



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 5

77 WEST JACKSON BOULEVARD

CHICAGO, IL 60604-3590

**SEP 28 2010**

REPLY TO THE ATTENTION OF:

**WW-16J**

Paul Eger, Commissioner  
Minnesota Pollution Control Agency  
520 Lafayette Road North  
St. Paul, Minnesota 55155-4194

Dear Mr. Eger:

The U.S. Environmental Protection Agency has conducted a complete review of the revisions to Appendix A of the Minnesota Statewide Mercury Total Maximum Daily Load (TMDL) received by EPA on April 7, 2010. The revisions submitted for review and approval include the addition of 95 new lake and river assessment unit impairments, and changes and corrections to five river and one lake assessment units.

Based on this review, EPA has determined that no revisions are being made to the original elements of the TMDL as approved on March 27, 2007, and subsequently revised on April 3, 2008. Revisions are only proposed for Appendix A, the list of lake and river assessment units and associated impairments addressed by the TMDL. This decision solely addresses revisions to Appendix A.

Based on this review, EPA has determined that the revisions to Appendix A meet the requirements of Section 303(d) of the Clean Water Act, 33 U.S.C. Section 1313(D), and EPA's implementing regulations at 40 CFR Part 130. This approval addresses 1,096 lake and river assessment units, including 95 new lake and river assessment units being added to Appendix A. The statutory and regulatory requirements, and the TMDL's compliance with these requirements, are described in the enclosed decision document.

We wish to acknowledge Minnesota's effort in submitting this revision to the Statewide Mercury TMDL. 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 black ink, appearing to read "Tinka G. Hyde", with a long horizontal line extending to the right.

☒ Tinka G. Hyde  
Director, Water Division

wq-iw4-01g

Enclosure

## **TMDL Decision Document**

**TMDL:** 2010 Revisions to Minnesota Statewide Mercury Total Maximum Daily Load

**Date of U.S. EPA Approval:** September 28, 2010

### **Background**

On March 27, 2007, the United States Environmental Protection Agency (U.S. EPA) approved two mercury Total Maximum Daily Loads (TMDLs), the northeast and southwest regional TMDLs, submitted by the state of Minnesota.<sup>1</sup> For purposes of this decision document, the northeast and southwest regional TMDLs approved by U.S. EPA on March 27, 2007, will be referred to as the “original TMDL”.

The original TMDL addresses water bodies not meeting the aquatic consumption designated use due to an exceedance of numeric water column water quality standards or elevated levels of fish tissue mercury concentration. The target for both the northeast and southwest regional TMDLs is 0.2 milligram per kilogram (mg/kg) fish tissue mercury concentration, which is a surrogate for the numeric water column water quality standards: 1.3 nanograms per liter (ng/L) for the Lake Superior Basin, and 6.9 ng/L for the rest of the State. The original TMDL established load allocations for the primary nonpoint source, atmospheric deposition, in addition to wasteload allocations for point sources, including stormwater, municipal wastewater treatment facilities and industrial dischargers. An explicit margin of safety was established for the southwest region’s TMDL while an implicit margin of safety was used for the northeast region’s TMDL.

The original TMDL calculated reduction factors that are necessary to achieve the target fish tissue mercury concentration in the standard size top predator fish. These reduction factors were calculated using the TMDL target fish tissue mercury concentration of 0.2 mg/kg and the 90<sup>th</sup> percentile fish tissue mercury concentrations in the standard size top predator fish. A mercury fish tissue concentration of 0.572 mg/kg was the highest concentration used in calculating the regional reduction factors. Therefore, only water bodies that have fish tissue mercury concentrations greater than 0.2 mg/kg or equal to or less than 0.572 mg/kg are addressed by the original TMDL. Appendix A of the original TMDL identifies lake and river assessment units that are addressed.

As part of Minnesota’s monitoring and assessment programs, new data, including fish tissue data, is continually being collected. New fish tissue data is typically considered during the State’s two year integrated reporting cycle pursuant to Sections 305(b) and 303(d) of the Clean Water Act. There are three possible outcomes of the State’s assessment of new fish tissue data.

1. A lake or river assessment unit is determined to be addressed by the original TMDL if the fish tissue mercury concentration is greater than 0.2 mg/kg or equal to or less than 0.572 mg/kg.
2. A lake or river assessment unit is placed in Category 2 or 3 of Minnesota’s Integrated

---

<sup>1</sup> A copy of U.S. EPA’s March 27, 2007 approval is included in this decision as Attachment 1.

**TMDL Decision Document**  
**2010 Revised Minnesota Statewide Mercury TMDL**  
**Approval Date: September 28, 2010**

Report<sup>2</sup> due to insufficient data.

3. A lake or river assessment unit is placed in Category 5 of Minnesota's Integrated Report<sup>3</sup> if the fish tissue mercury concentration meets the criteria in the 2010 assessment methodology for an impaired water and is greater than 0.572 mg/kg.

