October 6, 2016

Mr. Jim Sehl
Region 4 EWR Assistant Regional Manager
Minnesota Department of Natural Resources
Division of Ecological and Water Resources
21371 Highway 15 South
New Ulm, MN 56073

RE:  Fountain Lake Restoration Project – Environmental Assessment Worksheet
     Project No. 2013-02
     Freeborn County, MN

Dear Mr. Sehl,

The Shell Rock River Watershed District (SRRWD) is providing the following responses to comments received from MNDNR in your letter dated September 7, 2016.

1. **MNDNR Comment**: One of the listed goals of the Project is to "increase water depth to provide wintering holes and summer refuge areas for fish." MN Rules aim to limit alterations to the biological character of the waters and the surrounding shores to the minimal degree possible as well as preserving the natural character of the waters, particularly the ecosystem of the lake. Wholesale excavation of a large percentage of the lakebed may not be consistent with these goals.

Dredging will not significantly alter the surrounding shorelands nor will it significantly change the character of Fountain Lake. The purpose of excavation is to improve the ecosystem of Fountain Lake which currently experiences large increases in phytoplankton growth followed by die-off and subsequent declines in dissolved oxygen. From the hydrodynamic and ecological modeling work conducted, it can be expected that phytoplankton blooms will be less pronounced and dissolved oxygen less variable. Overall, Fountain Lake will be a more stable system and the biological community in Fountain Lake improved.

Environmental effects associated with dredge areas and depths will be further evaluated and controlled through ongoing regulatory agency authority, specifically through a Public Waters Work Permit.
2. **MNDNR Comment:** The project is intended to provide water quality improvements to Fountain Lake. The EAW indicates a substantial number of upstream management practices have been implemented and the SRRWD plans to further improve lake water quality by removing phosphorous-laden sediment through dredging. Benefits associated with dredging will be short-lived if a significant amount of phosphorous and sediment continues to enter Fountain Lake. External sources from the watershed will continue to contribute significant phosphorous that may mask any water quality improvements from this extensive proposed dredging project. In fact, the high watershed to lake ratio is a fundamental factor in external contributions of water and nutrients. Will this project provide a water quality solution or does the watershed guarantee recurrent sedimentation and nutrient inputs that negate the benefits of the project?

The SRRWD conducted a 10 year model simulation using Delft3D in anticipation of the need to address the question about long term benefits. Model results indicate that the benefits of the project are not negated with continued external loading. The Delft3D model simulation included sediment, nutrients, and other constituent loading from the tributary watershed, deposition and accumulation of nutrients and sediment in the lake bed, as well as re-release of phosphorus from the sediment during anaerobic conditions for each year of the model simulation. The results of this simulation are shown in Figure 3-11 to Figure 3-13 in the Draft Preliminary Engineering Report, Exhibit 1.

Model results indicate that phosphorus concentrations do increase in the sediment over time. However, there are several complex dynamics at play. To determine the longer-term water quality effect of dredging, the model took into account the increasing sediment phosphorus concentrations as well as changes in mixing dynamics due to the greater lake depths, which lead to greater phosphorus settling. The tea colored nature of the inflows (caused by high dissolved organic carbon concentrations) has the effect of contributing to the light limitation in Fountain Lake, and with greater depth and subsequent less frequent mixing, phytoplankton growth is reduced. With all of these considerations in the model, the simulations predict that there is still a water quality benefit over the long term after dredging with respect to greater clarity, lower chlorophyll a, and lower phosphorus. Chlorophyll a concentrations are predicted to be reduced by 12 to 70 ug/L – depending upon the external loading conditions for a particular year – as shown in Figure 3-12a and 3-12b in the Draft Preliminary Engineering Report, Exhibit 1.

3. **MNDNR Comment:** The DNR has concerns at what cost anticipated lake improvements will come. How will success be measured? Beyond water chemistry or chlorophyll will the benthos be monitored pre and post project? What impact will the project have on the fish community that can play a key element in water quality?

