



BEAR VALLEY SPRINGS ASSOCIATION

Lake Quality Advisory Committee Agenda

Location: Monday, December 4th 2023, at 6PM Whiting Center-Green Room

Call to Order at: 6:01 pm.

Adjourned at: 7:32 pm

A. Attendance:

Voting Members:	X Fred Hicks, Chair X Kimberly Clow <input type="checkbox"/> Rick Flores <input type="checkbox"/> Jane Custer X Jeff Gadzia <input type="checkbox"/> Alisha Loken <input type="checkbox"/> Andrei Karapetian X Scott Ostrem, Scribe X Paul Garibaldi
Staff (Non-Voting):	X Ashley Krempien, Director of Recreation X Butch Reyburn, Board Member

B. Approval of Agenda – Please send any additions or questions **Jeff motioned to approve Paul seconded passed unanimously.**

C. Approval of Minutes October minutes were emailed to the committee **Jeff motioned to approve Paul seconded passed unanimously.**

D. New Items:

1.	Committee membership renewal – The yearly renewals are due, and the reminders have been sent for 2024. Fred will send the membership list to Anita for the BVSA BOD to review and approve.
2.	<p>Lake Levels-Fred Lakes are still doing very well at a little over a foot below full pool. Jeff asked how the lakes were doing compared to previous years. Fred informed the committee that the lakes are doing much better than they have in the past due to better water management practices and consolidating the water into Cub and Four Island Lake to minimize evaporative loss.</p> <p>Fred informed the committee that BVSA had drained the 7th hole pond to harvest fish and work on shoreline stabilization in December and that he's keeping the water just above the water lily roots so the plants don't freeze. Ashley commented on how large the seventh hole pond is. Fred replied that the 7th hole pond at some point had been raised several feet by capping an overflow pipe going into Four Island Lake. This made the pond deeper but unfortunately increased shoreline erosion.</p> <p>Guest Veronica Miller asked how much water we save from evaporative loss by having two lakes full instead of keeping water in all three water bodies (Four Island Lake, Jacks Hole, and Cub Lake). Fred replied that it's approximately 54-acre feet of water per year. This is calculated by taking the surface and multiplying it by the 6 ft per year evaporative loss rate for this area. Discussion of water transfer ensued and Fred explained that an Acre foot of water is approximately \$2,000. Veronica asked if birds are considered when the water transfer occurs. Fred replied that birds are considered but they are one of many factors and Jacks hole is never completely drained.</p>
3.	Water Quality -Fred Ortho-phosphate levels are back to negligible in both lakes. There was a mistake in the Ortho-phosphate level readings due to an error with a reagent shipment. The packaging was virtually the same, but the reagent that was sent was for 5ml samples instead of 20ml samples. The mistake was easily corrected but required back counting samples and multiplying the results. The error was found when Solitude and I compared results while planning the Phoslock dosing. I believe the high spike to be related to plants dying off as cold water hit. I will adjust next year's calendar to plan for a heavy fall plant removal prior to the Coldwater season. Nitrates are still low in both lakes. Unfortunately, Four Island Lake has a significant algae bloom as



