



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

REPLY TO THE ATTENTION OF:

WW-16J

SEP 28 2004

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

Dear Ms. Corrigan:

The United States Environmental Protection Agency (U.S. EPA) has conducted a complete review of the final Total Maximum Daily Load (TMDL) submitted for dissolved oxygen in the Lower Minnesota River, including supporting documentation and information. Based on this review, U.S. EPA has determined that Minnesota's TMDL for one segment of the Lower Minnesota River, river mile 22 to the mouth of the Mississippi River, 07020012-505, for one pollutant (phosphorus) addressing one impairment (dissolved oxygen) meets the requirements of Section 303(d) of the Clean Water Act and U.S. EPA's implementing regulations at 40 C.F.R. Part 130. Therefore, by this letter, U.S. EPA hereby approves one (1) TMDL for the Lower Minnesota River. The statutory and regulatory requirements, and U.S. EPA's review of Minnesota's compliance with each requirement, are described in the enclosed decision document.

We appreciate your hard work in this area and the submittal of the TMDL as required. If you have any questions, please contact Kevin Pierard, Chief of the Watersheds and Wetlands Branch, at 312-886-4448.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Lynn Traub".

Lynn Traub  
Director, Water Division

Enclosure

cc: Jeff Risberg, MPCA  
Larry Gunderson, MPCA

## **DECISION DOCUMENT FOR THE APPROVAL OF THE LOWER MINNESOTA RIVER DISSOLVED OXYGEN TOTAL MAXIMUM DAILY LOAD REPORT**

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, agricultural);
- (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:

The State submitted a TMDL for U.S. EPA review and approval for one reach of the Lower Minnesota River, assessment unit ID 07020012-505, river mile 22 to the mouth of the Mississippi River. The TMDL addresses impairments due to violations of the dissolved oxygen water quality standard. Additional impairments identified on the State's 2004 303(d) list for this reach include fecal coliform bacteria, turbidity, PCBs, and mercury. This TMDL is only addressing the dissolved oxygen impairment. The dissolved oxygen impairment results from high biochemical oxygen demand (BOD) caused by excess phosphorus during low flow conditions. The TMDL establishes the allowable levels of phosphorus for this reach that will result in the attainment of the dissolved oxygen water quality standard. Phosphorus is a nutrient which contributes to the growth of algae. Excessive phosphorus leads to the over production of algae. The decomposition of algae in turn produces a high biochemical oxygen demand which leads to low dissolved oxygen. The problem is magnified in this lower reach of the Minnesota River due to the fact that it's a dredged channel and has a slow moving current.

The Minnesota River Basin covers nearly 17,000 square miles, which is approximately 20% of Minnesota. Growth trends indicate a 2.5% increase in population within the Basin over the next 10 years with the larger communities experiencing growth while smaller rural communities decline in population and medium communities remaining the same. The largest land use, 79%, in the Basin is agriculture. The remaining land uses include forest, pasture, urban, rural, transportation roads, and water.

Nonpoint sources include runoff from agricultural lands and improperly treated waste from noncompliant septic systems. Phosphorus from fertilizers and manure is transported from agricultural sources to the river via runoff and tile lines. Runoff is considered a limited source during low flow periods but was still considered due to the occurrence of storm events during low flow conditions. Within the Basin the State estimates that there are approximately 155,000 septic systems. It was also estimated that nearly 20,000 of these are noncompliant. Contributions from a noncompliant septic system can range from 10 to 30 mg/l total phosphorus.

Point sources within the Basin include municipal and industrial dischargers operating under NPDES permits and stormwater runoff. The TMDL establishes WLA for 40 NPDES permitted dischargers within the Basin. Although there are many more permitted dischargers within the Basin these 40 have been identified as having over a de minimus threshold of lbs/year of phosphorus. Therefore, these 40 discharges have received WLAs for phosphorus. Stormwater runoff can also be a source of phosphorus in the Basin. Water flowing over impervious surfaces is an efficient transport mechanism for phosphorus containing materials such as grass clippings, lawn fertilizers, and leaves to the river. Similar to agricultural runoff, stormwater runoff is considered a limited source during low flow periods but was still considered because, even during dry periods storm systems move through the Basin causing localized runoff. When phosphorus enters the river it remains there, manifesting itself during the low flow conditions.

