

## 2026 Modification to Lake Pepin and Mississippi River Eutrophication Total Maximum Daily Load Report

### GENERAL INFORMATION

<b>TMDL project name</b>	<a href="#">Lake Pepin and Mississippi River Eutrophication TMDL Report</a>
<b>Date of original EPA TMDL Approval</b>	May 19, 2021
<b>TMDL Modification Public Notice Dates</b>	January 5, 2026- February 4, 2026
<b>TMDL Assessment Unit Identification (AUID) and pollutants that require modification</b>	25-0001-00 – total phosphorus (TP) 07010206-814 – total phosphorus (TP) 07010206-805 – total phosphorus (TP)
<b>TMDL tables being modified</b>	Table 15. Lake Pepin TMDL, AUID 25-0001-00 Table 16. Mississippi River AUID 07010206-814 TMDL Table 17. Mississippi River AUID 07010206-805 TMDL

### EXPLANATION OF MODIFICATION

#### **What is being changed from the final Total Maximum Daily Load (TMDL) to the modified TMDL?**

The Minnesota Pollution Control Agency (MPCA) is making adjustments to Municipal Separate Storm Sewer Systems (MS4s) wasteload allocations (WLAs) to account for three new permittees, eight terminated permittees, and existing MS4 permittee jurisdictional boundary changes resulting in an overall expansion of MS4 area within the TMDL project area. The adjustments will not change the approved overall total loading capacities of the TMDLs.

#### **Given the modification described, are there any changes to Stormwater Pollution Prevention Programs (SWPPPs) to account for the modified WLAs? When will the SWPPPs be updated?**

Permitted MS4s (Table 1) with assigned WLAs will be required to account for the total phosphorus (TP) impaired Lake Pepin, Mississippi River Pool 2 reach (814, Upper St. Anthony Falls to St. Croix R), and Mississippi River reach (805, Crow R to Upper St. Anthony Falls) in their SWPPPs when the MS4 General Permit is reissued.

- Baldwin City, Becker Township, Livonia Township, and Wright County MS4s will be required to submit SWPPPs when they apply for permit coverage (expected in 2027).
- Current MS4 permittees will be required to submit updated SWPPPs when they apply for permit coverage under the reissued MS4 General Permit (expected in 2026).

**Table 1. Modified Appendix C – MS4 entities included in TMDLs (Page 132-137 of TMDL report; additions underlined and removals struck through).**

MS4 Name The WLAs for each MS4 included in the TMDLs in this report are based on a loading rate of 0.35 lb/acre/year total phosphorus	Permit Number	Type	Applicable Impaired AUID TMDLs			Notes
			25-0001-00	07010206-806/814	07010206-805	
Albertville City MS4	MS400281	City	X	X	X	1
Alexandria City MS4	MS400264	City	X	X		2
Andover City MS4	MS400045	City	X	X	X	1
Anoka City MS4	MS400001	City	X	X	X	1
Anoka County MS4	MS400066	County	X	X	X	1
<del>Anoka Technical College MS4</del>	<del>MS400222</del>	<del>Nontraditional</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>Terminated as of <u>2/13/2018</u></del>
Anoka-Ramsey Community College MS4	MS400223	Nontraditional	X	X	X	
Apple Valley City MS4	MS400074	City	X	X		
Arden Hills City MS4	MS400002	City	X	X	X	
Baxter City MS4	MS400231	City	X	X		2
Benton County MS4	MS400067	County	X	X		2
Big Lake City MS4	MS400249	City	X	X		2
Big Lake Township MS4	MS400234	Township	X	X		2
Birchwood Village City MS4	MS400004	City	X	X	X	
Blaine City MS4	MS400075	City	X	X	X	
Bloomington City MS4	MS400005	City	X	X		
Blue Earth County MS4	MS400276	County	X	X		
Brainerd City MS4	MS400266	City	X	X		2
Brockway Township MS4	MS400068	Township	X	X		2
Brooklyn Center City MS4	MS400006	City	X	X	X	
Brooklyn Park City MS4	MS400007	City	X	X	X	
Buffalo City MS4	MS400238	City	X	X	X	
Burnsville City MS4	MS400076	City	X	X		
Cambridge City MS4	MS400250	City	X	X		2
Capitol Region WD MS4	MS400206	Watershed District	X	X	X	
Carver City MS4	MS400077	City	X	X		
Carver County MS4	MS400070	County	X	X		
Centerville City MS4	MS400078	City	X	X	X	
Century College MS4	MS400171	Nontraditional	X	X	X	
Champlin City MS4	MS400008	City	X	X	X	

MS4 Name The WLAs for each MS4 included in the TMDLs in this report are based on a loading rate of 0.35 lb/acre/year total phosphorus	Permit Number	Type	Applicable Impaired AUID TMDLs			Notes
			25-0001-00	07010206-806/814	07010206-805	
Chanhasen City MS4	MS400079	City	X	X		
Chaska City MS4	MS400080	City	X	X		
Circle Pines City MS4	MS400009	City	X	X	X	
Columbia Heights City MS4	MS400010	City	X	X	X	
Coon Creek WD MS4	MS400172	Watershed District	X	X	X	1
Coon Rapids City MS4	MS400011	City	X	X	X	1
Corcoran City MS4	MS400081	City	X	X	X	
Cottage Grove City MS4	MS400082	City	X	X		
Credit River Township MS4	MS400131	Township	X	X		
Crystal City MS4	MS400012	City	X	X	X	
Dakota County MS4	MS400132	County	X	X		
Dakota County Technical College MS4	MS400254	Nontraditional	X			<u>Terminated as of 2/13/2018</u>
Dayton City MS4	MS400083	City	X	X	X	
Deephaven City MS4	MS400013	City	X	X		
Dellwood City MS4	MS400084	City	X	X	X	
Eagan City MS4	MS400014	City	X	X		
Eagle Lake City MS4	MS400284	City	X	X		
East Bethel City MS4	MS400087	City	X	X	X	1
Eden Prairie City MS4	MS400015	City	X	X		
Edina City MS4	MS400016	City	X	X		
Elk River City MS4	MS400089	City	X	X	X	1
Elko New Market City MS4	MS400237	City	X	X		
Empire Township MS4	MS400135	Township	X			
Excelsior City MS4	MS400017	City	X	X		
Fairmont City MS4	MS400239	City	X	X		
Falcon Heights City MS4	MS400018	City	X	X	X	
Farmington City MS4	MS400090	City	X			
Forest Lake City MS4	MS400262	City	X	X	X	
Fridley City MS4	MS400019	City	X	X	X	
Gem Lake City MS4	MS400020	City	X	X		
Glencoe City MS4	MS400252	City	X	X	X	
Golden Valley City MS4	MS400021	City	X	X	X	
Grant City MS4	MS400091	City	X	X	X	

