

**MINUTES OF THE WATER QUALITY MODELING WORKSHOP
OF THE
COMFORT LAKE -FOREST LAKE
WATERSHED DISTRICT**

THURSDAY, AUGUST 2, 2007

1) **Call to Order**

The President called the Water Quality Modeling Workshop to order at 4:00 p.m. at the Forest Lake City Offices, 220 North Lake Street, Forest Lake, Minnesota

Present: President Jackie Anderson, Vice President Richard Damchik, Secretary John Lynch, Treasurer Jon Spence, Manager Wayne Moe

Staff: Randy Anhorn, Joe Bischoff (Wenck & Associates), Dan Fabian (EOR), Cecilio Olivier (EOR), Andrea Plevan (EOR), John Thene (Wenck & Associates), Travis Thiel (WCD), Lisa Tilman (EOR), and Pete Young (WCD).

2) **Presentation and Discussion of Water Quality Modeling Results, Phosphorus Loads, and Potential Projects to Meet Goals.**

John Thene of Wenck & Associates stated the goals for the workshop were to develop a list of projects that Wenck will follow to produce preliminary designs and cost estimates for the CLFLWD Capital Improvement Plan. Thene further stated that they had presented and discussed some of the same information with the Stakeholder's group on July 25, 2007. Thene provided an agenda for the meeting;

1. Summary of identified projects;
2. Presentation for each lake in downstream order, including:
 - a. Model results and comparison with goals;
 - b. Load reduction goals;
 - c. Phosphorus sources and recommended BMPs;
 - d. Remaining load to be treated.
 - e. Capital projects.
3. Discussion of project list (type and locations)
4. Preliminary costs
5. Selection of projects for preliminary design
6. Time frame for capital plan
7. (Set time for additional workshop, if needed.)

Mr. Thene provided background on the load allocation model and calibration efforts as well as some background information on goal setting for the District's lakes. Thene gave an overview

of how the modeled results were presented, highlighting load sources and the determination of reductions needed to meet goals.

Joe Bischoff (Wenck & Associates) went through each lakes' (Birch, Bone, Comfort, Forest [divided into three basins], Little Comfort, Moody, School Shields, and Sylvan lakes) calibrated results of the Unit Area Load (UAL) model, and highlighted the needed load reductions for each in order to meet their long-term and short-term goals. Mr. Bischoff stated that by one lake meeting its goal(s), the reduction in phosphorus loading is taken in account for downstream lakes.

Mr. Bischoff then went through a list of in-lake and watershed appropriate projects/strategies for each lake enabling each to meet goals. Common projects included; rough fish control, infiltration, livestock manure management (including fencing of streams, manure management plans and field applications), buffers and swale, and in-lake and inflow injection alum treatments to name a few. One specific area brought up by Bischoff is the importance of fisheries control in shallow lakes. For example Bischoff mentioned that sporadic winterkills in shallow lakes can maintain a fishery which can result in better water quality. Bischoff also stated that the use of aeration in Shields Lake lessen the chance for winter kills in the lake. The Board mentioned the presence of a fishing pier on the lake.

Mr. Bischoff stated the importance of the adaptive management process in undertaking projects. After a project/strategy is designed and implemented in order to address an identified loading problem, the response should be evaluated in order to determine if the outcome meets the project goals, if not, additional steps may need to be taken, and those resulting responses evaluated. It is a long process and by prioritizing projects, the District will keep moving forward to address problem areas and continually assess progress. Mr. Thene mentioned that within the list of projects, the Board will have to decide which projects Wenck should look at providing design/cost estimates for (include in the District CIP), and which are projects more applicable for other groups to undertake (i.e. agricultural conservation issues via the area Soil and Water Conservation District(s)).

The Board discussed the potential projects proposed for each of the lakes. The Board questioned the common reliance of chemically treating inflow with alum in order to reduce loading. The Board asked Wenck to re-look at an increased role of wetlands (restoration and modification) for the purpose of reducing watershed nutrient loads.

Lisa Tilman (EOR) asked about the potential for numerous smaller infiltration practices (i.e. multiple raingardens in neighborhoods or areas of high loading) as opposed to single larger infiltration projects proposed.

Manager Anderson asked about the shallow pond area southwest of Comfort Lake. The Comfort Lake Diagnostic Study (2001) pointed to the pond as large contributor of nutrients to Comfort Lake. Mr. Thene said that contrary to that reported in the Comfort Lake Diagnostic

Study, their analysis revealed that the area actually often acted as a nutrient sink rather than a nutrient pump.

Administrator Anhorn pointed out the potential for a regional stormwater treatment system in the City of Forest Lake owned Bixby Park and/or in the District owned property on the Sunrise River.

The Board also questioned how realistic some of the lake goals actually were. Mr. Bischoff mentioned that some of the lakes could have always been nutrient rich even during pre-settlement. In which case, they could have naturally had phosphorus levels higher than the District goals. Bischoff said that the only way to really know what pre-settlement conditions were for each lake would be to take sediment core samples and the sediment diatom communities could be analyzed to determine likely historic lake water quality conditions. The Board requested Wenck to provide a cost estimate for conducting a sediment diatom analysis for a lake. Administrator Anhorn questioned the need for such analysis at this time.

2) **Adjournment**

Motion to adjourn CLFLWD Rules Workshop was made by Manager Damchik and seconded by Manager Lynch. Motion carried unanimously.

John T. Lynch, Secretary