

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

WEDNESDAY, MARCH 28, 2007

Welcome and Opening Remarks

The CLFLWD Load Allocation Modeling and Design Services Project Stakeholder Committee Meeting convened at 1:00 p.m. on March 28, 2007, at the Forest Lake City Offices, 220 North Lake Street, Forest Lake, Minnesota. Randy Anhorn, Administrator for CLFLWD, welcomed the group to the first 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 went over the purpose of the study, as well as mentioning the intentions of CLFLWD to use the results in the formation of Total Maximum Daily Load (TMDL) study for the watershed's waterbodies listed as impaired for nutrients (Bone, Comfort, and Shields lakes) and those soon to be listed as impaired (Birch, Moody and School lakes). Anhorn further mentioned that the resulting load thresholds for each lake may also be used in the development of specific rules for CLFLWD. After stakeholder introductions, Mr. Anhorn gave way to John Thene of Wenck & Associates who provided the outline for the study/stakeholder process.

Study/Stakeholder Process

John Thene went over the outline of the study, the stakeholders' involvement in that process. Mr. Thene stated that the end result of the modeling and design service project is to improve the water quality of the water resources in the watershed. Individual objectives are to develop an understanding of water quality in the CLFLWD lakes, identify opportunities to improve their water quality, identify and prioritize projects that will positively impact water quality, and eventually turn the study results into TMDL's on the District's impaired water bodies.

Watershed Orientation and loading model

Mr. Thene detailed the size, location and surface water drainage schematic of the watershed. As part of his watershed hydrology discussion, Mr. Thene mentioned that the watershed's groundwater influence could in a sense be split in two, with the eastern half of the watershed serving as a groundwater recharge area, and the western half of the watershed serving as a groundwater discharge area.

Thene further discussed the concepts of the load allocation model (including internal as well as external and atmospheric loading assessments) and the correlation between the modeled results, and goal setting. He stated that the future goals should be at reasonably obtainable levels supported by informed monitoring, modeling and ecological review, and involve input from the stakeholders.

Primer on Shallow Lakes

Joe Bischoff of Wenck & Associates gave a presentation on the ecology and biology of shallow lakes (polymictic; lakes that do not maintain a stratification and mix many times throughout the summer) and how they differ from deeper lakes (dimictic; lakes that turn over twice a year, during the spring and the fall). Shallow lakes are described by the MPCA as lakes with a maximum depth of 15 feet or less, or 80 percent or more of the lake area is shallow enough to support emergent and submergent rooted aquatic vegetation. Mr. Bischoff described the complexity of shallow lake system and the importance biology plays in the overall health and water quality of shallow lakes.

Shallow lakes fluctuate between two specific states; 1) a turbid state; that is a system that is dominated by algae, shading out aquatic plants and having low zooplankton populations, or 2) a clear water state, or one that is dominated by rooted aquatic plants, with low algal productivity and a larger zooplankton population.

Mr. Bischoff further discussed the importance invasive species such as Eurasian watermilfoil and curly-leaf pondweed as well as the aquatic communities such as plankton and fish have on the overall health of lakes. All these factors, on top of the lakes nutrient load, add to the overall complexity of managing shallow lake systems.

Lake Water Quality History

John Thene presented water quality information on the primary lakes in the CLFLWD, going over growing season (June 1-September 31) means and compared each to the MPCA's threshold for listing lakes as impaired for nutrients. As stated earlier, the CLFLWD lakes currently listed as nutrient impaired are Bone, Comfort and Shields lakes, with three additional lakes, Birch, Moody, and School lakes anticipated to be listed once the 2006 data are integrated with each lakes' existing water quality database.

Discussion

- In response to a question regarding Shields Lake, Randy Anhorn stated that a bio-manipulation was conducted on Shields Lake in the early 1990's and a carp barrier was installed on the lake. Randy Anhorn also said that a fish population assessment will be conducted by the DNR this summer (2007) on Shields Lake as well as Forest Lake.
- Randy Anhorn asked Joe Bischoff about one of the slides in the presentation that displayed a carp curtain in a lake in Wisconsin and wanted to know how long the curtain was left in place and if the water quality improvements in the area surrounded by the curtain were seen long term. Joe Bischoff said he did not know but that would look into the results of the study.
- Beryl Halldorson of the Bone Lake Association asked a question about the difficulties in improving the Bone Lake water quality due to the relatively large watershed compared to the lake size. Beryl Halldorson also asked if it will be possible to improve Moody Lake water quality which will improve input to Bone Lake. John Thene and Joe Bischoff responded that determining how to improve lake water quality throughout the watershed is

the critical piece of the entire project. It will be very important to determine where the improvement projects should be placed that will give the District the “best bang for the buck” in terms of dollars spent on projects resulting in improvements to lake water quality.

