



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

APR 26 2016

REPLY TO THE ATTENTION OF:

WW-16J

Rebecca Flood, Assistant Commissioner
Water Policy/Agriculture Liaison
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Dear Ms. Flood:

The U.S. Environmental Protection Agency has conducted a complete review of the final Total Maximum Daily Loads (TMDLs) for five segments in the South Metro - Mississippi River (South Metro) watershed, including supporting documentation and follow up information. The South Metro watershed is located in the south-central Minnesota area. The TMDLs were calculated for total suspended solids. The TMDLs address the impairment of aquatic life 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 five TMDLs in the South Metro 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 addressing aquatic recreational use, and look forward to future submissions by the State of Minnesota. If you have any questions, please contact Mr. Peter Swenson, Chief of the Watersheds and Wetlands Branch, at 312-886-0236.

Sincerely,

A handwritten signature in blue ink that reads "Tinka G. Hyde".

Tinka G. Hyde
Director, Water Division

Enclosure

cc: Celine Lyman, MPCA
Chris Zadak, MPCA

wq-iw9-12g



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FEB 20 2019

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 reviewed the approval (dated April 26, 2016) of the South Metro Mississippi Total Maximum Daily Load (TMDL) report and has determined that Table A.2 of Appendix A of the TMDL misidentified the daily and annual wasteload allocations (WLAs). EPA has corrected the original Decision Document, and I am enclosing a copy for your records. Please see Table A.2 of Appendix A of the revised Decision Document for the correct WLAs.

If you have any questions, please contact Mr. David Werbach, TMDL Coordinator, at 312-886-4242.

Sincerely,

A handwritten signature in black ink that reads "Peter Swenson".

Peter Swenson
Chief, Watersheds & Wetlands Branch

Enclosure

cc: Celine Lyman, MPCA
Marco Graziani, MPCA

TMDL: South Metro Mississippi River TSS TMDL, Minnesota

Date: April 26, 2016 (Revised February 20, 2019)

DECISION DOCUMENT FOR THE APPROVAL OF THE SOUTH METRO MISSISSIPPI RIVER, MINNESOTA, TMDL

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.

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 (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 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:

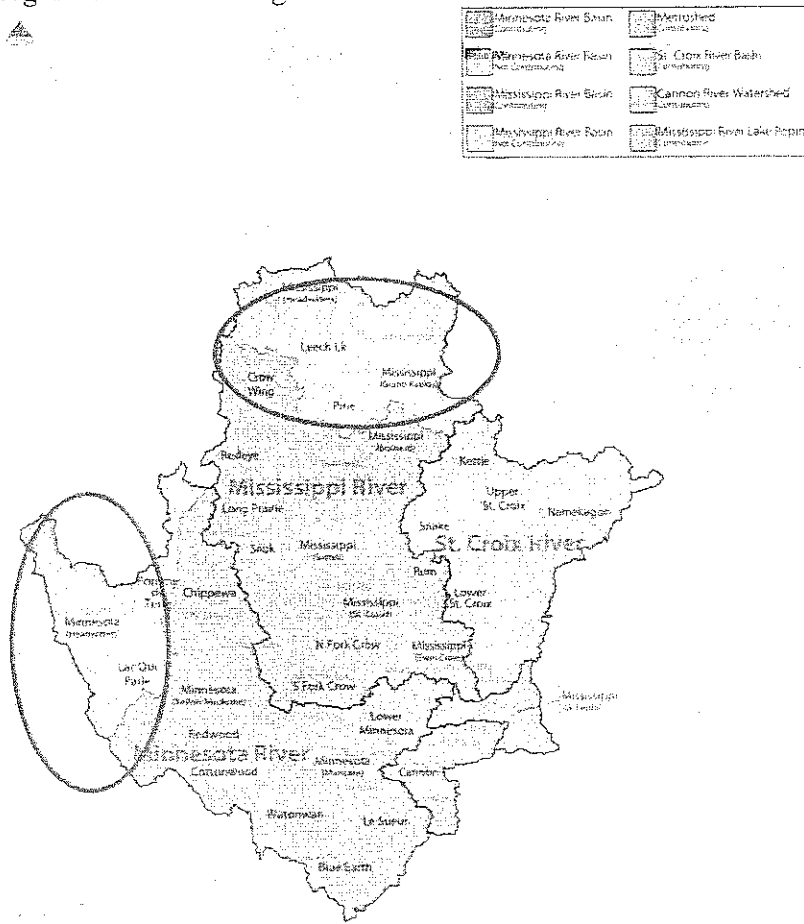
- (1) the spatial extent of the watershed in which the impaired waterbody is located;
- (2) the assumed distribution of land use in the watershed (e.g., urban, forested, agriculture);
- (3) population characteristics, wildlife resources, and other relevant information affecting the characterization of 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.

Comment:

Location Description/Spatial Extent: The South Metro Mississippi River (South Metro) watershed is located in the central portion of Minnesota and extends further eastward into Wisconsin. The impaired segments are the Lower Mississippi River from river mile 844 (at the mouth of the Minnesota River) to river mile 780 (upper pool of Lake Pepin). The watershed draining to these segments covers approximately half of the land area in Minnesota, and includes portions of Wisconsin, Iowa, and South Dakota. Figure 1 below (Figure 5 of the TMDL) shows the extent of the entire watershed (30 million acres). MPCA determined that sediment from portions of the western Minnesota River and northern Upper Mississippi River are trapped in natural settling basins provided by riverine lakes. These are the lightly shaded portions circled in Figure 1 of the Decision Document. The size of the watershed contributing sediment to the South Metro waterbodies is 24 million acres.

Figure 1 Contributing watershed for the South Metro TMDL waterbodies



The watershed includes the Minnesota River, Upper Mississippi River, St. Croix River, Cannon River, and several smaller tributaries. The three major basins (Minnesota, Mississippi, and St. Croix) account for 96% of the flow and 95% of the drainage area measured at Lock and Dam 3. MPCA has designated a portion of the Upper Mississippi River basin and the Minnesota River basin as the “Metroshed”, which is comprised of the urbanized areas of Minneapolis, St. Paul, and surrounding suburbs.

This TMDL includes five Assessment Units (AUs) shown in Table 1 of this Decision Document. The table includes a reach of the Mississippi River listed as impaired by Wisconsin. While the TMDL project has been developed in cooperation with Wisconsin, this TMDL addresses only the waters in Minnesota, and a separate TMDL report will be developed by Wisconsin.

Table 1 Waterbodies in the South Metro TSS TMDL

Reach and navigation pool	Assessment unit ID	Affected use	Pollutant or stressor
Mississippi River - Minnesota Minnesota River to Metro Wastewater Treatment Plant (River Mile 844 to 835; Pool 2)	07010206-505	Aquatic life	Total Suspended Solids
Mississippi River-Minnesota Metro Wastewater Treatment Plant to Rock Island Railroad Bridge (River Mile 835 to 830; Pool 2)	07010206-504	Aquatic life	Total Suspended Solids
Mississippi River-Minnesota Rock Island Railroad Bridge to Lock and Dam 2 (River Mile 830 to 815.2; Pool 2)	07010206-502	Aquatic life	Total Suspended Solids
Mississippi River-Minnesota Lock and Dam 2 to St. Croix River (River Mile 815.2 to 811.3; Upper Pool 3)	07010206-501	Aquatic life	Total Suspended Solids
Mississippi River-Minnesota St. Croix River through Lake Pepin to the Chippewa River, Wisconsin (River Mile 811.3 to 764.5; Pools 3- 4)	07040001-531*	Aquatic life	Total Suspended Solids
Wisconsin DNR listing: Mississippi (Reach 1) Rush-Vermillion - St. Croix R to Chippewa R. (Pools 3- Lower Pool 4, Lake Pepin)(River Mile 811.5 to 763.4)	892119	Aquatic life	Sediment/Total Suspended Solids

* - The TMDL applies to the upper portion of this segment, ending at RM 780.

Land use: Table 2 below (Table 2 of the final TMDL) states that the land use is primarily agricultural, but there is significant variation between basins. Land use in the Cannon River and Minnesota River basins are predominantly agricultural, while the St. Croix River is highly forested, and the Metroshed is urbanized.

Table 2 Land Use in the South Metro TSS TMDL

Land cover Watershed	UMR Basin acres	St. Croix River Acres*	Cannon River acres	Mississippi River - Lake Pepin acres	Metroshed acres	Minnesota River acres	Total acres
Barren	3,694	1,773	427	1,123	2,557	8,317	17,891
Cultivated Crop	2,601,761	468,961	569,680	311,932	195,335	6,144,507	10,292,176
Developed	527,089	285,571	80,211	82,123	502,042	476,464	1,953,500
Forest	1,789,906	2,106,932	81,720	136,598	108,497	180,895	4,404,548
Grass/Pasture	1,818,420	1,009,451	151,590	119,063	170,315	449,798	3,718,636
Water	551,547	201,298	31,124	43,899	93,959	206,608	1,128,435
Wetland	1,010,773	866,569	26,524	17,017	63,613	302,952	2,287,448
Total	8,303,189	4,940,555	941,275	711,754	1,136,319	7,769,543	23,802,635

* 46% of the basin is in Wisconsin

Problem Identification: The Executive Summary of the final TMDL document states that suspended sediment has reduced the amount of light penetration in the Lower Mississippi River

and upper Lake Pepin. As a result, the growth and maintenance of submerged aquatic vegetation (SAV) has been reduced. The loss of SAV has in turn reduced the migratory waterfowl and fish communities. The sediment is also filling in Lake Pepin at an accelerated pace, especially in the northern portion of the lake.

MPCA has gathered data on the South Metro segments for many years. The Upper Mississippi River has had relatively low levels of total suspended solids (TSS), and while it accounts for 36% of the South Metro watershed area, the Upper Mississippi River contributes only 16% of the annual load. The TSS concentrations average 20-25 mg/L in the southernmost reach of the Upper Mississippi River. However, at the confluence of the Minnesota River at river mile 844, TSS values increase dramatically, as the Minnesota River contributes large amounts of sediment to the Mississippi. Studies performed by the MPCA indicate that 75% of the TSS load to the South Metro segments come from the Minnesota River, while accounting for only 34% of the area. TSS concentrations average 112 mg/L at the mouth of the Minnesota River.

The TSS concentrations in the Metroshed basin remain relatively constant. Just downstream of the Mississippi River/Minnesota River confluence, TSS concentrations are 64 mg/L, and decrease to 52-55 mg/L at river mile 827, 17 miles downstream. Downstream of the Metroshed, the St. Croix River enters the Mississippi River. The St. Croix River has a relatively light load of TSS, averaging 4.5 mg/L TSS at the mouth of the river. The St. Croix accounts for 21% of the South Metro watershed area, but only 2% of the TSS load. The St. Croix River is the boundary between Minnesota and Wisconsin for much of its length, and approximately 46% of the St. Croix watershed is located in Minnesota. Further downstream, the Cannon River enters the Mississippi River. The Cannon River accounts for 4% of the area of the South Metro watershed, and contributes 6% of the TSS load. The TSS concentration averages 70 mg/L at the mouth of the Cannon River. MPCA also reviewed potential contributions from the direct drainage area surrounding Lake Pepin. Many of the tributaries on the Minnesota side are small creeks, with limited sampling data. However, MPCA does not believe the direct drainage watershed contributes significantly to the TSS impairments.

Priority Ranking: Section 1.1 of the TMDL states that the priority ranking is implicit in the TMDL schedule included in Minnesota's 303(d) list. MPCA began the South Metro TSS TMDL in conjunction with the Lake Pepin eutrophication TMDL. Both projects began in 2004, and were scheduled to be completed in 2009. During the development of the South Metro TMDL, MPCA determined that a site-specific criteria (SSC) for TSS as well as a SSC for the Lake Pepin eutrophication TMDL was needed. MPCA pursued the TSS site-specific criteria independently of the Lake Pepin site-specific eutrophication criteria, which was recently approved. The TSS SSC addresses the river from RM 844-780, the upper pool of Lake Pepin.

The South Metro watershed was given a priority ranking for TMDL development due to: the impairment impacts on public health and aquatic life, the public value of the impaired water resource, the likelihood of completing the TMDL in an expedient manner, the inclusion of a strong base of existing data and the restorability of the water body, the technical capability and the willingness of local partners to assist with the TMDL, and the appropriate sequencing of TMDLs within a watershed or basin. Lake Pepin and the Lower Mississippi River are popular locations for aquatic recreation, and are highly prized resources by Minnesota. Water quality

degradation has led to efforts to improve the overall water quality within the South Metro segments, and to the development of TMDLs.

Pollutants of Concern: The pollutant of concern for the aquatic life use impairments is excessive TSS which can impact SAV and aquatic communities within the waterbodies.

Source Identification: Point sources and nonpoint sources contribute to TSS impairments in the South Metro watershed.

Point Source Identification: The point sources include permitted treatment facilities, Municipal Separate Storm Sewer Systems (MS4s), and Construction and Industrial stormwater.

Wastewater Permits: MPCA identified a total of 486 permittees in Minnesota that discharge to waters in the South Metro watershed (Appendices 1 and 2 of this TMDL Decision Document). These are a mixture of municipal wastewater treatment facilities and industrial wastewater permits. Of these, 322 have effluent limits below the applicable Water Quality Standard (WQS) of 32 mg/L TSS or have no effluent limits as the facility does not discharge TSS. MPCA also identified 164 facilities that discharge over the 32 mg/L WQS. MPCA noted that all these facilities are controlled discharge stabilization lagoons, and are limited to 45 mg/L TSS through their NPDES permit. MPCA has determined that wastewater permits have a limited impact on water quality in the South Metro watershed.

MS4: Stormwater from areas regulated as MS4 communities can contain sediment washed off the land surface and into the stormwater system. MPCA identified 222 MS4 systems in the South Metro watershed, and determined the loading as an aggregate load.

Construction and Industrial Stormwater: MPCA identified stormwater runoff from construction and industrial sites as a very minor source of TSS. These sites are regulated under the NPDES program, and the loading was determined as an aggregate load.

Nonpoint Source Identification: The potential nonpoint sources to the South Metro watershed were identified by basin:

Upper Mississippi River/St. Croix River: MPCA noted that these two river basins are forested over most of the landscape, and contribute relatively little sediment. The downstream portion of the Upper Mississippi River has more agricultural land, where more sediment is added to the river. MPCA estimates 40% of the TSS load from these basins is sediment washed off cultivated land in the downstream portion of the basin, and 60% is estimated to come from eroded streambanks, bluffs, and ravines. During precipitation events, the force of the runoff erodes gullies and ravines, washing large amounts of sediment into the tributary rivers and streams, and eventually into the Upper Mississippi. This runoff can be exacerbated by tile drainage and other construction designed to move the water quickly off the land and into the drainage systems. The higher flow velocities contribute to increased erosion in the gullies, ravines, and stream banks.

Minnesota River: The Minnesota River contributes the largest amount of sediment to TMDL waterbodies. The TSS values increase moving downstream, as a result of changing land use and

geology. Over 80% of the Minnesota River basin is cultivated for crops, and is composed of finer-grained soils. These soils are easily eroded during precipitation events. MPCA also noted that sediment in the Minnesota River is generated from four main sources: upland field runoff, ravines, bluffs, and streambanks (*Identifying Sediment Sources in the Minnesota River Basin*, MPCA, 2009). The upland field runoff is due to precipitation runoff from cultivated fields washing sediment into small tributaries, and eventually into the Minnesota River. Drainage of these fields, either by tile drainage or surface alterations, increases the amount and velocity of runoff, often forming ravines, where higher loads of sediment are eroded and moved downstream. The Minnesota River is also lined by significant bluffs, which are being eroded as the landscape continues to respond to glacial events. These bluffs are fine-grained glacial material, and are easily eroded as the nick points migrate upstream. Nick points define abrupt breaks in slope. MPCA also noted that the flow in the Minnesota River has increased over the last decades, mainly as a result of increased drainage alterations (Figure 3 of the TMDL). These increased flows have increased streambank and bluff erosion, increasing sediment loads from these sources.

Metroshed: As noted above, the Metroshed is defined by MPCA as the Twin Cities metropolitan area (Page 28 of the TMDL). This area is evenly divided between developed urban land and cropland/grassland. Nonpoint sources in this basin include runoff from cultivated land, with limited ravine and bluff erosion.

Cannon River: The Cannon River is similar to the Minnesota River in land use, primarily agricultural in nature. Runoff from cultivated areas contributes most of the sediment, as does erosion from hills/bluffs in the lower portion of the watershed.

Mississippi River-Lake Pepin direct watershed: MPCA also investigated the sediment sources in the direct watershed for the South Metro/Lake Pepin watershed. MPCA noted that the watershed is a mix of cultivated land and forest/pasture. There are bluffs and hills located near the Mississippi River which are sources of sediment during precipitation events, and with the pasture land increasingly being converted to cropland, the potential for increased erosion and increased flows means there is a greater likelihood of bluff/ravine erosion occurring in the near future (Page 27 of the TMDL).