This TMDL accounts for future growth as explained in the TMDL document's discussion of reserve capacity found in Section 6.6. Based on growth projections for the Minnesota River Basin the daily discharges of municipal point sources that were used in the HSPF model were increased. The specific WLAs in Table 6.6. of the TMDL document reflect this increase. The larger municipal point sources already have a projected 20 year reserve capacity built into their permit allocations. The TMDL document also states that growth related increases in flow to existing point sources can tighten concentration effluent limits in their permits as a mechanism to maintain current WLAs.

The schedule of TMDL development on the State's 303(d) list reflects the State's priority ranking. The 303(d) list schedule targeted this TMDL for completion in 2003.

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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 anti-degradation 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:

All waters in the State of Minnesota are assigned classes. The classes are based on the suitability of that water for particular beneficial uses. The Minnesota Rules set forth water quality standards for each of the classes. The reach of the Minnesota River that this TMDL addresses is assigned the following classes: 2C, 3B, 3C, 4A, 4B, 5 and 6. The most stringent dissolved oxygen water quality standard applicable, as set forth in the Minnesota Rules, for these classes for this reach of the River is the Class 2C standards. The applicable Class 2C dissolved oxygen water quality standard is not less than 5 mg/l as a daily average year round [7050.0222, subp.5]. Compliance with this standard is required 50% of the days at which the flow of the receiving water is equal to the lowest consecutive 7-day flow with a once in ten year recurrence interval, i.e., 7Q10.

In order to meet this dissolved oxygen water quality standard, a past Waste Load Allocation Study for the Minnesota River conducted by the State determined that upstream sources of BOD needed to be reduced by 40%. This reduction resulted in a BOD concentration of 3.7 mg/l. Using this BOD target in the State's modeling efforts, it was determined that a phosphorus target of 0.131mg/l for the segment of the Minnesota River addressed in this TMDL would be needed. Establishing a water quality target for phosphorus is reasonable given the connection between the low dissolved oxygen conditions and excessive phosphorus. As previously discussed, excessive phosphorus causes excessive algae blooms. The death and decay of these algae blooms causes a high BOD. The high BOD causes a low dissolved oxygen condition in the River, especially during low flow conditions. Therefore, 0.131 mg/l phosphorus is established as the target for the pollutant of concern in this TMDL.

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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:

The loading capacity for the Lower Minnesota River, river mile 22 to the mouth of the Mississippi River, is 752 lb/day of phosphorus.

The State used the Hydrologic Simulation Program FORTTRAN (HSPF) model to simulate water quality based on watershed hydrology, land uses and modifications of land uses, and the amounts of phosphorus from various sources. The State ran numerous model runs in order to determine the sensitivity of the river to various inputs into the model. The various model runs considered low flow conditions however, the model was calibrated across all flow regimes to provide assurance that the river system was adequately explained. The model runs considered contributions of phosphorus from the following source categories: agriculture, noncompliant individual sewage treatment systems ( ISTS), under-treated communities, point sources, stormwater, and natural background sources. The model runs indicated large loadings from point sources during low flow conditions. In addition to point sources, agriculture, noncompliant ISTS, and stormwater discharges were sources identified which contribute phosphorus during low flow conditions.

As previously discussed the dissolved oxygen water quality standard applies at the 7Q10. Violations of the dissolved oxygen standard have occurred during low flow conditions. Therefore, the critical condition for this TMDL was low flow, specifically the 7Q10 flow was considered. The 7Q10 flow for the Minnesota River at Jordan was calculated to be 272 cubic



feet per second (cfs) using flow data from June through September from 1936 through 2001. The last 7Q10 flow occurred in 1988. For purposes of the modeling scenarios a critical low flow of August and September 1988 (61 days) was selected. The loading capacity was estimated through the modeling efforts for the 61 day critical period. However, a daily loading capacity was calculated for this TMDL since future periods of critical low flow may be shorter or longer than 61 days. Sections 5.11 and 6.3 of the TMDL document identify assumptions used in the modeling efforts to establish the 752 lb/day loading capacity.

