



AGENDA

IDAHO WATER RESOURCE BOARD

Board Meeting No. 12-21

WORK SESSION

Thursday, September 16, 2021

Executive Session 8:30 a.m. (PST)

Open Meeting 10:30 a.m. (PST)

Brad Little
Governor

Jeff Raybould
Chairman
St. Anthony
At Large

Roger W. Chase
Vice-Chairman
Pocatello
District 4

Jo Ann Cole-Hansen
Secretary
Lewiston
At Large

Dale Van Stone
Hope
District 1

Albert Barker
Boise
District 2

Dean Stevenson
Paul
District 3

Peter Van Der Meulen
Hailey
At Large

Brian Olmstead
Twin Falls
At Large

The Inn At Priest Lake
Main Floor Conference / Zoom Online
5310 Dickensheet Rd
COOLIN, ID

Board Members & the Public may participate via Zoom

[Click here to join our Zoom Meeting](#)

Dial in Option: 1(253) 215-8782

Meeting ID: 977 2622 9088 Passcode: 069083

1. Roll Call
2. Executive Session: Board will meet pursuant to Idaho Code § 74-206(1) subsection (f) to communicate with legal counsel regarding legal ramifications of and legal options for pending litigation, or controversies not yet being litigated but imminently likely to be litigated. Topics: Priest Lake Water Rights, Recharge Water Right Applications, and North Idaho Adjudication. There are no actions during executive session. Closed to the public.
3. Priest Lake
 - a. Status of the Water Management Project
 - b. 2021 Operations Update
 - c. Long Term Operational Guidance Curve
 - d. Comments from Bonner County
 - e. Priest Lake Water Management Video
 - f. Dam Operator Service Award
4. Adjourn

The board will break for lunch at approximately noon.

1:00 p.m. – 5:30 p.m.: The board will depart for a field trip of the Priest Lake.

Transportation will be provided for board members, IDWR staff, and invited guests.

* Action Item: A vote regarding this item may be made this meeting. Identifying an item as an action item on the agenda does not require a vote to be taken on the item. **Americans with Disabilities**: If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email: jennifer.strange@idwr.idaho.gov or by phone at (208) 287-4800.

Memorandum



To: Idaho Water Resource Board (IWRB)
From: Neeley Miller, Planning & Projects Bureau
Date: September 8, 2021
Re: Priest Lake Water Management Project Update

ACTION: No action is requested at this time

Background

As a result of limited water supply and drought conditions in northern Idaho in 2015 and 2016 (and 2019 and 2021) it has been difficult to maintain required lake pool levels and downstream flow in the Priest River during the recreational season.

The Priest Lake Water Management Study was completed in February 2018. The study included the following recommendations:

- Temporarily raising the surface level of Priest Lake up to 6 inches during the recreational season for dry years
- Outlet dam structural and operational improvements
- Replacing the current existing porous breakwater with an impervious breakwater structure and dredging a portion of the Thorofare channel

Construction

The IWRB authorized the expenditure of funds not to exceed \$5 million from the Revolving Development Account for the construction of the Outlet dam portion and Thorofare portion of the Priest Lake Water Management Project as well as for the construction management and for other costs associated with the project.

In February 2021, Strider, indicated it had encountered conditions not anticipated below the outlet dam and indicated that it may take more than one season to complete the construction. Mott MacDonald, the Project engineer and Owner's Representative, evaluated Strider's claim and recommended they not proceed into the phase 2 concrete work this season based upon project performance thus far and risk associated with tight construction timeline and spring runoff. As a result, the IWRB passed a resolution on February 18, 2021, authorizing an extension to second season to complete the outlet dam.

Work was completed at on the breakwater on-schedule and on-budget in April 2021. Finalized Thorofare punch list items and construction contract during summer 2021.

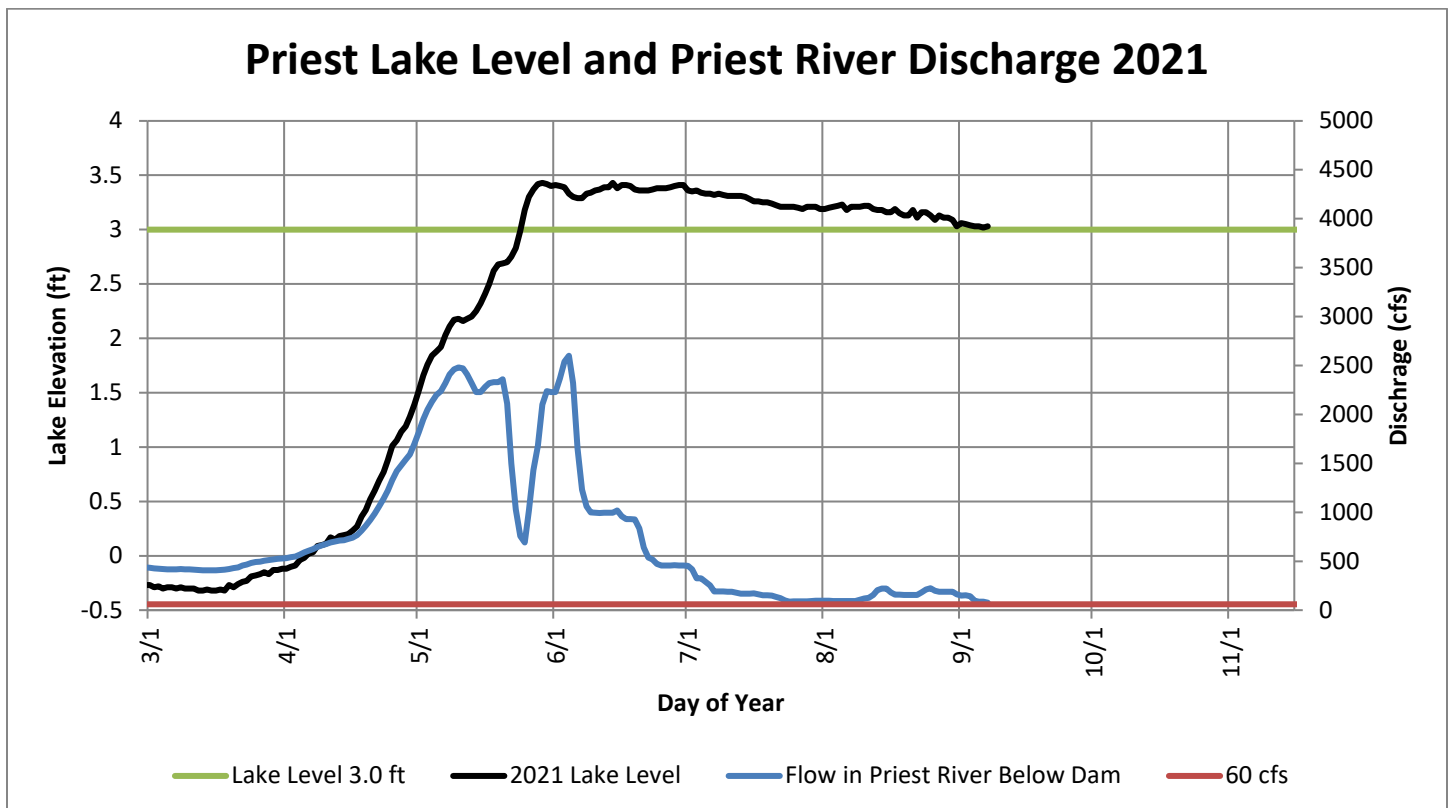
Remaining Schedule

- Fall/Winter 2021/2022 – Wrap up negotiations with contractor in preparation for season two of Outlet Dam construction. The project will be completed no later than June 1, 2022.
- Spring 2022 - Contract with MM to develop an Asset Management and O&M Plan for the Outlet Dam.
- Spring/Summer 2022 - Develop an Outlet Dam Operations Plan.