Upon consideration of new fish tissue mercury data and other relevant information, the State revised the original TMDL during the 2008 integrated reporting cycle. On April 3, 2008, U.S. EPA approved revisions to Appendix A of the original TMDL, hereafter referred to as the 2008 Revision. As discussed in U.S. EPA's approval of the 2008 Revision, the State did not make any revisions to the TMDL targets, reduction factors, loading capacities, allocations, reduction goals or any other element of a TMDL established in the original TMDL. A copy of the April 3, 2008, U.S. EPA approval is attached to this decision as Attachment 2.

2010 Revisions to the Minnesota Statewide Mercury Total Maximum Daily Load

On April 7, 2010, U.S. EPA received for review and approval revisions to Appendix A of the original TMDL, as revised and approved by U.S. EPA on April 3, 2008. For purposes of this decision document the information received by U.S. EPA on April 7, 2010 will be referred to as the 2010 Revision.

Identification of Water Bodies:

As previously discussed in this decision, lake and river assessment units that have fish tissue mercury concentrations greater than 0.2 mg/kg or equal to or less than 0.572 mg/kg are addressed by the original TMDL, as revised in 2008. Upon consideration of readily available data and information during the 2010 integrated reporting cycle, the State has identified 95 new lake and river assessment units for inclusion in Appendix A.<sup>4</sup>

The State is not proposing to revise any other portion of the original TMDL, as revised in 2008, other than Appendix A, the list of lake and river assessment units addressed by the TMDL. All other elements of the original TMDL along with its supporting documentation remain unchanged and are not the subject of this decision.<sup>5</sup>

---

<sup>2</sup> Refer to "Guidance Manual for Assessing the Quality of Minnesota Surface Waters for the Determination of Impairment, 305(b) Report and 303(d) List", Minnesota Pollution Control Agency, 2010 Assessment Cycle, pages 28-29, for specific descriptions of Minnesota's Integrated Report categories. For purposes of this decision document this guidance manual is referred to as the 2010 assessment methodology.

<sup>3</sup> Id.

<sup>4</sup> See the following attachments to the April 7, 2010 submittal to U.S. EPA for the State's identification of 95 new lake and river assessment units: Inventory of all Impaired Waters, 2010 Hg TMDL Additions to Appendix A, and complete Appendix A.

<sup>5</sup> Minnesota Pollution Control Agency memorandum, Draft 2010 List of Impaired Waters and Revisions to Appendix A of the Approved Statewide Mercury TMDL, September 2009, pages 2-3, and April 7, 2010 submittal enclosure entitled 2010 Hg TMDL Additions to Appendix A.

**TMDL Decision Document**  
**2010 Revised Minnesota Statewide Mercury TMDL**  
**Approval Date: September 28, 2010**

*U.S. EPA Assessment:* U.S. EPA finds the State's decision to include 95 new lake and river assessment units in Appendix A of the original TMDL, as revised in 2008, reasonable and appropriate. These lake and river assessment units have been identified by the State as having fish tissue mercury concentrations greater than 0.2 mg/kg and equal to or less than 0.572 mg/kg. As discussed in the Background section of this decision document, water bodies having fish tissue mercury concentrations within this range is consistent with the reduction factors used to develop the original TMDL.

U.S. EPA recognizes that these 95 lake and river assessment units and associated mercury impairments are currently not identified as impaired in Minnesota's approved Integrated Report, i.e., the 2008 Integrated Report Category 5. U.S. EPA believes it is reasonable for Minnesota to include these lake and river assessment unit impairments in the revised TMDL. The State's assessment of these lake and river assessment units for inclusion in the TMDL is consistent with the assessment necessary for making an impairment decision for Minnesota's Integrated Report.<sup>6</sup> The State's Final Draft 2010 Integrated Report submittal to U.S. EPA for review and approval proposes to identify these 95 lake and river assessment units as impaired needing a TMDL because the aquatic consumption designated use is not supported.<sup>7</sup>

Table 1 of this decision identifies the 95 new lake and river assessment units that are being added to Appendix A of the original TMDL, as revised in 2008.

*Other Changes to Appendix A:*

In addition to identifying new lake and river assessment unit impairments for inclusion in Appendix A, the State also identified the following changes and corrections to existing lake and river assessment units already included in Appendix A.

- Correction to lake ID# for Big Marine, original lake ID# 82-0052-01 corrected to 82-0052-04.
- Slight changes to assessment unit description for Cannon River, 07040002-581 and Cannon River, 07040002-582.
- Split Mississippi River, Platte River to Little Rock Creek, 07010201-505 into two new assessment units, 07010201-606 and 07010201-607. Remove 07010201-505 from Appendix A.
- Split Minnesota River, Lac qui Parle River to Chippewa River, 07020004-505 into two new assessment units, 07020001-550 and 07020004-668. Remove 07020004-505 from

---

<sup>6</sup> Refer to "Guidance Manual for Assessing the Quality of Minnesota Surface Waters for the Determination of Impairment, 305(b) Report and 303(d) List", Minnesota Pollution Control Agency, 2010 Assessment Cycle, Section VIII.B.