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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 load allocation (LA) for the Lower Minnesota River, river mile 22 to the mouth of the Mississippi River, is 335.7 lb/day of phosphorus.

The LA was originally established through the modeling efforts for the entire 61 day critical flow period (20,480 lb/61 days) however, a daily LA was calculated. The load allocation is divided between the following nonpoint source categories: agricultural runoff, noncompliant ISTS, stormwater runoff that is not subject to NPDES permitting, and natural and background sources. Natural and background sources included contributions of phosphorus from wetlands, forests, grasslands, atmospheric deposition and stream bank and bluff erosion. The LA was determined with the assumption that noncompliant ISTS would be reduced by 90%. In the establishment of the LA no reduction was applied to existing agricultural runoff source contributions. The TMDL document considers positive impacts from agriculture through best management practices (BMP) that will not necessarily reduce the phosphorus loading to the Minnesota River but that will increase flow in the River. If BMPs are implemented that help recharge the groundwater during wetter periods instead of allowing runoff to occur there should be an increase in groundwater seeps during dry periods. This increase should increase base flow of the River thus minimizing the frequency and duration of low flow periods. In the establishment of the LA, stormwater not subject to NPDES permitted was assumed to be reduced by 20%. Daily LA for nonpoint sources are shown in the table below.

*Load Allocations by nonpoint source categories*

<i>CATEGORY OF NONPOINT SOURCE</i>	<i>TOTAL PHOSPHORUS LA FOR SUMMER LOW FLOW PERIOD (61 DAYS)</i>	<i>AVERAGE DAILY PHOSPHORUS LA FOR SUMMER LOW FLOW</i>
Agricultural runoff	10,907 lb/61 days	178.8 lb/day
nonpermitted stormwater	8,999 lb/61 days	147.5 lb/day
noncompliant ISTS	341 lb/61 days	5.6 lb/day
natural and background	233 lb/61 days	3.8 lb/day

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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 overall wasteload allocation (WLA) for the Lower Minnesota River, river mile 22 to the



mouth of the Mississippi River, is 416.2 lb/day of phosphorus for all point sources.

This allocation is divided between all the point sources as shown in the following table and also as shown in Tables 6.1 and 6.2 of the TMDL document. Categories of point sources include municipal and industrial NPDES permitted treatment plants. Table 6.6 of the TMDL document assigns specific WLA to 40 specific point sources determined not to have de minimus amounts of phosphorus according to the State's phosphorus strategy. Also included in the point source categories are NPDES stormwater sources which include MS4 permits, construction stormwater permits, and industrial stormwater permits. Table 6.9 of the TMDL document identifies specific WLA by watershed for permitted stormwater systems. The last category of point source that received a WLA was the under treated communities. Table 6.8 of the TMDL document identifies the future WLAs, by watershed, for communities currently with under treated waste which when these communities receive adequate treatment will be subject to the allocations.

*Overall Wasteload Allocations by point source categories*

<i>CATEGORY OF POINT SOURCE</i>	<i>TOTAL PHOSPHORUS WLA FOR SUMMER LOW FLOW PERIOD (61 DAYS)</i>	<i>AVERAGE DAILY PHOSPHORUS WLA FOR SUMMER LOW FLOW</i>
NPDES permitted point sources	23,258 lb/61 days	381.3 lb/day
NPDES Stormwater Sources	1,863 lb/61 days	30.5 lb/day
Under-treated Communities (potential future NPDES permits)	268 lb/61 days	4.4 lb/day

