LIBBY DAM OPERATIONS SPRING/SUMMER 2025

Date: 19 May 2025

Leon Basdekas
Greg Hoffman

U.S. ARMY

US Army Corps of Engineers®

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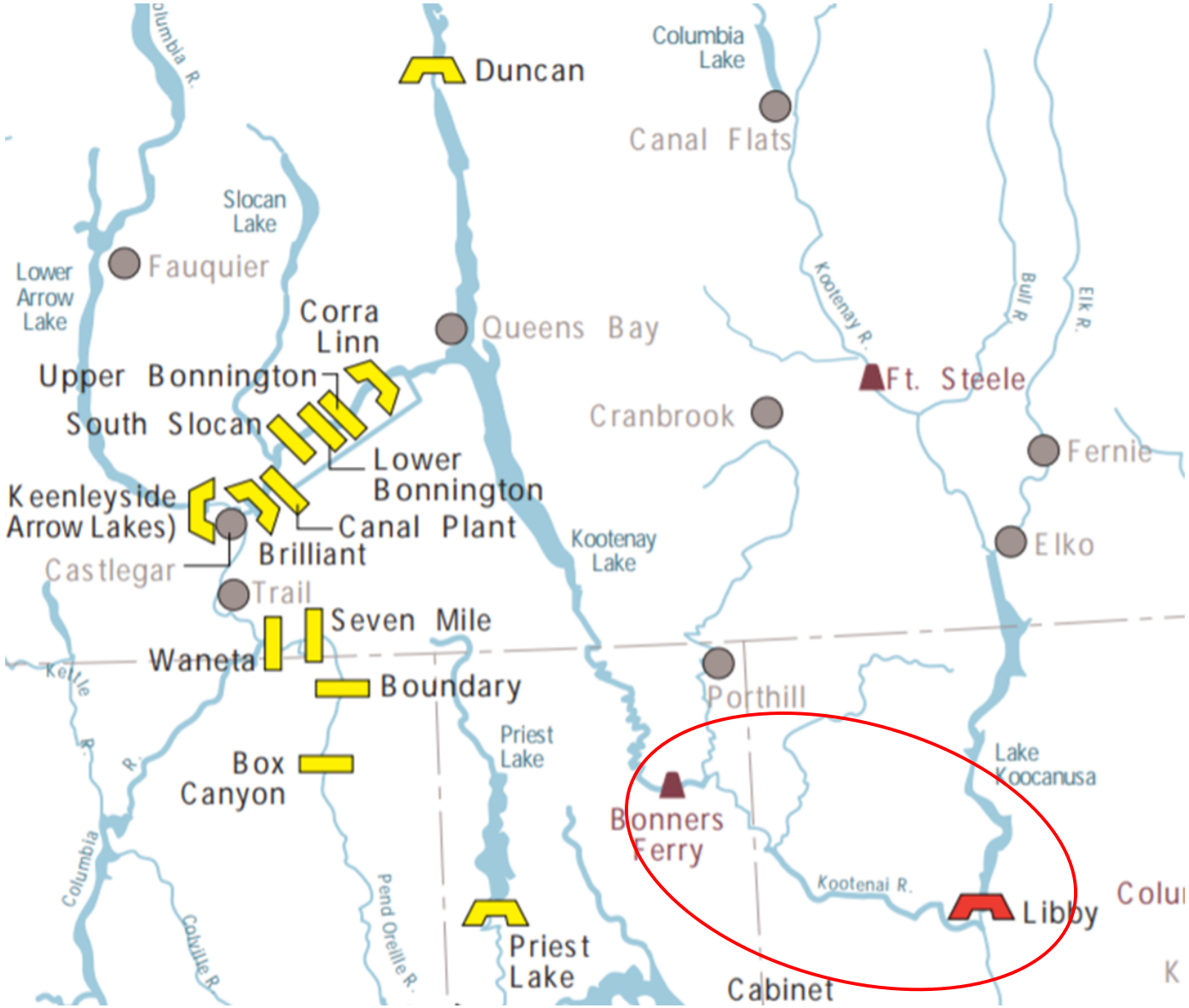
GENERAL BACKGROUND



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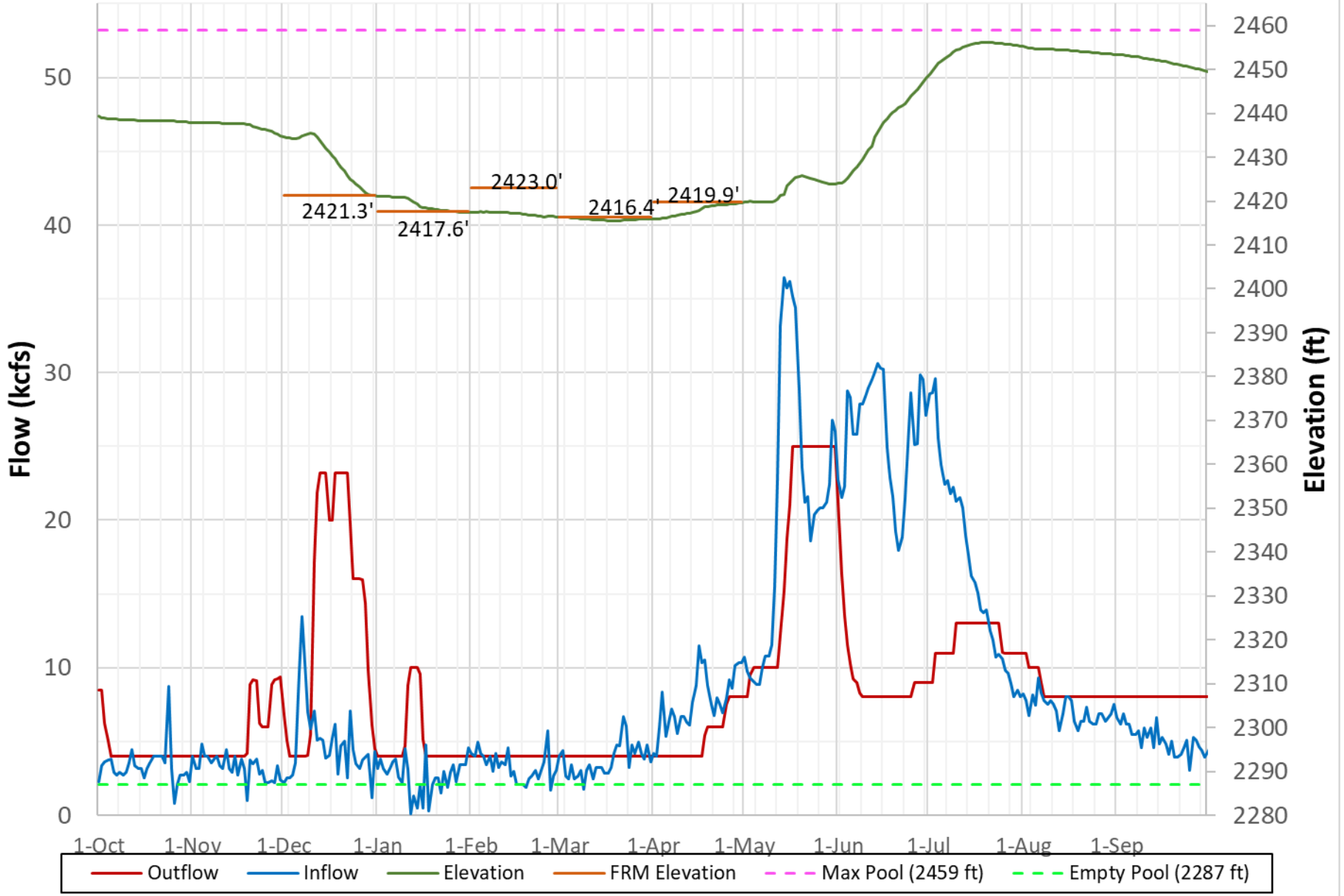
Koocanusa Reservoir Operations Water Year 2024



