



— BUREAU OF —
RECLAMATION

Glen Canyon Monthly Operations Call

Basin Hydrology and Operations

August 19, 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.”

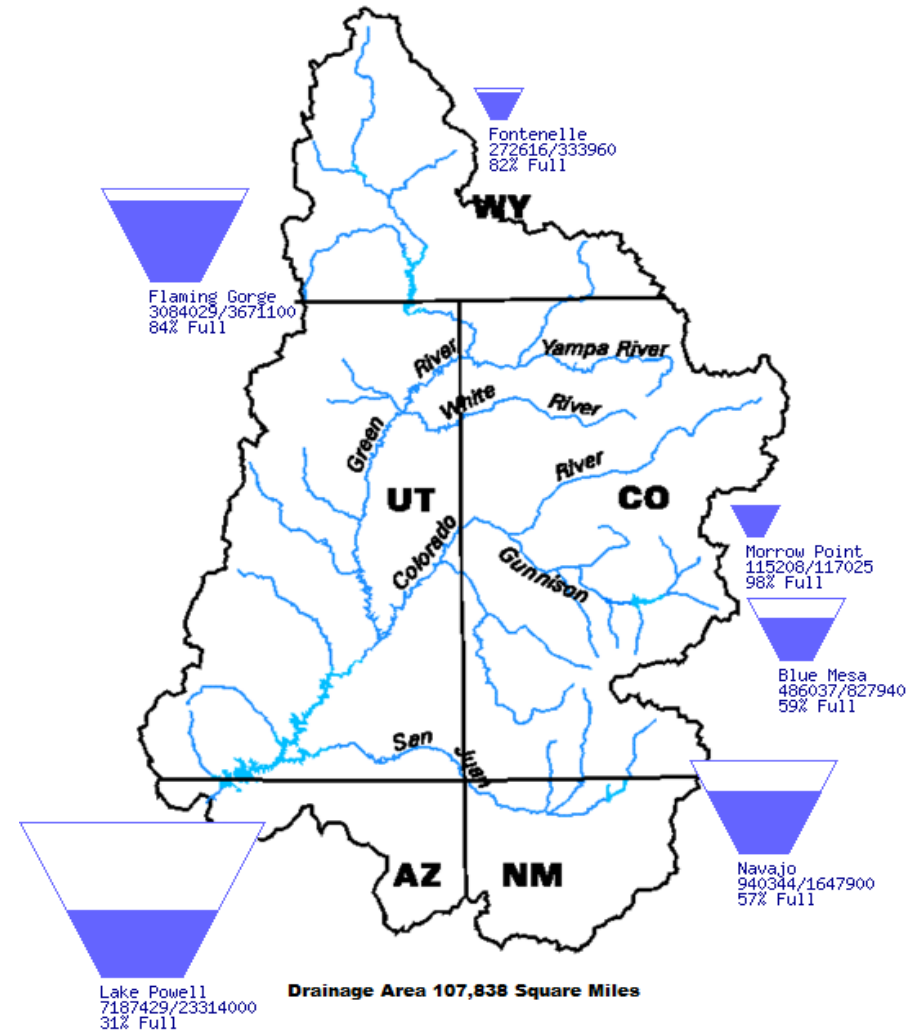


Upper Basin Storage (as of August 17, 2025)

Reservoir	Percent Current Live Storage	Current Live Storage (maf)	Live Storage Capacity (maf)	Elevation (feet)
Fontenelle	82	0.27	0.33	6,497.86
Flaming Gorge	84	3.08	3.67	6,025.03
Blue Mesa	59	0.49	0.83	7,477.80
Navajo	57	0.94	1.65	6,028.01
Lake Powell	31	7.19	23.31	3,551.33
UC System Storage	40	12.10	29.93	
Total System Storage	38	22.38	58.48	

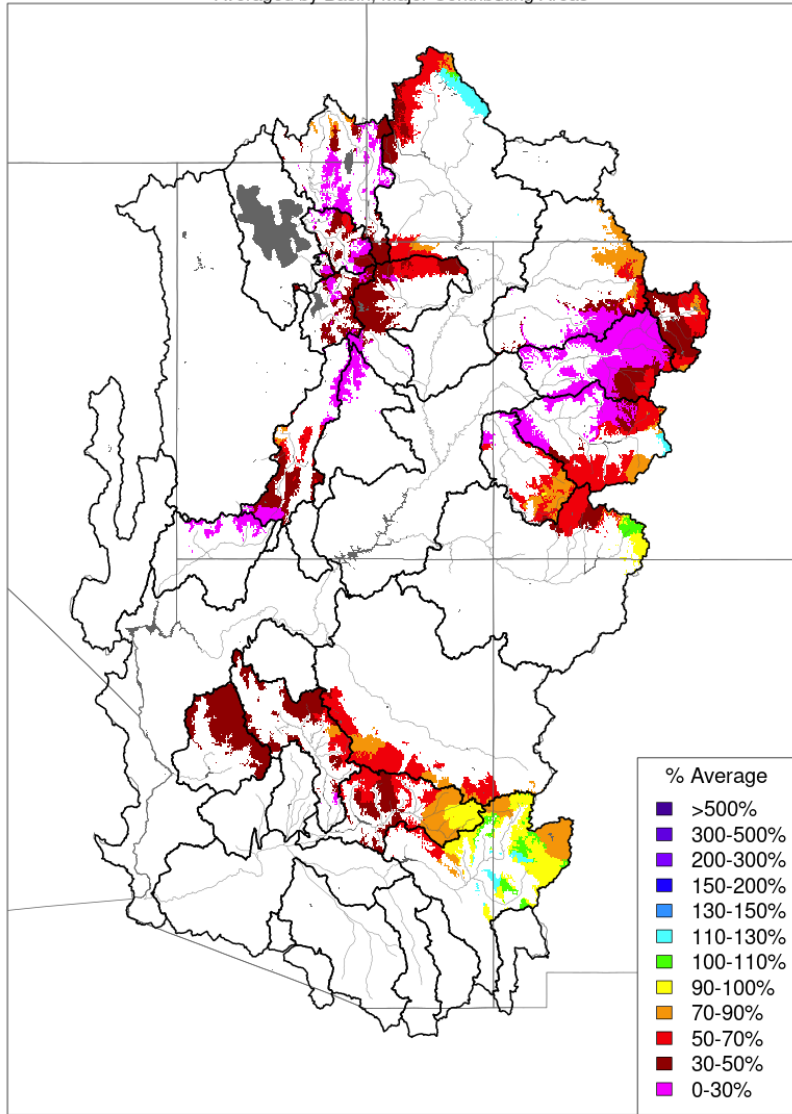
Data Current as of:
08/17/2025

Upper Colorado River Drainage Basin



Monthly Precipitation - July 2025

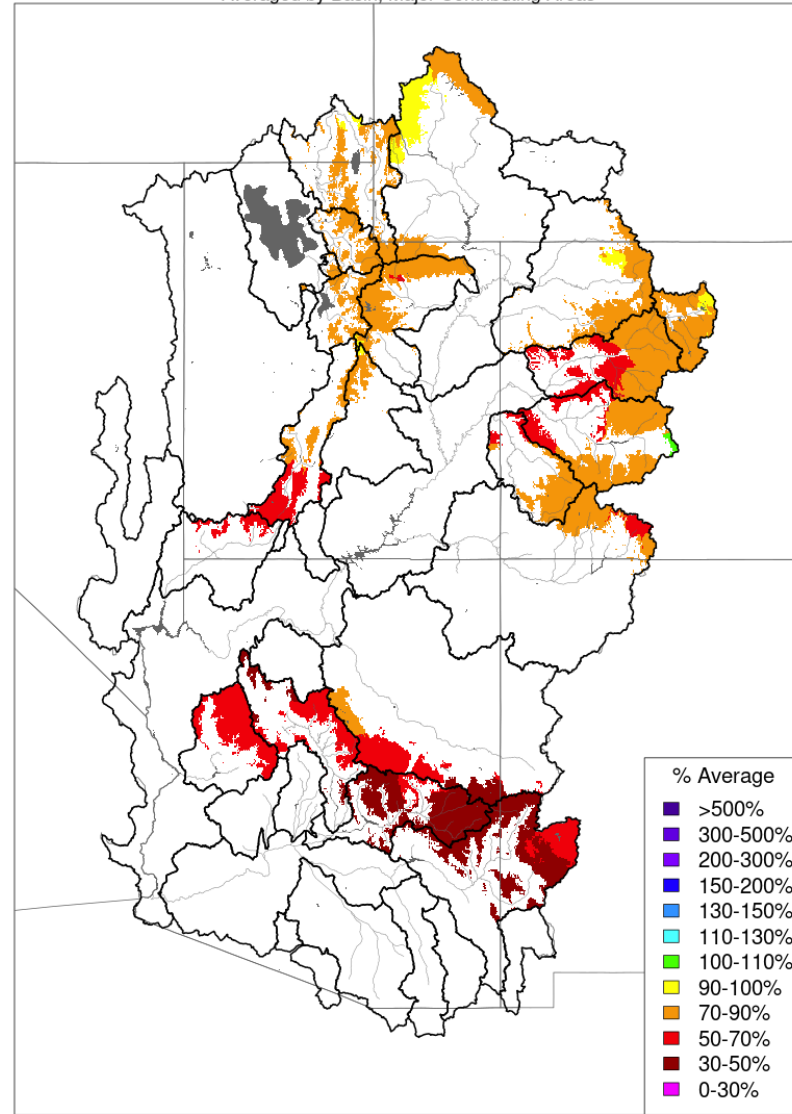
Averaged by Basin, Major Contributing Areas



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

Water Year Precipitation, October 2024 - July 2025

Averaged by Basin, Major Contributing Areas

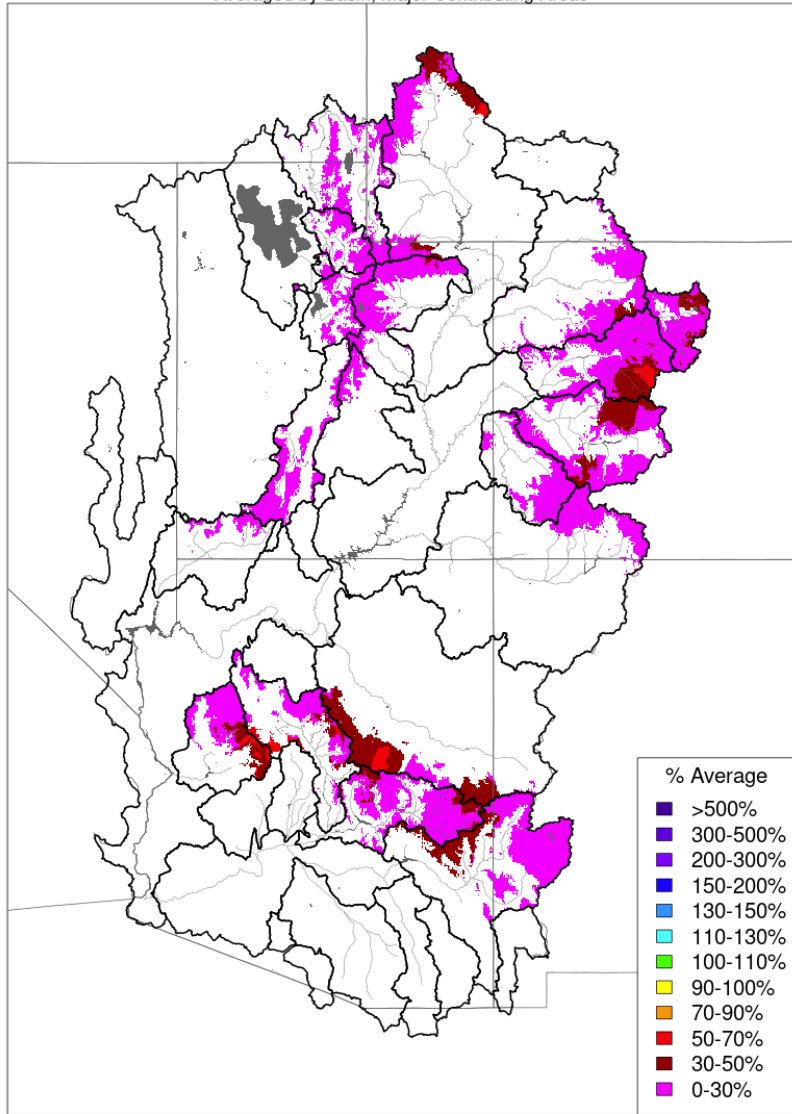


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov



Month to Date Precipitation - August 18 2025

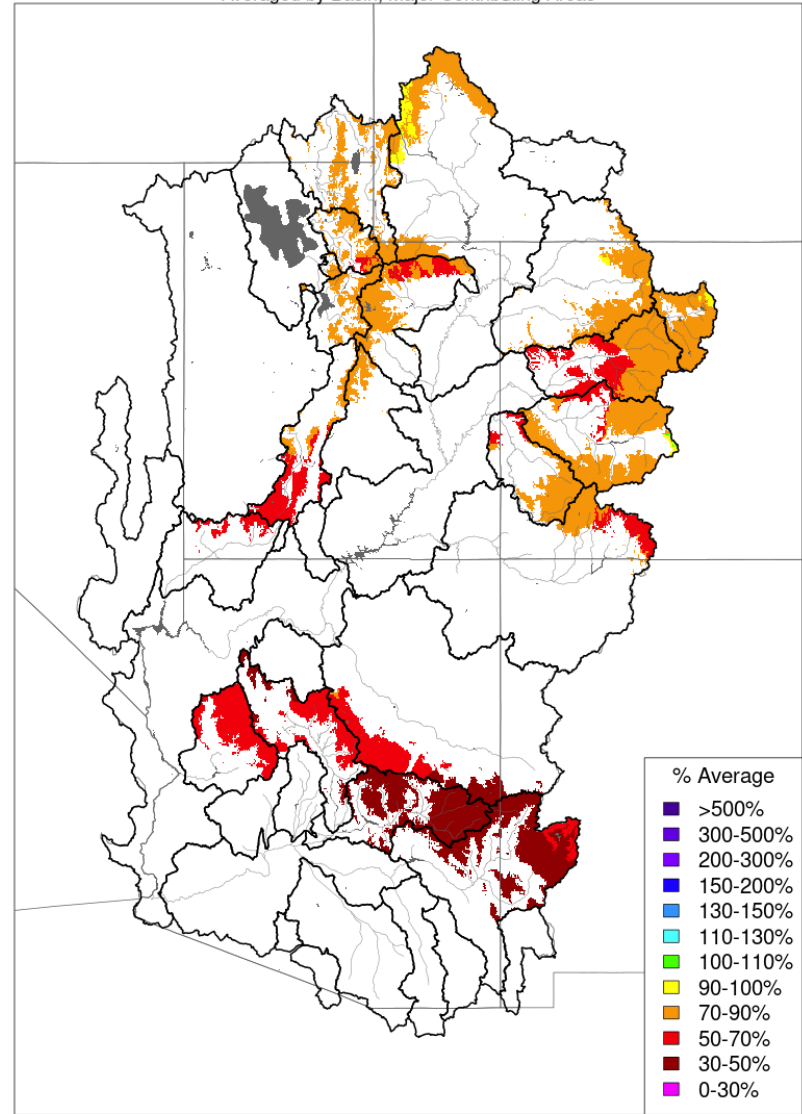
Averaged by Basin, Major Contributing Areas