Future growth: Sections 6.0 and 6.5 of the TMDL state that MPCA set aside a future growth (reserve capacity) load. This load was calculated for all wastewater treatment facilities that discharge above the 32 mg/L TSS criteria. MPCA set aside 50% of the permitted load for these facilities for future growth. MPCA stated in Section 6.5 of the TMDL that the allocations for nonpoint sources (load allocation or LA) are for all current and future sources, and that any expansion of nonpoint sources will need to comply with the LA.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this first element.

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.

Comment:

Designated Uses:

Section 4.1 of the TMDL lists all the beneficial use classifications for Minnesota (Minn. Rules Ch. 7050.0140 and 7050.0220).

1. Domestic consumption
2. Aquatic life and recreation
 - A. Cold water sport fish (trout waters), also protected for drinking water
 - B. Cool and warm water sport fish, also protected for drinking water
 - C. Cool and warm water sport fish, indigenous aquatic life, and wetlands, and
 - D. Limited resource value waters
3. Industrial consumption
4. Agriculture and wildlife
5. Aesthetic enjoyment and navigation
6. Other uses
7. Limited resources value

The designated uses for the Mississippi River (Metro WWTP to Rock Island Bridge) are 2C, 3B, 3C, 3D, 4, 5 and 6. For the other four Minnesota segments, the designated uses are 2B, 3B, 3C, 3D, 4, 5 and 6. The most restrictive use regarding TSS is Class 2, which is described in Minnesota Rule 7050.0140 (3): *“Aquatic life and recreation includes all waters of the state that support or may support fish, other aquatic life, 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.”*

Narrative Criteria: Minnesota Rule 7050.0150 (3) set forth narrative criteria for Class 2 waters of the State: "For all Class 2 waters, 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."

Standard for TSS: MPCA developed a SSC for TSS for the waters listed in Table 1 of this Decision document (Section 4.1.1 of the TMDL). The segments were initially listed as impaired under the turbidity criteria in force in 1998. During the development of the TMDL, MPCA determined that a SSC would be more appropriate to protect the aquatic life use in the South Metro watershed. This SSC was developed to protect submerged aquatic vegetation in the Mississippi River and associated backwaters. The SSC was determined to be 32 mg/L, measured as a summer mean from June 1 to September 30, and must be attained in at least five summers out of ten years.

During the early development of the TMDL, MPCA had determined that the 25 NTU turbidity standard was equivalent to a TSS value of 64 mg/L, well above the SSC of 32 mg/L. Secondary monitoring targets related to supporting the SAV were also developed, but are not part of the WQS. These targets include not exceeding a seasonal average of 44 mg/L TSS in more than one year out of a 10-year assessment period; and attaining a 21% SAV frequency (defined as attaining the SAV monitoring survey frequency of 21% using the USEPA's Environmental Mapping and Assessment Program protocol).

Target: The SSC for the South Metro watershed is 32 mg/L. MPCA calculated the target for the TMDL as 30 mg/L, to account for Margin of Safety (Section 6 of this Decision Document).

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this second element.

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 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 stream 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.

Comment: TMDL = Loading Capacity (LC) = WLA + LA + MOS
Sections 5 and 6 of the TMDL discuss the methodologies used for the TSS allocations and reductions.

Modeling: To calculate the TSS loadings for the TMDL, MPCA developed the Upper Mississippi River-Lake Pepin Water Quality Model (UMR-LP). This model consists of two parts, a hydrodynamic water quality model called ECOMSED and the Row-Column AESOP water quality model (RCA). The UMR-LP model was developed in conjunction with the project's Science Advisory Panel. A modeling report was developed by Limnotech in 2009 that discusses the development, calibration, and implementation of the model (*Upper Mississippi River-Lake Pepin Water Quality Model: Development, Calibration, and Application*, Limnotech, 2009).

ECOMSED is a three-dimensional hydrodynamic and sediment transport model developed initially for estuaries and marine environments, but has been updated to apply to freshwater environments (Limnotech, 2009, Exec. Summary). The "ECOM" component of the model is used to simulate three-dimensional and time dependent hydrodynamic behavior in the South Metro Mississippi River segments. The "SED" component simulates the transport and fate of cohesive and non-cohesive sediments. Advective/dispersive transport and deposition and resuspension processes are simulated for cohesive sediments, which represent clays, fine and medium silts, and associated organic material. Likewise, transport and deposition/resuspension is simulated for a non-cohesive sediment class, which typically represents medium to coarse sands.

The RCA model focuses more on the Lake Pepin eutrophication TMDL that is being developed in conjunction with the South Metro TSS TMDL. The model simulates water column processes that impact water quality. Numerous chemical inputs (including nitrogen, carbon, phosphorus, and algae) are linked to the cycling of detritus material, sediment oxygen demand, and algal growth to track eutrophication in the system.

The ECOMSED model treats the 5 segments of the South Metro watershed (Table 1 above) as a single segment. Allocations were calculated for each of the tributary watersheds, and the model was run across the entire length of the river system, from RM 844 to RM 780, to determine attainment of the SSC. EPA agrees this is appropriate, as the modeling report explains in detail

how the model accounted for flows along the river. The model report also explains how the unique hydrology due to the locks and dams in the river was used in the model. In addition, since the direct drainage watershed to the South Metro segments have limited impact on water quality, assigning loads to the overall river based upon major tributary watersheds more accurately portrays the impairment causes.

Scenarios: To determine the tributary allocations needed to attain the SSC, 21 scenarios were run, ranging from the current baseline to reducing to pre-settlement conditions. For the scenarios 1-19, TSS, TP, and algae were reduced at various levels to determine resulting water quality. Although Scenario 17 appeared to attain WQS for both TSS and TP, the Science Advisory Panel asked MPCA to conduct additional scenarios, focusing on the Minnesota River to determine the effects of seasonal variations in TSS loading. The additional scenarios were inconclusive, but MPCA noted that the scenarios provide a general indication of the types and magnitude of the land use changes needed to meet the load allocation for the Minnesota River in Scenario 17 (Table 3 of this Decision Document).

MPCA further adjusted Scenario 17 to account for additional refinements in how the SSC is defined (a moving 10-year average) and to account for high-flow conditions (Table 4 of this Decision Document; Section 6.0 of the TMDL). As a result, the adjustments were: 1) no TSS reductions in the St. Croix River, as the river is well below the WQS; and 2) additional TSS reductions from the Minnesota River, 60% instead of 50% during very high and high flows during the non-winter months.

Table 3 Assumptions for Scenarios 20-21 for the Minnesota River (from Limnotech Modeling report, 2009)

- Increase perennial vegetation to 20 percent of the watershed, targeting erosive areas downstream of nick points in the Blue Earth and Le Sueur watersheds, in particular.
- Implement conservation tillage on 75 percent of land with slopes greater than 3 percent, along with cover crops to reduce spring runoff.
- Eliminate all surface tile inlets.
- Follow University nutrient management recommendations.
- Use of drop structures on ravines to achieve 30-40 percent sediment loading reduction.
- Use controlled drainage on cropland with less than 1 percent slope, along with two-stage ditch design, storing the first inch of field and urban runoff for at least 24 hours.
- Stabilize stream banks and bluffs by reducing stream flow and scour.

Table 4 TSS Reductions needed

	Upper Miss River	Minnesota River	St. Croix River	Cannon River	Other Tributaries	Resuspension
Revised Scenario 17	20%	50% (60%)*	0%	50%	20%	50%

* - under very high and high flows

Once the modeling was complete, MPCA calculated the allocations needed to attain the SSC. Table 5 below provides the TMDL summary for the South Metro TSS TMDL. MPCA further broke the loadings down by flow conditions. MPCA stressed that these flow conditions are not the same as in load durations curves (*An Approach for Using Load Duration Curves in the Development of TMDLs*, EPA, 2007). The flow regimes are based upon historical monitoring data at Lock and Dam 2 and are based upon annual flows, not daily flows as for load duration curves. For example, the very high flows were based upon the years 1986, 1993, and 2001 (Section 6.0 of the TMDL).

Table 5 TMDL summary for the South Metro TSS TMDL

Category	Flow condition	Miss River-Lake Pepin		Metroshed	Upper Miss. River	Minnesota River	St. Croix River		Cannon River	State Totals		Grand Totals
		MN	WI				MN	WI		MN	WI	
Kilograms per day												
Stormwater (Industrial/Construction)	Very High									5,286	152	5,438
	High									4,120	118	4,238
	Moderate									3,258	94	3,351
	Low									2,504	72	2,576
	Very low									1,726	50	1,776

Stormwater (MS4s)*	Very High	13,750	0	150,923	42,226	12,764	9,914	2,523	6,524	236,102	2,523	238,625
	High	10,717	0	117,630	32,911	9,949	7,727	1,967	5,085	184,018	1,967	185,985
	Moderate	8,474	0	93,014	26,024	7,867	6,110	1,555	4,021	145,509	1,555	147,064
	Low	6,515	0	71,508	20,007	6,048	4,697	1,195	3,091	111,866	1,195	113,061
	Very low	4,491	0	49,294	13,792	4,169	3,238	824	2,131	77,115	824	77,939

Wastewater Treatment Plants	Very High	1,843	256	65,251	41,649	40,199	11,432	2,985	3,821	164,195	3,241	167,436
	High	1,843	256	65,251	41,649	40,199	11,432	2,985	3,821	164,195	3,241	167,436
	Moderate	1,843	256	65,251	41,649	40,199	11,432	2,985	3,821	164,195	3,241	167,436
	Low	1,843	256	65,251	41,649	40,199	11,432	2,985	3,821	164,195	3,241	167,436
	Very low	1,843	256	65,251	41,649	40,199	11,432	2,985	3,821	164,195	3,241	167,436

Natural Background	Very High	1,339	1,149	7,005	42,771	288,912	6,840	8,169	22,553	369,419	9,318	378,737
	High	882	757	4,613	28,167	190,263	4,505	5,379	14,852	243,281	6,136	249,417
	Moderate	742	636	3,879	23,688	160,008	3,788	4,524	12,490	204,596	5,160	209,756
	Low	529	454	2,767	16,893	114,108	2,702	3,226	8,907	145,905	3,680	149,585
	Very low	256	219	1,336	8,160	55,121	1,305	1,558	4,303	70,481	1,778	72,259

LA**	Very High	9,056	10,665	33,115	439,853	1,138,606	29,143	35,128	105,737	1,755,510	45,793	1,801,303
	High	8,409	9,140	27,836	291,163	728,708	31,089	36,090	81,296	1,168,501	45,230	1,213,731
	Moderate <i>Internal load (for Total)</i>	10,794	9,250	28,882	242,059	793,503	23,922	28,466	65,724	1,164,885	37,715	1,202,600 <i>144,114</i>
	Low	7,337	6,835	25,773	171,026	547,706	15,182	19,825	57,527	824,550	26,660	851,210
	Very low	5,560	5,182	23,719	104,345	361,976	8,253	12,812	34,607	538,459	17,993	556,453

Wastewater Reserve Capacity***	Very High	0	13	5	716	41	1	146	13	775	159	934
	High	0	13	5	716	41	1	146	13	775	159	934
	Moderate	0	13	5	716	41	1	146	13	775	159	934
	Low	0	13	5	716	41	1	146	13	775	159	934
	Very low	0	13	5	716	41	1	146	13	775	159	934

Total Loading Capacity	Very High	25,988	12,083	256,300	567,213	1,480,521	57,330	48,951	138,649	2,531,287	61,185	2,592,473
	High	21,851	10,165	215,335	394,604	969,159	54,754	46,568	105,068	1,764,890	56,851	1,821,741
	Moderate	21,853	10,155	191,031	334,134	1,001,617	45,253	37,676	86,071	1,683,217	47,925	1,731,141
	Low	16,223	7,557	165,304	250,290	708,101	34,013	27,378	73,360	1,249,795	35,008	1,284,803
	Very low	12,149	5,669	139,606	168,661	461,506	24,229	18,326	44,876	852,752	24,045	876,797

* includes natural background

** internal loading is a subset of the total LA; see Section 4 of this Decision Document

*** described in Section 5 of this Decision Document

Critical Conditions:

Section 6 of the TMDL states that the critical condition for the TMDL is the very high/high flow conditions. It is under these conditions that flow velocities are high enough to erode bluffs, gullies and ravines in the watershed, dramatically increasing TSS loads into the tributaries and eventually the South Metro waterbodies. The TMDL specifically increased the reductions needed to address the critical condition. EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this third element.

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.

Comment: Load allocations are in Table 5 above. The LAs are based upon the ECOMSED model results for bluff, ravine, gully and field run-off. MPCA determined that there was not sufficient data to calculate LAs for these various sources, and noted that these studies will need to be performed at smaller scales.

Natural background was determined through sediment core analysis in Lake Pepin (Engstrom *et al.*, 2009). MPCA noted that sedimentation rates were 10 times less in the pre-settlement times, and therefore based the natural background allocation as one-tenth of the current TSS loading (Section 6.2 of the TMDL). This natural background load was then apportioned to each basin based upon the relative contribution of sediment to Lake Pepin. For example, if a basin contributes 25% of the TSS load to the South Metro watershed, then 25% of the natural background load was allocated to that basin.

MPCA calculated a load allocation for internal load, which they defined as resuspension of existing sediments due to wind and wave action. The modeling effort was limited to the main channel and large backwaters such as Spring Lake. The internal load LA was modeled for the average (moderate) flow condition, and therefore is only depicted in the moderate flow regime of the LA (in italics in Table 5 of this Decision Document). EPA agrees this is reasonable, as the modeling results indicate it becomes more difficult to separate resuspended sediments from increased flow-based loads under higher flow conditions. MPCA stated that internal loading/resuspension occurs under all flow regimes, and that efforts to achieve the needed 50% sediment reduction will benefit all flow regimes.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this fourth element.

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 permittees 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.

Comment:

Wastewater Treatment Facilities (WWTF): Individual WLAs are in Appendix A at the end of this document, and are summarized in Table 5 above. The EPA notes that Table 5 and Appendix A of this Decision Document contain WLAs for several Wisconsin facilities. These Wisconsin WLAs are not part of this decision process, and are not considered approved as part of this TMDL. Although the South Metro TSS TMDL is a coordinated effort between Minnesota and Wisconsin, Wisconsin will be submitting a separate TMDL to address Wisconsin waterbodies.

MPCA identified 486 wastewater treatment facilities (WWTF) that are authorized to discharge to waterbodies in the South Metro watershed. Of these, 322 have effluent limits of 30 mg/L or less (as per MPCA effluent limit regulations) or do not contain a TSS effluent limit because the discharge does not contain TSS. MPCA did not assign reductions in TSS to these facilities. These facilities are listed in Appendix A.1 of this Decision Document (Appendix A.1 of the TMDL). The WLAs were calculated based upon the facility's design flow multiplied by the 30 mg/L effluent limit (Section 6.1 of the TMDL). For the facilities without a TSS effluent limit, the WLAs were calculated based upon the facility's design flow and the 32 mg/L SSC. MPCA noted that some facilities have water that is pulled from the Mississippi River and used for cooling purposes. MPCA determined that these facilities do not need a TSS WLA, as the water is pass-through, and the TSS concentrations are not altered.

MPCA also identified 164 facilities that discharge over the 32 mg/L TSS SSC (Appendix A.2 of this Decision Document; Appendix A.2 of the TMDL). These facilities are controlled discharge stabilization ponds, which discharge twice a year (as per their permit). The TSS effluent limit for these facilities is 45 mg/L. MPCA has determined that these facilities do not discharge significant loads of TSS, and therefore has calculated the WLAs for these facilities as the design discharge rate multiplied by the 45 mg/L effluent limit.

MS4s: To determine the WLAs for MS4 areas, MPCA calculated the urbanized area within the South Metro watershed (Section 6.1.2 and Figure 18 of the TMDL). MPCA then applied the actual MS4 boundaries to the mapped areas, generating an area of 768, 445 acres. MPCA next determined an allowable average sediment export rate, based upon data and reports from the US Army Corp of Engineers (USACOE). The final result was an annual median export coefficient of 154 pounds per acre, which was multiplied by the developed acreage to calculate an overall WLA of 53, 678 metric tons per year, based upon average flow. This was then increased/decreased proportionally for each flow regime. MPCA does not anticipate any reductions needed from the MS4s in the St. Croix River or Upper Mississippi River at this time. MPCA will be working with MS4s in the other basins on attaining the 154 lbs/acre export rate. The MS4 WLAs are categorical WLAs, and were not specifically determined for each MS4 entity (Appendix B of this Decision Document, Appendix B of the TMDL).

Construction and Industrial Stormwater: MPCA set aside 0.1% of the total WLA to account for TSS loading from construction and industrial stormwater. This WLA accounts for any construction stormwater or industrial stormwater generated within the TMDL watersheds (Sections 6.1.3 and 6.1.4 of the TMDL).

