

Technical team members: Dave Kafura, Frank Dallam, Dan Tyrolt, Dale Olson, Paul Cunningham.

Team Chair: Tom Aartila

Other Attendees: Bill Whitlock

Summary of June 21, 2006 meeting

Consensus of the technical team was that we should implement a passive system for the Round Lake system. We should focus on fixing the snowmobile trail, remove beaver dams, lower the CTH NN Culverts and change the lake level order to reflect this.

The team broke the Round Lake system up into parts based on points of constriction or hard points. The team identified the following control points:

- 1) Rt. 3 Elevated Culverts – Unpermitted fill and culverts on snowmobile trail on Osprey Creek. This site needs to be brought into compliance. There are wetland, floodplain, Ch. 30 and 31 issues. LCO is the landowner. Also included in this discussion were the beaver dams (7 total upstream of this culvert) on Osprey Creek.
- 2) CTH NN – These culverts need to be brought into compliance, either corrected (bring back to stream bed elevation) and permitted through Ch. 30 or Trans 207 or the county could apply for a Ch. 31 dam permit
- 3) Culvert on Barbour's Property – This culvert is backing up water and acting as a dam. Dick Barbour needs to make it code compliant.
- 4) Diversion Channel/Little Round Lake Dam – the county currently removes debris monthly from this structure. My notes indicate that the team thought that the Town of Hayward owns the bridge (?). Options for the dam are:
 - a) Passive Channel – It has been acting as a passive channel for years and rarely have any boards been placed into it. This option would require abandoning the dam and the DNR would give consideration to just removing the stop log gates and stop logs.
 - b) Keep existing dam and modify the order.
 - c) Or leave as is and keep cleaning it out.

Diversion Channel downstream could be modified or left as is to scour. Widening and deepening would lessen the high water duration. Could possibly use the hydrolic model for the 100 year floodplain to model flows in channel but need velocity information.

- 5) Vegetated Mat – This mat is located upstream of the dam and channel on Little Round Lake. During low water this is an issue, another check point.
- 6) Ground Water into Round Lake Diversion Channel.

The team also identified the following issues or needs:

- 1) Benchmarks – We need a common Datum. The county has most of them tied in and could tie them back to the original Datum. We recommend that the county provide this.
- 2) Acceptable Water Levels – We need to define what water levels are acceptable. This needs to be discussed with the full team so we can get option and alternatives for the engineering firm to look at.
- 3) Elevation of Houses – Depending on what option or decision is made, we will need to know the elevation of the houses around the lake, specifically of those that are at the lowest elevation.
- 4) Existing Water Level Order – technical team agrees that no matter what we do we have to change the order since the current order is not achievable.
- 5) Environmental Assessment – We would need to do an EA for a new order and would probably want to do one if we abandon.
- 6) How do today's levels compare to historical levels – Need to look at data to get an idea of past levels and see how they compare to the 41 order. See what the average water level has been for the past 25 years.
- 7) Modeling needs (?) – Dropping CTH NN culverts, flows in the Barbour channel during different events, estimate potential for channel erosion (see if there is enough velocity to erode the channel).

Summary of June 29, 2006 meeting

The technical team reviewed the available information and Fred Zietlow's data to get an idea of what water levels have been on Round Lake. The team then identified issues that need to be addressed and two possible options. The bed of the dam is at elevation 76.0 ft and the 1941 order established a range of 77.0 to 77.25 ft. The following bullets summarize these points.

- 1) Round lake water level data from our files ranged from a low of 75.6 feet (75.05 ft at Little Round Lake) to a high of 77.9 feet (78.19 ft at Little Round Lake).
- 2) Fred Zitlow's data recorded a low of 76.29 ft and a high of 78.14 during April 2002 (4-5 years of data).
- 3) Dave Kafura's readings from the Little Round Lake gauge were 77.27 ft in 2005 and 77.1 ft on May 31st during our boat tour this year.
- 4) At what point does the current structure control water levels?
- 5) Can the engineering program show effect if you remove the beaver dams?
- 6) What points are controlling points at various flows and what is the effect with our without these points?
- 7) Is the hydrolic model adequate to model the flows we will see at Little Round Lake, specifically the low flows?
- 8) Need to maintain a minimum flow on all regulated structures.
- 9) Sill elevation should be checked.

- 10) Need to do an ordinary high water mark determination.
- 11) What is the lowest grade on Round Lake that has houses built on it? This would identify the number of houses that might be effected by certain water elevations.
- 12) Can we model durations and peaks?
- 13) Model minimum only since we can't control the maximum.
- 14) What is actually controlling flows under this natural range?
- 15) Water level that is naturally occurring while maintaining a minimum level?
- 16) Need an idea what the stream bed elevation is to see if flows will scour channel.
- 17) What points are controlling points at certain flows/elevations?
- 18) If the county wishes to keep the CTH NN as is they will have to do some modeling.

The technical team sees two options for the Round Lake system.

Option 1) Passive System – this option would mean abandoning the dam, lower the culverts at CTH NN, fixing the culverts and floodplain/wetland fill on the Rt. 3 snowmobile trail, and actively manage beaver dams on Osprey Creek.

Option 2) Maintain a Range – This option would require engineering and modeling as identified by the technical team during these two meetings. This would also require the county to request an order change.

Tom Aartila notes.