REGION 5
CHICAGO, IL 60604

January 29, 2026

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

Dear Mr. Skuta:

The U.S. Environmental Protection Agency completed its review of the final Total Maximum Daily Load (TMDL) revision for the Root River Watershed TMDL (originally approved in 2017), including supporting documentation. The revised TMDLs address changes to the bacteria and total suspended solids (TSS) allocations for fifteen waterbodies. The revised TMDLs address the impaired Aquatic Recreation Use due to excessive bacteria and Aquatic Life Use due to excessive TSS.

The revised TMDLs meet the requirements of Section 303(d) of the Clean Water Act and the EPA's implementing regulations set forth at 40 C.F.R. Part 130. Therefore, the EPA approves Minnesota's 15 revised TMDLs for bacteria and TSS. All other aspects of the original TMDL approval remain the same. The EPA describes Minnesota's compliance with the statutory and regulatory requirements in the enclosed decision document.

The EPA acknowledges Minnesota's efforts in submitting this revised TMDL and look forward to future TMDL submissions by the State of Minnesota. If you have any questions, please contact Mr. David Werbach, at 312-886-4242 or Werbach.david@epa.gov.

Sincerely,

1/29/2026

X

Tera L. Fong
Division Director, Water Division
Signed by: TERA FONG

cc: Andrea Plevan, MPCA

Document Number: wq-iw9-17g

2025 Root River Watershed (2017) Revised TMDL Decision Document

TMDL: Revisions to the Minnesota "Total Maximum Daily Loads for the Root River Watershed (2017)"
Approval Date: 01/29/2026

Background

On February 16, 2017, the United States Environmental Protection Agency approved the Total Maximum Daily Loads (TMDLs) for nitrates, total suspended solids (TSS), and bacteria (specifically *E. coli*) for waterbodies in the Root River Watershed[1] in the State of Minnesota. Other TMDLs have been approved for waters in the Root River Watershed, specifically the *Revised Regional Total Maximum Daily Load Evaluation of Fecal Coliform Bacteria Impairments In the Lower Mississippi River Basin in Minnesota* (2006) and the *Root River Watershed TMDL Report* (2024)[2]. For purposes of this Decision Document, the TMDLs approved on February 16, 2017, will be referred to as the "Original TMDL." The Original TMDL addresses certain waterbodies not meeting aquatic recreation uses due to exceedances of the bacteria water quality standard, aquatic life uses due to exceedances of the TSS water quality standard, and drinking water uses due to exceedances of the nitrate water quality standard.

The Minnesota Pollution Control Agency (MPCA) submitted amendments[3] to the Original TMDL to EPA in December 2025. The EPA recognizes these amendments from December 2025 as the "2025 Revision". The 2025 Revision addresses the waterbodies in Table 1 of this Revised TMDL Decision Document. The remaining waters and associated TMDLs are not affected by the 2025 Revision (see details for these waters on Page 2 of the 2025 Revision).

Table 1: List of waterbodies and pollutants addressed by the 2025 TMDL Revision

Waterbody	State Assessment Unit ID	Pollutant
Root River (Lower)	07040008-501	TSS
Root River (Lower)	07040008-502	TSS
Root River	07040008-520	TSS
Root River	07040008-522	TSS
Root River	07040008-527	TSS
Middle Branch Root River	07040008-528	TSS
Middle Branch Root River	07040008-534	*E. coli*
Root River	07040008-535	*E. coli*
North Branch Root River	07040008-716	TSS
North Branch Root River	07040008-717	TSS
Rush Creek	07040008-523	*E. coli*
South Branch Root River	07040008-550	TSS
South Branch Root River	07040008-554	TSS

[1] Root River Watershed Total Maximum Daily Load Report for Bacteria, Nitrate and Suspended Solids (November 2016), MPCA, (https://www.pca.state.mn.us/sites/default/files/wq-iw9-17e.pdf, last visited 1/14/26)
[2] Root River Watershed Total Maximum Daily Load Report (May 2024), MPCA, (https://www.pca.state.mn.us/sites/default/files/wq-iw9-28e.pdf, last visited 1/14/26)
[3] Revision of Root River Total Maximum Daily Load Report (originally approved 2017)(December 2025), MPCA (hereafter the "2025 Revision").