Fountain Lake will continue to be monitored for total phosphorus, total suspended solids (TSS), chlorophyll-a, and transparency. There are currently no plans to collect benthic invertebrates pre- and post-project. Pre- and post-dredge water
quality monitoring data identified above will be compared to observe and quantify the effects of dredging. As noted in the EAW and other publically available documents, proposed dredging is just one part of a comprehensive water management plan.

Anticipated benefits of the project on the fish community include cooler lake temperatures overall, higher winter dissolved oxygen concentrations due to the creation of deeper habitats, a larger lake water volume, and removal of sediments that contribute to current in-lake nutrient cycling. Higher oxygen concentrations can lead to improved survival rates for anoxia-sensitive fish species such as bluegill sunfish and northern pike which have been shown to control rough fish populations through predation on eggs and the rough fish themselves, respectively. Reduced numbers of rough fish could also contribute to reductions in internal nutrient cycling, because benthic disturbance by rough fish would be reduced along with associated nutrient re-suspension.

4. **MNDNR Comment**: Has the impact to lake water levels been calculated given the scale of the proposed project?

  Following dredging, Fountain Lake will have a larger water storage capacity equal to the quantity of sediment removed; however, as a dam-controlled water body with several inlets, the water level of Fountain Lake is expected to remain stable. It is important to note the sediment removal project will not consume any lake water, as all lake water will be returned back to Fountain Lake.

  During hydraulic sediment dredging, lake water will be withdrawn and returned to the lake to transport sediment to the CDF cells. Withdrawn water will be separated from sediment at the CDF and then returned to Fountain Lake via Bancroft Creek. Estimated maximum daily withdrawal can be conservatively calculated using the maximum design dredge flow rate (7,160 gallons per minute) over 100% of the design 12-hour workday. This equates to approximately 5,155,200 gallons (689,197 ft³) of removed water per day. When distributed over the 521-acre surface area of Fountain Lake, this would decrease the water level by less than one half of one inch (0.36 inches) if the lake was isolated from the watershed and water was not returned to the lake. However, the watershed flow inputs to the lake averaged 98 cfs (8,467,200 ft³ per day) according to monitoring data collected by the SRRWD. Considering the overwhelming size of the lake and the watershed inputs relative to the dredging operation, the effects to the lake level will not have any environmental adverse effects to lake water levels.

  Environmental effects associated with water withdrawal will be further evaluated and controlled through ongoing regulatory agency authority, specifically through a Water Appropriations Permit.
5. **MNDNR Comment:** The DNR has concerns about justifying excavation to increase water depths to improve water quality. Unintended consequences could include development of depleted oxygen zones that could negatively affect the fish community. Implementation of a water level management plan could help manage vegetation, improve water quality/clarity, and water temperature. There are many examples of improving lake water quality on lakes throughout the state by managing water levels.

We chose to use a highly sophisticated 3-dimensional hydrodynamic and ecological model in part to evaluate these potential unintended consequences. With a model such as Delft3D we were able to simulate the effect of changing the lake bottom sediment chemistry, changing the depth of the lake, and changing the long-term biological oxygen demand load to the lake bottom sediments due to a change in phytoplankton growth (phytoplankton being a major source of organic carbon to the lake bottom sediments).

Two points are relevant to this discussion:

1) We conducted modified biological oxygen demand tests with sediment that is currently at the sediment-water interface and with sediment that will be exposed to the lake bottom waters after dredging. We did this to accurately input sediment oxygen demand into the model under post-dredge scenarios.

2) We conducted a 10-year simulation to evaluate how the sediment chemistry and water quality of Fountain Lake would change over time (see Figures 3-11 to 3-13 of the Draft Preliminary Engineering Report). The model-predicted concentrations of oxygen in the surface and bottom waters of the Main Bay of Fountain Lake before and after dredging are shown below.
6. **MNDNR Comment:** The main purpose of the project is to remove phosphorous by dredging sediment out of Fountain Lake. However, outflow from the CDF will be returned to an unnamed ditch that enters Bancroft Creek and ultimately Fountain Lake. The CDF contains drained wetland basins. The potential exists for the nutrient rich dredge spoils to enter the shallow groundwater and be discharged to the drainage ditch that enters Bancroft Creek and ultimately Fountain Lake. The EAW does not indicate if the project team has taken into account the interaction among the shallow groundwater, dredge spoil, outlet flows, and the transport of nutrients back into Fountain Lake? What specific steps will be taken to treat the water if the phosphorous levels are high?