Lake Level Status and 2021 Operations

Unfortunately the normally abundant total precipitation quantity (snow and rain) did not fall in the basin this past winter. This created a much less than normal volume of water available for summer base flows entering the lake. Although the long, cool spring stretched out the water supply to some extent the gates had to be operated in May to get the lake UP TO the Minimum Lake Level before the Memorial Day weekend. Early June water supply predictions based on snow water indicated lake inflows were going to be less than 50% of normal. Another dry and abnormally hot summer has exacerbated the issues.

The IWRB and IDWR staff have monitored the river flows and lake level daily and it has been noted that some 2021 river flows this summer near Priest River have been the lowest in 71 years of record, while the lake has been stable at about 4 inches above Minimum Lake Level. This indicates that flows were not low because more water was being stored. A result of the work on the gates not being completed is that 6 inches of additional storage could not be realized this year when we needed it the most.



Memorandum

To: Idaho Water Resource Board (IWRB)
From: Neeley Miller, Planning & Projects Bureau
Date: September 8, 2021
Re: Priest Lake 2021 Operations

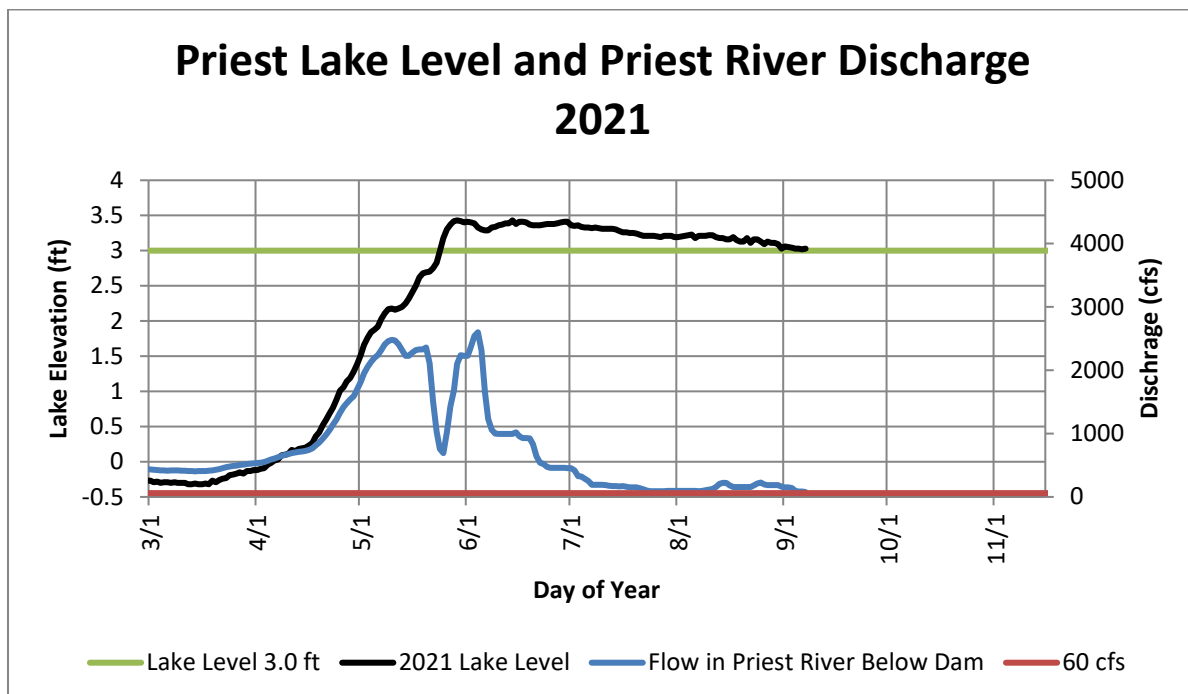


ACTION: No action is requested at this time

Priest Lake 2021 Operations

Unfortunately the normally abundant total precipitation quantity (snow and rain) did not fall in the basin this past winter. This created a much less than normal volume of water available for summer base flows entering the lake. Although the long, cool spring stretched out the water supply to some extent the gates had to be operated in May to get the lake UP TO the Minimum Lake Level before the Memorial Day weekend. Early June water supply predictions based on snow water indicated lake inflows were going to be less than 50% of normal. Another dry and abnormally hot summer has exacerbated the issues.

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Priest Lake Operations Guidance

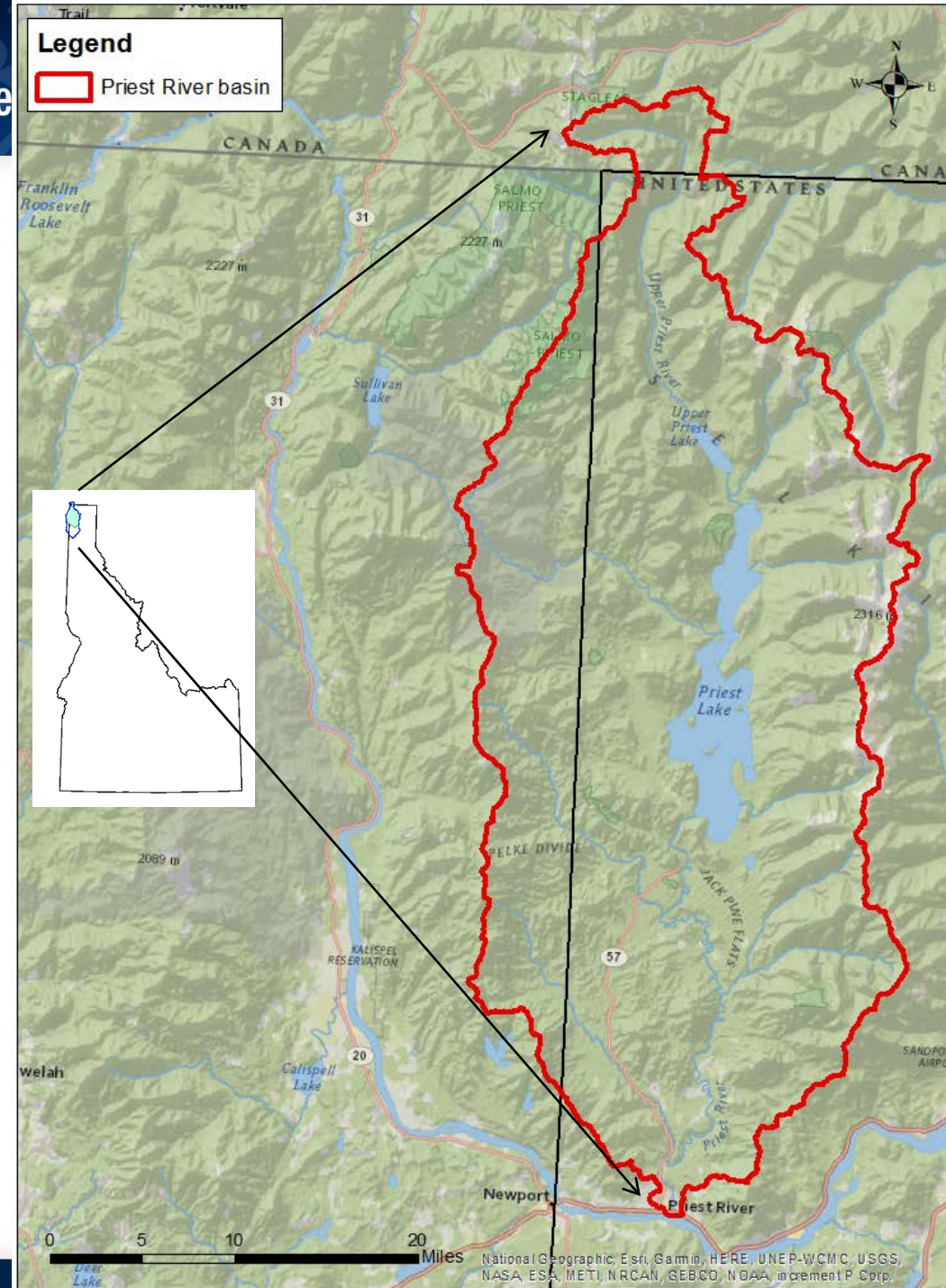
Presented by: Kara Ferguson & Matt Anders