South Branch Root River	07040008-555	TSS
South Branch Root River	07040008-556	TSS

The Original TMDL established wasteload allocations (WLA) to point sources, load allocations (LA) for nonpoint sources and a margin of safety (MOS).[4] The Original TMDL is being revised by MPCA to correct errors made in the WLA calculations for numerous wastewater treatment plants (WWTPs) addressed in bacteria and TSS TMDLs. In some cases, the facility flow estimates from the Original TMDL were incorrect, other changes involved updating the number of significant digits used in TMDL calculations (see Page 1 of the 2025 Revision).

Table 2 of this Revised TMDL Decision Document contains the updated WLAs for both TSS and bacteria. Most of the changes are on the order of <0.01 tons/day of TSS (approximately 20 lbs/day). The most significant change is for the Ulland Brothers Aggregate facility. In the Original TMDL, the Ulland Brothers Aggregate facility was listed as having a Maximum Flow Rate of 58.89 million gallons per day (MGD), while the 2025 Revision lists the facility as actually having a combined flow of 4.032 MGD. This recalculation reduced the WLA from 6.69 tons/day to 0.504 tons/day (Table 2 of this Revised TMDL Decision Document; Appendix C of the Original TMDL document).

For bacteria, the revisions are similarly based upon minor recalculations. The majority of changes to the Original TMDL's bacteria TMDLs involve updates to *E. coli* loading calculations that are <0.1 billion organisms per day. The EPA notes that changes in bacteria loadings are less consequential as the water quality monitoring is based upon a direct comparison to the concentration-based water quality criteria.

The MPCA also submitted revised TMDL summary tables in the 2025 Revision. These tables (below) contain the revised WLAs and LAs for the waterbodies addressed in 2025 Revision (Attachment 1 of this Revised Decision Document). The EPA notes that the overall Loading Capacity, Margin of Safety, as well as all other portions of the TMDL, remained unchanged and are still in effect. The updated information is contained in the 2025 Revision.

2025 Revisions to the Root River (2017) TMDL

The EPA is approving the changes documented in the 2025 Revision of the Original TMDL (i.e., the Root River Watershed Total Maximum Daily Load Report for Bacteria, Nitrate and Suspended Solids (November 2016)) based on information submitted by MPCA on December 31, 2025. In its 2025 Revision documentation, the MPCA provided revised TSS and bacteria WLAs for the WWTPs as noted in Table 2 of this TMDL Revision Decision Document.

As a result of some of the new WLAs, some of the associated LAs for nonpoint sources were reduced. All the corrected WLAs and LAs are noted in the Tables included in Attachment 1 to this Revised TMDL Decision Document. As a result of the reductions in several of the LAs, additional reasonable

[4] Root River Watershed Total Maximum Daily Load Report for Bacteria, Nitrate and Suspended Solids (November 2016), MPCA, (https://www.pca.state.mn.us/sites/default/files/wq-iw9-17e.pdf, last visited 1/14/26)

assurance is needed to demonstrate that the additional nonpoint source reductions are likely to occur.

The MPCA provided additional reasonable assurance in the 2025 Revision document. MPCA noted that the 2024 Root River TMDL addressed TSS and bacteria impairments in additional segments of the Root River Watershed.[5] MPCA also noted an updated Root River Watershed Restoration and Protection Strategy (WRAPS)(April 2024) https://www.pca.state.mn.us/sites/default/files/wq-ws4-98a.pdf. The WRAPS report contains such elements as the identification of impaired waters, watershed modeling outputs, point and nonpoint sources, and a table of implementation strategies and actions to achieve the needed load reductions (WRAPS Report Template, MPCA). The WRAPS document also highlights funding information and proposed implementation activities to address the various nonpoint source contributions.

An additional example of reasonable assurance is the One Watershed One Plan (1W1P) project developed by the Root River Partnership https://www.fillmoreswcd.org/root-river-watershed-one-watershed-one-plan/ . This effort develops a watershed plan based upon watershed boundaries, not political boundaries, and is designed to foster communication and collaboration between various local governments. The 1W1P was approved in 2016 and was recently reviewed by Minnesota in 2023. The report highlights the success and additional efforts needed to continue the progress of implementation in the watershed https://www.fillmoreswcd.org/wp-content/uploads/2022/07/Root-River-Partnership_1w1p-Final-Report-db.pdf

The EPA Assessment:
The EPA finds Minnesota's calculation of new WLAs and adjusted WLA/LA in the 2025 Revision (see Attachment 1 to this Revised Decision Document) to be reasonable and appropriate. The MPCA provided the basis for their calculations, as well as additional reasonable assurance to account for the shift of loads from LA to WLA.

