have been and continue to work toward the goal of reducing pollutant loads in the LOWW. Strong partnerships between the Warroad River Watershed District, counties, and Soil and Water Conservation Districts (SWCD) have led to the implementation of conservation practices in the past and will continue to do so into the future. Upon approval of the TMDL study by the EPA, the Lake of the Woods Soil and Water Conservation District (LOW SWCD) and the Roseau SWCD will incorporate the various implementation activities described by this TMDL study (see Section 8) and the LOW WRAPS Report into their Watershed Management Plan (WMP) or their One Watershed One Plan (1W1P), currently under development. The LOW SWCD and the Roseau SWCD are committed to taking lead roles during the implementation of this TMDL study and have the ability to generate revenue and receive grants to finance the implementation items.
[Excerpted from the TMDL document]

In addition to commitment from local agencies, the state of Minnesota has also made a commitment to protect and restore the quality of its waters. In 2008, Minnesota voters approved the Clean Water, Land, and Legacy Amendment to increase the state sales tax to fund water quality improvements.
[Excerpted from the TMDL document]

Clean Water Legacy Act: The CWLA was passed in Minnesota in 2006 for the purposes of protecting, restoring, and preserving Minnesota water. The CWLA provides the protocols and practices to be followed in order to protect, enhance, and restore water quality in Minnesota. The CWLA outlines how MPCA, public agencies and private entities should coordinate in their efforts toward improving land use management practices and water management. The CWLA anticipates that all agencies (i.e., MPCA, public agencies, local authorities and private entities, etc.) will cooperate regarding planning and restoration efforts. Cooperative efforts would likely include informal and formal agreements to jointly use technical, educational, and financial resources. The CWLA also provides details on public and stakeholder participation, and how the funding will be used. In part to attain these goals, the CWLA requires MPCA to develop Watershed Restoration and Protection Strategies (WRAPS). The WRAPS are required to contain such elements as the identification of impaired waters, watershed modeling outputs, point and nonpoint sources, load reductions, etc. (Chapter 114D.26; CWLA). The WRAPS also contain an implementation Table of strategies and actions that are capable of achieving the needed load reductions, for both point and nonpoint sources

(Chapter 114D.26, Subd. 1(8); CWLA). Implementation plans developed for the TMDLs are included in the table, and are considered "priority areas" under the WRAPS process (Watershed Restoration and Protection Strategy Report Template, MPCA). This Table includes not only needed actions but a timeline for achieving water quality targets, the reductions needed from both point and nonpoint sources, the governmental units responsible, and interim milestones for achieving the actions. MPCA has developed guidance on what is required in the WRAPS (Watershed Restoration and Protection Strategy Report Template, MPCA). The WRAPS for LOWW was approved by MPCA on February 6, 2020.

Potential measures to achieve load reductions are identified.

Section 8.2 of the TMDL document provides a discussion of the type of BMPs that have been identified as potential measures for controlling NPS TSS in the respective watersheds.

Water quality restoration and implementation strategies within the LOWW were identified through collaboration with state and local partners. Due to the homogeneous nature of the LOWW, most of the suggested strategies are applicable throughout the LOWW. The identified implementation strategies and priorities are discussed in the Lake of the Woods Watershed Restoration and Protection Strategy Report (HEI 2016b) and the Lake of the Woods Watershed Biotic Stressor Identification report (MPCA, 2016b). Below is a summary of the suggested strategies needed to achieve restoration goals in the LOWW:

- *Prevent or mitigate activities that will further alter the hydrology of the LOWW;*
- *Improve storage capacity within the LOWW through storage projects;*
- *Implement water and sediment control basins;*
- *Pursue opportunities and options to attenuate peak flows and augment base flows in streams throughout the LOWW;*
- *Re-establish natural functioning stream channels wherever possible using natural channel design principles;*
- *Increase the quantity and quality of instream habitat throughout the LOWW;*
- *Establish and/or protect riparian corridors along all waterways, including ditches, using native vegetation whenever possible;*
- *Increase the amount of continuous living cover throughout the LOWW;*
- *Implement agricultural BMPs to reduce soil erosion from fields;*
- *Implement agricultural BMPs to reduce delivery of sediment to surface waters (i.e., grass filter strips);*
- *Limit or exclude the access of livestock to waterways.*

[Excerpted from the TMDL document]

Potential resource needs for implementation are identified.