MPCA explained that BMPs and other stormwater control measures should be implemented at active construction sites to limit the discharge of pollutants of concern. BMPs and other stormwater control measures which should be implemented at construction sites are defined in the State's NPDES/State Disposal System (SDS) General Stormwater Permit for Construction Activity (MNR100001). If a construction site owner/operator obtains coverage under the NPDES/SDS General Stormwater Permit and properly selects, installs and maintains all BMPs required under the permit, including those related to impaired waters discharges and any applicable additional requirements found in Appendix A of the Construction General Permit, the stormwater discharges would be expected to be consistent with the WLA in this TMDL.

The WLA for stormwater discharges from sites where there is industrial activity reflects the number of sites in the watershed for which NPDES industrial stormwater permit coverage is required, and the BMPs and other stormwater control measures that should be implemented at the sites to limit the discharge of pollutants of concern (Appendix A.3 of this Decision Document, Appendix A.3 of the TMDL). BMPs and other stormwater control measures which 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). If a facility owner/operator obtains coverage under the appropriate NPDES/SDS General Stormwater Permit and properly selects, installs and maintains all BMPs required under the permit, the stormwater discharges would be expected to be consistent with the WLA in this TMDL.

Concentrated Animal Feeding Operations (CAFOs) were not considered significant sources of TSS and were therefore not given an allocation (WLA = 0).

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this fifth element.

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.

Comment:

The South Metro TSS TMDL uses an implicit MOS (Section 6.3 of the TMDL). MPCA explained how conservative assumptions were used in the ECOMSED model (Limnotech, 2009). The ECOMSED model went through an extensive calibration and confirmation process, as noted in detail in Section 4 of the modeling report (Limnotech, 2009). The model was developed with 22 years of data, which allowed an 11 year calibration and an 11 year validation process to be performed. Results of the calibration and confirmation process indicated a very good agreement with the sampling data (Section 4 of Limnotech, 2009), indicating the model adequately represents the South Metro watershed.

The initial model runs indicated that modeled sediment loads did not match measured data. Further analysis of the model results indicated that the lower portion of Pool 2 had spikes of sediment resuspension due to wave action. Although the model in general accounted for resuspension of sediment, the model was adjusted to include an additional "background resuspension" load in the June to September timeframe. After further model runs, MPCA determined the adjustments successfully addressed the TSS resuspension problem (Section 6.3 of the TMDL; Section 4.2 of Limnotech, 2009).

MPCA noted that the model adjustments did result in an over-prediction of flow peaks in high-flow years. Since the loads are, in large part, based upon flows in the river, this over-prediction of flow peaks means the TSS loads are somewhat over-predicted, resulting in load reductions slightly higher than needed to attain the TMDL target.

MPCA also included additional MOS by setting the target of the TMDL to 30 mg/L of TSS, below the SSC of 32 mg/L. The allocations in Table 5 are set to attain the TMDL target of 30 mg/L, a 6% reduction below the SSC.

EPA finds that the TMDL document submitted by MPCA contains an appropriate MOS satisfying all requirements concerning this sixth element.

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)).

Comment:

Seasonal variation was considered as described in Section 6.4 of the TMDL. The development of the ECOMSED model utilized hourly flow measurements from several USGS and USCOE gages over a period of 20 years. These flow measurements were collected over a variety of flow conditions observed within the South Metro watershed. The model represented a wide range of flow conditions, and thereby accounted for seasonal variation.

Given the amount of agricultural land use in the watershed, sediment loadings in the South Metro watershed vary with agricultural activity, particularly in the Minnesota River. Sediment inputs to surface waters typically occur primarily through wet weather events. MPCA analyzed the model results, and determined that additional reductions in TSS loads were needed from the Minnesota River during higher flow regimes. As a result of this analysis, MPCA increased the amount of reductions in TSS to 60% during high and very high flow regimes.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this seventh element.

8. Reasonable Assurances

When a TMDL is developed for waters impaired by point sources only, the issuance of a 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.

Comment:

Section 7 of the TMDL discusses the recent “Sediment Reductions Strategy for the Minnesota River Basin and South Metro Mississippi River” (the “Sediment Strategy”). This document was finalized in 2015. The Sediment Strategy provides an overview of actions and programs needed to attain the TSS reductions required in the South Metro watershed.

The Sediment Strategy discusses the draft South Metro TMDL, identifies several general milestones for sediment reduction, strategies and actions for sediment reduction based upon the source type, provides direction for engaging stakeholders and civic groups, as well as monitoring and tracking information. Several priority initiatives are identified in the Sediment Strategy, including:

- Reduce peak flow magnitude and duration
- Flow duration and magnitude goals
- Set water storage goals by watershed
- Define effective water storage practices
- Consider hydrology and downstream waters in local watershed planning efforts
- Funding assistance
- Increase living cover
- Combine state and federal funding for CRP-RIM partnership for water storage
- Development of a Sediment Reduction Task Force
- Stakeholder Workgroups

In Section 7.3 of the TMDL, MPCA noted the work included in the Chesapeake Bay TMDL, and stated they will loosely adopt the Chesapeake Bay Reasonable Assurance framework, with some modifications as follows:

- Develop strategies for the basins of the Minnesota, Upper Mississippi, and Cannon Rivers, plus direct watersheds, to meet TMDL allocations according to a phased schedule of implementation. This strategy will include how specific activities will be implemented at the appropriate scale – broad basin-wide initiatives and more specific actions for major watersheds. The MPCA staff will lead these strategies in accordance with the watershed approach.
- Evaluate existing programmatic, funding, and technical capacity to fully implement basin and watershed strategies.
- Identify gaps in current programs, funding, and local capacity to achieve the needed controls.
- Commit to systematically fill gaps and build program capacity. Agree to meet specific, iterative, short-term milestones. Demonstrate increased implementation and/or pollutant reductions.
- Commit to track/monitor/assess and report progress at set regular times – adaptive management.
- Accept contingency requirements if certain milestones are not on schedule.

MPCA noted that significant point source reductions are not expected, as these sources contribute a relatively small amount of TSS. The contingency requirements could take the form of:

- Review of statewide nonpoint source control programs and policies by state agencies and their implementation by local agencies.

- Requirements or inducements to implement existing nonpoint source authorities, including protected shoreland buffers (Minn. Stat. § 103F.201). For example, Dodge, Dakota, Goodhue, Olmsted, Wabasha, and Winona counties are working to achieve county-wide compliance using existing staff.
- Require buffers on public drainage ditches (Minn. Stat. § 103E.021) by a time certain. Six counties in the Minnesota River Basin have ordered a redetermination of benefits on all systems, which results in buffer implementation. These include Martin, Sibley, Freeborn, Steele, Redwood, and Faribault. Fourteen other counties have applied this process to selected drainage systems.
- Prohibition against excessive soil loss (Minn. Stat. § 103F.415). Fillmore, Olmsted, and Mower counties have such an ordinance in place.
- Prohibition of nuisance nonpoint source pollution (Minn. R. 7050.0210, subp. 2).
- Other existing regulatory measures that may be identified in the TMDL implementation plan.

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 Minnesota Board of Soil and Water Resources administers the Clean Water Fund as well, 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).

MS400177	Minnesota Correctional-Lino Lakes MS4
MS400179	Minnesota Correctional-St. Cloud MS4
*	Minnesota Correctional - Stillwater MS4
*	Minnesota State University – Mankato MS4
MS400036	Minnetonka Beach City MS4
MS400035	Minnetonka City MS4
MS400106	Minnetrista City MS4
MS400170	MNDOT Metro District MS4
MS400180	MNDOT Outstate District MS4
MS400261	Montevideo City MS4
MS400242	Monticello City MS4
MS400274	Morris City MS4
MS400108	Mound City MS4
MS400037	Mounds View City MS4
*	Morris City MS4
MS400207	Mpls Community/Technical College MS4
MS400038	New Brighton City MS4
MS400039	New Hope City MS4
MS400228	New Ulm City MS4
MS400040	Newport City MS4
*	Nicollet County MS4
MS400255	Normandale Community College MS4
MS400260	North Branch City MS4
MS400205	North Hennepin Community College - MS4
MS4ID	Name

MS400229	North Mankato City MS4
MS400109	North Oaks City MS4
MS400041	North St Paul City MS4
MS400271	Northfield City MS4
MS400110	Oak Grove City MS4
*	Oak Park Heights City MS4
MS400042	Oakdale City MS4
MS400111	Orono City MS4
MS400043	Osseo City MS4
MS400243	Otsego City MS4
MS400244	Owatonna City MS4
MS400044	Pine Springs City MS4
MS400112	Plymouth City MS4
MS400113	Prior Lake City MS4
MS400189	Prior Lake-Spring Lake WSD MS4
MS400115	Ramsey City MS4
MS400191	Ramsey County Public Works MS4
MS400190	Ramsey-Washington Metro WD MS4
MS400235	Red Wing City MS4
MS400236	Redwood Falls City MS4
MS400193	Rice Creek WD MS4
MS400045	Richfield City MS4
MS400046	Robbinsdale City MS4
*	Rogers City MS4
MS400117	Rosemount City MS4
MS400047	Roseville City MS4

MS400048	Sartell City MS4
MS400118	Sauk Rapids City MS4
MS400153	Sauk Rapids Township MS4
MS4ID	Name
*	Sauk River WD MS4
MS400119	Savage City MS4
MS400154	Scott County MS4
MS400120	Shakopee City MS4
MS400155	Sherburne County MS4
MS400121	Shoreview City MS4
MS400122	Shorewood City MS4
*	Skyline City MS4
*	South Bend Township MS4
*	South Central College - North Mankato Campus MS4
MS400049	South St Paul City MS4
MS400196	South Washington WD MS4
MS400050	Spring Lake Park City MS4
MS400156	Spring Lake Township MS4
MS400123	Spring Park City MS4
MS400051	St Anthony Village MS4
*	St Augusta City MS4
MS400124	St Bonifacius City MS4
MS400052	St Cloud City MS4
MS400197	St Cloud State University MS4
MS400204	St Cloud Technical College - MS4

*	St Francis City MS4
MS400125	St Joseph City MS4
MS400157	St Joseph Township MS4
MS400053	St Louis Park City MS4
MS400246	St Michael City MS4
MS400202	St Paul Community & Technical College - MS4
MN0061263	St Paul Municipal Storm Water
MS400054	St Paul Park City MS4
MS4ID	Name
MS400245	St Peter City MS4
MS400159	Stearns County MS4
MS400259	Stillwater City MS4
MS400055	Sunfish Lake City MS4
MS400056	Tonka Bay City MS4
MS400212	U of M-Twin Cities Campus MS4
MS400057	Vadnais Heights City MS4
MS400217	Valley Branch WD MS4
MS400126	Victoria City MS4
MS400232	Waconia City MS4
MS400127	Waite Park City MS4
MS400258	Waseca City MS4
MS400160	Washington County MS4
MS400161	Watab Township MS4
MS400058	Wayzata City MS4
MS400162	West Lakeland Township MS4
MS400059	West St Paul City MS4

MS400060	White Bear Lake City MS4
MS400163	White Bear Township MS4
MS400061	Willernie City MS4
MS400272	Willmar City MS4
MS400128	Woodbury City MS4
MS400129	Woodland City MS4
*	Wyoming City MS4
WI-5050075-2 (31431)	River Falls, City, Wisconsin
WI-5050075-2 (37192)	University of Wisconsin at River Falls
WI-5050181-1 (52320)	Hudson, Wisconsin
WI-5050181-1 (52317)	St. Joseph, Town, Wisconsin

*Minnesota MS4s designated after the 2010 census have not yet been assigned individual MS4 identification numbers.

MPCA noted that the CWLA enjoins state agencies to "...use existing regulatory authorities to achieve restoration for point and nonpoint sources of pollution where applicable, and promote the development and use of effective non-regulatory measures to address pollution sources for which regulations are not applicable." (Minn. Stat. § 114D.20, subd. 3). The MPCA will seek to pursue the following policies with state and local agencies:

- Comply with 50-foot buffer required for the shore impact zone of streams classified as protected waters (Minn. Stat. § 103F.201) for agricultural land uses.
- Comply with requirements to buffer highly erodible land within the 300-foot shoreland district, as described in the state shoreland rule.
- Establish a process and timeline to ensure compliance with the requirement for a 16.5-foot buffer on agricultural drainage ditches as defined in Minn. Stat. § 103E.021.
- Review the use of excessive soil loss ordinances by counties (described in Minn. Stat. § 103F.415) and the potential benefits of applying soil loss ordinances specifying a maximum rate of "T" (the tolerable rate of soil erosion which the NRCS defines as the rate at which soil can replenish itself) to areas contributing high amounts of sediment to the South Metro Mississippi and tributary watersheds.
- Review the MPCA's authorities on the prohibition of nuisance nonpoint source pollution (Minn. R. 7050.0210, subp. 2).

Other TMDLs: Several other TMDLs have been developed by MPCA and approved by EPA within the South Metro watershed. Section 5.1.2 of the TMDL explains how the existing TMDLs were reviewed and accounted for in the South Metro TMDL. The existing TMDLs reviewed by MPCA have greater reductions than those needed in the South Metro TMDL. MPCA stated that the most conservative allocation applies in terms of permits or other tracking. Several other TMDLs are in development or scheduled for development in the South Metro TMDL watershed. The most important will be the Minnesota River TMDL, which will have the greatest impact on the South Metro watershed. The TMDL is expected to be completed in the near future.

EPA finds that this criterion has been adequately addressed.

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.

Comment:

Section 7.4 of the TMDL discusses how monitoring will be performed to ascertain attainment of the criteria. Additional discussion of ongoing and future monitoring efforts are contained in the

Sediment Strategy, as well as the Dakota County "Mississippi Makeover" project (Dakota County Soil and Water Conservation District website). MPCA maintains a statewide Watershed Pollutant Load Monitoring Network, which monitors numerous sites in the South Metro watershed. The Minnesota Large Lake Program is run by the Minnesota Department of Natural Resources (MDNR) and monitors Lake Pepin throughout the year for changes in fish and macroinvertebrate populations. The USGS and MDNR operate the Long Term Monitoring sites in Lake Pepin, which monitors water quality, vegetation, macroinvertebrates, and fish in Lake Pepin. The Metropolitan Council Environmental Services (MCES) operates a monitoring network throughout the South Metro watershed, and including portions of the tributary basins (<http://metro council.org/Wastewater-Water/Services/Water-Quality-Management/River-Monitoring-Analysis.aspx?source=child>). This sampling includes TSS on a semi-monthly basis (approximately once every two weeks). These programs are long-term monitoring programs which are expected to continue for the foreseeable future.

EPA finds that this criterion has been adequately addressed.

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.

Comment:

Section 7 of the TMDL highlights some of the implementation efforts underway in the South Metro watershed. In addition to the efforts noted in Section 8 of this Decision Document, MPCA discussed several other implementation actions. Another source of sediment is the resuspension of bottom sediments due to wind and wave action. In the Sediment Strategy and the TMDL, MPCA explains that efforts are underway with MDNR, Wisconsin Department of Natural Resources, USACOE, and the US Fish and Wildlife Service to build islands in the mainstem and backwaters of the South Metro watershed. These islands will reduce the open area of the river where wind can churn up the waters and resuspend the sediments. The islands will also provide additional habitat for waterfowl, and allow increased aquatic vegetation, which will also serve to hold sediment in place. Periodic drawdowns of the river/pools will also be performed. These drawdowns expose sediment to the air, allowing it to dry and consolidate. It also facilitates the growth of rooted vegetation.

As part of the Watershed Restoration and Protection Strategy (WRAPS), MPCA monitors major watershed of the state on a rotating basis. Several of the watersheds in the South Metro watershed have been or will be monitored in the near future. Once monitored, MPCA will develop WRAPS reports to address water quality issues in the watershed. Those waters determined to be impaired will have TMDLs developed. The WRAPS and TMDLs will have

more specific implementation information included. Table 10 of the TMDL lists the upcoming monitoring and WRAPS development.

EPA finds that this criterion has been adequately addressed. The EPA reviews but does not approve implementation plans.

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.

Comment:

Section 7 of the TMDL explains the public participation process followed by MPCA. The process began in October 2004 when MPCA worked to form a Stakeholder Advisory Committee (Appendix C of the TMDL). The Committee participated in the effort to develop two TMDL work plans, one for water quality assessment and one for watershed analysis.

The Lake Pepin TMDL Science Advisory Panel was established in February 2005 (Appendix C of the TMDL). The Panel worked on the proposal for the South Metro and Lake Pepin modeling effort, as well as providing input to the modeling effort. MPCA also held meetings with several sector-specific groups in 2008, including agriculture, conservation and environmental protection, and municipal wastewater and stormwater.

MPCA also held several meetings with the public. Three technical conferences were held in 2006, 2007, and 2008, and MPCA made presentations at many technical meetings and conferences. The draft TMDL was public noticed from February 27, 2012, to May 29, 2012. Copies of the draft TMDL were made available upon request, in news releases, and on the Internet web site: <http://www.pca.state.mn.us/index.php/water/water-types-and-programs/minnesotas-impaired-waters-and-tmdls/tmdl-projects/tmdl-projects-and-staff-contacts.html>.