Public Participation for the 2025 Revisions
MPCA put the 2025 Revisions on public notice from July 28, 2025, to August 27, 2025, to seek comments on the revision to the Original TMDL. The draft document was posted at: http://www.pca.state.mn.us/water/tmdl. The MPCA did not receive comments on the 2025 Revisions.

The EPA Assessment:
The EPA reviewed the public participation information submitted by Minnesota (i.e., public notice announcement) and found that Minnesota's public participation processes for the 2025 Revisions were appropriate and that MPCA provided the general public with reasonable opportunity to review and comment on the proposed 2025 Revisions.

[5] Root River Watershed Total Maximum Daily Load Report (May 2024), MPCA, (https://www.pca.state.mn.us/sites/default/files/wq-iw9-28e.pdf, last visited 1/14/26).

Conclusion

The EPA has completed a full review of the 2025 Revision information provided by Minnesota in December 2025 and other appropriate supporting information. The EPA finds that pursuant to Section 303(d) of the Clean Water Act (CWA), 33 U.S.C. Section 1313(d), and the EPA's implementing regulations at 40 C.F.R. Part 130, the 2025 Revisions satisfy the elements of an approvable revised TMDL. This approval addresses changes to three bacteria TMDLs and twelve TSS TMDLs (Updated Tables in Attachment 2 of this Revised TMDL Decision document). No other elements or documentation relating to the original or subsequent approvals of this TMDL are being revised.

The EPA's approval of this TMDL extends to the waterbodies which are identified above with the exception of any portions of the waterbodies that are within Indian Country, as defined in 18 U.S.C. Section 1151, and as further discussed in our Decision Document. The EPA is taking no action to approve or disapprove TMDLs for those waters at this time. The EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under the CWA Section 303(d) for those waters.

Table 2. Revised WLAs for WWTPs *

Facility Name	Permit Number	Station	WLA Flow (mgd)	TSS limit (mg/L)	TSS WLA (tons/day)	*E. coli* WLA (billion org./day)
Canton WWTP	MN0023001	SD 002	0.065	30	0.008	0.310
Chatfield WWTP	MN0021857	SD 001	0.487	30	0.061	2.323
Dexter WWTP	MNG585228	SD 001	0.293	45	0.055	1.397
Foremost Farms USA Cooperative	MN0001333	SD 001	0.225	—	0.028	—
Fountain WWTP	MN0050873	SD 001	0.062	30	0.008	0.296
Grand Meadow WWTP	MN0023558	SD 002	1.043	45	0.196	4.974
Haven Hutterian Brethren	MNG585071	SD 001	0.096	45	0.018	0.458
Hokah WWTP	MN0021458	SD 001	0.102	30	0.013	0.486
Houston WWTP	MN0023736	SD 001	0.250	30	0.031	1.192
Lanesboro WWTP	MN0020044	SD 001	0.110	30	0.014	0.525
Lewiston WWTP	MN0023965	SD 001	0.350	30	0.044	1.669
Mabel WWTP	MN0020877	SD 002	0.189	30	0.024	0.901
MDNR Lanesboro State Fish Hatchery	MN0004430	SD 001	13.400	30	1.676	—
MDNR Peterson State Fish Hatchery	MN0061221	SD 001	7.056	30	0.883	—
Mathy Construction - Aggregate	MNG490081	SD 121	2.300	30	0.288	—
Mathy Construction - Aggregate	MNG490081	SD 120	4.320	30	0.540	—
Milestone Materials - Stewartville I-90 Quarry 496	MN0069531	SD 001	4.320	30	0.540	—
MNDOT Enterprise Rest Area	MN0048844	SD 001	0.024	45	0.005	0.114
Ostrander WWTP	MN0024449	SD 002	0.039	30	0.005	0.188
Peterson WWTP	MN0024490	SD 001	0.051	30	0.006	0.242
Preston WWTP	MN0020745	SD 002	0.392	30	0.049	1.870
Racine WWTP	MN0024554	SD 001	0.163	45	0.031	0.777
Rushford WWTP	MN0024678	SD 001	0.330	30	0.041	1.574
Spring Valley WWTP	MN0051934	SD 002	0.936	30	0.117	4.464
Stewartville WWTP	MN0020681	SD 001	1.111	30	0.139	5.301
Ulland Brothers - Aggregate	MNG490069	SD 083	2.016	30	0.252	—
Ulland Brothers - Aggregate	MNG490070	SD 106	2.016	30	0.252	—
Wykoff WWTP	MN0020826	SD 002	0.049	30	0.006	0.234

