BUREAU OF RECLAMATION

Glen Canyon Monthly Operations Call

Basin Hydrology and Operations

September 17, 2025

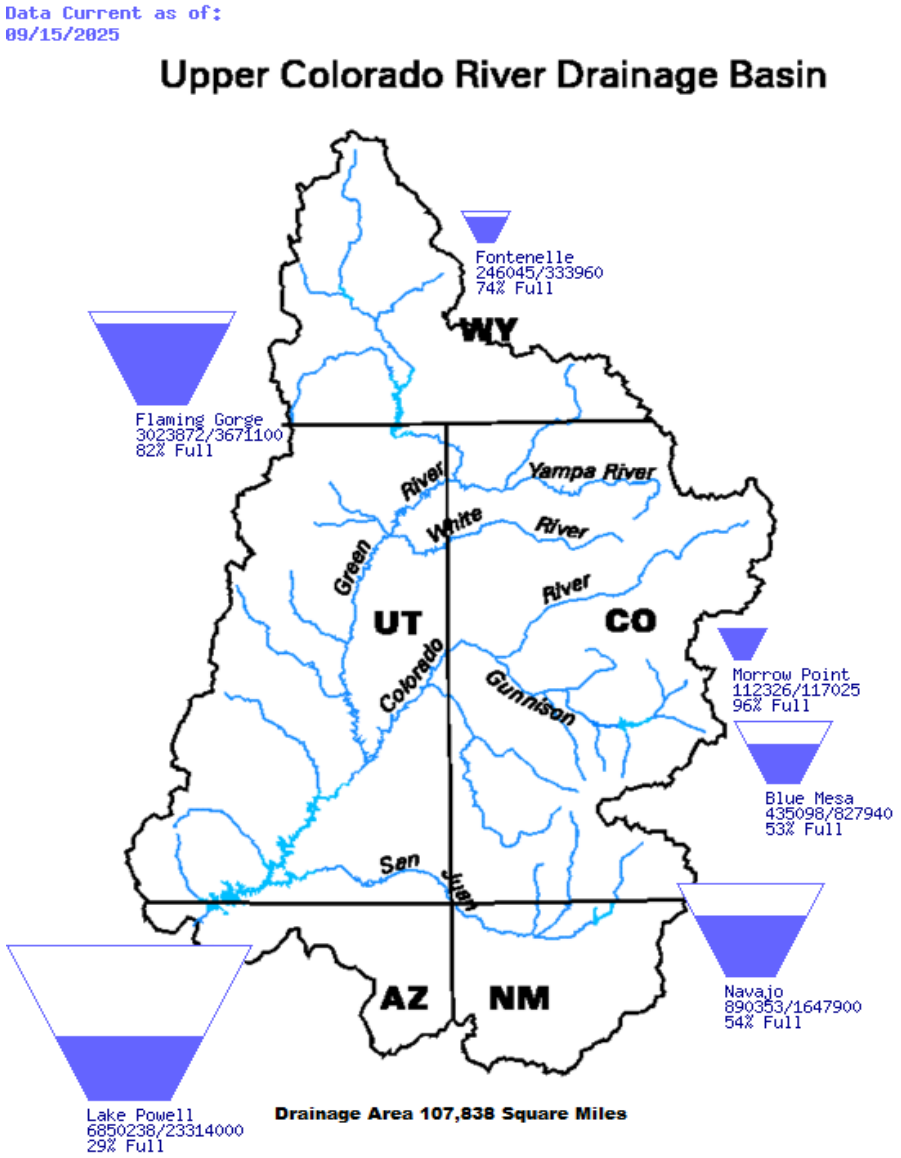
Background

This briefing is being provided consistent with the provision in Attachment B - Section 1.1 of the LTEMP ROD which states:

"Annually, Reclamation will develop a hydrograph based on the characteristics above. Reclamation will seek consensus on the annual hydrograph through monthly operational coordination calls with governmental entities, and regular meetings of the GCDAMP Technical Working Group (TWG) and AMWG. Reclamation will conduct monthly Glen Canyon Dam operational coordination meetings or calls with the DOI bureaus (USGS, NPS, FWS, and BIA), WAPA, and representatives from the Basin States and UCRC. The purpose of these meetings or calls is for the participants to share and seek information on Glen Canyon Dam operations. One liaison from each Basin State and from the UCRC may participate in the monthly operational coordination meetings or calls."

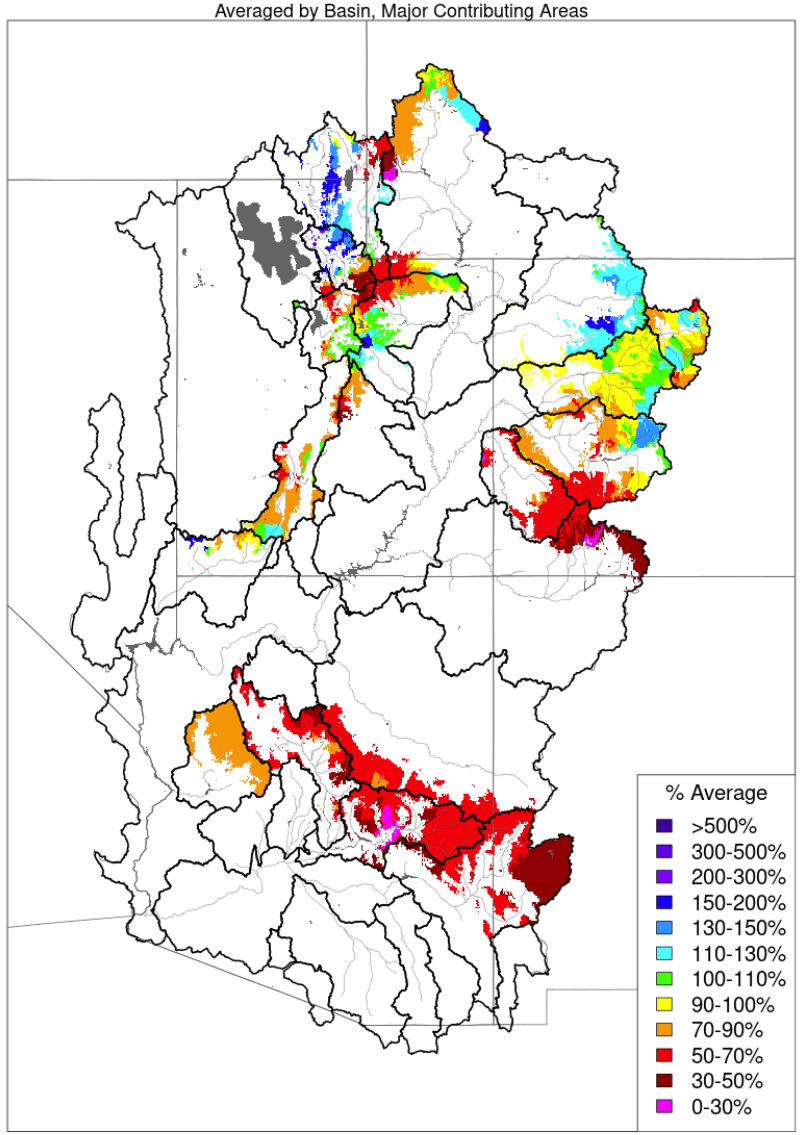
Upper Basin Storage (as of September 15, 2025)

Reservoir	Percent Current Live Storage	Current Live Storage (maf)	Live Storage Capacity (maf)	Elevation (feet)
Fontenelle	74	0.25	0.33	6,494.11
Flaming Gorge	82	3.02	3.67	6,023.31
Blue Mesa	53	0.44	0.83	7,470.53
Navajo	54	0.89	1.65	6,022.67
Lake Powell	29	6.85	23.31	3,546.25
UC System Storage	39	11.58	29.93	
Total System Storage	38	21.94	58.48	



Monthly Precipitation - August 2025

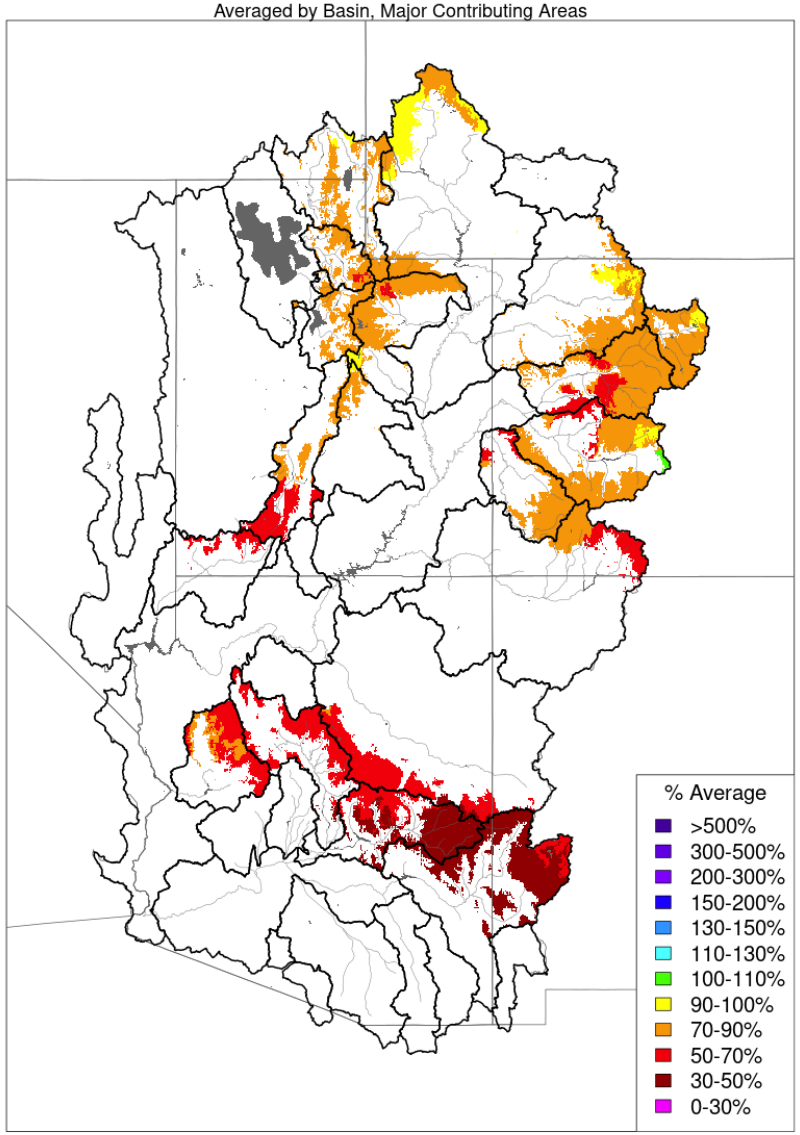
Averaged by Basin, Major Contributing Areas