BEAR VALLEY SPRINGS ASSOCIATION

Lake Quality Advisory Committee Agenda

Location: Monday, December 4th 2023, at 6PM Whiting Center-Green Room

	<p>Solitude doesn't treat the lakes November through March. The answer is we need more plants in Four Island Lake.</p>
4.	<p>Habitat projects update</p> <p>Cub Lake Shoreline stabilization 250' of shoreline has been stabilized using ¾" and 1" rock. This will stabilize the shoreline and decrease sediment. This provides fish and wildlife habitat as well as stabilizing the shoreline. In March Fred will place River Willow cuttings harvested from Four Island Lake to try and establish some trees along the shoreline.</p> <p>The 7th hole pond- is the next area to be stabilized this December. Fred is hoping to stabilize 300' of shoreline using the dirt from Jacks hole to stabilize the exposed sprinkler heads.</p> <p>All shorelines stabilized have a 3 to 1 slope. This means for every 3 feet horizontal there is a 1-foot vertical drop.</p> <p>Upcoming projects- are to increase the spawning habitat within Four Island Lake, and the Christmas tree habitat project.</p> <p>Questions were raised about Christmas tree decomposition. Fred replied that the trees last roughly three to four years and the habitat benefits far outweigh the negatives associated with the tree decomposition.</p>
5.	<p>Fish remediation update Addendum A – Fred referenced Addendum A and noted that November and October were a little lighter in harvest than he preferred. This was partially due to the focus of October being for Fred to capture and transfer Golden shiners into Cub Lake. During the fall sampling it was noted that the fish within Cub Lake were malnourished. To fix this Fred moved approximately 3200 Golden Shiners up to 10" from Four Island to Cub Lake in October. This will increase the forage base within Cub Lake for 2024 and beyond. These shiners will spawn within Cub Lake next year and begin to increase the forage base for the lake. Overall value is between 3-7 dollars each. This resulted in a realized median gain for the association of ~\$16,000. One advantage to transferring the large Golden Shiners is that the Crappies cannot eat them, so they have an increased chance of surviving and reproducing.</p> <p>Fish Sampling results-During the fall Cub Lake sampling it appears that there is still a high number of Black Crappies present. Bluegill numbers were fantastic with 18 Bluegills sampled between 7-10 inches. Unfortunately, Fred did remove multiple very large bullheads 1-2.5 lbs. from Cub Lake during the sampling. Fred will sample Cub Lake again in the spring and determine if additional Crappies will need to be removed. He is hesitant to remove more Crappies but feels it will be necessary for the benefit of the ecosystem. The Black Crappies do seem to be getting larger. Four Island Lake is doing much better regarding diversity of fish sampled and Fred has begun to record all fish captured to establish a data set for future comparisons. The Red Ear sunfish we stocked at 3-4" are now 7.5" in length. This is fantastic growth and Red Ear Sunfish are a biological control mechanism for the snails that carry the parasite which carry swimmer's itch.</p> <p>Questions were asked about how many people fish and does BVSA have rules for fishing. Ashley, and Fred explained that fishing is a popular recreational pastime within Bear Valley and section 8 and 9 of the BVSA rules are posted, at each lake.</p> <p>Questions were raised regarding anglers and fish harvest. It was explained that harvest is required each year to maintain the balance within the lakes. Four Island Lake should hold no more than 10,000 lbs of fish. The fish</p>



BEAR VALLEY SPRINGS ASSOCIATION

Lake Quality Advisory Committee Agenda

Location: Monday, December 4th 2023, at 6PM Whiting Center-Green Room

overcrowding within Four Island Lake has been a significant contributing factor to the fish die offs which have occurred within the past. It was also explained that to keep the fish population within acceptable levels Bullhead Catfish, and Black Crappies currently have unlimited harvest regulations in place, and all other fish within the lakes are catch and release.

7th hole pond fish transfer: Fred explained that the fish nursery program which utilizes the 7th hole pond as a fish hatchery/rearing facility went very well over last two years. This December a volunteer fish capture/transfer event was coordinated with the LQAC, residents, and the Kern River Fly Fishers. Over 20 people attended and participated. Prior to the work beginning the 7th hole pond was drained down and ~5,300 raised 4-7" green sunfish, and 3-10" golden shiners each worth 3-7 dollars were captured and transferred into Four Island Lake. Bullhead numbers within the pond were down significantly with only 360 lbs. captured and removed. **The median realized gain for the association was over \$25,000 resulting from this project.** Fred noted that this year they had difficulty with the spines of the catfish stabbing the volunteers sorting the captured fish. Fred also stated that he doesn't really mind being stung by the catfish, for volunteers the process needs to be improved. The way to improve the process is to use devices called fish grader/sorter which essentially sort fish by size. The fish grader/sorter should allow volunteers to sort fish without having to physically handle most of the catfish. A grader/sorter will also improve fish survivability by keeping the captured fish in cleaner water as they are sorted faster.

Fred asked for a motion to purchase a fish grader/sorter this fiscal year, and a 2nd one in the 2024/2025 budget year. Butch asked about funding Fred said that he will be coming in under budget for yearly water testing and he would like to use those funds to purchase one grader now if the department stays under budget for the remainder of the year. An additional grader/sorter would be budgeted for in 2024/2025 budget cycle.

Paul motioned Kimberly seconded "for a a motion to the BVSA BOD to purchase a fish grader/sorter this fiscal year, and a 2nd one in the 2024/2025 budget year." Motion passed unanimously.