Management of dredge material is regulated by the MPCA with requirements outlined in the MPCA guidance document, “Managing Dredge Materials in the State of Minnesota” dated April 2014. The CDF design has considered groundwater interaction to maintain dredge spoil storage above the groundwater table, as required by MPCA dredge material placement siting criteria. To mitigate potential interactions between dredge spoils and groundwater, the CDF design complies with guidance from U.S. Army Corps of Engineers Engineering and Design Manual “Dredging and Dredged Material Management,” EM1110-2-5025 dated July 31, 2015. As a result, potential negative interaction of dredging spoils and groundwater are mitigated through the design of the CDF.

In addition, clarified lake water will be removed from the CDF as dredge spoil is separated from the dredge slurry. Discharge of clarified lake water associated with hydraulic dredging is commonly regulated at the federal level by the United States Army Corps of Engineers, under the Section 404 of the Clean Water Act, and at the state level by the Minnesota Pollution Control Agency (MPCA), under Section 401 of the Clean Water Act. A joint permit application (USACE/MPCA Section 404/401) will authorize the return of clarified lake water from the CDF that will be monitored for the parameters and at a frequency indicated in as required in the permit conditions. If effluent monitoring indicates return lake
water needs further treatment, removal of water from the CDF will be suspended and additional water treatment will be installed.

7. **MNDNR Comment:** The EAW discusses the proposed integrated pest management strategy to control carp based on five objectives. DNR fisheries staff should be involved in the development of the carp control plan as we are responsible for managing fish in Minnesota. Please contact Craig Soupir, DNR Area Fisheries Supervisor, at 507-362-4223, to coordinate the proposed integrated pest management strategy for carp control.

The SRRWD has coordinated with MNDNR fisheries on rough fish management strategies and implementation for the last 13 years and will continue to work with them on development strategies for invasive species as proposed in the EAW. Just to note, the SRRWD has worked with 4 different area fisheries supervisors in this timeframe.

8. **MNDNR Comment:** The Draft Preliminary Engineers Report, Section 2.4.3.2, states a dredge elutriate test (DRET) that was completed suggests that at the point of dredging, "chronic surface water standards may be exceeded for un-ionized ammonia, aluminum (total), phosphorus (total) and mercury (total)." Further details on this potential condition are requested, including any relationships to water temperature, pH, spatial conditions across the lake bottom, dredge prisms, and other relevant parameters. This information is requested to help make potential predictions about when, where, and how such water quality standards violations might occur in the lake, because of a dredging operation.

The DRET elutriate test is an estimate of water quality at the point of dredging. The sample described in the report was a composite of sediment collected from the proposed dredge area and water from Fountain Lake. The unfiltered samples from this test exceeded chronic surface water standards for un-ionized ammonia, aluminum (total), phosphorus (total) and mercury (total). However, the baseline water sample collected from Fountain Lake at the time sampling also exceeded the same chronic surface water standards, with the exception of mercury (total). For the dissolved (filtered) sample analysis, only un-ionized ammonia exceeded chronic surface water standards for the DRET test (and the lake water test), which show that aluminum (total), phosphorus (total) and mercury (total) are associated with suspended solids.

Further, the correlation of the dredge elutriate test (DRET) to actual conditions during dredging has not been thoroughly studied. Studies that have been performed indicate order of magnitude differences between the DRET and dredging operation field conditions. For example, MNDNR is referred to the following reference describing the uncertainty of applying DRET data to actual field conditions:

Additionally, the project has selected hydraulic dredging methods for sediment removal from the lake, which is the most effective dredging technology available for control of surface water standards during dredging by conveying lake water at the point of dredging to the CDF for treatment. Water isolated in the CDF will be controlled through effluent monitoring, and treatment as needed. At the point of dredging potential effects from suspended solids will be mitigated through construction specifications and construction quality control requirements for turbidity monitoring and implementation of best management practices.