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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 MOS in this TMDL is considered to be implicit by using conservative assumptions in the modeling runs which established the allocations. As mentioned in the future growth discussion earlier in this document and in Section 6.6 of the TMDL document, the State accounted for future growth by increasing daily municipal discharges used in the HSPF model runs. The increase reflected a uniform shift in the discharge records so that peak storm events during critical conditions were raised to be at least 70% of the average wet weather design flow conditions. Using 70% is conservative because even during intense localized storm events most communities will not reach 70% of the average wet weather design flow. Therefore, this increased loading assumed a higher discharge during critical conditions across the entire 61 days. To demonstrate that this was conservative the State looked at 2003 flow records from the 40 facilities which were assigned specific WLAs and determined the 2003 load to be only 64% of the modeled allocation thus overestimating the WLA for point sources by approximately 129 lb/day of phosphorus. Since the State also considers this overestimation as a mechanism to provide allowance for future growth the State assumed only 50% of the overestimation (approximately 64 lb/day) supportive of the conservativeness of this assumption. The modeling efforts also included contributions from small communities with inadequate wastewater treatment, i.e., under treated communities. In calculating the allocations for these communities it was assumed that all future treatment facilities would discharge to surface water. The TMDL document states that of the 38 facilities identified at the beginning of the modeling efforts 18 have been corrected and only 5 are building wastewater treatment facilities. Looking at the corrective efforts currently underway the State concludes that assuming all under treated communities would discharge to surface waters as part of their corrective efforts was conservative.

Another factor contributing to the MOS, although not a specific conservative assumption in the modeling inputs was the reduction in load from agricultural runoff sources that was not accounted for in the LA. The State did not account for any reduction in load from agricultural runoff sources in the establishment of the LA. The current day existing load which was estimated in Scenario 1 of the model run was used as the specific allocation for agricultural runoff in the LA. However, when you compare the results of the phosphorus load for the critical condition (Scenario 7 of the model runs) to the current day existing load, the load during the critical condition is less by approximately 20 lb/day. Therefore, the State was conservative in assigning the LA by not taking into account the reduced load from agricultural runoff demonstrated by the modeling efforts.

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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:

This TMDL identifies the critical condition to be the summer low flow therefore, in order to account for the critical condition seasonal variation does not apply.

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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 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:

In order to meet the allocations established in this TMDL reductions of phosphorus loadings rely on both the NPDES permit program and voluntary reductions from nonpoint sources. Permits issued to NPDES permitted facilities will need to be consistent with the WLAs established in this TMDL. The regulatory nature of the NPDES permit program provides reasonable assurance that

the WLAs will be addressed.

Reasonable assurance that nonpoint source reductions will occur includes CWA § 319 awarded funding for blind tile intake projects in the Hawk Creek Watershed. Other nonpoint source demonstration projects in Chippewa River and Redwood River watersheds have received funding through CWA § 319. In 2002, the Greater Blue Earth River Watershed received funding to initiate several best management practices and educational outreach programs. The programs and BMPs implemented through this funding will add to the voluntary efforts being funded to improve water quality in the Minnesota River. In addition to funded programs, Clean Water Projects for the Redwood-Cottonwood watersheds and the Minnesota River Basin Plan have established phosphorus reduction goals. To aid in necessary reductions from ISTS the Minnesota Rules include acceptable designs of proper drainfields. Several of the counties in the Minnesota River Basin have maintenance and pumping programs in addition to point of sale inspections. Upon direction by the Minnesota Legislature the Minnesota Pollution Control Agency has prepared a plan which will bring 100% of systems into compliance in ten years. Another aspect of reasonable assurance for the nonpoint sources is the enrollment of 100,000 acres of riparian lands, most of which is under permanent easements, into the Conservation Reserve Enhancement Program (CREP).

U.S. EPA finds that the TMDL document adequately addresses this 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 State identified three aspects of a monitoring plan. Two of these aspects involve BMPs which will be addressed in an Implementation Plan which the State will develop after the approval of the TMDL. Continued monitoring of the Minnesota River at local monitoring stations will provide necessary data to track the effectiveness of the progress toward achieving water quality standards. The Implementation Plan developed by the State after the approval of this TMDL should provide additional plans for monitoring.