During the public comment period, MPCA received over 400 comment letters. 20 of the comment letters requested a contested case hearing under Minnesota R. 7000.1800. MPCA reviewed the comments, and discussed the comments with the commentors. In October 2015, MPCA finalized the response to comments on the South Metro TMDL. Although there were

over 400 comment letters, MPCA noted that many of these letters were similar in nature, and were compiled into categories by MPCA based upon issue area: A. Urban Stormwater interests; B. Agricultural interests; C. Wastewater; D. Load allocation methodology; E. Reasonable assurance; F. Implementation; and G. General comments. See the "Response to Comments attachment to the South Metro TSS TMDL" for more details. In the response to comments, MPCA identified the numerous changes made to the TMDL document in response to the comments. Significant changes include inclusion of internal loading in the TMDL tables, separating Minnesota and Wisconsin allocations, a summary of more recent research comparing climate effects vs. land use on stream channel erosion and loading, revised land cover data, and revisions to MS4 methodology ultimately replacing the previous 25% across the board reduction with a targeted areal loading. Page 4 of the Response to Comments contains a more detailed breakdown of the changes made to the TMDL as a result of comments. As shown in the changes to the TMDL, MPCA reviewed all the comments, and responded appropriately to the comments.

As a result of these changes and the Response to Comments, several of the contested case hearing requests were withdrawn. The remaining contested case hearings were consolidated into three groups, the Minnesota Soybean Growers Association (MSGA), the Lower Minnesota River Watershed District (LMRWD), and Cities of Monticello and St. Joseph (Monticello-St. Joseph petition). A summary of the contested case requests and MPCA responses is below:

MSGA: The issues raised by MSGA were 1) the TMDL failed to account for natural background of TSS loads, and 2) the TMDL failed to account for the components that contribute to turbidity. The MSGA contended that much of the sediment/TSS in the Minnesota River is generated through natural processes, and is not of anthropogenic origin. They commented that the natural background sedimentation rate of 10% was not valid, and did not account for the climate and ecosystems dynamics as required in the CWLA. MPCA responded that while erosion is a natural process, it is MPCA policy to exclude from natural background erosion that is above and beyond natural rates due to human activities. MPCA explained that loss of wetlands, drainage tiles, and ditching are all human activities that have accelerated sedimentation in the watershed. The second issue raised by MSGA was that the TMDL failed to account for how the components of turbidity were not accounted for in the TMDL calculations. MSGA noted that the TMDL did not account for volatile suspended solids (VSS), which are the organic materials (algae, leaf detritus, etc.), and that VSS has a much greater impact on turbidity than the non-volatile suspended solids. MPCA responded that the TMDL addresses TSS as per the SSC, not turbidity, and that the MSGA had submitted a comment during the TMDL public comment period praising the use of the SSC of 32 mg/L of TSS.

LMRWD: The LMRWD raised two issues on the TMDL: 1) the WLA was inflated, resulting in the LA being underinflated, resulting in an ineffectual 25% reduction in TSS loads from MS4s, and 2) the natural background load, while correct, was mis-applied to both field and non-field sources, and should be applied to only to the non-field sources. MPCA revised the TMDL to change the 25% reductions in MS4 TSS loads to a loading rate per acre calculation (Section 5 of this Decision Document). The LMRWD withdrew the contested case request for this issue. The second issue was addressed by MPCA by revising the TMDL to explain the natural background load is attributable to the non-field sources.

Monticello-St. Joseph: The Monticello-St. Joseph petition raised two issues; 1) The TSS concentrations upstream of Lock and dam #1 meet or are less than the SSC, and therefore the 25% MS4 TSS reduction is not needed, and 2) the 25% MS4 TSS reduction is arbitrary and ineffectual. MPCA responded that the two issues were directly addressed in the TMDL revisions. MPCA explained that the Mississippi River upstream of Lock and Dam #1 did not need any further reduction in MS4 load, except for the Lower Crow River, which has an existing TMDL for TSS. The reductions in the Lower Crow River will account for the 20% reduction needed to attain the South Metro TMDL, and therefore no additional reductions were needed (Section 5.1.2 of the TMDL). MPCA also explained that the 25% MS4 reduction has been removed from the TMDL, and the MS4 goal is now the export rate of 154 lbs/acre of TSS (Section 6.1.2 of the TMDL).

As a result of the changes to the TMDL and explanations noted above, the contested case requests were denied by the MPCA (Findings of Fact, Conclusions of Law and Order, MPCA, signed 11/06/2015). EPA has reviewed the comments submitted to MPCA, the Response to Comments, as well as the contested case Findings of Facts, and determined that MPCA has appropriately responded to all comments. As noted by MPCA, numerous changes were made to the TMDL to address comments and concerns raised by commentors, and MPCA explained why further changes were not warranted.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this eleventh element.

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.

Comment:

The EPA received the final South Metro TSS TMDL document, submittal letter and accompanying documentation from the MPCA on November 16, 2015. The submittal letter explicitly stated that enclosed was the final South Metro Mississippi River TMDL report for total suspended solids, which was being submitted to EPA pursuant to Section 303(d) of the Clean Water Act for EPA review and approval. The letter also contained the name of the watershed as it appears on Minnesota's 303(d) list, and the causes/pollutants of concern. This TMDL was submitted per the requirements under Section 303(d) of the Clean Water Act and 40 CFR 130.

EPA finds that the TMDL document submitted by MPCA satisfies all requirements concerning this twelfth element.

13. Conclusion

After a full and complete review, EPA finds that the TMDLs for the South Metro watershed satisfy all of the elements of an approvable TMDL. This approval addresses 5 TSS TMDLs.

EPA's approval of this TMDL does not extend to those waters that are 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.

Revision: The WLA columns in Table A.2 of Appendix A of the TMDL were switched in the final TMDL submittal. The column noting the daily load actually contained the annual load, and vice-versa. The TMDL has been updated, and the correct tables are contained in Table A.2 of Appendix A of the Decision Document. No other changes have been made to the Decision Document, and this does not affect the original decision.

Appendix A: Wastewater Treatment Facility Waste Load Allocations and Industrial Stormwater Facilities

A. I. Minnesota Wastewater Permits with TSS Limits \leq 32 mg/L Eligible for Future WLA Increase						
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Cannon Falls WWTP	MN0022993	Cannon	Cannon River	07040002	21,900	60.00
CenterPoint Energy - WWTS	MN0063967	Cannon	Cannon River	07040002	884	2.42
Faribault Foods - Faribault Division	MN0050491	Cannon	Cannon River	07040002	20,723	56.78
Faribault WWTP	MN0030121	Cannon	Cannon River	07040002	289,810	794.00
Genova-Minnesota Inc	MN0046957	Cannon	Cannon River	07040002	4,987	13.66
Hope - Somerset Township WWTP	MN0068802	Cannon	Cannon River	07040002	438	1.20
Hope Creamery	MN0001317	Cannon	Cannon River	07040002	707	1.94
Lakeside Foods Inc - Owatonna Plant	MN0001571	Cannon	Cannon River	07040002	13,505	37.00
Lonsdale WWTP	MN0031241	Cannon	Cannon River	07040002	28,470	78.00
Medford WWTP	MN0024112	Cannon	Cannon River	07040002	5,840	16.00
Milestone Materials - Spinler Pit	MN0063045	Cannon	Cannon River	07040002	207,229	567.75
Morristown WWTP	MN0025895	Cannon	Cannon River	07040002	8,760	24.00
Nerstrand WWTP	MN0065668	Cannon	Cannon River	07040002	1,737	4.76
Northfield WWTP	MN0024368	Cannon	Cannon River	07040002	140,890	386.00
Owatonna WWTP	MN0051284	Cannon	Cannon River	07040002	207,320	568.00
SMC - Owatonna Quarry	MN0041394	Cannon	Cannon River	07040002	24,867	68.13
Telamco Inc	MNG255064	Cannon	Cannon River	07040002	66	0.18
The Turkey Store - Faribault	MN0002500	Cannon	Cannon River	07040002	2,653	7.27
Viracon	MNG255078	Cannon	Cannon River	07040002	12,157	33.31
Waterville WWTP	MN0025208	Cannon	Cannon River	07040002	11,242	30.80
Anchor Block Co - South Plant	MN0069281	Metrosched	Lower Minnesota River	07020012	95	0.26

Anchor Glass Container	MN0003042	Metroshed	Lower Minnesota River	07020012	2,608	7.15
Apex International Manufacturing Inc	MN0067016	Metroshed	Lower Minnesota River	07020012	1,017	2.79
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Cologne WWTP	MN0023108	Metroshed	Lower Minnesota River	07020012	13,469	36.90
Cypress Semiconductor Minnesota Inc	MN0056723	Metroshed	Lower Minnesota River	07020012	53,051	145.34
Delta Air Lines Inc	MN0054194	Metroshed	Lower Minnesota River	07020012	1,186	3.25
Eden Prairie Well House 6 & 7	MING250084	Metroshed	Lower Minnesota River	07020012	4,191	11.48
Fabcon Inc	MN0068284	Metroshed	Lower Minnesota River	07020012	341	81.60
FSI International - Lyman Blvd	MN0068781	Metroshed	Lower Minnesota River	07020012	884	2.42
Hopkins Well 4 WTP	MING640045	Metroshed	Lower Minnesota River	07020012	8,289	22.71
Jordan WWTP	MN0020869	Metroshed	Lower Minnesota River	07020012	53,400	146.30
Kraemer Mining & Materials - Burnsville	MN0002224	Metroshed	Lower Minnesota River	07020012	787,469	2,157.45
LifeCore Biomedical LLC	MN0060747	Metroshed	Lower Minnesota River	07020012	2,072	5.68
McLaughlin Gormley King Co	MN0058033	Metroshed	Lower Minnesota River	07020012	290	0.79
Met Council - Blue Lake WWTP	MN0029882	Metroshed	Lower Minnesota River	07020012	1,739,590	4,766.00
Met Council - Seneca WWTP	MN0030007	Metroshed	Lower Minnesota River	07020012	1,572,785	4,309.00
Micron Molding Inc	MING250097	Metroshed	Lower Minnesota River	07020012	1,105	3.03
New Prague WWTP	MN0020150	Metroshed	Lower Minnesota River	07020012	75,920	208.00
Norwood Young America WWTP	MN0024392	Metroshed	Lower Minnesota River	07020012	37,595	103.00
Pepsi Bottling Group	MN0060101	Metroshed	Lower Minnesota River	07020012	5,526	15.14
Polar Semiconductor Inc	MN0064661	Metroshed	Lower Minnesota River	07020012	5,791	15.87
Rahr Malting Co	MN0031917	Metroshed	Lower Minnesota River	07020012	216,781	593.92
Rosemount Inc - Eden Prairie	MN0054747	Metroshed	Lower Minnesota River	07020012	619	1.70
Seagate Technology LLC - Bloomington	MN0030864	Metroshed	Lower Minnesota River	07020012	1,503	4.12
Superior Minerals Co	MN0063584	Metroshed	Lower Minnesota River	07020012	2,078	5.69
Thermotech Co	MING255072	Metroshed	Lower Minnesota River	07020012	19,894	54.50
United Sugars Corp Chaska	MNG250005	Metroshed	Lower Minnesota River	07020012	127	0.35
Xcel - Black Dog Generating Plant	MN0000876	Metroshed	Lower Minnesota River	07020012	558,815	1,531.00

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Kemps Culture Facility	MNG255071	Metroshed	Mississippi River - Lake Pepin	07040001	13,263	36.34
Met Council - Empire WWTP	MN0045845	Metroshed	Mississippi River - Lake Pepin	07040001	1,184,060	3,244.00
Vermillion WWTP	MN0025101	Metroshed	Mississippi River - Lake Pepin	07040001	2,227	6.10
3M Cottage Grove Center	MN0001449	Metroshed	Mississippi River - Twin Cities	07010206	198,925	545.00
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
528 Partnership LLP Brown & Bigelow Bldg	MNG255045	Metroshed	Mississippi River - Twin Cities	07010206	221	0.61
AaCron Inc	MNG250002	Metroshed	Mississippi River - Twin Cities	07010206	31,035	85.03
Aggregate Industries - Larson Quarry	MN0030473	Metroshed	Mississippi River - Twin Cities	07010206	281,831	772.14
Aggregate Industries - Nelson Plant	MN0001309	Metroshed	Mississippi River - Twin Cities	07010206	828,915	2,271.00
Aveda Corp	MN0066524	Metroshed	Mississippi River - Twin Cities	07010206	124	0.34
BAE Systems/River Road Industrial Center	MNG255087	Metroshed	Mississippi River - Twin Cities	07010206	8,594	23.55
Boomerang Laboratories	MN0066508	Metroshed	Mississippi River - Twin Cities	07010206	442	1.21
Calco of Minneapolis	MN0059960	Metroshed	Mississippi River - Twin Cities	07010206	1,824	5.00
Captain Ken's Foods Inc	MN0059765	Metroshed	Mississippi River - Twin Cities	07010206	249	0.68
CenterPoint Energy - GWTF	MN0063126	Metroshed	Mississippi River - Twin Cities	07010206	663	1.82
CF Industries Inc - Pine Bend Terminal	MN0069418	Metroshed	Mississippi River - Twin Cities	07010206	840	2.30
Converteam/Electric Machinery Co	MN0054771	Metroshed	Mississippi River - Twin Cities	07010206	774	2.12
Covanta Hennepin Energy Resource Co LP	MN0057525	Metroshed	Mississippi River - Twin Cities	07010206	8,276	22.67
Crystal Lake Flocculation Treatment Facility	MN0069957	Metroshed	Mississippi River - Twin Cities	07010206	29,426	80.62
Cummins Power Generation Inc	MNG255029	Metroshed	Mississippi River - Twin Cities	07010206	1,105	3.03
Curwood Minnesota LLC - Minneapolis	MNG250107	Metroshed	Mississippi River - Twin Cities	07010206	3,095	8.48
Excelstor WTP	MN0041769	Metroshed	Mississippi River - Twin Cities	07010206	653	1.79
Flint Hills Resources Pine Bend LLC	MN0000418	Metroshed	Mississippi River - Twin Cities	07010206	224,110	614.00
Former Naval Industrial Reserve Ordinance Plant	MNG790159	Metroshed	Mississippi River - Twin Cities	07010206	63,661	174.41
Fridley Locke Park Filtration WTP	MN0043664	Metroshed	Mississippi River - Twin Cities	07010206	2,081	5.70
GAF Materials Corp	MN0002119	Metroshed	Mississippi River - Twin Cities	07010206	16,578	45.42
Galtier Plaza	MN0062031	Metroshed	Mississippi River - Twin Cities	07010206	1,326	3.63
Gaviridae Common	MNG255074	Metroshed	Mississippi River - Twin Cities	07010206	50,619	138.68

GE Osmonics Inc	MN0059013	Metroshed	Mississippi River - Twin Cities	07010206	9,859	27.01
General Mills Inc - E Hennepin	MN0056022	Metroshed	Mississippi River - Twin Cities	07010206	38,196	104.65
HB Fuller Co - Willow Lake	MN0051811	Metroshed	Mississippi River - Twin Cities	07010206	66,313	181.68
Hennepin County Energy Center	MN0057509	Metroshed	Mississippi River - Twin Cities	07010206	3,448	9.45
Hiawatha Metalcraft Inc	MNG250061	Metroshed	Mississippi River - Twin Cities	07010206	18,126	49.66
Honeywell Inc. - Aerospace - Mpls	MN0042641	Metroshed	Mississippi River - Twin Cities	07010206	154,731	423.92

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Honeywell International Inc	MNG255088	Metroshed	Mississippi River - Twin Cities	07010206	22,989	62.98
Honeywell-Plymouth Operations	MN0063266	Metroshed	Mississippi River - Twin Cities	07010206	6,366	17.44
Hutchinson Technology Inc - Plymouth	MN0066699	Metroshed	Mississippi River - Twin Cities	07010206	177	0.48
International Market Square	MNG255061	Metroshed	Mississippi River - Twin Cities	07010206	133	0.36
International Paper - Fridley	MNG255038	Metroshed	Mississippi River - Twin Cities	07010206	93	0.25
Kwong Tung Foods Inc	MN0062723	Metroshed	Mississippi River - Twin Cities	07010206	543	1.49
Laketown Community WWTP	MN0054399	Metroshed	Mississippi River - Twin Cities	07010206	256	0.70
LSP Power - Cottage Grove Power Plant	MN0062821	Metroshed	Mississippi River - Twin Cities	07010206	35,367	96.90
Maple Hill Estates	MN0031127	Metroshed	Mississippi River - Twin Cities	07010206	1,241	3.40
Met Council - Eagles Point WWTP	MN0029904	Metroshed	Mississippi River - Twin Cities	07010206	492,750	1,350.00
Met Council - Hastings WWTP	MN0029955	Metroshed	Mississippi River - Twin Cities	07010206	111,325	305.00
Met Council - Metropolitan WWTP	MN0029815	Metroshed	Mississippi River - Twin Cities	07010206	12,996,920	35,608.00
Metal-Matic Inc	MNG255065	Metroshed	Mississippi River - Twin Cities	07010206	1,326	3.63
M-Foods Dairy LLC	MNG255067	Metroshed	Mississippi River - Twin Cities	07010206	23,873	65.40
Micom Corp	MNG255025	Metroshed	Mississippi River - Twin Cities	07010206	712	1.95
Minneapolis Water Works Fridley	MN0003247	Metroshed	Mississippi River - Twin Cities	07010206	54,020	148.00
MinnTech Corp	MN0053541	Metroshed	Mississippi River - Twin Cities	07010206	5,347	14.65
New Brighton WTP - Wells 10 & 11	MNG640068	Metroshed	Mississippi River - Twin Cities	07010206	1,243	3.41
Nifisk-Advance Inc	MN0066648	Metroshed	Mississippi River - Twin Cities	07010206	6,366	17.44
Northern Iron of St Paul LLC	MN0059277	Metroshed	Mississippi River - Twin Cities	07010206	1,105	3.03
NuStar - Roseville Terminal	MN0050318	Metroshed	Mississippi River - Twin Cities	07010206	265	0.73