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

Water Year to Date Precipitation, October 01 - August 18 2025

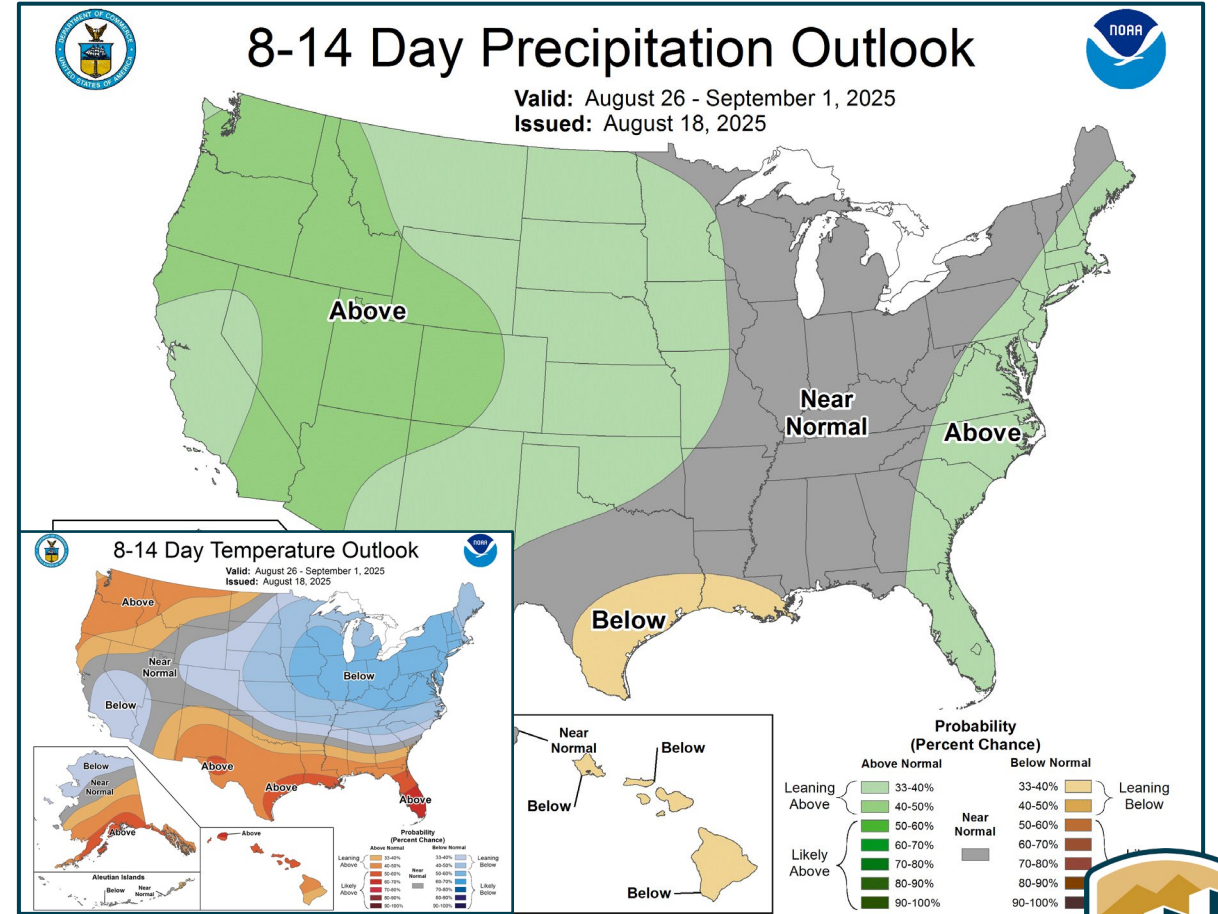
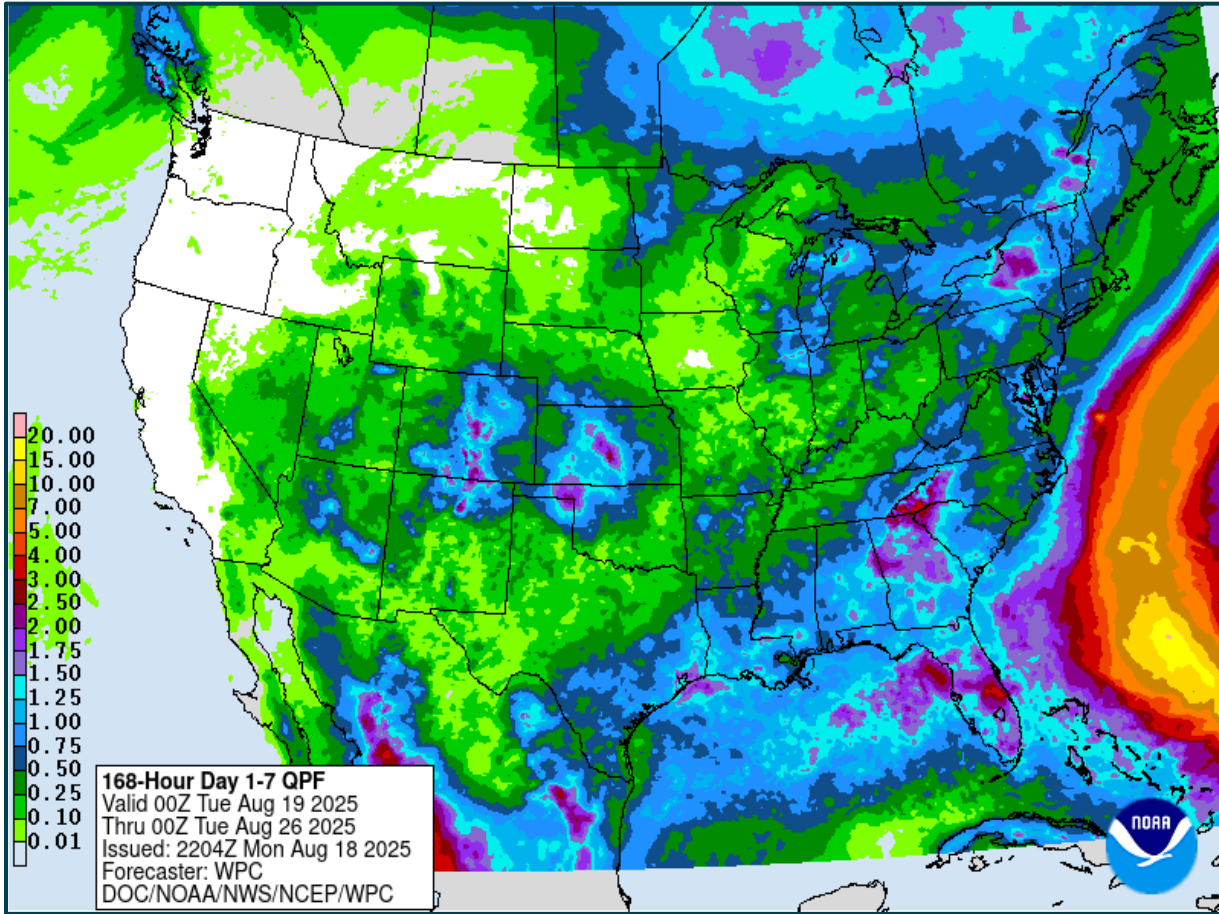
Averaged by Basin, Major Contributing Areas



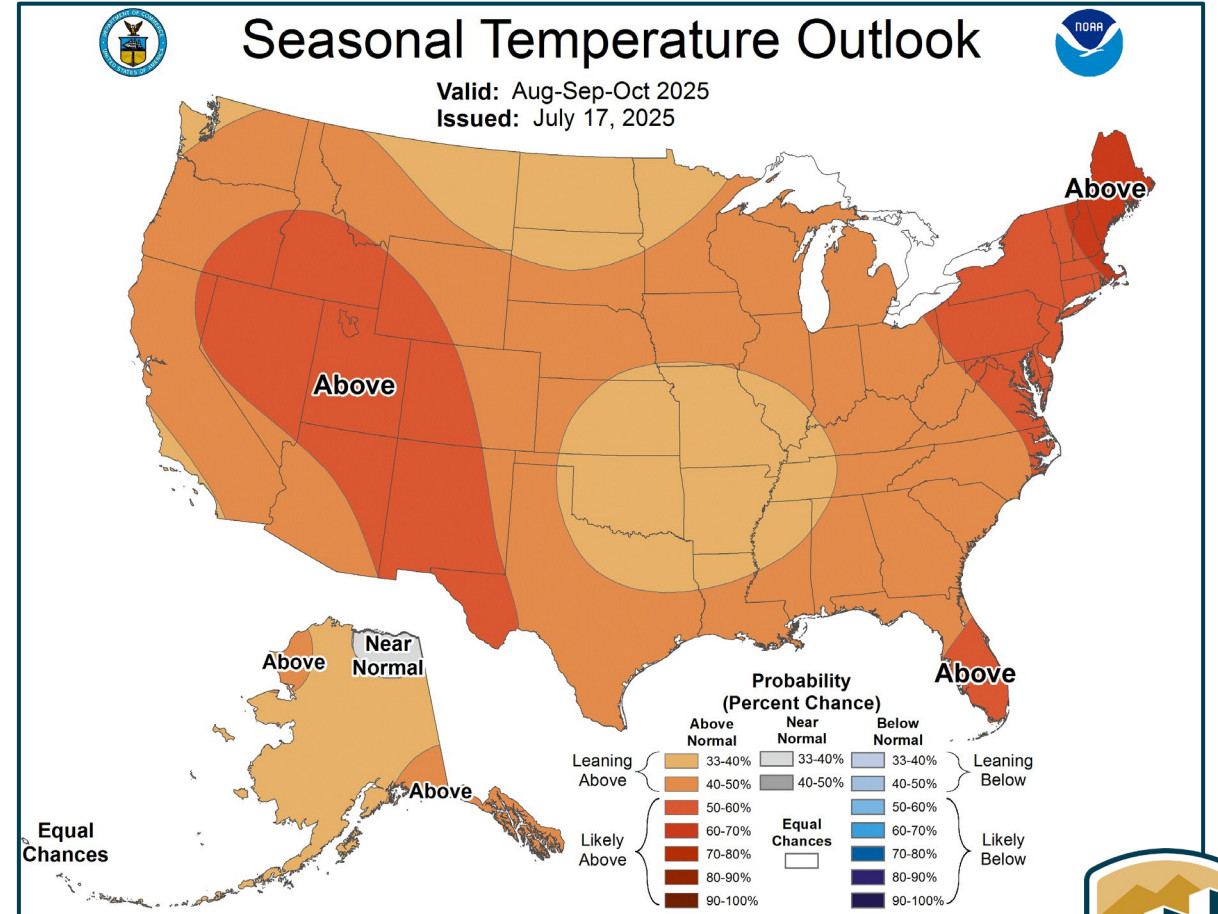
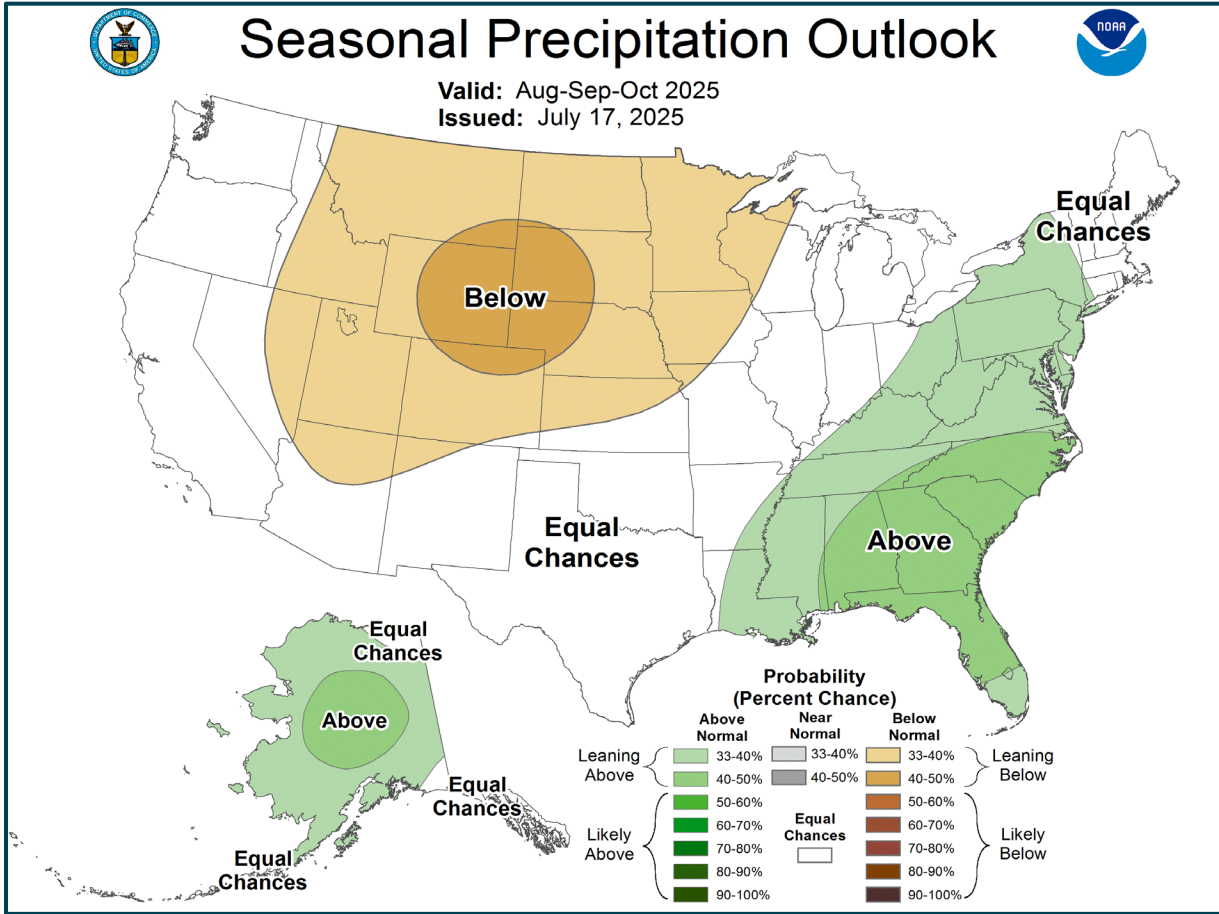
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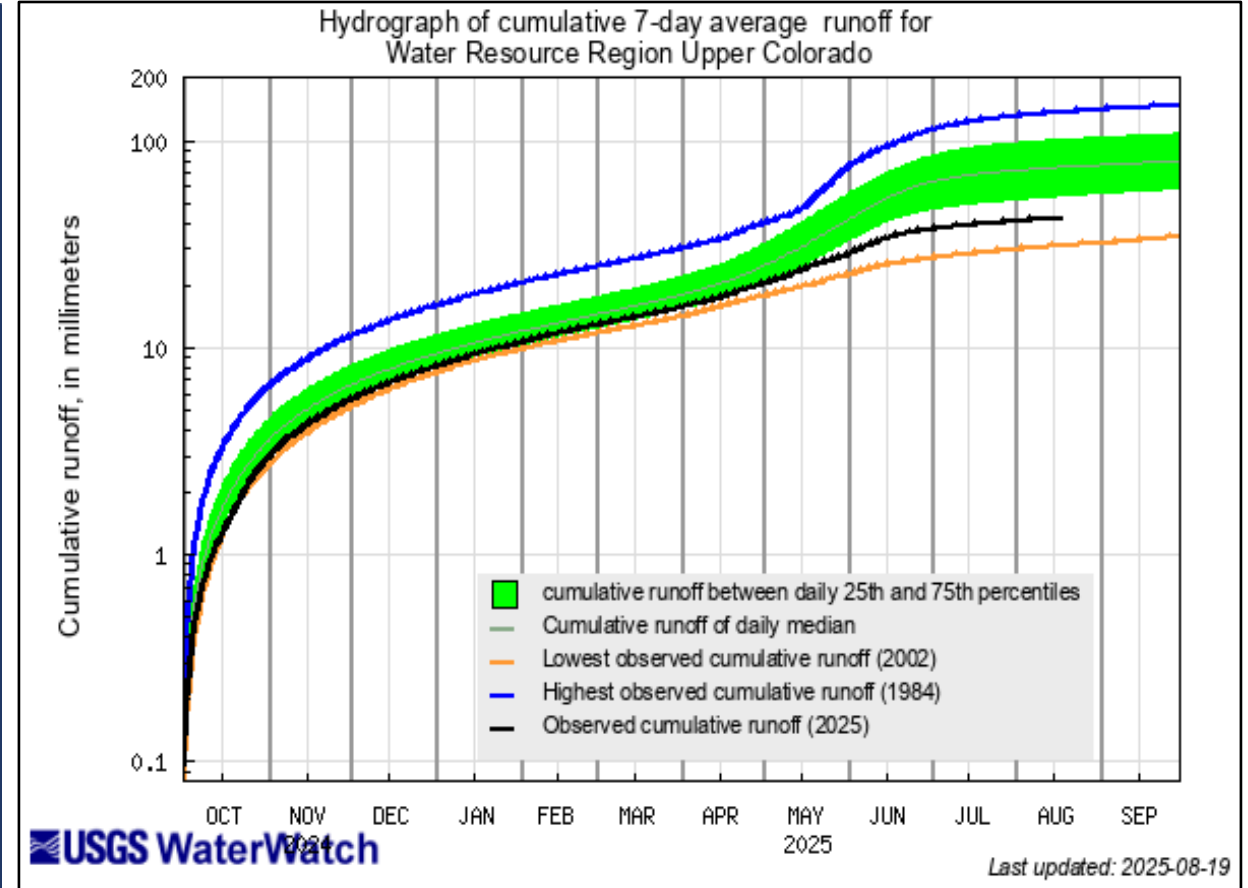
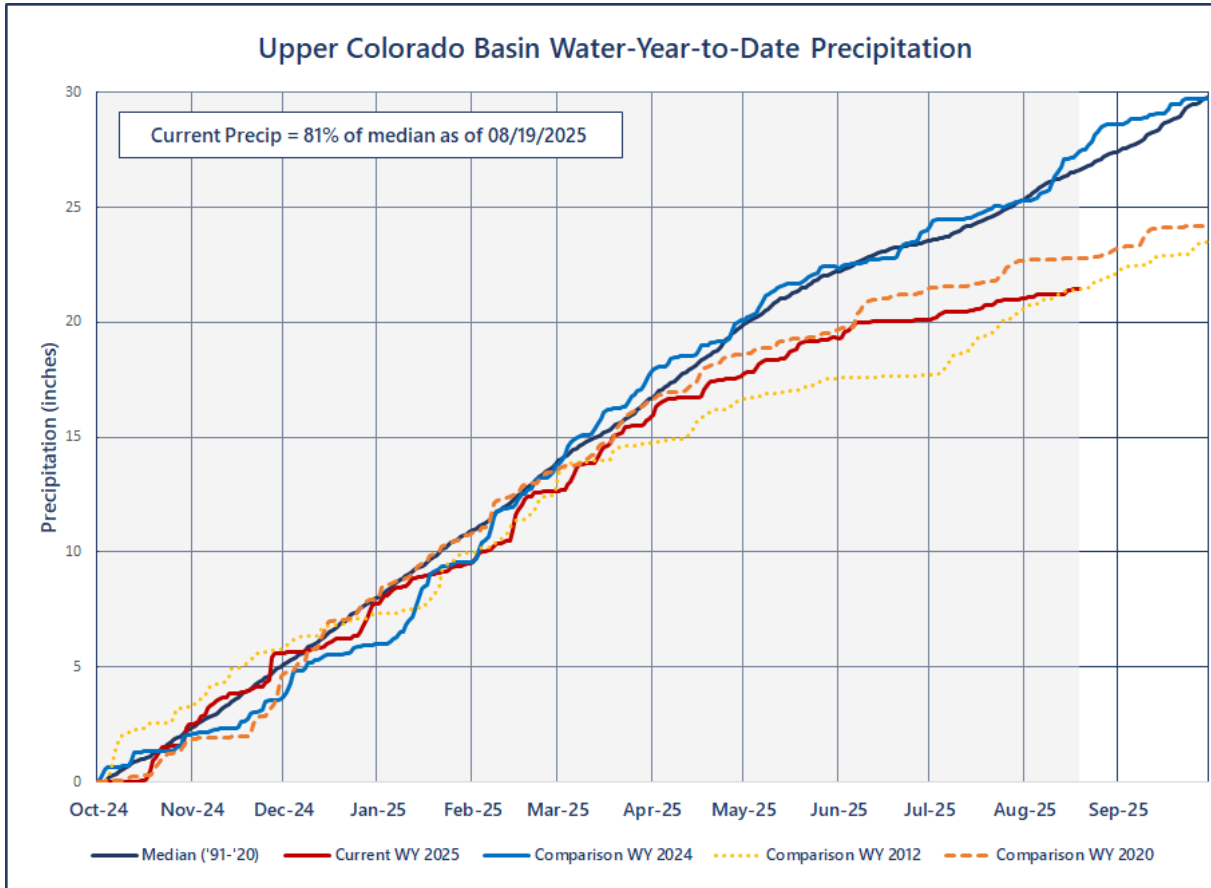
Weather Prediction Center and Climate Prediction Center Precipitation Forecasts