9. **MNDNR Comment**: Page 7 of the EAW indicates three sediment samples were between Tier 1 and Tier 2 concentrations for Arsenic or Copper. The proposer should consult with the Minnesota Pollution Control Agency to determine the extent of contamination and if there are areas that should not be dredged. Avoidance of dredging contaminated sediments has been used on other projects to reduce potential negative impacts from the project.

Comment noted. The project team has had continued contact with MPCA regarding dredge material management requirements. As indicated in the EAW, a Notification to Manage Dredged Material will be submitted to MPCA and dredge material will be managed in accordance with MPCA guidance document *Managing Dredge Materials in the State of Minnesota* (April 2014), or subsequent releases.

Management of dredged material is ultimately based on the concentrations of the mixed stockpile. Given only three sediment samples were between Tier 1 and Tier 2 SRVs and all others were below Tier 1 SRVs, it is unlikely that the composite stockpile sample will have concentrations that will significantly affect how the material will be managed (please refer to composite sediment sample results described in Section 2.2.2 and Table 2-2 of the Draft Preliminary Engineering Report). If the MPCA determines the proposed project cannot remove and manage sediment above Tier 1 concentrations for Arsenic or Copper from the lake ecosystem, dredging these limited areas will be avoided.

10. **MNDNR Comment**: The EAW includes locations of gas lines, tele-comm, and electrical lines in Figure 2-4 (111/173). Has the project team identified all underwater infrastructure, including the lake aeration system, and developed strategies for avoidance or relocation?

Gopher-State One Call tickets were filed for the CDF site (February 11, 2016) and for all bays of Fountain Lake (May 24, 2016) to identify buried or submerged public utilities. Avoidance or relocation of the lake aeration system will be coordinated with the City of Albert Lea.

11. **MNDNR Comment**: The Delft 3D modeling software was used to simulate the complex hydrodynamic and biological processes that occur within the Fountain Lake system. Has this model been peer reviewed or the result collaborated by another model due to the complexity of the Fountain Lake system, project scope and scale, and to weigh the costs
and benefits? We recommend that rough fish be included in the modeling since they play a key role regarding water quality.

The model was peer reviewed by Deltares staff, the developers of the Delft3D modeling software. Twice we conducted week-long intensive modeling meetings in the Netherlands with several Deltares staff members which were also the developers of the water quality and sediment chemistry functionalities of the model. There are several reasons why we chose to use the Delft3D model:

- Delft3D is one of the most well respected and used hydrodynamic (e.g., water movement in a lake, including stratification) and water quality model.

- Delft3D is able to model different rates of phosphorus release from lake-bottom sediments from different areas of the lake bottom. In addition, the chemistry of the lake bottom sediments was defined in two dimensions (e.g., across the lake bottom) and well as into the lake sediment (the lake sediment was divided into seven layers). This was critical to evaluate selective dredging. The water quality effect of dredging different areas as well as different sediment depths of the Fountain Lake could be simulated because of this sediment modeling functionality.

- Delft3D also has well established and sophisticated hydrodynamic model that can simulate the stratification of shallow lakes. Many models are not capable of simulating the rapid thermal stratification and destratification of shallow lakes. This is important to model internal loading (phosphorus release from sediment) properly as well as phytoplankton growth which can be affected by lake mixing.

- Delft3D also has a highly sophisticated phytoplankton model called BLOOM. The phytoplankton dynamics of shallow lakes such as Fountain Lake are very complex and dynamic. BLOOM was designed by Deltares to address this kind of complex system. The BLOOM model uses groups of phytoplankton that compete for nutrient and light resources. It is largely because of this model that the effect of limited light exposure to phytoplankton was identified as limiting phytoplankton growth during the summer months in Fountain Lake.

Other models that we considered (including EFDC, ELCOM-CAEDYM, and CEQUALW2) do not allow sediment chemistry and sediment physical properties to be modeled in 3-dimensional space (across and into the lake sediment bed). Comparison of this model to another model is not feasible since other models do not include a 3-dimensional sediment bed.

