

LIBBY DAM OPERATIONS SPRING/SUMMER 2023

Date: 20 May 2024

Leon Basdekas
Greg Hoffman



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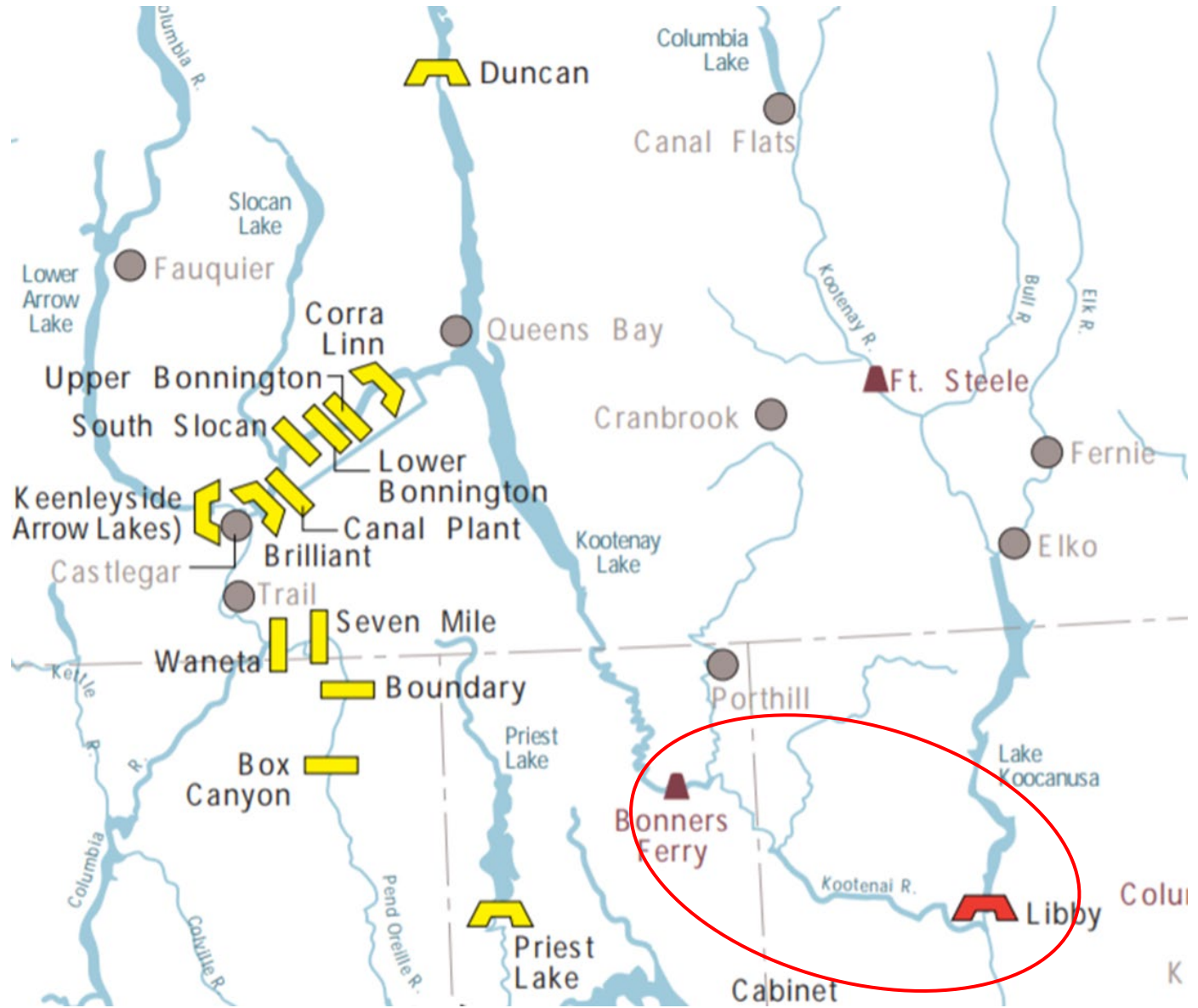
US Army Corps
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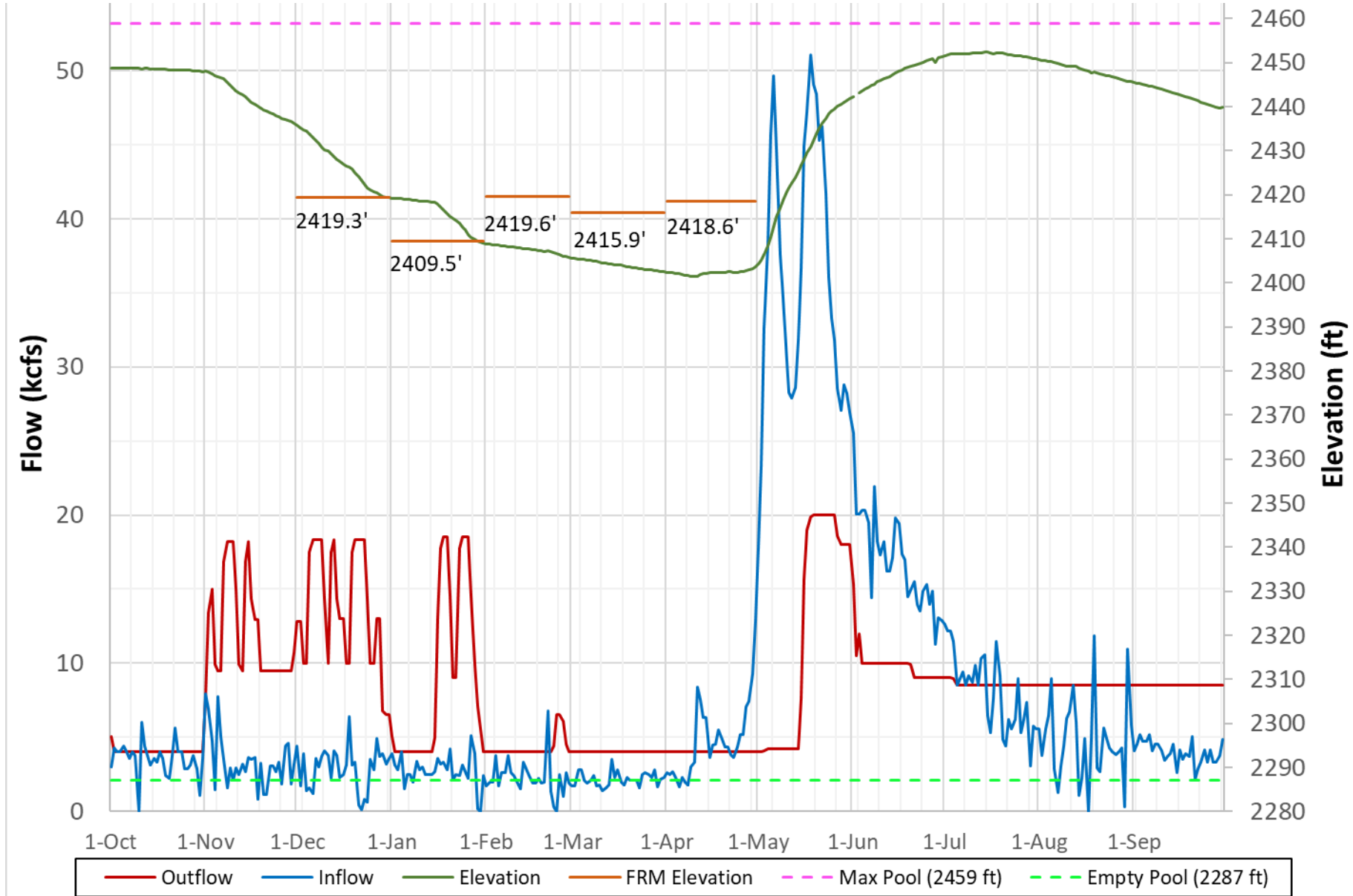
GENERAL BACKGROUND