MS4 Name The WLAs for each MS4 included in the TMDLs in this report are based on a loading rate of 0.35 lb/acre/year total phosphorus	Permit Number	Type	Applicable Impaired AUID TMDLs			Notes
			25-0001-00	07010206-806/814	07010206-805	
Greenwood City MS4	MS400022	City	X	X		
Ham Lake City MS4	MS400092	City	X	X	X	1
Hanover City MS4	MS400286	City	X	X	X	
Hastings City MS4	MS400240	City	X	X		
<del>Haven Township MS4</del>	<del>MS400136</del>	<del>Township</del>	<del>X</del>	<del>X</del>		<del>2</del> Terminated as of May 15, 2019
Hennepin County MS4	MS400138	County	X	X	X	
Hennepin Technical College Brooklyn Pk - MS4	MS400198	Nontraditional	X	X	X	
Hennepin Technical College Eden Prairie MS4	MS400199	Nontraditional	X	X		
Hilltop City MS4	MS400023	City	X	X	X	
Hopkins City MS4	MS400024	City	X	X		
Hugo City MS4	MS400094	City	X	X	X	
Hutchinson City MS4	MS400248	City	X	X	X	
Independence City MS4	MS400095	City	X	X	X	
Inver Grove Heights City MS4	MS400096	City	X	X		
Inver Hills Community College MS4	MS400224	Nontraditional	X	X		
Isanti City MS4	MS400287	City	X	X		2
Jackson Township MS4	MS400140	Township	X	X		
Lake City MS4	MS400288	City	X			
Lake Elmo City MS4	MS400098	City	X	X		
Laketown Township MS4	MS400142	Township	X	X		
Lakeville City MS4	MS400099	City	X	X		
Landfall City MS4	MS400025	City	X	X		
Lauderdale City MS4	MS400026	City	X	X		
Le Sauk Township MS4	MS400143	Township	X	X		2
Lexington City MS4	MS400027	City	X	X	X	
Lilydale City MS4	MS400028	City	X	X		
Lino Lakes City MS4	MS400100	City	X	X	X	
Litchfield City MS4	MS400253	City	X	X	X	
Little Canada City MS4	MS400029	City	X	X		
Little Falls City MS4	MS400227	City	X	X		2

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			25-0001-00	07010206-806/814	07010206-805	
Long Lake City MS4	MS400101	City	X	X		
Loretto City MS4	MS400030	City	X	X	X	
Louisville Township MS4	MS400144	Township	X	X		
Mahtomedi City MS4	MS400031	City	X	X	X	
Mankato City MS4	MS400226	City	X	X		
Mankato Township MS4	MS400297	Township	X	X		
Maple Grove City MS4	MS400102	City	X	X	X	
Maple Plain City MS4	MS400103	City	X	X	X	
Maplewood City MS4	MS400032	City	X	X		
Marshall City MS4	MS400241	City	X	X		
Medicine Lake City MS4	MS400104	City	X	X	X	
Medina City MS4	MS400105	City	X	X	X	
Mendota City MS4	MS400033	City	X	X		
Mendota Heights City MS4	MS400034	City	X	X		
Metropolitan State University - MS4	MS400201	Nontraditional	X	X		
Minden Township MS4	MS400147	Township	X	X		2
Minneapolis Municipal Storm Water	MN0061018	City	X	X	X	
Minnehaha Creek WD MS4	MS400182	Watershed District	X	X	X	
Minnesota Correctional-Lino Lakes MS4	MS400177	Nontraditional	X	X	X	
Minnesota Correctional-St Cloud MS4	MS400179	Nontraditional	X	X		2
Minnesota State University- Mankato MS4	MS400279	Nontraditional	X	X		
Minnetonka Beach City MS4	MS400036	City	X	X		
Minnetonka City MS4	MS400035	City	X	X	X	
Minnetrista City MS4	MS400106	City	X	X	X	
MNDOT Metro District MS4	MS400170	Nontraditional	X	X	X	1
MNDOT Outstate District MS4	MS400180	Nontraditional	X	X	X	1
Montevideo City MS4	MS400261	City	X	X		
Monticello City MS4	MS400242	City	X	X	X	1
Mound City MS4	MS400108	City	X	X		

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			25-0001-00	07010206-806/814	07010206-805	
Mounds View City MS4	MS400037	City	X	X	X	
Mpls Community/Technical College MS4	MS400207	Nontraditional	X	X	X	
New Brighton City MS4	MS400038	City	X	X	X	
New Hope City MS4	MS400039	City	X	X	X	
New Ulm City MS4	MS400228	City	X	X		
Newport City MS4	MS400040	City	X	X		
Normandale Community College MS4	MS400255	Nontraditional	X	X		
<del>North Hennepin Community College -MS4</del>	<del>MS400205</del>	<del>Nontraditional</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>Terminated as of May 23, 2025</del>
North Mankato City MS4	MS400229	City	X	X		
North Oaks City MS4	MS400109	City	X	X	X	
North St Paul City MS4	MS400041	City	X	X		
Nowthen City MS4	MS400069	City	X	X		2
Oak Grove City MS4	MS400110	City	X	X		2
Oakdale City MS4	MS400042	City	X	X		
Orono City MS4	MS400111	City	X	X		
Osseo City MS4	MS400043	City	X	X	X	
Otsego City MS4	MS400243	City	X	X	X	1
Pine Springs City MS4	MS400044	City	X	X	X	
Plymouth City MS4	MS400112	City	X	X	X	
Prior Lake City MS4	MS400113	City	X	X		
<del>Prior Lake-Spring Lake WSD MS4</del>	<del>MS400189</del>	<del>Watershed District</del>	<del>X</del>	<del>X</del>		<del>Terminated as of April 9, 2025</del>
Ramsey City MS4	MS400115	City	X	X	X	1
Ramsey County Public Works MS4	MS400191	County	X	X	X	
Ramsey-Washington Metro WD MS4	MS400190	Watershed District	X	X	X	
Red Wing City MS4	MS400235	City	X			
Redwood Falls City MS4	MS400236	City	X	X		
<del>Rice Creek WD MS4</del>	<del>MS400193</del>	<del>Watershed District</del>	<del>X</del>	<del>X</del>	<del>X</del>	<del>Terminated as of April 9, 2025</del>