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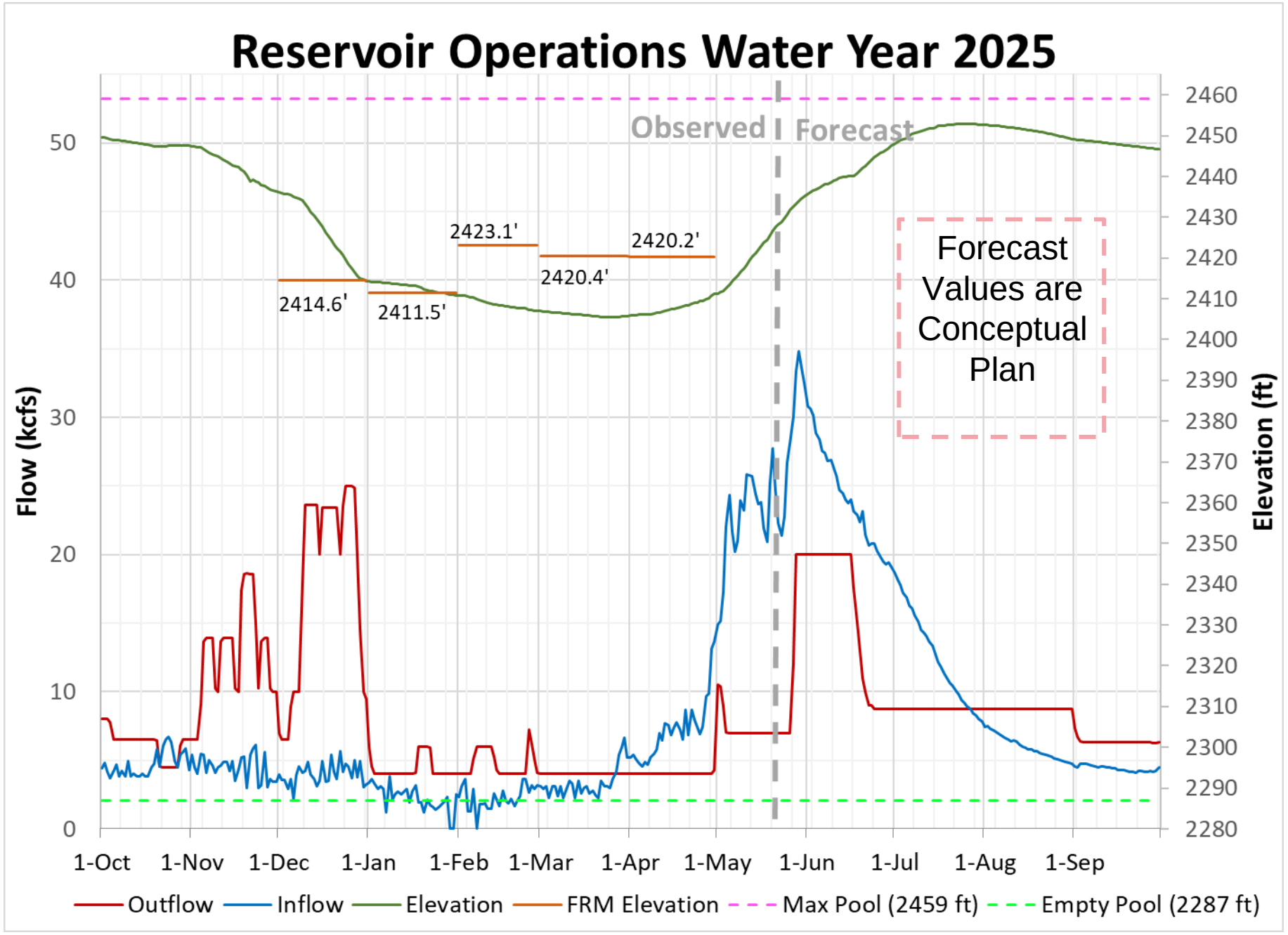

Reservoir Operations Water Year 2025
Observed
Forecast
Forecast Values are Conceptual Plan
2414.6'
2411.5'
2423.1'
2420.4'
2420.2'
Flow (kcfs)
Elevation (ft)
0
10
20
30
40
50
2280
2290
2300
2310
2320
2330
2340
2350
2360
2370
2380
2390
2400
2410
2420
2430
2440
2450
2460
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
Outflow
Inflow
Elevation
FRM Elevation
Max Pool (2459 ft)
Empty Pool (2287 ft)

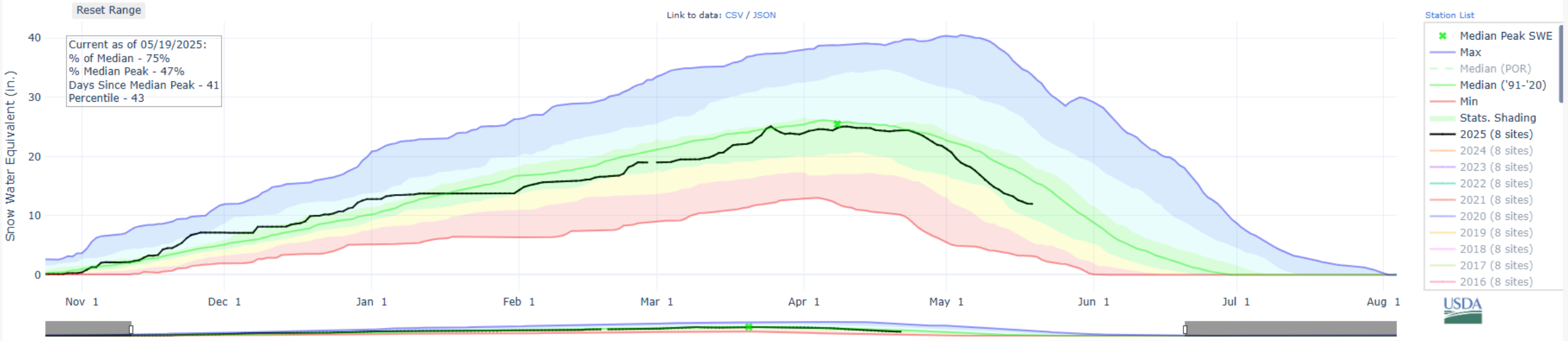
SNOW WATER EQUIVALENT

Natural Resources Conservation Service — National Water and Climate Center

AWS Plot | SNOW WATER EQUIVALENT IN KOOTENAI

NWCC Home | Interactive Map | Site Plots | Site Tools | Basin Plots | Basin Tools | Water Supply | Webservices | Contact Us

Add Title | Active Only | Greyscale Stats. | Clear Controls | Clear Annotation | Fullscreen



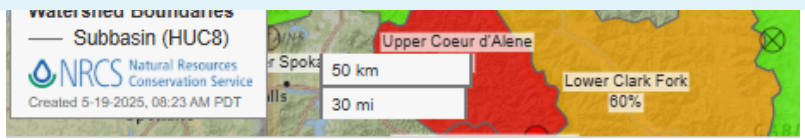
Statistical shading percentiles are calculated from period of record (POR) data, excluding the current water year. Percentile categories range from: minimum to 10th percentile , 10th - 30th , 30th - 70th , 70th - 90th , and 90th - maximum.

For more information visit: 30-Year Hydroclimatic Normals

Updated: Monday, May 19, 2025 01 PM CST

Basin.

- Predictive ability this early in the snow season is low for summer flows.