Seasonal Outlook



Upper Colorado Precipitation¹ and Runoff



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



Most Probable August Forecast Water Year 2025

April – July 2025
Preliminary Observed
Unregulated Inflow
as of August 1, 2025

Reservoir	Inflow (kaf)	Change from July	Percent of Avg ¹
Fontenelle	464	+19	63
Flaming Gorge	517	+12	52
Blue Mesa	410	-5	64
Navajo	230	-11	37
Powell	2,634	-65	41

Water Year 2025
Unregulated Inflow Forecast
as of August 1, 2025

Reservoir	Inflow (kaf)	Change from July	Percent of Avg ¹
Fontenelle	716	+22	67
Flaming Gorge	846	+14	60
Blue Mesa	658	-16	73
Navajo	355	-38	39
Powell	4,840	-125	50

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

Most Probable August Forecast Water Year 2026

April – July 2026
Forecasted Unregulated Inflow
as of August 1, 2025

Reservoir	Inflow (kaf)	Change from July	Percent of Avg ¹
Fontenelle	620	-5	84
Flaming Gorge	760	-15	79
Blue Mesa	580	-5	91
Navajo	555	+5	88
Powell	5,300	-100	83

Water Year 2026
Unregulated Inflow Forecast
as of August 1, 2025

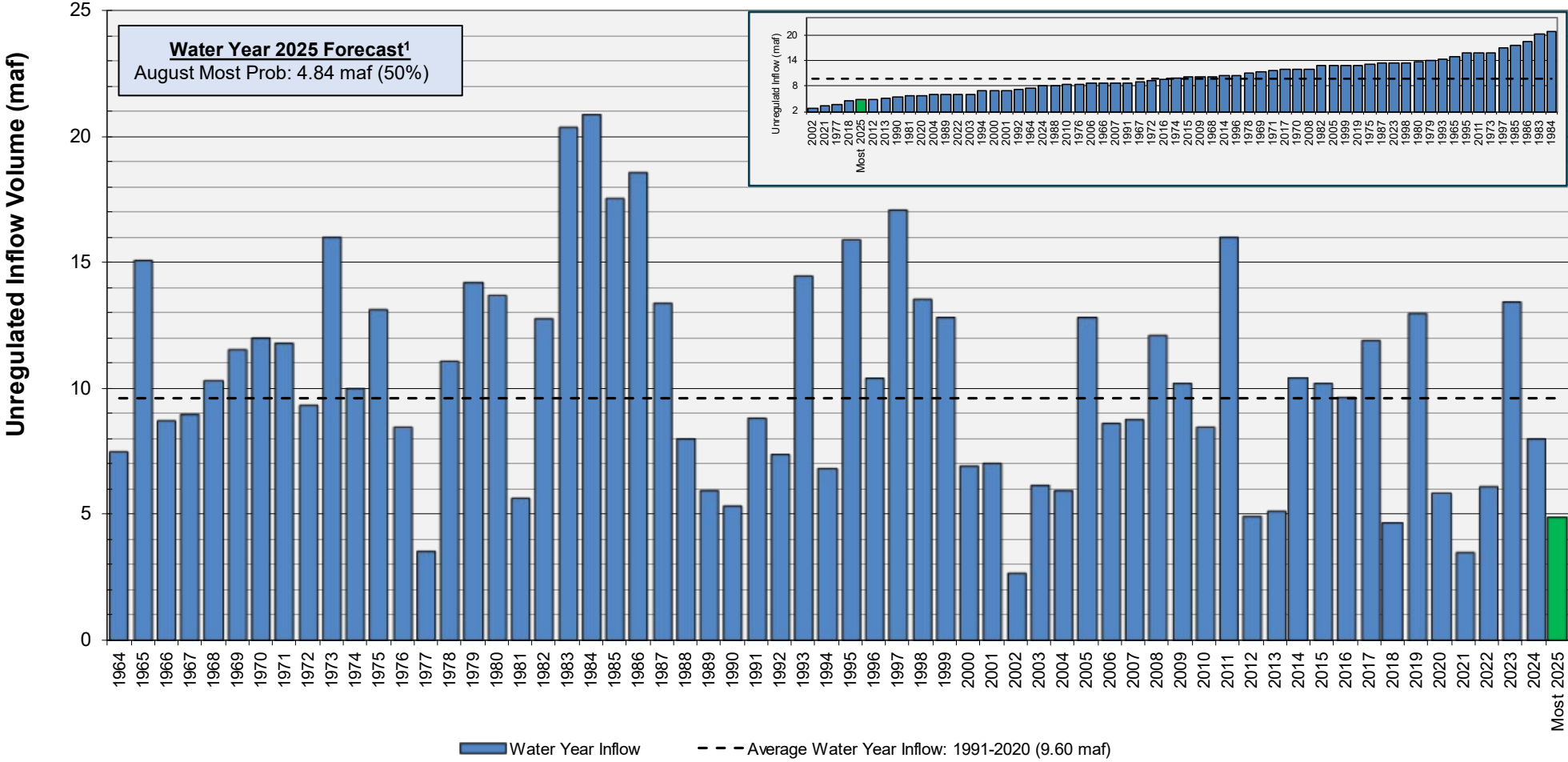
Reservoir	Inflow (kaf)	Change from July	Percent of Avg ¹
Fontenelle	890	-5	83
Flaming Gorge	1,110	-15	79
Blue Mesa	805	-10	89
Navajo	760	-5	83
Powell	7,850	-120	82

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

Lake Powell Water Year Unregulated Inflow

as of August 1, 2025

Comparison with History



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





Upper Colorado Basin

Hydrology and Operations
Projections Based on August
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

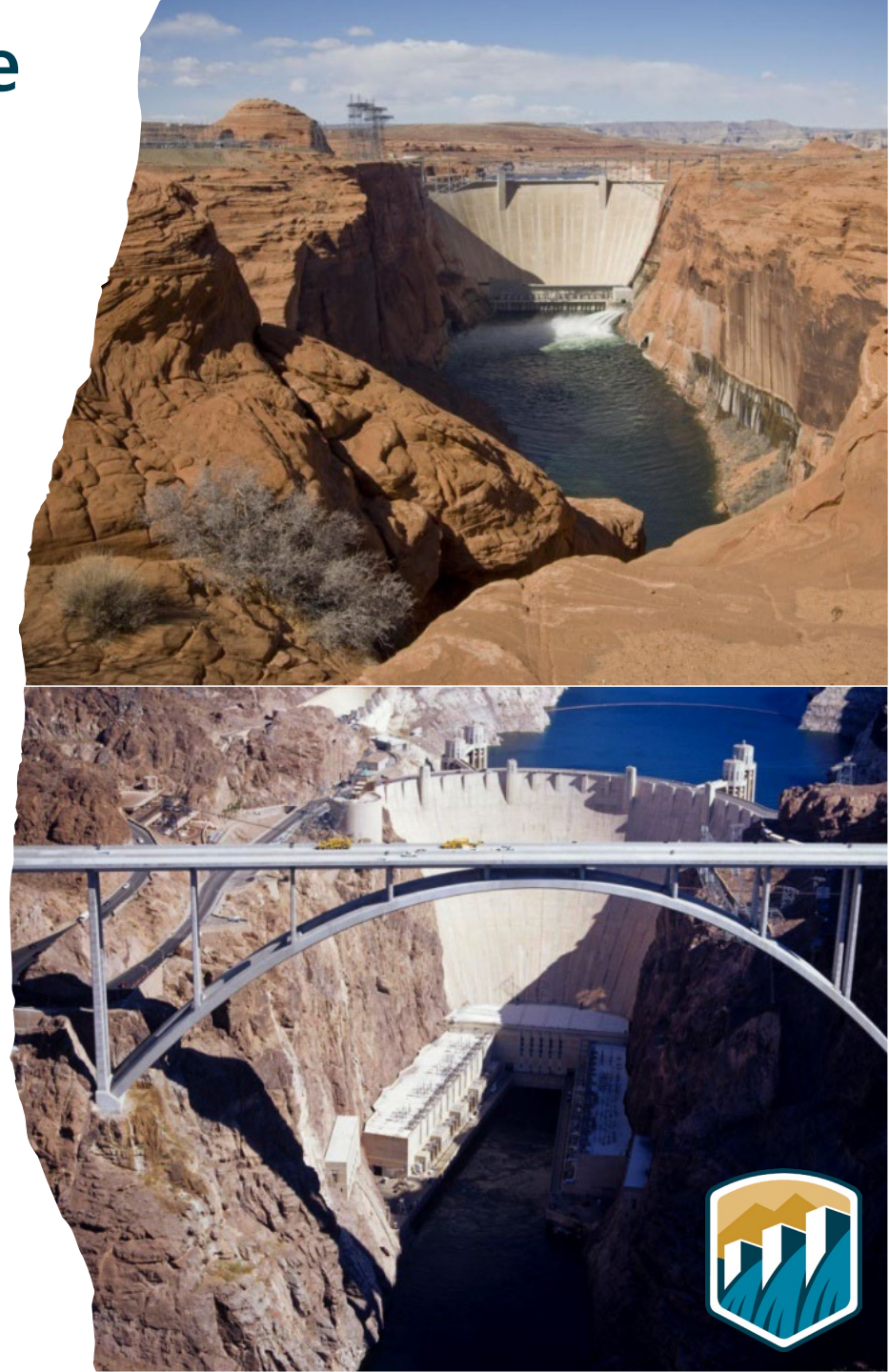


Lake Powell & Lake Mead Operational Table

Lake Powell Operational Tier Determination Run (aka "Exhibit Run")
with an 8.23 maf Release¹

Lake Powell		
Elevation (feet)	Operation According to the Interim Guidelines	Live Storage (maf)
3,700	Equalization 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	14.65-18.36 (2008-2026)
	If Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf	
3,575		8.90
3,532.15 ft <i>Jan 1, 2026 Projection</i>	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	
3,525		5.55
	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	
3,500		4.22
	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	
3,370		0

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		8.60
	Shortage Condition Deliver 7.167 maf	1,055.88 ft <i>Jan 1, 2026 Projection</i>
1,050		
	Shortage Condition Deliver 7.083 maf	
1,025		5.98
	Shortage Condition Deliver 7.0 maf	
1,000	Further measures may be undertaken	4.48
895		0



