We all know what needs to be done. It is not right to let anyone destroy the lakes.

thanks,

Darrell Ehlers
Dear Mr. Davis:

As a resident of Lake Crystal living on Crystal Lake I am very excited to hear about the TMDL report. The residents of Lake Crystal have known for a long time that the lake is in trouble. As a member of the Crystal Loon Lake Association, we have tried to make the lake healthy. We can only do so much keeping the aeration system going to keep the fish alive in the winter, but the problem with the nutrients flowing into the lake is beyond what our small organization can tackle. Reading the excess levels of nutrients in the lake was shocking to say the least.

As far as the action to take, please do everything you can to return the lake to healthy levels and in a way that it will be maintained forever. I realize that it took many years to get it in this condition, and that it will take many years to return it to what it was. I would hate to see all of the fish killed off if there is another way to do it. The fishing is just now returning to what it was before the winter kill a few years ago. I would like to see it dredged to deepen it like it used to be and get rid of the soft sediment that has settled at the bottom. Where we are on the lake you can’t even walk into the water without sinking in sludge.

I would like to see the lake back to “unusual brilliancy and crystal purity of the waters” as stated in the history section of the report. I would like to know that we can use the lake recreationally, and that our dogs can go in to water and be safe. Someday, I would like to be able to take my children swimming in the lake, and know that they are in pure water, and not runoff from the area fields and storm sewers.

Thank you for taking action on this matter,
Kelly Fleming
RE: The Crystal Lake draft Excess Nutrient TMDL Study.

Mr. Davis:

The undersigned petitioners include residents, landowners and farmers in the Crystal Lake watershed and the surrounding area. We support the long term objective of improving water quality, and are concerned that the proposed Crystal Lake Excess Nutrient TMDL Study does not achieve this objective. Further, we are concerned that inadequate understanding of the cause and effect relationships between natural and man-induced water quality impacts will lead to misdirection of scarce resources. As local stakeholders, we have an interest in the protection and management of local soil and water resources, including Crystal Lake.

Matters of Concern

The undersigned petitioners find that estimated monitoring data has been inserted into the report on page 31 and should be removed. Only real monitoring data should be published and used in this TMDL report. On page 51 the references for atmospheric deposition are erroneously reported as .3 kg per square kilometer per year. The actual reference is .3 -.4 kg/ha/ha/year for the eco-region. This is a difference of 100 fold. It is likely that these technical errors will have a significant impact on the model output used in the report.

The petitioners also find that the draft Crystal Lake Excess Nutrient TMDL report fails to properly account for “natural background” levels as required by the Minnesota Clean Water Legacy Act (CWLA) (MS 114D.15, subdivision 10); as well as, the Natural Water Quality section (7050.0170) of the MN Chapter 7050 rules. “Where background levels exceed applicable standards, the background levels may be used as the standards for controlling the addition of the same pollutants from point or nonpoint source discharges in place of the standards.”

The CWLA (MS 114D.15, subdivision 10) states that “Natural background means characteristics of the water body resulting from the multiplicity of factors in nature, including climate and ecosystem dynamics, that affect the physical, chemical, or biological conditions in a water body, but does not include measurable and distinguishable pollution that is attributable to human activity or influence.” This definition of Natural Background was developed and agreed to by the G-40 Stakeholder group that provided substantial input for the Minnesota Clean Water Legacy Act legislation. The G-40 included representatives from state agencies, including the Minnesota pollution Control Agency (MPCA), Agriculture Groups and Environmental groups.
The natural background definition clearly indicates non-point sources must be distinguishable and measurable to be given an allocation other than "natural background". It is unreasonable to try to "fix" sources that can't be identified and quantified as to anything other than Mother Nature's contributions. Measurable and distinguishable evidence that establishes the source of the Load Allocation being attributable to human activity or influence was not provided in this TMDL. In fact, the report indicates that the amount of Total Phosphorus measured (2007-2009) coming from the mostly agricultural portion of County Ditch 56 equals .182 lbs/acre/year. This compares with atmospheric deposition rates of .27 - .36 lbs/acre/year for this EPA Eco-region (Barr Engineering, 2004). In addition, the Least Impacted watershed reference standard for this Eco-region is .67 lbs/acre/year (Heiskary & Wilson, 1990). Least Impacted reference standards were developed in an effort to estimate natural background contributions for an Eco-region. By either comparison the mostly agricultural (9125 acre) portion of the Crystal Lake watershed is well below reasonable "natural background" levels.