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RESERVOIR OPERATIONS 2023

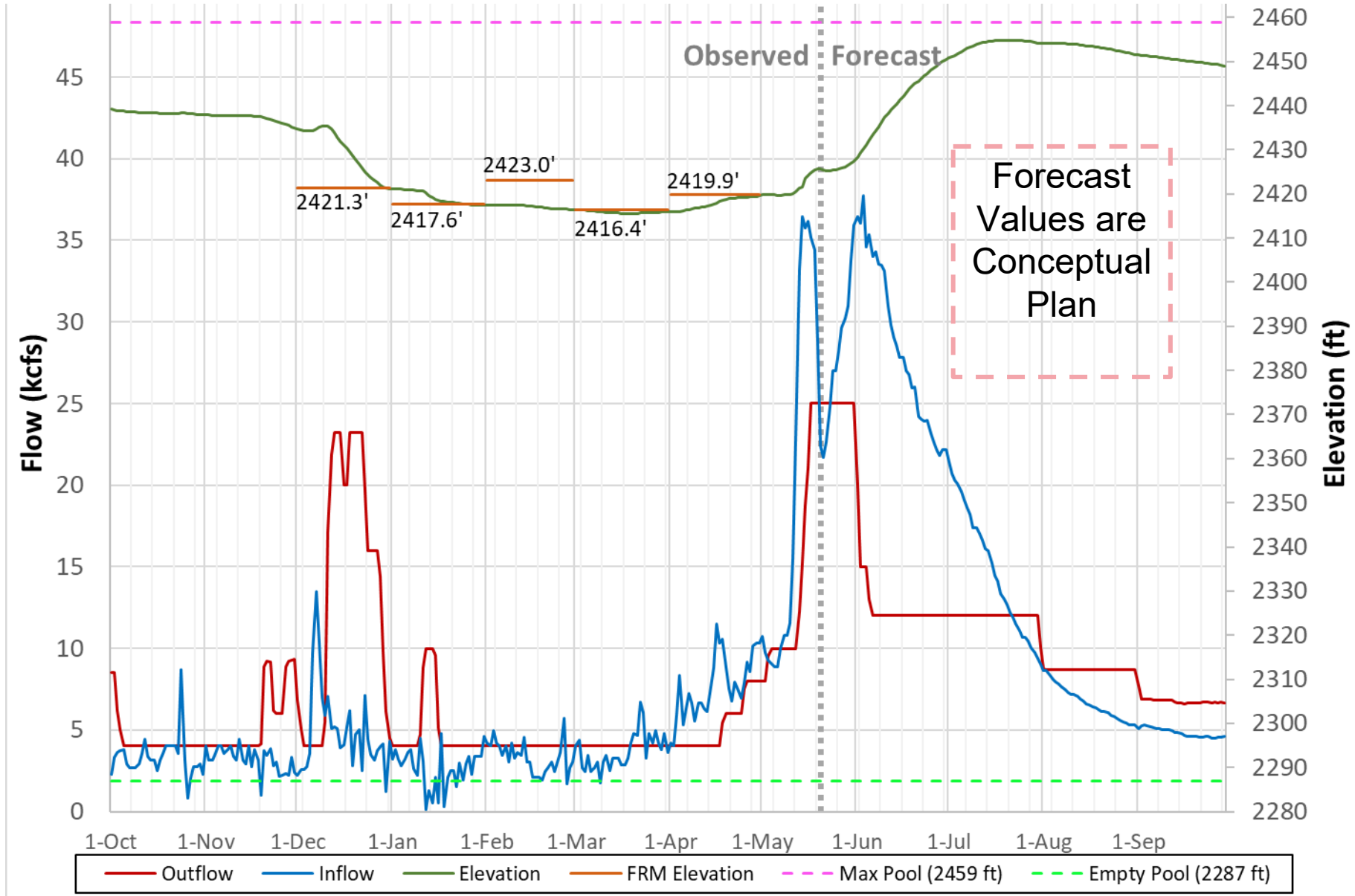




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RESERVOIR OPERATIONS 2024





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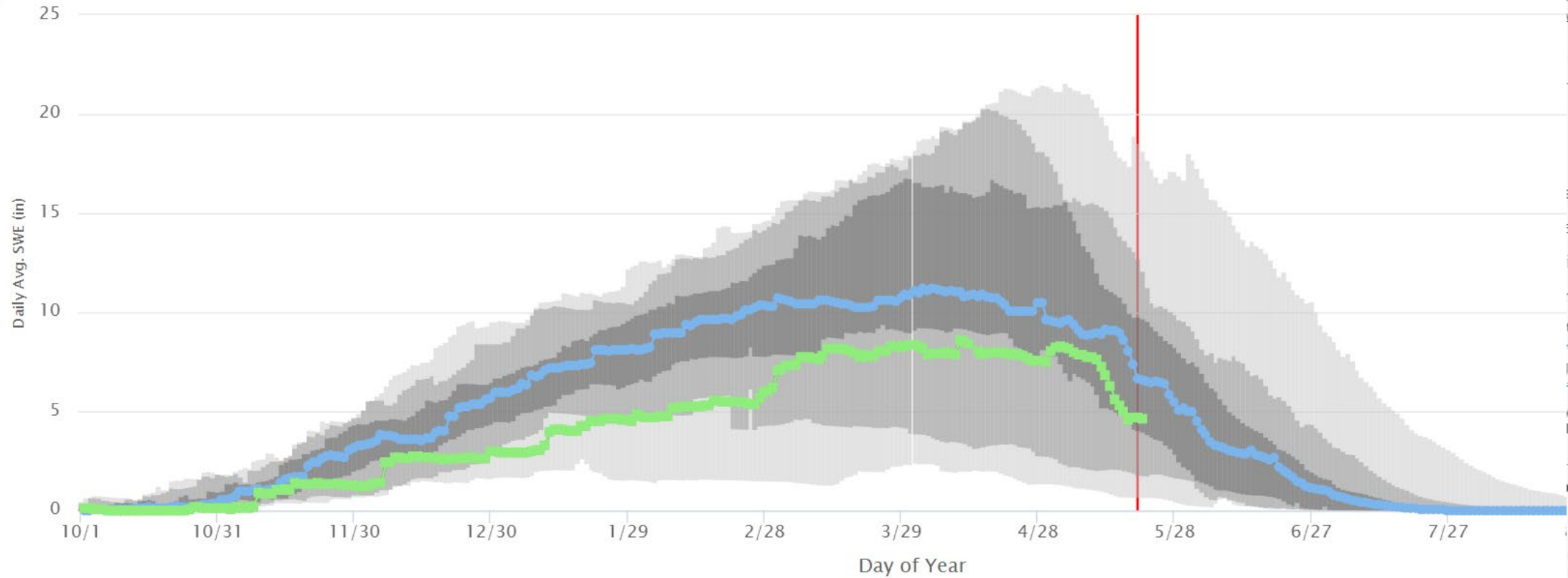


BASIN SNOW



SNODAS-Snow Water Equivalent-Libby Inflow

Water Year 2024



Color scale legend: █ █ █

≥200.00
Avg SWE (% of Avg)
SNODAS

to View
ies
/:
ons
of Normal
enStreetMap
of Peak

● Historical Max Min Range
 ● Historical 10% to 90% Range
 ● Historical 25% to 75% Range
 ◆ Historical Median
 ◆ 2024 Daily SWE
 ◆ Current SNODAS Season