Rough fish are not explicitly included in the Delft3D model. However, the impacts of rough fish are implicitly included due to the presence of rough fish in the lake.
during the calibration years. None of the other models considered include effects of rough fish on internal phosphorus loading. In addition, the current literature does not support a quantitative evaluation of rough fish and internal loading.

12. **MNDNR Comment:** The EAW indicates the CDF has a storage capacity of approximately 1,275,000 cubic yards. However, page 5 of the EAW indicates 1.7 million cubic yards of lake sediment will be pumped to the CDF. The EAW also states: "additional disposal areas will be secured in the future", but no details are provided. Under Minnesota Rules, part 4410.1000, subp. 4, connected actions and phased actions must be considered in total when determining the need for an EAW, preparing an EAW, and determining the need for an EIS. The EAW did not address the connected action of additional disposal areas needed for the excess 425,000 cubic yards of lake sediment. The EAW is incomplete because the proposed 1.7 million cubic yards of lake sediment to be removed is beyond the capacity of the CDF.

The RGU decision should be postponed until all suitable CDF locations are included or until the project is downsized to 1,275,000 cubic yards of dredged material removed. How do we evaluate the impact of disposal areas when it is unclear what the total size and locations are of the cells? How were water quality impacts calculated without this information?

The Project has been clarified to include only 1,275,000 cubic yards. For clarity, the dredging sediment volume will be approximately equal to the proposed CDF capacity of 1,275,000 cubic yards, to be removed to CDF Cells #1, #2 and #3. The area of potential sediment removal from Fountain Lake is represented on the Fountain Lake Restoration Project Detail Map, attached as Exhibit 2. Any additional sedimentation removal would require a new project with acquisition of additional real property and funding for the project. Therefore, it is not possible to adequately address any subsequent projects as it relates to additional sediment removal. Minnesota Rules, Part 4410.1000, Subp. 4, allows: “in connected actions and phased actions where it is not possible to adequately address all the project components or stages at the time of the initial EAW, a new EAW must be completed before approval and construction of each subsequent project component or stage.”

13. **MNDNR Comment:** The sponsor will need to obtain a DNR prohibited and regulated invasive species permit for this project. The invasive species permit will address restrictions on the transport of material from the CDF due to the presence of curly-leaf pondweed seed and turions in the dredged material. Additional invasive species prevention techniques will also need to be addressed. The invasive species permit must be obtained prior to the public waters work permit decision.

Comment noted. The 2016 aquatic vegetation survey included in the EAW did not visually observe curly-leaf pondweed; however, it was observed in 2014. The Project Team will coordinate with MNDNR on necessary permitting requirements.
14. **MNDNR Comment:** A 25-foot wide buffer zone will be maintained between CDF construction and the existing drainage ditch. A wider buffer zone should be used to ensure runoff water is treated and sediment does not enter the drainage ditch.

Comment noted. To mitigate this potential, the Project Team has elected to widen and exceed the 16.5 ft. buffer required under Minnesota Law for drainage ditches to 25 feet. The buffer zone will be inspected, maintained, and repaired to ensure surface runoff water is treated and sediment does not enter the drainage ditch.

During CDF construction, best management practices will be implemented as required by the NPDES/SDS General Permit to discharge stormwater associated with construction activities, which will be obtained for this project. Following construction, disturbed surfaces will be stabilized through seeding to establish stands of grass.

15. **MNDNR Comment:** MN Statute Chapter 103G.245, Subd. 7 (a) states: A public waters work permit may be issued only if the project will involve a minimum encroachment, change, or damage to the environment, particularly the ecology of the waterway. The following information will be specifically needed for permitting.

Detailed bathymetric maps showing proposed pre and post-project lake contours are needed to look at volumes of materials, stability of finished slopes, as well as ecological impacts. Defending the need for the depth of excavation based on the purpose for water quality improvements will be needed. This map should include the cells/locations that show the phasing of dredging. An "as built" bathymetric map will be required as part of the public waters work permit.