MS4 Name The WLAs for each MS4 included in the TMDLs in this report are based on a loading rate of 0.35 lb/acre/year total phosphorus	Permit Number	Type	Applicable Impaired AUID TMDLs			Notes
			25-0001-00	07010206-806/814	07010206-805	
Richfield City MS4	MS400045	City	X	X	X	
Robbinsdale City MS4	MS400046	City	X	X	X	
Rogers City MS4	MS400282	City	X	X	X	
Rosemount City MS4	MS400117	City	X	X		
Roseville City MS4	MS400047	City	X	X	X	
Saint Augusta City MS4	MS400293	City	X	X		2
Saint Francis City MS4	MS400296	City	X	X		2
Sartell City MS4	MS400048	City	X	X		2
Sauk Rapids City MS4	MS400118	City	X	X		2
Sauk Rapids Township MS4	MS400153	Township	X	X		2
Savage City MS4	MS400119	City	X	X		
Scott County MS4	MS400154	County	X	X		
Shakopee City MS4	MS400120	City	X	X		
Sherburne County MS4	MS400155	County	X	X		2
Shoreview City MS4	MS400121	City	X	X	X	
Shorewood City MS4	MS400122	City	X	X		
Skyline City MS4	MS400292	City	X	X		
South Bend Township MS4	MS400299	Township	X	X		
South St Paul City MS4	MS400049	City	X	X		
<del>South Washington WD MS4</del>	<del>MS400196</del>	<del>Watershed District</del>	<del>X</del>	<del>X</del>		<del>Terminated as of Dec 12, 2024</del>
Spring Lake Park City MS4	MS400050	City	X	X	X	
Spring Lake Township MS4	MS400156	Township	X	X		
Spring Park City MS4	MS400123	City	X	X		
St Anthony Village City MS4	MS400051	City	X	X	X	
St Bonifacius City MS4	MS400124	City	X	X		
St Cloud City MS4	MS400052	City	X	X		2
St Cloud State University MS4	MS400197	Nontraditional	X	X		2
<del>St Cloud Technical College MS4</del>	<del>MS400204</del>	<del>Nontraditional</del>	<del>X</del>	<del>X</del>		<del>2-Terminated October 3, 2024</del>
St Joseph City MS4	MS400125	City	X	X		2
St Joseph Township MS4	MS400157	Township	X	X		2
St Louis Park City MS4	MS400053	City	X	X	X	
St Michael City MS4	MS400246	City	X	X	X	1

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			25-0001-00	07010206-806/814	07010206-805	
St Paul Community & Technical College - MS4	MS400202	Nontraditional	X	X		
St Paul Municipal Storm Water	MN0061263	City	X	X		
St Paul Park City MS4	MS400054	City	X	X		
St Peter City MS4	MS400245	City	X	X		
Stearns County MS4	MS400159	County	X	X		2
Sunfish Lake City MS4	MS400055	City	X	X		
Tonka Bay City MS4	MS400056	City	X	X		
U of M-Twin Cities Campus MS4	MS400212	Nontraditional	X	X	X	
VA Medical Center- St. Cloud	MS400298	Nontraditional	X	X		2
Vadnais Heights City MS4	MS400057	City	X	X		
Victoria City MS4	MS400126	City	X	X		
Waconia City MS4	MS400232	City	X	X		
Waite Park City MS4	MS400127	City	X	X		2
Waseca City MS4	MS400258	City	X	X		
Washington County MS4	MS400160	County	X	X	X	
Watab Township MS4	MS400161	Township	X	X	✗	
Wayzata City MS4	MS400058	City	X	X		
West St Paul City MS4	MS400059	City	X	X		
White Bear Lake City MS4	MS400060	City	X	X	X	
White Bear Township MS4	MS400163	Township	X	X	X	
Willernie City MS4	MS400061	City	X	X	X	
Willmar City MS4	MS400272	City	X	X	X	
Woodbury City MS4	MS400128	City	X	X		
Woodland City MS4	MS400129	City	X	X		
<b>Areas</b> Cities not currently in the MS4 program but now exceed or are approaching a population of 5,000 and will eventually be brought into the MS4 program						
<u>Baldwin</u>	Not Applicable	<u>City</u>	X	X		
Becker		City	X	X		2
<u>Becker</u>		<u>Township</u>	X	X		2
Belle Plaine		City	X	X		
Delano		City	X	X	X	
Jordan		City	X	X		
Le Sueur		City	X	X		

MS4 Name The WLAs for each MS4 included in the TMDLs in this report are based on a loading rate of 0.35 lb/acre/year total phosphorus	Permit Number	Type	Applicable Impaired AUID TMDLs			Notes
			25-0001-00	07010206-806/814	07010206-805	
<u>Livonia</u>		<u>Township</u>	X	X		
New Prague		City	X	X		
Princeton		City	X	X		2
Rockford		City	X	X	X	
Saint James		City	X	X		
Sauk Centre		City	X	X		2
<u>Wright</u>		<u>County</u>	X	X	X	
Zimmerman		City	X	X		2

Note 1: A portion of these MS4s are in the Upper Mississippi River Watershed above the Crow River confluence or the Rum River Watershed and, therefore, those portions are not subject to the TMDL for 07010206-805.

