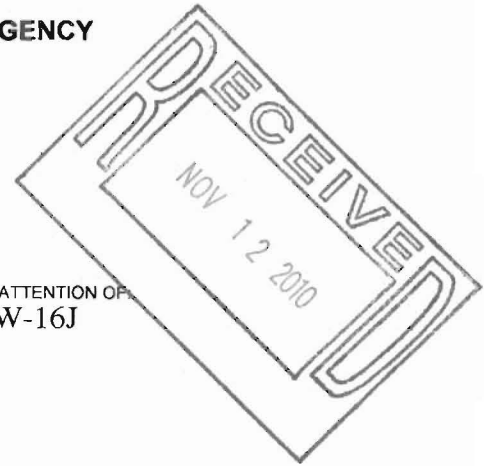




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 5  
77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

NOV 08 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 final Total Maximum Daily Loads (TMDLs) for the Clearwater River, including supporting documentation and follow up information. The Clearwater River is located in central Minnesota, in Sterns and Meeker Counties, Minnesota. The TMDLs address the Aquatic Life Use impairment due to low dissolved oxygen.

The 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 three TMDLs for Carbonaceous Biochemical Oxygen Demand (CBOD), Nitrogenous Biochemical Oxygen Demand (NBOD), and Sediment Oxygen Demand (SOD) for the Clearwater River. 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 and look forward to future TMDL 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,

Tinka G. Hyde  
Director, Water Division

Enclosure

cc: Margaret Leach, MPCA  
Dave Johnson, MPCA

**TMDL:** Clearwater River TMDL (DO), Minnesota

**Date:**

## **DECISION DOCUMENT FOR THE CLEARWATER RIVER, MINNESOTA DISSOLVED OXYGEN 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.

Comments:

*Location Description:* The Minnesota Pollution Control Agency (MPCA) developed TMDLs for a portion of the Clearwater River in the Upper Clearwater River Watershed in Sterns and Meeker Counties, Minnesota. By identifying measures to reduce oxygen-using pollutant loadings, the TMDLs will address the impairment of the aquatic life beneficial use in the river. The Clearwater River segment addressed by this TMDL flows east from Clear Lake to Lake Betsy. The watershed is approximately 33,800 acres in size, and is approximately 10 miles in length (Section 2.3 of the TMDL). Table 1 below identifies the waterbody segment, impairment, and pollutants covered by the TMDL as they appear on the Minnesota 2008 303(d) list. This TMDL addresses three pollutants in one segment of the Clearwater River. The river is listed as impaired for aquatic life use due to low dissolved oxygen (DO). Minnesota’s priority rankings for TMDL waters are reflected by the target dates for start and completion of TMDL studies.

Table 1. 2008 303(d) List Summary

| Waterbody                                  | ID number    | Affected use       | Stressor                  | Pollutants in the TMDL  |
|--|--------------|--------------------|---------------------------|---|
| Clearwater River: Clear Lake to Lake Betsy | 07010203-549 | Aquatic recreation | Low Dissolved Oxygen (DO) | Carbonaceous Biochemical Demand (CBOD)<br>Nitrogen Biochemical Oxygen Demand (NBOD)<br>Sediment Oxygen Demand (SOD) |

*Topography and Land Use:*

The Clearwater River watershed is mainly agricultural in nature (Section 2.2 of Part II of the TMDL). Table 2 below shows the land use of the watershed that drain to the impaired section of the Clearwater River. MPCA split the river into three sections based upon channel characteristics (Section 2.3 of Part II of the TMDL). The uppermost section (approximately 2 miles in length) is flat and mainly ditched. Significant wetlands are present, and the riparian land use is pasture and row crop. The next section (approximately 3.5 miles in length) is steeper and has better sinuosity. The sediments are more coarse, and the riparian land is more woody in nature. The lower section (approximately 4 miles in length) has a lower slope, and is ditched.

MPCA noted that in 1985, low-flow portions of the river were diverted to a large wetlands complex to reduce phosphorus and sediment entering Lake Betsy. Some of the flow from the river was diverted into the wetlands complex to allow it to filter out sediment and particulate phosphorus (Section 2.3 of the TMDL). The net result was an improvement in water quality downstream, but the wetlands now exert oxygen demand on the river (reducing DO levels) and at times exporting soluble phosphorus to the river.

