

Lake Quality Advisory Committee Meeting Minutes

September 26th, 2022

Whiting Center Green Room and also via Zoom

Fred called the meeting to order at 6:04 PM.

A. Attendance

Committee Members – Kimberly Clow, Jane Custer, Linda Flores, Rick Flores, Fred Hicks (Chair,) Alisha Loken, and Scott Ostrem

Staff – Ashley Krempien, Recreation Director; Debbie Papac, Former Recreation Director; Butch Reyburn, Board Member

Guests – Martin Hernandez (CSD Candidate)

B. Approval of Agenda – Kimberly made a motion to approve the agenda; it was seconded by Fred, and approved by the committee.

C. Approval of Minutes – The minutes of the August meeting had previously been approved via email, and sent to Anita (BVSA.) There was no meeting in Sept.

D. New Items

- 1. Committee Member Comments and Questions** – Fred reserved a booth for LQAC at the Whiting Center Halloween Carnival (10/29); he will send out a sign-up sheet for volunteers. Fred reported that one couple contacted LQAC (via email) about the harvesting taking place at Cub Lake. They feel that fish should be moved to 4-Island. Appears to be a lack of understanding about the process; Fred will respond to them.
- 2. Labor Day Fishing Derby (Addendum A)** – Overall, several hundred pounds of fish were harvested. 600+ fish alone were caught by the four kids that won the 4th of July Derby. As a reward, Fred took them fishing on his boat. He also plans to take out the winner of the single most catches soon. Photos are on the Google Drive, and were also sent to the Whiting Center and to Jennifer Whitney, to post on social media.
- 3. Sonde Update** – While our Sonde was sent in for repairs, Hach sent us loaner equipment to use, including a handheld operating device, which makes it considerably easier to use. There was no cost; it was included under our service contract.

Water Quality – Three weeks ago, when lake treatment was being done at Cub Lake, the dissolved oxygen (DO) level tested in the ‘fish kill’ territory (1.2). A decision was made not to treat algae that week, but instead begin harvesting crappies. Since then, the DO level has gone up. 4-Island is in a heavy green algae bloom, but no cyanobacteria appear to be present. No water quality issues; just

green water. DO levels are good; Nitrate levels are borderline (due water coming in from CSD wells.) Fred has been testing the wells, since July, hoping to get three months' worth of data. Visibility is down due to algae blooms.

- 4. Cub Lake Aeration Update** – the last eight aerators were installed last week. We have the compressor on hand, currently in the maintenance shop. A compressor stand is being built, along with an access door, for safety. Final installation should be completed by the end of Oct. Sound issues will then be addressed. The deepest point of Cub Lake is now 4 ½ feet. DO level is up to 6.0, a significant increase, mostly due to the extra aerators; partly due to the colder water. Fred was able to eliminate the rental charge for the three temporary aeration pumps used over the summer and fall, by assisting Marine Biochemists with the Cub lake aeration installation.
- 5. Lake Expansion Update (Addendum B)** – The primary purpose of lake expansion is for extra water retention. The first step is to know the type of soil you're dealing with, by coring samples. The civil engineers need this information for planning purposes. Cub Lake can potentially go down to approximately 40' in the center, without changing the current shoreline layout.

Early estimated minimum cost for excavating (only) Cub Lake is \$225K - 250K. Most of the money *might* be made back in a *good* year, since we wouldn't have to purchase as much water. It wouldn't happen every year. No decision yet on where the excavated soil would go; more research is needed. Excavated soil removal is the largest planning problem and potential expense to this project. Currently there is no data as to how deep the granite layer is beneath Cub Lake.

As far as 'dam permitting,' as long as the dams are kept below 6', a permit is not required. Currently, there are no permits on file with the state, in regards to any of the three lakes.

Kimberly asked about Jack's Hole – Fred reported that a dozer had just been moved over there last week. The peninsula work will continue, even as the excavation is ongoing. The goal is to try and finish it by this fall before we begin pumping water from Four Island Lake to Jacks Hole.

As for deepening Jacks hole first, Cub Lake is a better starting point as it is higher in elevation and is better developed for Recreational usage.

