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

MAR 25 2009

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 United States Environmental Protection Agency has conducted a complete review of the final Total Maximum Daily Load (TMDL) for Crystal Lake, including supporting documentation and follow up information. Crystal Lake is located in southeastern Minnesota, in Hennepin County. The TMDL addresses the Aquatic Recreation Use impairment due to excessive phosphorus.

The TMDL meets the requirements of Section 303(d) of the Clean Water Act (CWA) and EPA's implementing regulations at 40 C.F.R. Part 130. Therefore, EPA hereby approves Minnesota's TMDL for phosphorus for Crystal Lake. 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 this TMDL and look forward to future TMDL submissions by the State of Minnesota. If you have any questions, please contact Mr. Kevin Pierard, Chief of the Watersheds and Wetlands Branch at 312-886-4448.

Sincerely,

Tinka G. Hyde
Director, Water Division

Enclosure
cc: Barb Peichel, MPCA
Jeff Risberg, MPCA

TMDL: Crystal Lake TMDL, Minnesota
Date:

DECISION DOCUMENT FOR THE CRYSTAL LAKE, MINNESOTA PHOSPHORUS 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 a nutrient TMDL for Crystal Lake in Hennepin County, Minnesota. By implementing measures to reduce nutrient loading, the TMDL will address impairment of the aquatic recreation beneficial use in the watershed. Table 1, below, identifies the waterbody segment covered by the TMDL Study as it appears on the Minnesota 2008 303(d) list. 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

Lake	DNR Lake #	Listing Year	Affected use	Pollutant or Stressor
Crystal Lake	27-0034-00	2002	Aquatic recreation	Nutrient/Eutrophication Biological Indicators

Crystal Lake is located in the City of Robbinsdale, Minnesota, in Hennepin County. The lake is 89 acres in size, and has an overall drainage area of 1237 acres (Table 2 below). Crystal Lake has no natural outlet; the City of Robbinsdale operates a lift station to pump water into the City of Minneapolis storm sewer system, which then discharges into Shingle Creek (Section 3.1 of the TMDL).

Table 2. Lake Characteristics of Crystal Lake (Table 3.1 of the TMDL Study).

Parameter	Crystal Lake
Surface Area (ac)	89
Average Depth (ft)	10.0
Maximum Depth (ft)	39
Volume (ac-ft)	937
Residence Time (years)	1
Littoral Area (ac)	64 (72%)
Watershed (ac) (cumulative)	1237

Topography and Land Use: The Crystal Lake watershed is mainly residential, with a number of homes on the lake itself (Section 3.2 of the TMDL). For the land use in the watershed, 67% is single-family residential, 6% commercial, 6% multi-family residential, 9% parks, and 6% water. Almost all of the inflow into Crystal lake is via storm sewers.

Fishing and boating are common on the lake. A boat launch is located on the south side of the lake, and several parks are along the shoreline. Over 70% of the lake is littoral (shallow), and there is abundant plant growth. However, some locations have excessive plant growth, and much of the plants are invasives (Section 3.6 of the TMDL).

Pollutant of concern: The pollutant of concern for this TMDL is phosphorus. Levels of phosphorus are above water quality targets, limiting all types of aquatic recreation, including

fishing and swimming. Excess phosphorus stimulates excessive plant growth (algae and nuisance plants/weeds). This enhanced plant growth reduces dissolved oxygen in the water when dead plant material decomposes and can cause other organisms to die. For informational purposes, the TMDL Study also includes water quality data and information for the nutrient indicators chlorophyll-a and Secchi depth. Chlorophyll-a is a primary pigment in aquatic algae. Chlorophyll-a levels correlate well with algal production. Secchi depth is an indicator for water clarity and quality and is measured by lowering a probe into the water until it can no longer be seen from the surface (Section 3.4.1 of the TMDL).

The lake has been sampled periodically for total phosphorus, chlorophyll-a and Secchi depth since 1986 (Sections 3 and 5 of the TMDL). The Shingle Creek Watershed Management Commission has conducted sampling as part of the Citizens Assisted Monitoring Program, and the City of Robbinsdale has also conducted sampling efforts. All sampling efforts have been from April 1-September 30th (the growing season). Results of the various sampling efforts show that nutrient levels peaked in the period from 1988-1997, and returned to more "normal" levels of approximately 100 µg/L. The summer levels of chlorophyll-a and Secchi depth followed this trend (Figures 3.4, 3.5, and 3.6 of the TMDL). The sampling also indicates that phosphorus levels are also high during dryer periods, suggesting that phosphorus is being released from sediments in the lake.

For the TMDL, monitoring data up to 2003 and modeling were used to estimate current phosphorus loadings to the lakes. Detailed information regarding water quality monitoring and assessment can be found in Appendix A of the TMDL.