* - This table replaces Table 31 and Appendix C of Original Root River (2017) Watershed TMDL

Attachments

Attachment 1: Revised (2025) TMDL Summaries for the Root River Watershed (15 total; 12 TSS and 3 *E. coli*)

Attachment 2: The EPA's February 16, 2017 approval of the Total Maximum Daily Loads for the Root River Watershed

Attachment 1

Table 32. Root River (Lower) (07040008-501) TSS TMDL.

Root River AUID 07040008-501 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**521.44**	**256.59**	**191.57**	**155.44**	**120.98**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	5.33	5.33	5.33	5.33	5.33
	Permitted Industrial Stormwater Facilities	0.02	0.02	0.02	0.02	0.02
	Construction and Industrial Stormwater	0.47	0.23	0.17	0.14	0.11
	City of Stewartville MS4 (future)	1.63	0.78	0.58	0.46	0.35
	Total WLA	**7.45**	**6.36**	**6.10**	**5.95**	**5.81**
Load Allocation		**461.85**	**224.57**	**166.31**	**133.95**	**103.07**
Margin of Safety		**52.14**	**25.66**	**19.16**	**15.54**	**12.10**

Table 33. Root River (Lower) (07040008-502) TSS TMDL.

Root River AUID 07040008-502 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**474.53**	**240.93**	**167.66**	**126.28**	**77.52**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	5.33	5.33	5.33	5.33	5.33
	Permitted Industrial Stormwater Facilities	0.02	0.02	0.02	0.02	0.02
	Construction and Industrial Stormwater	0.43	0.22	0.15	0.11	0.07
	City of Stewartville MS4 (future)	1.53	0.76	0.51	0.38	0.22
	Total WLA	**7.31**	**6.33**	**6.01**	**5.84**	**5.64**
Load Allocation		**419.77**	**210.51**	**144.88**	**107.81**	**64.13**
Margin of Safety		**47.45**	**24.09**	**16.77**	**12.63**	**7.75**

Table 35. Root River (07040008-520) TSS TMDL.

Root River AUID 07040008-520 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**418.40**	**199.61**	**130.27**	**91.57**	**56.58**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	3.61	3.61	3.61	3.61	3.61
	Permitted Industrial Stormwater Facilities	0.02	0.02	0.02	0.02	0.02
	Construction and Industrial Stormwater	0.38	0.18	0.12	0.08	0.05
	City of Stewartville MS4 (future)	1.74	0.81	0.51	0.34	0.20
	Total WLA	**5.75**	**4.62**	**4.26**	**4.05**	**3.88**
Load Allocation		**370.81**	**175.03**	**112.98**	**78.36**	**47.04**
Margin of Safety		**41.84**	**19.96**	**13.03**	**9.16**	**5.66**

Table 36. Root River (07040008-522) TSS TMDL

Root River AUID 07040008-522 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**409.18**	**190.97**	**123.35**	**85.14**	**51.91**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	3.58	3.58	3.58	3.58	3.58
	Permitted Industrial Stormwater Facilities	0.02	0.02	0.02	0.02	0.02
	Construction and Industrial Stormwater	0.37	0.17	0.11	0.08	0.05
	City of Stewartville MS4 (future)	1.82	0.82	0.51	0.34	0.19
	Total WLA	**5.79**	**4.59**	**4.22**	**4.02**	**3.84**
Load Allocation		**362.47**	**167.28**	**106.80**	**72.61**	**42.88**
Margin of Safety		**40.92**	**19.10**	**12.33**	**8.51**	**5.19**

Table 37. Root River (07040008-527) TSS TMDL.