NWC Ltd Partnership - Wells Fargo Center	MNG250103	Metroshed	Mississippi River - Twin Cities	07010206	53,051	145.34
Owens Corning Roofing & Asphalt LLC Mpls	MN0048810	Metroshed	Mississippi River - Twin Cities	07010206	104	0.28
Pearson Candy Co	MNG255066	Metroshed	Mississippi River - Twin Cities	07010206	884	2.42
Robinson Rubber Products Co Inc	MNG250048	Metroshed	Mississippi River - Twin Cities	07010206	2,608	7.15
Saint Croix Forge Inc	MN0069051	Metroshed	Mississippi River - Twin Cities	07010206	85	0.23
Saint Paul Park Refining Co LLC	MN0000256	Metroshed	Mississippi River - Twin Cities	07010206	62,780	172.00
St Anthony WTP	MNG640081	Metroshed	Mississippi River - Twin Cities	07010206	332	0.91
St Louis Park GWP - Reilly Tar Site	MN0045489	Metroshed	Mississippi River - Twin Cities	07010206	6,676	18.29
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
St Louis Park WTP	MNG640084	Metroshed	Mississippi River - Twin Cities	07010206	12,019	32.93
St Paul Pioneer Press - Ridder Circle	MN0054577	Metroshed	Mississippi River - Twin Cities	07010206	83	0.23
St Paul Regional Water Services McCarron	MN0045829	Metroshed	Mississippi River - Twin Cities	07010206	186,506	510.98
Stadium Village Flats	MNG790176	Metroshed	Mississippi River - Twin Cities	07010206	12,732	34.88
Tanner's Alum WTP	MN0067661	Metroshed	Mississippi River - Twin Cities	07010206	23,255	387.58
Tekna Seal LLC	MNG255036	Metroshed	Mississippi River - Twin Cities	07010206	88	0.24
TH 13/101 Design-Build Project	MNG790175	Metroshed	Mississippi River - Twin Cities	07010206	101,680	278.58
TH 61 Hastings Bridge	MNG790173	Metroshed	Mississippi River - Twin Cities	07010206	19,998	52.32
U of M - Civil Engineering Bldg 156	MN0058882	Metroshed	Mississippi River - Twin Cities	07010206	28,515	78.12
U of M - Minnesota Library Access Center	MN0063436	Metroshed	Mississippi River - Twin Cities	07010206	928	2.54
United/Children's Hospitals	MN0002968	Metroshed	Mississippi River - Twin Cities	07010206	746	2.04
USCOE Lock & Dam 2 WTP	MNG640113	Metroshed	Mississippi River - Twin Cities	07010206	124	0.34
VEECO MBE Division	MNG250093	Metroshed	Mississippi River - Twin Cities	07010206	4,686	12.84
Vision-Ease Lens - Ramsey	MN0065501	Metroshed	Mississippi River - Twin Cities	07010206	456	1.25
Waldorf Corp - A Rock-Tenn Co	MN0048984	Metroshed	Mississippi River - Twin Cities	07010206	44,430	121.73
Wayzata WTP - Plants 1 & 2	MNG640096	Metroshed	Mississippi River - Twin Cities	07010206	1,533	4.20
Xcel - Riverside Generating Plant	MN0000892	Metroshed	Mississippi River - Twin Cities	07010206	165,728	454.05
Xcel Energy - Combined Cycle Plant	MN0000884	Metroshed	Mississippi River - Twin Cities	07010206	2,227	6.10
Xcel Energy - Fifth Street Substation	MN0003301	Metroshed	Mississippi River - Twin Cities	07010206	33,157	90.84

Blue Earth WWTP	MN0020532	Minnesota	Blue Earth River	07020009	40,515	111.00
Buffalo Lake Energy LLC	MN0068063	Minnesota	Blue Earth River	07020009	21,097	57.80
Darling International Inc - Blue Earth	MN0002313	Minnesota	Blue Earth River	07020009	2,215	79.80
Fairmont Foods of Minnesota Inc	MN0001996	Minnesota	Blue Earth River	07020009	2,690	7.37
Fairmont WTP	MN0045527	Minnesota	Blue Earth River	07020009	124	0.34
Fairmont WWTP	MN0030112	Minnesota	Blue Earth River	07020009	161,695	443.00
Great River Energy Lakefield	MN0067709	Minnesota	Blue Earth River	07020009	373	1.02
Interstate Power - Fox Lake Station	MN0000957	Minnesota	Blue Earth River	07020009	47,249	129.45
Seneca Foods Corp - Blue Earth	MN0001287	Minnesota	Blue Earth River	07020009	15,418	42.24
Trimont WWTP	MN0022071	Minnesota	Blue Earth River	07020009	7,665	21.00
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Welcome WWTP	MN0021296	Minnesota	Blue Earth River	07020009	10,768	29.50
Winnebago WWTP	MN0025267	Minnesota	Blue Earth River	07020009	70,445	193.00
Benson WWTP	MN0020036	Minnesota	Chippewa River	07020005	32,368	88.68
Chippewa Valley Ethanol Co	MN0062898	Minnesota	Chippewa River	07020005	4,476	12.26
Kerkhoven WWTP	MN0020583	Minnesota	Chippewa River	07020005	6,205	17.00
Montevideo WWTP	MN0020133	Minnesota	Chippewa River	07020005	102,200	280.00
Starbuck WWTP	MN0021415	Minnesota	Chippewa River	07020005	14,491	39.70
August Schell Brewing Co	MN0022284	Minnesota	Cottonwood River	07020008	1,451	3.97
New Ulm WWTP	MN0030066	Minnesota	Cottonwood River	07020008	280,320	768.00
Springfield WWTP	MN0024953	Minnesota	Cottonwood River	07020008	32,339	88.60
Wabasso WWTP	MN0025151	Minnesota	Cottonwood River	07020008	4,672	12.80
Walnut Grove WWTP	MN0021776	Minnesota	Cottonwood River	07020008	8,395	23.00
Amboy WWTP	MN0022624	Minnesota	Le Sueur River	07020011	11,863	32.50
New Richland WWTP	MN0021032	Minnesota	Le Sueur River	07020011	24,820	68.00
St Clair WWTP	MN0024716	Minnesota	Le Sueur River	07020011	8,760	24.00
Waldorf WWTP	MN0021849	Minnesota	Le Sueur River	07020011	4,015	11.00
Waseca WWTP	MN0020796	Minnesota	Le Sueur River	07020011	144,905	397.00

Arlington WWTP	MN0020834	Minnesota	Lower Minnesota River	07020012	33,215	91.00
Dairy Farmers of America - Winthrop	MN0003671	Minnesota	Lower Minnesota River	07020012	52,604	144.12
Lafayette WWTP	MN0023876	Minnesota	Lower Minnesota River	07020012	3,942	10.80
Le Center WWTP	MN0023931	Minnesota	Lower Minnesota River	07020012	34,164	93.60
Le Sueur Cheese Co	MN0060216	Minnesota	Lower Minnesota River	07020012	8,286	22.70
MG Waldbaum Co - Gaylord	MN0060798	Minnesota	Lower Minnesota River	07020012	22,776	62.40
Montgomery WWTP	MN0024210	Minnesota	Lower Minnesota River	07020012	40,077	109.80
MRVPUC WWTP	MN0068195	Minnesota	Lower Minnesota River	07020012	76,285	209.00
New Prague WTP	MNG640117	Minnesota	Lower Minnesota River	07020012	1,409	3.86
Seneca Foods Corp - Arlington	MN0000264	Minnesota	Lower Minnesota River	07020012	8,286	22.70
Seneca Foods Corp - Montgomery	MN0001279	Minnesota	Lower Minnesota River	07020012	20,696	56.70
Winco Inc	MNG255043	Minnesota	Lower Minnesota River	07020012	159	0.44

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
ADM - Mankato	MN0061514	Minnesota	Minnesota River - Mankato	07020007	5,305	14.53
CHS Oilseed Processing - Mankato	MN0001228	Minnesota	Minnesota River - Mankato	07020007	157,287	430.92
Comfrey WWTP	MN0021687	Minnesota	Minnesota River - Mankato	07020007	3,103	8.50
Courtland WTP	MNG640025	Minnesota	Minnesota River - Mankato	07020007	84	0.23
Firmenich Inc	MNG255006	Minnesota	Minnesota River - Mankato	07020007	7,639	20.93
Hard Rock Quarries Inc	MN0067237	Minnesota	Minnesota River - Mankato	07020007	6,631	18.17
Hiniker Co	MN0064408	Minnesota	Minnesota River - Mankato	07020007	211	0.58
Lake Crystal WWTP	MN0055981	Minnesota	Minnesota River - Mankato	07020007	24,455	67.00
Mankato WWTP	MN0030171	Minnesota	Minnesota River - Mankato	07020007	466,105	1,277.00
Morgan WWTP	MN0020443	Minnesota	Minnesota River - Mankato	07020007	14,856	40.70
New Ulm Quartzite Quarries Inc	MN0061638	Minnesota	Minnesota River - Mankato	07020007	343,475	1,249.05
Northern Con-Agg LLP - Frohrip Kaolin Mine	MN0062154	Minnesota	Minnesota River - Mankato	07020007	4,145	11.36
Northern Con-Agg LLP - Redwood Falls	MN0059331	Minnesota	Minnesota River - Mankato	07020007	14,920	40.88
POET Biorefining - Lake Crystal	MN0067172	Minnesota	Minnesota River - Mankato	07020007	5,371	14.72
Saint George District Sewer System	MN0064785	Minnesota	Minnesota River - Mankato	07020007	270	0.74

Saint Peter WWTP	MN0022535	Minnesota	Minnesota River - Mankato	07020007	165,710	454.00
Unimin Corp - Kasota Plant	MN0053082	Minnesota	Minnesota River - Mankato	07020007	103,614	1,892.50
Unimin Corp - Ottawa Plant	MN0001716	Minnesota	Minnesota River - Mankato	07020007	165,783	3,406.50
Wis-Pak of Mankato Inc	MN0063029	Minnesota	Minnesota River - Mankato	07020007	10,776	29.52
Xcel - Wilmarth Generating Plant	MN0000914	Minnesota	Minnesota River - Mankato	07020007	5,749	15.75
Clara City WWTP	MN0023035	Minnesota	Minnesota River - Yellow Medicine River	07020004	19,053	52.20
Delhi WWTP	MN0067008	Minnesota	Minnesota River - Yellow Medicine River	07020004	595	1.63
Granite Falls Energy LLC	MN0066800	Minnesota	Minnesota River - Yellow Medicine River	07020004	5,471	14.99
Granite Falls WWTP	MN0021211	Minnesota	Minnesota River - Yellow Medicine River	07020004	33,215	91.00
Maynard WWTP	MN0056588	Minnesota	Minnesota River - Yellow Medicine River	07020004	6,351	17.40
Olivia WWTP	MN0020907	Minnesota	Minnesota River - Yellow Medicine River	07020004	40,552	111.10
Prinsburg WWTP	MN0063932	Minnesota	Minnesota River - Yellow Medicine River	07020004	2,256	6.18
Renville WWTP	MN0020737	Minnesota	Minnesota River - Yellow Medicine River	07020004	35,369	96.90
Sacred Heart WWTP	MN0024708	Minnesota	Minnesota River - Yellow Medicine River	07020004	9,808	26.87

Name	Permit Number	Tributary Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Southern Minnesota Beet Sugar - Renville	MN0040665	Minnesota	Major Watershed	57,019	500.00
Xcel - Minnesota Valley Plant	MN0000906	Minnesota	Minnesota River - Yellow Medicine River	43,070	118.00
ADM Corn Processing - Marshall	MN0057037	Minnesota	Redwood River	109,417	299.77
Marshall WWTP	MN0022179	Minnesota	Redwood River	186,150	510.00
Delft Sanitary District WWTP	MN0066541	Minnesota	Watowan River	237	0.65
La Salle WWTP	MN0067458	Minnesota	Watowan River	621	1.70
Lewisville WTP	MN0043958	Minnesota	Watowan River	705	1.93
Madelia WWTP	MN0024040	Minnesota	Watowan River	54,385	149.00
Milk Specialties Co (MSC)	MN0056036	Minnesota	Watowan River	2,984	8.18
POET Biorefining - Ethanol 2000 LLP	MN0063118	Minnesota	Watowan River	5,968	16.35
Saint James WWTP	MN0024759	Minnesota	Watowan River	122,640	336.00
Truman WTP	MNG640129	Minnesota	Watowan River	622	1.70
Truman WWTP	MN0021652	Minnesota	Watowan River	32,485	89.00

ADM - Red Wing	MNG250009	Minor Tributaries	Mississippi River - Lake Pepin	07040001	6,189	16.96
Federal-Mogul Powertrain Systems	MN0001147	Minor Tributaries	Mississippi River - Lake Pepin	07040001	11,388	31.20
Lake City WWTP	MN0020664	Minor Tributaries	Mississippi River - Lake Pepin	07040001	62,926	172.40
Red Wing WWTP	MN0024571	Minor Tributaries	Mississippi River - Lake Pepin	07040001	165,710	454.00
Xcel Energy - Prairie Island Nuclear	MN0004006	Minor Tributaries	Mississippi River - Lake Pepin	07040001	426,422	1,168.28
Aitkin agri-peat Inc - Cromwell	MN0055662	St. Croix	Kettle River	07030003	178,217	488.27
Hinckley WWTP	MN0023701	St. Croix	Kettle River	07030003	28,105	77.00
Andersen Corp	MN0001724	St. Croix	Lower St. Croix River	07030005	26,083	71.46
Baytown GW Contamination Site	MNG790156	St. Croix	Lower St. Croix River	07030005	6,366	17.44
Chisago Lakes Joint STC	MN0055808	St. Croix	Lower St. Croix River	07030005	101,835	279.00
Cimarron Park WWTP	MN0050636	St. Croix	Lower St. Croix River	07030005	4,973	166.00
Forest Lake WTP	MNG640118	St. Croix	Lower St. Croix River	07030005	1,078	2.95
Harris WWTP	MN0050130	St. Croix	Lower St. Croix River	07030005	6,643	18.20
John Iacarella - Linwood Terrace Co	MN0054372	St. Croix	Lower St. Croix River	07030005	694	1.90
Met Council - St. Croix Valley WWTP	MN0029998	St. Croix	Lower St. Croix River	07030005	191,990	526.00
North Branch WWTP	MN0024350	St. Croix	Lower St. Croix River	07030005	33,580	92.00

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Xcel Energy - Allen S King Generating Plant	MN0000825	St. Croix	Lower St. Croix River	07030005	1,226,710	3,360.85
Mora WWTP	MN0021156	St. Croix	Snake River - St. Croix Basin	07030004	33,215	91.00
Bertha WWTP	MN0022799	Upper Mississippi	Crow Wing River	07010106	8,206	171.80
East Gull Lake WWTP	MN0059871	Upper Mississippi	Crow Wing River	07010106	17,082	46.80
Motley WWTP	MN0024244	Upper Mississippi	Crow Wing River	07010106	26,682	73.10
Staples WWTP	MN0024988	Upper Mississippi	Crow Wing River	07010106	28,178	77.20
Alexandria Lakes Area Sanitary District	MN0040738	Upper Mississippi	Long Prairie River	07010108	123,735	339.00
Alexandria Light & Power	MNG250004	Upper Mississippi	Long Prairie River	07010108	2,122	5.81
Long Prairie Ground Water Remediation	MNG790134	Upper Mississippi	Long Prairie River	07010108	15,915	43.60
Long Prairie WWTP - Municipal	MN0066079	Upper Mississippi	Long Prairie River	07010108	75,920	208.00
Aitkin WWTP	MN0020095	Upper Mississippi	Mississippi River - Brainerd	07010104	28,580	78.30