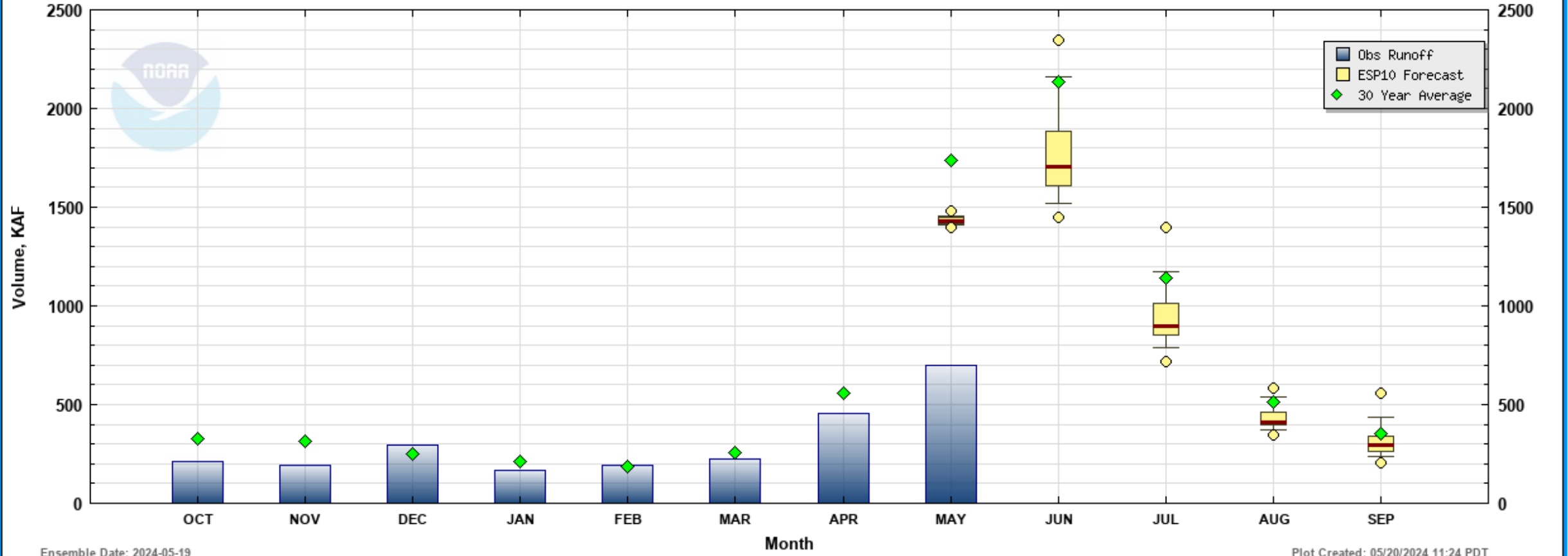


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OBSERVED AND FORECAST INFLOWS



Water Supply Volume Monthly Forecasts (ESP10) for Water Year 2024
(LYDM8) KOOTENAI - LIBBY DAM



Ensemble Date: 2024-05-19

Plot Created: 05/20/2024 11:24 PDT



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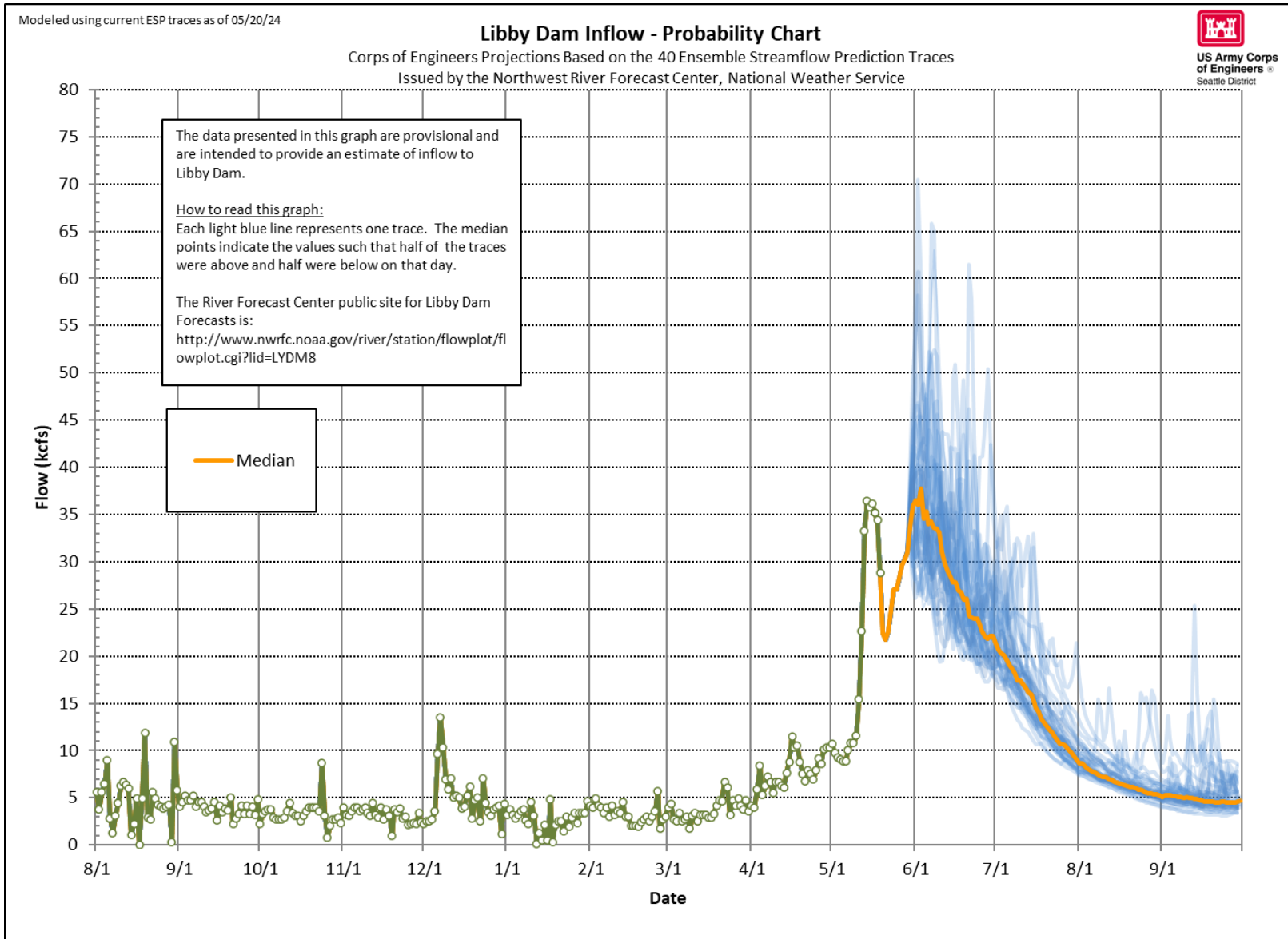
REFILL AND FLOW PLAN OBJECTIVES