Motion discussion: Veronica asked if all catfish are bad Fred answered that all Bullhead Catfish are an invasive species which reproduce rapidly and outcompete desirable fish species. Bullheads have spines with venom that frequently break off under your skin and can become infected. Ashley asked if the graders/sorters will just be used at the 7th hole pond. Fred responded that they will be used throughout the year and will simplify his workflow.

As a bonus to the fish capture/transfer, resident children helped by playing in the drained ponds mud and collecting six full five-gallon buckets of golf balls. In total 2100 golf balls were collected. The kids were reimbursed \$25 dollars a bucket for their efforts, and the good golf balls were cycled into the driving range ball pool **realized gain for the association was over >\$1000.**

Questions were asked about how the program started- Fred stated that initially \$1,000 worth of Golden Shiners were stocked into the pond approximately two years ago. There is also an overflow pipe that connects Four Island Lake directly to the 7th Hole Pond which fish can travel through and enter/exit the pond when it is over full pool level.

6. Fish program outreach -Fred



BEAR VALLEY SPRINGS ASSOCIATION

Lake Quality Advisory Committee Agenda

Location: Monday, December 4th 2023, at 6PM Whiting Center-Green Room

	<ol style="list-style-type: none">1. 7th hole pond fish transfer -Detailed in #5 above with 20 volunteers from the community, LQAC, and Kern River Flyfishers participating.2. Trick a fish- A Halloween program where Fred gave a short talk about how fish find food using their senses underwater. The participants were provided with 3 blank lure bodies and oil markers so they could design and color their own lures. That same weekend 5 kids who participated all caught fish on their self-designed lures. Ashley suggested we move classes to the spring for increased participation.3. Derby winners' trip-Fred was able to take out the derby winners this fall. The kids wanted to fish for Largemouth Bass in Cub Lake. Unfortunately, the fish did not want to cooperate, and no fish were caught.
7.	<p>Plants – Fred/Rick</p> <p>Cattail removal-Per our current cattail management plan all cattail removal has been completed for the year within Four Island Lake. This work was completed in October and November. In total with the plant maintenance program over the summer over 60 8' truck beds of plants were removed. The cattails were manually cut and removed.</p> <p>Water Hyacinth- In the end of October Rick, Paul, and Fred moved the water Hyacinth to a greenhouse for the winter. They were able to house about the same number of plants we began the spring with in a 10'*5' area. Approximately 5300 live plants were removed and disposed of from Four Island Lake. These plants filled the entire LQAC boat and removed a large amount of nutrients from the lake. The realized savings of this project is ~\$16,000 that the BVSA didn't have to spend on additional plants. These were grown from an initial investment of ~\$2000. We will see how the winter goes and next year we plan to continue with this project.</p>
8.	<p>Halloween event recap- The Halloween trunk or treat event went very well this year. It was pirate themed with Jane Custer, Kyley (Janes granddaughter), and the local fishing kids helping set up and hand out candy at the table. The popular items this year were the fake gold coins and gems on the table. As planned, we used all the leftover smarties from the fourth of July parade. Lots of children participated and stopped by the table. This event typically goes through about 60+ pounds of candy.</p>
9.	<p>Five-year plan assignments-The five-year plan is due for its yearly update Rick will work on plants, Kimberly will work on Recreation, Paul will work on Watershed, Jeff will work on Water Quality, and Fred will work on the Fish and Google Drive sections. Fred typically tries to update the google drive in November/December but he is finding it increasingly difficult to find the time to keep the Google Drive up to date with all of the projects and ongoing work he is performing. In February we will review the sections.</p>
10.	<p>Committee member comments and questions- Fred asked if the committee wanted to meet in January and there was no interest. The next LQAC meeting will be the first Monday in February at 6:00 pm in the Whiting Center Green Room.</p> <p>Paul asked about the LQAC volunteer shirts and vests- Fred said he had forgotten to place this item on the agenda. Tilly has designed a fantastic LQAC logo. Hoodies can be purchased for ~25.00 each. Fred will follow up with an email to the group containing the logo. Fred will hold on to the volunteer work vests and distribute and each work event, every committee member will be given a t-shirt.</p>
11.	<p>Visitor Comments and Questions Addendum B</p>



BEAR VALLEY SPRINGS ASSOCIATION

Lake Quality Advisory Committee Agenda

Location: Monday, December 4th 2023, at 6PM Whiting Center-Green Room

Veronica Miller-Veronica commented on her letter that was forwarded to the committee. Veronica is concerned about the potential plans for the expansion of Jacks Hole, and Cub Lake. Veronica is for the expansion project but strongly feels that we need to find a location other than nature path/common area parcel that has been discussed to place the fill dirt that will be excavated. A long Discussion ensued.