The .182 lbs/acre/year coming from the agricultural portion of the watershed is low relative to the atmospheric deposition rate and the Eco-region reference standard rate. However, the actual amount of the .182 lbs/acre/year that will impact water quality is, in effect, lower than this amount. Numerous studies have shown that the mineral fraction of the Total Suspended Solids (TSS) will adsorb the soluble phosphorus in the water making it unavailable for algae growth (Latterel, Holt & Timmons 1971). According to the 2007-2009 monitoring data on County Ditch 56, 68-82% of the TSS measured was the mineral fraction which can adsorb the soluble phosphorus making it unavailable and about 30% of the Total Phosphorus was already in the non-soluble form.

The TMDL report indicates that the daily load of Phosphorus to Crystal Lake needs to be less than 5.44 lbs/day in order to meet the existing standards. According to the models used to estimate the daily internal loading of Phosphorus, the daily internal loading ranged from 31% to 329% of the TMDL allocation. Internal loading is typically the greatest during the summer months, which is during the time when the impairments are greatest. It is very apparent that existing standards can not be met, due to the fact that the internal phosphorus loading by itself exceeds the standard most of the time. There was no evidence provided in the report to indicate that the internal phosphorus loading is not part of the natural background loading.

It is very clear, from the limited data presented in the draft Crystal Lake Excess Nutrient TMDL report, that the natural background component of the Phosphorus loading to the lake is the primary driver of phosphorus impairment. In order to reduce the phosphorus loading to meet the existing standard the internal loading will have to be significantly reduced. Dredging the sediment out of the lake is likely the most cost effective method for accomplishing this task; however, this TMDL study has not addressed this likely solution as part of the implementation.

The petitioners ask that the MPCA properly determine the "natural background" levels of the load allocation, using measurable and distinguishable evidence as is required by the Minnesota Clean Water Legacy Act. In addition, the MPCA should review the appropriateness of the existing standard and develop a plan that provides reasonable assurance that the water quality of Crystal Lake can be improved by dealing with the high internal loading. In addition, the petitioners ask that the technical errors which have been cited above be corrected and be rewritten to account for the differences.
Proposed Actions:
The undersigned petitioners request that MPCA hold a contested case hearing in this matter.

The MPCA must grant a party's petition to hold a contested case hearing if it finds that:

A. There is a material issue of fact in dispute concerning the matter pending before the agency;
B. The agency has the jurisdiction to make a determination on the disputed material issue of fact; and
C. There is a reasonable basis underlying the disputed material issue of fact or fact such that the holding of a contested case hearing would allow the introduction of information that would aid the agency in resolving the disputed facts in making a final decision on the matter. Minn. R. 7000.1900, subpart 1.

Issues to be addressed by contested case hearing:
The undersigned petitioners request the MPCA address the legal requirements of the Crystal Lake Excess Nutrient TMDL report under the US Clean Water Act and the Minnesota Clean Water Legacy Act, including the load allocations, evaluation of natural background conditions and natural background standards.

Witnesses in this matter shall include the undersigned witnesses and other expert witnesses to be named later.

Publications, references and studies to be introduced include available data from US EPA Storet system, US EPA and MPCA Impaired Waters - TMDL protocols and various scientific studies and reports.

The undersigned petitioners estimate that it will require one full day to adequately address these matters.

Request for information:
1. In preparing for contested case, and pursuant to the Minnesota Government Data Practices Act (MS 13.01) the undersigned petitioners request MPCA provide an opportunity at the earliest convenient date to inspect and review the following data connected with the development of the Crystal Lake Excess Nutrient TMDL report.

2. All documents, final or drafts, regarding scope of work in preparing the Crystal Lake Excess Nutrient TMDL report.

3. All documents regarding the Crystal Lake Excess Nutrient TMDL report and work plan, including final and draft documents.

4. All technical, scientific, monitoring, laboratory testing data and Quality Control and Quality Assurance protocols, including electronic data (i.e. spreadsheets and data stored in electronic media) compiled or used in the development the Crystal Lake Excess Nutrient TMDL report.