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

Water Year Precipitation, October 2024 - August 2025

Averaged by Basin, Major Contributing Areas



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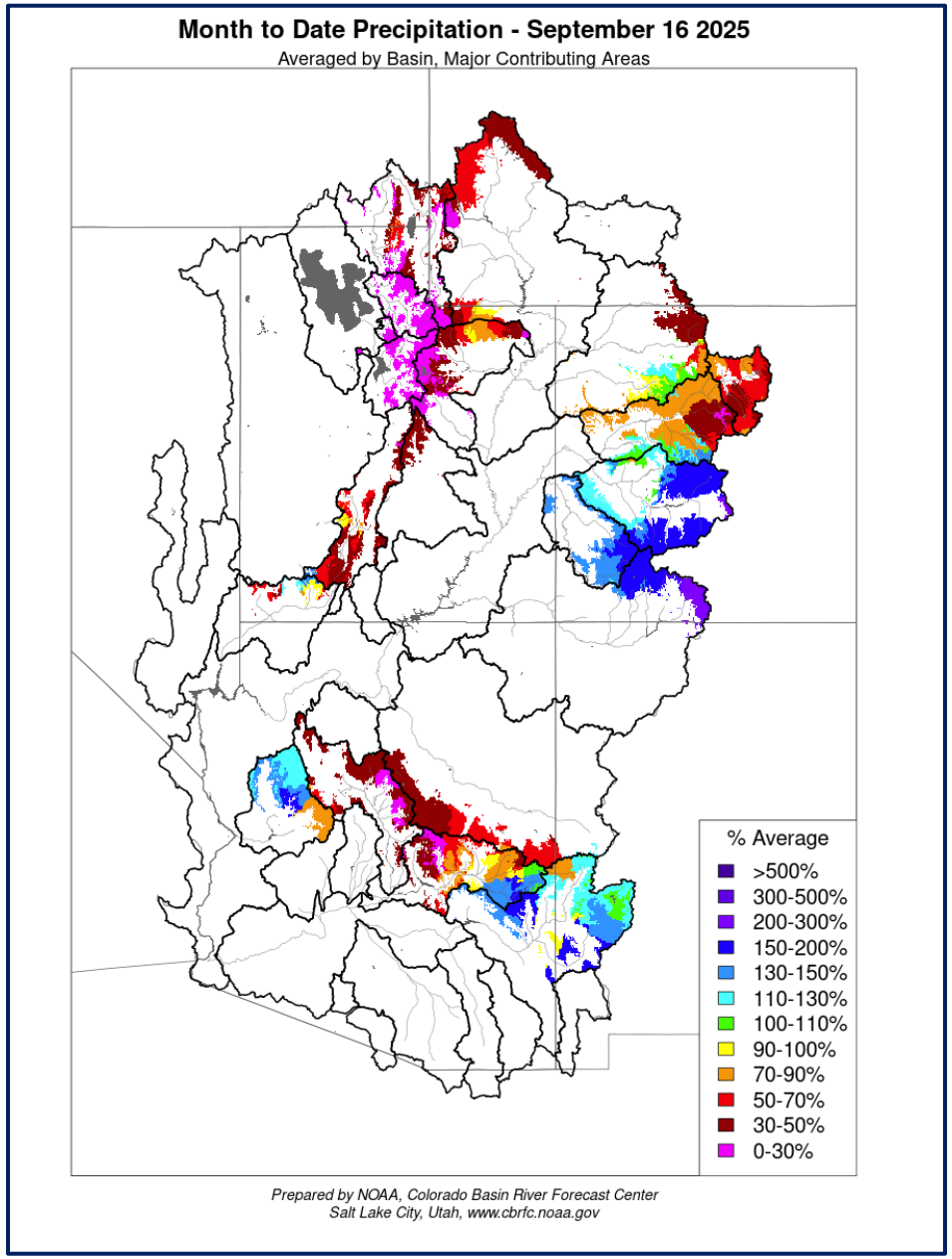
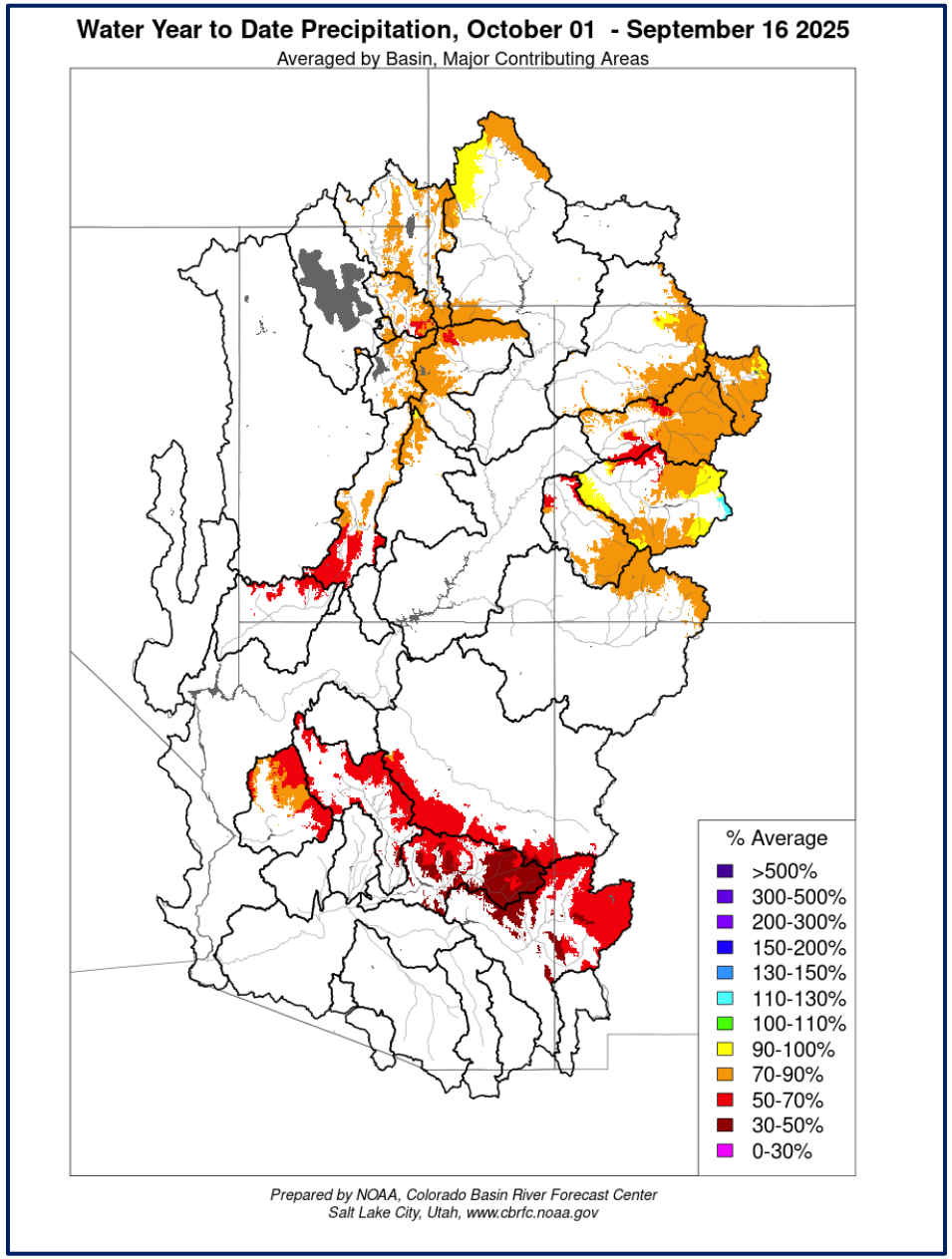

Month to Date Precipitation - September 16 2025
Averaged by Basin, Major Contributing Areas
% Average
>500%
300-500%
200-300%
150-200%
130-150%
110-130%
100-110%
90-100%
70-90%
50-70%
30-50%
0-30%
Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov


Water Year to Date Precipitation, October 01 - September 16 2025
Averaged by Basin, Major Contributing Areas
% Average
>500%
300-500%
200-300%
150-200%
130-150%
110-130%
100-110%
90-100%
70-90%
50-70%
30-50%
0-30%
Prepared by NOAA, Colorado Basin River Forecast Center
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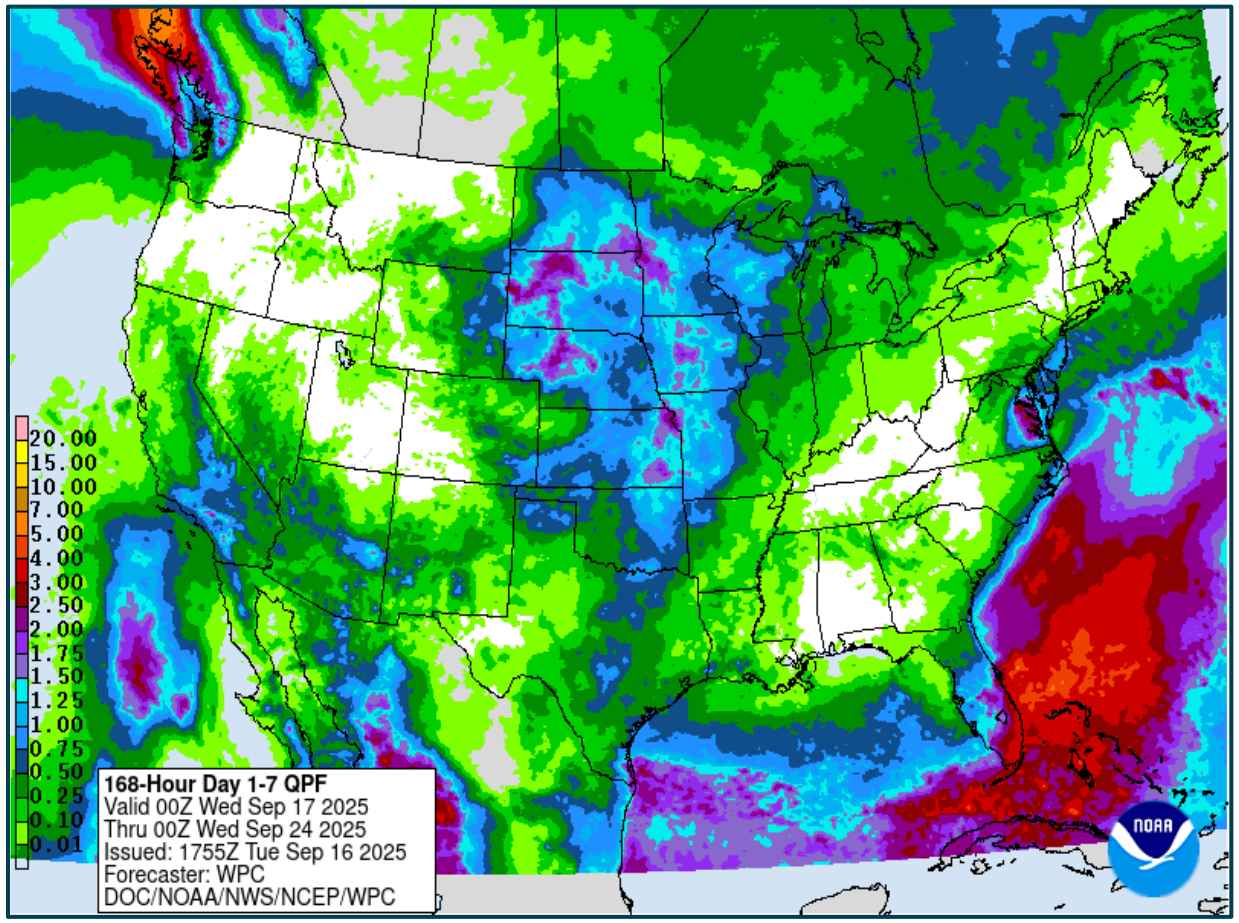
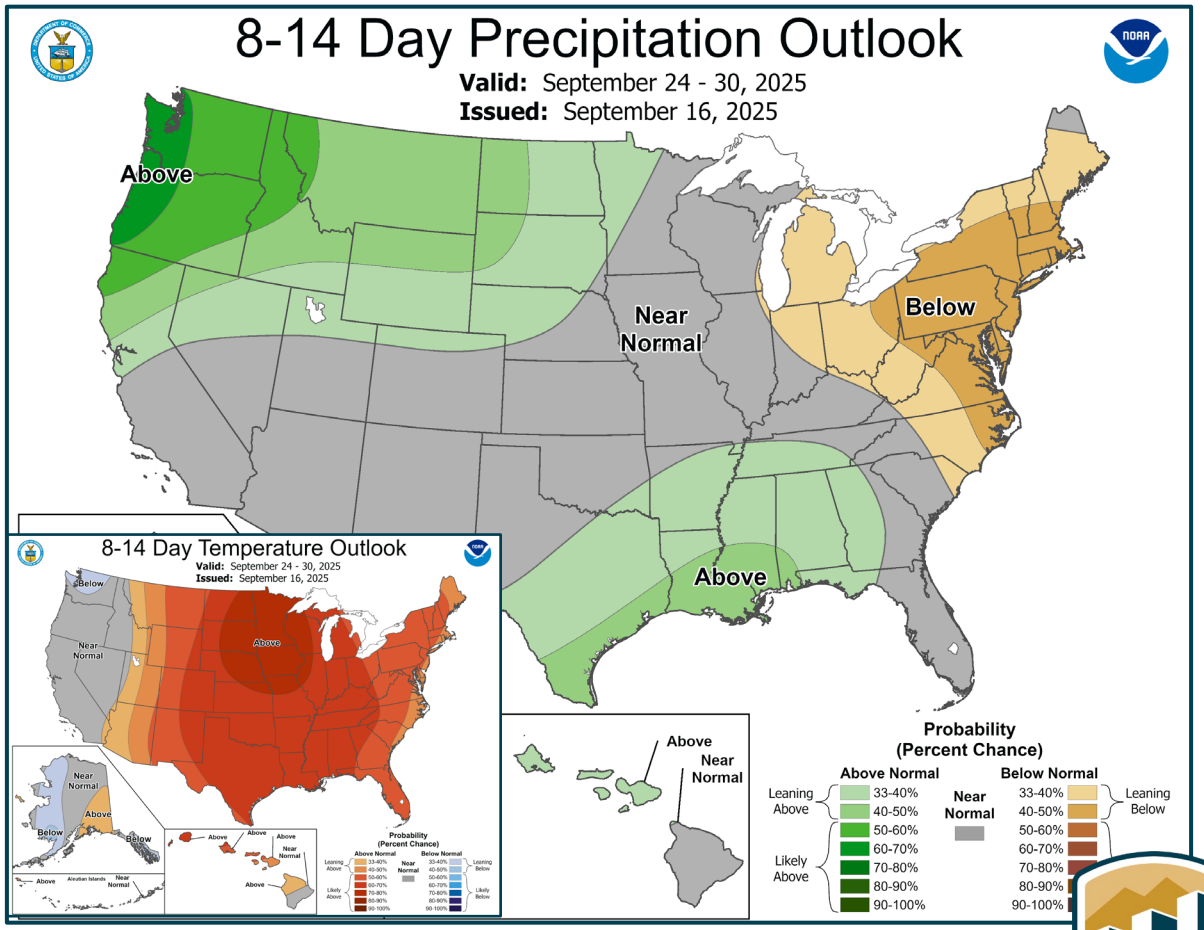
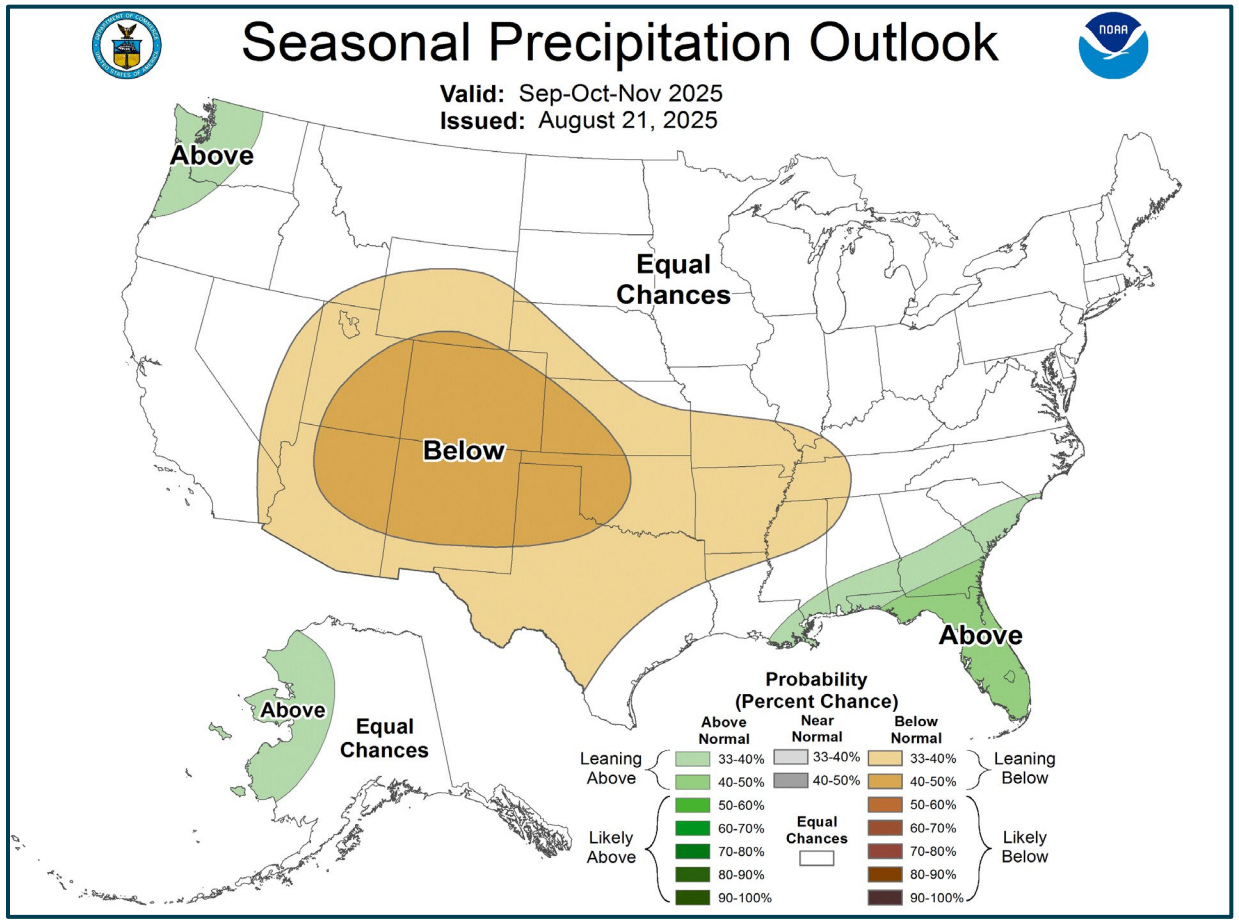
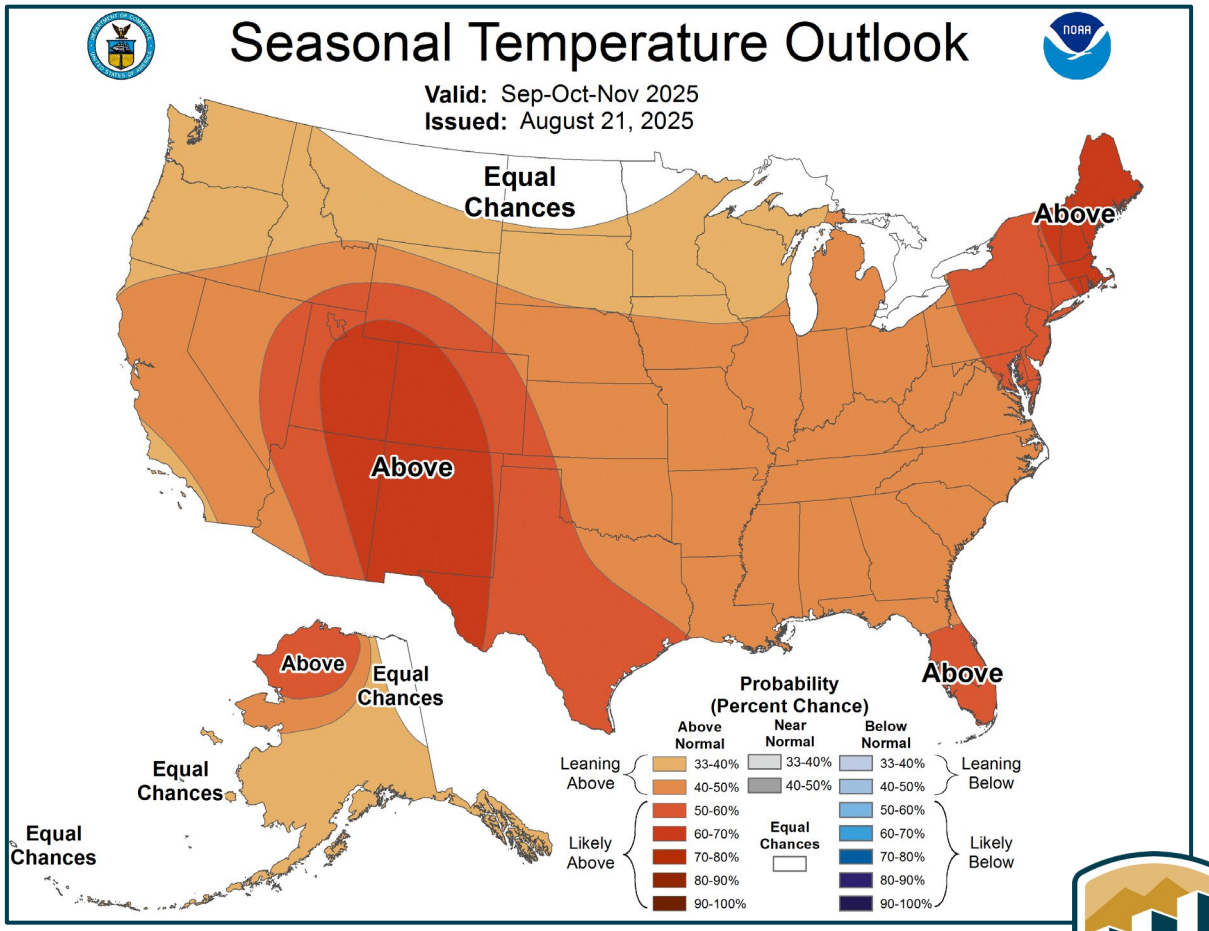
Weather Prediction Center and Climate Prediction Center Precipitation Forecasts