Root River AUID 07040008-527 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**366.83**	**157.03**	**96.49**	**60.05**	**32.17**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	4.32	4.32	4.32	4.32	4.32
	Permitted Industrial Stormwater Facilities	0.02	0.02	0.02	0.02	0.02
	Construction and Industrial Stormwater	0.33	0.14	0.09	0.05	0.03
	City of Stewartville MS4 (future)	1.91	0.79	0.46	0.27	0.12
	Total WLA	**6.58**	**5.27**	**4.89**	**4.66**	**4.49**
Load Allocation		**323.57**	**136.06**	**81.95**	**49.39**	**24.46**
Margin of Safety		**36.68**	**15.70**	**9.65**	**6.00**	**3.22**

Table 39. Middle Branch Root River (07040008-528) TSS TMDL.

Root River Middle Branch AUID 07040008-528 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**241.57**	**98.26**	**58.71**	**34.11**	**16.75**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	2.36	2.36	2.36	2.36	2.36
	Permitted Industrial Stormwater Facilities	NA	NA	NA	NA	NA
	Construction and Industrial Stormwater	0.22	0.09	0.05	0.03	0.02
	City of Stewartville MS4 (future)	2.01	0.77	0.43	0.21	0.06
	Total WLA	**4.59**	**3.22**	**2.84**	**2.60**	**2.44**
Load Allocation		**212.82**	**85.21**	**50.00**	**28.10**	**12.63**
Margin of Safety		**24.16**	**9.83**	**5.87**	**3.41**	**1.68**

Table 47. North Branch Root River (07040008-716) TSS TMDL.

Root River North Branch AUID 07040008-716 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**126.05**	**38.24**	**22.29**	**13.11**	**7.35**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	1.59	1.59	1.59	1.59	1.59
	Permitted Industrial Stormwater Facilities	NA	NA	NA	NA	NA
	Construction and Industrial Stormwater	0.11	0.03	0.02	0.01	0.01
	City of Stewartville MS4 (future)	3.04	0.90	0.51	0.28	0.14
	Total WLA	**4.74**	**2.52**	**2.12**	**1.88**	**1.74**
Load Allocation		**108.71**	**31.90**	**17.94**	**9.92**	**4.87**
Margin of Safety		**12.60**	**3.82**	**2.23**	**1.31**	**0.74**

Table 48. North Branch Root River (07040008-717) TSS TMDL.

Root River North Branch AUID 07040008-717 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**53.24**	**16.17**	**9.42**	**5.54**	**3.11**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	1.44	1.44	1.44	1.44	1.44
	Permitted Industrial Stormwater Facilities	NA	NA	NA	NA	NA
	Construction and Industrial Stormwater	0.048	0.015	0.008	0.005	0.003
	City of Stewartville MS4 (future)	0.068	0.020	0.011	0.006	0.002
	Total WLA	**1.56**	**1.48**	**1.46**	**1.45**	**1.45**
Load Allocation		**46.36**	**13.07**	**7.02**	**3.54**	**1.35**
Margin of Safety		**5.32**	**1.62**	**0.94**	**0.55**	**0.31**

Table 50. South Branch Root River (07040008-550) TSS TMDL

Root River South Branch AUID 07040008-550 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**16.09**	**7.26**	**4.49**	**2.83**	**1.54**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	1.78	1.78	1.78	1.78	*
	Permitted Industrial Stormwater Facilities	0.02	0.02	0.02	0.02	*
	Construction and Industrial Stormwater	0.014	0.007	0.004	0.003	*
	Total WLA	**1.81**	**1.81**	**1.80**	**1.80**	*
Load Allocation		**12.67**	**4.72**	**2.24**	**0.75**	*
Margin of Safety		**1.61**	**0.73**	**0.45**	**0.28**	**0.15**

* The permitted wastewater design flows exceed the stream flow in the indicated flow zone(s). The allocations are expressed as an equation rather than an absolute number: allocation = (flow contribution from a given source) x 65 mg/L (or NPDES/SDS permit concentration).

Table 52. South Branch Root River (07040008-554) TSS TMDL

Root River South Branch AUID 07040008-554 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**15.88**	**5.99**	**3.79**	**2.57**	**1.42**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	0.082	0.082	0.082	0.082	0.082
	Permitted Industrial Stormwater Facilities	NA	NA	NA	NA	NA
	Construction and Industrial Stormwater	0.0014	0.0005	0.0003	0.0002	0.0001
	Total WLA	**0.083**	**0.083**	**0.082**	**0.082**	**0.082**
Load Allocation		**14.21**	**5.31**	**3.33**	**2.23**	**1.20**
Margin of Safety		**1.59**	**0.60**	**0.38**	**0.26**	**0.14**

Table 53. South Branch Root River (07040008-555) TSS TMDL.