5. Software utilized to analyze electronic data, including any models used in the development of the load and waste load allocations used to develop the Crystal Lake Excess Nutrient TMDL report.
6. Any and all documents including staff memorandums, emails or other correspondence relating to the technical, scientific, monitoring, laboratory testing data and Quality Control and Quality Assurance protocols used to develop the Crystal Lake Excess Nutrient TMDL report.

In accordance with Minn. Stat. 13.03, Subdivision 3, the petitioners further request that the MPCA designate one or more individuals to explain the meaning of all data that is produced.

We respectfully request that the MPCA to provide the information herein requested at the earliest convenient opportunity. Please contact ( ) at (507) 835-5605 to make the necessary arrangements.

Greg Mikkelson

address

Dean McSperry

Robert Miller
September 26, 2012

Paul Davis
Minnesota Pollution Control Agency
12 Civic Center Plaza, Suite 2165
Mankato, MN 56001

Re: Draft Crystal Lake Nutrient TMDL
Comments of Minnesota Center for Environmental Advocacy

Thank you for the opportunity to submit these comments on behalf of the Minnesota Center for Environmental Advocacy on the draft TMDL for Crystal Lake.

MCEA is a Minnesota non-profit environmental organization whose mission is to use law, science and research to preserve and protect Minnesota’s wildlife, natural resources and the health of its people. MCEA has statewide membership. MCEA has been concerned about impairment of Minnesota’s waters from point and nonpoint source discharges for a number of years, has made impaired waters a significant component of its work, and has participated in a number of related policy and legal matters.

The draft Crystal Lake TMDL cannot be approved in its current form because it is not calculated to meet the water quality standards and lacks a margin of safety, both requirements of federal law. In addition, the draft TMDL lacks source assessment, has an insufficient monitoring plan, and has insufficient reasonable assurance of reductions.

The TMDL Is Not Calculated to Meet Water Quality Standards

TMDLs must “be established at a level necessary to implement the applicable water quality standards.”¹ Minnesota’s eutrophication standards for Class 2 lakes include a causal variable, phosphorus, and two response variables, chlorophyll-a and Secchi depth.² Phosphorus and at least one of the two response variables must be met for the water quality standard to be achieved.³ EPA has confirmed in its comments on draft TMDLs that TMDLs must meet these criteria.⁴ The draft TMDL accurately identifies the water quality criteria that must be met.⁵

---

² Minn. R. 7050.0222 subp. 4.
³ Id. at subp. 3a(B).
⁴ Dave Werbach, U.S. EPA Region V, “Comments on the Revised Draft Lake Winona TMDL,” Nov. 15, 2010 (“the total phosphorus criteria and either chl-a or Secchi depth criteria had to be met . . . TMDLs have to meet the approved WQSs”).
⁵ Draft TMDL at 24.
The TMDL contractors used the BATHTUB approach to calculate the maximum phosphorus load, running a first-order phosphorus model and the Canfield-Bachmann model. Neither model accurately predicted the phosphorus or chlorophyll-a levels resulting from existing conditions (instead predicting much lower levels).\(^6\)

Rather than conduct a source assessment to more accurately estimate external watershed loading, the TMDL contractors assume that all of the missing phosphorus must result from internal loading.\(^7\) Even after adding a significant internal load, neither model accurately predicts the observed chlorophyll-a concentration. Both models predict almost 30 µg/l less chlorophyll-a than observed conditions.\(^8\)

The TMDL contractors then modeled a reduced phosphorus load to meet the 90 µg/l criterion. Table 4.7D in the TMDL identifies “Crystal Lake modeled to the water quality standard.”\(^9\) It shows the phosphorus criterion of 90 µg/l being met, but not the chlorophyll-a or Secchi depth. Because neither response variable is met, the lake would not meet water quality standards.

<table>
<thead>
<tr>
<th></th>
<th>Water Quality Standard</th>
<th>Lake conditions modeled to TP standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphorus</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Chlorophyll-a</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>Secchi depth</td>
<td>0.7</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Unless the TMDL is calculated to meet the phosphorus criterion and one or more response criterion, and the calculation is built on reasonably accurate modeling, it cannot be approved.