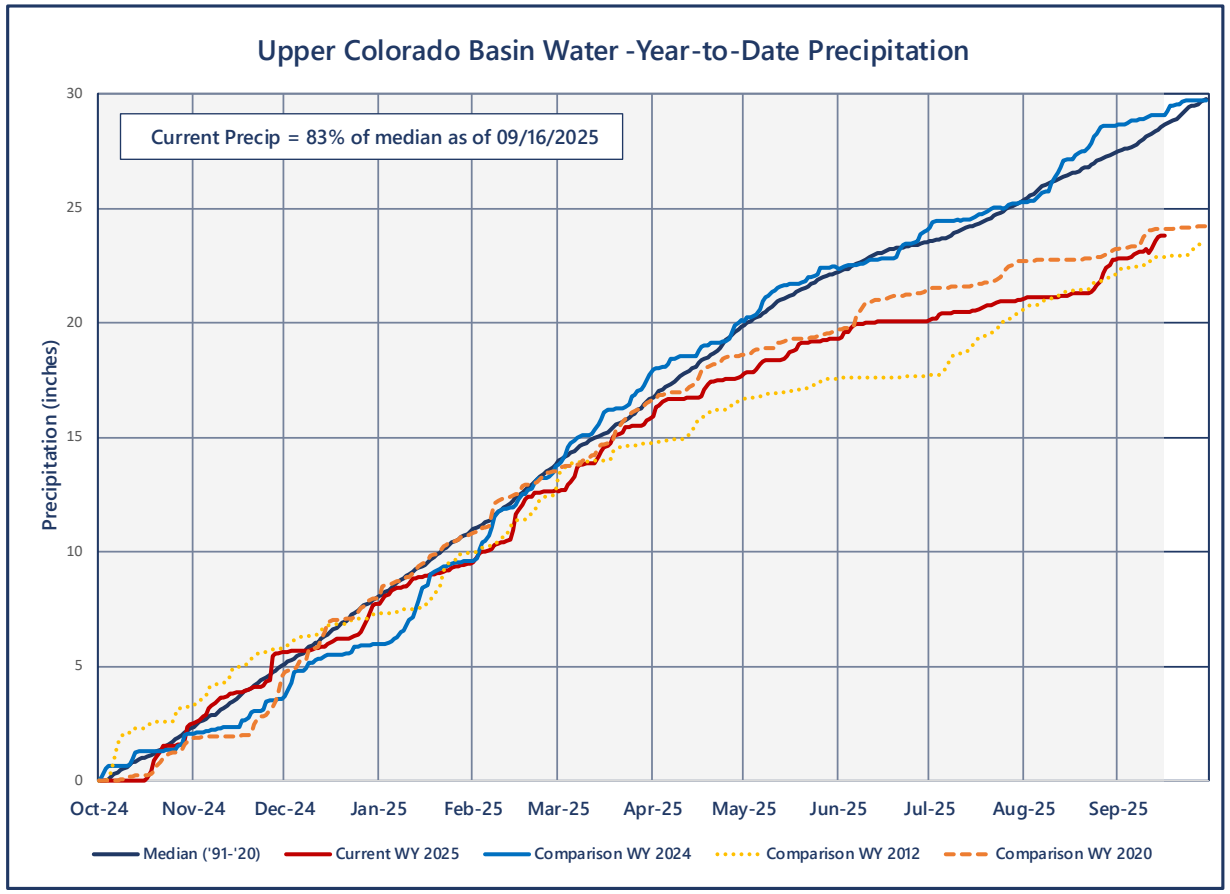


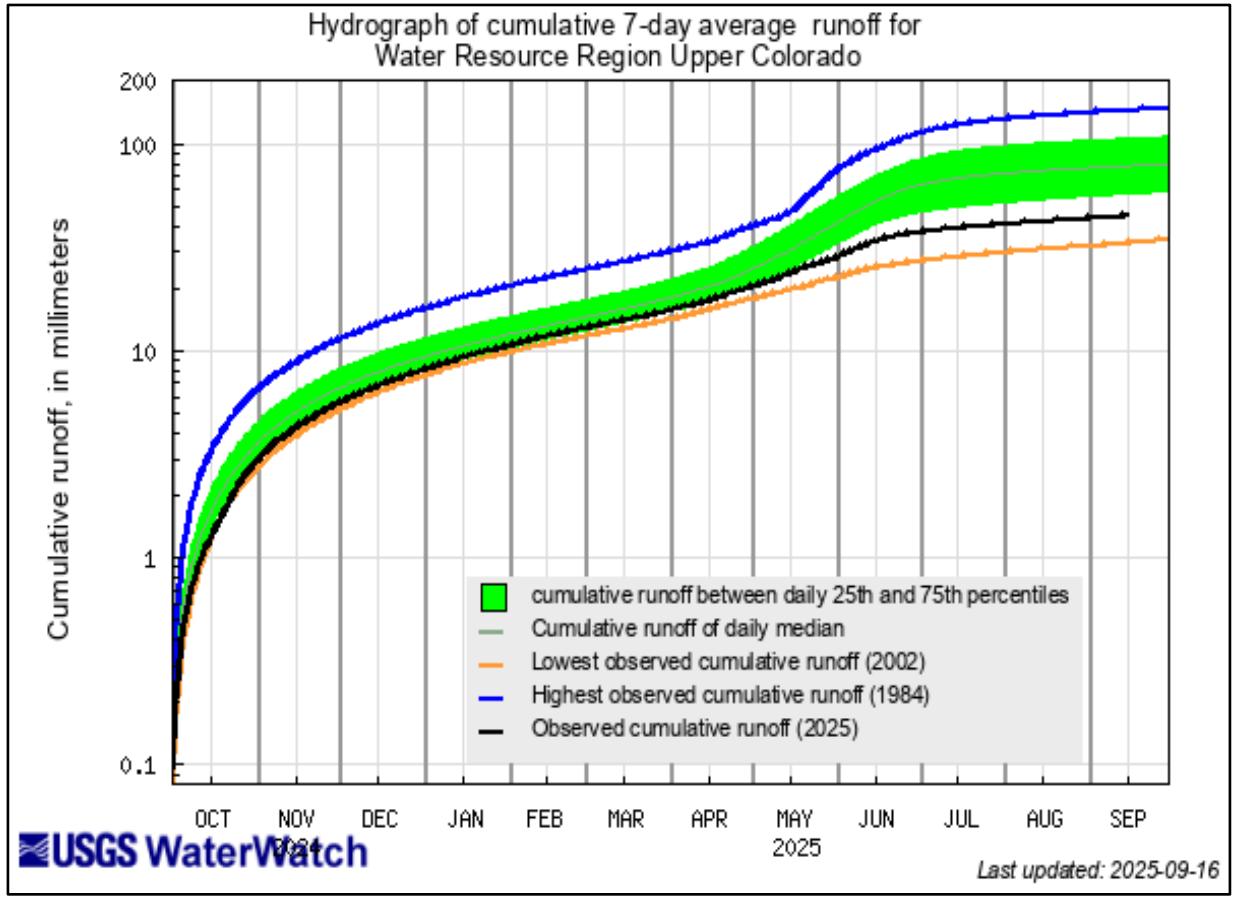
Seasonal Outlook





Upper Colorado Precipitation[1] and Runoff





[1]*Statistics are based on the 30-year period of record from 1991-2020.*

Most Probable September Forecast
Water Year 2025

2025 April – July
Observed Unregulated Inflow

Reservoir	Inflow (kaf)	Change from -	Percent of Avg[1]
Fontenelle	464	-	63
Flaming Gorge	517	-	54
Blue Mesa	409	-	64
Navajo	230	-	37
Powell	2,635	-	41