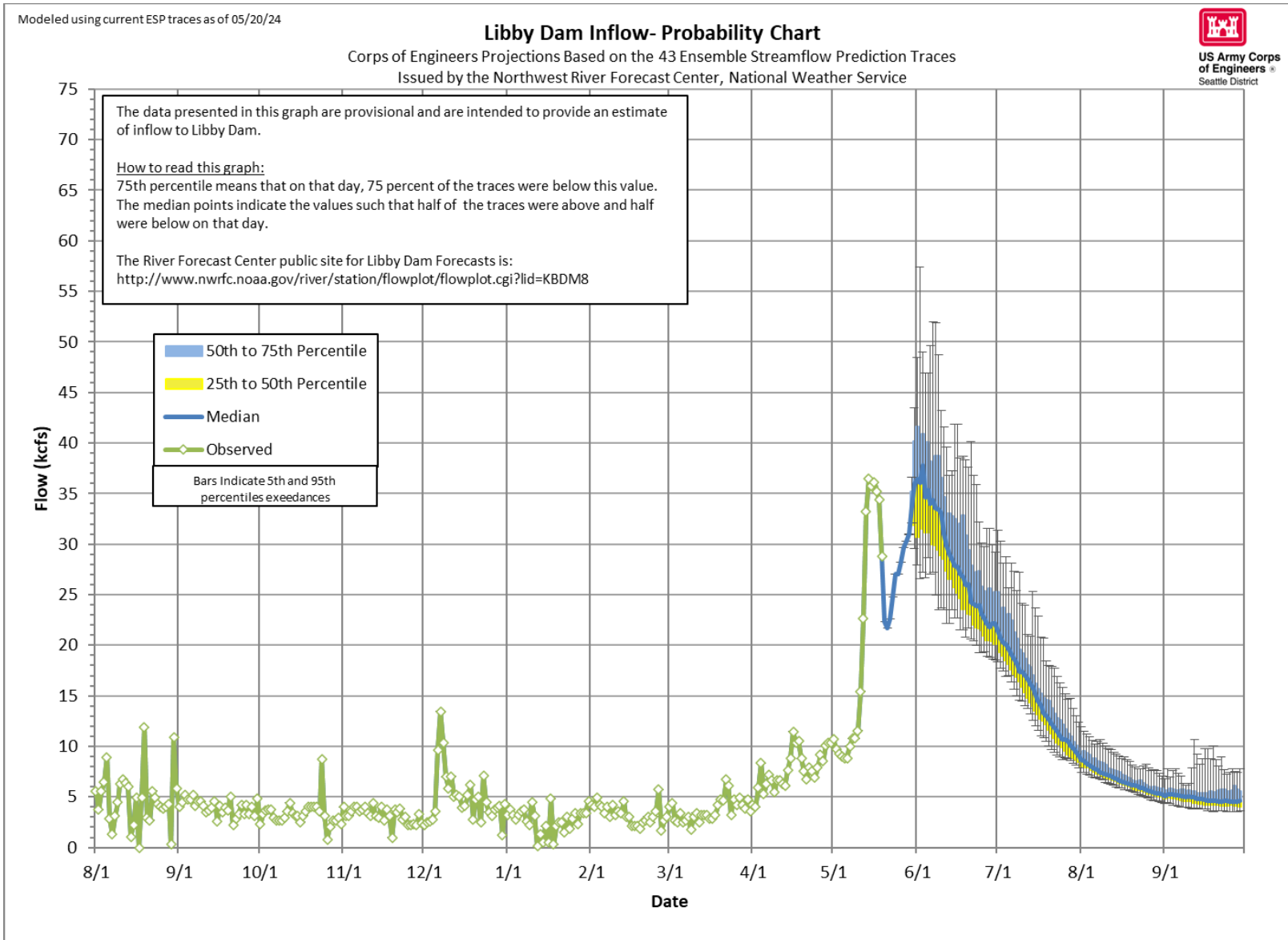


- Spring Refill Began on May 1st
- Meet Lake Kooconusa refill objective of 2454.0 ft; late July to early August.
- Meet end of September draft requirement of 2449.0 ft.
- Sturgeon augmentation started on May 15th and ramp up discharges from Libby Dam to ~20 kcfs (reduced powerhouse capacity). May 16th ramped up discharges from Libby Dam to ~25 kcfs (powerhouse capacity). Maintain powerhouse pulse discharge for approximately ~16* days, followed by a relatively quick recession to an approximate flat to descending summer flow.
- Target to Maintain Bonners Ferry at or above 30 kcfs: ~18 Days (Median)
- May reach Bonners Ferry stage at 1760'
- As with all our plans, we will adjust to real time conditions with more or less water than is currently forecast to best meet the above objectives.



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Modeled using current ESP traces as of 05/20/24

Libby Dam Outflow - Probability Chart

Corps of Engineers Projections Based on the 43 Ensemble Streamflow Prediction Traces
Issued by the Northwest River Forecast Center, National Weather Service

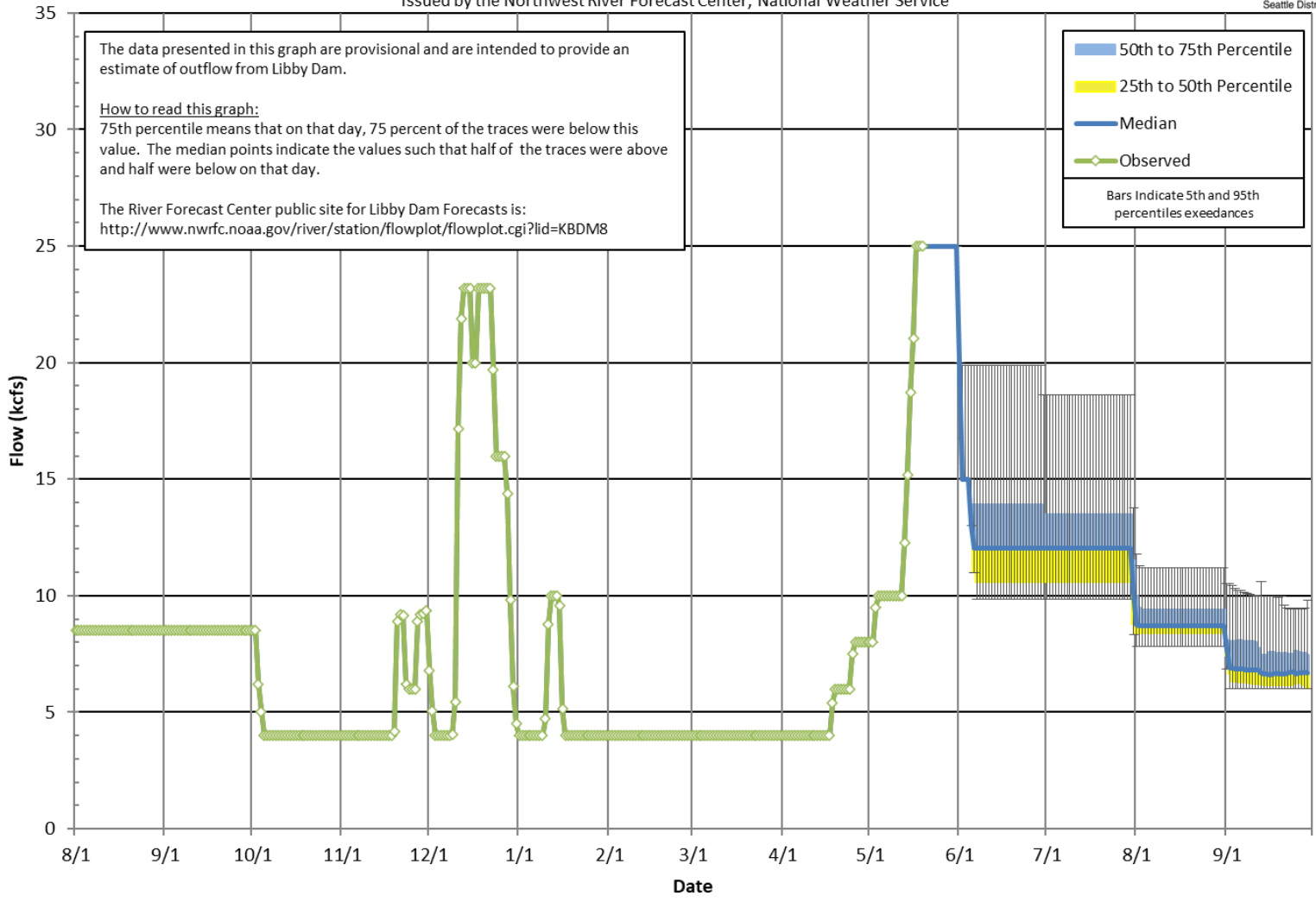


The data presented in this graph are provisional and are intended to provide an estimate of outflow from Libby Dam.

How to read this graph:
75th percentile means that on that day, 75 percent of the traces were below this value. The median points indicate the values such that half of the traces were above and half were below on that day.