Anderson Custom Processing Inc	MNG255005	Upper Mississippi	Mississippi River - Brainerd	07010104	5,305	14.53
BNSF RR - Former Tie Treating Plant	MN0055387	Upper Mississippi	Mississippi River - Brainerd	07010104	9,284	25.44
Brainerd WWTP	MN0049328	Upper Mississippi	Mississippi River - Brainerd	07010104	129,575	355.00
Camp Ripley - Area 22 Washrack	MN0063070	Upper Mississippi	Mississippi River - Brainerd	07010104	373	1.02
Camp Ripley WWTP	MN0025721	Upper Mississippi	Mississippi River - Brainerd	07010104	59,495	163.00
Little Falls WTP	MNG640128	Upper Mississippi	Mississippi River - Brainerd	07010104	2,984	8.18
Little Falls WWTP	MN0020761	Upper Mississippi	Mississippi River - Brainerd	07010104	99,280	272.00
Randall WWTP	MN0024562	Upper Mississippi	Mississippi River - Brainerd	07010104	7,556	20.70
Sampson Farms	MN0057533	Upper Mississippi	Mississippi River - Brainerd	07010104	12,434	34.07
Swanville WWTP	MN0020109	Upper Mississippi	Mississippi River - Brainerd	07010104	7,556	20.70
Wausau Paper Mills LLC	MN0001422	Upper Mississippi	Mississippi River - Brainerd	07010104	261,920	717.59
Avon WWTP	MN0047325	Upper Mississippi	Mississippi River - Sartell	07010201	17,484	47.90
Benton Utilities WWTP	MN0065391	Upper Mississippi	Mississippi River - Sartell	07010201	3,103	8.50
Holdingford WWTP	MN0023710	Upper Mississippi	Mississippi River - Sartell	07010201	10,111	27.70
Lake Andrew WWTP	MN0067733	Upper Mississippi	Mississippi River - Sartell	07010201	628	1.72
New Pirates Cove WWTP	MN0066109	Upper Mississippi	Mississippi River - Sartell	07010201	2,070	5.67
Order of St Benedict - Power Plant	MN0046035	Upper Mississippi	Mississippi River - Sartell	07010201	2,946	8.07
Order of St Benedict WWTP	MN0022411	Upper Mississippi	Mississippi River - Sartell	07010201	10,038	27.50

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Sartell Valves Inc	MNG255084	Upper Mississippi	Mississippi River - Sartell	07010201	4,509	12.35
Albertville WWTP	MN0050954	Upper Mississippi	Mississippi River - St. Cloud	07010203	38,690	106.00
Appert's Inc	MN0052728	Upper Mississippi	Mississippi River - St. Cloud	07010203	442	1.21
Aspen Hills WWTP	MN0066028	Upper Mississippi	Mississippi River - St. Cloud	07010203	807	2.21
Becker WWTP - Municipal	MN0025666	Upper Mississippi	Mississippi River - St. Cloud	07010203	35,186	96.40
Big Lake WWTP	MN0041076	Upper Mississippi	Mississippi River - St. Cloud	07010203	15,038	41.20
Clear Lake/Cleanwater WWTP	MN0047490	Upper Mississippi	Mississippi River - St. Cloud	07010203	10,841	29.70
Elk River Municipal Utilities	MNG250016	Upper Mississippi	Mississippi River - St. Cloud	07010203	12,069	33.07
Elk River WWTP	MN0020788	Upper Mississippi	Mississippi River - St. Cloud	07010203	43,070	118.00

Gelsinger & Sons Inc	MNG790169	Upper Mississippi	Mississippi River - St. Cloud	07010203	198,940	545.04
Great River Energy - Elk River Station	MN0001988	Upper Mississippi	Mississippi River - St. Cloud	07010203	4,147,518	11,363.06
Monticello WWTP	MN0020567	Upper Mississippi	Mississippi River - St. Cloud	07010203	49,640	136.00
Olsego WWTP West	MN0066257	Upper Mississippi	Mississippi River - St. Cloud	07010203	29,784	81.60
Riverbend Mobile Home Park WWTP	MN0042251	Upper Mississippi	Mississippi River - St. Cloud	07010203	2,482	6.80
Saint Cloud WWTP	MN0040878	Upper Mississippi	Mississippi River - St. Cloud	07010203	538,010	1,474.00
Xcel - Monticello Nuclear Generating Plt	MN0000868	Upper Mississippi	Mississippi River - St. Cloud	07010203	8,249	22.60
Xcel - Sherburne Generating Plant	MN0002186	Upper Mississippi	Mississippi River - St. Cloud	07010203	627,435	1,719.00
Zimmerman WWTP	MN0042331	Upper Mississippi	Mississippi River - St. Cloud	07010203	18,615	51.00
AMPI - Paynesville	MN0044326	Upper Mississippi	North Fork Crow River	07010204	12,600	34.52
Anandale/Maple Lake/Howard Lake WWTP	MN0066966	Upper Mississippi	North Fork Crow River	07010204	48,910	134.00
Buffalo WWTP	MN0040649	Upper Mississippi	North Fork Crow River	07010204	149,285	409.00
Bushmills Ethanol	MN0067211	Upper Mississippi	North Fork Crow River	07010204	6,424	17.60
Faribault Foods - Cokato	MN0030635	Upper Mississippi	North Fork Crow River	07010204	29,565	81.00
Great River Energy of Dickinson	MN0049077	Upper Mississippi	North Fork Crow River	07010204	1,243	3.41
Green Lake SSWD WWTP	MN0052752	Upper Mississippi	North Fork Crow River	07010204	36,865	101.00
Greenfield WWTP	MN0063762	Upper Mississippi	North Fork Crow River	07010204	4,125	11.30
Grove City WWTP	MN0023574	Upper Mississippi	North Fork Crow River	07010204	9,125	25.00
Litchfield WWTP	MN0023973	Upper Mississippi	North Fork Crow River	07010204	78,475	215.00
Meadows of Whisper Creek WWTP	MN0066753	Upper Mississippi	North Fork Crow River	07010204	840	2.30
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
MPCA - Paynesville GWP 4	MNG790109	Upper Mississippi	North Fork Crow River	07010204	12,732	34.88
Otsego East WWTP	MN0064190	Upper Mississippi	North Fork Crow River	07010204	45,625	125.00
Rockford WWTP	MN0024627	Upper Mississippi	North Fork Crow River	07010204	26,937	73.80
Rogers WWTP	MN0029629	Upper Mississippi	North Fork Crow River	07010204	66,065	181.00
Saint Michael WWTP	MN0020222	Upper Mississippi	North Fork Crow River	07010204	101,215	277.30
Wadena WWTP	MN0020672	Upper Mississippi	Redeye River	07010107	31,025	85.00
Braham WWTP	MN0022870	Upper Mississippi	Rum River	07010207	16,571	45.40

Cambridge WWTP	MN0020362	Upper Mississippi	Rum River	07010207	26,682	73.10
Castle Towers WWTP	MN0042196	Upper Mississippi	Rum River	07010207	4,964	13.60
Isanti Estates LLC	MN0054518	Upper Mississippi	Rum River	07010207	840	2.30
Isanti WWTP	MN0023795	Upper Mississippi	Rum River	07010207	11,242	30.80
Kraemer Mining & Materials - Mille Lacs	MN0067806	Upper Mississippi	Rum River	07010207	41,446	113.55
Premier Products Inc	MNG250082	Upper Mississippi	Rum River	07010207	191	0.52
Princeton WWTP	MN0024538	Upper Mississippi	Rum River	07010207	26,280	72.00
Saint Francis WWTP	MN0021407	Upper Mississippi	Rum River	07010207	22,338	61.20
Bel Clare Estates WWTP	MN0045721	Upper Mississippi	Sauk River	07010202	3,103	8.50
Cold Spring WWTP	MN0023094	Upper Mississippi	Sauk River	07010202	29,821	81.70
Gold'n Plump Poultry - Cold Spring	MN0047261	Upper Mississippi	Sauk River	07010202	38,617	105.80
Lake Henry WWTP	MN0020885	Upper Mississippi	Sauk River	07010202	1,657	4.54
Martin Marietta Materials Inc	MN0004031	Upper Mississippi	Sauk River	07010202	72,964	199.90
Melrose WWTP	MN0020290	Upper Mississippi	Sauk River	07010202	124,100	340.00
NuStar - Sauk Centre Terminal	MN0057771	Upper Mississippi	Sauk River	07010202	4,145	11.36
Richmond WWTP	MN0024597	Upper Mississippi	Sauk River	07010202	12,848	35.20
Sauk Centre WWTP	MN0024821	Upper Mississippi	Sauk River	07010202	36,719	100.60
AB Mauri Food Inc	MNG250099	Upper Mississippi	South Fork Crow River	07010205	132,626	363.36
Brownston WWTP	MN0022951	Upper Mississippi	South Fork Crow River	07010205	8,140	22.30
Delano WTP	MNG640123	Upper Mississippi	South Fork Crow River	07010205	6,217	17.03
Delano WWTP	MN0051250	Upper Mississippi	South Fork Crow River	07010205	91,031	249.40
Glencoe WWTP	MN0022233	Upper Mississippi	South Fork Crow River	07010205	107,675	295.00
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Hector WWTP	MN0025445	Upper Mississippi	South Fork Crow River	07010205	27,302	74.80
Hutchinson Technology Inc	MN0055506	Upper Mississippi	South Fork Crow River	07010205	5,526	15.14
Hutchinson WWTP	MN0055832	Upper Mississippi	South Fork Crow River	07010205	176,660	484.00
Lester Prairie WWTP	MN0023957	Upper Mississippi	South Fork Crow River	07010205	15,075	41.30
Mayer WWTP	MN0021202	Upper Mississippi	South Fork Crow River	07010205	17,995	49.30

Minnesota Energy	MN0063151	Upper Mississippi	South Fork Crow River	07010205	1,658	4.54
Water Town WWTP	MN0020940	Upper Mississippi	South Fork Crow River	07010205	52,195	143.00
Willmar WWTP	MN0025259	Upper Mississippi	South Fork Crow River	07010205	310,980	852.00
Winsted WWTP	MN0021571	Upper Mississippi	South Fork Crow River	07010205	33,945	93.00

Revised 2/20/2019

A.2. Minnesota Wastewater Permits with TSS Limits > 32 mg/L, Not Eligible for Future WLA Increase

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Dennison WWTP	MN0022195	Cannon	Cannon River	07040002	2,335	66.00
Ellendale WWTP	MNG580014	Cannon	Cannon River	07040002	9,353	324.60
Elysian WWTP	MN0041114	Cannon	Cannon River	07040002	12,123	349.65
Geneva WWTP	MN0021008	Cannon	Cannon River	07040002	6,434	162.00
Kilkenny WWTP	MNG580084	Cannon	Cannon River	07040002	2,126	81.15
Meriden Township WWTP	MN0068713	Cannon	Cannon River	07040002	1,501	51.15
MNDOT - Heath Creek Rest Area	MN0069639	Cannon	Cannon River	07040002	560	11.70
MNDOT Straight River Rest Area	MN0049514	Cannon	Cannon River	07040002	1,119	24.00
Belle Plaine WWTP	MN0022772	Metrosched	Lower Minnesota River	07020012	39,770	923.50
Bongards Creameries Inc	MN0002135	Metrosched	Lower Minnesota River	07020012	15,153	483.50
Hamburg WWTP	MN0025585	Metrosched	Lower Minnesota River	07020012	5,875	144.75
MA Gedney Co	MN0022446	Metrosched	Lower Minnesota River	07020012	24,150	345.00
Hampton WWTP	MN0021946	Metrosched	Mississippi River - Lake Pepin	07040001	9,419	103.50
Alden WWTP	MNG580118	Minnesota	Blue Earth River	07020009	14,827	628.50
Bricelyn WWTP	MNG580129	Minnesota	Blue Earth River	07020009	6,248	119.10
Elmore WWTP	MN0021920	Minnesota	Blue Earth River	07020009	11,750	636.00

Frost WWTP	MNG580120	Minnesota	Blue Earth River	07020009	4,495	100.35
Granada WWTP	MNG580023	Minnesota	Blue Earth River	07020009	3,693	92.40
Kiestler WWTP	MNG580097	Minnesota	Blue Earth River	07020009	8,393	126.90
Northrop WWTP	MN0024384	Minnesota	Blue Earth River	07020009	4,663	201.60
Vernon Center WWTP	MN0030490	Minnesota	Blue Earth River	07020009	5,475	15.00
Walters WWTP	MN0068756	Minnesota	Blue Earth River	07020009	1,457	37.35
Clontarf WWTP	MNG580108	Minnesota	Chippewa River	7020005	2,191	54.00
Danvers WWTP	MNG580119	Minnesota	Chippewa River	07020005	2,135	48.15
Evansville WWTP	MN0023329	Minnesota	Chippewa River	07020005	9,325	191.25
Farwell Kensington Sanitary District WWTP	MNG580220	Minnesota	Chippewa River	07020005	7,115	145.50

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Hancock WWTP	MN0023582	Minnesota	Chippewa River	07020005	17,056	349.95
Hoffman WWTP	MNG580134	Minnesota	Chippewa River	07020005	14,827	630.30
Lowry WWTP	MN0024007	Minnesota	Chippewa River	07020005	4,607	107.70
Millerville WWTP	MN0054305	Minnesota	Chippewa River	07020005	3,637	64.80
Murdock WWTP	MNG580086	Minnesota	Chippewa River	07020005	3,963	81.00
Sunburg WWTP	MNG580125	Minnesota	Chippewa River	07020005	1,464	30.12
Urbank WWTP	MN0068446	Minnesota	Chippewa River	07020005	1,026	20.40
Acme-Ochs Plant	MN0061646	Minnesota	Cottonwood River	07020008	11,635	126.47
Balaton WWTP	MN0020559	Minnesota	Cottonwood River	07020008	11,470	208.50
Clements WWTP	MNG580094	Minnesota	Cottonwood River	07020008	2,331	41.57
Del Monte Corp - Plant 114	MN0001171	Minnesota	Cottonwood River	07020008	23,751	196.50
Garvin WWTP	MNG580101	Minnesota	Cottonwood River	07020008	2,005	43.20

Lamberton WWTP	MNG580100	Minnesota	Cottonwood River	07020008	18,651	333.00
Lucan WWTP	MNG580112	Minnesota	Cottonwood River	07020008	2,574	58.20
Revere WWTP	MNG580114	Minnesota	Cottonwood River	07020008	1,669	38.25
Sanborn WWTP	MNG580115	Minnesota	Cottonwood River	07020008	6,621	87.30
Sleepy Eye WWTP	MNG580041	Minnesota	Cottonwood River	07020008	65,277	1,646.85
Storden WWTP	MNG580106	Minnesota	Cottonwood River	07020008	3,262	67.35
Tracy WWTP	MN0021725	Minnesota	Cottonwood River	07020008	27,976	291.00
Wanda WWTP	MNG580126	Minnesota	Cottonwood River	07020008	1,557	45.75
Westbrook WWTP	MNG580127	Minnesota	Cottonwood River	07020008	13,988	415.65
Delavan WWTP	MNG580109	Minnesota	Le Sueur River	07020011	5,036	103.95
Freeborn WWTP	MNG580018	Minnesota	Le Sueur River	07020011	3,320	62.40
Good Thunder WWTP	MNG580206	Minnesota	Le Sueur River	07020011	7,647	181.05
Hartland WWTP	MNG580102	Minnesota	Le Sueur River	07020011	4,196	101.10
Janesville WWTP	MNG580025	Minnesota	Le Sueur River	07020011	31,799	874.05
Mapleton WWTP	MN0021172	Minnesota	Le Sueur River	07020011	37,861	915.00
Pemberton WWTP	MNG580075	Minnesota	Le Sueur River	07020011	4,942	166.50
Wells-Easton-Minnesota Lake WWTP	MN0025224	Minnesota	Le Sueur River	07020011	101,459	3,969.00

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Altona Hutterian Brethren WWTP	MIN0067610	Minnesota	Lower Minnesota River	07020012	1,166	30.00
Gaylord WWTP	MNG580204	Minnesota	Lower Minnesota River	07020012	51,289	1,123.65
Gibbon WWTP	MNG580020	Minnesota	Lower Minnesota River	07020012	15,014	253.95
Starland Hutterian Brethren Inc	MIN0067334	Minnesota	Lower Minnesota River	07020012	1,026	40.50
Winthrop WWTP	MIN0051098	Minnesota	Lower Minnesota River	07020012	32,452	534.00