Water Year 2025
Unregulated Inflow Forecast
as of September 2, 2025

Reservoir	Inflow (kaf)	Change from August	Percent of Avg[1]
Fontenelle	712	-4	66
Flaming Gorge	836	-10	59
Blue Mesa	650	-8	72
Navajo	347	-8	38
Powell	4,696	-144	49

[1]Water year statistics are based on the 30-year period from 1991-2020

Most Probable September Forecast
Water Year 2026

April – July 2026
Forecasted Unregulated Inflow
as of September 2, 2025

Reservoir	Inflow (kaf)	Change from August	Percent of Avg[1]
Fontenelle	610	-10	83
Flaming Gorge	750	-10	78
Blue Mesa	580	0	91
Navajo	525	-30	84
Powell	5,200	-100	81

Water Year 2026
Unregulated Inflow Forecast
as of September 2, 2025

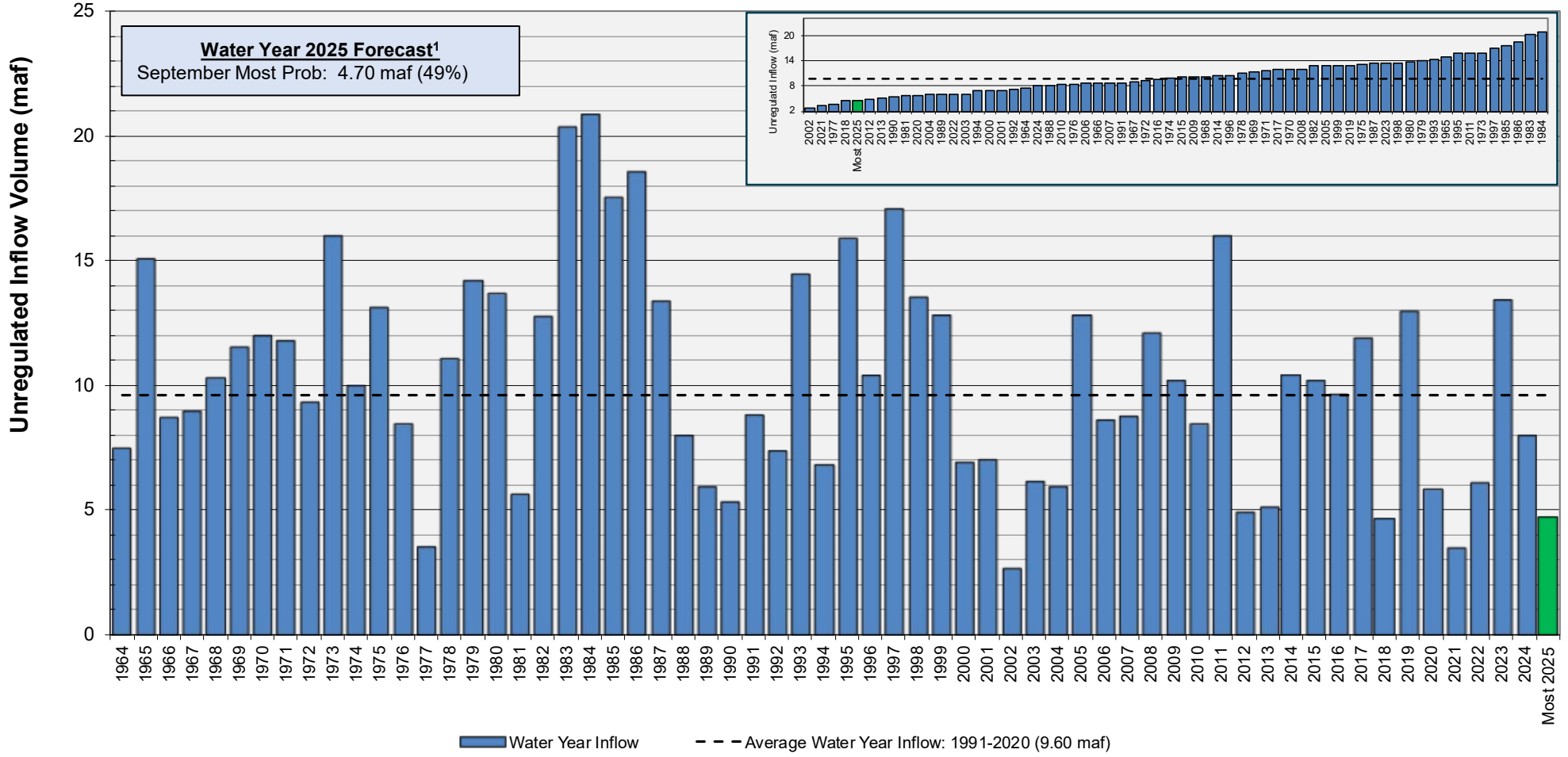
Reservoir	Inflow (kaf)	Change from August	Percent of Avg[1]
Fontenelle	874	-16	81
Flaming Gorge	1,090	-20	77
Blue Mesa	800	-5	88
Navajo	710	-50	78
Powell	7,600	-250	79

[1]Water year statistics are based on the 30-year period from 1991-2020

Lake Powell Water Year Unregulated Inflow

as of September 2, 2025

Comparison with History



[1]*Water Year statistics are based on the 30-year period of record from 1991-2020.*

Upper Colorado Basin

Hydrology and Operations Projections Based on September 2025 24-Month Studies

Upper Basin Reservoir Operations
Water Years 2025 and 2026

- Lake Powell will be operated consistent with the 2007 Interim Guidelines, the Upper Basin Drought Response Operations Agreement and Upper Basin Records of Decision
- Lake Powell WY 2026 will operate in the Mid-Elevation Release Tier with a planned release of 7.48 maf
- Includes the Supplemental Environmental Impact Statement for Near-term Colorado River Operations Record of Decision (2024 Near-term SEIS, signed May 6, 2024)
- Includes the Glen Canyon Dam Long-Term Experimental and Management Plan Final Supplemental Environmental Impact Statement (2024 LTEMP SEIS ROD, signed July 3, 2024)
- Reclamation will also ensure all appropriate consultation with Basin Tribes, the Republic of Mexico, other federal agencies, water users and non-governmental organizations with respect to implementation of these monthly and annual operations

Lake Powell & Lake Mead Operational Table

Lake Powell Operational Tier Determination Run (aka "Exhibit Run") with an 8.23 maf Release[1]

Lake Powell

Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf)
3,700	**Equilization Tier** Equalize, avoid spills, or release 8.23 maf	23.31
3,636-3,666 (2008-2026)	**Upper Elevation Balancing Tier** Release 8.23 maf If Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf	14.65-18.36 (2008-2026)
3,575	**Mid-Elevation Release Tier** Release 7.48 maf; if Lake Mead < 1,025 feet; release 8.23 maf If any minimum probable Lake Powell elevation projection shows Lake Powell <3,500 feet, begin planning to reduce releases to no less than 6.0 maf	8.90
3,525	**Lower Elevation Balancing Tier** Balance contents with a min/max release of 7.0 and 9.5 maf If any minimum probable Lake Powell elevation projection shows Lake Powell <3,500 feet, begin planning to reduce releases to no less than 6.0 maf	5.55
3,500	The Secretary reserves the right to operate Reclamation facilities to protect the Colorado River system if hydrologic conditions require such action as described in Sections 6 and 7(D) in the 2007 Interim Guidelines ROD	4.22
3,370		0

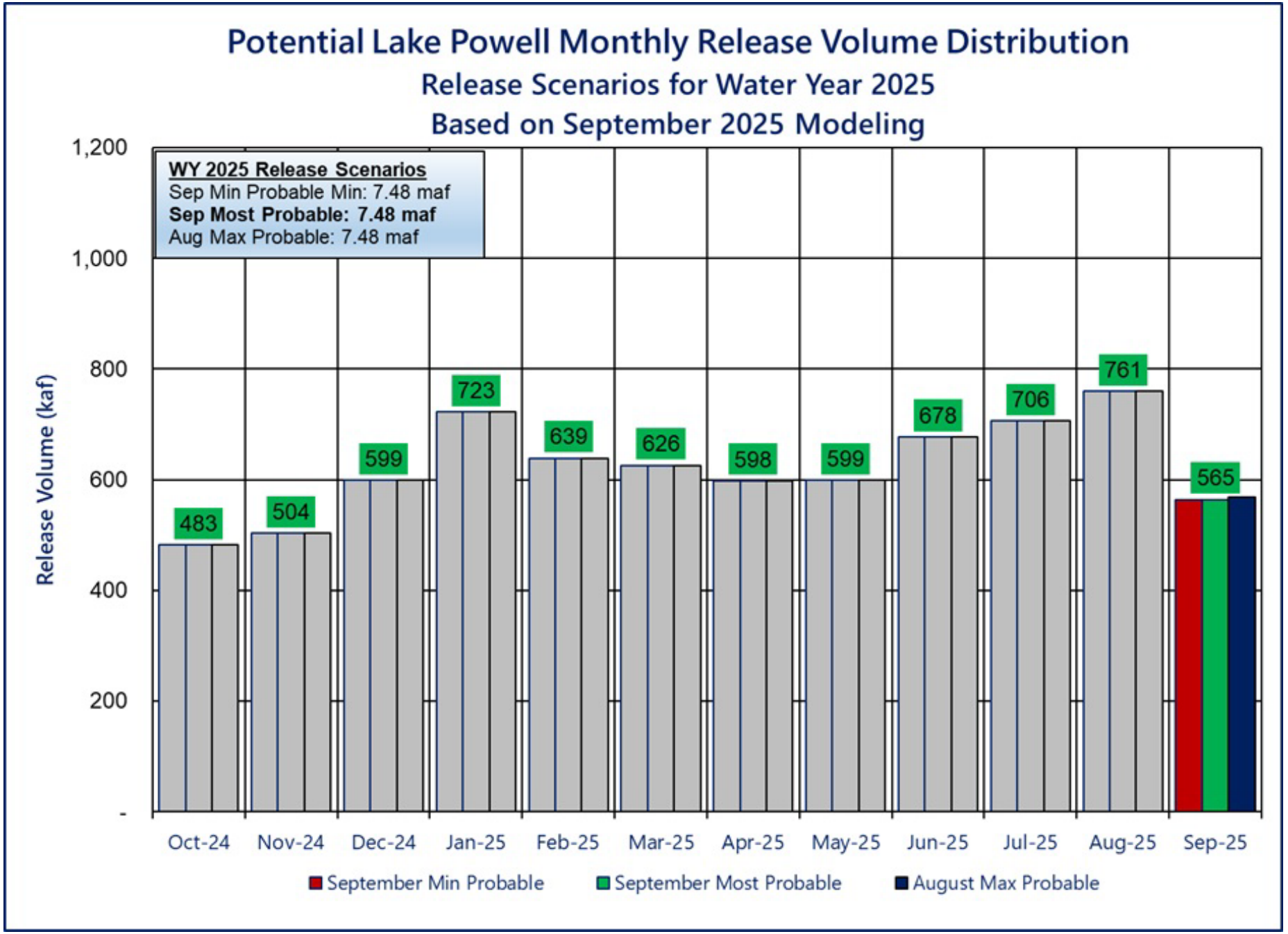
3,532.15 ft Jan 1, 2026 Projection

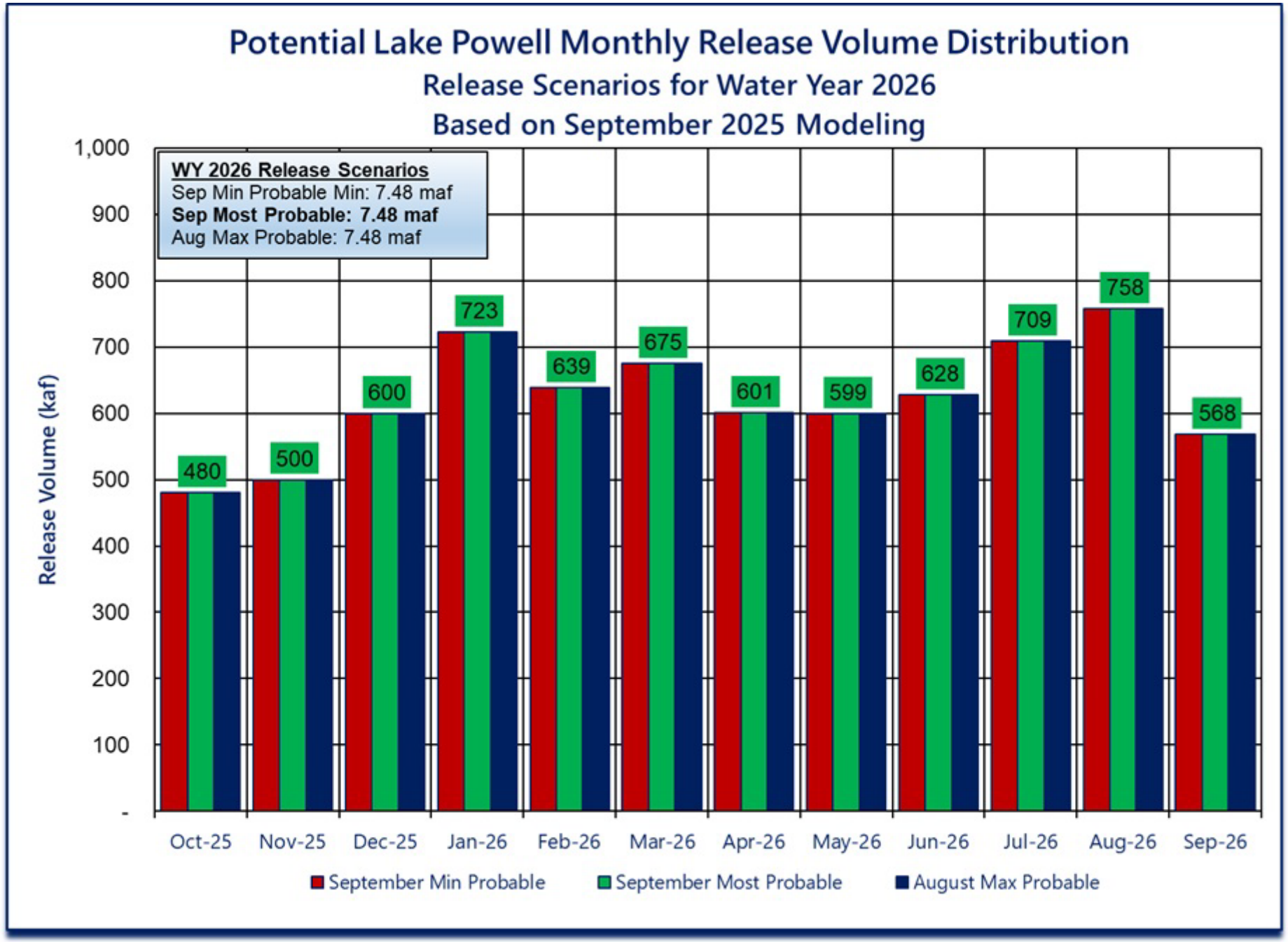
Lake Mead

Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf)
1,220	**Flood Control Surplus or Quantified Surplus Condition** Deliver > 7.5 maf	26.18
1,200 (approx.)	**Domestic Surplus or ICS Surplus Condition** Deliver > 7.5 maf	23.14 (approx.)
1,145	**Normal or ICS Surplus Condition** Deliver ≥ 7.5 maf	16.18
1,075	**Shortage Condition** Deliver 7.167 maf	
1,050	**Shortage Condition** Deliver 7.083 maf	
1,025	**Shortage Condition** Deliver 7.0 maf Further measures may be undertaken	5.98
1,000		4.48
895		0

1,055.88 ft Jan 1, 2026 Projection

[1] Lake Powell and Lake Mead operational tier determinations will be documented in the draft 2026 AOP.


