MINUTES OF THE STAKEHOLDER MEETING
FOR THE COMFORT LAKE -FOREST LAKE WATERSHED DISTRICT (CLFLWD)
LOAD ALLOCATION MODELING DESIGN SERVICES PROJECT

WEDNESDAY, JULY 25, 2007

Welcome and Opening Remarks

The CLFLWD Load Allocation Modeling and Design Services Project Stakeholder Committee Meeting convened at 1:00 p.m. on July 25, 2007, at the Forest lake City Offices, 220 North Lake Street, Forest Lake, Minnesota. Randy Anhorn, Administrator for CLFLWD, welcomed the group to the third of a planned series of four stakeholder meetings to present portions of the load allocation model and design project as well as seek input from the group throughout the project process. Mr. Anhorn stated that the purpose of the meeting was to present:

- load reduction goals determined from the final results of the watershed hydrology and phosphorus loading and lake response models;
- load reduction project screening;
- potential costs for load reduction projects;
- discuss locations and ideas for load reduction and lake improvement projects.

Anhorn further stated that following the stakeholder meeting, the project list will be reviewed by the CLFLWD Board of Managers to develop a final list of projects to be advanced for preliminary designs and estimates. They will then be incorporated into a prioritized list of projects and activities that will later be used to develop a Capitol Improvement Plan (CIP) for the District. Mr. Anhorn gave way to John Thene of Wenck & Associates who provided the outline for the meeting.

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.

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 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 they should look at undertaking (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))

Jack Frost (Metropolitan Council) asked about plans to translate the anticipated phosphorus load reductions into correlated water clarity improvements. Specifically, he thought it would be worthwhile to show the resulting water clarity for the total project dollars. For example if $500,000 in projects improves a lake's mean phosphorus concentration from 50.0 ppb to 40.0 ppb (shown as an improved Secchi transparency from 4 feet to 7 feet) and an additional $1,500,000 would further improve the same lake's mean phosphorus concentration from 40.0 ppb to 30.0 ppb (resulting in an improved transparency from 7 feet to 7.8 feet, it may be determined that the additional $1,500,000 it would cost for an improvement of only 0.8 foot in transparency may not be worthwhile. Mr. Bischoff stated that cost-benefit analysis will be a part of the project prioritization process.

Wayne Moe (CLFLWD Manager) asked about the load from upstream lakes for Birch Lake. Mr. Moe stated that the monitored load from Bone Lake in 2006 was only on the order of 50 pounds, while the modeled loads for Birch Lake show 276 pounds coming from Bone Lake. Mr. Thene stated that the UAL model was calibrated against 2004 where the annual precipitation was considered "normal" and there were available data throughout the watershed.

Tim Ohmann (DNR) questioned the mention of barley straw as an improvement project for Shields Lake. He did not feel that this represented "real science" and would argue for more "peer reviewed" alternatives. Ohmann further asked what the expected in-lake response would be for the lake if barley straw was used. Anhorn stated that his past experience has shown that barley straw (depending on the lakes fishery) can not only result in lower algal populations and improve water quality, but lower phosphorus levels as well. Ohmann questioned the need for a permit if the barley straw acted as an algicide. Anhorn, stated that the barley straw was not an algicide, rather, his research with Steve McComas on a few small lakes in the southern Metro, points toward the decomposing straw acting as a carbon amendment for so called "good" bacteria. This results in bacteria out-competing the algae for phosphorus, meaning less algae and better clarity.

Beryl Halldorson (Bone Lake Association) asked about the longevity of in-lake alum treatments. She is worried about boat traffic around the shallow portions of a lake re-suspending the alum and reducing it efficiency. Mr. Thene stated the most alum treatments are done in deeper portions of the lake. The main reason being that the area applying the alum in theses areas, not only is phosphorus stripped from the water column (depending on application method), but a flocculent layer is developed on the lake bottom essentially trapping the phosphorus in the sediment.

Mr. Ostlie asked about each lake's specific short-term and long-term goals and where they came from. Mr. Thene stated that the short-term goals were simply MPCA standards (40 ppb for deeper lakes and 60 ppb for shallow lakes), while the long-term goals of 30 ppb for some lakes were more aggressive goals the District's Board of Managers wanted.

Future Stakeholder Meetings

John Thene presented the anticipated schedule of the upcoming stakeholder meeting and open house. The next stakeholder meeting to present project designs, costs, and prioritization, will be scheduled sometime in September after a list of potential projects and strategies to protect and improve the District's lakes has been determined by the CLFLWD Board of Managers. Mr. Thene also stated that they plan on holding an open house following the completion of the study.

Adjournment

Randy Anhorn again thanked all those who attended the stakeholder meeting, and thanked Wenck & Associates for the informative presentation. The meeting adjourned at 3:10 p.m.

List of Attendees

Randy Anhorn	CLFLWD
Joe Bischoff	Wenck & Associates
Earth Evans	City of Forest Lake
Jack Frost	Metropolitan Council
Tim Ohmann	MNDNR
Beryl Halldorson	Bone Lake Association
Wayne Moe	CLFLWD
Wally Ostlie	Comfort Lake Association
John Thene	Wenck & Associates
Casey Thiel	Chisago County SWCD
Lisa Tilman	Emmons and Olivier Resources