Note 2: The entire MS4 area is in the Upper Mississippi River Watershed above the Crow River confluence or the Rum River Watershed, which are boundary conditions for AUID 07010206-805, and therefore not subject to the TMDL.

**Explanation of modifications:**

- There are four newly regulated MS4s: Baldwin City (unassigned permit number), Becker Township (unassigned permit number), Livonia Township (unassigned permit number), and Wright County (unassigned permit number) (Table 1). When the TMDLs were approved on May 19, 2021, any stormwater contributions from Baldwin City, Becker Township, Livonia Township, and Wright County were considered unregulated stormwater and were covered under the load allocations (LAs) as they were not designated as MS4s. Because it has been determined that these entities will be regulated MS4s under the next MS4 General Permit, a portion of the LA is being reallocated to WLAs for the from Baldwin City MS4, Becker Township MS4, Livonia Township MS4, and Wright County MS4.
- There are eight terminated MS4s (with termination dates listed in the Notes column of Table 1): Anoka Technical College (Permit #MS400222), Dakota County Technical College (Permit #MS400254), Haven Township (Permit #MS400136), North Hennepin Community College (Permit #MS400205), Prior Lake-Spring Lake WSD (Permit #MS400189), Rice Creek WD (Permit #MS400193), South Washington WD (Permit #MS400196) and St Cloud Technical College (Permit #MS400204). The areas associated with Anoka Technical College, Dakota County Technical College, North Hennepin Community College, Prior Lake-Spring Lake WSD, Rice Creek WD, South Washington WD, and St Cloud Technical College are located within other regulated MS4 areas and will remain WLA areas. However, the WLA assigned to Haven Township is not associated with any other regulated MS4’s area and is being transferred back to the LA.

- The overall jurisdictional boundary area assigned to MS4 permittees increased, so LAs are being transferred to WLAs where relevant.

### **Transfer methodology**

Transfers for each AUID were completed based on the 0.35 lb/ac/yr rate multiplied by the MS4 jurisdictional boundaries within each subwatershed. (Section 5.2.2 of the TMDL).

The MPCA is proposing the following modifications:

#### **Pepin Lake, AUID 25-0001-00**

The MPCA is shifting 40 kg/day of TP from the Total LA to the MS4 WLA (Modified Table 15).

#### **Mississippi River Pool 2, AUID 07010206-814**

The MPCA is shifting 41 kg/day of TP from the Total LA to the MS4 WLA (Modified Table 16).

#### **Mississippi River, AUID 07010206-805**

The MPCA is shifting 12 kg/day of TP from the Total LA to the MS4 WLA (Modified Table 17).