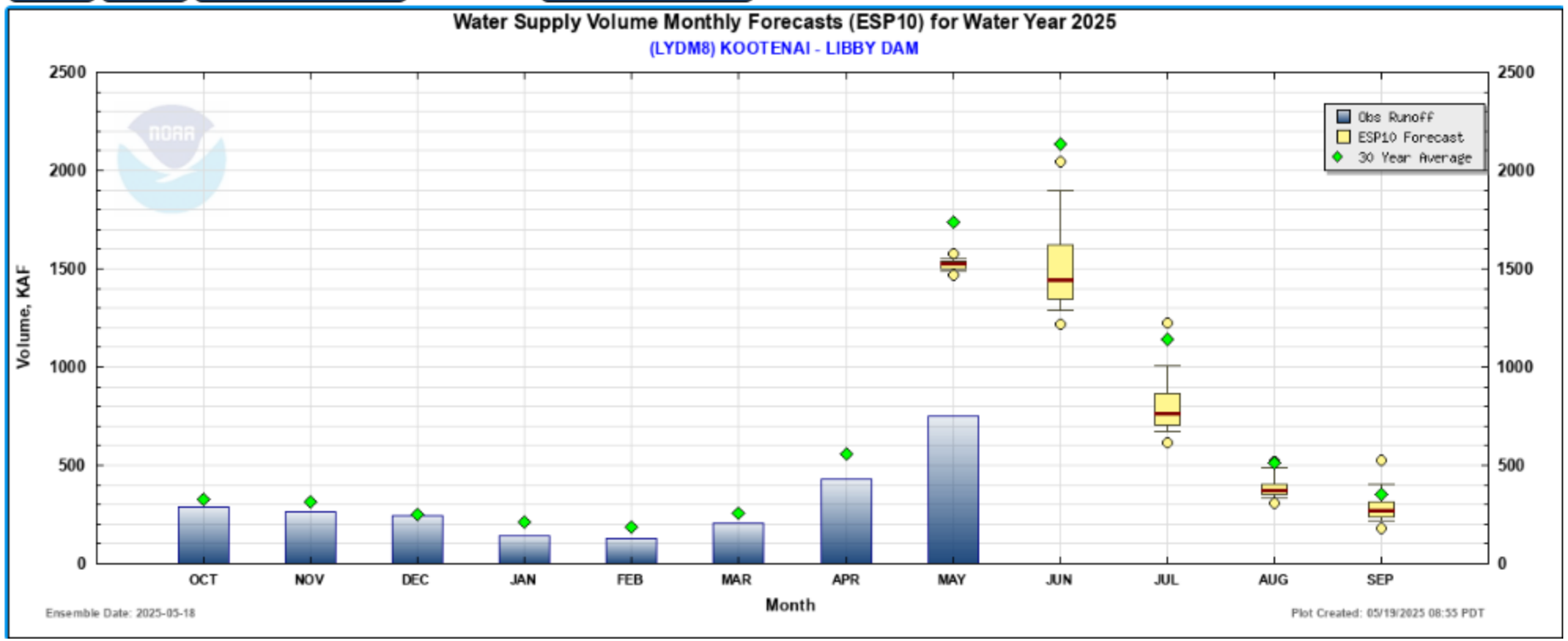


OBSERVED AND FORECAST INFLOWS

Northwest River Forecast Center

ESP Monthly Water Supply Volumes

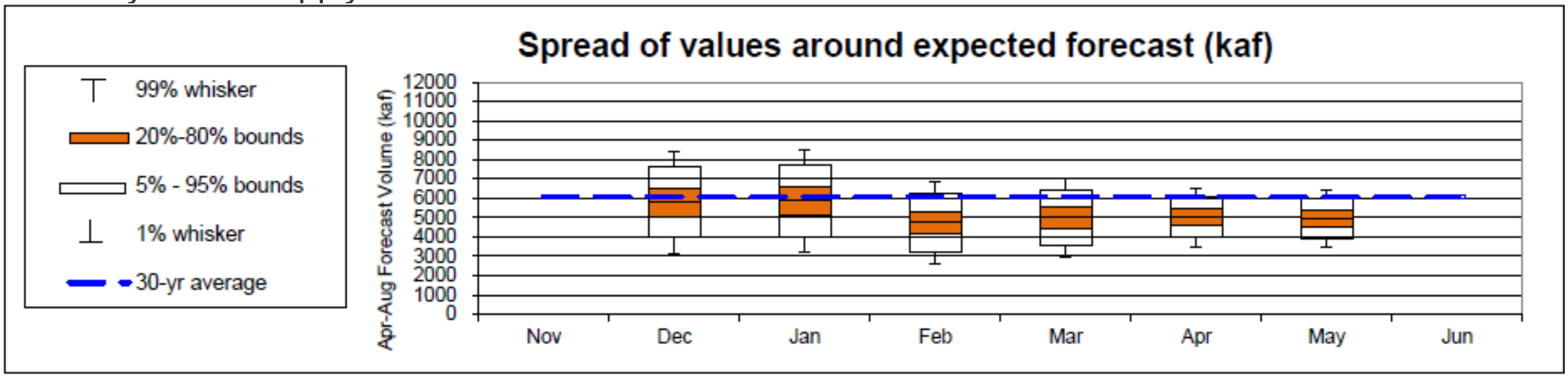
Home | Close | Seasonal Forecasts | Choose Date: | Next Water Year



MAY 1ST WATER SUPPLY FORECAST AND BIOP OBJECTIVES

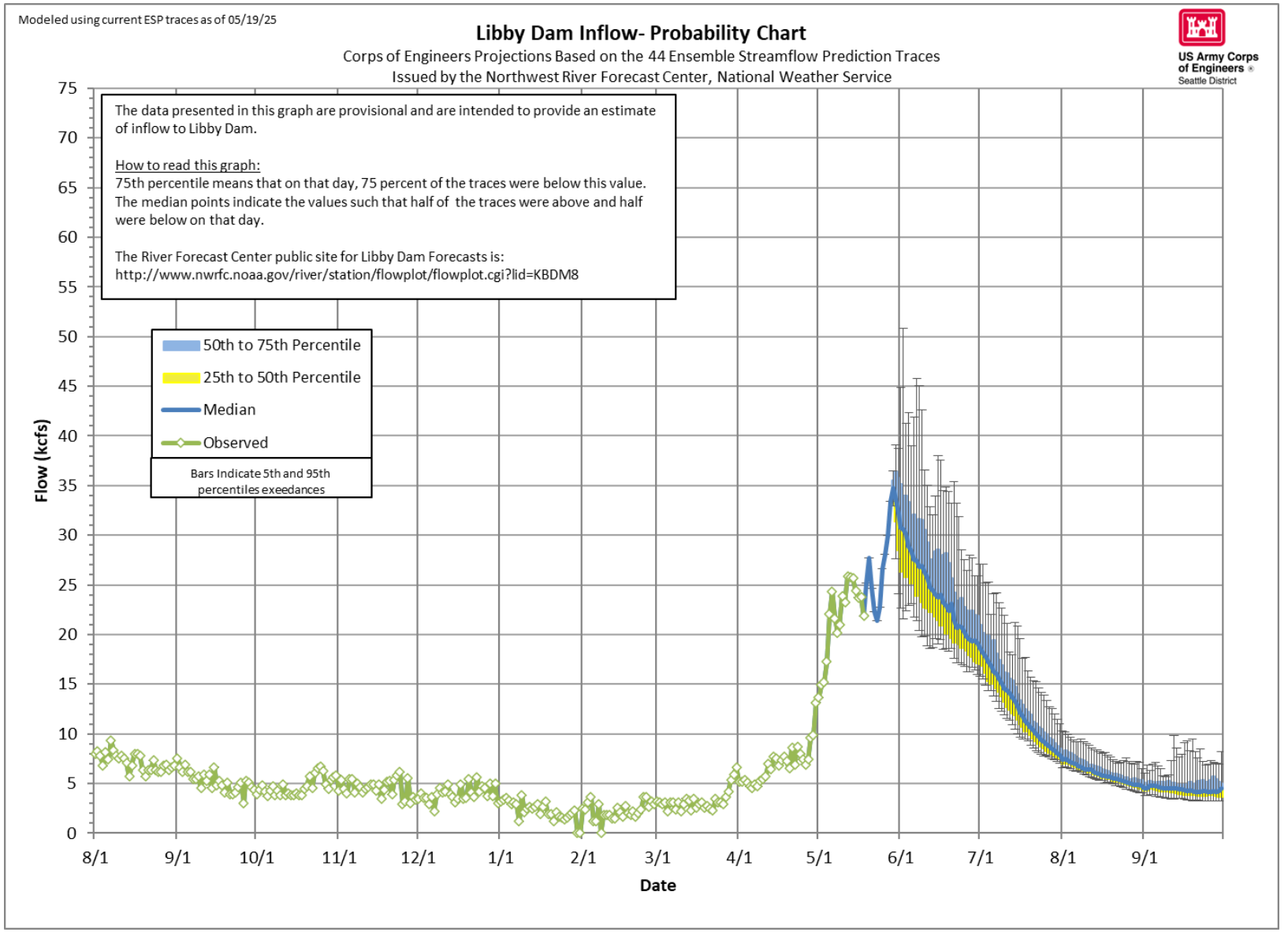
- April-August inflow forecast for Libby Dam is 4.94 million acre-feet (MAF)
  - Forecast is 81% of average
  - Sturgeon Volume is 0.8 MAF
  - Bull trout minimum flows following the Sturgeon Pulse through Aug 31 is 7 kcfs
  - Libby flow augmentation draft to 12.3 ft from full (2446.7 ft) end of September