Potential Lake Powell Monthly Release Volume Distribution
Release Scenarios for Water Year 2025
Based on September 2025 Modeling
WY 2025 Release Scenarios
Sep Min Probable Min: 7.48 maf
Sep Most Probable: 7.48 maf
Aug Max Probable: 7.48 maf
Release Volume (kaf)
1,200
1,000
800
600
400
200
-
483
504
599
723
639
626
598
599
678
706
761
565
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
Apr-25
May-25
Jun-25
Jul-25
Aug-25
Sep-25
September Min Probable
September Most Probable
August Max Probable

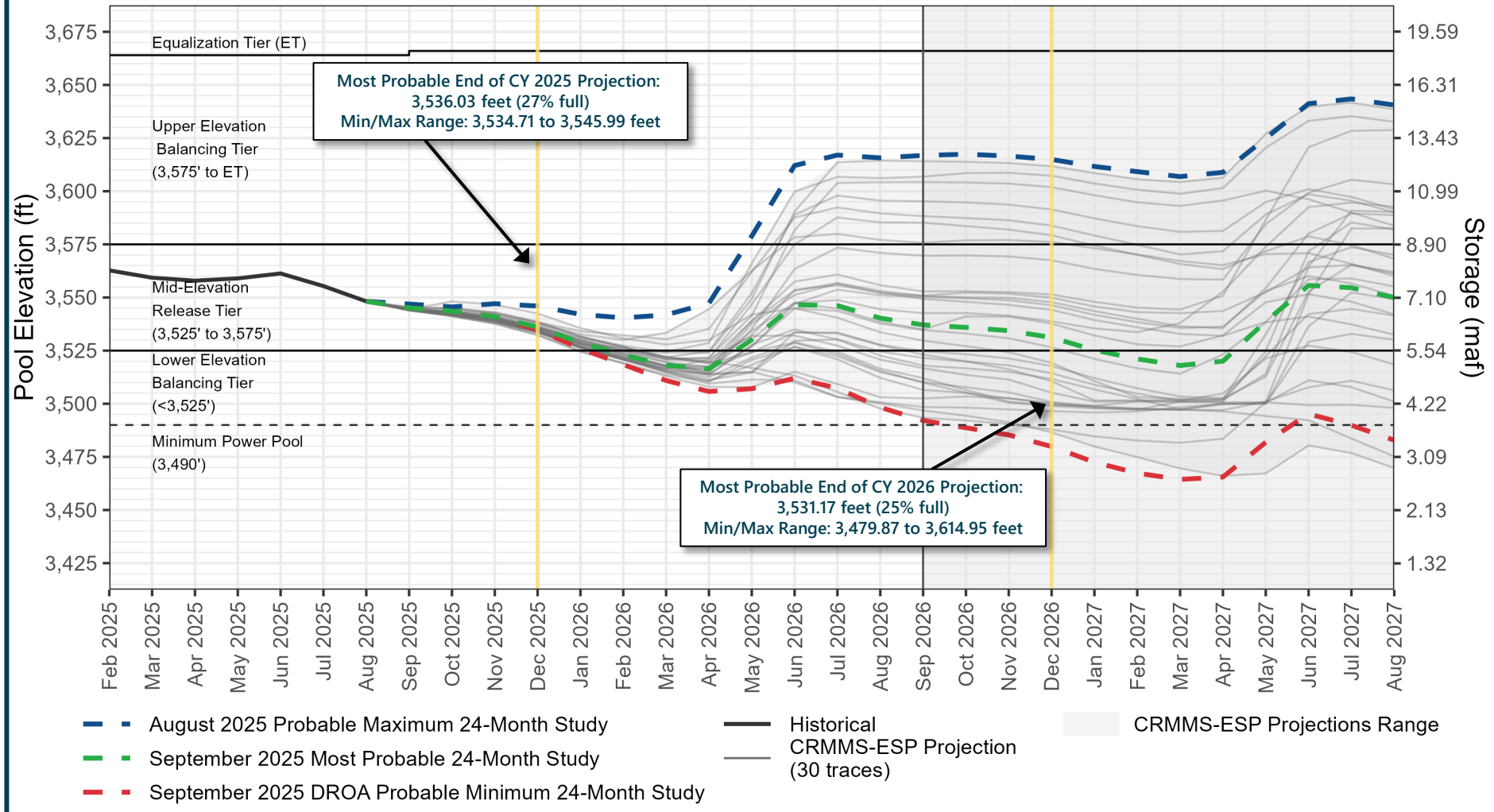

Potential Lake Powell Monthly Release Volume Distribution
Release Scenarios for Water Year 2026
Based on September 2025 Modeling
WY 2026 Release Scenarios
Sep Min Probable Min: 7.48 maf
Sep Most Probable: 7.48 maf
Aug Max Probable: 7.48 maf
Release Volume (kaf)
1,000
900
800
700
600
500
400
300
200
100
-
480
500
600
723
639
675
601
599
628
709
758
568
Oct-25
Nov-25
Dec-25
Jan-26
Feb-26
Mar-26
Apr-26
May-26
Jun-26
Jul-26
Aug-26
Sep-26
September Min Probable
September Most Probable
August Max Probable

Reclamation Operational Modeling
Model Comparison

	Colorado River Mid-term Modeling System (CRMMS)		CRSS
	24-Month Study Mode (Manual Mode)	Ensemble Mode (Rule-based Mode)	
Primary Use	AOP tier determinations and projections of current conditions	Risk-based operational planning and analysis	Long-term planning, comparison of alternatives
Simulated Reservoir Operations	Operations input manually	Rule-driven operations	
Probabilistic or Deterministic	Deterministic – single hydrologic trace	Deterministic OR Probabilistic 30 (or more) hydrologic traces	Probabilistic – 100+ traces
Time Horizon (years)	1 - 2	1 - 5	1 - 50
Upper Basin Inflow	Unregulated forecast, 1 trace	Unregulated ESP forecast, 30 traces	Natural flow; historical, paleo, or climate change hydrology
Upper Basin Demands	Implicit, in unregulated inflow forecast		Explicit, 2016 UCRC assumptions
Lower Basin Demands	Official approved or operational		Developed with LB users

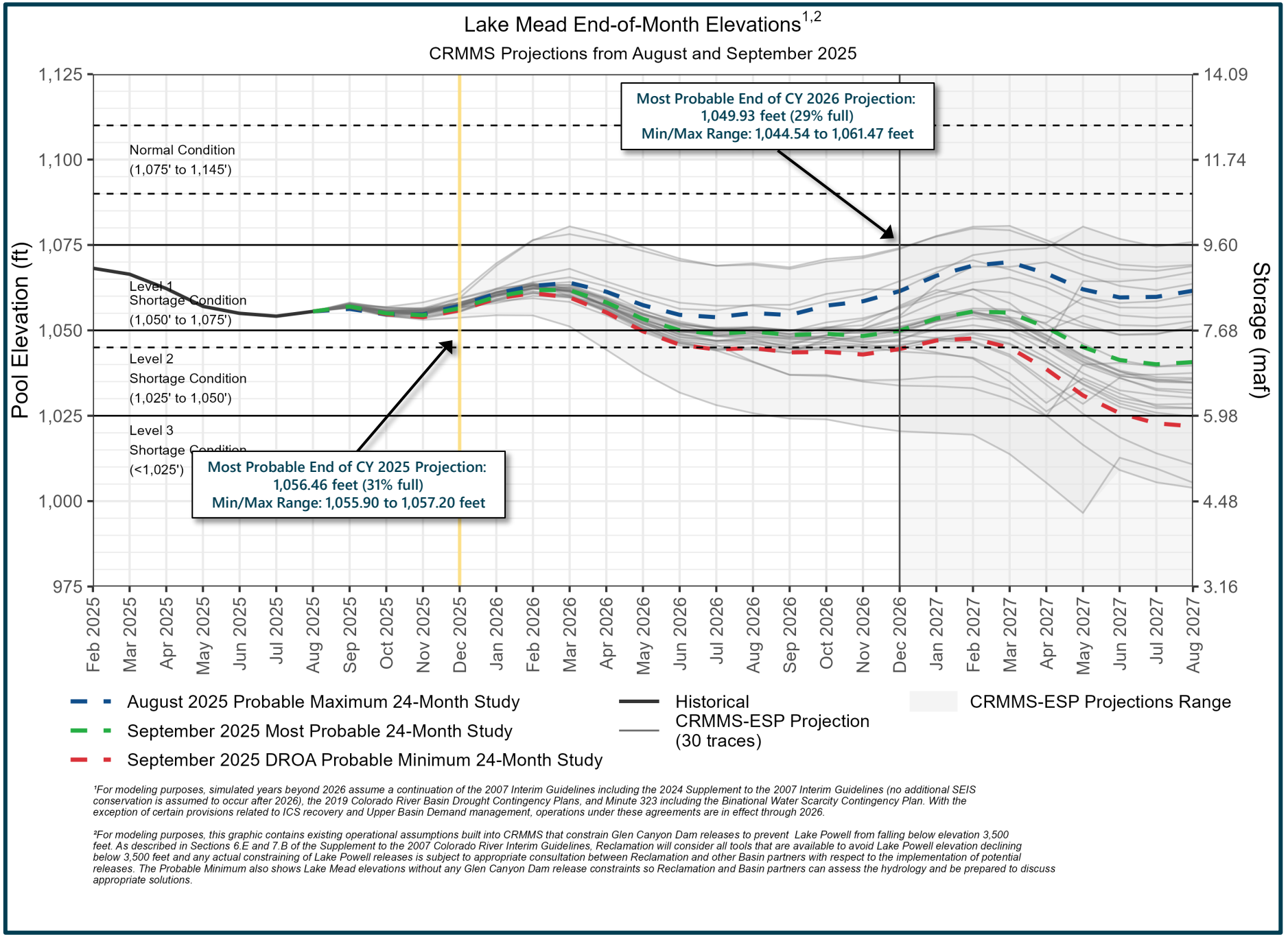
Lake Powell End-of-Month Elevations[1,2]

CRMMS Projections from August and September 2025



[1]For modeling purposes, simulated years beyond 2026 assume a continuation of the 2007 Interim Guidelines including the 2024 Supplement to the 2007 Interim Guidelines (no additional SEIS conservation is assumed to occur after 2026), the 2019 Colorado River Basin Drought Contingency Plans, and Minute 323 including the Binational Water Scarcity Contingency Plan. With the exception of certain provisions related to ICS recovery and Upper Basin Demand management, operations under these agreements are in effect through 2026.

[2]For modeling purposes, this graphic contains existing operational assumptions built into CRMMS that constrain Glen Canyon Dam releases to prevent Lake Powell from falling below elevation 3,500 feet. As described in Sections 6.E and 7.B of the Supplement to the 2007 Colorado River Interim Guidelines, Reclamation will consider all tools that are available to avoid Lake Powell declining below 3,500 feet and any actual constraining of Lake Powell releases is subject to appropriate consultation between Reclamation and other Basin partners with respect to the implementation of potential releases. The Probable Minimum also shows Lake Powell elevations without any Glen Canyon Dam release constraints so Reclamation and Basin partners can assess the hydrology and be prepared to discuss appropriate solutions.