- John Thene stated that as part of the modeling effort to determine where improvement projects should be placed, Wenck is using the XP SWMM model created by SRF and recalibrating it for low flow events. The model will be used to identify areas where projects can be constructed to improve water quality.
- Amanda Goebel from Washington County asked if a cost would be included for each suggested project. John Thene responded that a cost analysis of the projects would be included.
- Jack Frost asked what the land use is for the watershed and if there are a lot of animal units. Joe Bischoff responded that Wenck is still in the process of obtaining all the land use data for the whole watershed but that the initial review of the data obtained so far indicated that developed/urban land uses were higher than expected.
- Wayne Moe commented that there are a lot of cattle in a pasture on the south end of Bone Lake. He said that he was told by WCD that the TP entering Bone Lake from the south was more significant than the inputs from Moody Lake on the north end.
- In response to the Mr. Moe’s comment Joe Bischoff said that it will be an important part of the project to understand the relationships between the land use and lake water quality.
- Dan Seemon from the ACOE states that he realizes that the improvements to the lakes are the end point of the study. However, he wanted to point out the wetlands between the lakes are a very important component in terms of treating TP inputs to lakes. Dan Seemon asked if we are going to look into improving wetlands as a mechanism to improve lake water quality. Dan Seemon also referenced some research in some lower portions of the Sunrise River that have better water quality and a higher occurrence of mussel species as compared to the upper reaches.
- Joe Bischoff responded that Wenck agrees that the function of wetlands is an important component. Knowledge of specific impacts to wetlands (changes in vegetation, hydrology, bounce, channelization, etc.) can be important to the study. One of the key questions for the study will be can we identify high priority wetland areas in the watershed.
- In response to a question about historical changes in the watershed, Board member Dick Berglund stated that late in the 1990’s is when water quality took a turn for the worse in Comfort Lake. He stated that one of the major projects during that time was the construction of Wal-Mart.
- In response to Mr. Berglund’s statement a Tom Lynch stated that it is easy to point to Wal-Mart as a cause because it is a visible project but the City did install some good storm water control measures as part of the project. In his opinion the lack of maintenance on the large JD-1 wetland has caused water quality problems in Comfort Lake.
- Dick Berglund stated that Comfort Lake has a large amount of ‘bounce’ during rain events. He also said that the lake is noticeably clearer during dry periods.
- Joe Bischoff said that the lake being clearer during dry periods coincides with the sediment data that showed low amounts of phosphorus release in Comfort Lake.

- Tom Lynch commented that wetlands were created to mitigate for Wal-Mart construction impacts, but they dumped the soil from the construction site into a Type-II wetland that is next to a judicial ditch.
- Deb Anderson stated that she lives next to JD-1 and that drainage is a problem in the wetland.
- Wayne Moe raised the point the City of Forest Lake has a compost site near a ditch. He was wondering if this could possibly release TP into Comfort Lake.
- Randy Anhorn stated that the shallow pond area to the southwest of Comfort Lake is the largest contributor of TP to Comfort Lake. Comfort Lake has a very high watershed to lake ratio (88:1). Sylvan Lake on the other hand (the best quality lake in CLFLWD) has a watershed-to-surface area ratio of roughly 4-to-1.
- Randy Anhorn suggested that in years going forward the District will focus on additional monitoring in sections of the river between Birch and School Lakes. Also the District will need to survey the plant communities of Birch and School Lakes.
- Dan Seemon from the ACOE stated that there are not a lot of wetlands in buffer areas around Birch and School Lakes and that he thinks that the ‘shallow pond’ effect on Comfort Lake is also occurring between Birch and School Lakes.
- Joe Bischoff stated that input and information from the stakeholders in regards to land use and conditions in the watershed are important to creating the models and interpreting the results.

Future Stakeholder Meetings

John Thene presented the anticipated schedule of upcoming stakeholder meetings. The next stakeholder meeting will be scheduled sometime in May after the lake response models are complete. The third meeting will be scheduled following the compilation of potential projects and strategies to protect and improve the District’s water bodies, and the fourth and final stakeholder meeting will follow the prioritizing of the project list. 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 2:30 p.m.

List of Attendees

Deb Anderson	CLFLWD Citizen Advisory Committee
Randy Anhorn	CLFLWD
Richard Berglund	Comfort Lake Association
Joe Bischoff	Wenck & Associates
Doug Borglund	City of Forest Lake
Earth Evans	City of Forest Lake
Jeff Fertig	Chisago County
Jack Frost	Metropolitan Council
Travis Germundson	MNDNR
Amanda Goebel	Washington County

Beryl Halldorson	Bone Lake Association
Anne Hurlburt	City of Scandia
Tom Lynch	CLFLWD
Jeff Madejczyk	Wenck & Associates
Craig Mell	Chisago County SWCD
Wayne Moe	CLFLWD
John Pechman	City of Chisago Lakes
Dan Seemon	Army Corp of Engineers
Jerry Spetzman	Chisago Co. Environmental Services/St. Croix Basin Planning Team
John Thene	Wenck & Associates
Fred Weck	Wyoming Township
Neil Vanderbosch	MNDNR