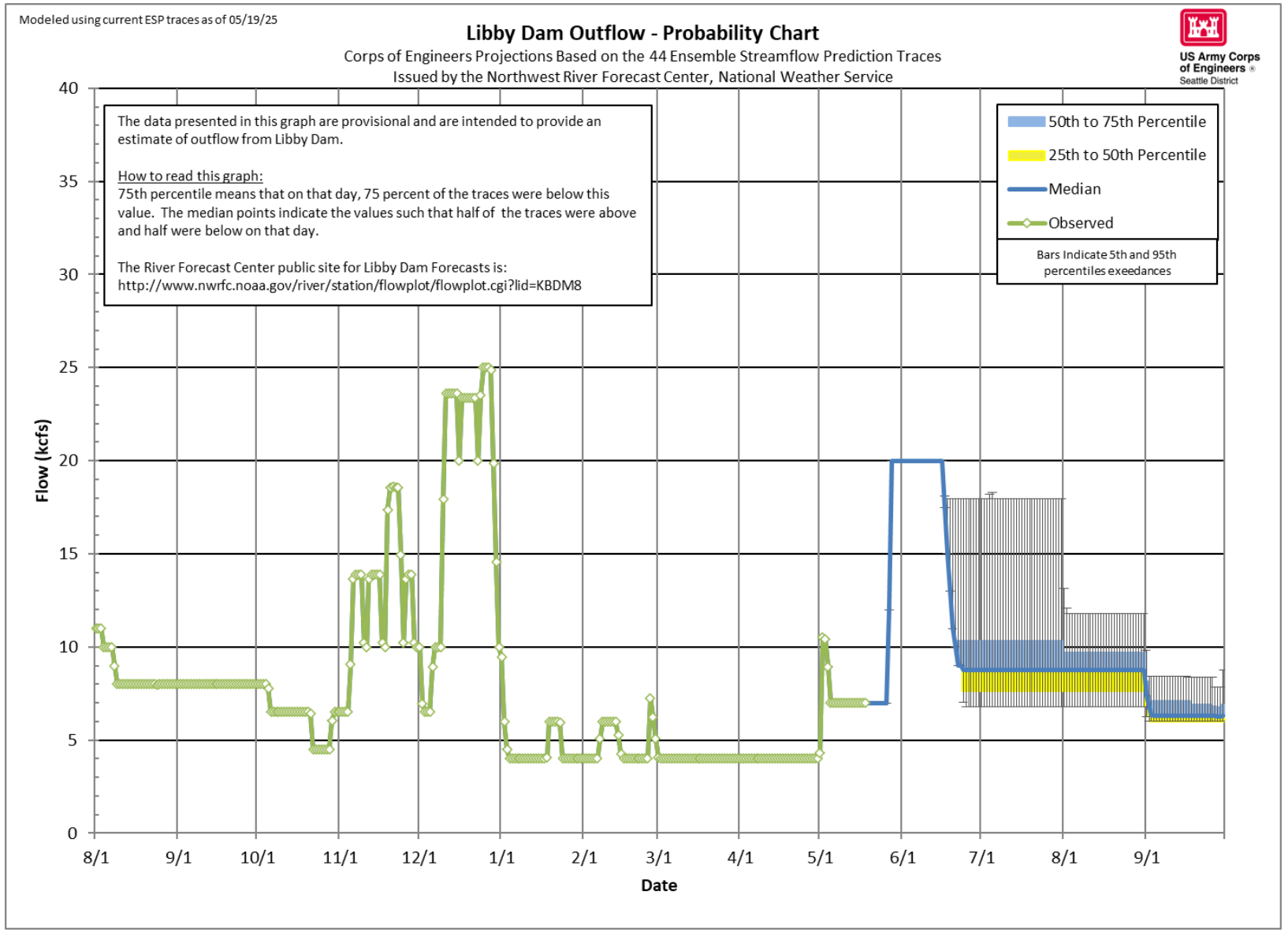
- Libby Water Supply Forecast Trend:

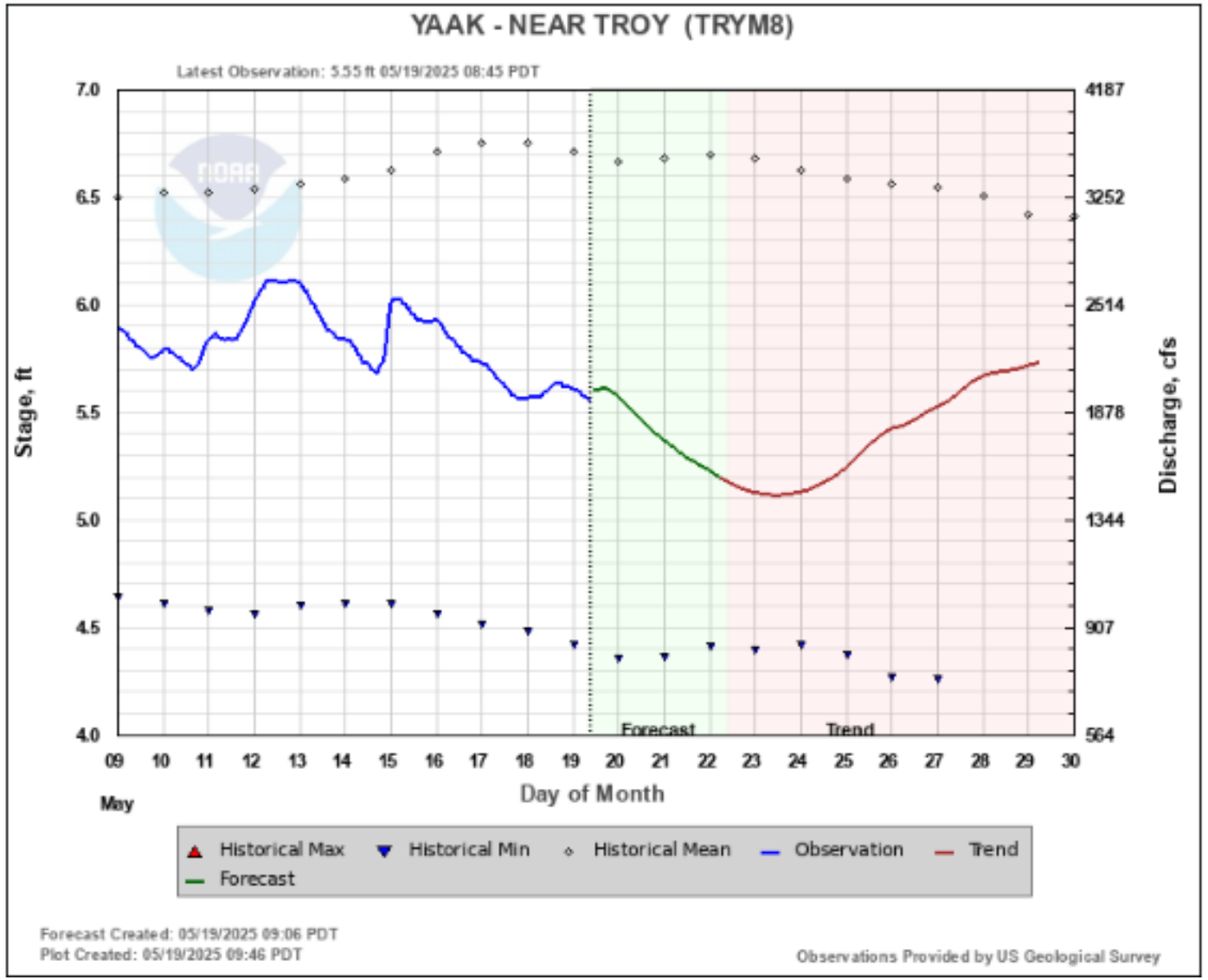


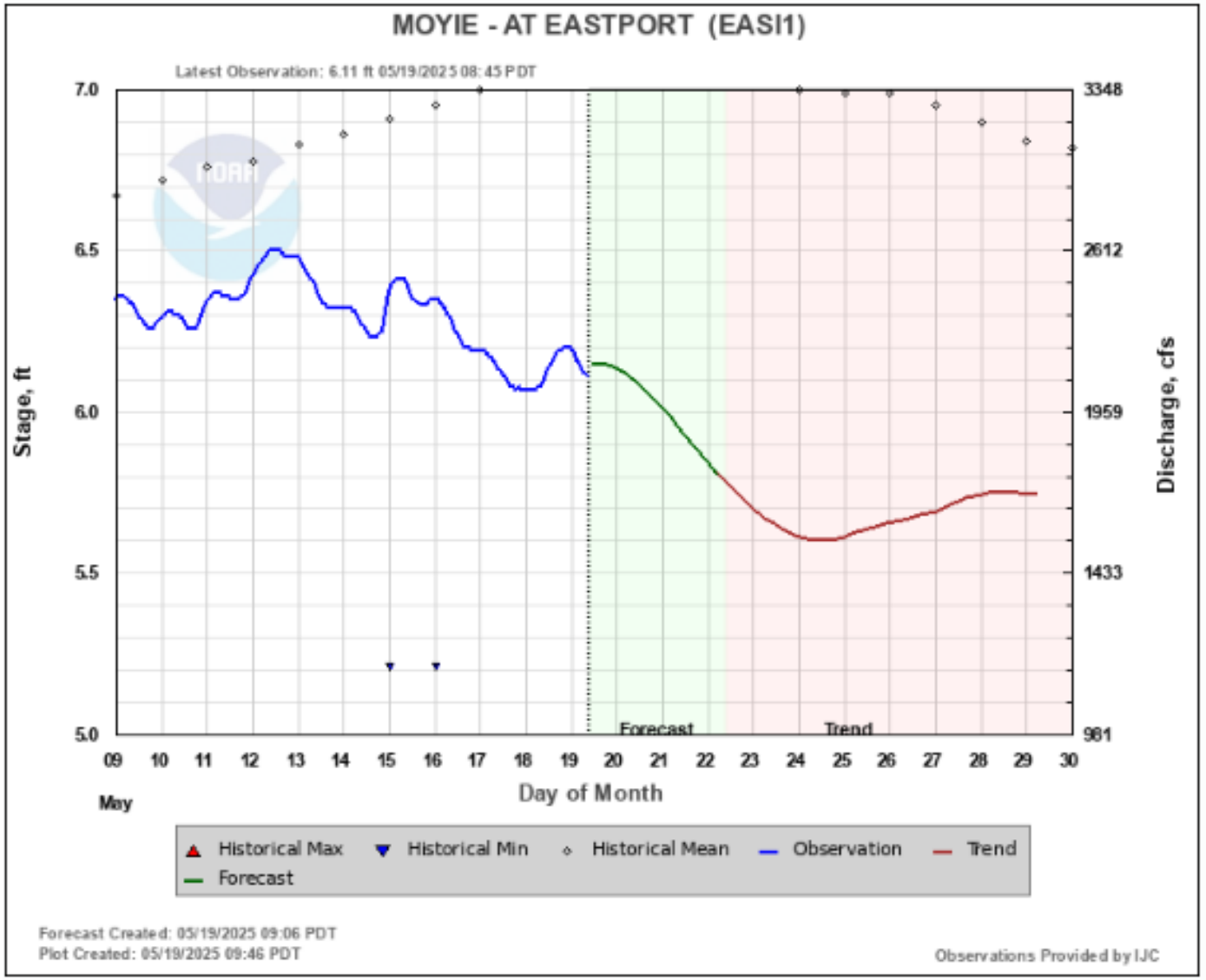
REFILL AND FLOW PLAN OBJECTIVES

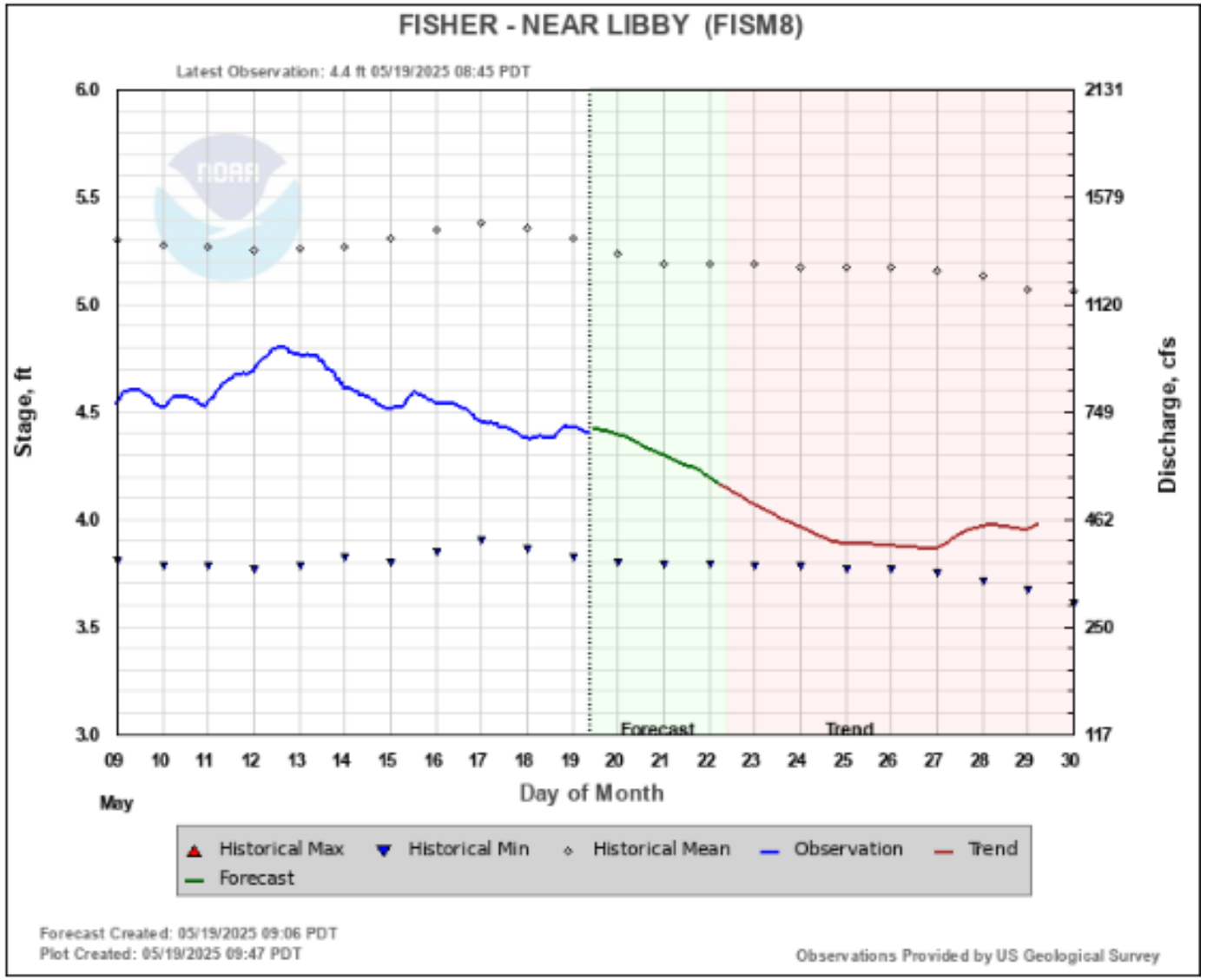
- Spring Refill Began on May 1st
- Meet Lake Koocanusa refill objective of 2454.0 ft; late July to early August.
- Meet end of September draft requirement of 2446.7 ft.
- Sturgeon augmentation anticipated to start on May 27th and ramp up discharges from Libby Dam to ~20 kcfs. Maintain ~20 kcfs pulse discharge for approximately ~18 days. Ramp down over twice the normal ramping time frame (more gradual recession). Then target a flat to descending summer flow.
- Will not 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.