**Absence of Source Assessment**

Source assessment is a component required by EPA in its review of TMDLs. EPA’s Protocol for Developing Nutrient TMDLs\(^10\) is clear on the importance of source assessment in supporting the allocations for a TMDL, and provides detail on how to conduct the assessment:

The source assessment is needed to evaluate the type, magnitude, timing, and location of loading to an impaired waterbody. It further describes the sources initially identified during the problem identification. The source assessment determines nutrient inputs, measured as loads or concentrations, that will support the formulation of the load allocation and the wasteload allocation of the TMDL. ...Once the sources within the watershed have been inventoried and mapped, each activity should be evaluated to determine its individual pollutant generating mechanisms, processes, and potential magnitude.

---

\(^6\) *Id.* at 42.

\(^7\) *Id.* at 42-43.

\(^8\) *Id.* at 43.

\(^9\) *Id.* at 44.

The draft TMDL allocates a lump sum to nonpoint sources generally. In describing the load allocation, it identifies several components: natural background, internal loading, atmospheric loading, urban stormwater, septic systems, and the primary tributary to Crystal Lake. No description is given of locations or the magnitudes of the source categories identified. The sources to the tributary (which is a method of transporting phosphorus rather than a source itself) are never identified. No category appears to include the watersheds of Mills and Loon Lakes, which flow to Crystal Lake. The implementation section later suggests that numerous agricultural BMPs will help achieve the target load. Agriculture is not identified as a component of the load allocation in the TMDL.

The lack of source assessment makes it impossible to determine the validity of either the load allocation or wasteload allocation, and prevents efficient implementation of restoration activities. The final TMDL should identify and describe the categories, locations, and magnitudes of the sources of the pollution loading. MCEA requests that the MPCA review any available source assessment data that would provide a solid basis for the load allocation in the TMDL, and then revise the load allocation and implementation framework as necessary.

### Insufficient Margin of Safety

The Clean Water Act requires TMDLs to contain a margin of safety to account for uncertainty. As discussed above, the modeled load was not expected to lead to either response variable meeting the water quality standard and was based on inaccurate predictions that would yield chlorophyll-a even further in excess of the standard. As such, there appears to be no margin of safety.

Again, the TMDL models generated significantly different results. The TMDL averages the two conflicting outcomes without explaining why the average of model outcomes provides an accurate result. The TMDL reduces this averaged result by ten percent to account for the margin of safety, then assigns the remaining loads totaling 900 kg to the wasteload and load allocations. If the first-order model is accurate (at 791 kg/year), even the phosphorus criterion would not be met even after the required load reductions are achieved. The allocated total is 109 pounds greater than the load predicted to meet the criterion in the first-order model.

<table>
<thead>
<tr>
<th>First-order model</th>
<th>791 kg/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canfield-Bachmann model</td>
<td>1,208.9 kg/year</td>
</tr>
<tr>
<td>Average of models</td>
<td>1,000 kg/year</td>
</tr>
<tr>
<td>WLA + LA</td>
<td>900 kg/year</td>
</tr>
</tbody>
</table>

---

11 Draft TMDL at 50.
12 Id. at 55.
13 See id. at 48-50.
15 Draft TMDL at 45, 51.
The final TMDL must provide a margin of safety that is demonstrated to account for uncertainties, and that is above and beyond the reductions needed to meet the phosphorus and either chlorophyll-a or Secchi depth criteria.

**Insufficient Monitoring Plan**

EPA and MPCA provide guidance for monitoring plans, describing three elements for a lake TMDL monitoring plan as resource monitoring for impairment, implementation adoption, and implementation effectiveness. The TMDL accurately identifies these three elements of a monitoring plan.

The draft TMDL proceeds to ignore its own statement of elements. It states that “Existing programs and projects can often be leveraged for monitoring.” It lists two such programs. Nowhere does the TMDL identify whether these programs that “can be leveraged” will actually conduct monitoring of any sort in the watershed. Even if the TMDL did identify them as operating within the watershed, the descriptions of the programs do not include implementation adoption or effectiveness monitoring.

Without more complete monitoring information, it will be impossible to determine whether implementation resources are being used effectively. Without evaluation of BMP effectiveness, the TMDL provides no assurance of correction if the responsible parties do not take implementation actions or if actions fail to achieve the target load.

The final TMDL should contain a monitoring plan that includes ambient water quality monitoring, implementation monitoring and implementation effectiveness evaluation.