Comment noted. Environmental effects will be further evaluated and mitigated through ongoing regulatory agency authority, specifically the Public Waters Work Permit identified in EAW. Information will be supplied as required by MNDNR for the permit. Information provided to MNDNR will include detailed bathymetric maps showing pre- and proposed post-project lake contours. The post-project lake contour map will include information regarding phasing of the proposed dredging. An “as built” bathymetric map will be prepared and provided upon completion of the dredging project. The project will not significantly alter the surrounding shorelands nor will it significantly change the character of Fountain Lake. Dredging will remove sediment that has accumulated over time from sedimentation to restore previously existing lake conditions.

16. **MNDNR Comment:** The EAW indicates that dredging will not occur within 30 feet of the shoreline. Near shore vegetation is key to lake habitats, limiting impact of wave and ice action. A 30 foot setback from shore does not reflect the importance of this area to the lakes ecology. Consideration should be given to protect the shallow (<5 feet) gravel or hardened substrate for spawning bluegill and bass, avoid known locations of water lilies with a 50-foot buffer, and protect habitat used by the state-listed threatened Blanding's turtle for over-wintering and foraging. Dredging in emergent stands of vegetation is not
allowed. The extent of dredging also needs to be evaluated in order to balance the amount of dredge material with the capacity of the proposed CDF.

Comment noted. The indicated shoreline offset in the EAW will ultimately be controlled through an issued Public Waters Work Permit. The Project Team will coordinate with MNDNR during the permit process on appropriate shoreline offsets. Shallow areas of native lake bottom materials are designated to remain in place as opposed to materials that are the result of sedimentation. Fountain Lake Restoration Project Detail Map, attached as Exhibit 2 illustrates the extent of dredging that will occur during the first project phase. Initial dredge extents will be up to the storage capacity of the proposed CDF cells of 1,275,000 cubic yards. CDF construction and dredging beyond 1,275,000 cubic yards will be described and evaluated in a subsequent EAW (Refer to Comment Response 12).

17. MNDNR Comment: Fountain Lake currently has a great recreational fishery and we hope to sustain the bluegill, perch, and northern pike populations in the future. Dredging activities can result in direct impacts to nests and sediment being deposited over eggs which can negatively impact spawning success. Impacts may change the balance of the lakes fishery and impact water quality for years to come. Any dredging should be designed to protect fish nests and eggs. Dredging each season should start away from shore in deeper locations to avoid areas of spawning fish. Containing suspended solids resulting from dredging will be needed.

As noted in the EAW, the Project Team will coordinate with the MNDNR Area Fisheries Manager to coordinate a sequence of dredging areas with water work exclusion windows associated with fish spawning.

Hydraulic dredging methods are protective of fish nests and eggs from re-suspended sediment deposit. Hydraulic dredging equipment is the most effective dredging technology available for control of surface water standards, including suspended solids. Potential dredging impacts to the lake will be mitigated through construction specifications and construction quality control requirements for turbidity monitoring and best management practices at the dredging location. Potential negative environmental effects can be anticipated and are expected to be short term and localized at the point of dredging.

18. MNDNR Comment: Dredging should be designed and conducted in a manner that has varying elevations to provide higher quality habitat to avoid unsafe drop-offs near shorelines.

As indicated in Comment Response 15, the project team will provide design drawings showing dredge area limits, side slopes, depths, and volumes during permit coordination with MNDNR. The design eliminates unsafe drop-offs by specifying 3 to 1 gradual slopes at the dredging limits.

19. MNDNR Comment: The DNR Dam Safety Permit will be required for the construction of the CDF. This permit will be needed prior to the public waters work permit decision.
Comment noted. The Project Team initiated contact with MNDNR in June 2015 regarding Dam Safety Permit requirements. A Dam Safety Permit was submitted to MNDNR on June 16, 2016 for the CDF cells identified in the EAW. The permit application submittal included the following:

- CDF Basis of Design Report
- CDF Site Geotechnical Data Report including soil boring logs, test pit logs, and laboratory testing data and reports
- CDF embankment slope stability assessment
- CDF embankment seepage assessment
- CDF embankment foundation consolidation assessment
- Dam break analysis report
- CDF design plans
- CDF embankment construction specifications

The Project Team will continue to coordinate with MNDNR on necessary permit requirements.