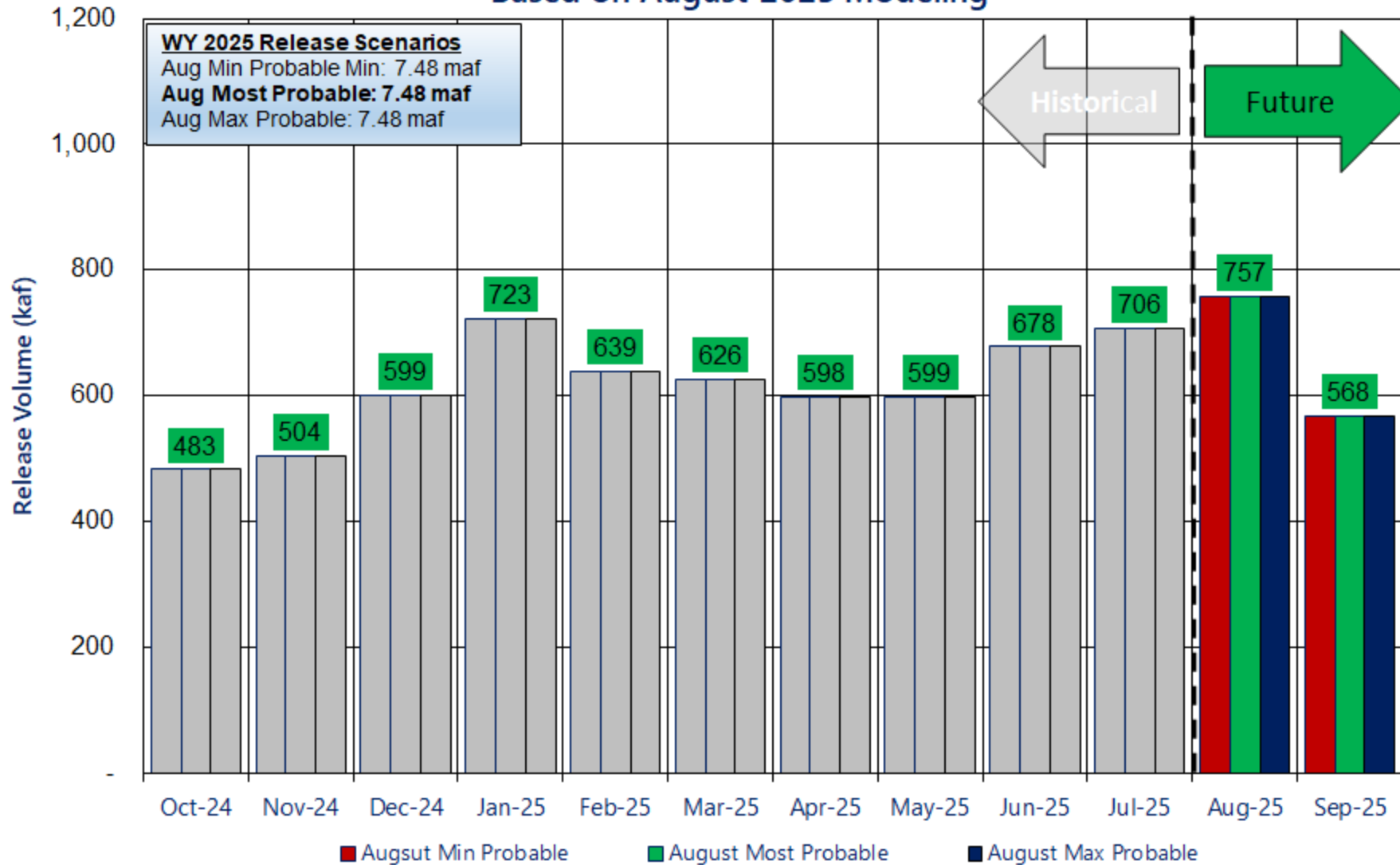
¹ Lake Powell and Lake Mead operational tier determinations will be documented in the draft 2026 AOP.



Potential Lake Powell Monthly Release Volume Distribution

Release Scenarios for Water Year 2025

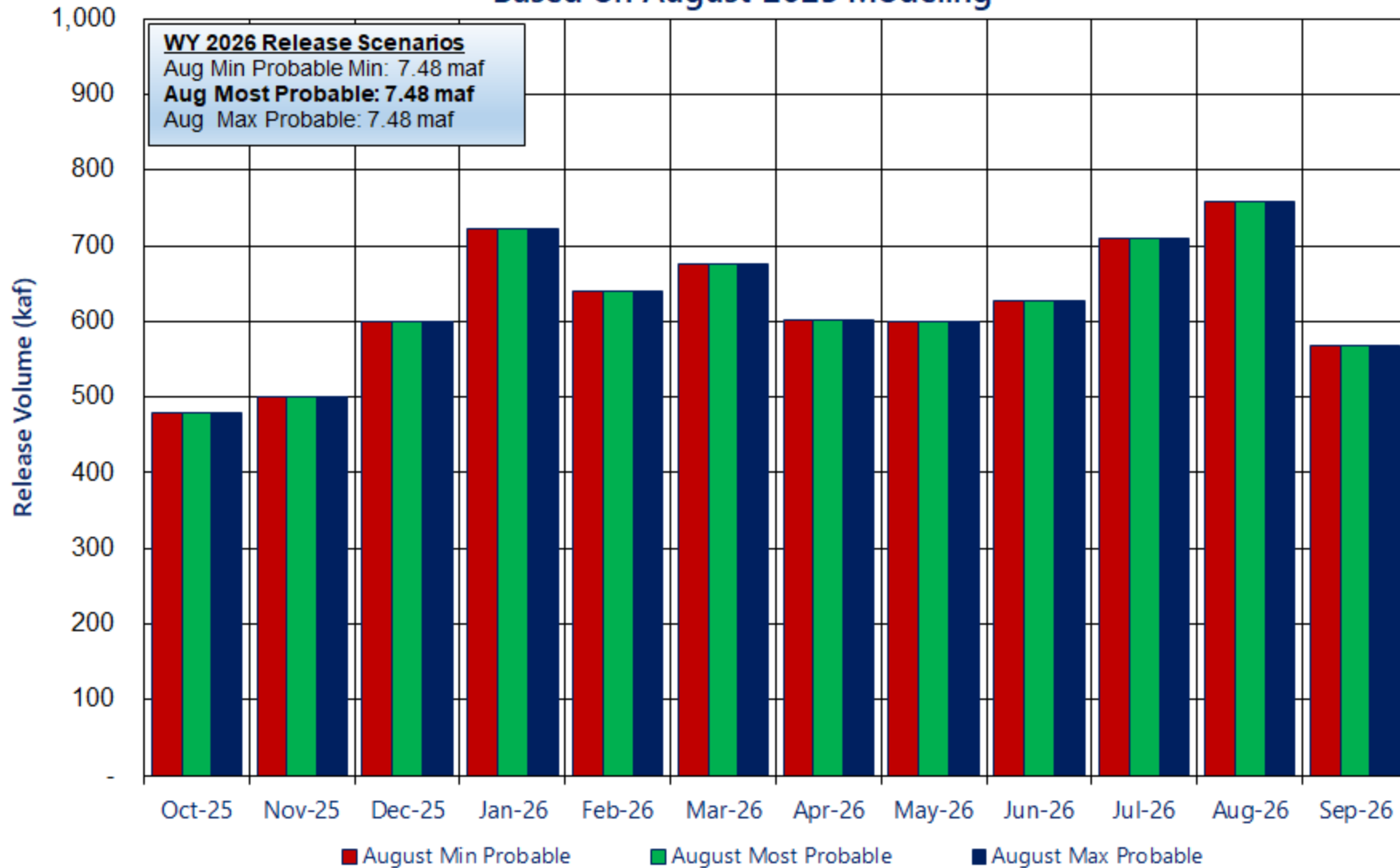
Based on August 2025 Modeling



Potential Lake Powell Monthly Release Volume Distribution

Release Scenarios for Water Year 2026

Based on August 2025 Modeling



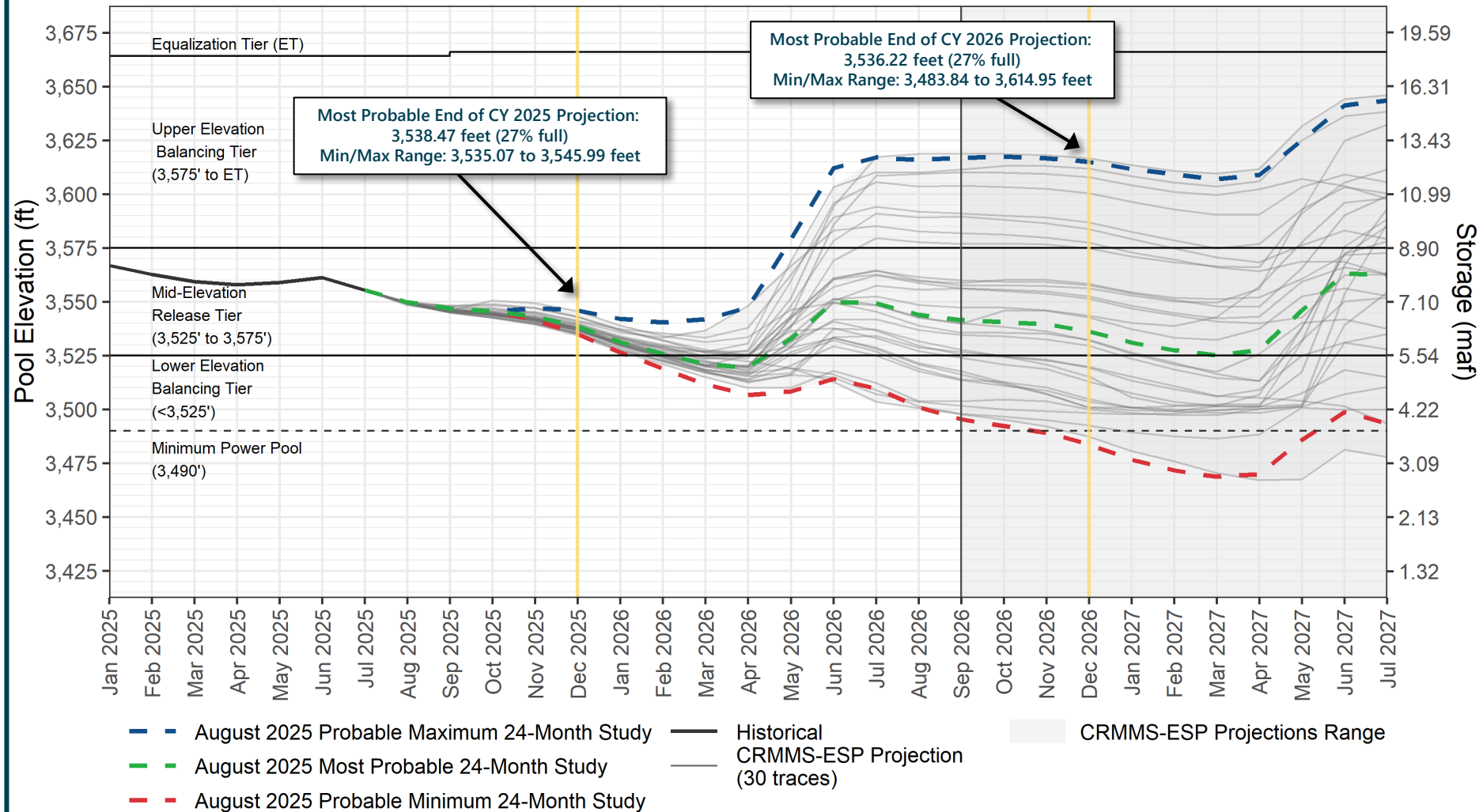
Reclamation Operational Modeling Model Comparison

	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 2025



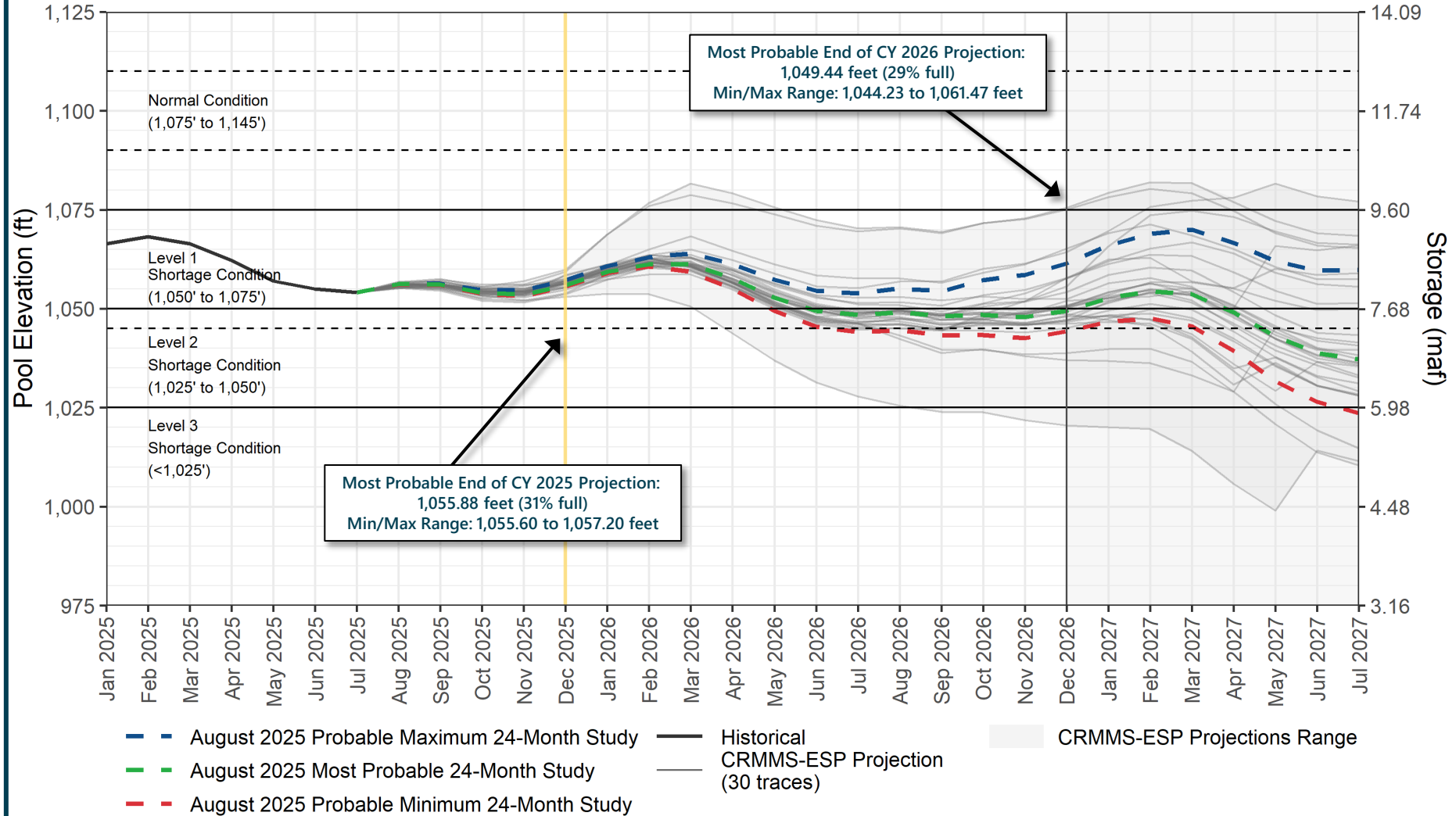
¹For modeling purposes, simulated years beyond 2026 assume a continuation of the 2007 Interim Guidelines including the 2024 Supplement to the 2007 Interim Guidelines (no additional SEIS conservation is assumed to occur after 2026), the 2019 Colorado River Basin Drought Contingency Plans, and Minute 323 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.