**Lack of Reasonable Assurance of Nonpoint Source Reductions**

Reasonable assurance is a required element when wasteload allocations depend on successful implementation of nonpoint source load reductions. The TMDL assigns a wasteload to construction stormwater calculated based on its potential discharge and assumes reductions from nonpoint sources. MPCA recommends that “some additional provision in the TMDL, such as a schedule and description of the implementation mechanisms for nonpoint source control measures, is needed to provide reasonable assurance that the nonpoint source measures will achieve the expected load reductions.” EPA states that the measures must not only be met, but “will be implemented and maintained.” Such delivery systems should have adequate funding.

---

16 Protocol for Developing Sediment TMDLs, U.S. EPA at 7-7 (1999); Lake Nutrient TMDL Protocols and Submittal Requirements, MPCA, Mar. 2007, at 49.
17 Draft TMDL at 57.
18 Id.
20 Draft TMDL at 42 (“external sources of phosphorus will need to be reduced to attain long-term improvements to Crystal Lake water quality”).
The TMDL does not provide these assurances. It notes that “a wide variety of management practices will need to be considered and implemented.” Nowhere does it identify what those practices are, where they should occur, who will implement them, who will oversee the implementation, or how they will be evaluated. There is no record that the responsible authorities have had success in implementing the practices. The TMDL does not identify any regulatory or nonregulatory programs to ensure nonpoint source reductions, lacks a schedule for nonpoint source reductions, and lacks a reliable delivery system supported by adequate funding.

MCEA recommends that the TMDL include additional detail of necessary steps and assurances of reductions from nonpoint sources to ensure that the reductions necessary to meet water quality standards will be achieved.

Conclusion

MCEA urges the MPCA to carefully review the issues above and make any necessary additions and changes to the draft TMDLs before adopting and submitting them to the EPA for final approval. Please feel free to contact us should you have any questions with respect to MCEA’s comments. Thank you for the opportunity to comment.

Sincerely,

Kris Sigford
Water Quality Director

Michael Schmidt
Water Quality Associate

---

23 Reasonable Assurance for Sources for Which an NPDES Permit is Not Required, 65 Fed Reg. 43599-43600 (July 13, 2000).
24 Draft TMDL at 58.
September 26, 2012

Paul Davis, Project Manager
Minnesota Pollution Control Agency
12 Civic Center Plaza, Suite 2165
Mankato MN 56001

Dear Mr. Davis:

The Minnesota Corn Growers Association (MCGA) appreciates this opportunity to comment on behalf of over 6,000 farmer members on the draft Crystal Lake Excess Nutrient TMDL. Minnesota farmers are active clean water advocates, eager to engage in a productive discussion at every level from the determination of designated uses and standards to the identification of pollution sources and the development of the implementation plan. We offer the following comments and questions in order to help the MPCA provide a more meaningful pollution source assessment as stakeholders begin the process of developing an implementation plan to address this impairment.

First, while it is true that CD 56 allowed additional acres to be farmed and increased productivity and that the ditch continues to provide economic benefits to agriculture, it is also true that the city of Lake Crystal also benefited from the construction of CD 56 and continues to do so. Homeowners do not want wet basements any more than farmers want drowned crops.

Second, we see the issue of the future of CRP as a very minor concern. CRP enrollments are related to commodity prices and the net profitability of crop production, but we believe that 50-75% of the acres currently enrolled in CRP could be farmed with minimal environmental impacts due to changes in technology and tillage systems that have occurred during the past three decades. We would ask the TMDL author to reword this passage to encourage the use of good farming practices throughout the watershed, including on those acres coming back into production from CRP.

Third, the soils discussion in section 2.3 should be reworded to clearly state that the nutrient addressed in this report is phosphorus. Use of the term “nutrients” is too broad given the dramatic differences between phosphorus and nitrogen cycles. The reference to “leaked” nutrients should also be omitted,
since the original use of the term referred to nitrate nitrogen, or changed to reflect that drained agricultural systems contribute significantly less total phosphorus than undrained agricultural systems, despite the very small amount of dissolved phosphorus contained in tile water. We would suggest that the “specific impacts of this drainage are difficult to quantify within the context of this TMDL” is because the referenced research is not applicable to a phosphorus TMDL and should be deleted.

Fourth, and relating to the third issue, is the discussion of phosphorus and drainage on page 31 of the draft report. The data given from monitoring of CD 56 show phosphorus levels that are, on average, below the 50% quartile of minimally impacted streams in the ecoregion (Regionalization of Minnesota’s Rivers for Application of River Nutrient Criteria, MPCA). Soil testing and precision application of fertilizers is important, but not critical. Such exaggeration is not helpful.