Date: September 16, 2021



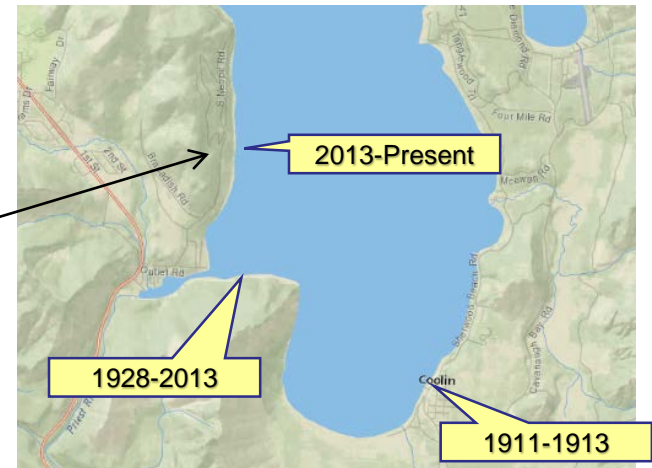
Geography & History

- Priest Lake Dam constructed in 1951 and owned by IWRB.
- Purpose is to stabilize lake levels for summer recreation.
- Priest River Minimum Stream Flow Water Right (97-7380)
 - At the confluence of the East River and Priest River (21 miles downstream of lake)
 - Subordinate to statutory Priest Lake Level operation requirements (Idaho Code § 70-507) and water right 97-2020.



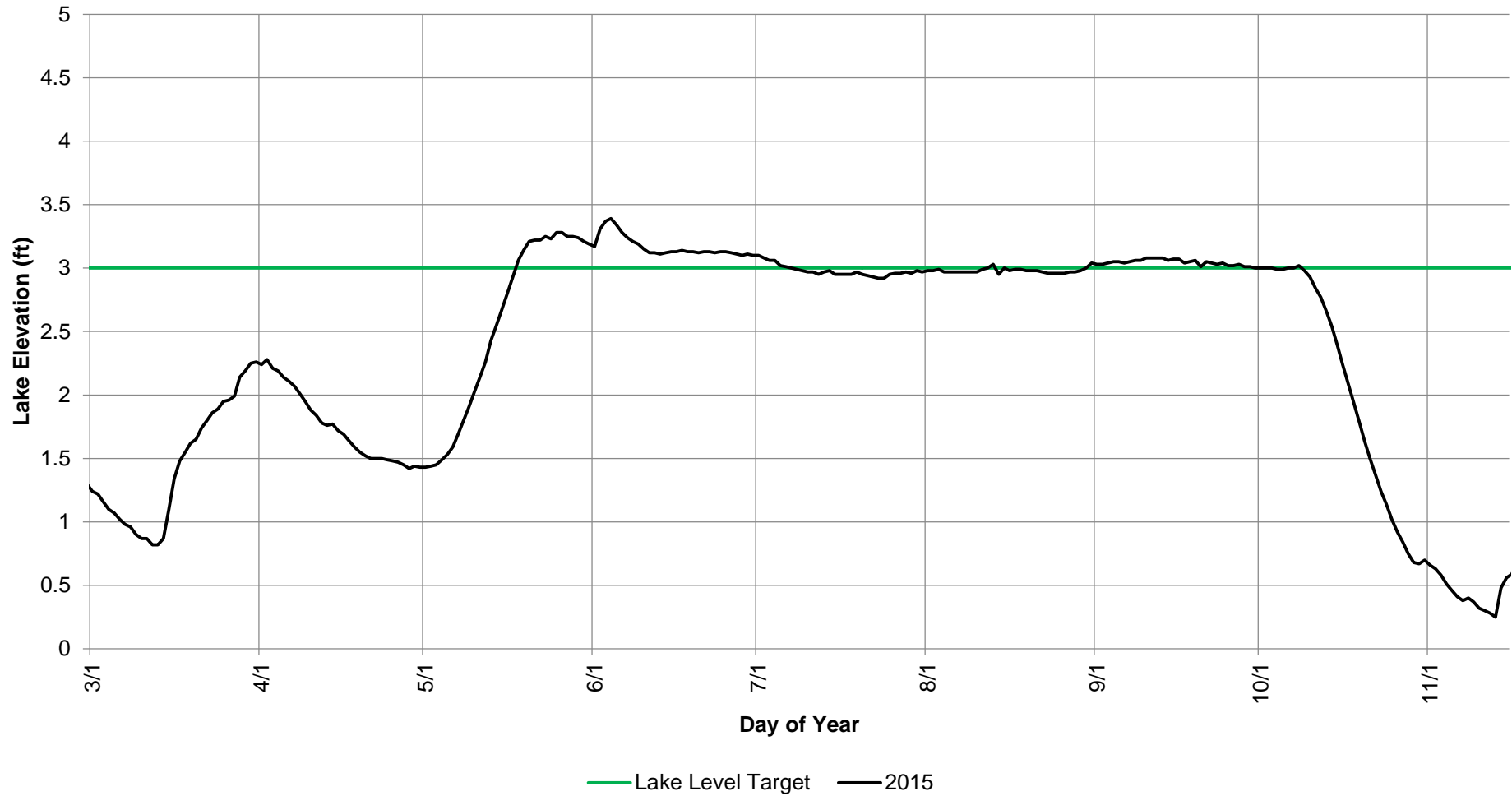
Dam Operations

- Idaho Code § 70-507 requires lake levels at USGS gage 12393000:
 - 3.0 ft. in normal to wet years
 - 3.0-3.5 ft. in dry years.



