

**1. Agenda and 2014 Annual Meeting minutes approved**

**2. Perry Jones – USGS - Studying Surface & groundwater interaction**

- a. Looking for the impact of aquifer pumping on lake levels in the North East Metro
- b. Study was funded by the State of Minnesota
- c. Five wells sampled around Turtle Lake for testing
- d. Up to 20% lake water contribution to Shoreview wells from Turtle Lake, i.e. 20% of the water that Shoreview is pumping for its municipal wells is coming from Turtle Lake - This was similar to the USGS findings a couple of years ago.
- e. Work completed on Turtle Lake to measure the sediment levels on the lake bottom. The theory is that the more sediment there is the less ground water/surface water interaction. It was noted that in general there was more sediment on the bottom of Turtle Lake as compared to some of the very deep areas of White Bear Lake that had less sediment.
- f. Questions taken:
  - Q1 - Any water quality testing?
  - A1 – USGS survey did not test water quality
  - Q2 – Will municipal water pumping stop?
  - A2 – Not likely unless NE water usage diverts municipalities to use surface water, rather, lake augmentation would be used
  - Q3 – Does aquifer pumping lessen the aquifer pressure that keeps water in the lake?
  - A3 – Possibly, it depends on the materials between the aquifer and the lake
  - Q4 – has any TCAAP information been helpful?
  - A5 – there was lots of data but the wells were shallow and the data was not looked at extensively

**3. Mark Maloney, Public Works Director, City of Shoreview - Augmentation Study Progress Report**

- a. Mr. Maloney handed out a current progress report that is attached to these meeting minutes.
- b. Wants to be 2/3rds done by July
- c. Many options being examined
  - i. Multiple water sources
  - ii. Water quality levels
- d. Study will likely cost the full \$100,000
  - i. The study is complex due to the number of agencies involved that will comment on the DNR permit.
  - ii. Many of these agencies are talking a lot about water at this time, however, not a lot of action is being taken by these agencies
- e. Questions taken:
  - Q1 – Is the DNR the only permitting agency?
  - A1 – Yes, however, many agencies will have input and comment on the DNR permit
  - Q2 – What is the DNR role in operating the system?
  - A2 – The DNR grants the appropriations permit but they do not have a role in managing an augmentation system. The city would manage and operate the augmentation system just like they do for Snail Lake
  - Q3 – Did the DNR grant the right for WB and Shoreview to dig wells and use it?
  - A3 – Yes, the DNR issues the appropriations permits to pump, distribute, and sell ground water [Secretary comment – This topic was the crux of the lawsuit in WB,

wherein the plaintiffs sued the DNR, claiming that they did not properly manage groundwater usage, which in turn damaged White Bear Lake.]

- Q4 – Are the water sources for Turtle Lake augmentation changing?
- A4 – All water sources are owned by the St Paul Water authority, it is just different access point that are being considered.
- Q5 – Could other city action affect lake levels?
- A5 – The study is not done yet that would show what should be done. He's not hopeful that the study would be definitive.
- Q6 – How often does the Mississippi river go under the minimum flow necessary to allow lake augmentations?
- A6 – Since 1988 (when pumps stopped going into lakes), the river has never been at or below minimum levels needed for lake augmentation
- Q7 – Any surprises in water quality for the Snail Lake augmentation water?
- A7 – There was a danger for zebra mussels but a filter has now been added to address that. Snail Lake now has better water quality than before augmentation.
- Q8 – Is there any chance to increase the watershed for Turtle Lake?
- A8 – No
- Q9 – Can we stop further Turtle Lake watershed shrinkage?
- A9 – Agencies, such as the Rice Creek Watershed District should be doing that now Mr. Maloney also cited the Oakridge Street project with the use of permeable concrete (at the request of homeowners) to allow for more water to stay within the watershed.

4. Treasurer's report

- a. Finances are steady with a slight downward trend.
- b. The Phragmites issue is the on-going expense that could be a game-changer.
  - i. Chemical treatments were fairly inexpensive (10%)
  - ii. Biomass removal was the expensive part (90%).

5. Invasive Species report

- Q1 – Is Phragmites controllable?
- A1 – With continual treatments and high water levels, Phragmites is controllable. The weed needs exposed shoreline to take root.

6. Picnic

- a. A survey will be conducted for TLHA members to determine desired options and times.

Submitted by:

Mark Cossack

TLHA Secretary