Fifth, the fourth paragraph on page 39 is unclear. The model prediction should be reported directly in phosphorus concentrations, for the sake of consistency. The subsequent discussion of livestock in the watershed, presented as though it represents the “source for which we have not accounted”, is flawed in that the proper use of manure as a crop fertilizer does not represent a new source, as the analysis already includes fertilized cropland. It is much more likely that your unidentified sources is a combination of urban runoff, which appears to be underestimated based on monitoring of other urban areas (Minneapolis Parks Board), and internal loading.

Sixth, we note that that load allocation is not subdivided into various land use categories because “research is not sufficient”. This is very important to stakeholders who will work together to develop an implementation plan, since the success of implementing BMPs hinges on correct identification of sources.

Seventh, we note that many of the BMPs listed for agriculture are already in place. Analysis of the extent to which these practices are in place should be a top priority during development of the implementation plan. How will progress toward further implementation be determined? Will producers be given “credit” for practices already adopted? What is the timeline for implementation? Will MPCA re-evaluate the water quality standard for attainability? When? These are the unanswered questions that leave the TMDL subject to broad interpretation and scrutiny.

Thank you for the opportunity to provide comments. Please feel free to contact the MCGA office for further discussion.

Best regards,

John Mages, President
Minnesota Corn Growers Association
Minnesota Pheasants Inc. of Blue Earth County (MPI) is currently discussing options with the US Fish & Wildlife and MN DNR representatives to formulate a plan that may directly impact the Crystal Lake project. We concur with the findings of the report and wish to offer alternatives once they have been fully developed.

Minnesota Pheasants Inc., Blue Earth County Chapter is a 501(c)3 non-profit organization and was incorporated in February of 1987. The purpose of the corporation is the development and maintenance of wildlife and wildlife habitat, to include the acquisition of real or personal property for that purpose. Since our inception, through direct and cooperative efforts, the Blue Earth County Chapter of Minnesota Pheasants Inc., has been directly involved with the acquisition and/or restoration of nearly 1,300 acres. Our total commitment to land acquisitions alone is nearly $800,000.00. All right here in Blue Earth County!

We undertake these objectives through a variety of methods, the most common being:

* Direct acquisition of real property utilizing Minnesota Pheasants dollars, grants, cooperative efforts with Federal and State governmental entities and cooperative collaborations with like-minded sportsman’s groups or wildlife oriented organizations.
* Direct restoration efforts utilizing Minnesota Pheasants funding, equipment and volunteer labor (including in-kind labor). Similarly, we may partner with other organizations in habitat restoration projects utilizing funds and/or equipment and labor.
Indirect restoration projects through donations or in-kind labor with Federal and State governmental entities.

Please feel free to contact us regarding questions at MNPheasantsBE@Gmail.com

If you’d like to contact us by regular mail:
Minnesota Pheasants Inc., Blue Earth County Chapter
PO Box 202,
Good Thunder, MN 56137

Or, you can call and leave a voice mail at 507-387-9011

This message may contain confidential information. If you are not the designated recipient, please notify the sender immediately, and delete the original and any copies. Any use of the message by you is prohibited.
Mr. Paul Davis  
Minnesota Pollution Control Agency  
12 Civic Center Plaza, Suite 2165  
Mankato, MN 56001  
paul.a.davis@state.mn.us

RE: The Crystal Lake draft Excess Nutrient TMDL Study.

Mr. Davis:

The undersigned petitioners include residents, landowners and farmers in the Crystal Lake watershed and the surrounding area. We support the long term objective of improving water quality, and are concerned that the proposed Crystal Lake Excess Nutrient TMDL Study does not achieve this objective. Further, we are concerned that inadequate understanding of the cause and effect relationships between natural and man-induced water quality impacts will lead to misdirection of scarce resources. As local stakeholders, we have an interest in the protection and management of local soil and water resources, including Crystal Lake.

Matters of Concern

The undersigned petitioners find that estimated monitoring data has been inserted into the report on page 31 and should be removed. Only real monitoring data should be published and used in this TMDL report. On page 51 the references for atmospheric deposition are erroneously reported as .3 kg per square kilometer per year. The actual reference is .3 - .4 kg/hactre/year for the eco-region. This is a difference of 100 fold. It is likely that these technical errors will have a significant impact on the model output used in the report.