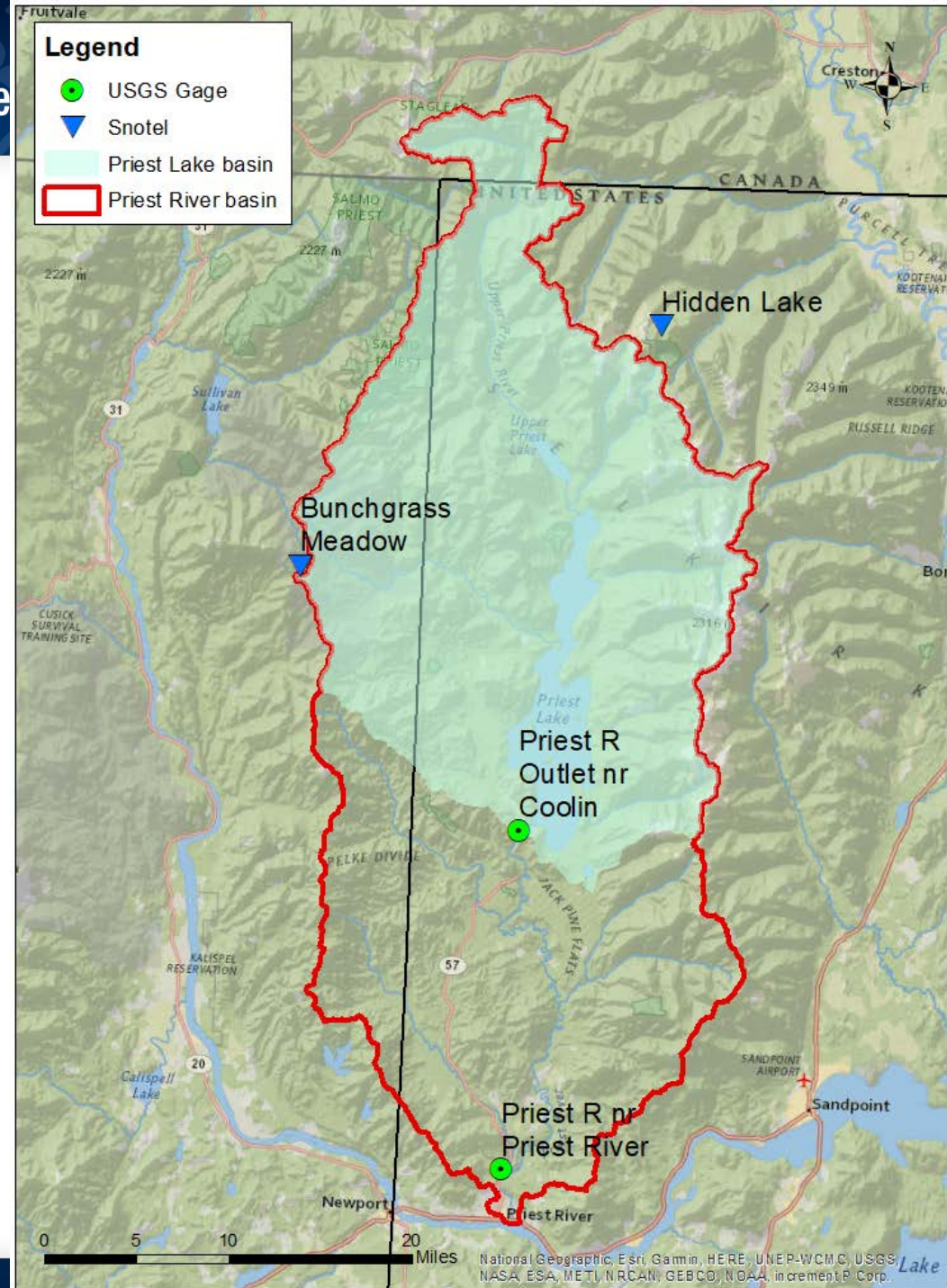
- IWRB policy: When lake level is >3.0 ft., maintain a minimum of 60 cfs of discharge in the Priest River below Priest Lake Dam.
- Operations agreement with Avista for Priest Lake Dam ended in 2011 and operations reverted back to IWRB.
- Drought in 2015 made it difficult to maintain lake at 3.0 ft.

Priest Lake Level - 2015



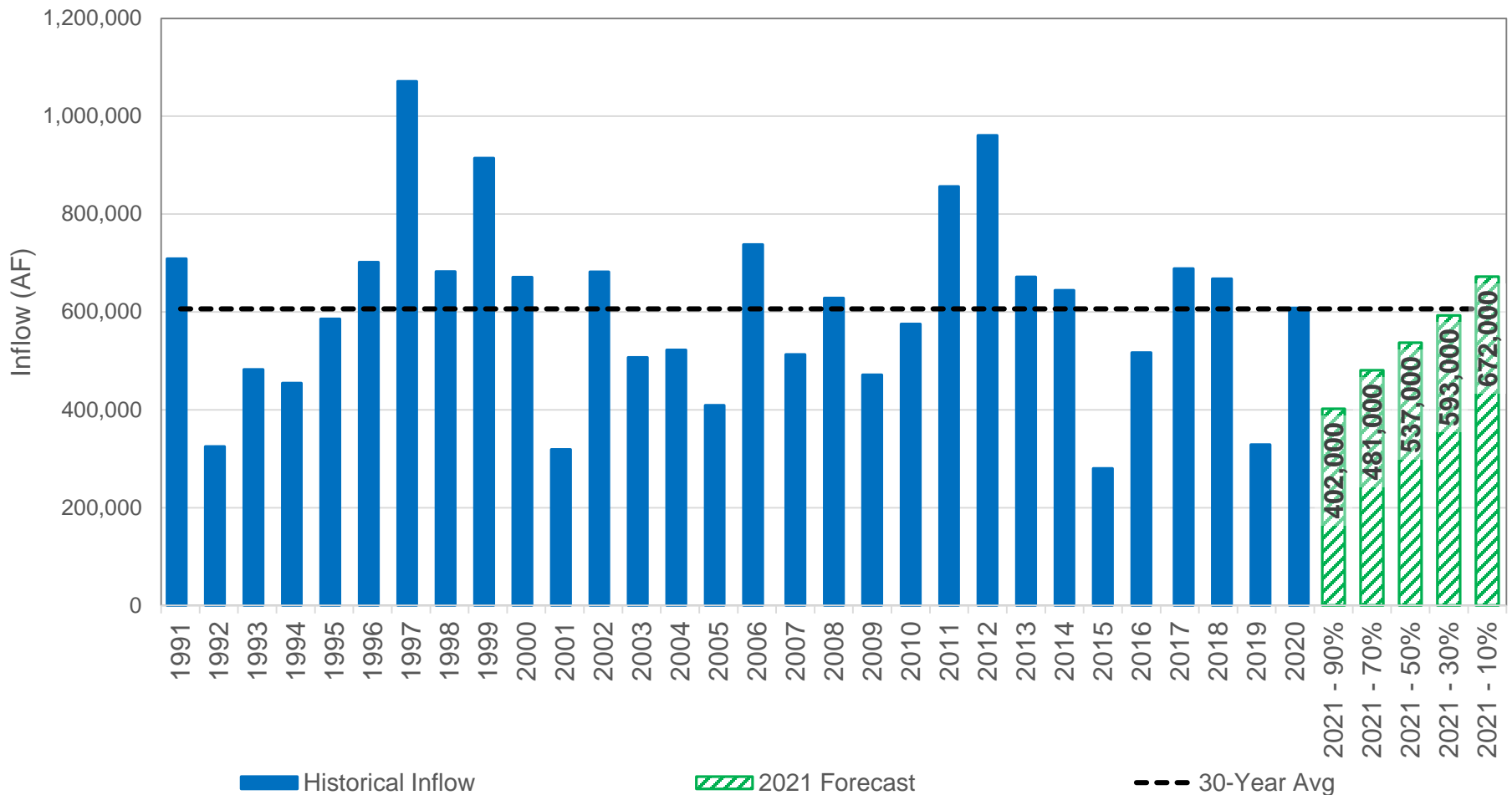
Priest Lake Inflow Forecast

- NRCS uses SNOTEL sites to forecast for the volume of water passing the USGS stream gage at Priest River near Priest River.
- IDWR produces forecasts for the inflow for Priest Lake.
 - February 1
 - March 1
 - April 1
 - May 1
 - June 1