Pollutant sources: Sources identified in the TMDL report as contributing to the nutrient impairment include stormwater run-off, and internal phosphorus release. The only point sources in the watershed are the MS4 permits for the cities of Minneapolis and Robbinsdale, and Hennepin County.

Future growth trends: As stated in Section 7.5 of the TMDL, future growth will not affect this TMDL. The watershed for Crystal Lake is almost entirely built out, and no new growth is expected.

EPA finds that the TMDL document 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 2.0 of the TMDL Study describes designated uses and numeric criteria applicable to this watershed.

Use Designation: Crystal Lake is classified as a Class 2B water (MN. R. 7050.0430). The designated use addressed by this TMDL is aquatic recreation 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 nutrients that limit the quantity of nutrients entering waters (Table 3 below). MN R. 7050.0222(4) defines the numeric criteria, based upon ecoregions. Crystal Lake is classified by MPCA as a deep lake in the North Central Hardwood Forest ecoregion (Section 2.2 of the TMDL). Lakes are to meet either the phosphorus target or the Chlorophyll-a and Secchi disk target. The applicable criteria are:

Table 3. Applicable numeric criteria for Crystal Lake

Parameter	**Criteria**
Phosphorus concentration (µg/L)	40
Chlorophyll-a concentration (µg/L)	14
Secchi Disk transparency (meters)	>1.4

Targets:
To achieve the designated use and the applicable eutrophication criteria, MPCA selected the total phosphorus number (40 µg/L) as the primary target of the TMDL (Section 2.0 of the TMDL).

EPA finds that the TMDL document 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 steam 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:
Modeling summary: The loading capacity determination used for Crystal Lake is based on three models, the Storm Water Management Model (SWMM), Program for Predicting Polluting Particle Passage through Pits, Puddles, and Ponds (P8) and BATHTUB (Section 6 of the TMDL). Watershed hydraulics (flow) and runoff volume modeling was completed using SWMM. The SWMM model was calibrated using data gathered during the development of nearby TMDL efforts, specifically the Shingle Creek chloride TMDL. The P8 model was used to determine the pollutant load (phosphorus) contained in the flows modeled in the SWMM model. For these models, data from 1992-2003 were used.

After the loading rates were determined, the BATHTUB model was applied. BATHTUB models apply a series of empirical equations derived from assessments of lake data and perform steady state water and nutrient calculations based on lake morphometry and tributary inputs. The BATHTUB model requires fairly simple inputs to predict phosphorus loading. The model accounts for pollutant transport, sedimentation, and nutrient cycling. The BATHTUB model was modified to account for the internal loading of phosphorus in the lake. The internal load was calculated by two methods, mass-balance and area-weighted factors. Section 6.3.3.1 discusses the two methods, and shows the results of the two methods to be very similar. For this TMDL, MPCA uses an average internal load of 129 kg/y.

The results of the BATHTUB model indicate that watershed and internal loads are significant for Crystal Lake. MPCA did calculate an atmospheric deposition load, but that load is very minor (Section 6.3.2). Two years were modeled; 2001 and 2003. MPCA chose these years due to the available data for calibration of the model. Predicted vs. monitored data shows generally good correlation (Table 6.4 of the TMDL).

Loading Capacity: The loading capacity developed to meet the phosphorus criteria of 40 µg/l for the lake is **0.28** kg/day and is presented in Table 4 below. The loading capacity is the combination of the wasteload allocation, load allocation, and margin of safety. Thus, the loading capacity is equal to the TMDL assigned for the waterbody. For this study, MPCA averaged the loads from 2001 and 2003, to determine an average precipitation year to determine the loading capacity.

Table 4. TMDL for Total Phosphorus Expressed as Daily Loads for Crystal Lake (Table 7.2 of TMDL Study).

Lake	Wasteload Allocation (kg/day)	Load Allocation (kg/day)	Margin of Safety	Total Phosphorus TMDL (kg/day)
Crystal Lake	0.22	0.06	Implicit	0.28

Critical conditions: The critical condition for Crystal Lake is the summer growing season for an average precipitation year (Section 7.1.2 of the TMDL). Excessive nutrient problems such as algal blooms and fish kills are most prevalent in Minnesota during the summer recreational season (June through September). The numeric targets developed by MPCA focused on summer season as the critical condition. The annual precipitation conditions are based on actual precipitation received during the monitoring period.

EPA finds that the TMDL document 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:
Load allocation for the lake was determined to be **0.06** kg/day. To determine the LA, MPCA calculated the load for the point sources (Section 5 below) and subtracted that from the total loading capacity as calculated in Section 3 above (Section 7.1.1 of the TMDL).

MPCA did refine the LA further. Modeling results show that internal loading contributes a significant load to the lake. The BATHTUB model was used to determine the internal load reduction needed to achieve the water quality target. A LA of 13 kg/y (0.03 kg/d) was assigned by MPCA to the internal load. Atmospheric loading was also calculated, based upon statewide data (Section 6.3.2 of the TMDL). The LA for the atmospheric deposition of phosphorus was calculated to be 10 kg/y (0.03 kg/d).