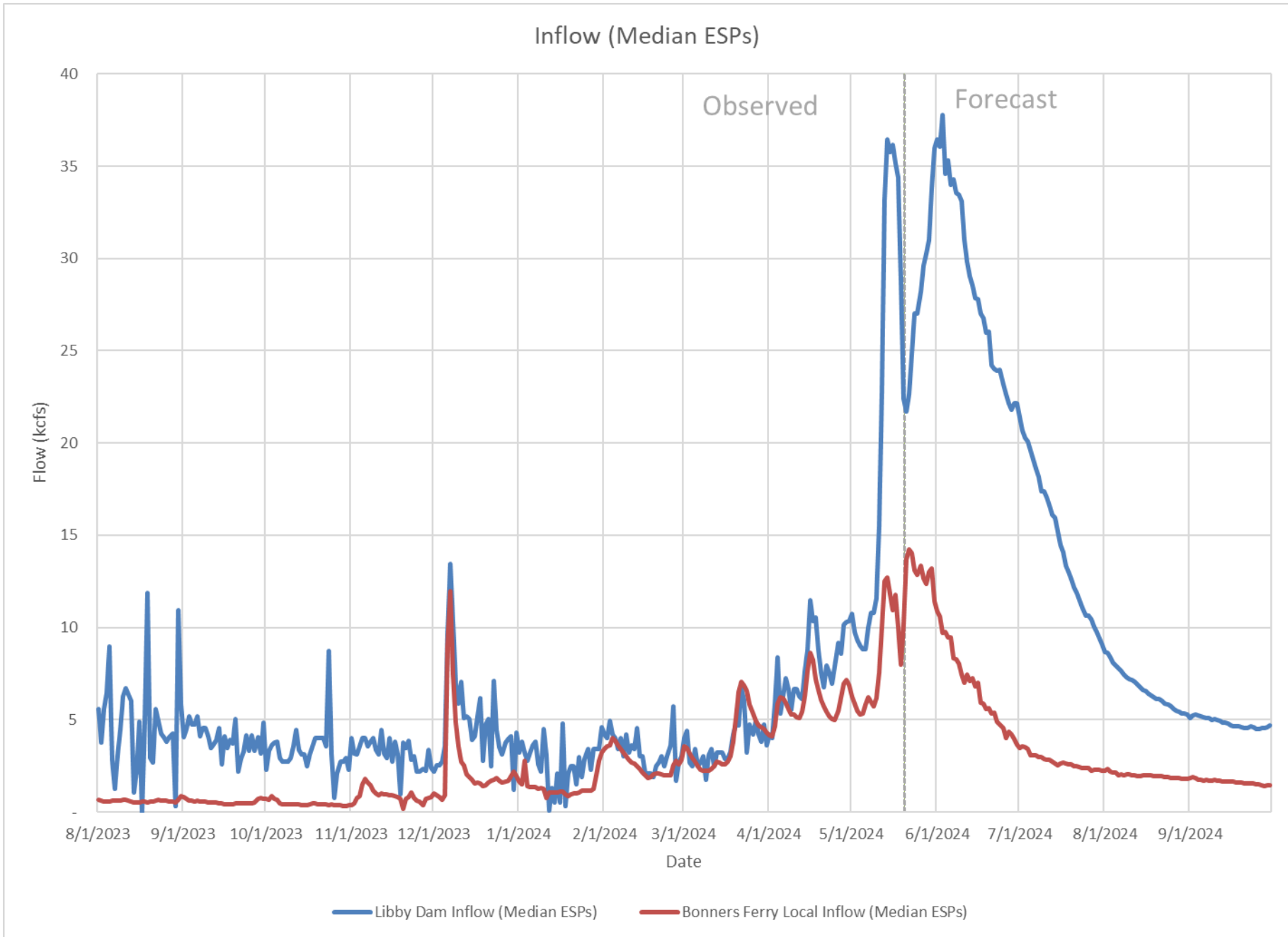
The River Forecast Center public site for Libby Dam Forecasts is:
<http://www.nwrfc.noaa.gov/river/station/flowplot/flowplot.cgi?lid=KBDM8>

- 50th to 75th Percentile
 - 25th to 50th Percentile
 - Median
 - Observed
- Bars Indicate 5th and 95th percentiles exceedances