²For 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, 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.



Lake Mead End-of-Month Elevations^{1,2}

CRMMS Projections from August 2025



¹For 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.

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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	18,800	Aug 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	Aug MOST
Max (kaf) ¹	483	504	599	723	639	626	598	598	676	710	757	568	7.48 maf
Most (kaf) ¹	483	504	599	723	639	626	598	598	676	710	757	568	7.48 maf
Min (kaf) ¹	483	504	599	723	639	626	600	598	676	710	757	568	7.48 maf
											(updated 08-18-2025)		

1 Projected release based on August 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.

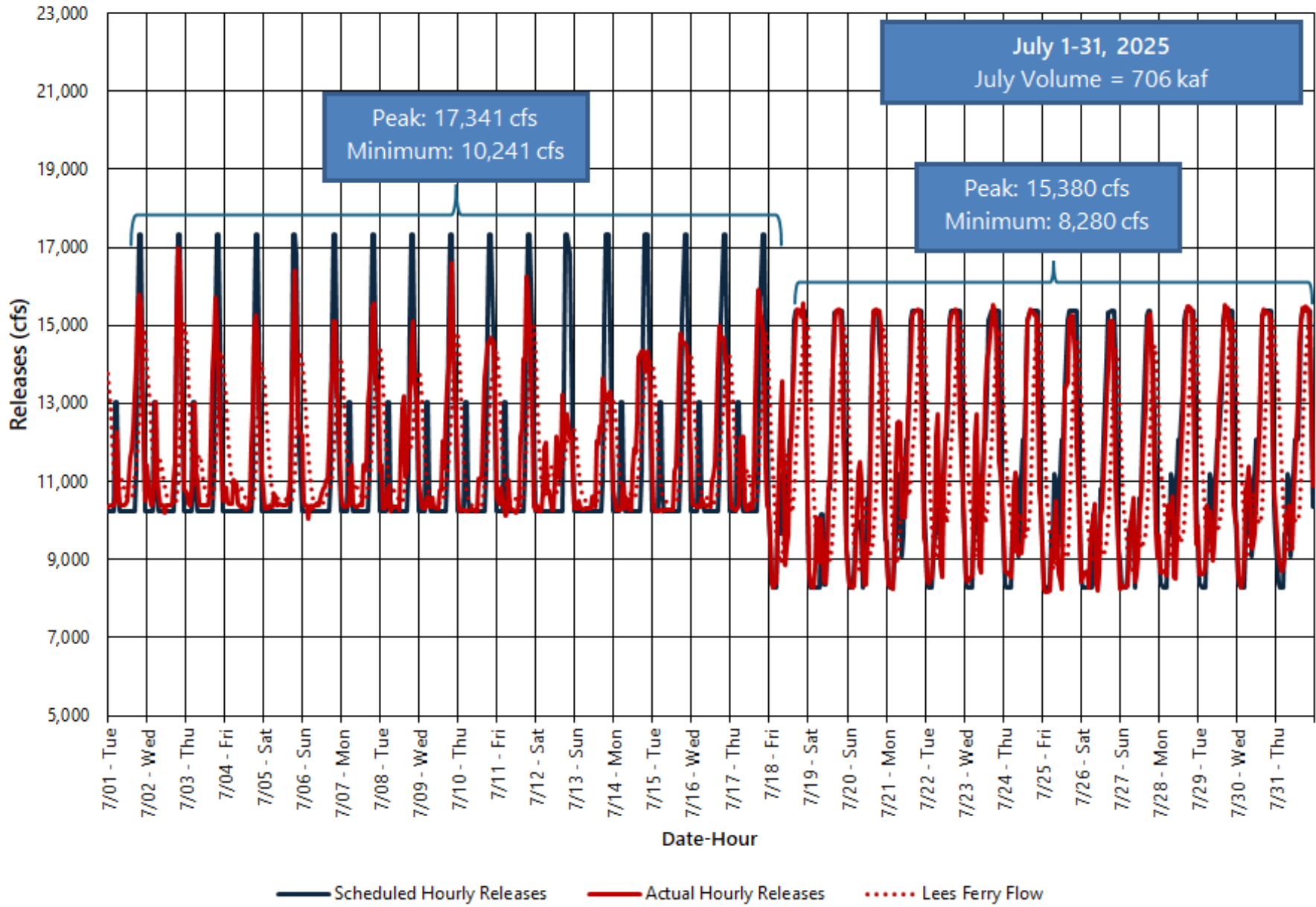
Glen Canyon Power Plant Planned Unit Outage Schedule for Water Year 2026

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	25,500	25,300	25,000	18,100	17,900	22,400	23,600	25,800	25,800	25,600	18,600	Aug MOST ²
Penstock Capacity (kaf/month)	1,190	1,440	1,560	1,460	1,030	1,110	1,310	1,450	1,530	1,580	1,560	1,110	Aug 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 08-18-2025)			

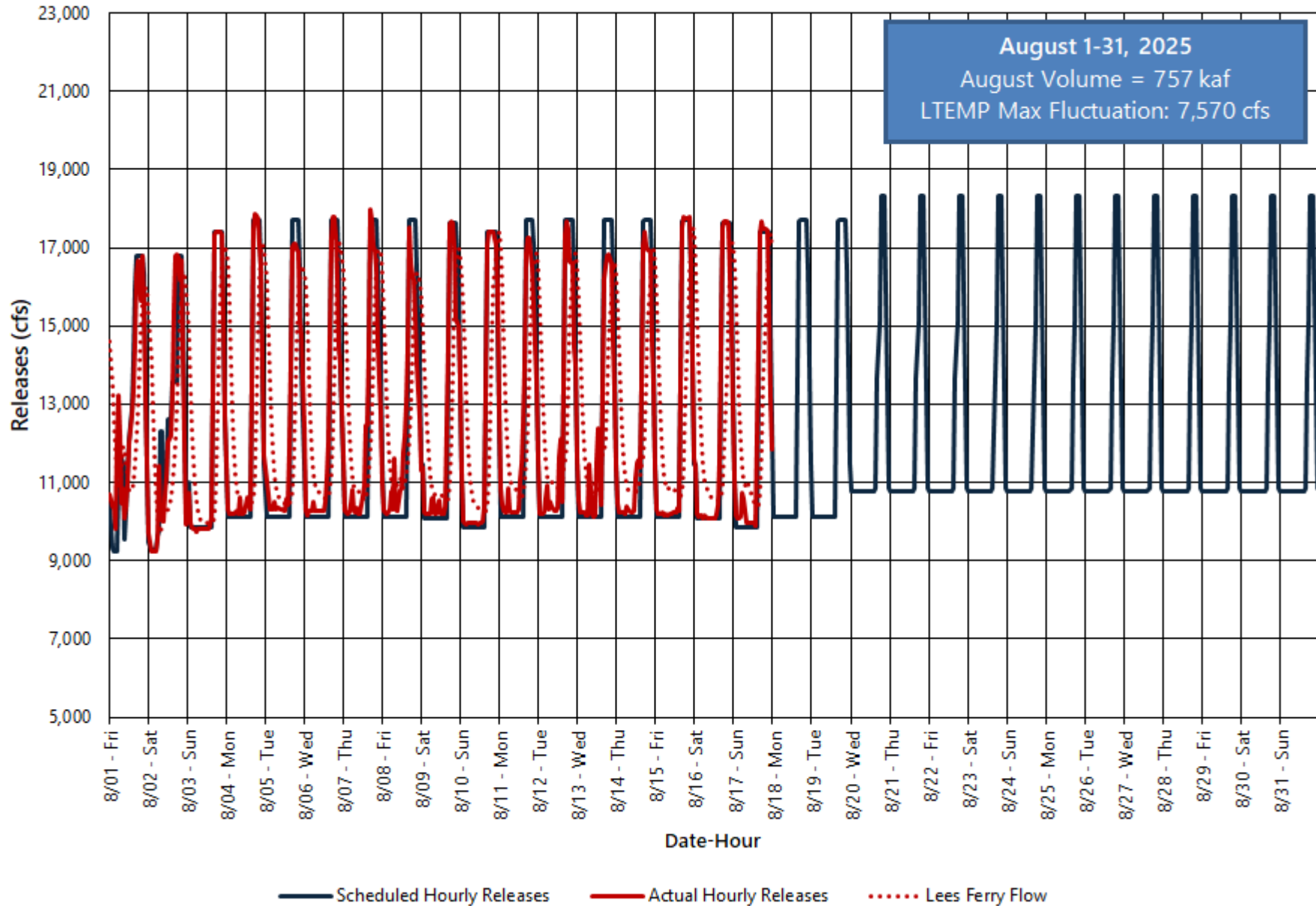
1 Projected release based on August 2025 24-Month Study for the minimum, most, and maximum probable scenarios.

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

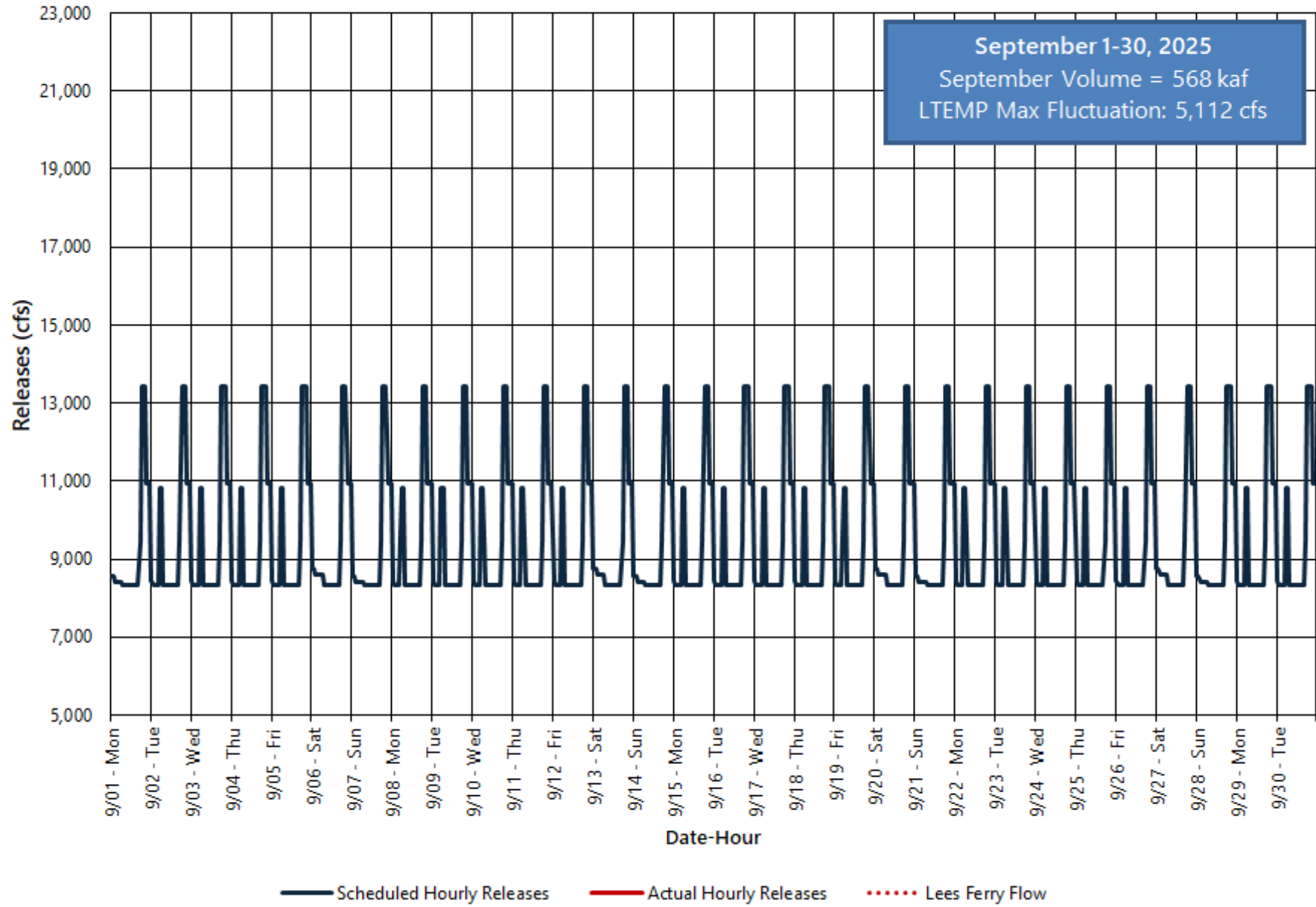
Glen Canyon Dam Hourly Release Pattern - July 2025