Carolynn Corporan-Commented that the Wildlife coalition has not taken a position regarding the proposed Jacks Hole, and Cub Lake excavation.

Butch-commented that the BVSA BOD is very aware of the legal process that a project like this must go through, and this a very long-term project that probably is 15-20 years out. He also noted that the BVSA talks all member comments seriously.

Fred-Stated that all waterbodies within Bear Valley are man made and fall under many different state and federal agencies. Drainage maps have been created by the LQAC biologists. Fred will inquire Don Ciota about forwarding the Lake and Streambed Alteration Documents to Veronica Miller and Carolynn Corporan.

E. Follow-Up Items: 3 items

- | | |
|----|----------------------|
| 1. | Bear Tracks articles |
|----|----------------------|

LQAC 2023 scheduled meetings occur at 06:00 PM Pacific Time (US and Canada): March 6th 2023, Apr 3rd 2023, May 1st 2023, Jun 5th 2023, Aug 7th 2023, Oct 2nd 2023, Nov 6th 2023, and Dec 4th 2023.



BEAR VALLEY SPRINGS ASSOCIATION

Lake Quality Advisory Committee Agenda

Location: Monday, December 4th 2023, at 6PM Whiting Center-Green Room

Addendum A Fish Remediation

Fish capture in pounds

Netting Monthly Overview

Four Island

October 1/5 of the month (Hoop Netting)	280.00
November full month (Hoop Netting)	1,731.00
December 1/2 month (Hoop Netting)	573.00
January full month (Hoop Netting)	4,107.00
February 5 days (Hoop Netting)	210.00
March full month (Hoop Netting)	2,101
April full month (Hoop Netting)	483.00
May Full month (Hoop Netting)	209
June Full month (Hoop & cast netting)	2167
July Full month (Cast netting)	4390
August Full month (Cast netting)	1290
September Full month (Cast netting)	1340
October Full month (Cast netting)	395
October Full month (Cast netting) Golden Shiners transferred to Cub Lake 2-10 dollars each	3220
November Full Month (Hoop netting)	580
Netting harvest to date	19856
Fish harvested between May of 22 to Oct 22	13,000.00

**Total fish Harvested in pounds from Four Island between
May 1, 2022, to November 30th, 2023**

32856



BEAR VALLEY SPRINGS ASSOCIATION

Lake Quality Advisory Committee Agenda

Location: Monday, December 4th 2023, at 6PM Whiting Center-Green Room

Cub Lake sampling 15 nights 1 full set with 2 nets

4-24-23 to 5-25-23

1721 Crappies removed all same size	860.50
80 bluegills all transferred to Four Island 68 were 8" and over	40
7 Largemouth bass released	13
12 large golden shiners	2
5 really large Bullhead removed	11.50
Total fish Harvested in pounds from Cub between April 24, 2023, to May 25, 2023	927

November 2023	Number of net nights		9	
Location	Cub Lake			
Size range	0-4 inches	4-7 inches	7-10 inches	10-13 inches
Black Crappie		20	88	6
Bluegill		44	18	
Redear Sunfish				
Green Sunfish				
Golden Shiner		5	5	
Bullhead catfish		1		10
Largemouth Bass		1	1	1
Channel catfish				



BEAR VALLEY SPRINGS ASSOCIATION

Lake Quality Advisory Committee Agenda

Location: Monday, December 4th 2023, at 6PM Whiting Center-Green Room

November 2023	Number of net nights		11	
Location	Four island Lake			
Size range	0-4 inches	4-7 inches	7-10 inches	10-13 inches
Black Crappie	1	69	42	
Bluegill		57	3	
Redear Sunfish			2	
Green Sunfish	6	17		
Golden Shiner			6	
Bullhead catfish				580 lbs
Largemouth				
Bass		1	1	
Channel catfish				