<sup>7</sup> On April 7, 2010, U.S. EPA received Minnesota's final draft 2010 Integrated Report for review and approval. The Inventory of All Impaired Waters included in this submittal identifies all 95 lake and river assessment units as not supporting the aquatic consumption designated use due to mercury in fish tissue.

**TMDL Decision Document**  
**2010 Revised Minnesota Statewide Mercury TMDL**  
**Approval Date: September 28, 2010**

Appendix A.

- Split Root River, Middle Branch, Bear Creek to Upper Bear Creek, 07040008-505 into two new assessment units, 07040008-B95 and 07040008-B96. Remove 07040008-505 from Appendix A.

*U.S. EPA Assessment:* U.S. EPA finds these corrections and changes to assessment units acceptable. Splitting assessment units typically occurs during each integrated reporting cycle. River assessment units typically extend “from one significant tributary to another or from the headwaters to the first significant tributary and is typically less than 20 miles in length. The river may be further divided into two or more assessment units when there is a change in the use classification or when there is a significant morphological feature such as a dam, or a lake within the river.”<sup>8</sup> U.S. EPA encourages States to review previously assessed water bodies during each integrated reporting cycle. During this review, the State may determine a more appropriate way to segment a water body to reflect tributary impacts and morphological features. Although for purposes of tracking U.S. EPA refers to the original assessment unit as being removed, U.S. EPA recognizes that the splitting of the original assessment unit is actually a resegmentation, or a revision to the start and end points, of the assessment unit.

Table 2 of this decision document identifies the changes and corrections being made through the 2010 Revision.

*Public Participation:*

The 2010 Revision was available to the public for review and comment during a 30-day public notice and comment period from October 19, 2009 to November 19, 2009. By letter dated September 2009, and distributed to an extensive mailing list, Minnesota Pollution Control Agency (MPCA) announced the public notice and comment period, announcing public meetings, and identifying the changes included in the 2010 Revision. The State held seven public informational meetings throughout the state. Public participation for the revised TMDL coincided with public participation for Minnesota’s 2010 draft Integrated Report. Although many comments were received regarding the 2010 Draft Integrated Report no comments were received by MPCA regarding the 2010 Revision.

*U.S. EPA Assessment:* In reviewing the revised TMDL, U.S. EPA reviewed the public participation package submitted by the State and received by U.S. EPA on April 7, 2010. U.S. EPA reviewed the public comments and concurs with the State that no comments regarding the 2010 Revision were submitted. U.S. EPA also reviewed the information made available to the public for review and comment and the announcement of the 30-day public notice and comment period. U.S. EPA finds that the State of Minnesota’s public participation process provided the public with a reasonable opportunity to review and provide comments on the 2010 Revision.

---

<sup>8</sup> “Guidance Manual for Assessing the Quality of Minnesota Surface Waters for the Determination of Impairment, 305(b) Report and 303(d) List”, Minnesota Pollution Control Agency, 2010 Assessment Cycle, page 21.

**TMDL Decision Document**  
**2010 Revised Minnesota Statewide Mercury TMDL**  
**Approval Date: September 28, 2010**

Conclusion

After a full and complete review of the information received by U.S. EPA on April 7, 2010, and other supporting documents, U.S. EPA finds that pursuant to Section 303(d) of the Clean Water Act, 33 U.S.C. Section 1313(D), and U.S. EPA's implementing regulations at 40 CFR Part 130, the 2010 Revision satisfies the elements of an approvable TMDL. This approval addresses only changes to Appendix A of the Minnesota Statewide Mercury TMDL as approved on March 27, 2007 and subsequently revised on April 3, 2008. No other elements or documentation supporting the original TMDL or the 2008 Revision are being revised.

This approval addresses a total of 1,096 lake and river assessment unit impairments,<sup>9</sup> including 95 new lake and river assessment units not addressed in the original TMDL, as revised in 2008. This approval also recognizes corrections to three assessment units and splitting of three assessment units.

Table 3 of this decision document is the complete Appendix A, as revised by this approval.

U.S. EPA's approval of the 2010 Revision extends to the lake and river assessment unit impairments identified in Tables 1 through 3 of this decision document, with the exception of any portions of the water bodies that are within Indian Country, as defined in 18 U.S.C. Section 1151. U.S. EPA is taking no action to approve or disapprove the State's mercury TMDLs with respect to those portions of the waters at this time. U.S. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.

U.S. EPA's approval of the 2010 Revision does not extend to any element of the original TMDL or the 2008 Revision unless it is specifically discussed in this decision document. U.S. EPA's approval of the 2010 Revision does not approve any additions of impaired waters or removal of impaired waters from Minnesota's Integrated Report. U.S. EPA will issue a separate decision specific to Minnesota's 2010 Integrated Report.

---

<sup>9</sup> 1096 lake and river assessment unit impairments = 998 lake and river assessment unit/pollutant combinations from the original TMDL, as revised in 2008, + 3 new lake and river assessment unit/pollutant combinations due to assessment units being split, + 95 new lake and river assessment unit/pollutant combinations as added in the 2010 Revision.

cc: Howard Markus, MPCA  
David Johnson, MPCA