**MAPS**

**Figure 1. Pepin Lake (AUID 25-0001-00) TP TMDL Watershed and regulated MS4 areas.**

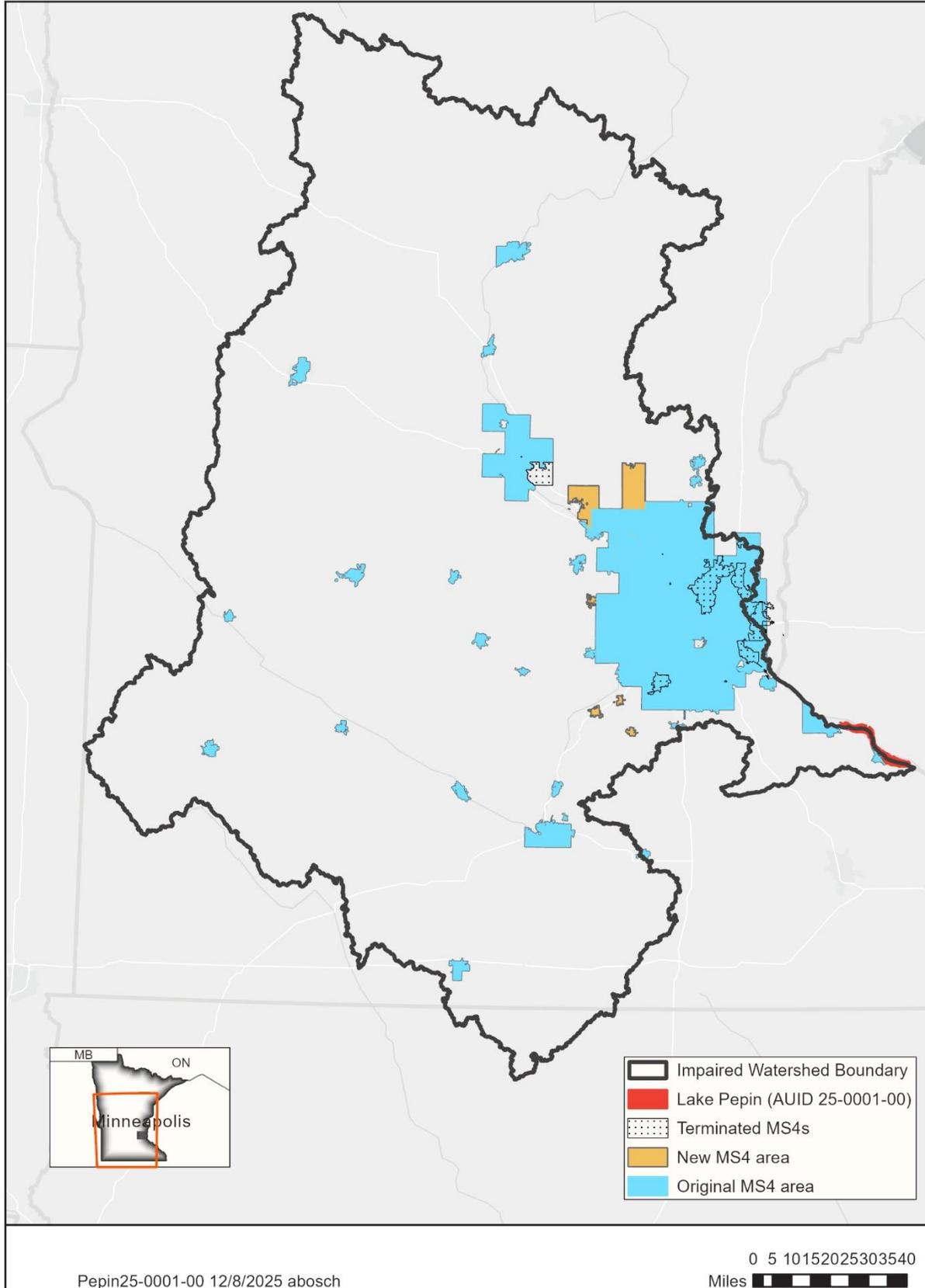


Figure 2. Mississippi River Pool 2 (AUID 07010206-814) TP TMDL Watershed and regulated MS4 areas.

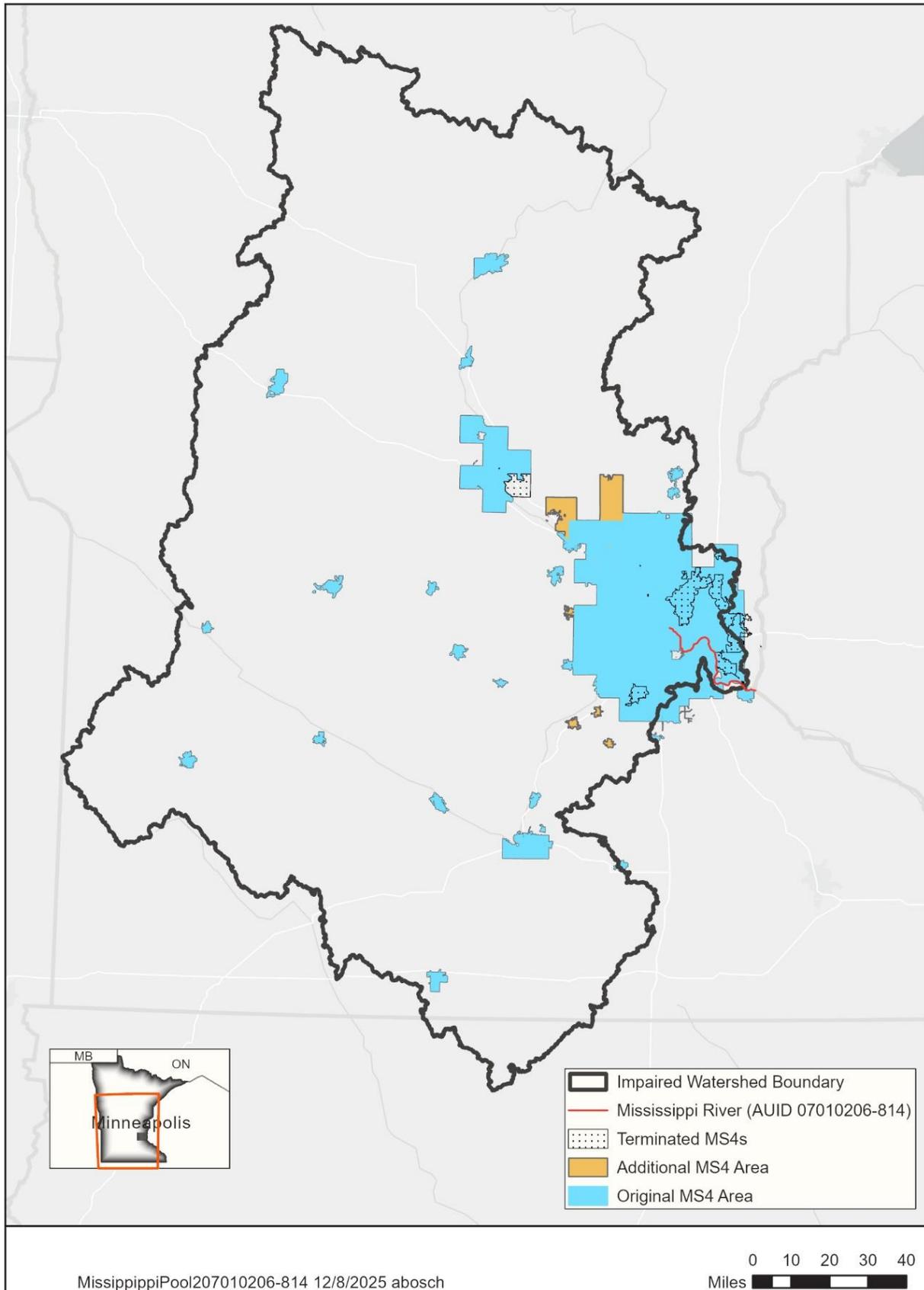
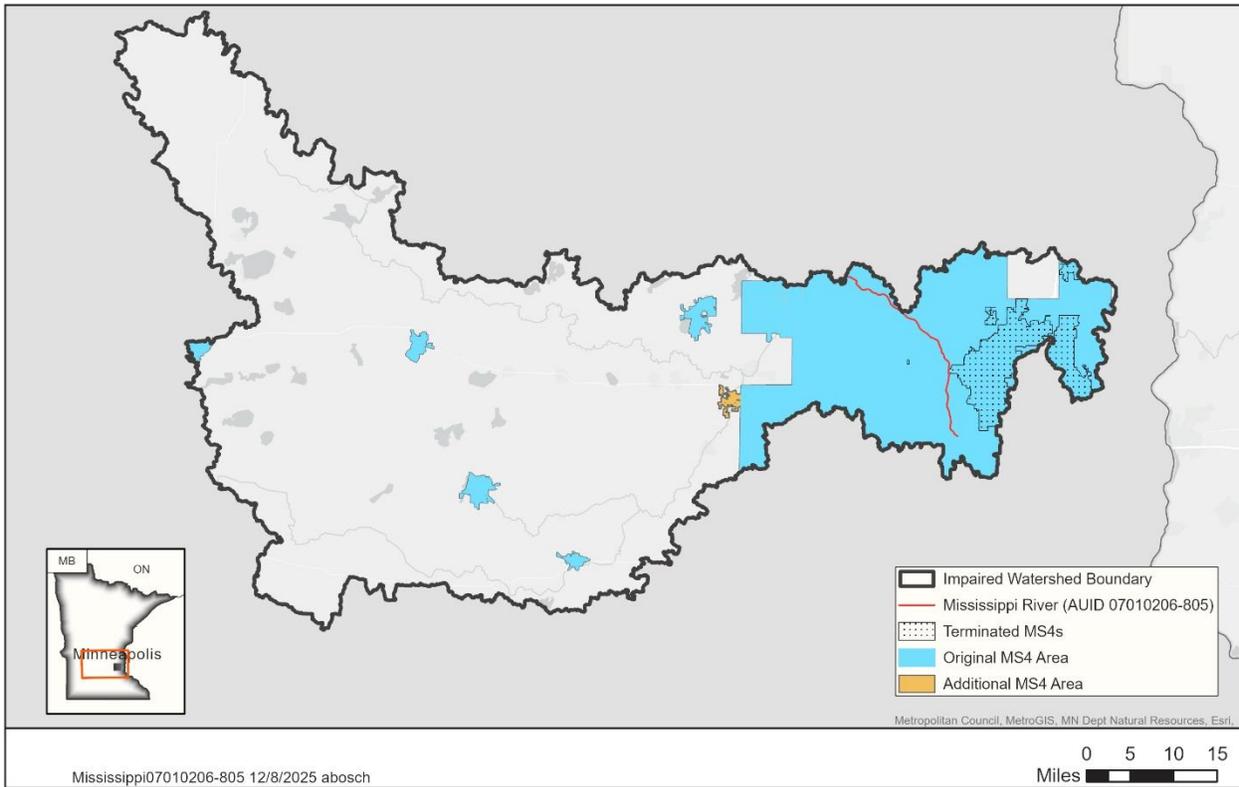