Potential resources for funding BMP are discussed in Section 6 of the TMDL document.

> *The LOW SWCD and Roseau SWCS have the ability to provide funding for projects consistent with those identified within the WMP and/or the 1W1P. The WMP and the 1W1P are required to be updated following a ten-year cycle and future revisions will include projects and methods to make progress toward implementing the goals identified in the TMDL study.*
> *[Excerpted from the TMDL document]*

The MN Clean Water Legacy Act also provides funding through the Clean Water Fund. The Minnesota Board of Soil and Water Resources administers the Clean Water Fund and has developed a detailed grants policy explaining what is required to be eligible to receive Clean Water Fund money (FY 2014 Clean Water Fund Competitive Grants Request for Proposal (RFP); Minnesota Board of Soil and Water Resources, 2014).

The cost associated with implementing the measures needed is discussed in Section 8.3 of the TMDL document.

> *Based on cost estimates from current, planned, and proposed work as outlined in the Lake of the Woods and Roseau County Water Management Plans, a reasonable estimate to continue efforts for reducing sediment and bacterial loading in the impaired reaches, addressed in this study, would be $2.5 to 3 million dollars prior to 2020 (LOW SWCD, 2015; Roseau SWCD, 2009). Provided cost estimates are in addition to project cost estimates that have not yet been identified as well as staff time. Funding will be spent primarily on practices such as retention projects, side-water inlets, grassed water ways/filter strips, sediment control basins, cover crops, saturated buffers, and perennial plantings.*
> *[Excerpted from the TMDL document]*

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the eighth criterion.

Section 9. Monitoring Plan to Track TMDL Effectiveness

EPA's 1991 document, *Guidance for Water Quality-Based Decisions: The TMDL Process* (EPA 440/4-91-001), recommends a monitoring plan to track the effectiveness of a TMDL, particularly when a TMDL involves both point and nonpoint sources, and the WLA is based on an assumption that nonpoint source load reductions will occur. Such a TMDL should provide assurances that nonpoint source controls will achieve expected load reductions and, such TMDL should include a monitoring plan that describes the additional data to be collected to determine if the load reductions provided for in the TMDL are occurring and leading to attainment of water quality standards.

Section 9 Review Comments

An effectiveness monitoring plan is provided.

Section 7 of the TMDL document provides a discussion of future monitoring plans.

> *The LOW SWCD with support from the Lake of the Woods County Water Plan Committee will continue monitoring priority streams in the county as outlined in the Lake of the Woods County Water Quality Monitoring Plan. This plan also supports a River Watch Program for the Rainy River. Data collected are utilized to prioritize projects and priority areas within the county (LOW SWCD, 2015). The Roseau SWCD will also continue water quality monitoring efforts for baseline study on the Warroad River and Willow Creek (Roseau SWCD, 2009). The Warroad River Watershed District is working to develop a water quality monitoring plan to help identify baseline conditions (WWWD, 2007). As outlined in the Rainy-Lake of the Woods State of the Basin Report, the Lake of the Woods Water Sustainability Foundation (WSF) will continue coordination with appropriate stakeholders, agencies, and organizations to conduct and expand basin-wide monitoring (LOWWSF, 2014).*
> *In addition to the stream monitoring sponsored by the Lake of the Woods and Roseau SWCDs, the Warroad River Watershed District, and the Lake of the Woods WSF, the MPCA also has on-going monitoring in the LOWW. The MPCA's major watershed outlet monitoring will continue to provide a long-term on-going record of water quality at the LOW outlet. The MPCA will return to the LOWW under their Intensive Watershed Monitoring program in 2022-2024. On-going stream flow monitoring has also been under taken by the USGS at one site within the LOWW.*
> *[Excerpted from the TMDL document]*

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the ninth criterion.

Section 10. Implementation

EPA policy encourages Regions to work in partnership with States/Tribes to achieve nonpoint source load allocations established for 303(d)-listed waters impaired by nonpoint sources. Regions may assist States/Tribes in developing implementation plans that include reasonable assurances that nonpoint source LAs established in TMDLs for waters impaired solely or primarily by nonpoint sources will in fact be achieved. In addition, EPA policy recognizes that other relevant watershed management processes may be used in the TMDL process. EPA is not required to and does not approve TMDL implementation plans.