Glen Canyon Dam Hourly Release Pattern - August 2025



Glen Canyon Dam Hourly Release Pattern - September 2025



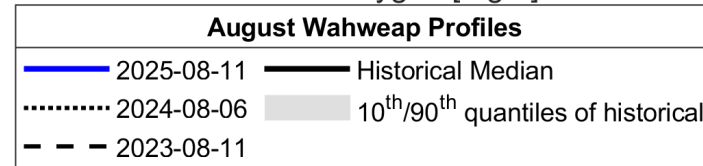
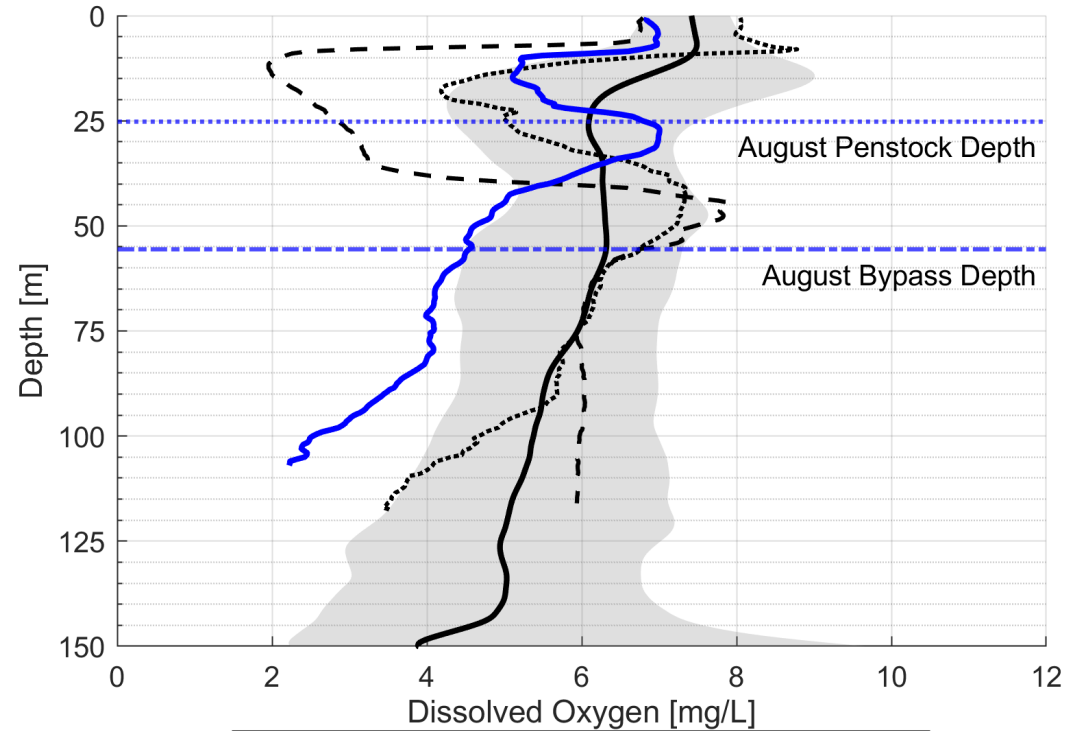
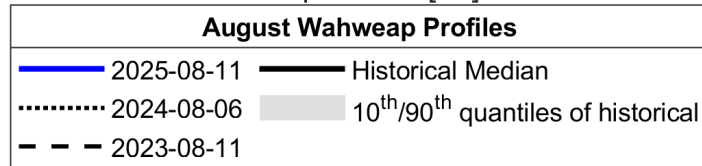
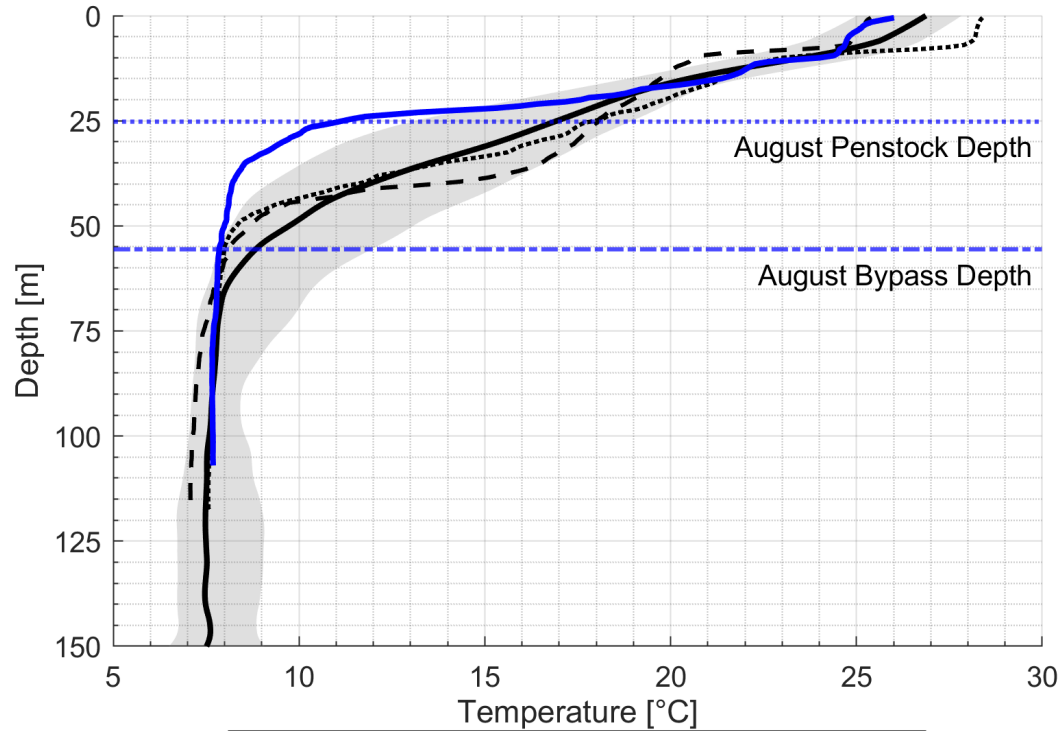


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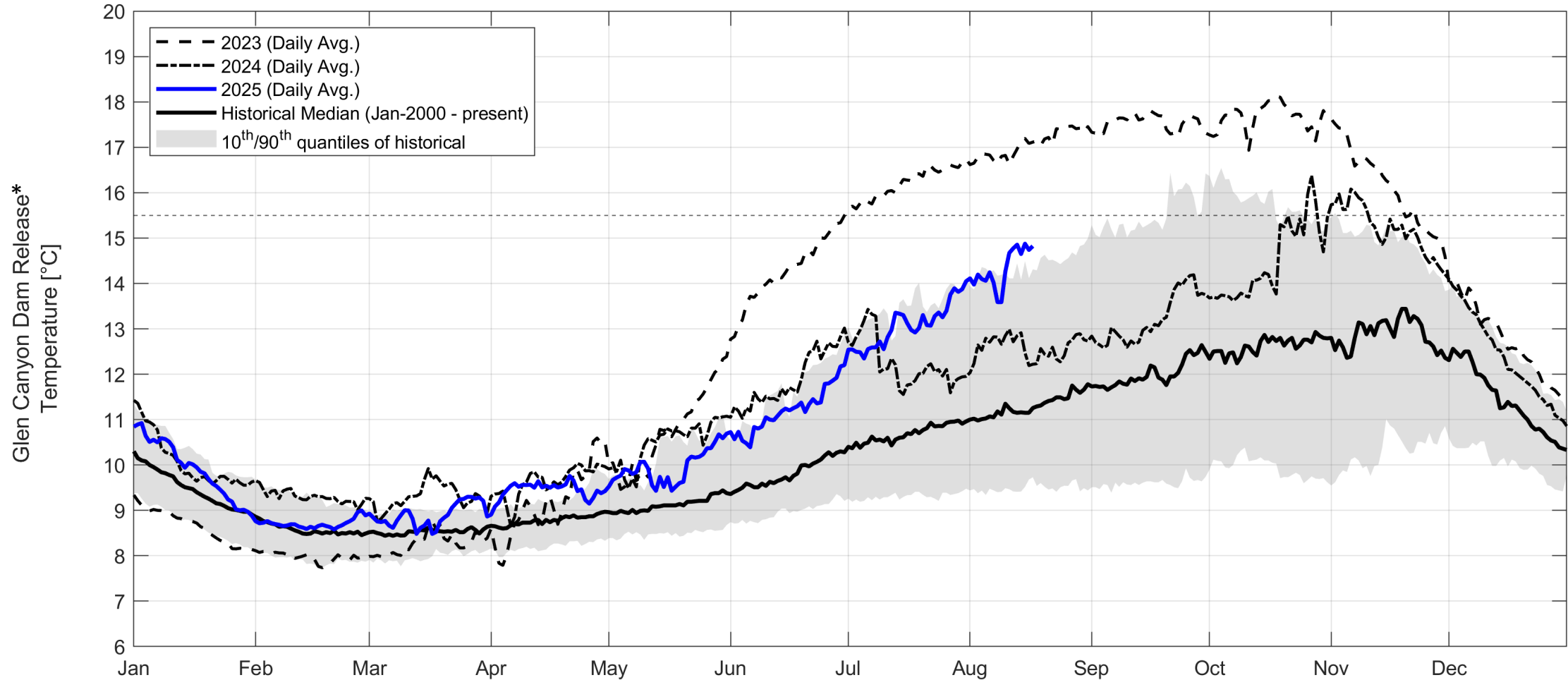
Water Quality Update

08/19/2025

Lake Powell – Wahweap Profiles



Glen Canyon Release Temperature

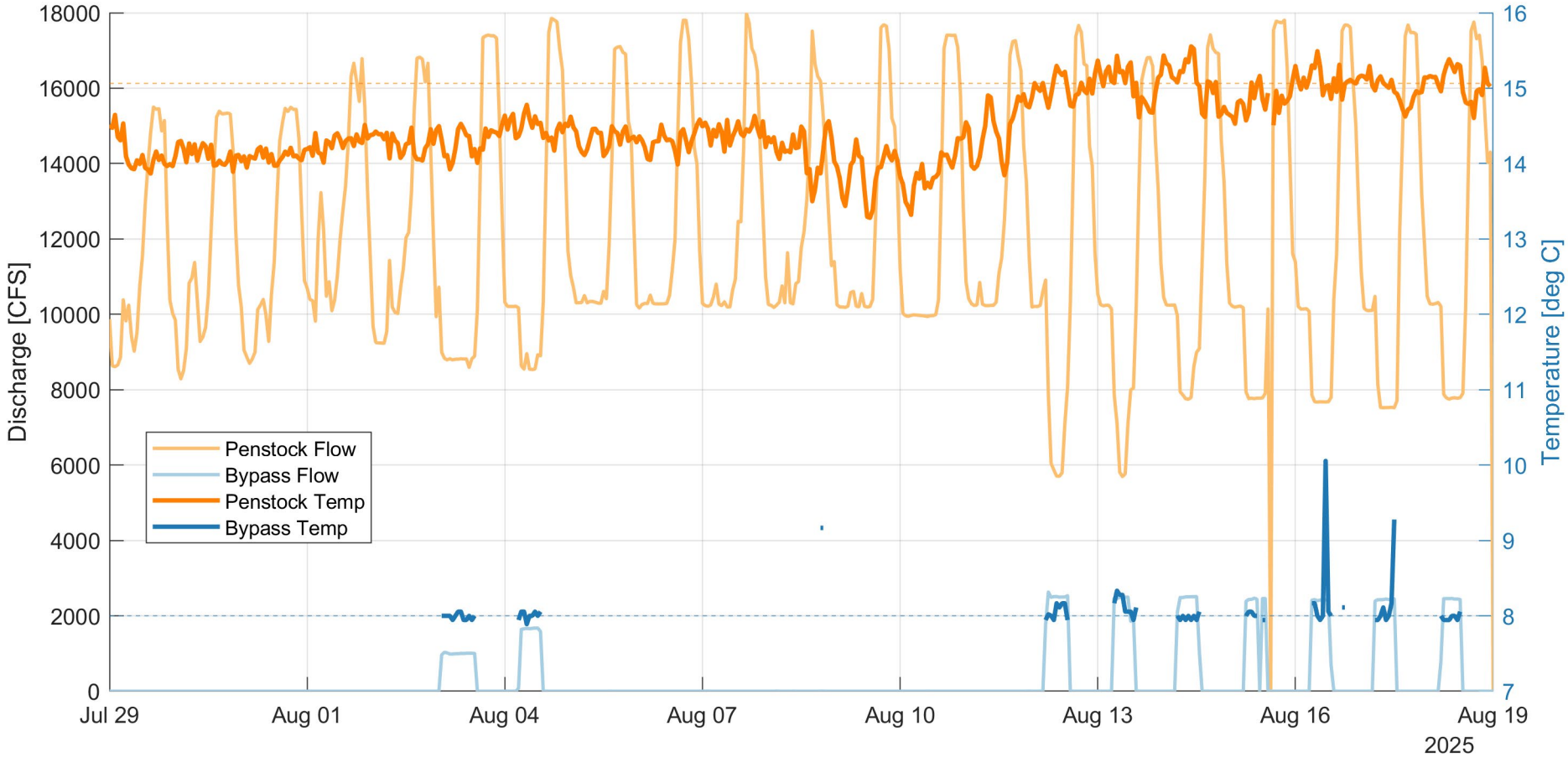


* Credit to USGS for data. Preliminary, not for citation.

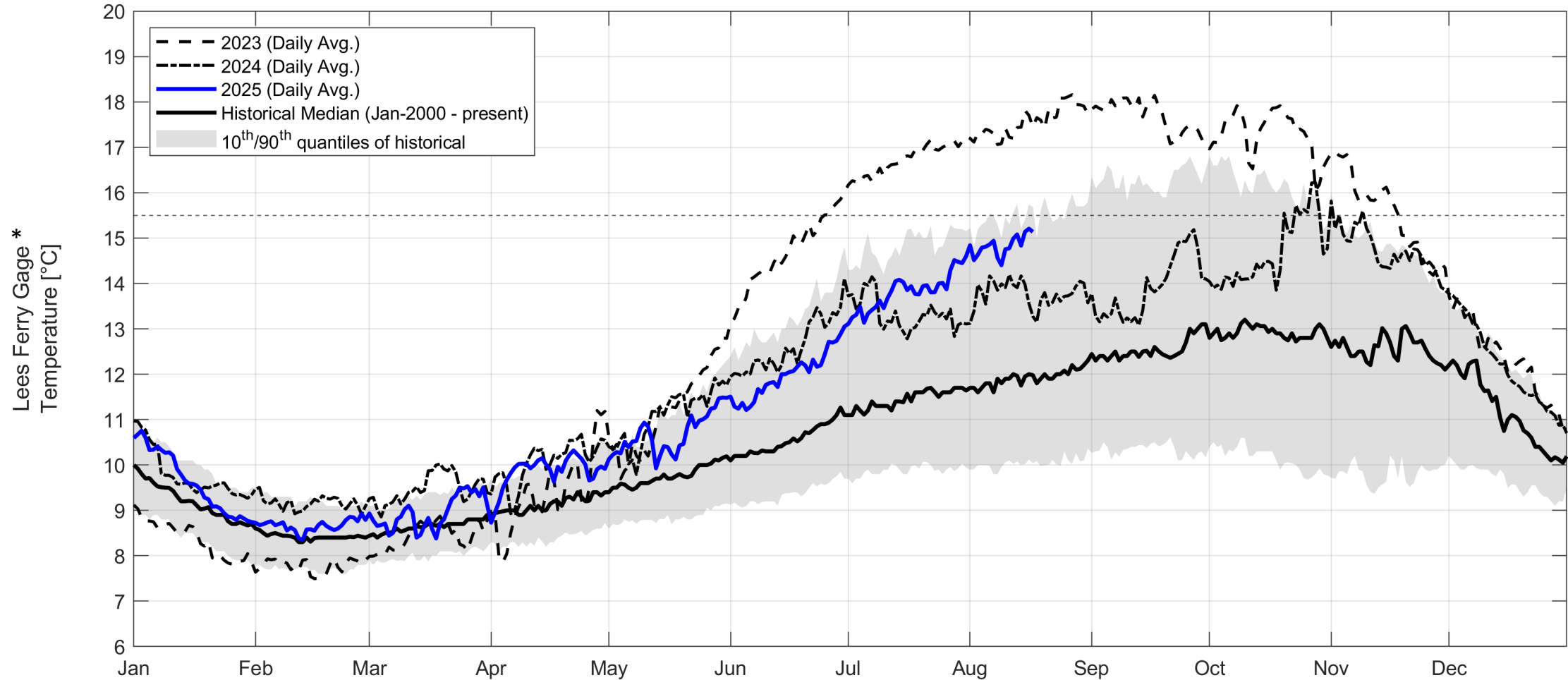
Currently ~15 C, data likely fouled by cool mix