The petitioners also find that the draft Crystal Lake Excess Nutrient TMDL report fails to properly account for “natural background” levels as required by the Minnesota Clean Water Legacy Act (CWLA) (MS 114D.15, subdivision 10); as well as, the Natural Water Quality section (7050.0170) of the MN Chapter 7050 rules. “Where background levels exceed applicable standards, the background levels may be used as the standards for controlling the addition of the same pollutants from point or nonpoint source discharges in place of the standards.”

The CWLA (MS 114D.15, subdivision 10) states that “Natural background means characteristics of the water body resulting from the multiplicity of factors in nature, including climate and ecosystem dynamics, that affect the physical, chemical, or biological conditions in a water body, but does not include measurable and distinguishable pollution that is attributable to human activity or influence.” This definition of Natural Background was developed and agreed to by the G-40 Stakeholder group that provided substantial input for the Minnesota Clean Water Legacy Act legislation. The G-40 included representatives from state agencies, including the Minnesota pollution Control Agency (MPCA), Agriculture Groups and Environmental groups.
The natural background definition clearly indicates non-point sources must be distinguishable and measurable to be given an allocation other than "natural background." It is unreasonable to try to "fix" sources that can’t be identified and quantified as to anything other than Mother Nature’s contributions. Measurable and distinguishable evidence that establishes the source of the Load Allocation being attributable to human activity or influence was not provided in this TMDL. In fact, the report indicates that the amount of Total Phosphorus measured (2007-2009) coming from the mostly agricultural portion of County Ditch 56 equals **.182 lbs/acre/year**. This compares with atmospheric deposition rates of **.27 -.36 lbs/acre/year** for this EPA Eco-region (Barr Engineering, 2004). In addition, the Least Impacted watershed reference standard for this Eco-region is **.67 lbs/acre/year** (Heiskary & Wilson, 1990). Least Impacted reference standards were developed in an effort to estimate natural background contributions for an Eco-region. By either comparison the mostly agricultural (9125 acre) portion of the Crystal Lake watershed is well below reasonable “natural background” levels.

The .182 lbs/acre/year coming from the agricultural portion of the watershed is low relative to the atmospheric deposition rate and the Eco-region reference standard rate. However, the actual amount of the .182 lbs/acre/year that will impact water quality is, in affect, lower than this amount. Numerous studies have shown that the mineral fraction of the Total Suspended Solids (TSS) will adsorb the soluble phosphorus in the water making it unavailable for algae growth (Latterel, Holt & Timmons 1971). According to the 2007-2009 monitoring data on County Ditch 56, 68-82% of the TSS measured was the mineral fraction which can adsorb the soluble phosphorus making it unavailable and about 30% of the Total Phosphorus was already in the non-soluble form.

The TMDL report indicates that the daily load of Phosphorus to Crystal Lake needs to be less than 5.44 lbs/day in order to meet the existing standards. According to the models used to estimate the daily internal loading of Phosphorus, the daily internal loading ranged from 31% to 329% of the TMDL allocation. Internal loading is typically the greatest during the summer months, which is during the time when the impairments are greatest. It is very apparent that existing standards can not be met, due to the fact that the internal phosphorus loading by itself exceeds the standard most of the time. There was no evidence provided in the report to indicate that the internal phosphorus loading is not part of the natural background loading.

It is very clear, from the limited data presented in the draft Crystal Lake Excess Nutrient TMDL report, that the natural background component of the Phosphorus loading to the lake is the primary driver of phosphorus impairment. In order to reduce the phosphorus loading to meet the existing standard the internal loading will have to be significantly reduced. Dredging the sediment out of the lake is likely the most cost effective method for accomplishing this task; however, this TMDL study has not addressed this likely solution as part of the implementation.

The petitioners ask that the MPCA properly determine the “natural background” levels of the load allocation, using measurable and distinguishable evidence as is required by the Minnesota Clean Water Legacy Act. In addition, the MPCA should review the appropriateness of the existing standard and develop a plan that provides reasonable assurance that the water quality of Crystal Lake can be improved by dealing with the high internal loading. In addition, the petitioners ask that the technical errors which have been cited above be corrected and be rewritten to account for the differences.
Proposed Actions:
The undersigned petitioners request that MPCA hold a contested case hearing in this matter.