Cleveland WWTP	MNG580009	Minnesota	Minnesota River - Mankato	07020007	12,776	274.65
Evan WWTP	MNG580202	Minnesota	Minnesota River - Mankato	07020007	1,194	37.05
Fairfax WWTP	MNG580060	Minnesota	Minnesota River - Mankato	07020007	29,654	1,076.55
Franklin WWTP	MN0021083	Minnesota	Minnesota River - Mankato	07020007	10,724	29.40
Hanska WWTP	MNG580207	Minnesota	Minnesota River - Mankato	07020007	4,663	95.70
Jeffers WWTP	MNG580111	Minnesota	Minnesota River - Mankato	07020007	6,528	87.30
Morton WWTP	MN0051292	Minnesota	Minnesota River - Mankato	07020007	12,309	33.75
Nicollet WWTP	MNG580037	Minnesota	Minnesota River - Mankato	07020007	19,397	653.40
Searles WWTP	MNG580080	Minnesota	Minnesota River - Mankato	07020007	4,756	98.25
Belview WWTP	MNG580003	Minnesota	Minnesota River - Yellow Medicine River	07020004	13,739	431.70
Bird Island WWTP	MN0022829	Minnesota	Minnesota River - Yellow Medicine River	07020004	17,345	289.50
Blomkest Svea Sewer Board WWTP	MN0069388	Minnesota	Minnesota River - Yellow Medicine River	07020004	3,730	115.50
Clarkfield WWTP	MNG580093	Minnesota	Minnesota River - Yellow Medicine River	07020004	30,494	748.20
Cottonwood WWTP	MNG580010	Minnesota	Minnesota River - Yellow Medicine River	07020004	14,920	472.65
Danube WWTP	MNG580057	Minnesota	Minnesota River - Yellow Medicine River	07020004	6,248	165.00
Echo WWTP	MNG580059	Minnesota	Minnesota River - Yellow Medicine River	07020004	8,066	166.20
Hanley Falls WWTP	MNG580122	Minnesota	Minnesota River - Yellow Medicine River	07020004	3,264	62.40
Ivanhoe WWTP	MNG580103	Minnesota	Minnesota River - Yellow Medicine River	07020004	10,258	141.45
Minneota WWTP	MNG580033	Minnesota	Minnesota River - Yellow Medicine River	07020004	22,287	457.20
Pennock WWTP	MNG580104	Minnesota	Minnesota River - Yellow Medicine River	07020004	8,020	166.50
Porter WWTP	MNG580128	Minnesota	Minnesota River - Yellow Medicine River	07020004	1,772	41.55
Raymond WWTP	MNG580197	Minnesota	Minnesota River - Yellow Medicine River	07020004	7,703	361.50
Redwood Falls WWTP	MN0020401	Minnesota	Minnesota River - Yellow Medicine River	07020004	123,188	337.50
Saint Leo WWTP	MN0024775	Minnesota	Minnesota River - Yellow Medicine River	07020004	1,585	36.00

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Taunton WWTP	MNG580090	Minnesota	Minnesota River - Yellow Medicine River	07020004	1,958	49.95
Wood Lake WWTP	MNG580107	Minnesota	Minnesota River - Yellow Medicine River	07020004	6,015	91.50
Ghent WWTP	MNG580121	Minnesota	Redwood River	07020006	3,450	66.00
Lynd WWTP	MNG580030	Minnesota	Redwood River	07020006	4,252	87.30
Milroy WWTP	MNG580124	Minnesota	Redwood River	07020006	3,227	63.00
Russell WWTP	MNG580062	Minnesota	Redwood River	07020006	7,833	149.70
Ruthon WWTP	MNG580105	Minnesota	Redwood River	07020006	5,306	96.45
Tyler WWTP	MNG580116	Minnesota	Redwood River	07020006	16,319	278.55
Vesta WWTP	MNG580043	Minnesota	Redwood River	07020006	3,324	66.15
Butterfield WWTP	MN0022977	Minnesota	Watowan River	07020010	27,043	706.65
Lewisville WWTP	MN0065722	Minnesota	Watowan River	07020010	5,595	118.50
Mountain Lake WWTP	MNG580035	Minnesota	Watowan River	07020010	32,639	1,051.50
Neuhof Hutterian Brethren	MNG580113	Minnesota	Watowan River	07020010	396	29.55
Odin-Ormsby WWTP	MN0069442	Minnesota	Watowan River	07020010	2,933	76.50
Barnum WWTP	MNG580142	St. Croix	Kettle River	07030003	13,578	278.55
Finlayson WWTP	MNG580203	St. Croix	Kettle River	07030003	27,976	208.50
Kettle River WWTP	MNG580183	St. Croix	Kettle River	07030003	3,273	73.65
Moose Lake WWTP	MN0020699	St. Croix	Kettle River	07030003	46,160	1,257.00
Sandstone WWTP	MNG580213	St. Croix	Kettle River	07030003	35,716	732.00
Willow River WWTP	MN0021971	St. Croix	Kettle River	07030003	4,103	139.32
Rush City WWTP	MNG580212	St. Croix	Lower St. Croix River	07030005	37,255	940.65
Shafer WWTP	MN0030848	St. Croix	Lower St. Croix River	07030005	9,792	202.50

Shorewood Park Sanitary District	MNG580216	St. Croix	Lower St. Croix River	07030005	1,399	49.95
Taylor Falls WWTP	MNG580218	St. Croix	Lower St. Croix River	07030005	13,149	291.30
Grasston WWTP	MN0025691	St. Croix	Snake River - St. Croix Basin	07030004	3,544	99.75
Ogilvie WWTP	MN0021997	St. Croix	Snake River - St. Croix Basin	07030004	21,353	58.50
Pine City WWTP	MN0021784	St. Croix	Snake River - St. Croix Basin	07030004	69,940	1,550.25
Wahkon WWTP	MN0047066	St. Croix	Snake River - St. Croix Basin	07030004	11,284	245.10
Askov WWTP	MN0022616	St. Croix	Upper St. Croix River	07030001	4,700	112.50

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Menahga WWTP	MNG580032	Upper Mississippi	Crow Wing River	07010106	18,184	557.25
Pillager WWTP	MNG580209	Upper Mississippi	Crow Wing River	07010106	6,826	241.20
Browerville WWTP	MN0022926	Upper Mississippi	Long Prairie River	07010108	35,996	1,015.50
Carlos WWTP	MN0023019	Upper Mississippi	Long Prairie River	07010108	5,968	199.50
Clarissa WWTP	MNG580008	Upper Mississippi	Long Prairie River	07010108	9,512	234.45
Eagle Bend WWTP	MN0023248	Upper Mississippi	Long Prairie River	07010108	18,184	375.00
Garfield WWTP	MN0023515	Upper Mississippi	Long Prairie River	07010108	5,595	199.50
Millona WWTP	MN0024155	Upper Mississippi	Long Prairie River	07010108	7,460	152.10
Flensburg WWTP	MNG580016	Upper Mississippi	Mississippi River - Brainerd	07010104	1,725	41.55
Grey Eagle WWTP	MN0023566	Upper Mississippi	Mississippi River - Brainerd	07010104	8,673	145.05
Serpent Lake WWTP	MNG580215	Upper Mississippi	Mississippi River - Brainerd	07010104	62,666	1,598.10
Sobieski WWTP	MNG580217	Upper Mississippi	Mississippi River - Brainerd	07010104	1,585	53.25
Albany WWTP	MN0020575	Upper Mississippi	Mississippi River - Sartell	07010201	51,476	1,275.00
Bowlus WWTP	MN0020923	Upper Mississippi	Mississippi River - Sartell	07010201	2,798	70.65
Rice WWTP	MN0056481	Upper Mississippi	Mississippi River - Sartell	07010201	17,252	354.90

Rich Prairie Sewer Treatment Facility	MNG580211	Upper Mississippi	Mississippi River - Sartell	07010201	21,411	553.50
Royalton WWTP	MN0020460	Upper Mississippi	Mississippi River - Sartell	07010201	16,133	44.10
Upsala WWTP	MNG580053	Upper Mississippi	Mississippi River - Sartell	07010201	4,402	162.30
Foley WWTP	MN0023451	Upper Mississippi	Mississippi River - St. Cloud	07010203	34,625	727.50
Gilman WWTP	MNG580021	Upper Mississippi	Mississippi River - St. Cloud	07010203	6,155	99.75
Alwater WWTP	MN0022659	Upper Mississippi	North Fork Crow River	07010204	18,651	312.00
Belgrade WWTP	MN0051381	Upper Mississippi	North Fork Crow River	07010204	31,146	378.00
Brooten WWTP	MN0025909	Upper Mississippi	North Fork Crow River	07010204	12,403	270.75
Cokato WWTP	MN0049204	Upper Mississippi	North Fork Crow River	07010204	67,616	185.25
Darwin WWTP	MNG580150	Upper Mississippi	North Fork Crow River	07010204	4,663	83.10
Dassel WWTP	MN0054127	Upper Mississippi	North Fork Crow River	07010204	17,532	312.00
Montrose WWTP	MN0024228	Upper Mississippi	North Fork Crow River	07010204	72,818	199.50
Paynesville WWTP	MN0020168	Upper Mississippi	North Fork Crow River	07010204	82,715	373.50
Deer Creek WWTP	MNG580180	Upper Mississippi	Redeye River	07010107	3,171	133.05
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Hewitt WWTP	MNG580024	Upper Mississippi	Redeye River	07010107	3,171	83.10
Sebeka WWTP	MN0024856	Upper Mississippi	Redeye River	07010107	18,651	241.05
Wolf Lake WWTP	MN0069205	Upper Mississippi	Redeye River	07010107	783	29.10
Foreston WWTP	MNG580017	Upper Mississippi	Rum River	07010207	4,560	172.05
Isle WWTP	MN0023809	Upper Mississippi	Rum River	07010207	18,651	307.50
M/DNR Father Hennepin State Park	MN0033723	Upper Mississippi	Rum River	07010207	802	20.85
Milaca WWTP	MN0024147	Upper Mississippi	Rum River	07010207	63,319	964.35
Onamia WWTP	MNG580050	Upper Mississippi	Rum River	07010207	19,583	403.20

Pease WWTP	MNG580167	Upper Mississippi	Rum River	07010207	3,637	106.05
Freeport WWTP	MNG580019	Upper Mississippi	Sauk River	07010202	12,123	249.45
GEM Sanitary District	MNG580205	Upper Mississippi	Sauk River	07010202	7,544	156.00
Osakis WWTP	MN0020028	Upper Mississippi	Sauk River	07010202	27,323	1,138.80
Saint Martin WWTP	MN0024783	Upper Mississippi	Sauk River	07010202	3,917	112.20
Buffalo Lake WWTP	MN0050211	Upper Mississippi	South Fork Crow River	07010205	15,387	444.75
Cedar Mills WWTP	MN0066605	Upper Mississippi	South Fork Crow River	07010205	853	49.95
Cosmos WWTP	MNG580056	Upper Mississippi	South Fork Crow River	07010205	8,393	114.30
Lake Lillian WWTP	MN0021954	Upper Mississippi	South Fork Crow River	07010205	4,966	100.50
Loreto WWTP	MN0023990	Upper Mississippi	South Fork Crow River	07010205	5,688	203.70
New Germany WWTP	MN0024295	Upper Mississippi	South Fork Crow River	07010205	4,849	97.50
Seneca Foods Corp - Glencoe	MN0001236	Upper Mississippi	South Fork Crow River	07010205	69,953	1,298.45
Silver Lake WWTP	MNG580164	Upper Mississippi	South Fork Crow River	07010205	12,962	336.60
Stewart WWTP	MNG580077	Upper Mississippi	South Fork Crow River	07010205	10,631	214.50

A.3. Minnesota Permits Subject to Categorical Industrial Stormwater WLA

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8
Aggregate Industries Inc - Multiple Sites	MNG490073	Cannon	Cannon River	07040002
Castle Rock Materials	MNG490258	Cannon	Cannon River	07040002
David Spangler Construction Inc	MNG490076	Cannon	Cannon River	07040002
Kleimayer Construction Inc	MNG490085	Cannon	Cannon River	07040002
Koch - Wood River Pipeline	MN0064700	Cannon	Cannon River	07040002
Ritchie Bros Auctioneers	MN0069256	Cannon	Cannon River	07040002
SMCCI - North Sanders/North Medford	MN0067792	Cannon	Cannon River	07040002
Tom Mariska Pit	MNG490230	Cannon	Cannon River	07040002

Tri-County Aggregate Inc	MNG490176	Cannon	Cannon River	07040002
Witte Brothers Inc	MNG490156	Cannon	Cannon River	07040002
Wondra Pit	MNG490130	Cannon	Cannon River	07040002
Zufall Pit	MNG490245	Cannon	Cannon River	07040002
Bituminous Roadways Inc	MNG490006	Metroshed	Lower Minnesota River	07020012
Bryan Rock Products Inc	MNG490080	Metroshed	Lower Minnesota River	07020012
Cargill AgHorizons - East Elevator Dredge	MN0054445	Metroshed	Lower Minnesota River	07020012
Cargill AgHorizons - West Elevator Dredge	MN0062201	Metroshed	Lower Minnesota River	07020012
City of Jordan - Mill Pond Dredge	MN0068730	Metroshed	Lower Minnesota River	07020012
Frac Master Sands LLC	MNG490201	Metroshed	Lower Minnesota River	07020012
Midwest Asphalt Corp	MNG490132	Metroshed	Lower Minnesota River	07020012
Nine Mile Creek Watershed District WW	MN0069094	Metroshed	Lower Minnesota River	07020012

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8
Prior Lk/Spring Lk Ferric Chloride WTP	MN0067377	Metroshed	Lower Minnesota River	07020012
Savage Riverport Dredge	MN0069035	Metroshed	Lower Minnesota River	07020012
Terry Bros Moon Valley LLC	MNG490243	Metroshed	Lower Minnesota River	07020012
Wm Mueller & Sons Inc - Hamburg	MNG490042	Metroshed	Lower Minnesota River	07020012
Eureka Sand & Gravel Inc - Eureka Pit	MNG490077	Metroshed	Mississippi River - Lake Pepin	07040001
Fischer Sand & Aggregate LLP	MNG490263	Metroshed	Mississippi River - Lake Pepin	07040001
Garvey Pit	MNG490221	Metroshed	Mississippi River - Lake Pepin	07040001
Kelly/Ames Mining Operation	MNG490232	Metroshed	Mississippi River - Lake Pepin	07040001
Pine Bend Paving Inc	MNG490211	Metroshed	Mississippi River - Lake Pepin	07040001
SKB/Ped Sand Pit	MNG490261	Metroshed	Mississippi River - Lake Pepin	07040001
Storlie Gravel Pit	MNG490169	Metroshed	Mississippi River - Lake Pepin	07040001
BP Pipelines North America Inc	MN0063754	Metroshed	Mississippi River - Twin Cities	07010206
CenterPoint Energy Distribution System	MN0063649	Metroshed	Mississippi River - Twin Cities	07010206
CS McCrossan Construction Inc	MNG490009	Metroshed	Mississippi River - Twin Cities	07010206
Dayton Park Properties	MN0041432	Metroshed	Mississippi River - Twin Cities	07010206

Lexington Sand LLC	MNG490210	Metroshed	Mississippi River - Twin Cities	07010206
MAC - Minneapolis/St Paul Intl Airport	MN0002101	Metroshed	Mississippi River - Twin Cities	07010206
MAC - Minneapolis/St Paul Intl Airport-GWP	MN0005404	Metroshed	Mississippi River - Twin Cities	07010206
Magellan Pipeline Co LP - Hydrostatic	MN00063304	Metroshed	Mississippi River - Twin Cities	07010206
Magellan Pipeline Co LP - Mpls Complex	MN0045896	Metroshed	Mississippi River - Twin Cities	07010206
Met Council - Minneapolis CSO	MN0046744	Metroshed	Mississippi River - Twin Cities	07010206
Met Council - St Paul CSO	MN0025470	Metroshed	Mississippi River - Twin Cities	07010206
Minneapolis Municipal Storm Water	MN0061018	Metroshed	Mississippi River - Twin Cities	07010206
Minnesota Pipe Line Co - Meter Station	MN0056472	Metroshed	Mississippi River - Twin Cities	07010206
MNDNR - Forestry	MNG490239	Metroshed	Mississippi River - Twin Cities	07010206
MPCA Leak 13456	MNG790174	Metroshed	Mississippi River - Twin Cities	07010206
Northern Con-Agg Inc	MNG490088	Metroshed	Mississippi River - Twin Cities	07010206
Northern Metal Recycling	MN0003380	Metroshed	Mississippi River - Twin Cities	07010206
Saint Paul Department of Public Works/Asphalt Pit	MNG490034	Metroshed	Mississippi River - Twin Cities	07010206

