

2019 Modification to Upper Mississippi River Bacteria Total Maximum Daily Load Report

Overview

TMDL Project Name	Upper Mississippi River Bacteria TMDL Study and Protection Plan
Date of EPA TMDL Approval	November 20, 2014
Public Notice Dates	May 6, 2019 through June 5, 2019
MPCA Approval Date for Modification	June 5, 2019
TMDL segment AUID and pollutant which require modification	07010203-528 – <i>E. coli</i> TMDL modification 07010203-561 – <i>E. coli</i> TMDL modification 07010203-639 – <i>E. coli</i> TMDL modification 07010203-724 – <i>E. coli</i> TMDL modification
TMDL Tables in final TMDL document which are being modified	Table 7-1. TMDLs and % reduction of watershed load (pg. 181). Table 7-3. MS4s within each TMDL Subwatershed (pg. 186).

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 stormwater wasteload allocations (WLAs) to account for new regulated-MS4s. There are two new regulated-Municipal Separate Storm Sewer Systems (MS4s) within the TMDL project area, Albertville City (Permit #MS400281) and Saint Augusta City (Permit #MS400293) (Table 1). When the TMDLs were approved on November 20, 2014, Albertville City and Saint Augusta City were unregulated and the areas associated with the cities were assigned to the load allocation (LA). Now that the two cities are regulated-MS4s, the LA assigned to them is being transferred to the MS4 WLA. The adjustments will not change the approved overall total loading capacities of the TMDLs.

Table 1. New regulated-MS4s within TMDL subwatersheds.

AUID	Reach Name	Current MS4s	New MS4	Impairment
07010203-528	Unnamed Creek	See Table 7.3	Albertville City MS4	<i>E. coli</i>
07010203-561	Unnamed Creek (Luxemburg Creek)		St. Augusta City MS4	<i>E. coli</i>
07010203-639	Johnson Creek (Meyer Creek)		St. Augusta City MS4	<i>E. coli</i>
07010203-724	Unnamed Creek (Robinson Hill Creek)		St. Augusta City MS4	<i>E. coli</i>

Explanation of modifications:

Albertville City and Saint Augusta City were not regulated under the MS4 permit when the TMDL was completed in 2014. Albertville City and Saint Augusta City are now regulated-MS4s and the permitted area needs to be accounted for in the TMDL WLAs for the TMDL segments listed above. The MPCA is proposing the following modifications:

Unnamed Creek, AUID 07010203-528

The MPCA is shifting between 0.0628 and 4.37 billions of organisms/day depending on flow of *Escherichia Coli* (*E. coli*) from the LA to the categorical MS4 WLA to include Albertville City (Modified Table 7-1).

Unnamed Creek (Luxemburg Creek), AUID 07010203-561

The MPCA is shifting between 0.0133 and 0.218 billions of organisms/day of *E. coli* from the LA to the MS4 WLA for St. Augusta City (Modified Table 7-1).

Johnson Creek (Meyer Creek), AUID 07010203-639

The MPCA is shifting between 0.224 and 3.62 billions of organisms/day depending on flow of *E. coli* from the LA to the categorical MS4 WLA to include St. Augusta City (Modified Table 7-1).

Unnamed Creek (Robinson Hill Creek), AUID 07010203-724

The MPCA is shifting between 0.008 and 0.13 billions of organisms/day depending on flow of *E. coli* from the LA to the categorical MS4 WLA to include St. Augusta City (Modified Table 7-1).