The MPCA must grant a party's petition to hold a contested case hearing if it finds that:

A. There is a material issue of fact in dispute concerning the matter pending before the agency;
B. The agency has the jurisdiction to make a determination on the disputed material issue of fact; and
C. There is a reasonable basis underlying the disputed material issue of fact or fact such that the holding of a contested case hearing would allow the introduction of information that would aid the agency in resolving the disputed facts in making a final decision on the matter. Minn. R. 7000.1900, subpart 1.

Issues to be addressed by contested case hearing:
The undersigned petitioners request the MPCA address the legal requirements of the Crystal Lake Excess Nutrient TMDL report under the US Clean Water Act and the Minnesota Clean Water Legacy Act, including the load allocations, evaluation of natural background conditions and natural background standards.

Witnesses in this matter shall include the undersigned witnesses and other expert witnesses to be named later.

Publications, references and studies to be introduced include available data from US EPA Storet system, US EPA and MPCA Impaired Waters - TMDL protocols and various scientific studies and reports.

The undersigned petitioners estimate that it will require one full day to adequately address these matters.

Request for information:
1. In preparing for contested case, and pursuant to the Minnesota Government Data Practices Act (MS 13.01) the undersigned petitioners request MPCA provide an opportunity at the earliest convenient date to inspect and review the following data connected with the development of the Crystal Lake Excess Nutrient TMDL report.
2. All documents, final or drafts, regarding scope of work in preparing the Crystal Lake Excess Nutrient TMDL report.
3. All documents regarding the Crystal Lake Excess Nutrient TMDL report and work plan, including final and draft documents.
4. All technical, scientific, monitoring, laboratory testing data and Quality Control and Quality Assurance protocols, including electronic data (i.e. spreadsheets and data stored in electronic media) compiled or used in the development the Crystal Lake Excess Nutrient TMDL report.
5. Software utilized to analyze electronic data, including any models used in the development of the load and waste load allocations used to develop the Crystal Lake Excess Nutrient TMDL report.
6. Any and all documents including staff memorandums, emails or other correspondence relating to the technical, scientific, monitoring, laboratory testing data and Quality Control and Quality Assurance protocols used to develop the Crystal Lake Excess Nutrient TMDL report.

In accordance with Minn. Stat. 13.03, Subdivision 3, the petitioners further request that the MPCA designate one or more individuals to explain the meaning of all data that is produced.

We respectfully request that the MPCA to provide the information herein requested at the earliest convenient opportunity. Please contact Barb Overlie at 507-642-8098 or 507-720-1144 to make the necessary arrangements.

Barbara Overlie
4875 190 St
Lake Crystal MN 56083
donbarmn@gmail.com
Dear Mr. Davis:

I am interested in your TMDL report not only as a resident of Lake Crystal and lake front property owner, but also as the owner of Bobber Shop Fishing in Mankato. I know what a healthy lake can do for a community, both residential and businesses. I moved to this community ten years ago, and have seen the ups and downs in our water quality. Ten years ago on a Saturday or Sunday afternoon, the lake was full of waterskiers, fishing boats and pontoons. Every year the traffic on the lake has declined. I plan to live in this community for the rest of my life, and hope to raise a family here, and would hate to have the lake, which makes this town so unique, turn into a slough. This year has been a sad year. The lake is green, the clarity is low, and now my dogs can’t even go in it.

As a tackle shop owner in Mankato, trust me, I have heard many stories about how great the lakes used to be in the past, and now it’s a mess.

I joined the Crystal Loon Lake Rec in 2010. A group of us were invited to a meeting by the standing board because we wanted to help with the lake. The standing board was so frustrated they hadn’t met in over a year. When we showed up, they simply pushed the books over and told us elect new officials. There is only one member of that board, Gus Larson, that is still currently on the board. In the past year, I have seen how fed up the community is, not willing to help because the problem has grown to be far more than what a few volunteers can handle. We've heard, "Why raise money for a new aeration system when the blue green algae is making the water unsafe." The frustration has turned into apathy on many accounts.

Any action that is taken will be appreciated.

Thank you for showing interest in our lake.

Paul Rosenberg

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2012.0.2221 / Virus Database: 2441/5290 - Release Date: 09/24/12