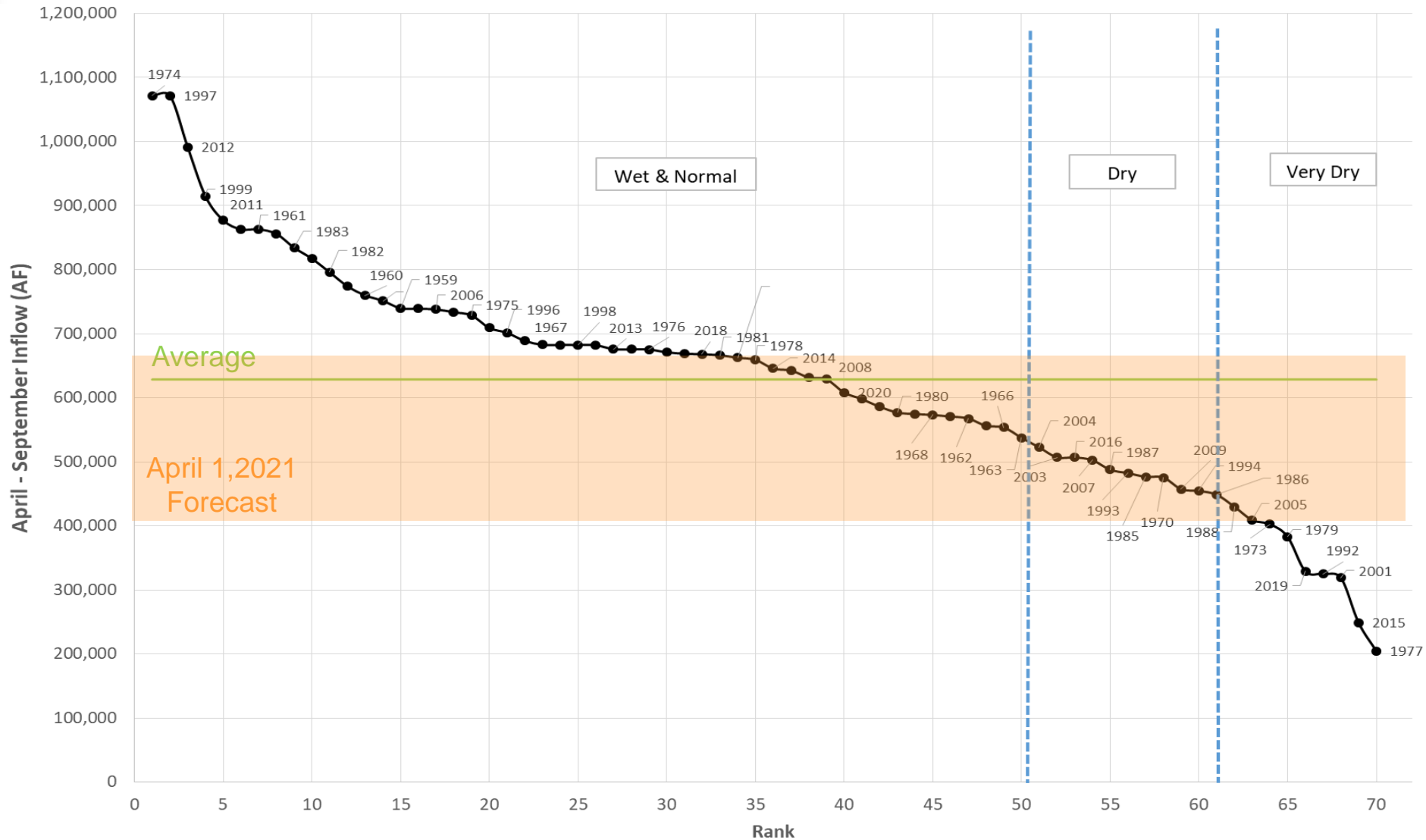


Example of Priest Lake Inflow Forecast - 2021

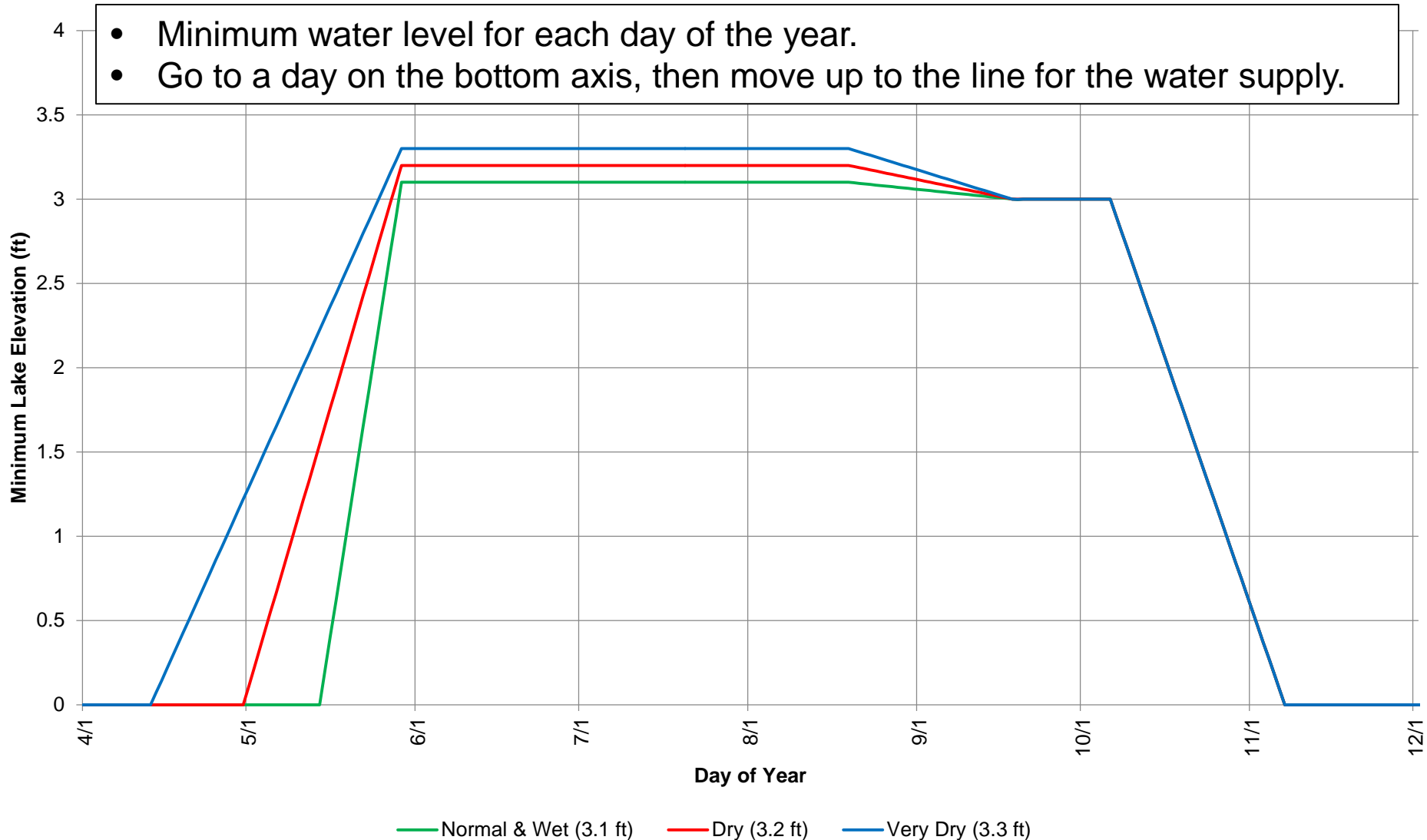
April-September Inflow to Priest Lake: April 1 Forecast vs. 1991-2020



