



Summit Lake Community Association

11545 Summit Lake Road, Olympia, WA 98502

January 29, 2024

Michael J Gallagher
Southwest Region Section Manager, Water Resources Program
Department of Ecology
PO Box 47775
Olympia, WA 98504

Ref: Dept of Ecology Letter From M Gallagher to Audrey Richards, President, Summit Lake Community Association, dated December 13th, 2023

Dear Michael Gallagher:

Please find below our Summit Lake Community Association (SLCA) annual report on lake level and dam management at Summit Lake in accordance with the referenced letter.

Executive Summary:

- The boards in the dam were managed as defined by the Department of Ecology direction and our measured lake level data and the LCOSS data shows the value of the boards in maintaining lake levels in a tight range. The maximum lake level was noted as +5 inches with a minimum lake level of -16 inches. The lake experienced a range of 21 inches of depth change.
- The years' work was deemed as generally routine maintenance handled under our watermaster's leadership and the support of the Pacific Harbors Council camp.
- A small claims court lawsuit (which was dismissed) resulted in validation that the work our watermaster has been doing for the last 70 years is aligned with the Dept of Ecology mandate to the SLCA.

Our volunteer watermaster, Larry Raedel has coordinated all activity at the dam during 2023. In 2023 we had just the single watermaster. This work included:

1) Board Management:

a) Installation: The boards were installed on April 1st

The picture below (see attachment 1) shows the water flow over the dam boards with clear flow. The water level was between 5.10 and 5.20 on the dam level gauge, just below the top of the concrete pier. See clear flow over the boards (attachment 2) on 4/20.

b) Removal: The Boards were removed on Nov 2. See attachment 3. The delay was based upon discussions with, and approval from, the Dept of Ecology, and was immaterial, as the water level was below the spillway level and water was not flowing with or without the boards. See attachment 4.

c) Comments:

i) Rainfall in the months of May and June were significantly below normal and caused the lake to begin to lose water thru evaporation and outflow sooner than normal. The lake was very low by the end of the summer and the water level was below that of the dam outfall without the boards.

ii) The lake level is being tracked by a project described here:

(1) Lake Observations by Citizen Scientists and Satellites

(2) <https://www.locss.org>

(3) We have correlated the LOCSS data for Summit Lake to the concrete pier defined in the Dept of Ecology letter. The target lake level defined in that letter is equal to 1.00 feet on the LOCSS gauge at the WDFW boat ramp. The effect of the boards can be seen with a review of the data. The boards were installed at the beginning of April. We see the lake level rise through early May at which time the low rainfall was experienced and the marked decline in lake level from there thru the summer.



LAKE OBSERVATIONS
BY CITIZEN SCIENTISTS & SATELLITES

About

Lakes

Height in feet

1.22 feet

0.96 feet

0.71 feet

0.46 feet

0.20 feet

2023-02

2023-04

2023-06

2023-08

2023-08-02

Height in feet: 0.20 feet

iii) Our watermaster performed frequent visits and checks on the dam and the inflow/outflow and reported these via email to SLCA and Ecology. Most visits to the dam involved some debris clean up. In addition, our watermaster recorded lake water levels as shown in the table below. Note the water level correlation - a value

- iv) of 5.2 feet on the dam gauge equals the top of the pier which equals the LOCSS 1.0 feet mark.

Dates (2023)	Depth ¹ (ft)	Depth to pier ² (in)	Comments
Feb 9	4.8	-5	
Mar 13	5.15	-1	
Mar 29	5.00	-2	
Apr 1			boards installed
Apr 5	5.15	-1	
Apr 12	5.50	+4	water flowing cleanly over the boards
Apr 20	5.60	+5	flow over boards is unobstructed
Apr 27	5.60	+5	
May 3	5.50	+4	
May 11	5.35	+2	
May 19	5.30	+1	
Jun 9	5.05	-2	see picture below of typical debris, beaver activity continues to be cleared
Jun 14	5.00	-2	water stopped leaving the lake over the boards
Jul 2	4.85	-4	minor beaver debris
Jul 8			work party
Jul 21	4.60	-7	
Aug 4	4.40	-10	
Aug 15	4.30	-11	
Sep 2	3.90	-16	
Sep 27	4.05	-14	
Oct 7			work party
Oct 22	4.30	-11	
Nov 2			boards removed
Nov 10	5.00	-2	water began flowing out of the lake, tree obstruction noted, WFDW contacted
Nov 14	5.20	0	tree was down and removed
Nov 24	4.90	-4	
Dec 6	5.60	-5	
Dec 29	5.10	-1	

1) Depth is in feet at the dam water level gauge. Top of pier = 5.2.

2) Depth is in inches above/below the top of the pier. The top of the pier is the court prescribed lake level.

- 2) Channel, pond, and stream management: Our watermaster routinely monitored the site and flow through the dam. Twice during the year, the watermaster called a volunteer work party to assist with flow path clean up.
- a) The first work party of 2023 took place on July 8th, with 6 volunteers. Half the team worked to remove muck and gravel around the dam in/outflow while the other half

- b) worked to clean out the channel leading into the pond of both muck and vegetative debris.
 - c) The second work party in 2023 took place on October 7th. The primary task was removing woodlands debris and logs from the channel between the lake and the pond. There were 5 volunteers led by the watermaster.
- 3) Other topics:
- a) Lawsuit: Our watermaster was sued in small claims court in Thurston County by a lake resident claiming high water levels in 2022 damaged his dock (Small Claim Number 36845). The case was dismissed by the judge. Ecology performed an extensive review of the actions by our watermaster, comments and photo documentation submitted by residents, performed onsite inspections and made aerial observations, and found no evidence that supported mismanagement or that indicated a violation of Washington State Water Law as it relates to the outflow structure for Summit Lake.
 - b) HPA: SLCA has a current HPA from WDFW: The HPA is Permit Number: 2022-6-462+01. It is effective through 2027 and will be renewed at its expiration.
 - c) Communications with and support from the Pacific Harbors Council scout camp (the “home” of the dam) has been excellent.
- 4) 2024 Look ahead:
- a) Board placement: Our watermaster intends to install the boards on or around April 1st and to remove them when the rains return in the fall.
 - b) Water level measurement: The SLCA will begin an effort to simplify and be able to collect additional lake level data to allow for discussions around future management improvements. The SLCA hopes to work with the Department of Ecology to develop this methodology and implementation of any upgrades.

We welcome any feedback from the Department of Ecology with regard to this report. We appreciate the support of the Department and look forward to our on-going collaboration.

Respectfully,



Audrey Richards
SLCA President

cc:

Larry Raedel, SLCA Watermaster

Pacific Harbors Council Camp Thunderbird Camp Superintendent, Dan Collet



(1) Date boards were installed 4/1/23



(2) Showing clear, unobstructed flow over boards by 4/20/23



(3) Showing boards removed 11/2/23. No Flow.



(4) Note the exceptionally low reading for this time.