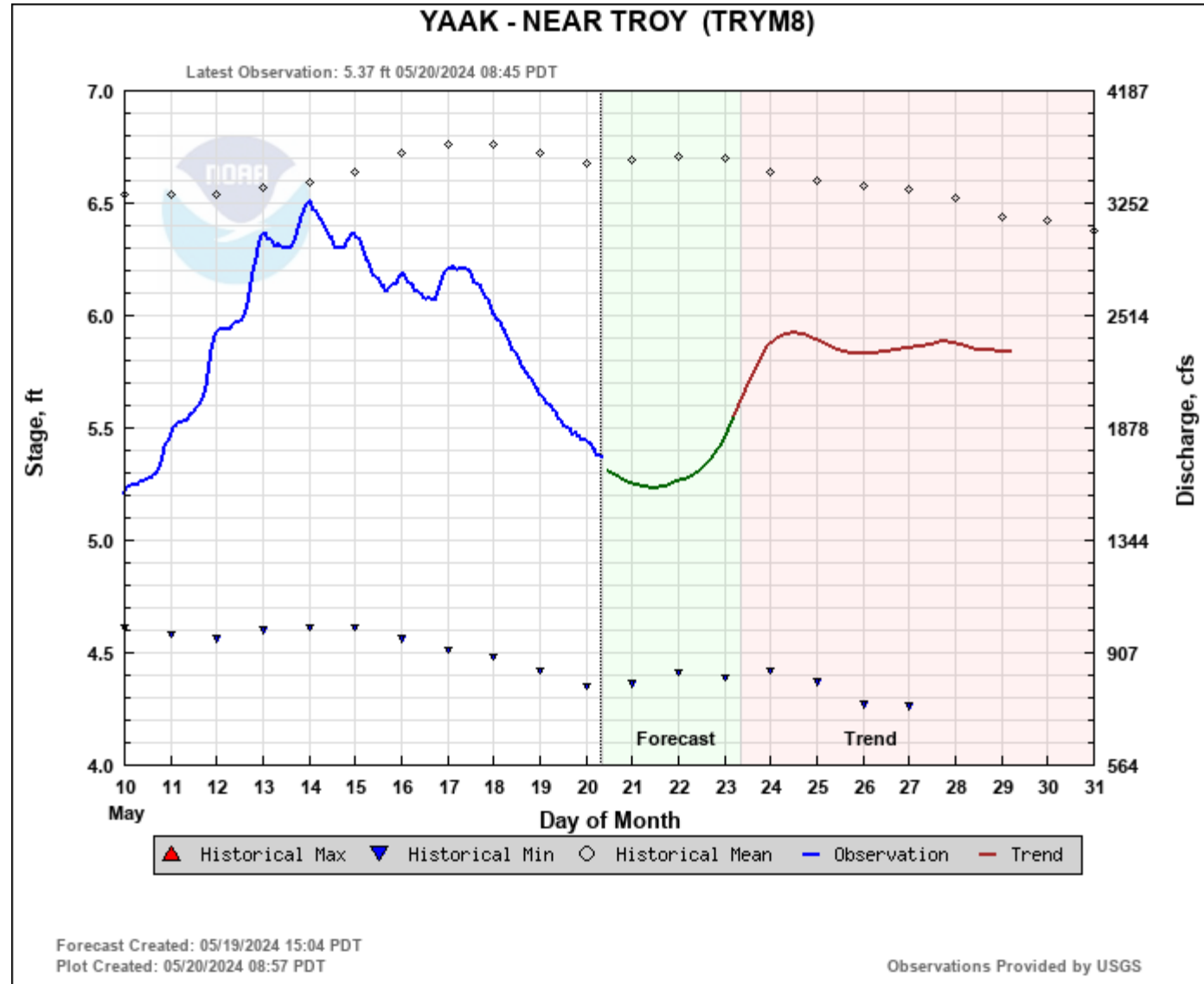


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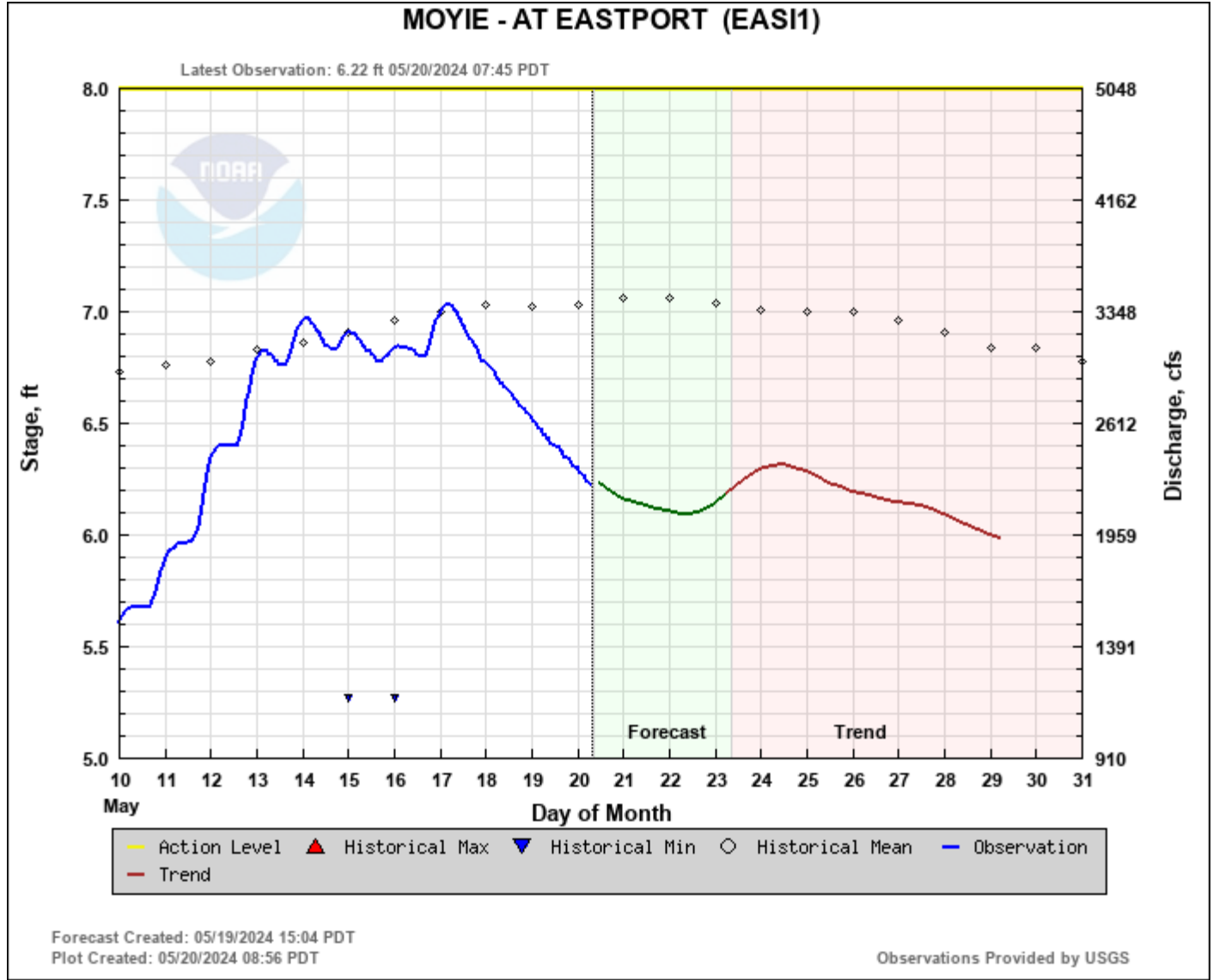


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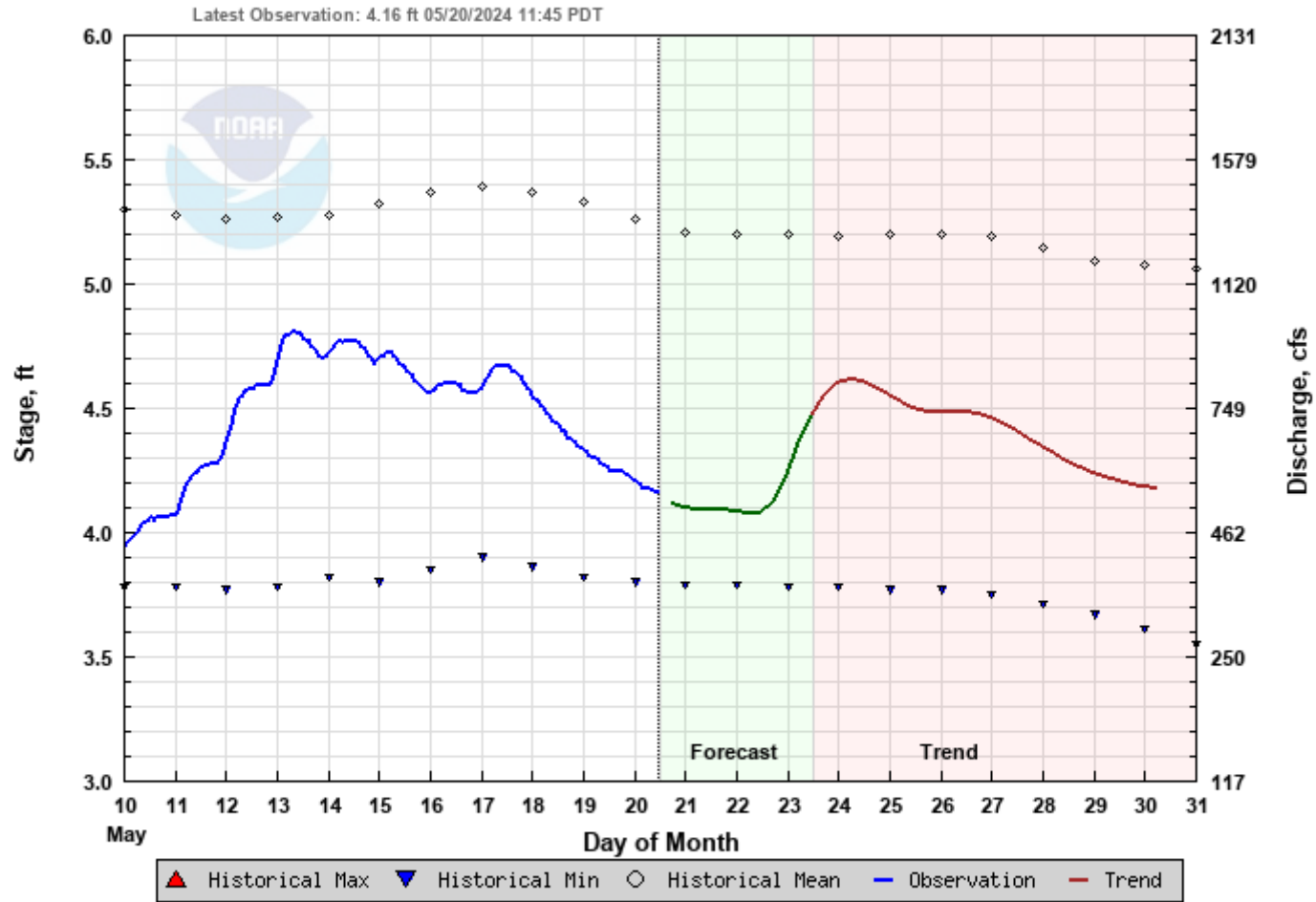




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FISHER - NEAR LIBBY (FISM8)