Figure 3. Mississippi River (AUID 07010206-805) TP TMDL Watershed and regulated MS4 areas.



**TABLES**

**Original Table 15. Lake Pepin TMDL, AUID 25-0001-00 (Page 57 of TMDL report).**

<b>Lake Pepin TMDL, AUID 25-0001-00</b> <b>TMDL (kg/year) = LC = WLA + LA + MOS + RC + BC</b> <b>= 2,220,152 = 717,412 + 979,090 + 111,008 + 31,582 + 381,060</b>		<b>Allowable TP Load</b>	
		<b>kg/year</b>	<b>kg/day</b>
<b>Load Capacity (LC)</b>		<b>2,220,152</b>	<b>6,085</b>
LC (excluding Boundary Conditions)		1,839,092	5,039
<b>Major Basin Components</b>	<i>Mississippi River at LD1</i>	629,625	1,725
	<i>Minnesota River</i>	916,880	2,512
	<i>Twin Cities Metro Below LD1</i>	198,782	545
	<i>Mississippi River/Vermillion/Lower Cannon</i>	93,805	257
<b>Wasteload Allocation (WLA)</b>	<b>Total WLA</b>	<b>717,412</b>	<b>1,968</b>
	<b>WWTPs</b>	<b>463,851</b>	<b>1,272</b>
	<i>Mississippi River at LD1</i>	130,141	357
	<i>Minnesota River</i>	167,809	460
	<i>Twin Cities Metro Area Below LD1</i>	157,263	431
	<i>Mississippi River/Vermillion/Lower Cannon</i>	8,638	24
	<b>MS4s</b>	<b>251,721</b>	<b>691</b>
	<i>Mississippi River at LD1</i>	137,497	377
	<i>Minnesota River</i>	53,145	146
	<i>Twin Cities Metro Area Below LD1</i>	41,519	114
	<i>Mississippi River/Vermillion/Lower Cannon</i>	19,560	54
	<b>Construction and Industrial Stormwater</b>	<b>1,840</b>	<b>5.0</b>
	<i>Mississippi River at LD1</i>	630	1.7
	<i>Minnesota River</i>	917	2.5
	<i>Twin Cities Metro downstream of LD1</i>	199	0.5
	<i>Mississippi River/Vermillion/Lower Cannon</i>	94	0.3
<b>Load Allocation (LA)</b>	<b>Total LA</b>	<b>979,090</b>	<b>2,682</b>
	<i>Natural Background</i>	399,746	1,095
<b>Margin of Safety (MOS): Explicit 5% of LC</b>		<b>111,008</b>	<b>304</b>
<b>Reserve Capacity (RC)</b>		<b>31,582</b>	<b>87</b>
<b>Boundary Conditions (BC)</b>	<b>Total BC</b>	<b>381,060</b>	<b>1,044</b>
	<i>St. Croix River Basin</i>	216,445	593
	<i>Cannon River Upstream of Lake Byllesby</i>	64,970	178
	<i>Mississippi River Upstream of Aitkin</i>	63,510	174
	<i>Minnesota River Upstream of Lac qui Parle Dam</i>	36,135	99

Applicable TP criterion: 100 µg/L

Note that multiplying kg/day values by 365 days do not exactly equal kg/year values due to rounding.

Wisconsin loads are not included other than in the boundary condition for the St. Croix Basin. See Appendix E for the loads from Wisconsin downstream of the St. Croix River that are accounted for in this TMDL.

Modified Table 15\*. Lake Pepin TMDL, AUID 25-0001-00 (modifications highlighted in yellow).