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Upper Colorado Basin

Hydropower Maintenance

Glen Canyon Power Plant Planned Unit Outage Schedule for Water Year 2025

Unit Number	Oct 2024	Nov 2024	Dec 2024	Jan 2025	Feb 2025	Mar 2025	Apr 2025	May 2025	Jun 2025	Jul 2025	Aug 2025	Sep 2025	
1													
2													
3													
4													
5													
6													
7													
8													
ROW 1													
ROW 2													
ROW 3													
ROW 4													
Units Available	6	6	7	5	5	6	7	7	8	8	8	6	
Penstock Capacity (cfs)	19,650	19,700	23,350	16,100	16,100	19,700	22,600	26,300	26,300	26,100	25,800	18,700	Sep MOST[2]
Penstock Capacity (kaf/month)	1,200	1,500	1,550	1,360	910	1,240	1,430	1,610	1,560	1,600	1,580	1,130	Sep MOST
Max (kaf)[1]	483	504	599	723	639	626	598	598	676	710	757	565	7.48 maf
Most (kaf)[1]	483	504	599	723	639	626	598	598	676	710	757	565	7.48 maf
Min (kaf)[1]	483	504	599	723	639	626	600	598	676	710	757	565	7.48 maf
										(updated 09-16-2025)			

1 Projected release based on September 2025 24-Month Study for the minimum, most, and maximum probable scenarios.

2 Dependent upon availability to shift contingency regulation, which will increase capacity by 30-40MW (3%) at current efficiency.

Glen Canyon Power Plant Planned Unit Outage Schedule for Water Year 2026

Unit Number	Oct 2025	Nov 2025	Dec 2025	Jan 2026	Feb 2026	Mar 2026	Apr 2026	May 2026	Jun 2026	Jul 2026	Aug 2026	Sep 2026	
1													
2													
3													
4													
5													
6													
7													
8													
Units Available	6	8	8	8	6	6	7	7	8	8	8	6	
Penstock Capacity (cfs)	18,700	25,400	25,200	24,900	18,000	17,800	21,900	23,400	25,700	25,600	25,400	18,500	Sep MOST[2]
Penstock Capacity (kaf/month)	1,190	1,430	1,550	1,450	1,020	1,110	1,300	1,440	1,530	1,580	1,550	1,110	Sep MOST
Max (kaf)[1]	480	500	600	723	639	675	601	599	628	709	758	568	7.48 maf
Most (kaf)[1]	480	500	600	723	639	675	601	599	628	709	758	568	7.48 maf
Min (kaf)[1]	480	500	600	723	639	675	601	599	628	709	758	568	7.48 maf
										(updated 09-16-2025)			

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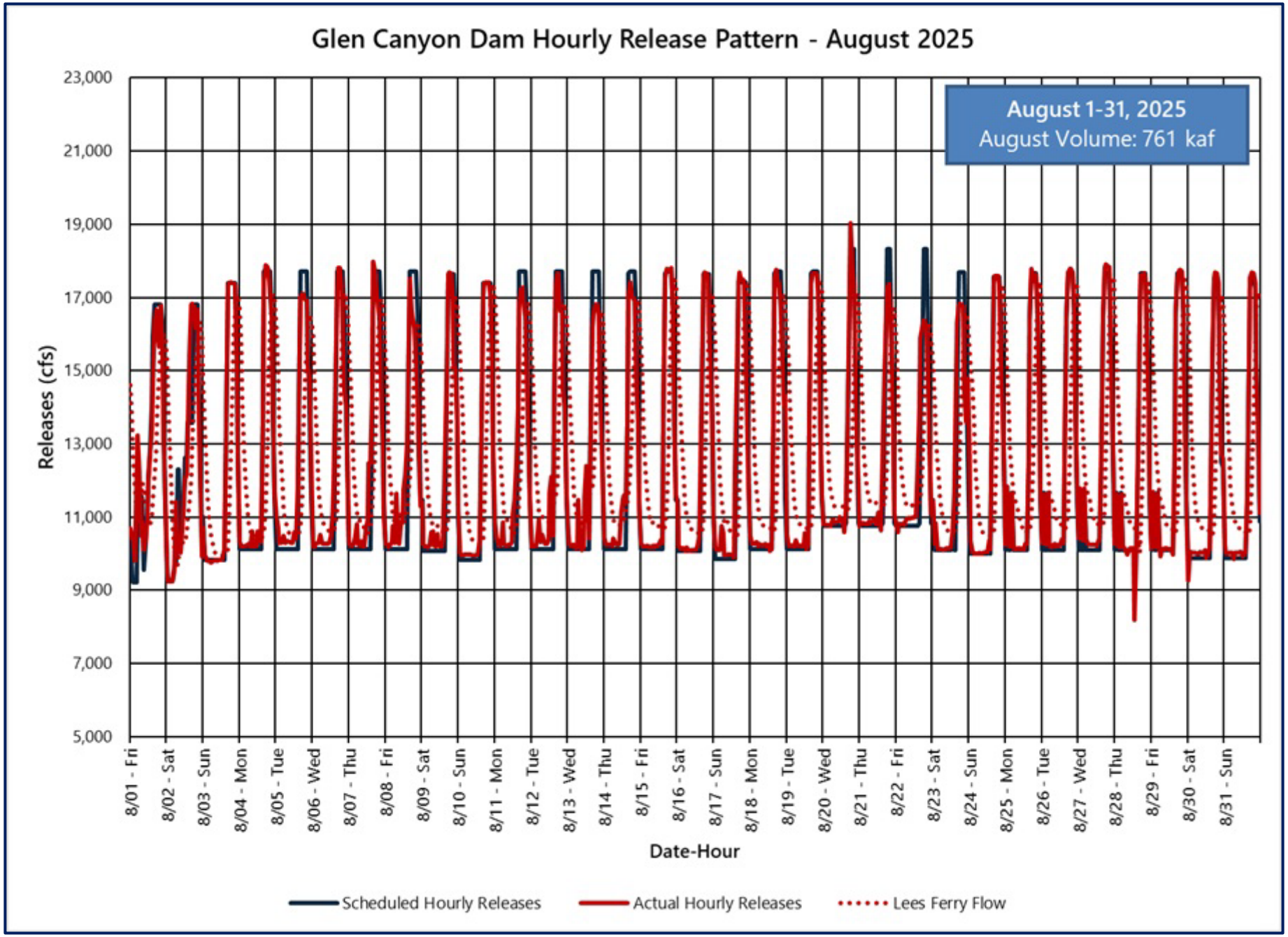
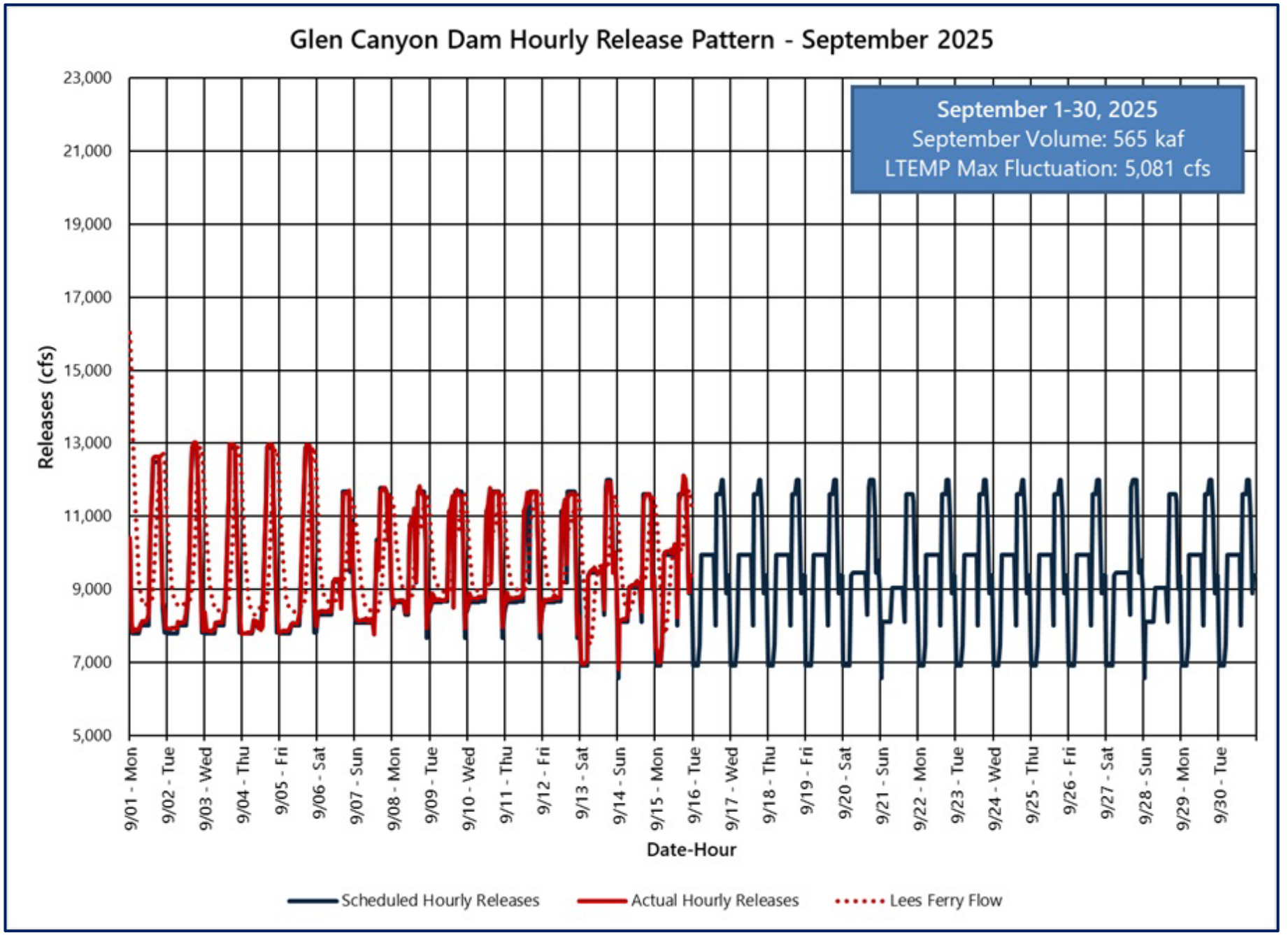

Glen Canyon Dam Hourly Release Pattern - August 2025
August 1-31, 2025
August Volume: 761 kaf
Releases (cfs)
23,000
21,000
19,000
17,000
15,000
13,000
11,000
9,000
7,000
5,000
8/01 - Fri
8/02 - Sat
8/03 - Sun
8/04 - Mon
8/05 - Tue
8/06 - Wed
8/07 - Thu
8/08 - Fri
8/09 - Sat
8/10 - Sun
8/11 - Mon
8/12 - Tue
8/13 - Wed
8/14 - Thu
8/15 - Fri
8/16 - Sat
8/17 - Sun
8/18 - Mon
8/19 - Tue
8/20 - Wed
8/21 - Thu
8/22 - Fri
8/23 - Sat
8/24 - Sun
8/25 - Mon
8/26 - Tue
8/27 - Wed
8/28 - Thu
8/29 - Fri
8/30 - Sat
8/31 - Sun
Date-Hour
Scheduled Hourly Releases
Actual Hourly Releases
Lees Ferry Flow

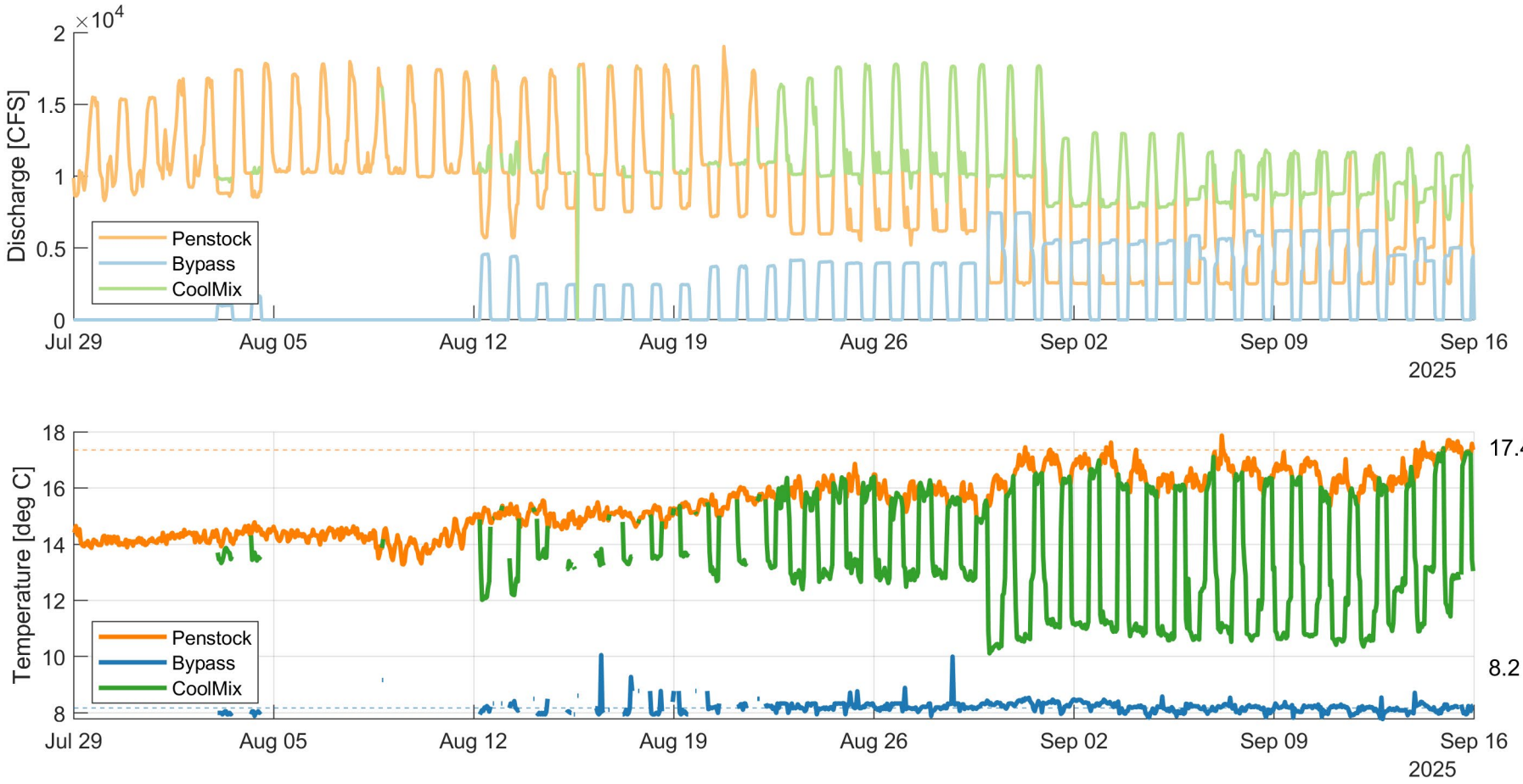

Glen Canyon Dam Hourly Release Pattern - September 2025
September 1-30, 2025
September Volume: 565 kaf
LTEMP Max Fluctuation: 5,081 cfs
Releases (cfs)
23,000
21,000
19,000
17,000
15,000
13,000
11,000
9,000
7,000
5,000
9/01 - Mon
9/02 - Tue
9/03 - Wed
9/04 - Thu
9/05 - Fri
9/06 - Sat
9/07 - Sun
9/08 - Mon
9/09 - Tue
9/10 - Wed
9/11 - Thu
9/12 - Fri
9/13 - Sat
9/14 - Sun
9/15 - Mon
9/16 - Tue
9/17 - Wed
9/18 - Thu
9/19 - Fri
9/20 - Sat
9/21 - Sun
9/22 - Mon
9/23 - Tue
9/24 - Wed
9/25 - Thu
9/26 - Fri
9/27 - Sat
9/28 - Sun
9/29 - Mon
9/30 - Tue
Date-Hour
Scheduled Hourly Releases
Actual Hourly Releases
Lees Ferry Flow