- 6. Plants and Floating Island (FI) update for 2022** – Fred reported that the water lettuce did not do well; however, the water hyacinth is doing very well. The latter seems to be the way to go for next year, in front of the high nitrate well outputs; pull the plants out as they fill up. It's effective and doesn't obstruct the view, etc. The repurposed FIs are doing well. Next year will be the true test. The FI in the 7th hold pond needs to be thinned; the plants are currently busting through the structure.

We will not be harvesting water lilies this year. They look and do better if they get into a second year of growth. Will transition into an every-other-year cycle of harvesting in the fall of 2023.

Kimberly will check with Kathy Carey and see if she's willing to donate more water irises this year, when she splits hers. The Eel grass that was planted in the soil at Cub Lake is doing very well; the grass that was planted at 4-Island dried up. We will ask Jeff about donating more plants for next year. At this point, we don't need more FIs. Will wait until we see how the rehabilitation effort turns out.

- 7. Fish Remediation Options (Addendums C and D)** – Fred reached out to five different companies regarding electrofishing/Rotenone/netting. (He demonstrated the use of a netting hoop to the LQAC.) Three of the companies recommended this as the next best option, if we don't want to use the other two. It is especially effective when the water level is low. Not an easy process (very labor intensive,) but relatively cheap (\$750 - \$900 total for the nets, bait, and misc. materials, to run two trial nets) compared to the other two options. Fred will begin the netting in late October.

Only one company said electrofishing would work (Rojas Fishery.) They are planning to do a two-day trial in October, to determine the effectiveness of the process. Fred feels that it is well worth it, from a data gathering perspective. The biggest question is how effective it would be for Bullheads, since it's not commonly used for that.

The electrofishing project would most likely happen the week of 10/15. Approval of the BVSA Board is required, as well as some permitting from Fish & Wildlife. One day would be spent at Cub Lake, and one day at 4-Island, to give us results from different depths. The lakes will need to be closed for two days. The company is planning to remove the fish *live*, and dispose of them offsite.

Three companies are working on proposals for Rotenone. Only one has come back with a quote. Cost would be approximately \$15K for labor, and \$15K for the product. (Doesn't include picking up the dead fish.) That's assuming that we could get the lake level down to 3' or below. Cannot guarantee 100% effectiveness, unless two treatments are done. They don't feel that a chemical discharge permit is needed, as long as no water is being discharged from the lakes. Fred will insure that permitting would be the company's responsibility in any proposals brought to the LQAC. Rojas Fisheries said they *can* do Rotenone. However, they don't want to discuss it with the state, until they see the results of the electrofishing trial.

After a month, the Rotenone is completely out of the lake system. Alisha asked if animals who ate the (affected) fish would be harmed. Fred said that he will do more research on the issue. None of the companies want to deal with the (bad) PR that

goes along with it. However, Fred feels that from a *scientific* standpoint, it is the best option on the table.

Fred reported that if we lower the volume of 4-Island each year, and we yearly net, we *might* be able to gradually take care of the Bullhead problem (in house.) Still difficult to say how effective it will be in reducing fish kills, since we have such a large biomass problem. By our November meeting, we will have more data, and should be able to make informed decisions. We will need volunteers in mid-November, when the water level is lower. The plan now is to ship water from 4-Island to Jack's Hole. Then from Jack's Hole to Cub Lake, if necessary.

Per the CSD specs, 4-Island is to be kept as full as possible during the summer. Fred will check with the CSD to see if there's a minimum water level that must be maintained. Kimberly asked if there were any minimums required per the Fire Department; Fred said the CSD advised that there weren't. But he will confirm with the FD.

Alisha asked if the lower water level would cause oxygen problems. Fred said that since the water temperature will be lower in the winter time, it will maintain more oxygen, and we won't run the risk of a fish die-off then.

8. **Visitor Comments and Questions** – Martin said he didn't realize that LQAC had so much work going on, and commended us on doing a good job.

E. Follow-Up Items

Bear Tracks articles – November (Fred will write about the electrofishing project, if approved by the board.) December will be about the recycled Christmas tree project.

Adjournment

The meeting was adjourned at 7:18 PM.

Our next meeting will be held at 6:00 PM on November 7th, at the Whiting Center and also via Zoom.

Minutes submitted by: Linda Flores

Minutes approved by: Fred Hicks