Maps

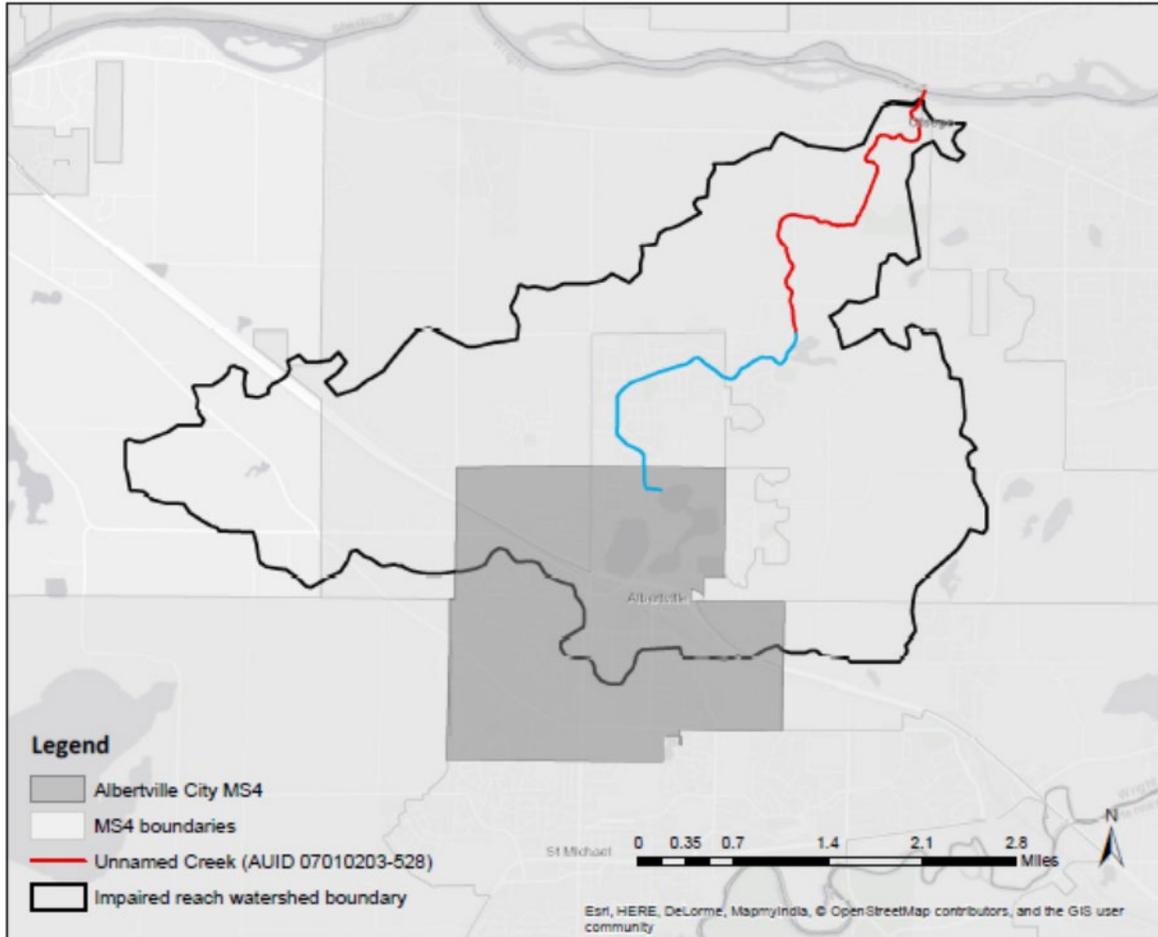


Figure 1. Impaired bacteria reach Unnamed Creek (AUID 07010203-528) TMDL Subwatershed and regulated MS4 areas.