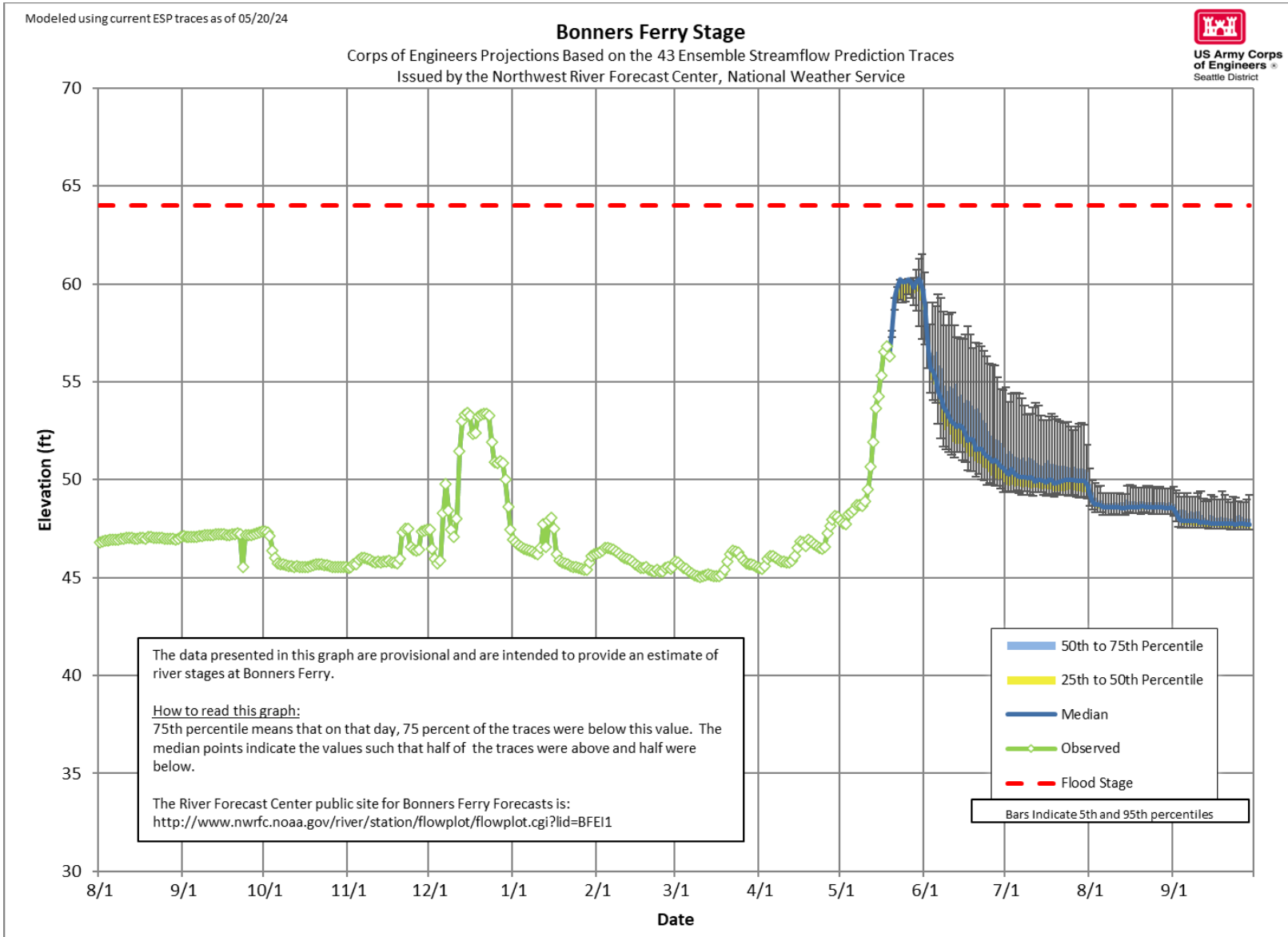


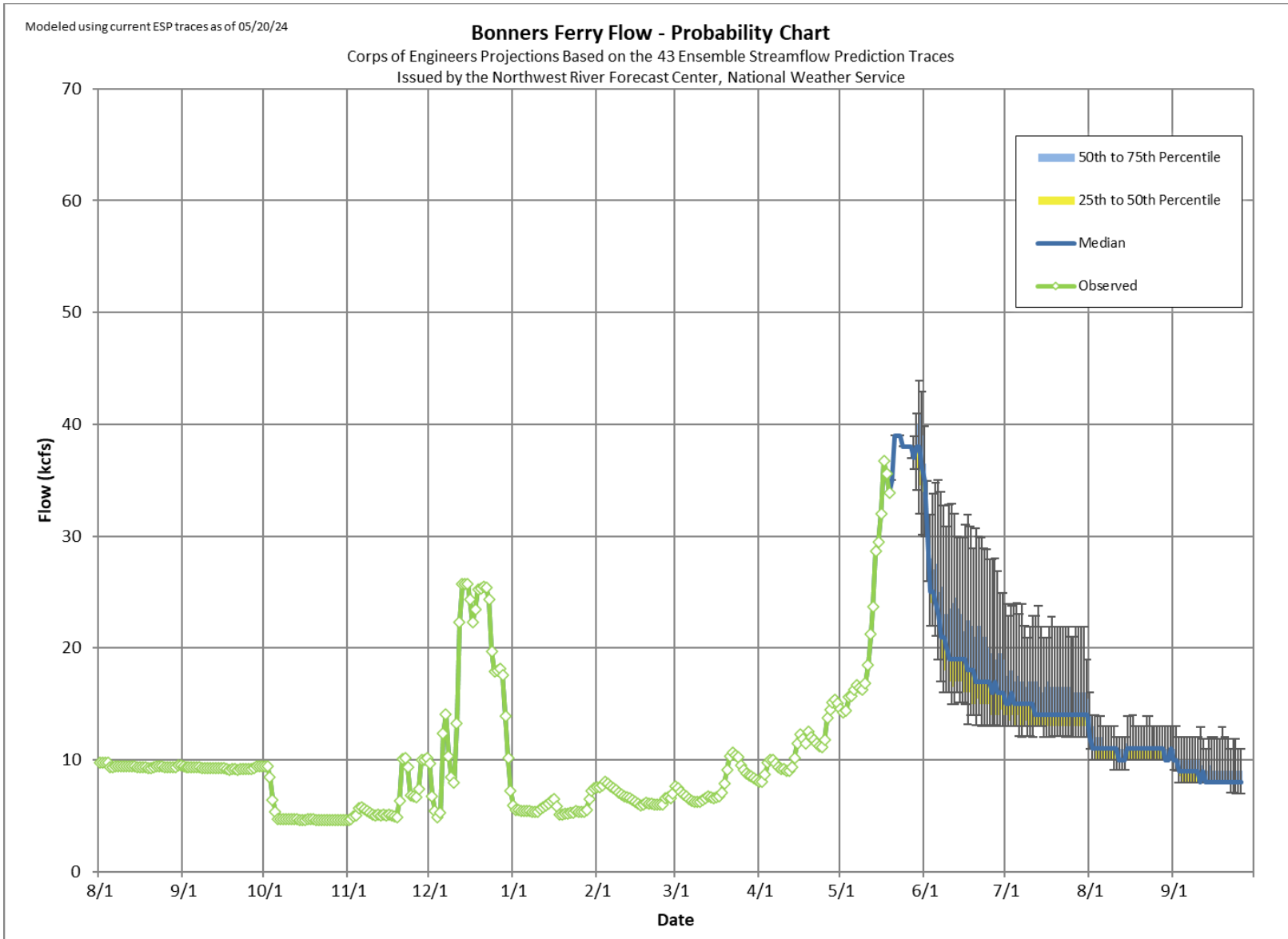
Forecast Created: 05/20/2024 10:24 PDT
Plot Created: 05/20/2024 12:07 PDT