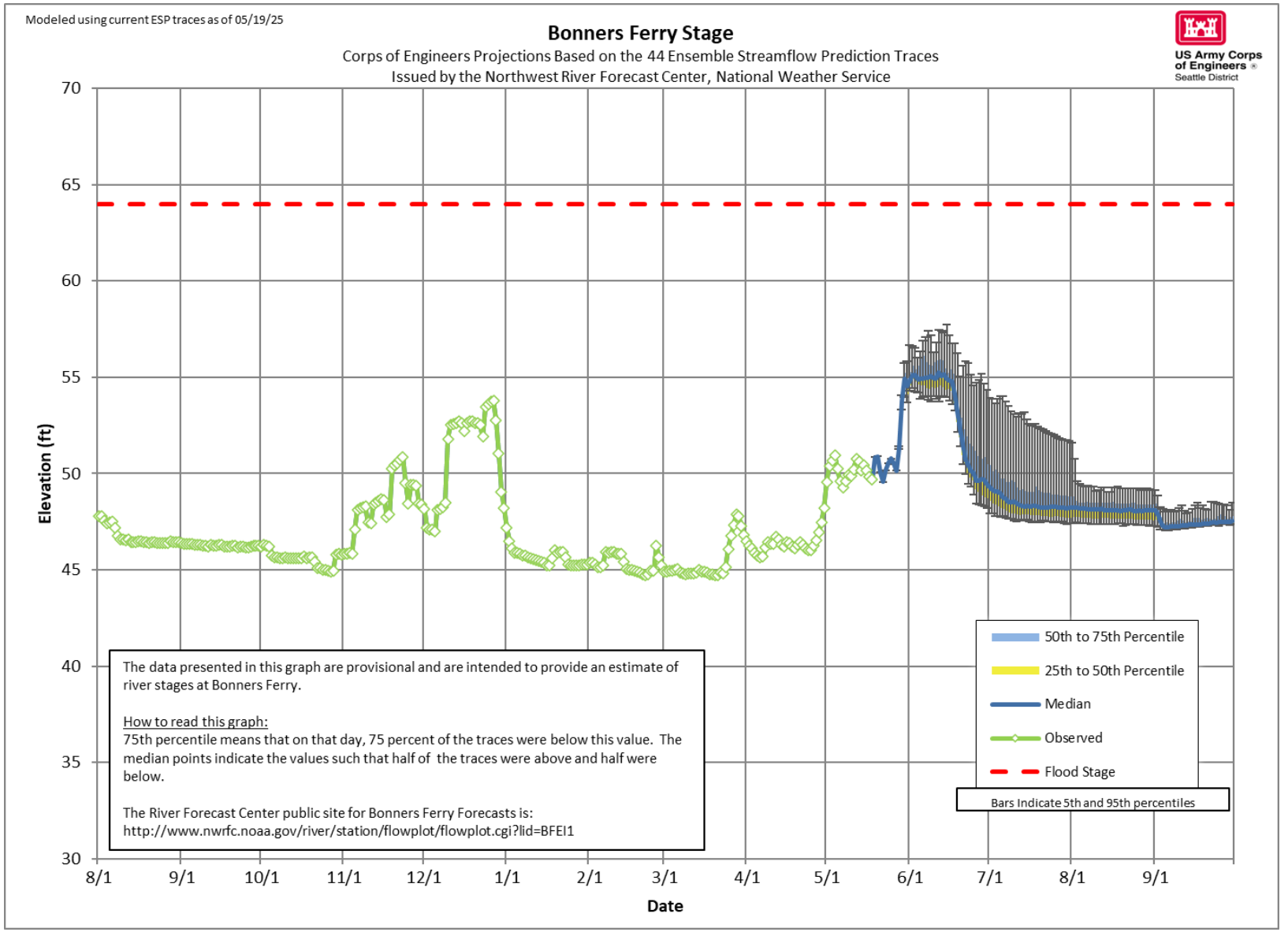

Modeled using current ESP traces as of 05/19/25
Libby Dam Inflow- Probability Chart
Corps of Engineers Projections Based on the 44 Ensemble Streamflow Prediction Traces
Issued by the Northwest River Forecast Center, National Weather Service
US Army Corps of Engineers
Seattle District
The data presented in this graph are provisional and are intended to provide an estimate of inflow to 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 exeedances
Flow (kcfs)
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
0
8/1
9/1
10/1
11/1
12/1
1/1
2/1
3/1
4/1
5/1
6/1
7/1
8/1
9/1
Date