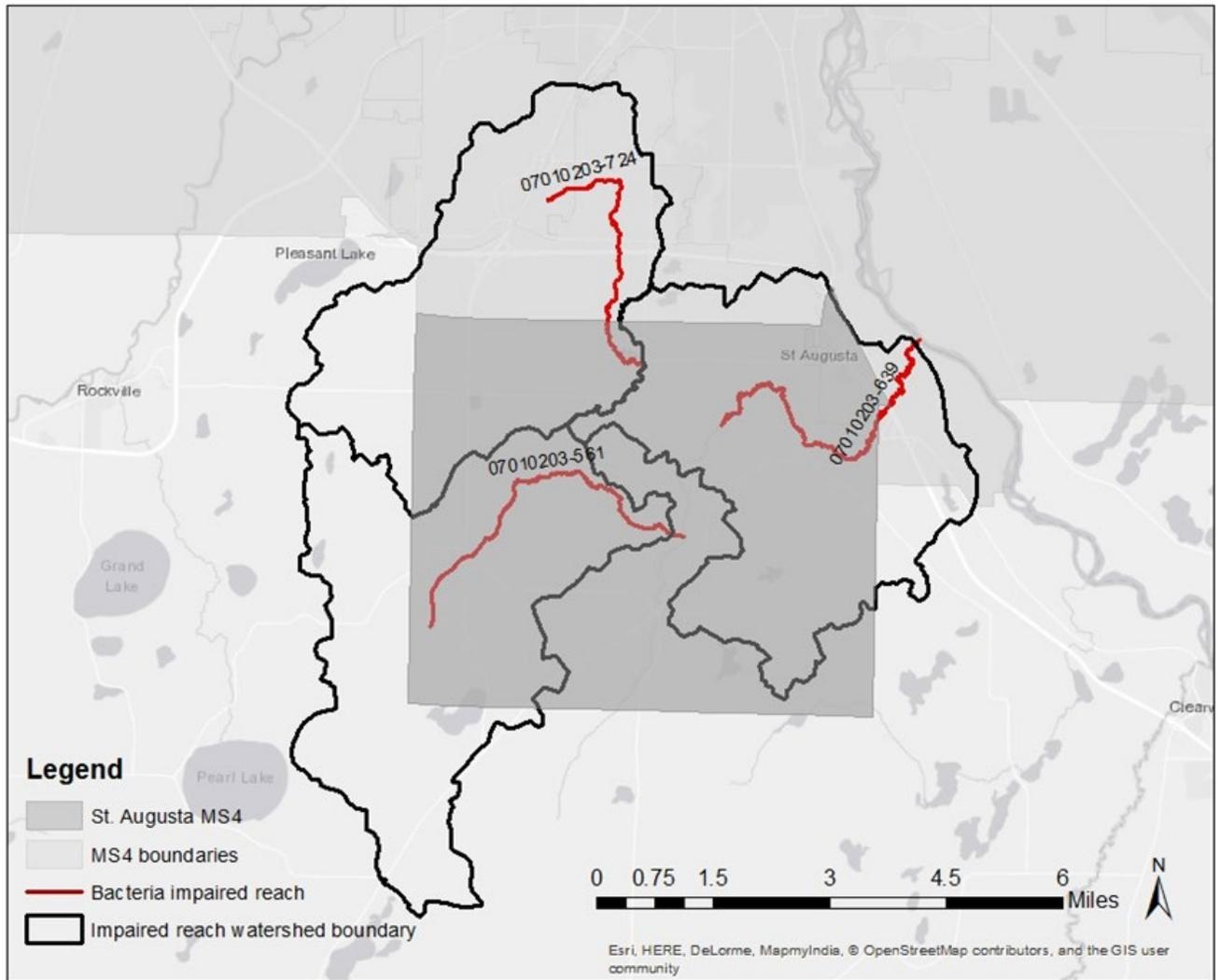


Figure 2. Impaired bacteria reaches Unnamed Creek (Luxemburg) (AUID 07010203-561), Johnson Creek (Meyer Creek) (AUID 07010203-639), and Unnamed Creek (Robinson Hill Creek (07010203-724) TMDL subwatersheds and regulated MS4 areas.

Tables

Original TMDL table, excerpt from Table 7-1. TMDLs and % reduction of watershed load (pg. 181 from TMDL report):

Listed Reach Name	Reach Description	AUID	Flow Regime	WLA WWTFs (Total) (billion org/d)	WLA Straight Pipes (billion org/d)	WLA MS4 (billion org/d)	Load Allocation (billion org/d)	MOS (billion org/d)	TMDL (billion org/d)	Existing Load from Watershed Runoff (rural and urban runoff, regulated and non-regulated) (billion org/d)	LA + MS4 WLA (maximum allowable watershed runoff) (billion org/d)	Estimated Reduction in Watershed Runoff (%)
Unnamed creek	T121 R23W S19, south line to Mississippi R	070102 03-528	High	7.86	-	6.83	50.6	7.25	72.5	169	57.4	66%
			Moist	7.86	-	2.38	17.7	3.1	31	43.3	20.1	54%
			Mid-Range	7.86	-	0.671	4.97	1.5	15	15.6	5.64	64%
			Dry	7.86	-	0.0982	0.727	0.965	9.65	ID	0.825	ID
			Low	EQN	-	EQN	EQN	0.622	6.22	ID	EQN	ID
Unnamed creek (Luxemburg Creek)	T123 R28W S30, south line to Johnson Cr	070102 03-561	High	-	-	-	56.9	6.32	63.2	ID	56.9	ID
			Moist	-	-	-	23.9	2.65	26.5	53.7	23.9	56%
			Mid-Range	-	-	-	12.8	1.42	14.2	52.8	12.8	76%
			Dry	-	-	-	6.6	0.733	7.33	21	6.6	69%
			Low	-	-	-	3.48	0.387	3.87	ID	3.48	ID
Johnson Creek (Meyer Creek)	T123 R28W S14, west line to Mississippi R	070102 03-639	High	-	-	3.12	88.7	10.2	102	720	91.8	87%
			Moist	-	-	1.32	37.5	4.31	43.1	1520	38.8	97%
			Mid-Range	-	-	0.701	19.9	2.29	22.9	678	20.6	97%
			Dry	-	-	0.364	10.3	1.19	11.9	399	10.7	97%
			Low	-	-	0.193	5.49	0.631	6.31	ID	5.68	ID
Unnamed creek (Robinson Hill Creek)	CD 14 to CSAH 136	070102 03-724	High	-	-	4.06	50.4	6.05	60.5	ID	54.5	ID
			Moist	-	-	1.69	21.1	2.53	25.3	48.6	22.8	53%
			Mid-Range	-	-	0.911	11.3	1.36	13.6	42.8	12.2	71%
			Dry	-	-	0.47	5.85	0.702	7.02	13.7	6.32	54%
			Low	-	-	0.249	3.09	0.371	3.71	ID	3.34	ID