BUREAU OF RECLAMATION

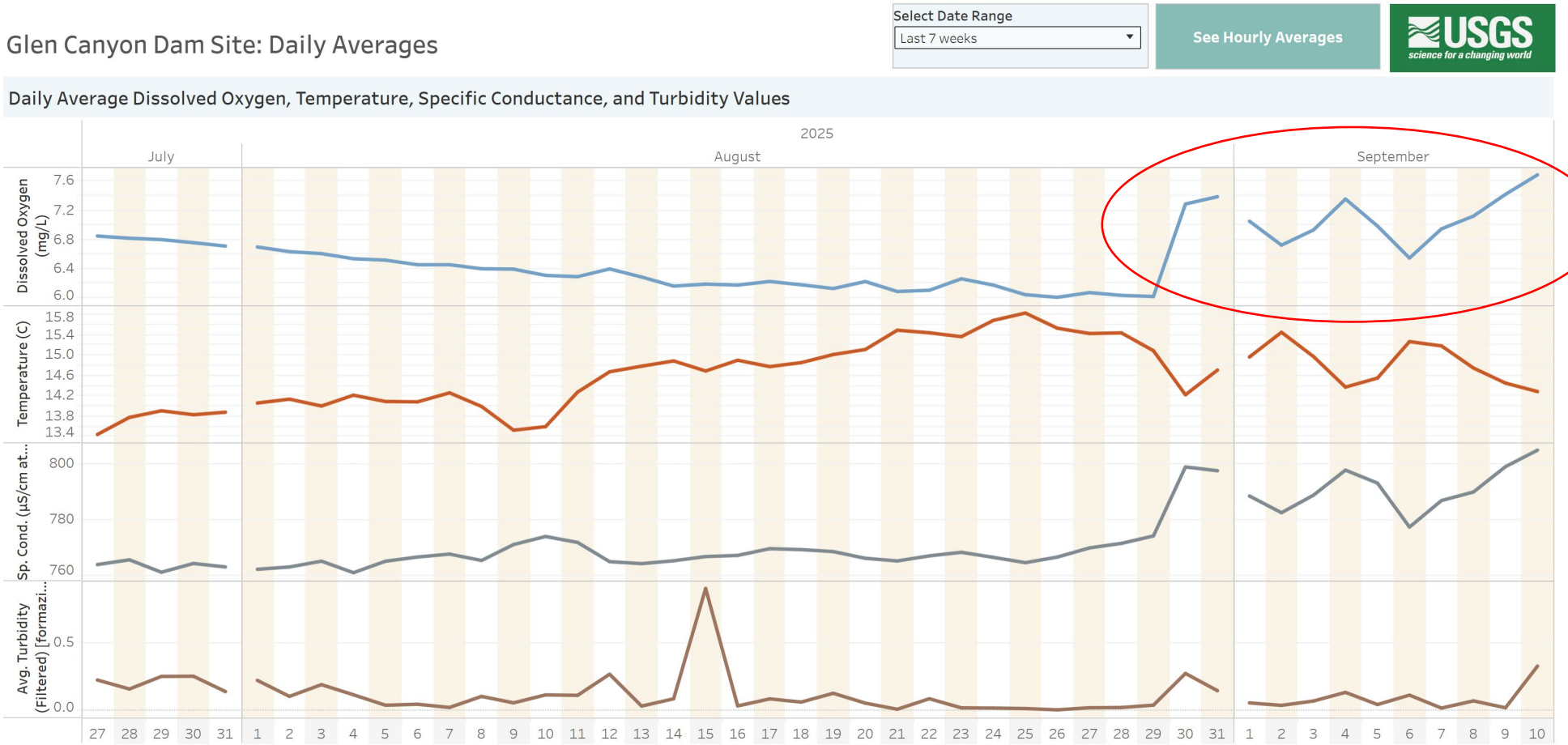
Water Quality Update

09/17/2025

Cool Mix Flow Operations

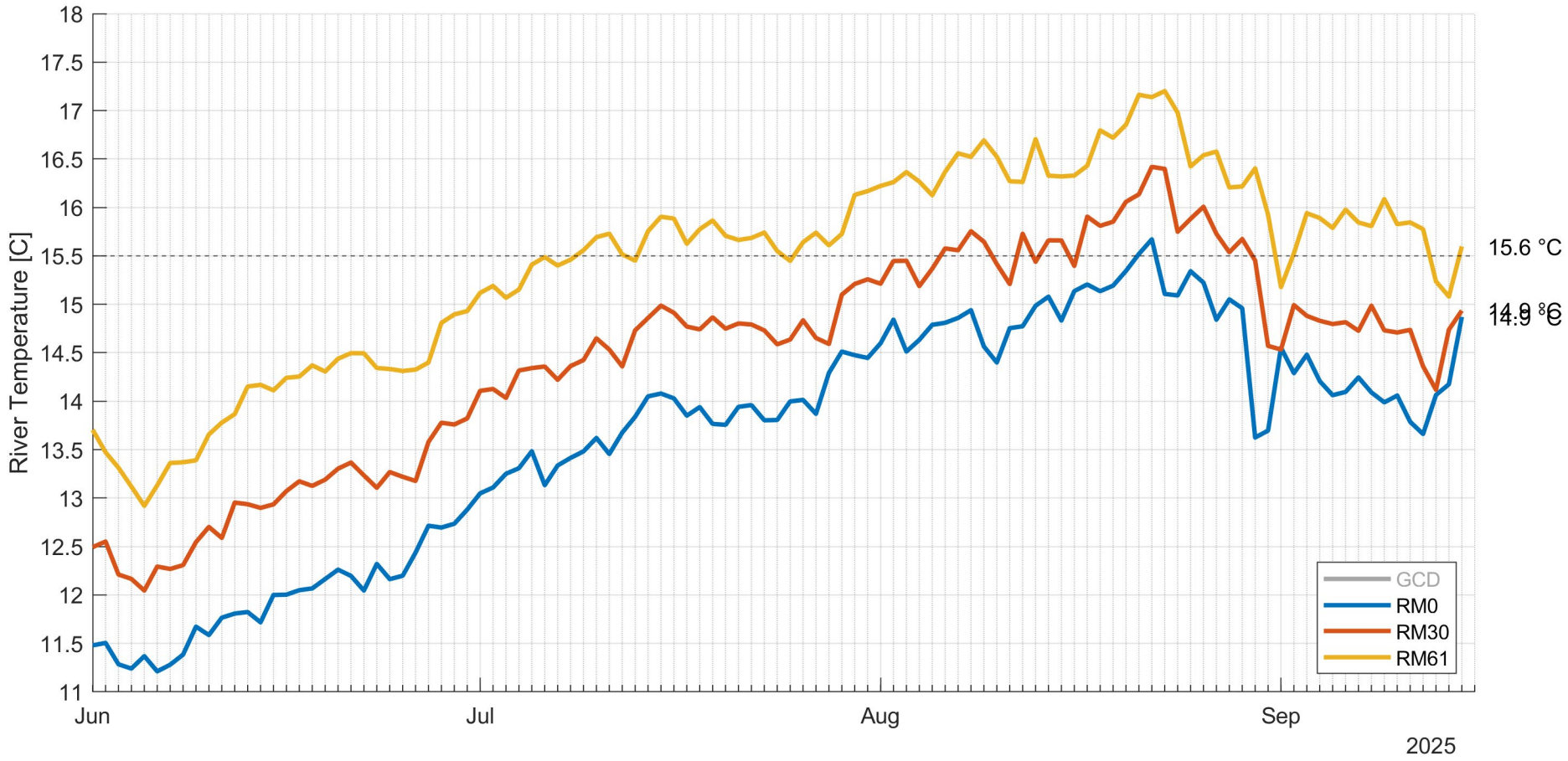


GCD Observations (Below Dam Sonde)