Lake Pepin TMDL, AUID 25-0001-00		Allowable TP Load	
TMDL (kg/year) = LC = WLA + LA + MOS + RC + BC			
= 2,220,152 = 732,521 + 963,981 + 111,008 + 31,582 + 381,060		kg/year	kg/day
Load Capacity (LC)		2,220,152	6,085
Wasteload Allocation (WLA)	Total WLA	732,521	2,008
	WWTPs	463,851	1,272
	MS4s	266,830	731
	Construction and Industrial Stormwater	1,840	5.0
Load Allocation (LA)	Total LA	963,981	2,642
	Natural Background	399,746	1,095
Margin of Safety (MOS): Explicit 5% of LC		111,008	304
Reserve Capacity (RC)		31,582	87
Boundary Conditions (BC)	Total BC	381,060	1,044

Applicable TP criterion: 100 µg/L

Note that multiplying kg/day values by 365 days do not exactly equal kg/year values due to rounding.

Wisconsin loads are not included other than in the boundary condition for the St. Croix Basin. See Appendix E for the loads from Wisconsin downstream of the St. Croix River that are accounted for in this TMDL.

\*Original table included an additional breakdown by basin, the updated table does not. This omission does not affect any loading capacities.

Original Table 16. Mississippi River AUID 07010206-814 TMDL (pg. 58 of TMDL report).

Mississippi River: Upper St. Anthony Falls to St. Croix River TMDL, AUID 07010206-814 TMDL (kg/year) = LC = WLA + LA + MOS + RC + BC = 1,844,932 = 685,759 + 936,618 + 92,247 + 30,663 + 99,645		Allowable TP Load	
		kg/year	kg/day
<b>Load Capacity (LC)</b>		<b>1,844,932</b>	<b>5,057</b>
LC (excluding Boundary Conditions)		1,745,287	4,782
<b>Major Basin Components</b>	<i>Mississippi River at LD1</i>	629,625	1,725
	<i>Minnesota River</i>	916,880	2,512
	<i>Twin Cities Metro Below LD1</i>	198,782	545
<b>Wasteload Allocation (WLA)</b>	<b>Total WLA</b>	<b>685,759</b>	<b>1,880</b>
	<b>WWTPs</b>	<b>452,240</b>	<b>1,240</b>
	<i>Mississippi River at LD1</i>	130,141	357
	<i>Minnesota River</i>	167,809	460
	<i>Twin Cities Metro Area Below LD1</i>	154,290	423
	<b>MS4s</b>	<b>231,773</b>	<b>635</b>
	<i>Mississippi River at LD1</i>	137,497	377
	<i>Minnesota River</i>	53,095	145
	<i>Twin Cities Metro Area Below LD1</i>	41,181	113
	<b>Construction and Industrial Stormwater</b>	<b>1,746</b>	<b>4.7</b>
	<i>Mississippi River at LD1</i>	630	1.7
	<i>Minnesota River</i>	917	2.5
	<i>Twin Cities Metro downstream of LD1</i>	199	0.5
<b>Load Allocation (LA)</b>	<b>Total LA</b>	<b>936,618</b>	<b>2,567</b>
	<i>Natural Background</i>	388,912	1,066
<b>Margin of Safety (MOS): Explicit 5% of LC</b>		<b>92,247</b>	<b>253</b>
<b>Reserve Capacity (RC)</b>		<b>30,663</b>	<b>84</b>
<b>Boundary Conditions (BC)</b>	<b>Total BC</b>	<b>99,645</b>	<b>273</b>
	<i>Mississippi River Upstream of Aitkin</i>	63,510	174
	<i>Minnesota River Upstream of Lac qui Parle Dam</i>	36,135	99

Applicable TP criterion: 125 µg/L. This TMDL applies to AUID 07010206-814 and AUID 07010206-806  
 Note that multiplying kg/day values by 365 days do not exactly equal kg/year values due to rounding.

Modified Table 16\*. Mississippi River AUID 07010206-814 TMDL (modifications highlighted in yellow).

Mississippi River: Upper St. Anthony Falls to St. Croix River TMDL, AUID 07010206-814		Allowable TP Load	
TMDL (kg/year) = LC = WLA + LA + MOS + RC + BC		kg/year	kg/day
<b>= 1,844,932 = 700,799 + 921,578 + 92,247 + 30,663 + 99,645</b>			
Load Capacity (LC)		1,844,932	5,057
Wasteload Allocation (WLA)	Total WLA	<b>700,799</b>	<b>1,921</b>
	WWTPs	452,240	1,240
	MS4s	<b>246,813</b>	<b>676</b>
	Construction and Industrial Stormwater	1,746	4.7
Load Allocation (LA)	Total LA	<b>921,578</b>	<b>2,526</b>
	Natural Background	388,912	1,066
Margin of Safety (MOS): Explicit 5% of LC		92,247	253
Reserve Capacity (RC)		30,663	84
Boundary Conditions (BC)	Total BC	99,645	273

Applicable TP criterion: 125 µg/L. This TMDL applies to AUID 07010206-814 and AUID 07010206-806

Note that multiplying kg/day values by 365 days do not exactly equal kg/year values due to rounding.

\*Original table included an additional breakdown by basin, the updated table does not. This omission does not affect any loading capacities.

Original Table 17. Mississippi River AUID 07010206-805 TMDL (Page 59 of TMDL report).

Mississippi River: Crow River to Upper St. Anthony Falls, 07010206-805		Allowable TP Load
TMDL (kg/year) = LC = WLA + LA + MOS + RC + BC		
= 2,490 = 223 + 594 + 125 + 6 + 1,542		kg/day
<b>Load Capacity (LC)</b>		<b>2,490</b>
LC (excluding Boundary Conditions)		948
<b>Major Basin Components</b>	<i>Crow River</i>	474
	<i>Twin Cities Metro Above St. Anthony Falls</i>	474
<b>Wasteload Allocation (WLA)</b>	<b>Total WLA</b>	<b>223</b>
	<b>WWTPs</b>	<b>38</b>
	<i>Crow River</i>	33
	<i>Twin Cities Metro Above St. Anthony Falls</i>	5
	<b>MS4s</b>	<b>184</b>
	<i>Crow River</i>	41
	<i>Twin Cities Metro Above St. Anthony Falls</i>	143
	<b>Construction and Industrial Stormwater</b>	<b>1.0</b>
	<i>Crow River</i>	0.5
	<i>Twin Cities Metro Above St. Anthony Falls</i>	0.5
<b>Load Allocation (LA)</b>	<b>Total LA</b>	<b>594</b>
	<i>Natural Background</i>	111
<b>Margin of Safety (MOS): Explicit 5% of LC</b>		<b>125</b>
<b>Reserve Capacity (RC)</b>		<b>6</b>
<b>Boundary Conditions (BC)</b>	<b>Total BC</b>	<b>1,542</b>
	<i>Mississippi River Upstream of Crow River</i>	1,327
	<i>Rum River</i>	215

Applicable TPs criterion: 100 µg/L

Allowable TP loads applied June through September. However, for the Twin Cities Metro Above Upper St. Anthony Falls WLAs, the Lake Pepin/Pool 2 TMDL WLA is sufficient to address the RES impairment.