Modified TMDL table, excerpt from Table 7-1. TMDLs and % reduction of watershed load (adjustments highlighted in yellow):

Listed Reach Name	Reach Description	AUID	Flow Regime	WLA WWTFs (Total) (billion org/d)	WLA Straight Pipes (billion org/d)	WLA MS4 (billion org/d)	Load Allocation (billion org/d)	MOS (billion org/d)	TMDL (billion org/d)	Existing Load from Watershed Runoff (rural and urban runoff, regulated and non-regulated) (billion org/d)	LA + MS4 WLA (maximum allowable watershed runoff) (billion org/d)	Estimated Reduction in Watershed Runoff (%)
Unnamed creek	T121 R23W S19, south line to Mississippi R	070102 03-528	High	7.86	-	11.2	46.2	7.25	72.5	169	57.4	66%
			Moist	7.86	-	3.91	16.2	3.1	31	43.3	20.1	54%
			Mid-Range	7.86	-	1.10	4.54	1.5	15	15.6	5.64	64%
			Dry	7.86	-	0.161	0.664	0.965	9.65	ID	0.825	ID
			Low	EQN	-	EQN	EQN	0.622	6.22	ID	EQN	ID
Unnamed creek (Luxemburg Creek)	T123 R28W S30, south line to Johnson Cr	070102 03-561	High	-	-	0.218	56.7	6.32	63.2	ID	56.9	ID
			Moist	-	-	0.0916	23.8	2.65	26.5	53.7	23.9	56%
			Mid-Range	-	-	0.0490	12.8	1.42	14.2	52.8	12.8	76%
			Dry	-	-	0.0253	6.57	0.733	7.33	21	6.6	69%
			Low	-	-	0.0133	3.47	0.387	3.87	ID	3.48	ID
Johnson Creek (Meyer Creek)	T123 R28W S14, west line to Mississippi R	070102 03-639	High	-	-	6.74	85.1	10.2	102	720	91.8	87%
			Moist	-	-	2.85	36.0	4.31	43.1	1520	38.8	97%
			Mid-Range	-	-	1.51	19.1	2.29	22.9	678	20.6	97%
			Dry	-	-	0.786	9.88	1.19	11.9	399	10.7	97%
			Low	-	-	0.417	5.27	0.631	6.31	ID	5.68	ID
Unnamed creek (Robinson Hill Creek)	CD 14 to CSAH 136	070102 03-724	High	-	-	4.19	50.3	6.05	60.5	ID	54.5	ID
			Moist	-	-	1.75	21.0	2.53	25.3	48.6	22.8	53%
			Mid-Range	-	-	0.941	11.3	1.36	13.6	42.8	12.2	71%
			Dry	-	-	0.485	5.83	0.702	7.02	13.7	6.32	54%
			Low	-	-	0.257	3.08	0.371	3.71	ID	3.34	ID

Excerpt from Table 7-1. MS4s within each TMDL Subwatershed (changes highlighted in yellow).

AUID of TMDL Reach	Reach Name	Reach Description	MS4s in TMDL Subwatershed (MS4 Permit ID)
07010203-528	Unnamed creek	T121 R23W S19, south line to Mississippi R	Otsego City (MS400243) St Michael City (MS400246) Albertville City (MS400281)
07010203-561	Unnamed Creek (Luxemburg Creek)	T123 R28W S30, south line to Johnson Cr	St. Augusta City (MS400293)
07010203-639	Johnson Creek (Meyer Creek)	T123 R28W S14, west line Mississippi R	St Cloud City (MS400052) St. Augusta City (MS400293)
07010203-724	Unnamed creek (Robinson Hill Creek)	CD 14 to CSAH 136	MnDOT Outstate District (MS400180) St Cloud City (MS400052) Stearns County (MS400159) Waite Park City (MS400127) St. Augusta City (MS400293)

Implementation

Given the modification described, are there any changes to Stormwater Pollution Prevention Plan (SWPPP) to account for the modified WLAs?

Albertville City MS4 and St. Augusta City MS4 will be required to submit an updated SWPPP when the new MS4 permit becomes effective in late 2019. At that time, Albertville MS4 and St. Augusta MS4 will be required to account for the *E. coli* impaired reaches above.

Will the SWPPPs be updated to include the new information included in the modification? If yes, when will the SWPPPs be updated?

The SWPPPs will be updated to include the new information in the modification when the new MS4 permit becomes effective in late 2019.