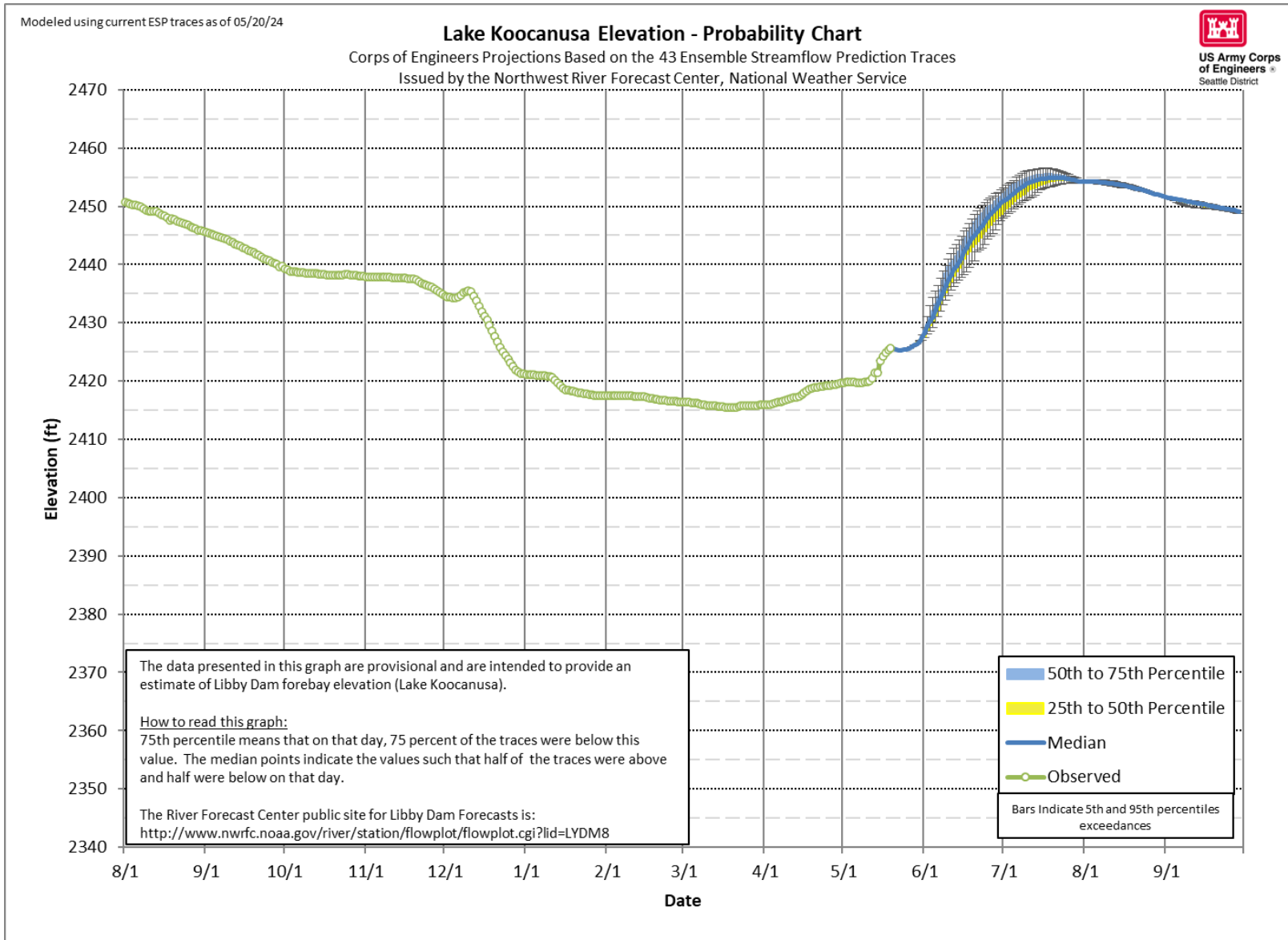
Observations Provided by USGS



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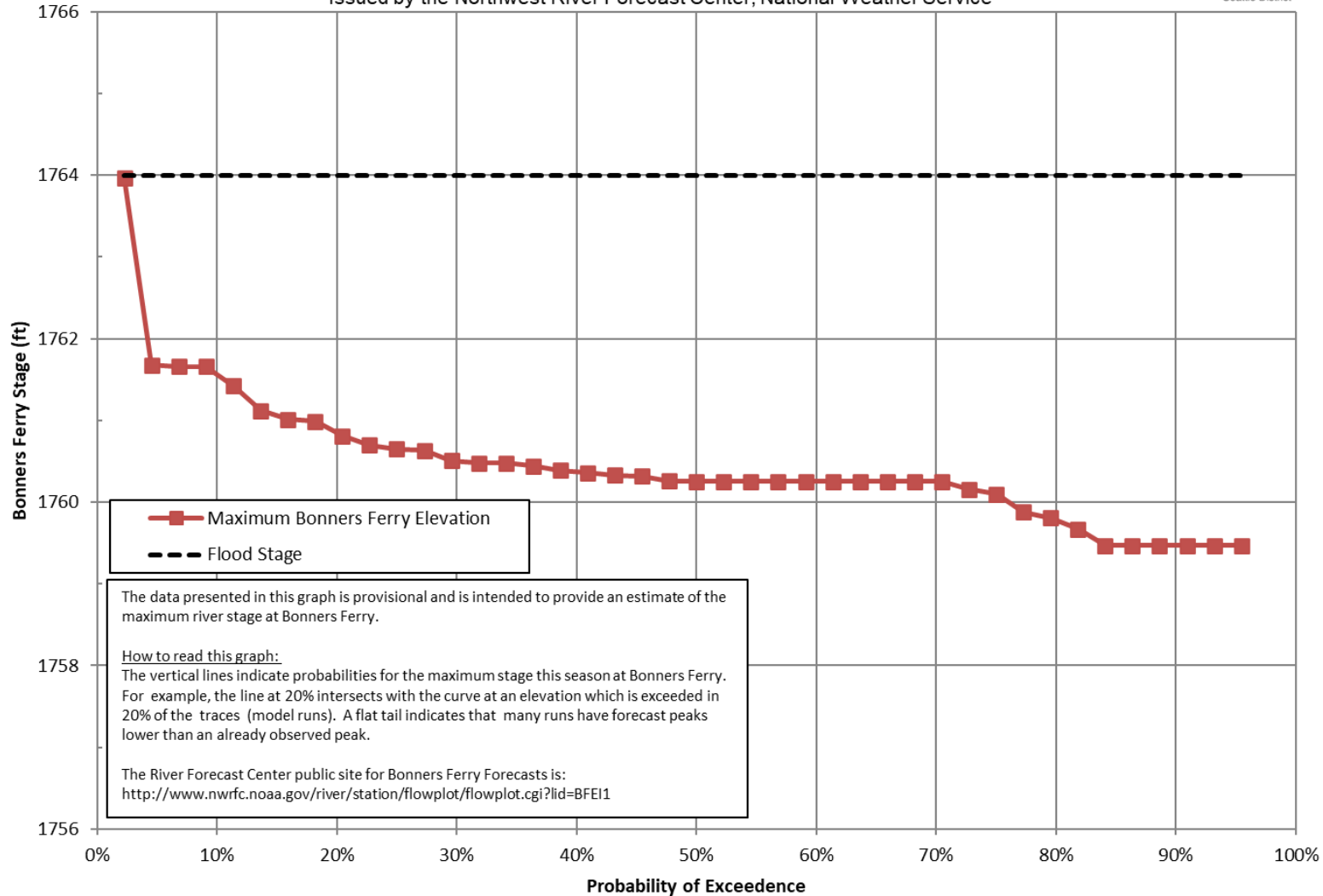




Modeled using current ESP traces as of 05/20/24

Maximum April-August Bonners Ferry Stage - Probability Chart

Corps of Engineers Projections Based on the 43 Ensemble Streamflow Prediction Traces
Issued by the Northwest River Forecast Center, National Weather Service





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REFILL AND FLOW PLAN OBJECTIVES



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QUESTIONS

For emails regarding release changes and lake level updates email

- UpperColumbiaWM@usace.army.mil
- Leon.Basdekas@usace.army.mil

General Queries call 206-764-6702

Seattle District water management data website :

<http://www.nwd-wc.usace.army.mil/nws/hh/www/index.html#>

Reservoir Control Center
SEATTLE DISTRICT
Water Management Section
US Army Corps of Engineers

HOME ABOUT MEDIA AND CONTACTS LINKS GLOSSARY

Basins and Projects

- Chehalis River Basin
- Eastern Washington Rivers (Chief Joseph Dam)
- Flathead and Clark Fork Rivers
- Green River Basin (Howard Hanson Dam)
- Kootenai River Basin (Libby Dam)**
- Lake Washington (Lake Washington Ship Canals)
- Pend Oreille River Basin (Albent Falls Dam)
- Puyallup River Basin (Mud Mountain Dam)
- Skagit River Basin
- Water Quality Data

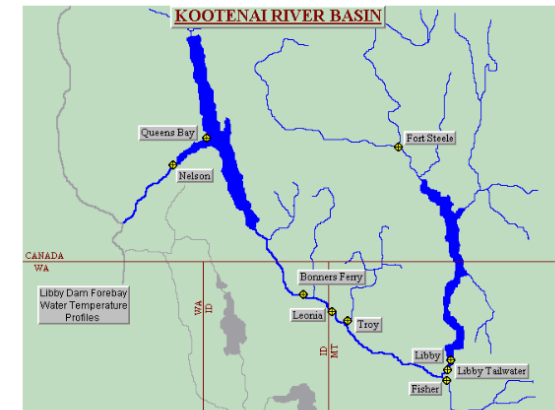
Water Management

The Water Management Section of the Seattle District Corps of Engineers is responsible for monitoring and/or regulating several rivers in the Puget Sound region. This has required the implementation of a complex computer network to collect data from multiple locations and gages every hour. The Water Management Section compiles data from several of its water control projects. The data that are provided here come from those projects and a variety of other sources including:

- National Weather Service (NWS)
- U. S. Geological Survey (USGS)
- U. S. Bureau of Reclamation (USBR)
- Seattle City Light (SCL)
- Tacoma Public Utilities (TPU)
- Puget Sound Energy (PSE)

Basins and Projects

- Chehalis River Basin
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- Kootenai River Basin (Libby Dam)
 - Bonners Ferry
 - Moyie River Eastport
 - Below Moyie Nr Bonners
 - Fisher
 - Fort Steele
 - Leonia
 - Libby
 - Libby Tailwater
 - Nelson
 - Queen's Bay
 - Troy
 - Libby Water Temp Profiles
 - Lake Kooocanusa Summary Hydrograph
 - ESP
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- Puyallup River Basin (Mud Mountain Dam)



Stations

- Bonners Ferry
- Moyie River Eastport
- Below Moyie Nr Bonners
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