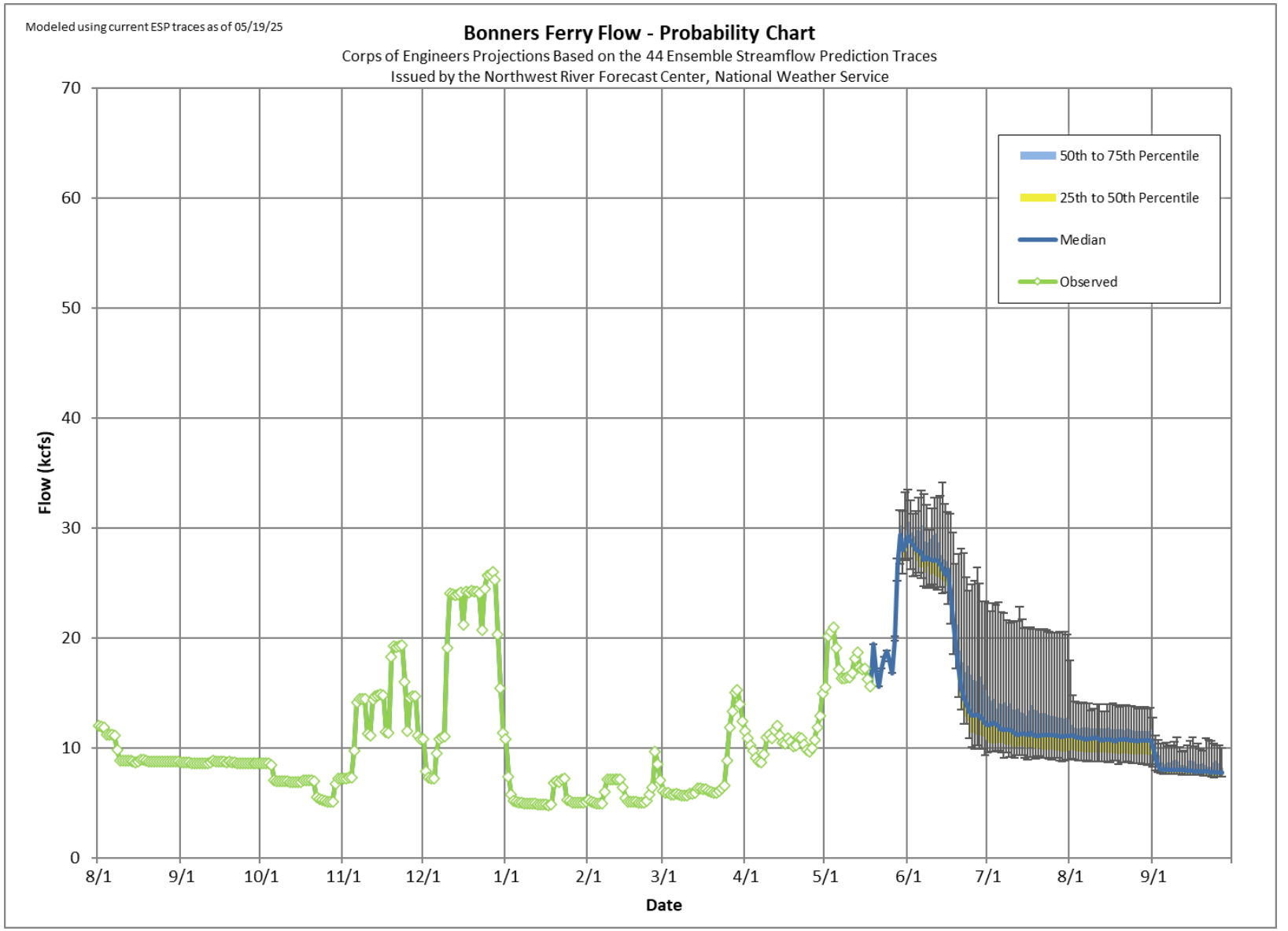

Modeled using current ESP traces as of 05/19/25
Libby Dam Outflow - Probability Chart
Corps of Engineers Projections Based on the 44 Ensemble Streamflow Prediction Traces
Issued by the Northwest River Forecast Center, National Weather Service
US Army Corps of Engineers
Seattle District
The data presented 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 exeedances
Flow (kcfs)
0
5
10
15
20
25
30
35
40
8/1
9/1
10/1
11/1
12/1
1/1
2/1
3/1
4/1
5/1
6/1
7/1
8/1
9/1
Date

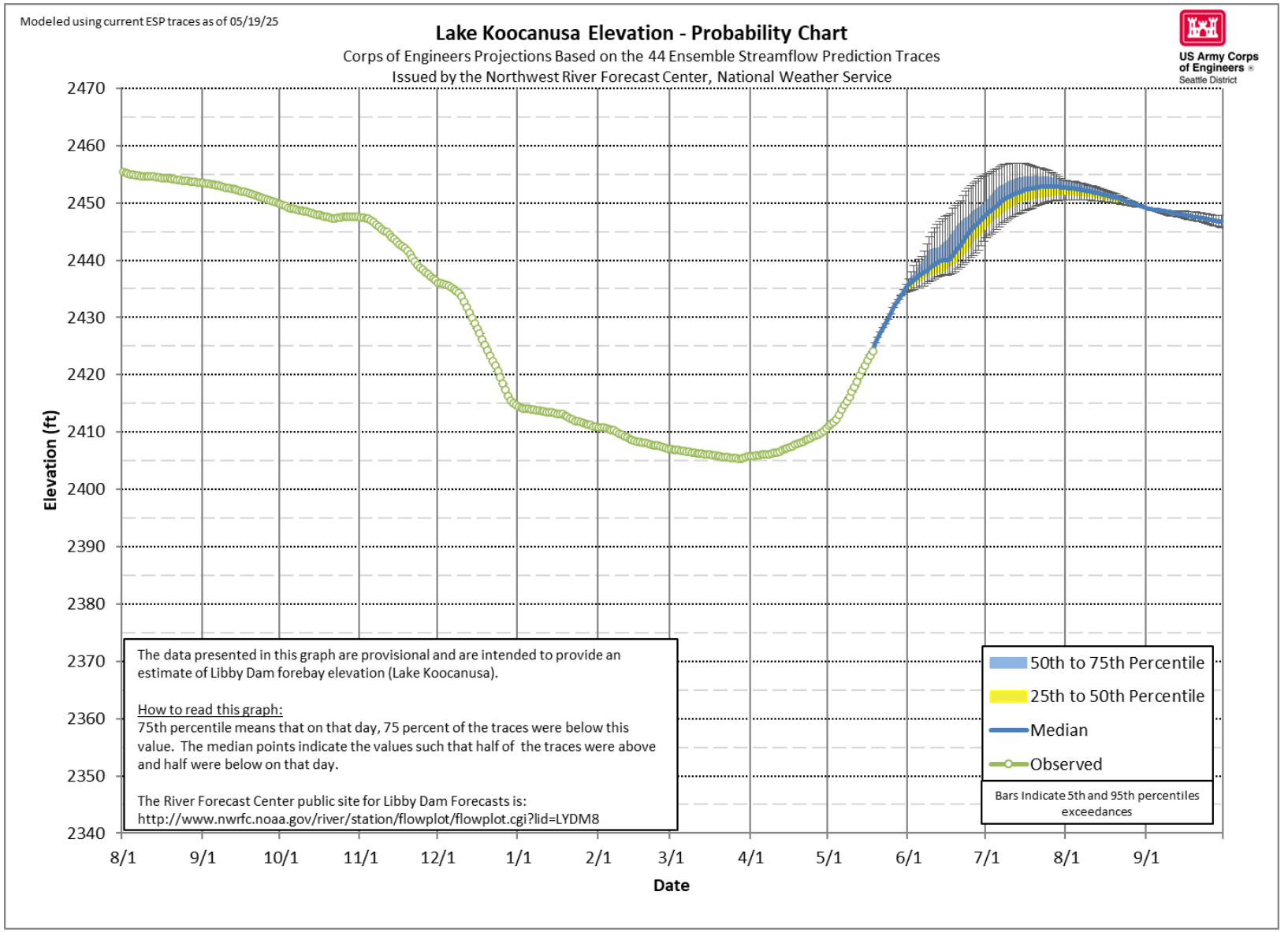

YAAK - NEAR TROY (TRYM8)
Latest Observation: 5.55 ft 05/19/2025 08:45 PDT
Stage, ft
Discharge, cfs
7.0
6.5
6.0
5.5
5.0
4.5
4.0
4187
3252
2514
1878
1344
907
564
Forecast
Trend
09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
May
Day of Month
Historical Max
Historical Min
Historical Mean
Observation
Trend
Forecast
Forecast Created: 05/19/2025 09:06 PDT
Plot Created: 05/19/2025 09:46 PDT
Observations Provided by US Geological Survey


MOYIE - AT EASTPORT (EASI1)
Latest Observation: 6.11 ft 05/19/2025 08:45 PDT
Stage, ft
Discharge, cfs
7.0
6.5
6.0
5.5
5.0
3348
2612
1959
1433
981
Forecast
Trend
09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
May
Day of Month
Historical Max
Historical Min
Historical Mean
Observation
Trend
Forecast
Forecast Created: 05/19/2025 09:06 PDT
Plot Created: 05/19/2025 09:46 PDT
Observations Provided by IJC


FISHER - NEAR LIBBY (FISM8)
Latest Observation: 4.4 ft 05/19/2025 08:45 PDT
Stage, ft
Discharge, cfs
6.0
5.5
5.0
4.5
4.0
3.5
3.0
2131
1579
1120
749
462
250
117
Forecast
Trend
09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
May
Day of Month
Historical Max
Historical Min
Historical Mean
Observation
Trend
Forecast
Forecast Created: 05/19/2025 09:06 PDT
Plot Created: 05/19/2025 09:47 PDT
Observations Provided by US Geological Survey


Modeled using current ESP traces as of 05/19/25
Bonners Ferry Stage
Corps of Engineers Projections Based on the 44 Ensemble Streamflow Prediction Traces
Issued by the Northwest River Forecast Center, National Weather Service
US Army Corps of Engineers
Seattle District
Elevation (ft)
70
65
60
55
50
45
40
35
30
8/1
9/1
10/1
11/1
12/1
1/1
2/1
3/1
4/1
5/1
6/1
7/1
8/1
9/1
Date
50th to 75th Percentile
25th to 50th Percentile
Median
Observed
Flood Stage
Bars Indicate 5th and 95th percentiles
The data presented in this graph are provisional and are intended to provide an estimate of river stages at Bonners Ferry.
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.
The River Forecast Center public site for Bonners Ferry Forecasts is:
http://www.nwrfc.noaa.gov/river/station/flowplot/flowplot.cgi?lid=BFEI1


Modeled using current ESP traces as of 05/19/25
Bonners Ferry Flow - Probability Chart
Corps of Engineers Projections Based on the 44 Ensemble Streamflow Prediction Traces
Issued by the Northwest River Forecast Center, National Weather Service
Flow (kcfs)
70
60
50
40
30
20
10
0
8/1
9/1
10/1
11/1
12/1
1/1
2/1
3/1
4/1
5/1
6/1
7/1
8/1
9/1
Date
50th to 75th Percentile
25th to 50th Percentile
Median
Observed