EPA finds that the TMDL document 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 Wasteload Allocation (WLA) is discussed in Section 7.1.3 of the TMDL. The only point sources identified in the watershed are three MS4 permits; City of Minneapolis (MM40061018), City of Robbinsdale (MS400046) and Hennepin County (MS400138). The WLA is based upon the watershed load calculated from the P8 model, averaged between the two model years of 2001 and 2003. The WLA is a gross allocation for the three permits, and is **0.22** kg/day.

EPA finds that the TMDL document 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 TMDL for Crystal Lake uses an implicit margin of safety (MOS), based on conservative modeling assumptions (Section 7.4 of the TMDL). The main assumption is the use of a low sedimentation rate in the Canfield-Bachman model. MPCA believes that sediment and the

attached phosphorus were modeled to settle out of the water at a lower rate than is found in most Minnesota lakes. Much of the buried phosphorus will not be available for resuspension and use as a nutrient. The model therefore overestimates the phosphorus concentration in the lake, and correspondingly overestimates the reductions needed to achieve the WQS. In addition, the P8 model did not account for the use of stormwater ponds and wetlands in the watershed, which will reduce the phosphorus that enters Crystal Lake (Section 6.1 of the TMDL).

EPA finds that the TMDL document 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 TMDL by using several years of data, and including wet and dry years (based upon precipitation records) (Section 7.3 of the TMDL). The implementation activities discussed by MPCA include best management practices (BMPs) that will address conditions that the modeling efforts considered the most significant in adding phosphorus loads to the lake (Section 9 of the TMDL).

EPA finds that the TMDL document 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 detail in Section 10 of the TMDL Study. A summary is provided below:

Watershed Management: The Shingle Creek Watershed Management Commission (SCWMC) was formed in 1984 under Minnesota state authority. The Commission works with the local governments to determine capital improvements, set targets/standards for various activities, and assess funding needs. The Commission has developed a Second Generation 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.

NPDES MS4 Permits: The entire watershed is covered under NPDES regulation and Minnesota's General Permit requiring MS4s to amend their NPDES Storm Water Pollution Prevention Programs (SWPPPs) to ensure consistency with applicable TMDL WLA requirements.

EPA finds that the TMDL document 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:
Regular bi-weekly monitoring of Crystal Lake from April-October will continue as identified in the watershed plan (Section 10.4.2 of the TMDL). The SCWMC has developed a schedule of monitoring activities in the latest Water Quality Plan.

EPA finds that the TMDL document 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 submitted TMDL Study contained 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 will be finalized by MPCA upon approval of the Crystal Lake TMDL. Based on the phosphorus loading reduction estimates provided in Section 7 of the TMDL Study, the final TMDL Implementation Plan will provide detailed plans for nutrient reductions. Potential activities, identified by MPCA, for controlling nutrients in Crystal Lake are summarized below.

Internal Loading Reduction Strategies
- Rough fish management
- Aquatic Plant Management
- Alum Treatments
- Hypolimnetic withdrawal or aeration

External Loading Reduction Strategies
- Improvements during re-development
- Increase infiltration
- Improved street sweeping
- Retrofit BMPs
- Shoreline restoration

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 Crystal Lake TMDL project was administered locally through the Shingle Creek Watershed Management Commission (Section 8 of the TMDL). A technical advisory committee was established for the TMDL Study in order to involve interested stakeholders. The committee included local cities, Minnesota DNR, the Metropolitan Council, the USGS, and MPCA. All meetings were open to the public. The committee held meetings to discuss watershed TMDL efforts, including the Crystal Lake TMDL Study, on December 8, 2005, February 10, 2006, March 9, 2006, and June 27, 2007. An open house was held on the TMDL on August 14, 2008.

MPCA placed the Draft Crystal Lake TMDL on public notice from November 24, 2008 to December 24, 2008, 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. One set of comments was received during the TMDL public notice period. Public comments were addressed appropriately by MPCA.

EPA finds that the TMDL document 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 March 5, 2009, EPA received the Crystal Lake TMDL, and a submittal letter dated February 26, 2008, 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 Crystal Lake Total Maximum Daily Load (TMDL) study for excess nutrients to the U.S. Environmental Protection Agency for final approval". The submittal letter included the names and locations of the waterbodies and the pollutants of concern.

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

13. Conclusion

After a full and complete review, EPA finds that the phosphorus TMDL for Crystal Lake satisfies all of the elements of an approvable TMDL. This decision document addresses **1** TMDL for **1** waterbody segment as identified on Minnesota's 2008 303(d) list (see table below).

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.

Reach	MDNR Lake Assessment Unit ID	Affected use	TMDL Pollutant
Crystal Lake	27-0034-00	Aquatic recreation	Total Phosphorus