

2024 Twin Lake Trigger Water Levels Management

Triggers	Date 2024	UTL Storage Ft/m	TP Storage Ft/m	LTL Vertical Water Level Ft/m	
Snowpack /Precipitation	Mar 12/24 80%	-.98' /-.3m below WCG	-1' /-.33m below WCG From fall measure	17.187ft./5.2m	No Data logger for 4 mo. Used field measure.
LTL ice off	Mar 25	1.1' / .36m	1.3 ' / .4m	17.06' / 5.19m	
DL 1469s culvert ice out	Mar 17	1.1' / .36m	1.3' / .4m	17.06' / 5.19 m	
Water into UTL	Mar 31 April 6	1.3' / .4m 1.3' / .4m	1.3' / .4m 1.57' / .48m	17.13' / .52m H2O from pipe 17.13' / 5.2m H2O in Creek Bed	Apr 6 water in Creek bed to UTL
Water over UTL spillway	Apr 18	1.46' / .6m 2 days before was .55m	1.47' / .45m	17.13' / 5.2m 6inch over spillway	Rain
Water into LTL	Apr 23	2.37' / .725m	1.47' / .45m	16.95 ft/ .516m trickle into LTL	Trickle from TP to LTL
Horn Creek stops	June 3	3.2' / .98m 1 "over spillway	2.29' / .7m	17.1' / 5.21m. Jun rain++	
Spillway tops	July 10	3.1' / .95 m	1.8' / .55m	17.2' / 5.24m	Peaked at 1" May 24 to Jun 5
Water to LTL stops	Oct 21	-1' /-.3m	1.57' / .48m	16.8' / 5.12 m	Debris at Eastview Rd culvert.
Culvert Open Culvert Shut at dam	Jun 28 Oct. 1	3.2' / 1m -.1' /-.3m	2.3' / .7m 1.6' / .5m	17.18' / 5.2m 16.92' / 5.1m	Roots blocking culvert. Logging++
LTL Peak	July 7	3.1' / .95m & 1/8 in. over spillway	1.6' / .5m	17.3' / 5.27m	
Ice -on open water at inlet until mid-Jan.2024	Dec 15	N/A	-1.6' /-.5m	16.67' / 5.08 m	
Pump on	No Pump on				
Total Freshet	peak (LTL 17.3' + UTL 3.1' –[ice off UTL 1.1'+LTL 17.06']) +approximately 4' EUS = 6.24'				
EUS	~4 ft.	Varies with precipitation, temp., water use & ground water level.			
Projected	Capacity for 2025 5.53 vertical ft.		LTL has about 2.53 ft. (flood at 19.2 ft) + UTL has 3 ft. capacity	5.53 vertical ft. freshet capacity	
Addition info	2 nd winter logging trucks operating all winter – Horn Creek or Myers Creek Watershed?				

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LEGEND:

WCG is Water Canada Gauge,

UTL is Upper Twin Lake,

TP is Turtle Pond,

LTL is Lower Twin Lake,

TL is Upper & Lower Twin Lake,

Stor is live storage and MHC is Middle Horn Creek – from UTL outlet to TP.

EUS is evaporation/use & seepage which in 1973 average was 3 ft. but 2019 proved to be 4 ft. (2 ft. from each UTL & LTL).

EVRC is Eastview Rd. Culvert

Not Assessed is N A.

DL 1469s culverts are at South White Lake Rd. ~ 1km above or south of UTL where Horn Creek leaves Orofino Mt. and enters a field.

Snowpack is predicted mid Feb., mid Mar., & mid Apr. by Rivers Forecast for S. Okanagan. Mt. Kobau (1815masl) or Greyback Reservoir (1550 masl) have snow pillows but not Orofino Mt. (1550 masl).

LTL has full lake supply (FLS) at 18.6 ft when water reaches the tree line.

Flood of LTL built infrastructure begins at 19.2 ft.

Full System Supply (FSS) - UTL storage (licensed for 320-acre ft. which is ~4 vertical ft. on WCG before spill) + LTL 19.2 ft. at infrastructure flood level = 23.2 ft.

One vertical inch of LTL water when LTL is at ~ 80 acres or recommended high water level of 17.6 ft. is 2.173M US g. UTL & LTL area each about 80 acres but UTL is a shallow lake. LTL is 90 ft deep in the S. Bay.

LTL vertical water level is as the 1968 hydrometric station (Botham in 1973 stated normal should be a low of 12.6 ft to high of 17.6 ft).

TL waterway is formed by its geology and initially was used by 2 ranchers for gravity feed irrigation.

In the spring water was stored behind the 1948 dam to flood the upper field by the old barn.

By June 30 the dam slide culvert was opened according to the water licence so that water moved into the LTL which overflowed or later (1951 to 1962) was released via a slide culvert to a gravity feed pipe to a lower field DL 280 & 281.

Ice on & ice off is according to the BC Lake Stewardship protocol.