The Mississippi River upstream of the Crow River and the Rum River are meeting RES standards. Therefore, these watersheds are treated as boundary conditions for this RES TMDL.

**Modified Table 17\*. Mississippi River AUID 07010206-805 TMDL (modifications highlighted in yellow).**

Mississippi River: Crow River to Upper St. Anthony Falls, 07010206-805		Allowable TP Load
TMDL (kg/year) = LC = WLA + LA + MOS + RC + BC		
= 2,490 = 235 + 582 + 125 + 6 + 1,542		kg/day
Load Capacity (LC)		2,490
Wasteload Allocation (WLA)	Total WLA	235
	WWTPs	38
	MS4s	196
	Construction and Industrial Stormwater	1
Load Allocation (LA)	Total LA	582
	Natural Background	111
Margin of Safety (MOS): Explicit 5% of LC		125
Reserve Capacity (RC)		6
Boundary Conditions (BC)	Total BC	1,542

Applicable TP criterion: 100 µg/L

Allowable TP loads applied June through September. However, for the Twin Cities Metro Above Upper St. Anthony Falls WLAs, the Lake Pepin/Pool 2 TMDL WLA is sufficient to address the RES impairment.

The Mississippi River upstream of the Crow River and the Rum River are meeting RES standards. Therefore, these watersheds are treated as boundary conditions for this RES TMDL.

\*Original table included an additional breakdown by basin, the updated table does not. This omission does not affect any loading capacities.

### Reasonable Assurance

The MPCA is responsible for applying federal and state regulations to protect and enhance water quality in Minnesota. The MPCA oversees stormwater management accounting activities for all permitted MS4 entities listed in this TMDL modification. The MS4 General Permit requires regulated municipalities to implement best management practices (BMPs) that reduce pollutants in stormwater to the maximum extent practicable. A critical component of permit compliance is the requirement for the owners or operators of a permitted MS4 conveyance to develop a SWPPP. The SWPPP addresses all permit requirements, including the following six measures:

- Public education and outreach
- Public participation
- Illicit discharge detection and elimination program
- Construction site runoff controls
- Post-construction runoff controls
- Pollution prevention and municipal good housekeeping measures

A SWPPP is a management plan that describes the MS4 permittee's activities for managing stormwater within their regulated area. The TMDL report and this modification assign WLAs to permitted MS4s in the study area. The MS4 permit requires applicants to submit information at the time of application on applicable WLAs. They must document how they will make progress on performance-based WLAs

(bacteria, chloride, temperature), demonstrate they are currently meeting their numerical WLAs (oxygen demand, nitrate, total phosphorus [TP], or total suspended solids [TSS]), or develop a compliance schedule for those numerical WLAs that are not being met. A compliance schedule includes BMPs that will be implemented over the permit term, a timeline for their implementation, and a long-term strategy for continuing progress towards assigned WLAs. The MPCA requires MS4 owners or operators to submit their application and corresponding SWPPP document to the MPCA for review. Once the application and SWPPP are deemed complete by the MPCA, all application materials are placed on 30-day public notice, allowing the public an opportunity to review and comment on the prospective program.

Progress on BMP implementation must be reported annually. For WLAs being met at the time of permit application, the same level of treatment must be maintained in the future. Regardless of WLA attainment, all permitted MS4s are still required to reduce pollutant loadings to the maximum extent practicable.

The MPCA's stormwater program and its National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permit program are regulatory activities providing reasonable assurance that implementation activities are initiated, maintained, and consistent with WLAs assigned in this study.

Several nonpermitted reduction programs exist to support implementation of nonpoint source reduction BMPs statewide. Per the spending for water quality implementation projects website (data compiled by MPCA: [Spending for water quality implementation projects](#)), over half a billion dollars in state and federal grants, loans, local government and landowner cost share match have been spent on nonpoint source projects since 2004 in the North and South Fork Crow River, Mississippi River – Twin Cities, and Mississippi River – Lake Pepin Watersheds. Efforts to reduce nonpoint source pollution loading will continue.

## **Implementation**

This TMDL modification assigns new applicable TP WLAs to Baldwin City MS4, Becker Township MS4, Livonia Township MS4, and Wright County MS4. This will result in permit requirements for all of these permittees.

When evaluating TP WLA attainment during permit application, permittees should evaluate the areas draining to stormwater conveyance within the impairment subwatershed within their jurisdictional boundary (Figure 1 through Figure 3). Any wasteload reducing BMPs currently implemented and functioning can be counted toward WLA attainment. MS4s can measure their progress against a loading rate of 0.35 lb/ac/yr TP. See [Making WLA determinations | Minnesota Stormwater Manual](#).

Prior to implementation, permitted MS4s are encouraged to compare their sewersheds (e.g., catchments, pipesheds, etc.) with the drainage areas for each impaired water body to ensure appropriate BMP crediting. If a permitted MS4 sewershed is different from what is defined as the drainage area in this report, the sewershed should be considered part of the MS4 contribution to the impaired water if sufficient evidence of the appropriate sewershed area is provided to the MPCA. With Agency approval, any wasteload-reducing BMP implemented since the TMDL baseline year within the sewershed of the impaired waterbody will be creditable towards an MS4's load reduction for purposes of annual reporting and demonstrating progress towards meeting the WLA(s).