Root River South Branch AUID 07040008-555 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**7.41**	**3.23**	**1.90**	**1.14**	**0.60**
Wasteload Allocation (WLA) Components	Ostrander WWTP (MN0024449)	0.005	0.005	0.005	0.005	0.005
	Construction and Industrial Stormwater	0.0067	0.0029	0.0017	0.0010	0.0005
	Total WLA	**0.012**	**0.008**	**0.007**	**0.006**	**0.006**
Load Allocation		**6.66**	**2.90**	**1.70**	**1.02**	**0.53**
Margin of Safety		**0.74**	**0.32**	**0.19**	**0.11**	**0.06**

Table 54. South Branch Root River (07040008-556) TSS TMDL.

Root River South Branch AUID 07040008-556 TMDL summary		VHigh	High	Mod	Low	VLow
		tons/day				
TSS Loading Capacity (TMDL)		**3.84**	**1.7**	**0.97**	**0.59**	**0.3**
Wasteload Allocation (WLA) Components	Ostrander WWTP (MN0024449)	0.005	0.005	0.005	0.005	0.005
	Construction and Industrial Stormwater	0.0035	0.0015	0.0009	0.0005	0.0003
	Total WLA	**0.009**	**0.007**	**0.006**	**0.006**	**0.005**
Load Allocation		**3.45**	**1.52**	**0.86**	**0.52**	**0.26**
Margin of Safety		**0.38**	**0.17**	**0.10**	**0.06**	**0.03**

Table 40. Middle Branch Root River (07040008-534) *E. coli* TMDL allocations.

Middle Branch Root River AUID 07040008-534 TMDL summary		VHigh	High	Mod	Low	VLow
		Billions of Organisms/day				
***E. coli* Loading Capacity (TMDL)**		**3405.76**	**1350.05**	**797.85**	**456.95**	**221.36**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	19.93	19.93	19.93	19.93	19.93
	Permitted Industrial Stormwater Facilities	NA	NA	NA	NA	NA
	City of Stewartville MS4 (future)	36.45	14.31	8.36	4.68	2.15
	Total WLA	**56.38**	**34.24**	**28.29**	**24.61**	**22.08**
Load Allocation		**3008.80**	**1180.80**	**689.77**	**386.64**	**177.14**
Margin of Safety		**340.58**	**135.01**	**79.79**	**45.70**	**22.14**

Table 45. Root River (07040008-535) *E. coli* TMDL allocations

Root River North Branch AUID 07040008-535 TMDL summary		VHigh	High	Mod	Low	VLow
		Billions of Organisms/day				
***E. coli* Loading Capacity (TMDL)**		**1873.55**	**676.00**	**346.35**	**177.14**	**75.49**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	9.48	9.48	9.48	9.48	9.48
	Permitted Industrial Stormwater Facilities	NA	NA	NA	NA	NA
	City of Stewartville MS4 (future)	43.11	15.55	7.97	4.08	1.74
	Total WLA	**52.59**	**25.03**	**17.45**	**13.56**	**11.22**
Load Allocation		**1633.60**	**583.37**	**294.26**	**145.87**	**56.72**
Margin of Safety		**187.36**	**67.60**	**34.64**	**17.71**	**7.55**

Table 49. Rush Creek (07040008-523) *E. coli* TMDL allocations.

Rush Creek AUID 07040008-523 TMDL summary		VHigh	High	Mod	Low	VLow
		Billions of Organisms/day				
***E. coli* Loading Capacity (TMDL)**		**398.97**	**287.83**	**237.81**	**200.64**	**155.14**
Wasteload Allocation (WLA) Components	Permitted Municipal and Industrial Wastewater Facilities	1.78	1.78	1.78	1.78	1.78
	Permitted Industrial Stormwater Facilities	NA	NA	NA	NA	NA
	Total WLA	**1.78**	**1.78**	**1.78**	**1.78**	**1.78**
Load Allocation		**357.29**	**257.27**	**212.25**	**178.80**	**137.85**
Margin of Safety		**39.90**	**28.78**	**23.78**	**20.06**	**15.51**