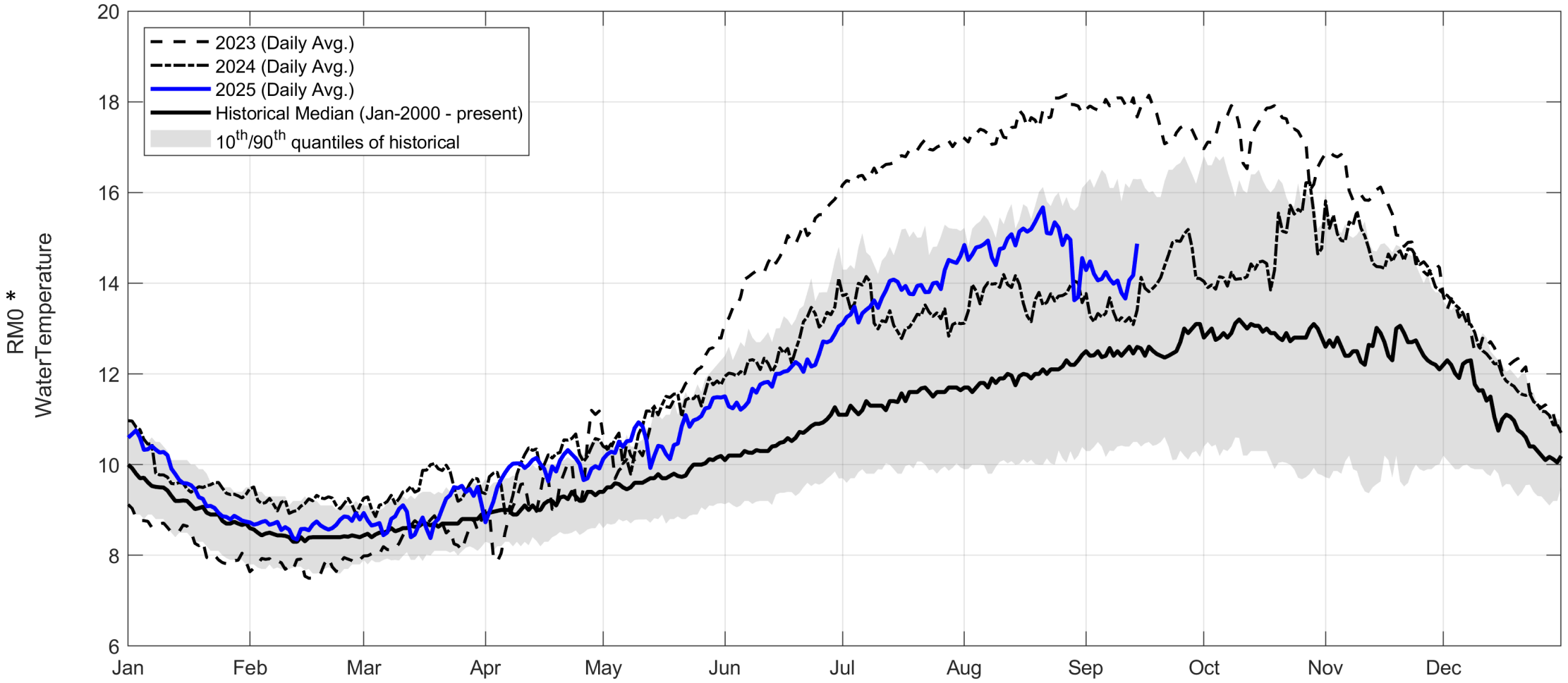


Seeing recirculation below the dam

River Temperature Observations

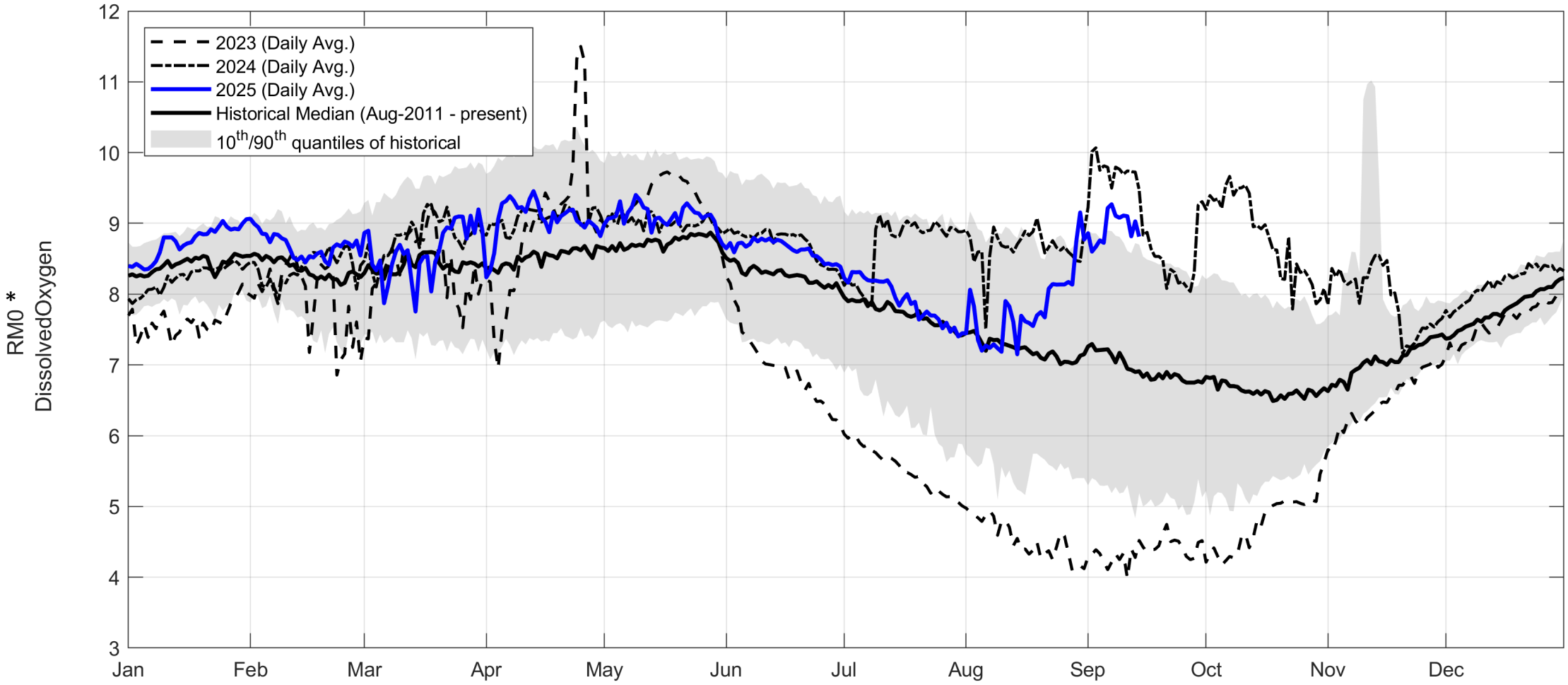


Lees Ferry - Temperature



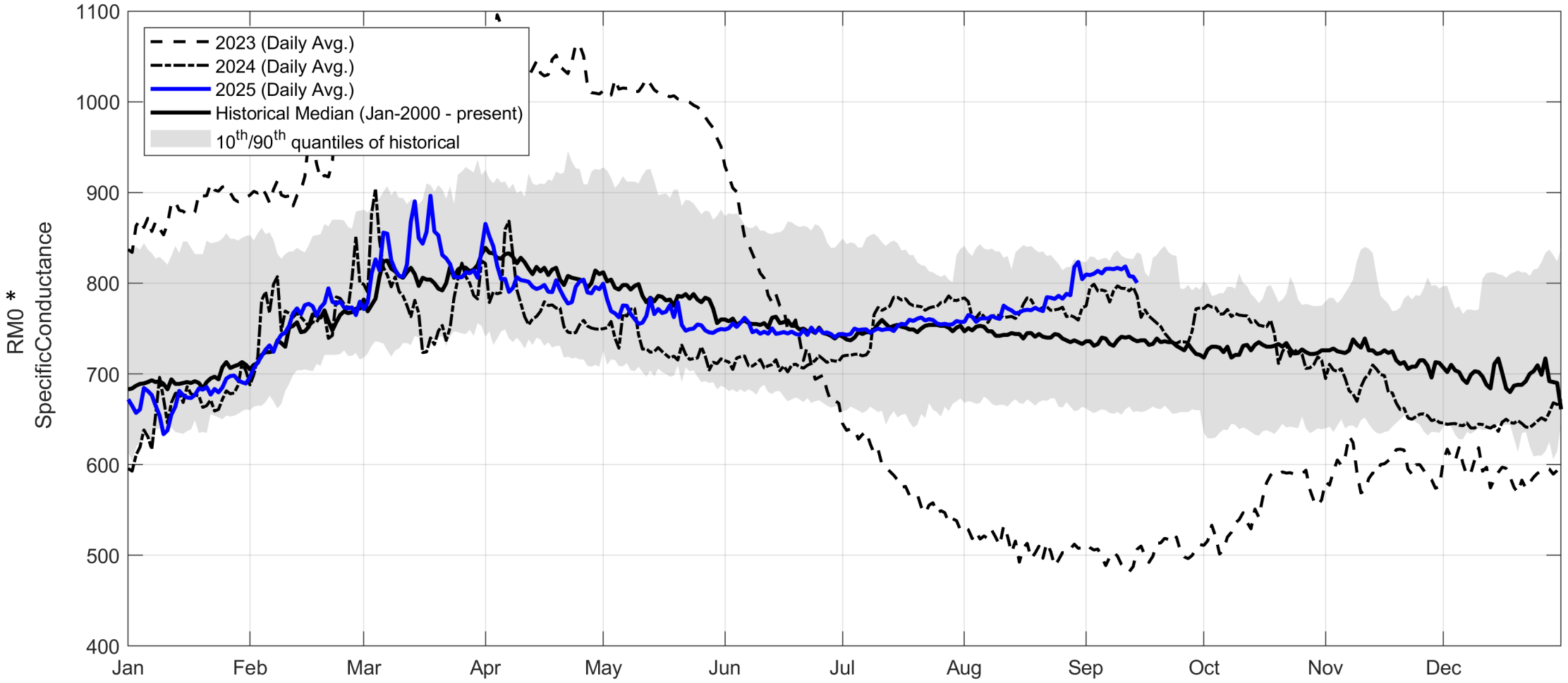
* Credit to USGS for data. Preliminary, not for citation.

Lees Ferry – Dissolved Oxygen



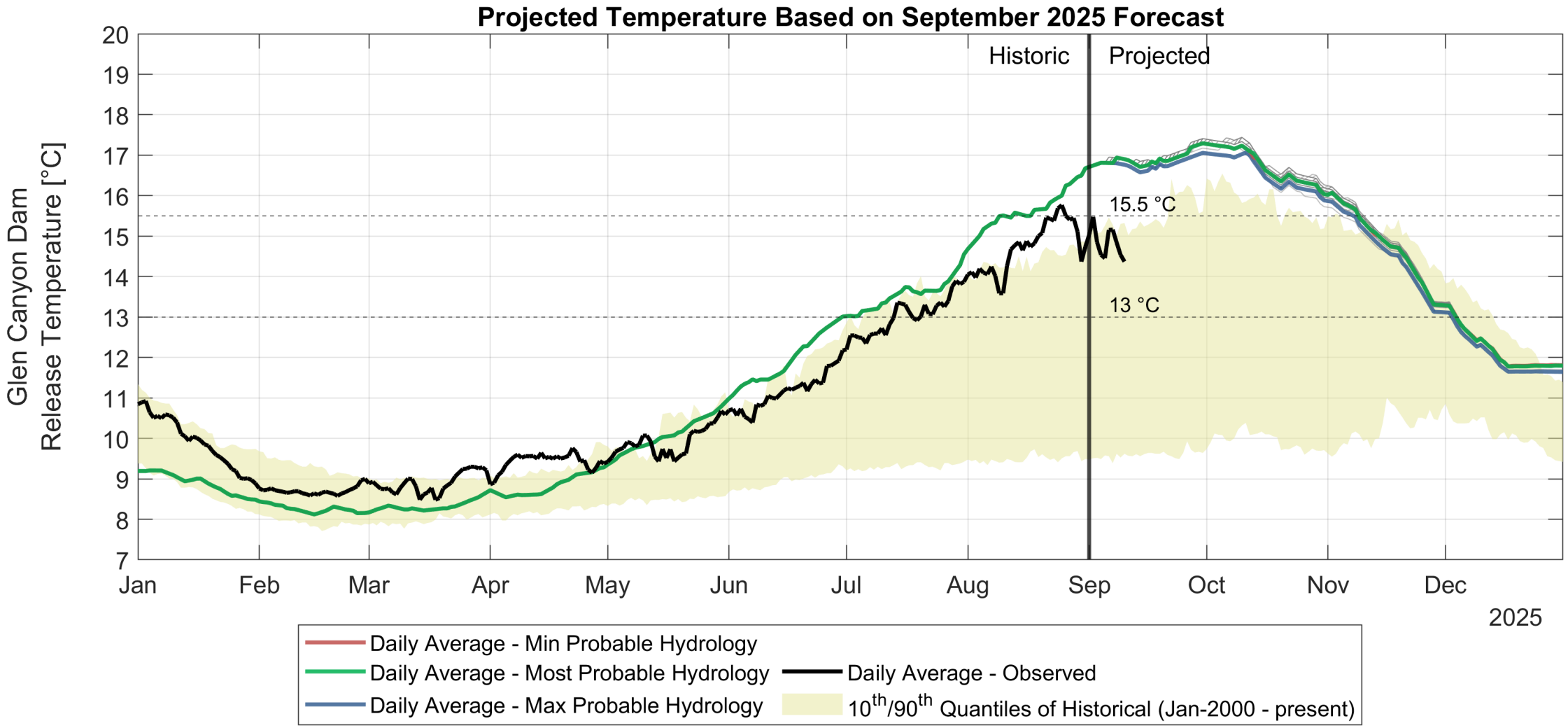
* Credit to USGS for data. Preliminary, not for citation.

Lees Ferry – Specific Conductance



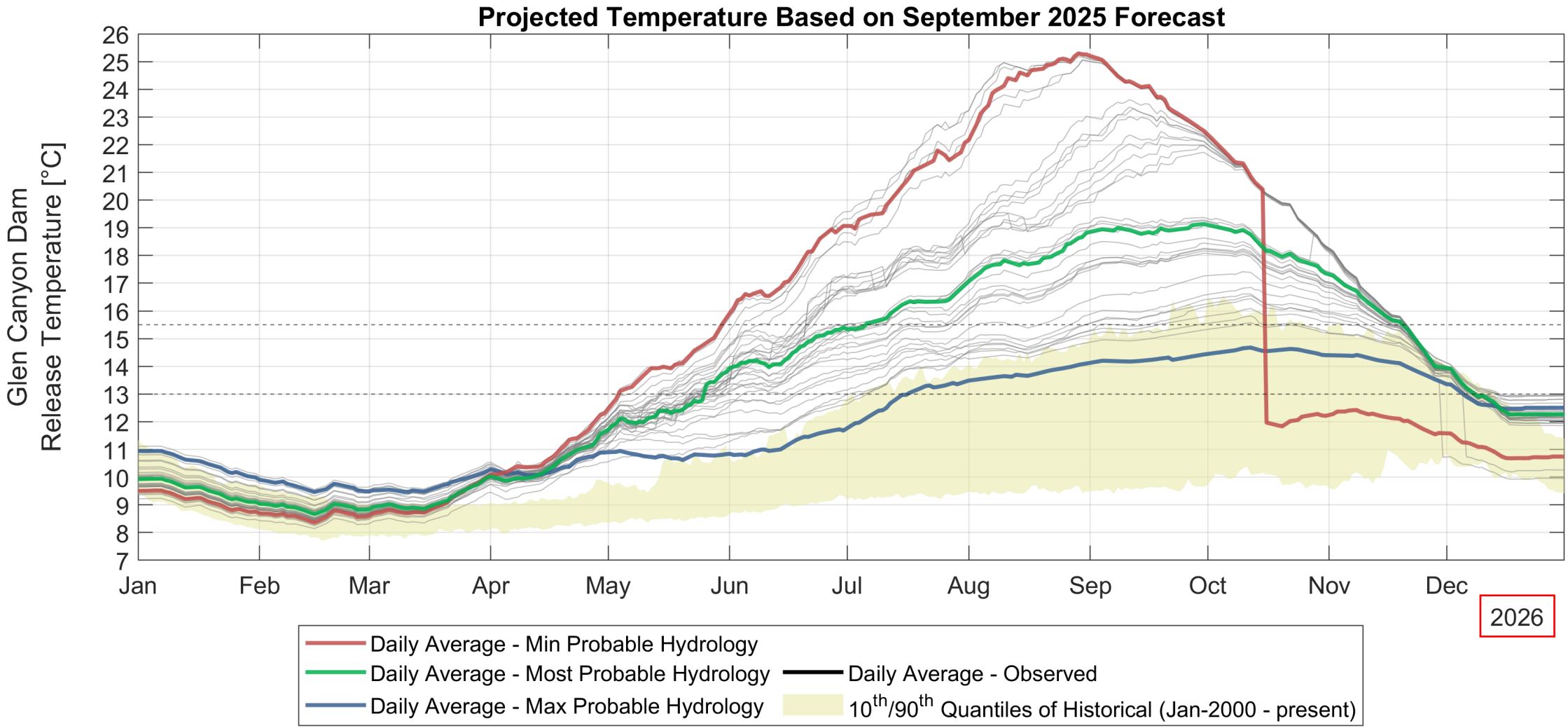
* Credit to USGS for data. Preliminary, not for citation.

Glen Canyon Dam Release Temperature (*Eppehimer et al, 2024 model)



* https://doi.org/10.1101/2024.01.23.576966

Glen Canyon Dam Release Temperature (*Eppehimer et al, 2024 model)



* https://doi.org/10.1101/2024.01.23.576966


Questions?
BUREAU OF
RECLAMATION