Section 10 Review Comments

Watershed NPS P load reductions

> Section 8.2 of the TMDL document provides a lengthy and thorough discussion of past, ongoing, and future planning of implementation efforts and strategies in the basin.

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the tenth criterion. The EPA reviews but does not approve implementation plans.

Section 11. Public Participation

EPA policy is that there should be full and meaningful public participation in the TMDL development process. The TMDL regulations require that each State/Tribe must subject calculations to establish TMDLs to public review consistent with its own continuing planning process (40 C.F.R. §130.7(c)(1)(ii)). In guidance, EPA has explained that final TMDLs submitted to EPA for review and approval should describe the State's/Tribe's public participation process, including a summary of significant comments and the State's/Tribe's responses to those comments. When EPA establishes a TMDL, EPA regulations require EPA to publish a notice seeking public

comment (40 C.F.R. §130.7(d)(2)).

Provision of inadequate public participation may be a basis for disapproving a TMDL. If EPA determines that a State/Tribe has not provided adequate public participation, EPA may defer its approval action until adequate public participation has been provided for, either by the State/Tribe or by EPA.

Section 11 Review Comments

TMDL development provided for adequate public participation.

Public Participation Process is described.

Public participation during this TMDL study process was a coordinated effort led by the Lake of the Woods SWCD. A TMDL study stakeholder group was identified early in the TMDL study process and kept up to date of actions as the project proceeded. Members of the group included area landowners, representatives from the area SWCDs, counties and townships, and representatives from state agencies (MPCA, DNR, and BWSR). The TMDL study updates were presented through five public meetings in the LOWW during the months of March 2012, October 2012, November 2012, April 2013, and June 2016. In addition, the LOW SWCD developed a project webpage where updates and select reports are be posted. The MPCA also developed a project webpage to keep the public informed of progress.
[Excerpted from the TMDL document]

An opportunity for public comment was provided and a summary of significant comments and the State's responses is included in/with the final TMDL submission.

An opportunity for public comment on the draft TMDL study was provided via a public notice in the State Register from November 12, 2019, through December 12, 2019. The MPCA did not receive any comment letters resulting from the public notice.
[Excerpted from the TMDL document]

The EPA finds that the TMDL document submitted by the MPCA satisfies the requirements of the eleventh criterion.

Section 12. Submittal Letter

A submittal letter should be included with the TMDL submittal, and should specify whether the TMDL is being submitted for a *technical review* or *final review and approval*. Each final TMDL submitted to EPA should be accompanied by a submittal letter that explicitly states that the submittal is a final TMDL submitted under Section 303(d) of the Clean Water Act for EPA review and approval. This clearly establishes the State's/Tribe's intent to submit, and EPA's duty to review, the TMDL under the statute. The submittal letter, whether for technical review or final review and approval, should contain such identifying information as the name and location of the waterbody, and the pollutant(s) of concern.

Section 12 Review Comments:

A Submittal Letter is provided requesting formal review.

On February 7th, 2020, EPA received a submittal letter from the Minnesota Pollution Control Agency requesting final approval of the Lake of the Woods Watershed Maximum Daily Load Study. Adequate waterbody identification information was included in the accompanying final TMDL study report. The letter and accompanying report identified TSS as the pollutant of concern for the three waterbodies covered by the TMDL study.

The EPA finds that the submittal letter satisfies the requirements of the twelfth criterion.

Section 13: Conclusions

After a full and complete review, EPA finds that the TMDL study satisfies all of the elements of an approvable TMDL. The EPA is approving three TMDLs for TSS. EPA's approval of this TMDL extends to the water bodies identified in TMDL Review Table 2 with the exception of any portions of the water body that is within Indian Country, as defined in 18 U.S.C. Section 1151. EPA is taking no action to approve or disapprove TMDLs for those waters at this time. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under the CWA Section 303(d) for those waters.

TMDL Review Table 2 - Final Approved TMDLs				
AUID	**Affected Use**	**Waterbody**	**Location/Reach Description**	**Pollutant**
09030009-501	Aquatic Life	Williams Creek	Headwaters to Zippel Creek	TSS
09030009-515	Aquatic Life	Zippel Creek, West Branch	(County Ditch 1), Headwaters to Zippel Bay (Lake of the Woods)	TSS
09030009-523	Aquatic Life	Unnamed ditch	Unnamed ditch to Unnamed ditch	TSS