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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:

Section 8.0 of the TMDL document discusses the use of a watershed permit for phosphorus, a staged approach to permitting which would allow point to point trading and trading offsets, and revision of existing 1985 waste load allocation study which could lead to modifications of the WLA included in the TMDL. The State has presented various implementation options for the WLA included in the TMDL. Whatever NPDES permit mechanism the State uses, the NPDES permit must be consistent with the specific WLAs established in this TMDL. The approval of this TMDL is not an approval of any of the suggested permit mechanisms discussed in TMDL document. The State has identified some existing practices already utilized by nonpoint sources which can be built upon to help achieve the necessary LA in this TMDL.

U.S. EPA recognizes that the State has ideas for implementation and while U.S. EPA reviewed this information these implementation ideas did not form the basis of this approval decision.

## **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

Final TMDL Decision Document  
Lower Minnesota River Dissolved Oxygen TMDL  
Approval Date: September 28, 2004

defer its approval action until adequate public participation has been provided for, either by the State/Tribe or by EPA.

Comments:

The State conducted a formal public participation through a 30-day public comment period during which written comments could be submitted to the state for consideration and during which two public meetings were held. The draft TMDL report was on public notice from February 2 through March 18, 2004. The two public meetings were held on February 9 and 10, 2004. A meeting with the wastewater treatment facilities was also held on February 27, 2004. During this formal public participation eleven people commented on the draft TMDL report. The State included a Responsiveness Summary with the submittal of the TMDL document. This Responsiveness Summary provides a response from the State to the issues raised in the public comments received.

In addition to the formal public participation the State created a 45-person advisory committee. The advisory committee was comprised of people representing cities, industry, agriculture, commodity groups, counties, watershed projects, and environmental groups. Appendix E of the TMDL document provides a list of people participating on the advisory committee. The advisory committee held five meetings. The advisory committee made recommendations on the model runs in an effort to better define the problem and form a solution. Recommendations from the advisory committee specific to the model run that was used to form the allocations are presented in Sections 5 and 6, and Table 9.2 of the TMDL document.

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this 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:

The transmittal letter from Sheryl A. Corrigan, Commissioner, MPCA, to Jo Lynn Traub, Director, Water Division, U.S. EPA, R5 was dated May 19, 2004. The transmittal letter states



that the enclosed is a TMDL for final review and approval by U.S. EPA. The letter identifies that the enclosed TMDL is for the lower 22-mile segment of the Minnesota River which is impaired for dissolved oxygen. The letter also states the dissolved oxygen standard is not being met during low flow conditions due to high BOD and that the allocations in the TMDL will reduce BOD by reducing phosphorus which is the main cause of the high BOD. The letter states that achieving reductions identified in the TMDL will accelerate clean up efforts in the Minnesota River Basin. The letter also identified one aspect of the public participation that the State included in the development of the TMDL, i.e., an advisory committee comprised of 45 people representing cities, industry, agriculture, commodity groups, counties, watershed projects, and environmental groups.

U.S. EPA finds that the TMDL document submitted by the State satisfies the requirements of this element.

### 13. Conclusion

After a full and complete review, U.S. EPA finds that the TMDL for the Lower Minnesota River satisfies the elements of an approvable TMDL. This approval is for one (1) waterbody reach impaired for dissolved oxygen for a total of one (1) TMDL addressing one (1) impairment as identified on Minnesota's 2004 303(d) list.

<u>Waterbody Reach</u>	<u>Assessment Unit ID</u>	<u>Pollutant</u>	<u>Impairment</u>
Minnesota River; RM22 to Mississippi River	07020012-505	Phosphorus	dissolved oxygen

U.S. EPA's approval of this TMDL extends to the waterbody which is identified in this document and the TMDL with the exception of any portions of the waterbody that is 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 TMDL with respect to those portions of the water at this time. U.S. EPA, or eligible Indian Tribes, as appropriate, will retain responsibilities under Section 303(d) for those waters.