Table 2 Land Use Characteristics – Clearwater River

| Land use             | Total (ac)       | Percent        |
|----------------------|------------------|----------------|
| Corn                 | 10,601.34        | 31.29%         |
| Soybeans             | 7,665.40         | 22.63%         |
| Spring Wheat         | 73.37            | 0.22%          |
| Alfalfa              | 1,269.44         | 3.75%          |
| Peas                 | 0.49             | 0.00%          |
| Grass/Pasture        | 3,932.62         | 11.61%         |
| Woodland             | 3,002.73         | 8.86%          |
| Urban/Developed      | 3,516.33         | 10.38%         |
| Water                | 1,000.65         | 2.95%          |
| Wetlands             | 2,813.19         | 8.30%          |
| <b>Total (acres)</b> | <b>33,875.55</b> | <b>100.00%</b> |

*Pollutant of concern:*

The pollutants of concern for the Clearwater River are Carbonaceous Biochemical Oxygen Demand (CBOD), Nitrogenous Biochemical Oxygen Demand (NBOD), and Sediment Oxygen Demand (SOD). Results of sampling of the river between Clear Lake and Lake Betsy during 2005 and 2006 show that DO levels are fairly consistent until the river reaches the wetlands complex (Figure 2.5 of the TMDL). At that point, DO levels drop significantly, and remain depressed until the Clearwater River enters Lake Betsy.

MPCA reviewed the data and source information regarding the DO impacts in the Clearwater River during the development of TMDLs for total phosphorus and fecal coliform for the Clearwater River and 6 lakes within the watershed. The TMDLs for those pollutants were approved on January 26, 2010.

During this process, MPCA noted that CBOD, NBOD, and SOD were the pollutants that needed to be addressed. Organic material such as leaves, bacteria, algae and various sorts of organic debris can enter waterbodies and decay. This is particularly prevalent when flow velocities slow. These materials can decay in the water, and the decomposition uses oxygen to break down the organic material. CBOD is defined as the carbonaceous portion of the material. The decomposition of nitrogen materials (nitrification) also utilizes oxygen as ammonia is converted to nitrites, and then nitrates. NBOD is the measurement of the nitrogen portion of the material. In locations with significant amounts of organic mud or muck (for example, wetlands), the decomposition of the organic material consumes oxygen. SOD is the measurement of the consumption of oxygen due to the organic sediment.

Based upon the analysis of the data, MPCA noted that NBOD and CBOD values are only slightly elevated, but once the river enters the wetlands complex, and flows are slowed significantly, CBOD, NBOD, and SOD exert a impact on the water, and DO levels are reduced (Section 5 of the TMDL). Because the river was channelized and otherwise hydrologically modified, the impairment is not considered 'natural background', and therefore the TMDL was developed (Section 1 of the TMDL).

*Pollutant sources:*

Sources identified by MPCA in the TMDL as contributing to the DO impairment include agricultural run-off from the local lake watershed, wetland impacts, feedlots and pasturing and

construction permits (Section 4 of the TMDL). MPCA determined that much of the SOD load is the result of the river flow through the wetlands complex. Due to the slower flow velocities through the complex, organic matter and sediment can settle out and often die, using oxygen in the process. The only point sources in the watershed are a small number of construction permits issued under the National Pollutant discharge Elimination Program (NPDES program). MPCA believes these potential point source discharges contribute little CBOD or NBOD.

Run-off from land within the watershed was also reviewed by MPCA. Depending on the hydrology, direct run-off (from agricultural lands or animal operations) is often a significant portion of the overall CBOD and NBOD load into the lakes (Section 4.1.3 of the TMDL). MPCA believes that the high levels of nitrates and other organic material in the river indicate that NBOD and CBOD materials are entering the river, and when the river slows down, the NBOD and CBOD substances break down by using oxygen. Numerous small animal operations operate in the watershed, and manure run-off from these operations can contribute CBOD and NBOD materials (Section 4.1.4 of the TMDL).

*Future growth trends:* As stated in Section 5.6 of the TMDL, future growth will not affect these TMDLs. No significant growth is expected by MPCA.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of 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.

### Comments:

Section 3.0 of the TMDL describes designated uses and numeric criteria applicable to this watershed.

*Use Designation:* The Clearwater River is classified as Class 2B waters (MN. R. 7050.0430). The designated use addressed by this TMDL is Aquatic Life for 2B waters. Class 2 waters include waters which “do or may support fish, other aquatic life, bathing, boating, or other recreational purposes...” (MN R. 7050.0150(3)).

*Numeric Standards:* Minnesota has numeric criteria for DO for 2B waters. MN R. 7050.0222(4) defines the numeric criteria as 5.0 mg/L as a daily minimum. Compliance with this criteria is required 50% of the days at which flow is equal to the 7Q10. MPCA noted that the downstream end of the river (RM 25.6), river flows are low enough that backflow from Lake Betsy often occurs.

*Targets:* The target for the TMDL is the DO criteria of 5.0 mg/L. MPCA modeled the effects of the DO-using pollutants and adjusted the loads until the DO target was achieved. The impacts of the pollutants are inter-related (particularly NBOD and CBOD), and therefore MPCA targeted the overall impacts of all three pollutants rather than determining the specific impact of one pollutant.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of 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.