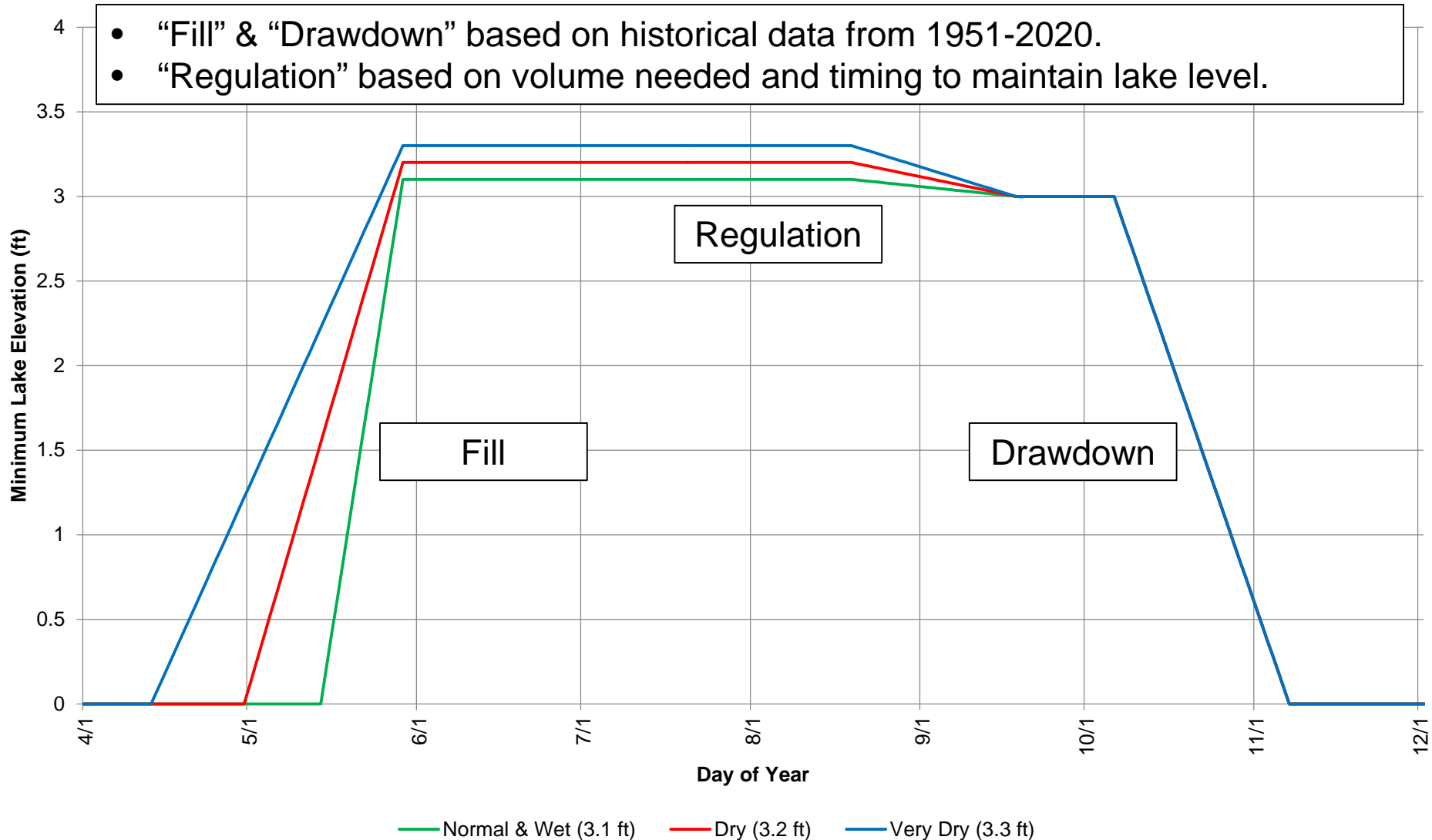
Type of Water Year (1951-2020)