Modeled using current ESP traces as of 05/19/25
Lake Koocanusa Elevation - Probability Chart
Corps of Engineers Projections Based on the 44 Ensemble Streamflow Prediction Traces
Issued by the Northwest River Forecast Center, National Weather Service
US Army Corps of Engineers
Seattle District
Elevation (ft)
2470
2460
2450
2440
2430
2420
2410
2400
2390
2380
2370
2360
2350
2340
8/1
9/1
10/1
11/1
12/1
1/1
2/1
3/1
4/1
5/1
6/1
7/1
8/1
9/1
Date
The data presented in this graph are provisional and are intended to provide an estimate of Libby Dam forebay elevation (Lake Koocanusa).
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=LYDM8
50th to 75th Percentile
25th to 50th Percentile
Median
Observed
Bars Indicate 5th and 95th percentiles exceedances

REFILL AND FLOW PLAN OBJECTIVES

- Spring Refill Began on May 1st
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- Sturgeon augmentation anticipated to start on May 27th and ramp up discharges from Libby Dam to ~20 kcfs. Maintain ~20 kcfs pulse discharge for approximately ~18 days. Ramp down over twice the normal ramping time frame (more gradual recession). Then target a flat to descending summer flow.
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- 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.

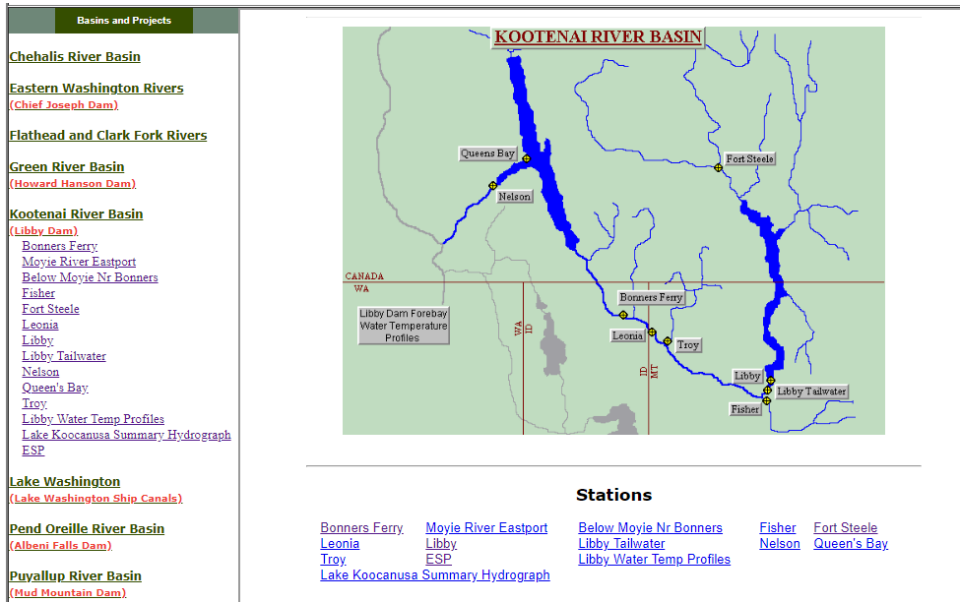
QUESTIONS

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#



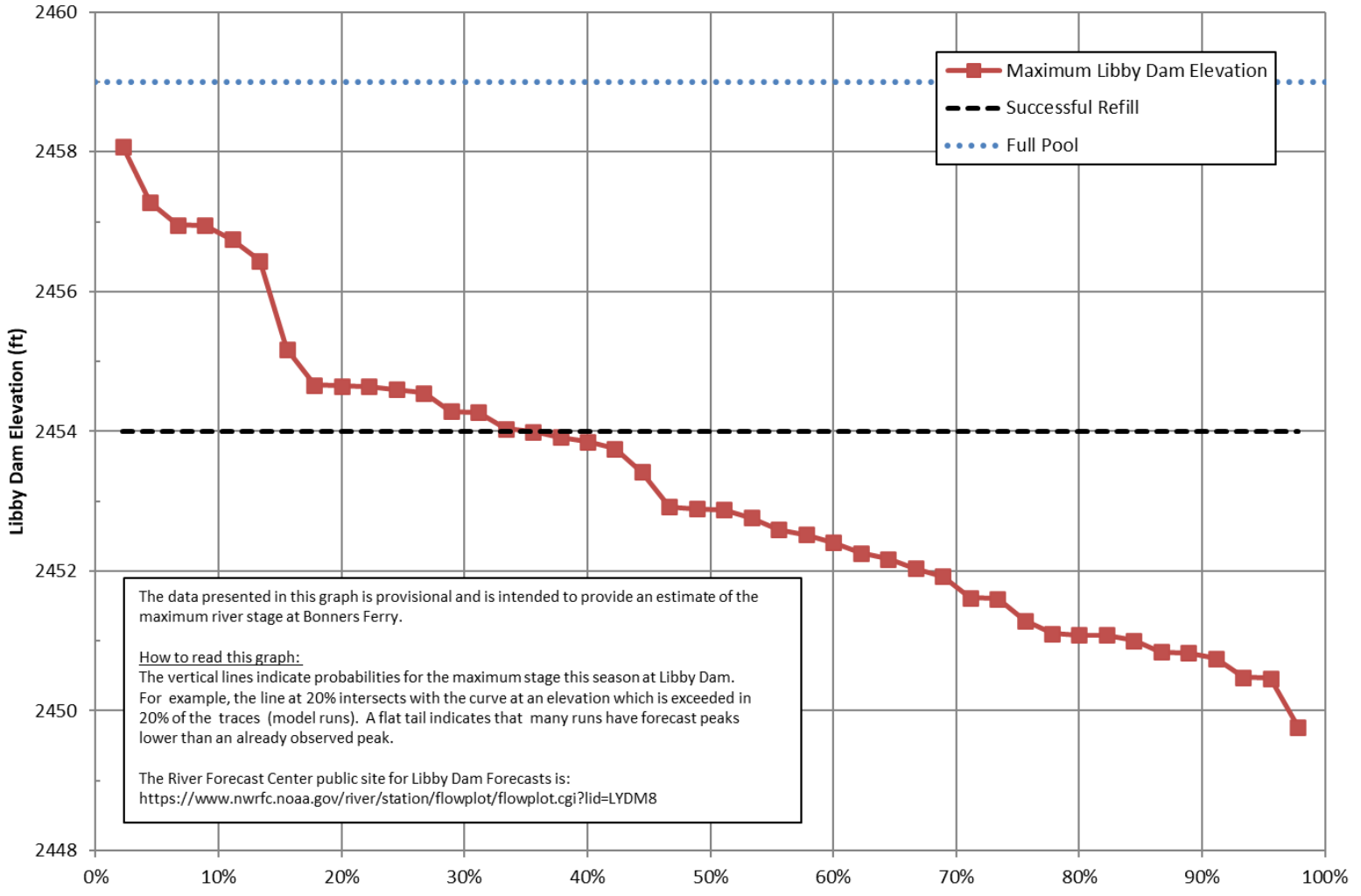
U.S. ARMY

Modeled using current ESP traces as of 05/19/25

Maximum April-September Libby Dam Pool Elevation- Probability Chart

Corps of Engineers Projections Based on the 44 Ensemble Streamflow Prediction Traces
Issued by the Northwest River Forecast Center, National Weather Service

US Army Corps of Engineers
Seattle District



The data presented in this graph is provisional and is intended to provide an estimate of the maximum river stage at Bonners Ferry.

How to read this graph:
The vertical lines indicate probabilities for the maximum stage this season at Libby Dam. For example, the line at 20% intersects with the curve at an elevation which is exceeded in 20% of the traces (model runs). A flat tail indicates that many runs have forecast peaks lower than an already observed peak.

The River Forecast Center public site for Libby Dam Forecasts is:
https://www.nwrfc.noaa.gov/river/station/flowplot/flowplot.cgi?lid=LYDM8