Cool Mix Flow Operations



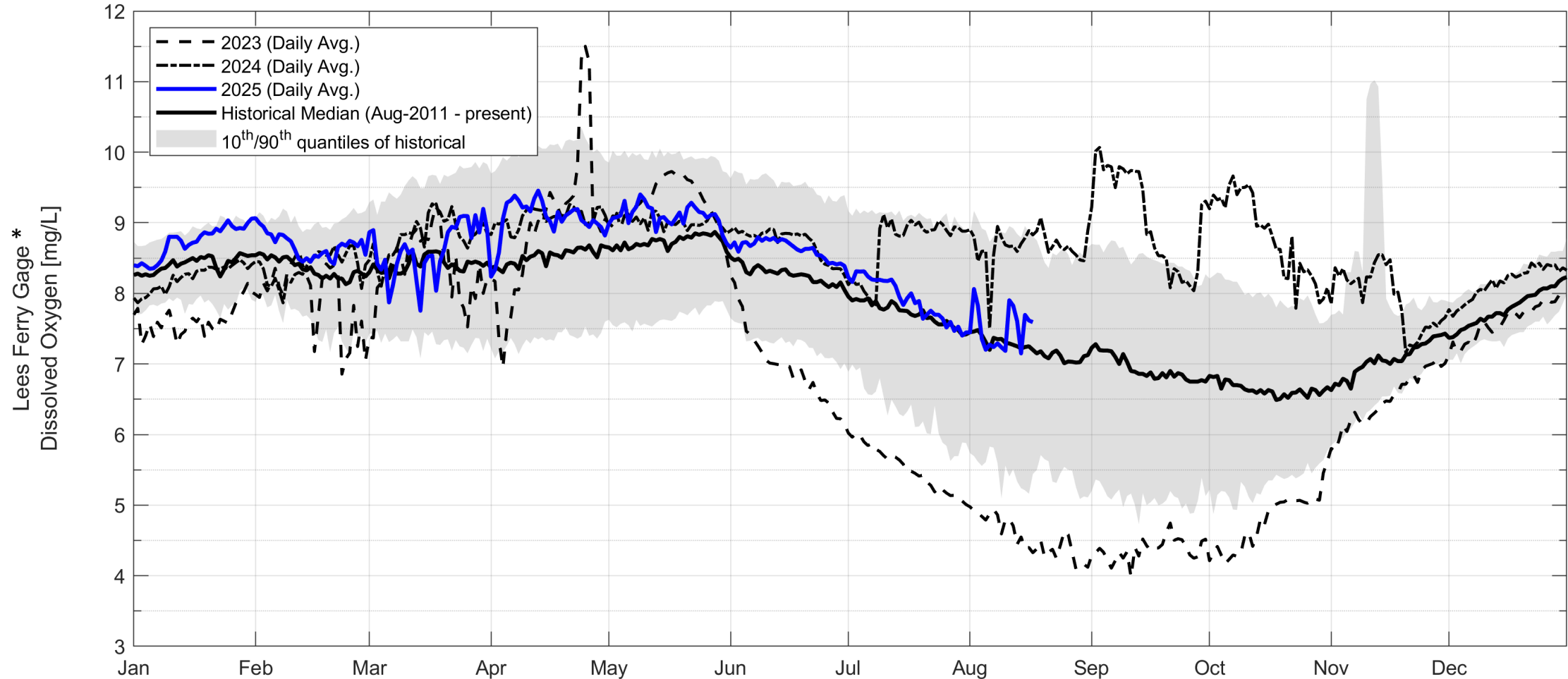
Lees Ferry - Temperature



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



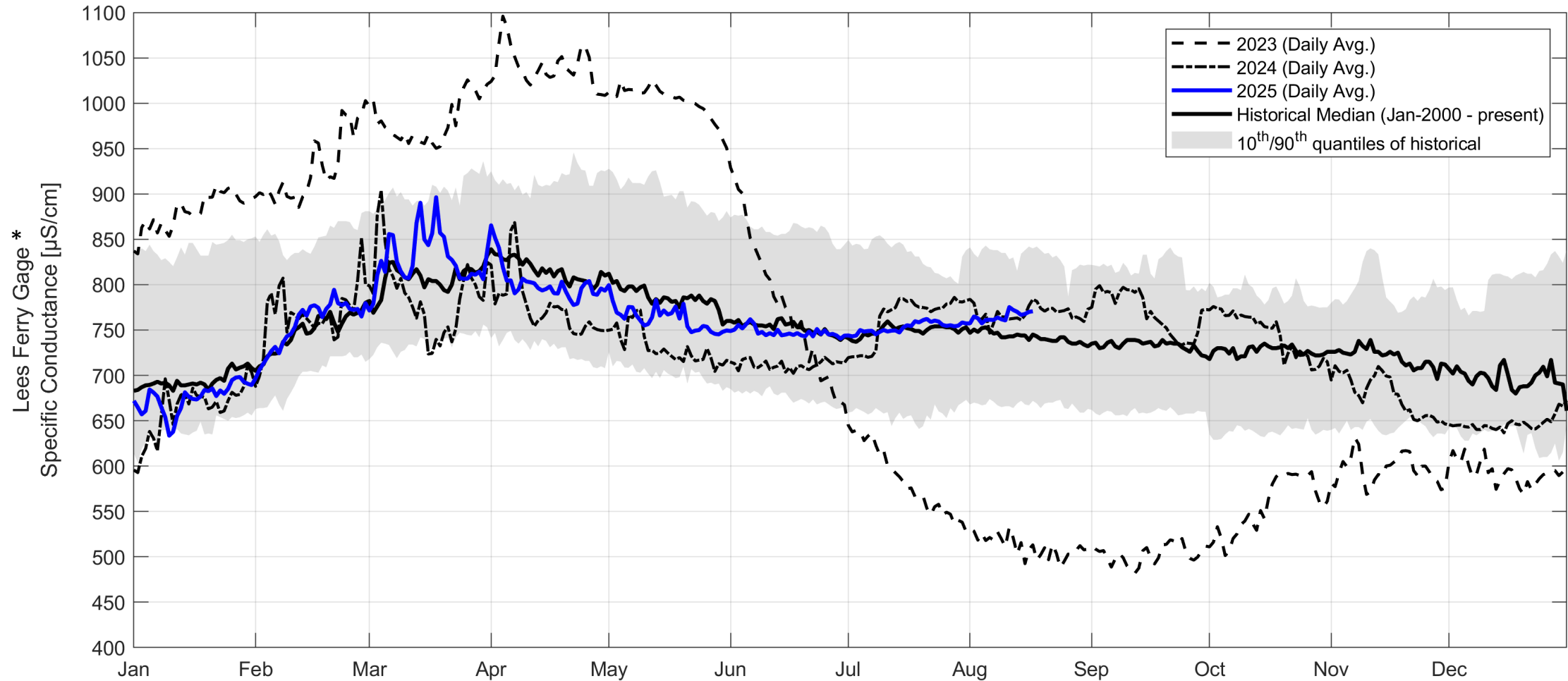
Lees Ferry – Dissolved Oxygen



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



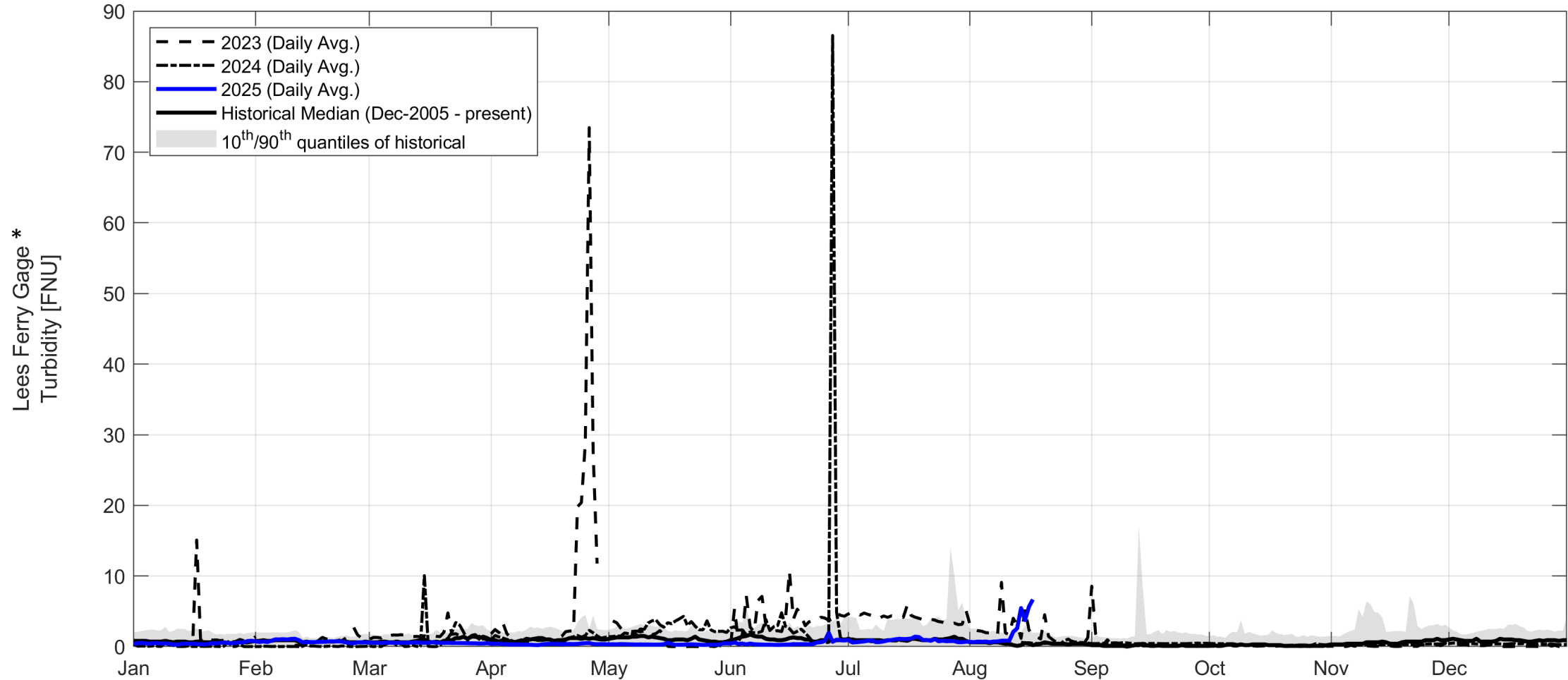
Lees Ferry – Specific Conductance



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



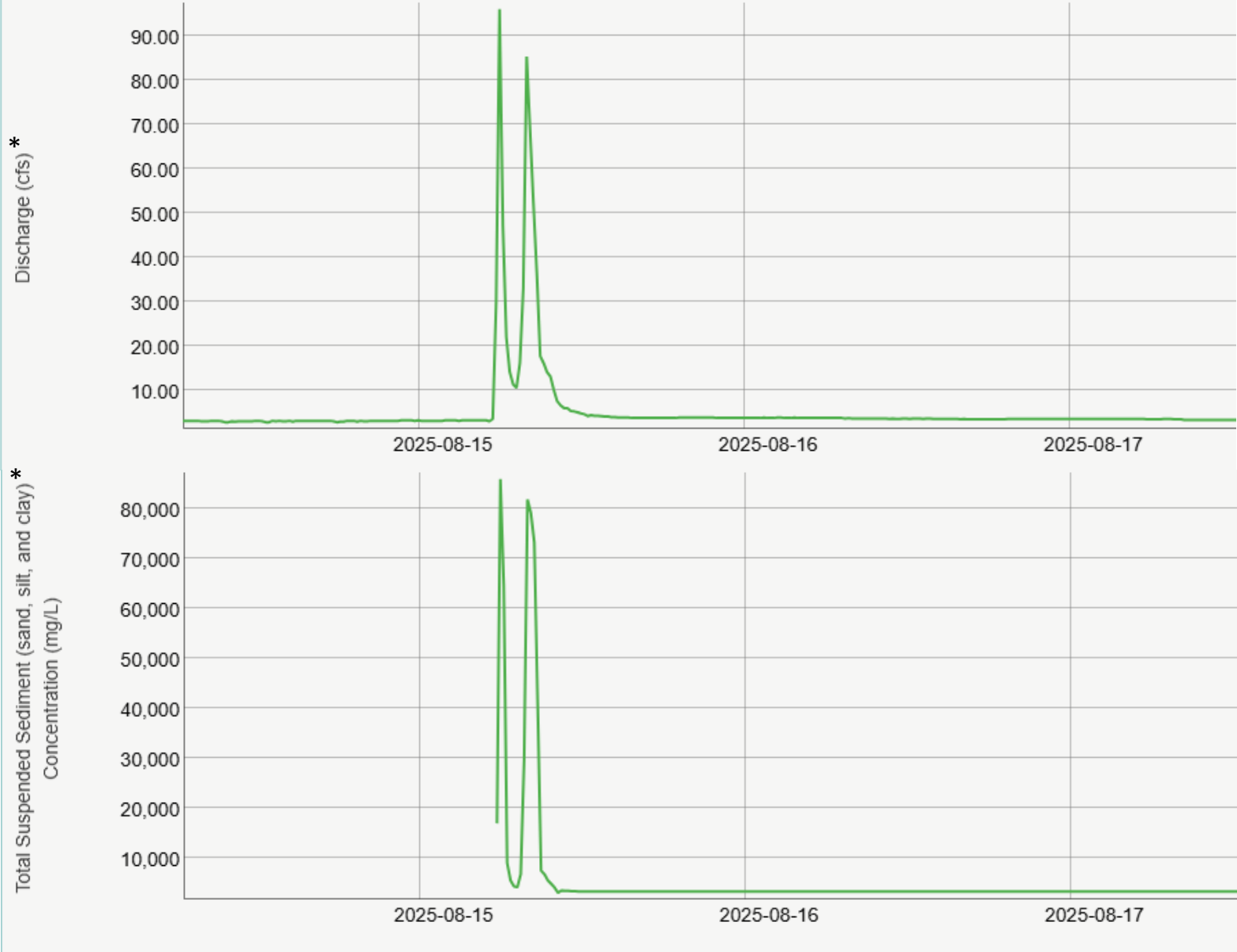
Lees Ferry – Turbidity



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Paria River Sediment



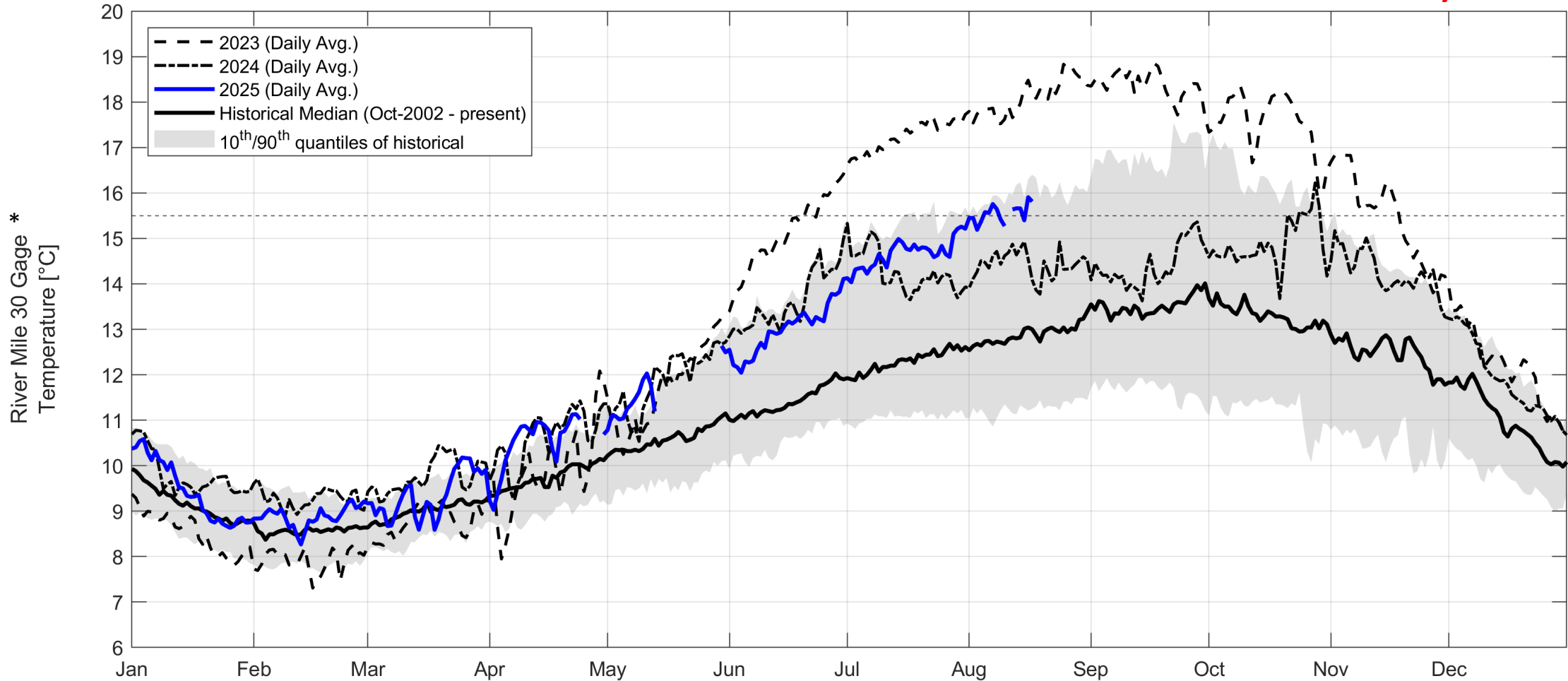
* Credit to USGS for data. Preliminary, not for citation.