Comments:

Loading Capacity:

The loading capacity developed to meet the DO criteria for the river is presented in Table 3 below. The loading capacity is the combination of the wasteload allocation (WLA), load allocation (LA), and margin of safety (MOS). Thus, the loading capacity is equal to the TMDL assigned for the waterbody. The WLAs are for the construction permits within each lake's watershed (Section 5 below).

Table 3. TMDLs for the Clearwater River Expressed as Daily Loads

|                              | CBOD<br>(lbs/day) | NBOD<br>(lbs/day) | SOD<br>(lbs/day) |
|------------------------------|-------------------|-------------------|------------------|
| <b>Waste Load Allocation</b> |                   |                   |                  |
| NPDES Construction           | 2.18              | 493.01            | 0                |
| Other                        | 0                 | 0                 | 0                |
| <b>WLA</b>                   | <b>2.18</b>       | <b>493.01</b>     | <b>0.00</b>      |
| <b>Load Allocation</b>       |                   |                   |                  |
| Watershed Load               | 215.90            | 48,808.43         | 0.0              |
| Groundwater                  | 0.85              | 9,739.73          | 0.0              |
| SOD                          | --                | --                | 324.9            |
| <b>LA</b>                    | <b>216.75</b>     | <b>58,548.16</b>  | <b>324.86</b>    |
| <b>MOS- Implicit</b>         | --                | --                | --               |
| <b>RC</b>                    | <b>0.0</b>        | <b>0.0</b>        | <b>0.0</b>       |
| <b>TMDL</b>                  | <b>218.93</b>     | <b>59,041.17</b>  | <b>324.86</b>    |

Modeling summary:

To determine the loading capacities, MPCA used the QUAL2K model (Section 4.3 and Appendix B of the draft TMDL). QUAL2K is a one-dimensional, steady-state model which is used to simulate DO, CBOD, organic and inorganic phosphorus and the nitrogen series. All these parameters, as well as reaeration, sediment oxygen demand, groundwater influx, nitrification, and many other physical and environmental factors are taken into consideration by the model to simulate dissolved oxygen impacts.

The Clearwater River was divided by MPCA into 5 reaches, based upon changes in the channel and topography. Reach 4 and Reach 5 are the two wetlands that exist adjacent to the Clearwater River. Model inputs were derived from synoptic surveys of the river, and literature values. The model was adjusted to account for the lack of flow in the upstream portion of the river during the fall. Watershed loads were determined based upon tributary inflows, rather than land use, as the watershed is relatively small and analysis by MPCA showed little direct overland discharge (Section 3.2 of Appendix A of the draft TMDL). The model was run for a number of scenarios to determine the reductions needed in CBOD, NBOD, and SOD to achieve the DO criteria of 5.0 mg/l.

The model was calibrated to the 2005 river survey, and validated based upon data gathered during the 2006 river survey. Results showed generally good agreement with the river data. The model was run for both spring and fall time periods. The fall loads were used as they represent the low flow critical conditions. The results of the QUAL2K model indicate that the watershed load of CBOD and NBOD must be reduced the same amount as the wetland SOD load (Section 5.2 of the TMDL). The loading capacity above represents an approximate 60% reduction in each of the three pollutants loads (CBOD, NBOD, and SOD).

*Critical condition:* MPCA determined the critical condition for the Clearwater River is the late summer, low-flow condition (Section 5 of the TMDL). Under this condition, temperatures are high, flows are low, and DO levels are at the lowest. The QUAL2K model was run to address the conditions.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of 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.

*Comments:*

The LAs for the Clearwater River are in Table 3 above. To determine the LA, MPCA calculated the load for the watershed (run-off from the various sources and a groundwater load) based upon results of the QUAL2K model.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of 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.



Comments:

The WLAs are discussed in Section 5.3 of the TMDL and found in Table 3 above. The only point sources identified in the watershed are those related to the National Pollutant Discharge Elimination System (NPDES) construction general permit. The WLA is based upon an estimate of the ongoing construction activities in the watershed.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of 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.

Comments:

The TMDLs for the Clearwater River use an implicit MOS, based on conservative modeling assumptions (Section 5.4 of the TMDL). The main assumption is that the load allocations are based upon both watershed load reductions (CBOD and NBOD) and wetland SOD reductions. The model results show that either a 60% reduction in CBOD/NBOD or a 60% reduction in wetland SOD will likely result in achieving the water quality criteria being achieved. MPCA believes that the impacts on DO from the wetlands are not fully understood, and that the pollutants are to some degree interrelated and therefore it is a conservative assumption to address the impairment by reductions in all three pollutants. In addition, the model calibration and validation show that the QUAL2K model underpredicts the DO concentrations, and therefore the DO reductions needed is overpredicted.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of 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)).