20. **MNDNR Comment**: The potential for Blanding's Turtles to exist in the project area. Dredging can negatively impact turtles due to direct fatalities and habitat degradation. Please be advised that the public waters work permit may contain protective measures for the turtles as outlined in the August 26, 2016 Natural Heritage Inventory System review letter and Blanding's Turtle Fact Sheet.

Comment noted. Hydraulic dredging is a relatively slow progressing process that is not anticipated to destroy Blanding’s Turtle habitat. The NHIS review letter indicated upland and wetland development as potentially detrimental to Blanding’s Turtle populations. As clarified, the project described in the EAW will not include any sediment removal from Bancroft Bay. As recommended in the NHIS letter, CDF and dredging contractors will be provided with the Blanding’s Turtle flyer and fact sheet. The SRRWD would expect to incorporate in the Public Waters Work Permit the inclusion of recommendations and protective measures outlined in MNDNR’s August 26, 2016 NHIS review letter.

21. **MNDNR Comment**: Overall the EAW lacks important information that is needed by the Responsible Government Unit (SRRWD) to make a determination on the need for an Environmental Impact Statement. Under Minnesota Rules, part 4410.1700, subp. 2a, subitem B. the RGU can "... postpone the decision on the need for an EIS, for not more than 30 days or such other period of time as agreed upon by the RGU and proposer, in order to obtain the lacking information." The RGU decision should be postponed for the following reasons:
a) The proposed volume of dredged material is beyond the capacity of the CDF.
b) Resolution needs to be achieved for issues concerning the water quality being discharged from the CDF.
c) Additional modeling needs to be conducted to simulate the complex hydrodynamic and biological processes that occur within the Fountain Lake system.
d) The dredge extent map needs to be revised.

Comments noted. Regarding the listed comments, SRRWD provides the following responses:

a) MNDNR is referred to Comment Response 12. The work described in this project covers construction of three CDF cells and removal of the corresponding storage capacity of approximately 1,275,000 cubic yards of sediment from Fountain Lake through hydraulic dredging. If, after securing funding, a future project is approved by the District for additional sediment removal, an additional EAW will be prepared for construction of any future CDF storage site(s) to accommodate additional corresponding sediment removal in that future project.

b) MNDNR is referred to Comment Response 6. Effluent discharge from the CDF will be in accordance with an obtained Clean Water Act Section 404/401 joint permit from USACE and MPCA.

c) We made use of the most sophisticated hydrodynamic and ecological model available, Delft3D, and as part of the modeling effort we coupled the 3-dimensional hydrodynamic model to a 3-dimensional sediment model that interacted dynamically with modeled water column. We applied the most sophisticated lake modeling approach possible with support by laboratory experiments to determine sediment oxygen demand pre and post-dredging, sediment sampling to define the spatial distribution of mobile and organically-bound phosphorus (pre and post-dredging), lake water chemistry that included a range of constituents, and tributary inflow data. We made a genuine effort to support the rational evaluation of the potential benefits as well as unintended effects of dredging. We have presented the development, calibration, and outcome of this model to the technical advisory panel and would be willing to present these findings again if needed.

d) MNDNR is referred to Comment Response 15 and Exhibit 2, Fountain Lake Restoration Detail Project Map. Dredge maps indicating actual areas and depths of dredging will be prepared and submitted to obtain a Public Waters Work Permit.

SRRWD thanks MNDNR for taking time to provide comments related to the Fountain Lake Restoration Project EAW. SRRWD feels potential environmental impacts related to the proposed project are sufficiently identified and will be controlled through ongoing regulatory agency authority for permits that are required for nearly every aspect of this project.
Brett Behnke, District Administrator

Enclosures:

Exhibit 1: Appendices to the Barr Draft Preliminary Engineering Report (Via electronic transmission only)

Exhibit 2: Fountain Lake Restoration Detail Project Map