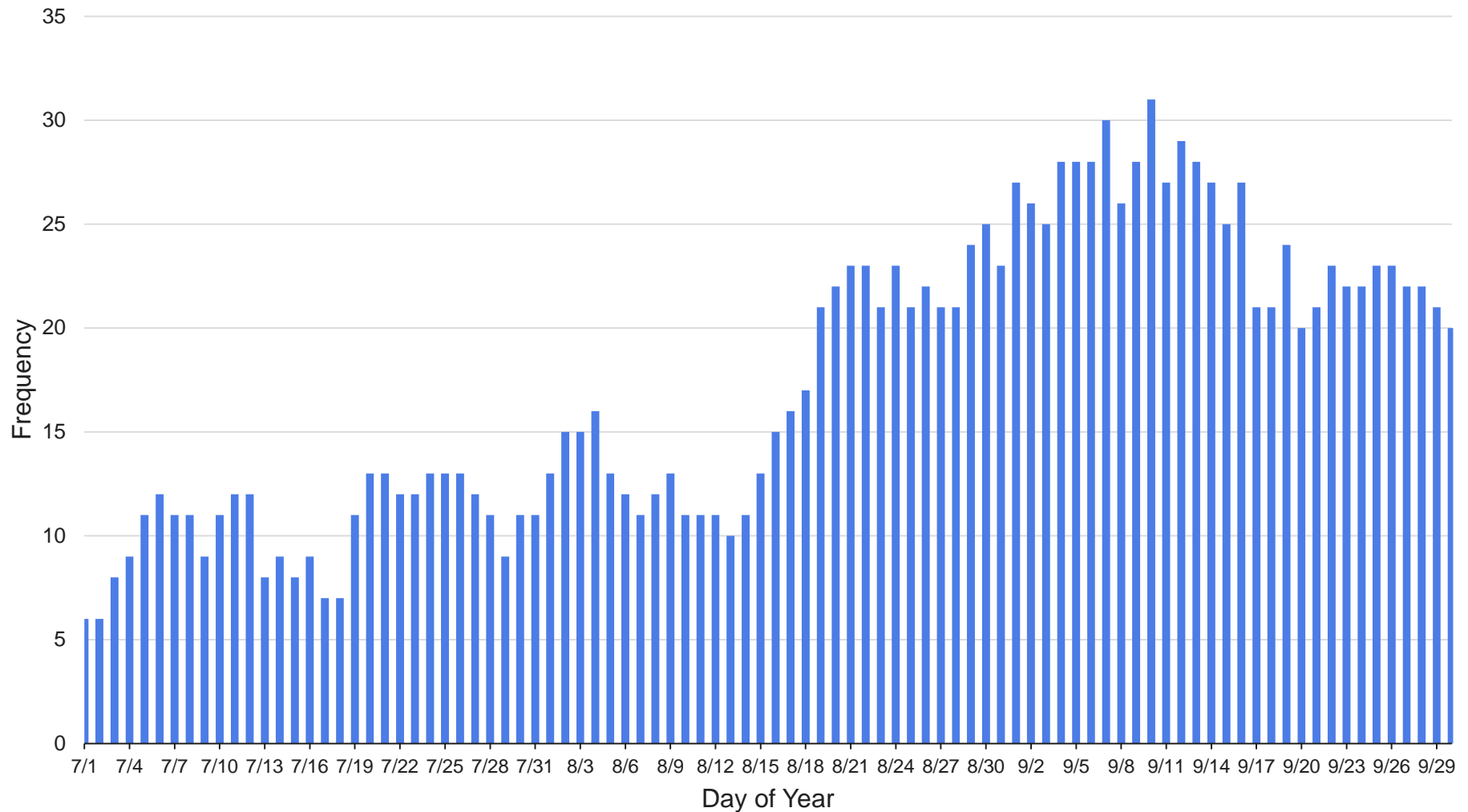
Fill Guidance Curve - DRAFT



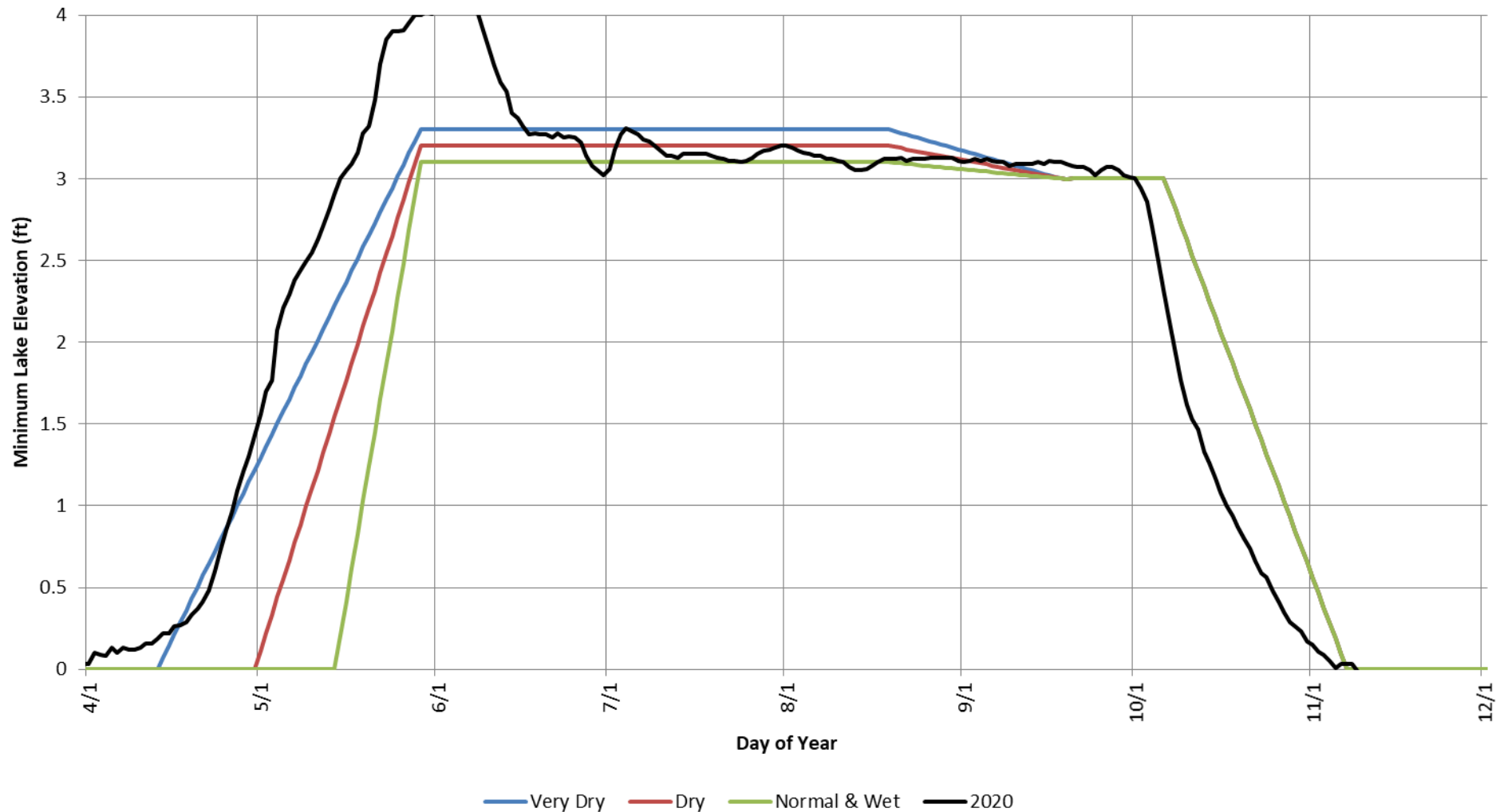
Fill Guidance Curve - DRAFT



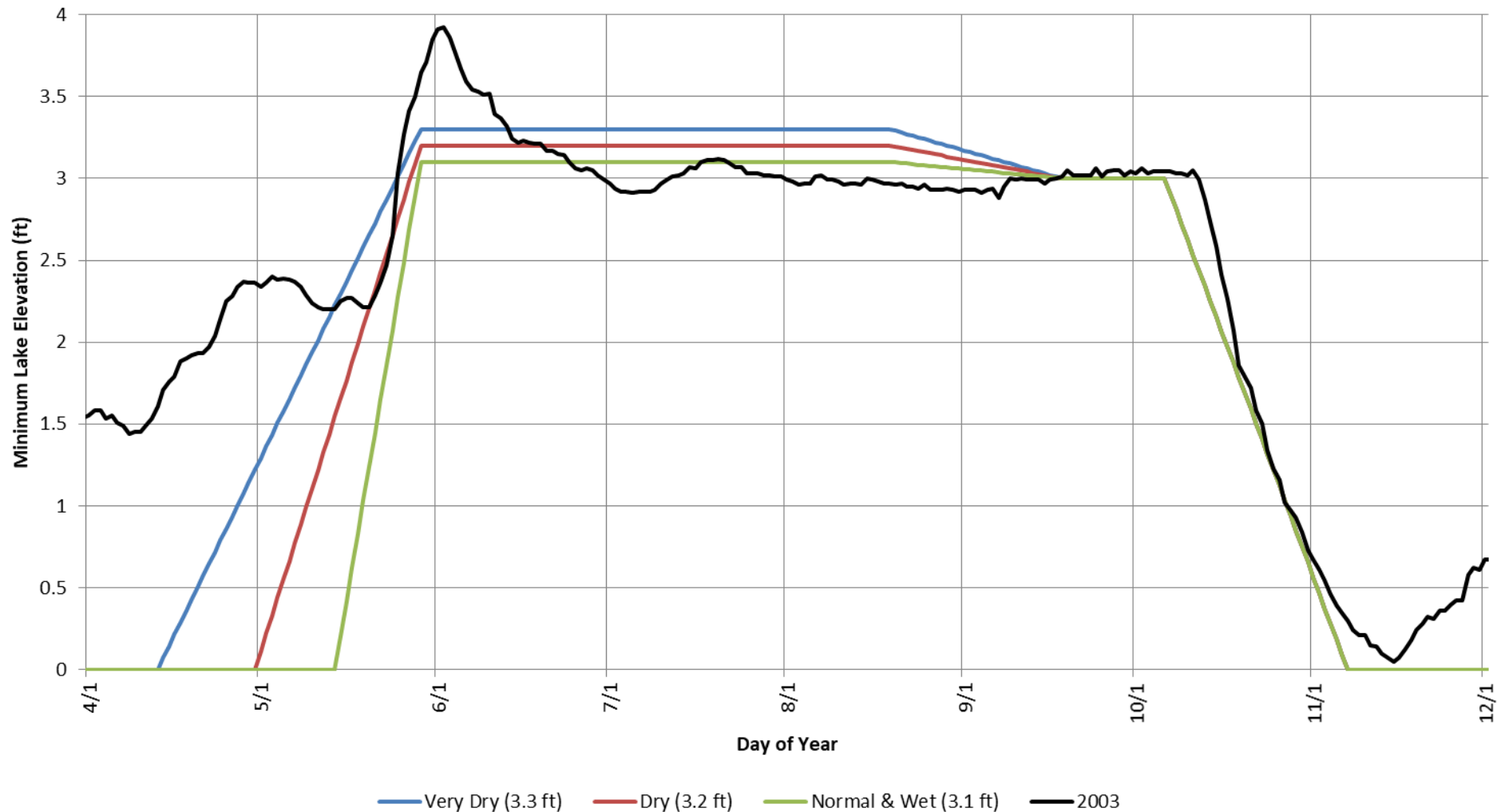
Days Below 3.0 ft During Recreation Season (1951-2020)



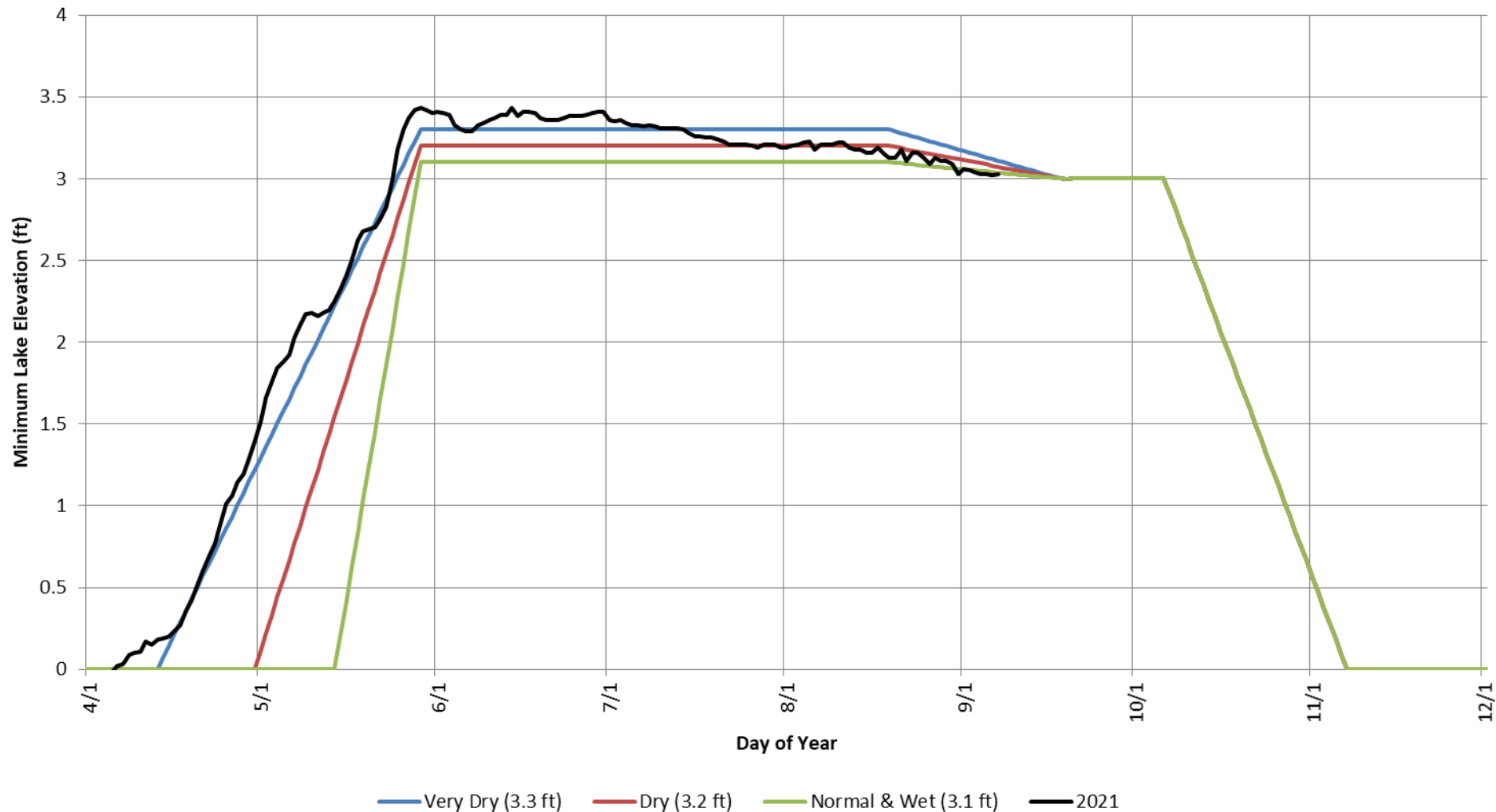
Example 2020 – Normal



Example 2003 – Dry



Example 2021 – Very Dry



Questions?



Memorandum



To: Idaho Water Resource Board (IWRB)
From: Neeley Miller, Planning & Projects Bureau
Date: September 8, 2021
Re: Comments from Bonner County/Priest Lake Breakwater Project Partner

ACTION: No action is requested at this time

A representative from Bonner County will speak to the IWRB about their participation in the breakwater/thorofare portion the Priest Lake Water Management Project.

Memorandum



To: Idaho Water Resource Board (IWRB)
From: Neeley Miller, Planning & Projects Bureau
Date: September 8, 2021
Re: Draft Priest Lake Water Management Video

ACTION: No action is requested at this time

Staff will preview a draft Priest Lake Water Management Project video focused primarily on the thorofare/breakwater.

Memorandum



To: Idaho Water Resource Board (IWRB)
From: Neeley Miller, Planning & Projects Bureau
Date: September 8, 2021
Re: Priest Lake Dam Operator Service Award – Karl Duncan

ACTION: No action is requested at this time

IWRB will present dam operator service award to Karl Duncan (recently retired, longtime operator of Priest Lake Outlet Dam).