Comments:

Seasonal variation was accounted for by MPCA in the Clearwater River DO TMDLs by using several years of water quality data and flows in the models (Section 5.5 of the TMDL). Data were used from the spring (when flows and loads are higher) and the fall (when flows are low and water quality impacts are greatest). This assures that the effects of seasonal variations are captured and accounted for in the load calculations.

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

## 8. Reasonable Assurances

When a TMDL is developed for waters impaired by point sources only, the issuance of a National Pollutant Discharge Elimination System (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.

### Comments:

Reasonable Assurance is discussed in Section 7 of the Clearwater River DO TMDL, in Section 7 of the Clearwater River/6 Lakes TMDL (approved earlier), and in material from the Clearwater River Watershed District (CRWD) website. MPCA believes that many if not all the activities discussed under the Clearwater River/6 Lakes TMDL (which are targeted at phosphorus and fecal coliform) will also reduce CBOD, NBOD and SOD in the watershed. The Plan was approved on May 19, 2010.

The CRWD was formed in 1975 using a Joint Powers Agreement developed under Minnesota State authority. The CRWD is composed of the three counties and several cities having land in the watershed. The CRWD works with the local governments to determine capital improvements, set targets/standards for various activities, and assess funding needs. The District has developed a Watershed Management Plan that includes a Water Quality Plan, revised Capital Improvement Program, and a Cost Sharing Policy to work towards achieving the watershed goals. Funding is supplied by grants from the MPCA, Board of Water and Soil Resources, and the Minnesota Department of Natural Resources.

The implementation plan develops the roles and responsibilities for the stakeholders, local governments, and the MPCA. The plan also details Best Management Practices (BMPs) that will be targeted to reduce pollutant loads. The plan also contains timelines for activities, enhanced monitoring to determine effectiveness, cost estimates, and annual reporting on activities.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of this eighth element.

## **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.

### Comments:

The CRWD will evaluate progress towards meeting the TMDL goals in their Annual Report (Section 8 of the TMDL). The Annual Report will be used to formulate the work plan, budget, and measurable goals for the next year. Every five years, the CRWD will evaluate the implementation measures and determine if the Implementation Plan needs to be adjusted. Regular monitoring of the lakes from April-October will continue as identified in the CRWD Comprehensive Plan.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of this ninth element.

## **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.

### Comments:

The TMDL contains a section on implementation that includes an implementation framework and a summary of planned activities (Section 9 of the TMDL). The formal TMDL Implementation Plan has been developed and will be updated to account for the Clearwater River DO TMDL. Continued development of the implementation plan will involve meeting with stakeholders and public notice of the plan. Based on the loading reduction estimates provided in Section 5 of the TMDL, the final TMDL Implementation Plan will provide detailed plans for pollutant reductions. Potential activities and estimated costs identified by MPCA for controlling the various pollutants in the watershed are in Table 9.1 of the TMDL.

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

## 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.

### Comments:

The Clearwater River DO TMDL project was administered locally through the CRWD (Section 6 of the TMDL). A technical advisory committee was established for the TMDL in order to involve interested stakeholders. The committee included MPCA technical staff, the CRWD, and the project consultant. The project initially focused on the Clearwater River, Lake Louisa and Lake Marie; the project was expanded to include the other lakes after they were listed as impaired on the 2008 303d list. Several public meetings were held from 2003—2008, to present data and information to the stakeholders and public, and to receive input.

MPCA placed the draft Clearwater River Watershed TMDLs on public notice from August 2, 2010 to September 1, 2010 to provide an opportunity for public comment. The draft TMDL was posted at: <http://www.pca.state.mn.us/water/tmdl/tmdl-draft.html>, the MPCA's TMDL web site. EPA sent MPCA comments on the draft TMDL, and the comments were adequately addressed in the final TMDL. No public comments were received during the TMDL public notice period.

EPA finds that the TMDL submitted by MPCA satisfies all requirements of 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.

Comments:

On October 27, 2010, EPA received the Clearwater River DO TMDL and a submittal letter dated October 19, 2010 signed by Paul Eger, Commissioner, addressed to Tinka Hyde, U.S. EPA, Region 5, Water Division. In the submittal letter, MPCA stated “I am pleased to submit the Upper Mississippi/Clearwater River Total Maximum Daily Load (TMDL) study for dissolved oxygen to the U.S. Environmental Protection Agency (EPA) for final approval.” The submittal letter included the names and locations of the waterbodies and the pollutants of concern.

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

### **13. Conclusion**

After a full and complete review, EPA finds that the TMDLs for CBOD, NBOD, and SOD for the Clearwater River satisfy all of the elements of an approvable TMDL. This decision document addresses **3** TMDLs in the Clearwater River as identified on Minnesota’s 2008 303(d) list (see Table 1 above).

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.