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8
St Paul Municipal Storm Water	MN0061263	Metroshed	Mississippi River - Twin Cities	07010206
St Paul Port Authority-Southport Barge Slip Dredge	MN0056081	Metroshed	Mississippi River - Twin Cities	07010206
Tiller Corp	MNG490010	Metroshed	Mississippi River - Twin Cities	07010206
Twin City Tanning LLP	MN0068411	Metroshed	Mississippi River - Twin Cities	07010206
US Air Force Reserve/934th Airlift Wing	MN0052141	Metroshed	Mississippi River - Twin Cities	07010206
Viking Gas Transmission	MN0060755	Metroshed	Mississippi River - Twin Cities	07010206
Xcel Energy Hydrostatic Testing	MN0060089	Metroshed	Mississippi River - Twin Cities	07010206
Faribault County Public Works	MNG490154	Minnesota	Blue Earth River	07020009
Hanel Pit	MNG490236	Minnesota	Blue Earth River	07020007
Valero Renewable Fuels Co LLC - Welcome Plant	MN0068161	Minnesota	Blue Earth River	07020009
Charles Kotten	MNG490248	Minnesota	Cottonwood River	07020008
Dallenbach Gravel Pit	MNG490094	Minnesota	Cottonwood River	07020008
Highwater Ethanol LLC	MN0068586	Minnesota	Cottonwood River	07020008

Leavenworth Silage Co	MNG049905	Minnesota	Cottonwood River	07020008
Blue Earth County Highway Department	MNG490235	Minnesota	Le Sueur River	07020011
Irvine Sand & Gravel	MNG490253	Minnesota	Le Sueur River	07020011
Jansen-Hard Rock Quarries Inc	MNG490228	Minnesota	Le Sueur River	07020011
Heartland Coin Products	MN0062561	Minnesota	Lower Minnesota River	07020012
Max Johnson Trucking Inc	MNG490260	Minnesota	Lower Minnesota River	07020012
Sibley Aggregates Inc	MNG490061	Minnesota	Lower Minnesota River	07020012
Traxler Construction Inc	MNG490268	Minnesota	Lower Minnesota River	07020012
Hoffman Construction - Cambria Pit	MNG490233	Minnesota	Minnesota River - Mankato	07020007
Magellan Pipeline Co LP - Mankato	MN0059811	Minnesota	Minnesota River - Mankato	07020007
Mankato-Kasota Stone Inc - Multi-Site	MNG490178	Minnesota	Minnesota River - Mankato	07020007
MR Paving/Valley Asphalt Products	MNG490037	Minnesota	Minnesota River - Mankato	07020007
OMG Midwest Inc/Southern MN Construction Co Inc	MNG490131	Minnesota	Minnesota River - Mankato	07020007
Reinelt Excavating LLC	MNG490236	Minnesota	Minnesota River - Mankato	07020007
Vetter Stone Co	MNG490173	Minnesota	Minnesota River - Mankato	07020007
WW Blacktopping Inc	MNG490184	Minnesota	Minnesota River - Mankato	07020007

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8
Broich Mine	MNG490137	Minnesota	Minnesota River - Yellow Medicine River	07020004
Chippewa Co Highway Dept - Miller Pit	MNG490146	Minnesota	Minnesota River - Yellow Medicine River	07020004
Duininck Bros Inc - Aggregate	MNG490046	Minnesota	Minnesota River - Yellow Medicine River	07020004
Gordy Serbus & Sons Gravel LLC	MNG490117	Minnesota	Minnesota River - Yellow Medicine River	07020004
Lincoln County Highway Department	MNG490203	Minnesota	Minnesota River - Yellow Medicine River	07020004
D & G Excavating Inc	MNG490067	Minnesota	Redwood River	07020006
Magellan Pipeline Co LP - Marshall	MN0059838	Minnesota	Redwood River	07020006
McLaughlin & Schulz Inc	MNG490019	Minnesota	Redwood River	07020006
Anderson Pit	MNG490240	Minnesota	Watowan River	07020010
Bituminous Materials LLC - Fairbault	MNG490004	Minor Tributaries	Mississippi River - Lake Pepin	07040001
Flint Hills RPB Airport & Wisconsin Pipelines	MN0064696	Minor Tributaries	Mississippi River - Lake Pepin	07040001

Glander Sand & Gravel - James Haglund Pit	MNG490122	Minor Tributaries	Mississippi River - Lake Pepin	07040001
River City Asphalt Inc	MNG490149	Minor Tributaries	Mississippi River - Lake Pepin	07040001
Xcel - Red Wing Generating Plant	MN0000850	Minor Tributaries	Mississippi River - Lake Pepin	07040001
Sheryl's Construction Inc - Isle	MNG490199	St. Croix	Kettle River	07030003
Siafine Construction & Aggregate LLC	MNG490162	St. Croix	Kettle River	07030003
Chisago County Highway Department	MNG490147	St. Croix	Lower St. Croix River	07030005
Blum Sand & Gravel	MNG490188	St. Croix	Snake River - St. Croix Basin	07030004
Cemstone Products Co	MNG490133	St. Croix	Snake River - St. Croix Basin	07030004
Knife Lake Sand & Gravel	MNG490216	St. Croix	Snake River - St. Croix Basin	07030004
Miller Pit	MNG490193	St. Croix	Snake River - St. Croix Basin	07030004
Pine City Township Gravel Pit	MNG490167	St. Croix	Snake River - St. Croix Basin	07030004
North Pine Aggregate - Fogt Rock Quarry	MNG490222	St. Croix	Snake River - St. Croix Basin	07030004
David Barrett Construction	MNG490120	Upper Mississippi	Upper St. Croix River	07030001
Long Construction Inc	MNG490074	Upper Mississippi	Crow Wing River	07010106
Rodney E Lof Co	MNG490180	Upper Mississippi	Crow Wing River	07010106
Central Specialties Inc	MNG490071	Upper Mississippi	Crow Wing River	07010106
Lakes Area Paving & Striping Inc	MNG490219	Upper Mississippi	Long Prairie River	07010108
Long Prairie WWTP - Industrial	MN0020303	Upper Mississippi	Long Prairie River	07010108

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8
Anderson Brothers Construction Co	MNG490001	Upper Mississippi	Mississippi River - Brainerd	07010104
Crow Wing County Highway Department	MNG490198	Upper Mississippi	Mississippi River - Brainerd	07010104
Gun Lake Sand & Gravel LLC	MNG490099	Upper Mississippi	Mississippi River - Brainerd	07010104
Kingsway Construction Inc	MNG490192	Upper Mississippi	Mississippi River - Brainerd	07010104
Marvin Tretter Inc	MNG490269	Upper Mississippi	Mississippi River - Sartell	07010201
South Side Sand & Gravel	MNG490223	Upper Mississippi	Mississippi River - Sartell	07010201
Tri-City Paving Inc	MNG490039	Upper Mississippi	Mississippi River - Sartell	07010201
TTWOS Granite Supply Quarry LLC	MNG490165	Upper Mississippi	Mississippi River - Sartell	07010201
Anandale Rock Products Inc	MNG490022	Upper Mississippi	Mississippi River - St. Cloud	07010203

J & B Mining	MNG490191	Upper Mississippi	Mississippi River - St. Cloud	07010203
Knife River Central Minnesota	MNG490003	Upper Mississippi	Mississippi River - St. Cloud	07010203
Kolles Sand & Gravel Inc	MNG490241	Upper Mississippi	Mississippi River - St. Cloud	07010203
MTD Excavating Gravel Pit	MNG490217	Upper Mississippi	Mississippi River - St. Cloud	07010203
Rock Solid Land Co LLC	MNG490244	Upper Mississippi	Mississippi River - St. Cloud	07010203
Saldana Excavating & Aggregates/Granite	MNG490166	Upper Mississippi	Mississippi River - St. Cloud	07010203
Schmidt Gravel Mine/Schuer Inc	MNG490148	Upper Mississippi	Mississippi River - St. Cloud	07010203
Veit Co - Rogers	MNG490183	Upper Mississippi	Mississippi River - St. Cloud	07010203
Fehn Companies Inc	MNG490204	Upper Mississippi	North Fork Crow River	07010204
Hardrives Inc	MNG490083	Upper Mississippi	North Fork Crow River	07010204
Omann Brothers Inc - St Michael	MNG490259	Upper Mississippi	North Fork Crow River	07010204
Prior Lake Aggregates Inc	MNG490250	Upper Mississippi	North Fork Crow River	07010204
Ottertail Aggregate Inc	MNG490254	Upper Mississippi	Redeye River	07010107
Wadena Asphalt Inc	MNG490041	Upper Mississippi	Redeye River	07010107
Helmin Construction Inc	MNG490218	Upper Mississippi	Rum River	07010207
Northern Lights 2009-2010 Zone EF	MN0069396	Upper Mississippi	Rum River	07010207
Cold Spring Granite - Plants	MN0062481	Upper Mississippi	Sauk River	07010202
Cold Spring Granite Co	MNG490143	Upper Mississippi	Sauk River	07010202
Mid Continent Asphalt	MNG490023	Upper Mississippi	Sauk River	07010202
Winter Sand & Gravel	MNG490224	Upper Mississippi	Sauk River	07010202
Name	Permit Number	Tributary	Major Watershed	HUC-8
Alliance Pipeline LP	MN0064068	Watershed	South Fork Crow River	07010205
Willmar Municipal Utilities Power Plant	MN0069663	Upper Mississippi	South Fork Crow River	07010205

A.4 Wisconsin Wastewater Permits with TSS Limits ≤ 32 mg/L Eligible for Future WLA Increase

Name	Permit Number	Tributary	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Baldwin WWTP	WI0026891	Watershed	Rush-Vermillion	07040001	23,348	63.97
Bay City	WI0061255	Minor Tributaries	Rush-Vermillion	07040001	6,051	16.58

Ellsworth Coop Creamery	WI00222942	Minor Tributaries	Rush-Vermillion	07040001	7,875	21.57
Ellsworth WWTP	WI0021253	Minor Tributaries	Rush-Vermillion	07040001	15,888	43.53
Pepin WWTP	WI0022811	Minor Tributaries	Rush-Vermillion	07040001	4,940	13.54
Prescott WWTP	WI0022403	Minor Tributaries	Rush-Vermillion	07040001	21,096	57.80
Advanced Food Products	WI0039781	St. Croix	Lower St. Croix River	07030005	17,728	48.57
Amani Sanitary District	WI0031861	St. Croix	Lower St. Croix River	07030005	1,326	3.63
Aimery, City of	WI0020125	St. Croix	Lower St. Croix River	07030005	22,173	60.75
Burnett Dairy Cooperative	WI0039039	St. Croix	Lower St. Croix River	07030005	9,325	25.55
Clayton, Village of	WI0036706	St. Croix	Lower St. Croix River	07030005	3,606	9.88
Clear Lake, Village of	WI0023639	St. Croix	Lower St. Croix River	07030005	16,744	45.87
Frederic	WI0029254	St. Croix	Lower St. Croix River	07030005	15,335	42.01
Hudson WWTF	WI0024279	St. Croix	Lower St. Croix River	07030005	134,699	369.04
Lakeside Foods, INC. New Richmond	WI0002836	St. Croix	Lower St. Croix River	07030005	4,360	24.22
Luck, Village of	WI0021482	St. Croix	Lower St. Croix River	07030005	15,086	41.33
New Richmond WWTF	WI0021245	St. Croix	Lower St. Croix River	07030005	71,701	196.44
Osceola, Village of	WI0025020	St. Croix	Lower St. Croix River	07030005	31,084	85.16
River Falls WWTP	WI0029394	St. Croix	Lower St. Croix River	07030005	131,383	359.95
Somerset WWTF	WI0030252	St. Croix	Lower St. Croix River	07030005	15,542	42.58
St Croix Falls, City of	WI0020796	St. Croix	Lower St. Croix River	07030005	20,557	56.32
Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Star Prairie WWTF	WI0060984	St. Croix	Lower St. Croix River	07030005	6,383	17.49
T. Thompson Hatchery	WI0049191	St. Croix	Lower St. Croix River	07030005	97,613	267.43
WI DNR Osceola Fish Hatchery	WI0004197	St. Croix	Lower St. Croix River	07030005	48,906	133.99
WI DNR St Croix Falls Hatchery	WI0004201	St. Croix	Lower St. Croix River	07030005	15,208	41.67

A.5. Wisconsin Wastewater Permits with TSS Limits > 32 mg/L Not Eligible for Future WLA Increase

Name	Permit Number	Tributary Watershed	Major Watershed	HUC-8	WLA (kg/year)	WLA (kg/day)
Maiden Rock	WI0032361	Minor Tributaries	Rush-Vermillion	07040001	2,860	34.07
Webster, Village of	WI0028843	St. Croix	Upper St. Croix River	07030001	10,569	173.73
Deer Park WWTF	WI0025356	St. Croix	Lower St. Croix River	07030005	6,341	104.24
Grantsburg, Village of	WI0060429	St. Croix	Lower St. Croix River	07030005	47,248	776.68

Appendix B: Regulated MS4 List

MS4ID	Name
MNR040000	Minnesota Phase II MS4s
WI-S050075-1	Wisconsin Phase II MS4s
*	Albertville MS4
MS400264	Alexandria City MS4
MS400073	Andover City MS4
MS400001	Anoka City MS4
MS400066	Anoka County MS4
MS400222	Anoka Technical College MS4
MS400223	Anoka-Ramsey Community College MS4
MS400074	Apple Valley City MS4
MS400002	Arden Hills City MS4
*	Baldwin Township MS4
MS400231	Baxter City MS4
*	Bayport City MS4
MS400067	Benton County MS4
MS400249	Big Lake City MS4
MS400234	Big Lake Township MS4
MS400075	Blaine City MS4
MS400005	Bloomington City MS4
*	Blue Earth County MS4
MS400266	Brainerd City MS4
MS400068	Brockway Township MS4

MS400006	Brooklyn Center City MS4
MS400007	Brooklyn Park City MS4
MS400238	Buffalo city of MS4
MS400069	Burns Township MS4

MS4ID	Name
MS400076	Burnsville City MS4
MS400250	Cambridge City MS4
MS400206	Capitol Region WD MS4
MS400077	Carver City MS4
MS400070	Carver County MS4
MS400078	Centerville City MS4
MS400171	Century College MS4
MS400008	Champlin City MS4
MS400079	Chanhassen City MS4
MS400080	Chaska City MS4
MS400009	Circle Pines City MS4
MS400010	Columbia Heights City MS4
MS400172	Coon Creek WD MS4
MS400011	Coon Rapids City MS4
MS400081	Corcoran City MS4
MS400082	Cottage Grove City MS4
MS400131	Credit River Township MS4
MS400012	Crystal City MS4
MS400132	Dakota County MS4
MS400254	Dakota County Technical College MS4

MS400083	Dayton City MS4
MS400013	Deephaven City MS4
MS400084	Dellwood City MS4
MS400014	Eagan City MS4
*	Eagle Lake City MS4
MS400087	East Bethel City MS4
MS400015	Eden Prairie City MS4
MS400016	Edina City MS4
MS400089	Elk River City MS4

MS4ID	Name
MS400237	Elko-New Market City MS4
MS400135	Empire Township MS4
MS400017	Excelsior City MS4
MS400239	Fairmont City MS4
MS400018	Falcon Heights City MS4
MS400233	Faribault City MS4
MS400090	Farmington City MS4
MS400175	Federal Medical Center MS4
MS400262	Forest Lake MS4
MS400019	Fridley City MS4
MS400020	Gem Lake City MS4
MS400252	Glencoe City MS4
MS400021	Golden Valley City MS4
MS400091	Grant City MS4
MS400022	Greenwood City MS4

MS400092	Ham Lake City MS4
*	Hanover City MS4
MS400240	Hastings City MS4
MS400136	Haven Township MS4
MS400138	Hennepin County MS4
MS400198	Hennepin Technical College Brooklyn Pk - MS4
MS400199	Hennepin Technical College Eden Prairie MS4
MS400023	Hilltop City MS4
MS400024	Hopkins City MS4
MS400094	Hugo City MS4
MS400248	Hutchinson City MS4
MS400095	Independence City MS4
MS400096	Inver Grove Heights City MS4
MS400224	Inver Hills Community College MS4

MS4ID	Name
*	Isanti City MS4
MS400140	Jackson Township MS4
*	Lake City MS4
MS400098	Lake Elmo City MS4
MS400142	Laketown Township MS4
MS400099	Lakeville City MS4
MS400025	Landfall City MS4
MS400026	Lauderdale City MS4
MS400143	Le Sauk Township MS4
MS400027	Lexington City MS4

MS400028	Lilydale City MS4
MS400100	Lino Lakes City MS4
MS400253	Litchfield City MS4
MS400029	Little Canada City MS4
MS400227	Little Falls City MS4
MS400101	Long Lake City MS4
MS400030	Loretto City MS4
MS400144	Louisville Township MS4
MS400031	Mahtomedi City MS4
MS400226	Mankato City MS4
*	Mankato Township MS4
MS400102	Maple Grove City MS4
MS400103	Maple Plain City MS4
MS400032	Maplewood City MS4
MS400241	Marshall City MS4
MS400104	Medicine Lake City MS4
MS400105	Medina City MS4
MS400033	Mendota City MS4
MS400034	Mendota Heights City MS4

MS4ID	Name
MS400201	Metropolitan State University - MS4
MS400146	Midway Township MS4
MS400147	Minden Township MS4
MN0061018	Minneapolis Municipal Storm Water
MS400182	Minnehaha Creek WD MS4