<https://waterdata.usgs.gov/monitoring-location/USGS-09383050/#period=P7D&dataTypeId=continuous-00010>

River Mile 30 - Temperature

Currently: 15.8 °C

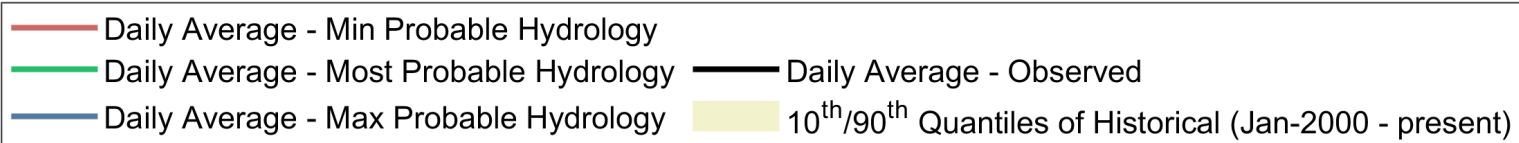
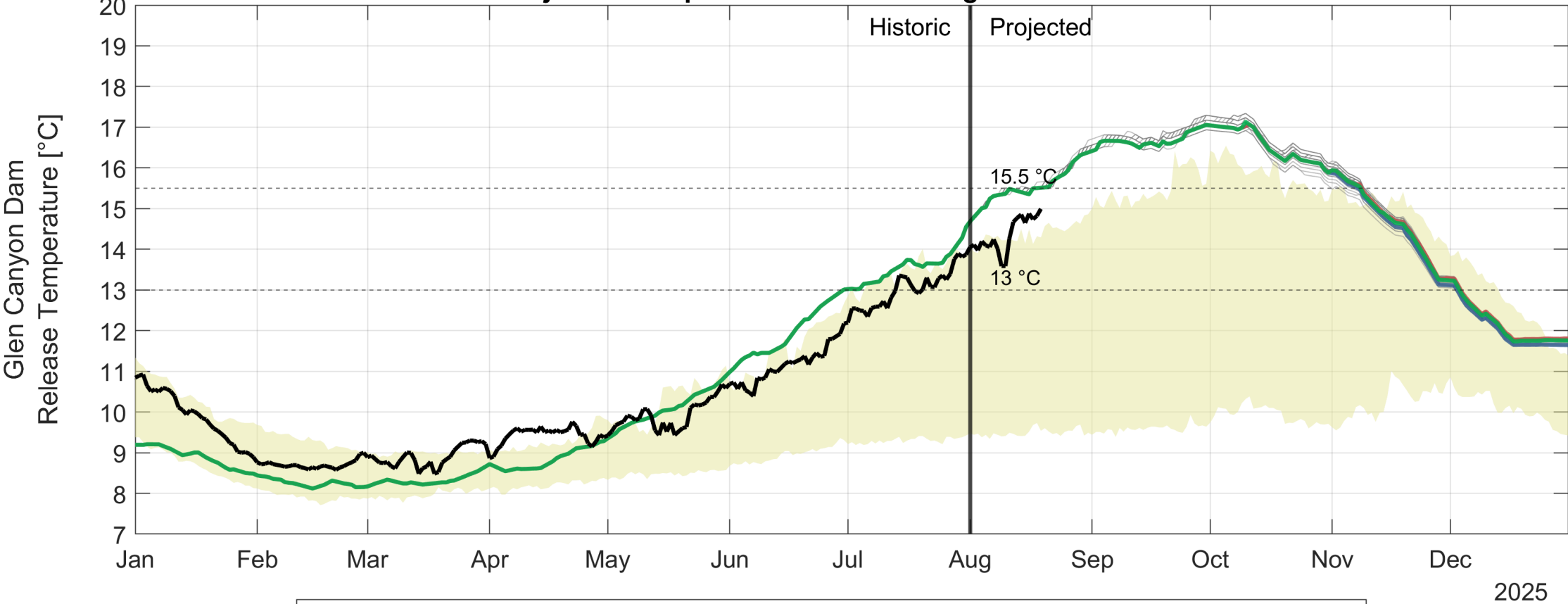


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Glen Canyon Dam Release Temperature (*Eppehimer et al, 2024 model)

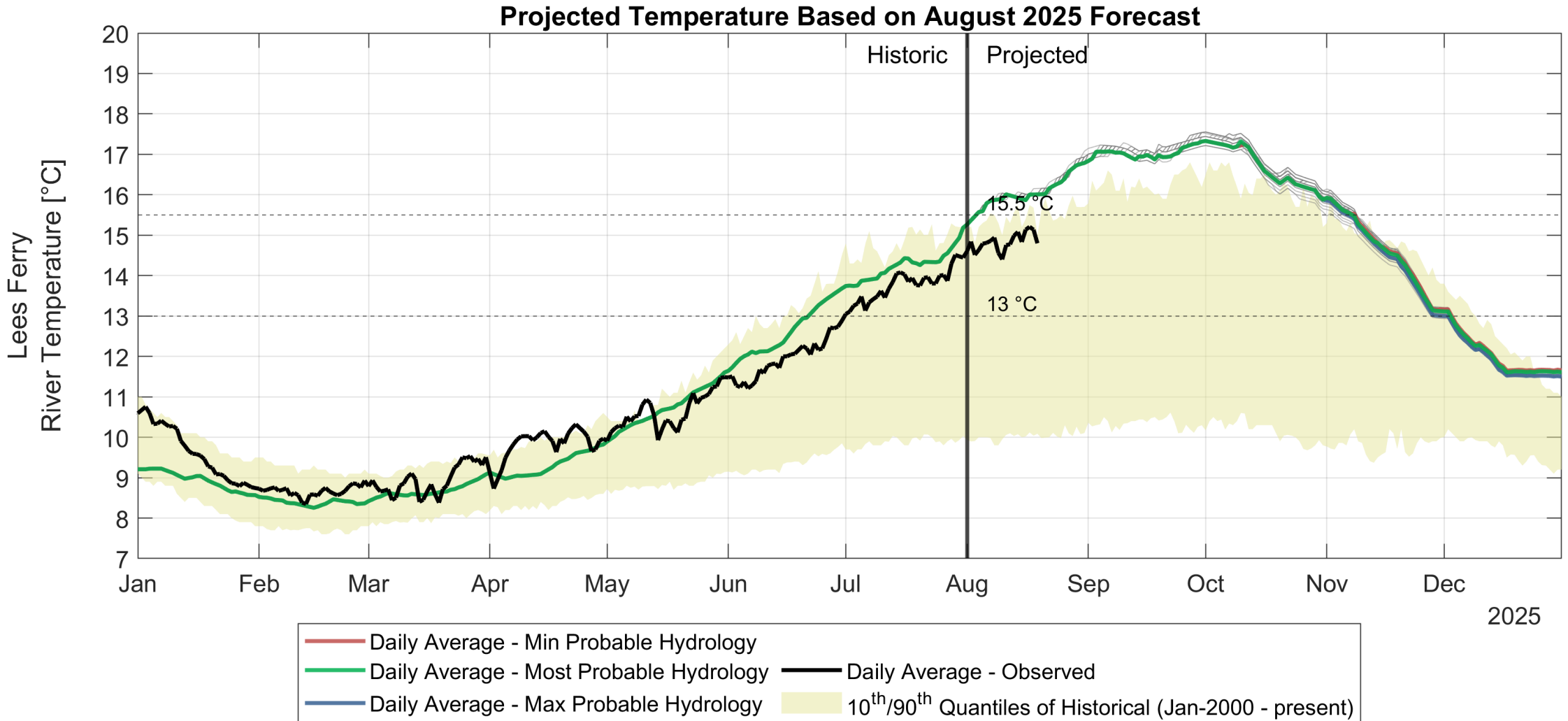
Projected Temperature Based on August 2025 Forecast



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



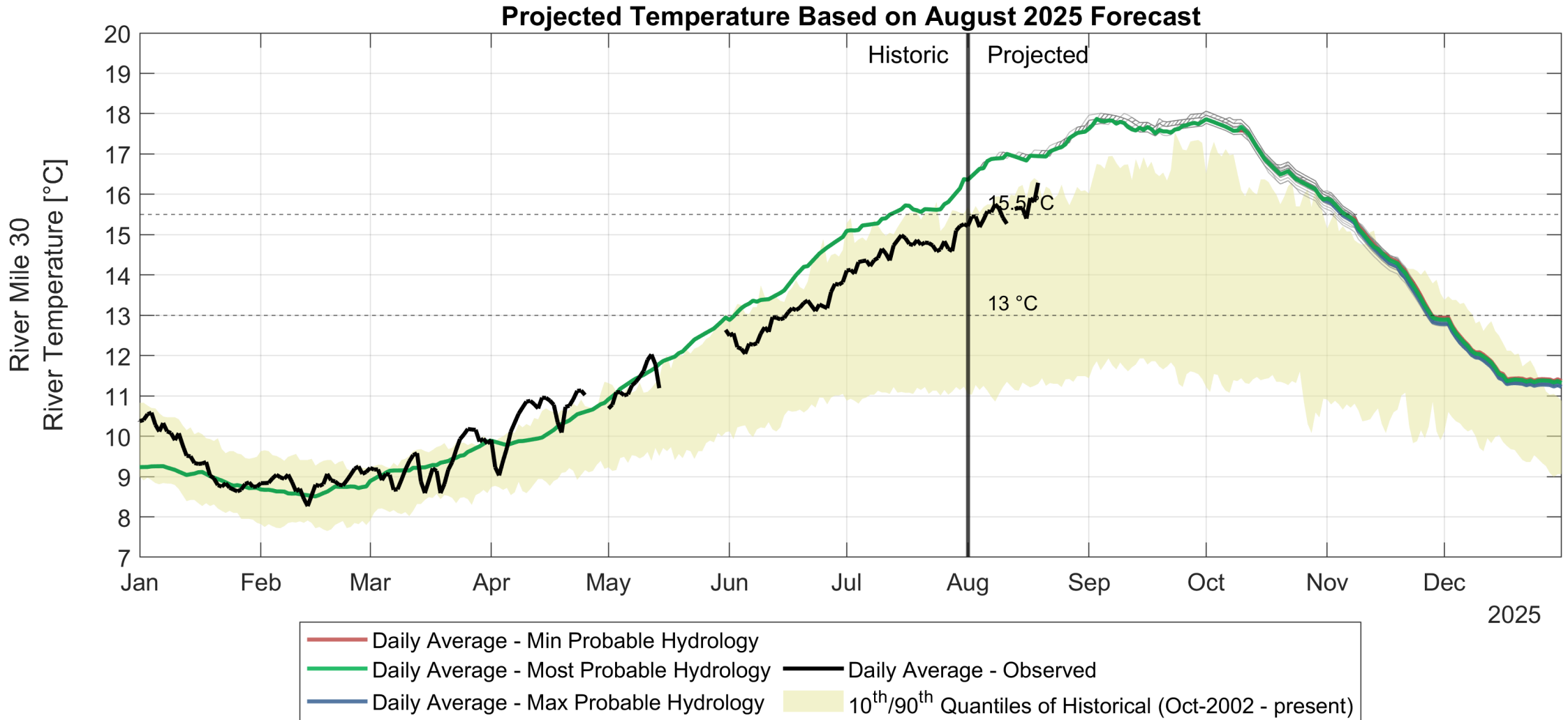
Lees Ferry River Temperature (*Dibble et al, 2020 model)



*<https://doi.org/10.1002/eap.2279>



River Mile 30 Temperature (*Dibble et al, 2020 model)

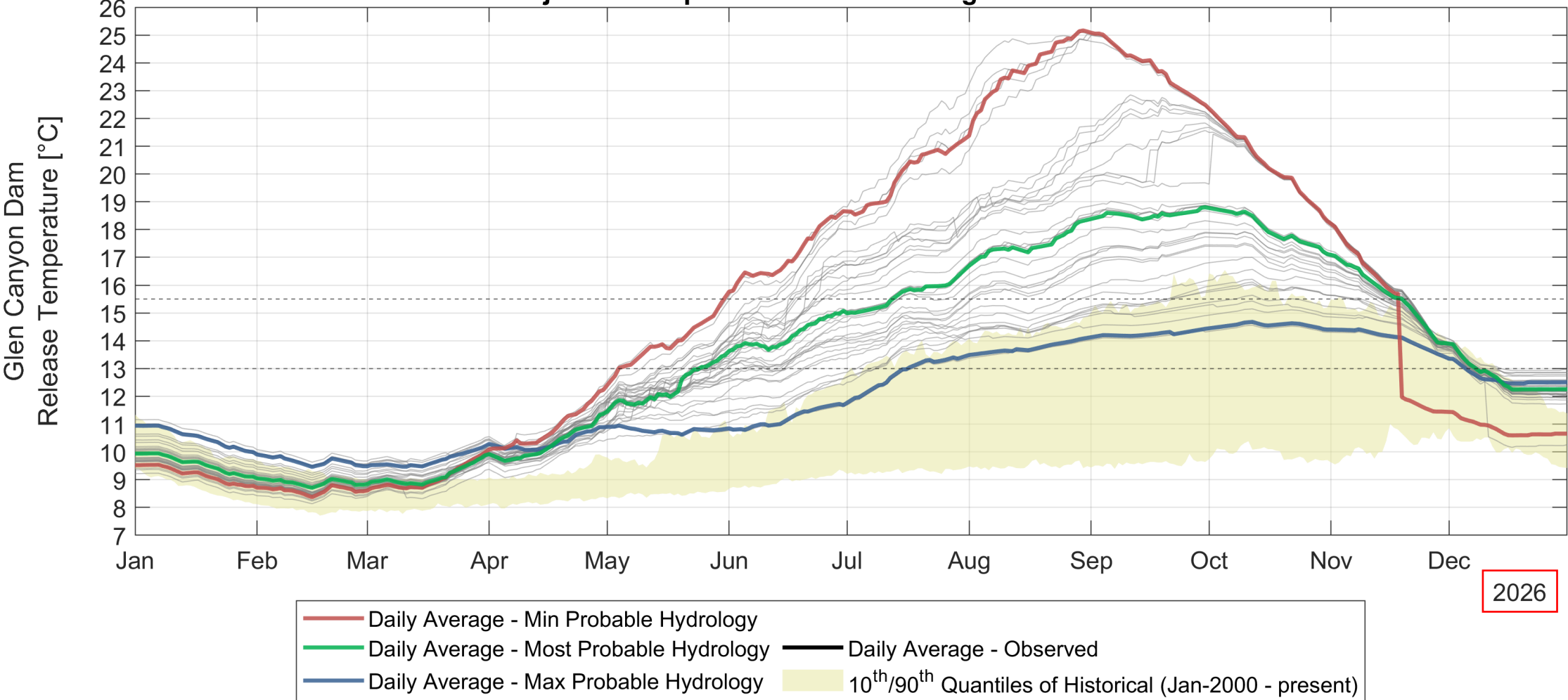


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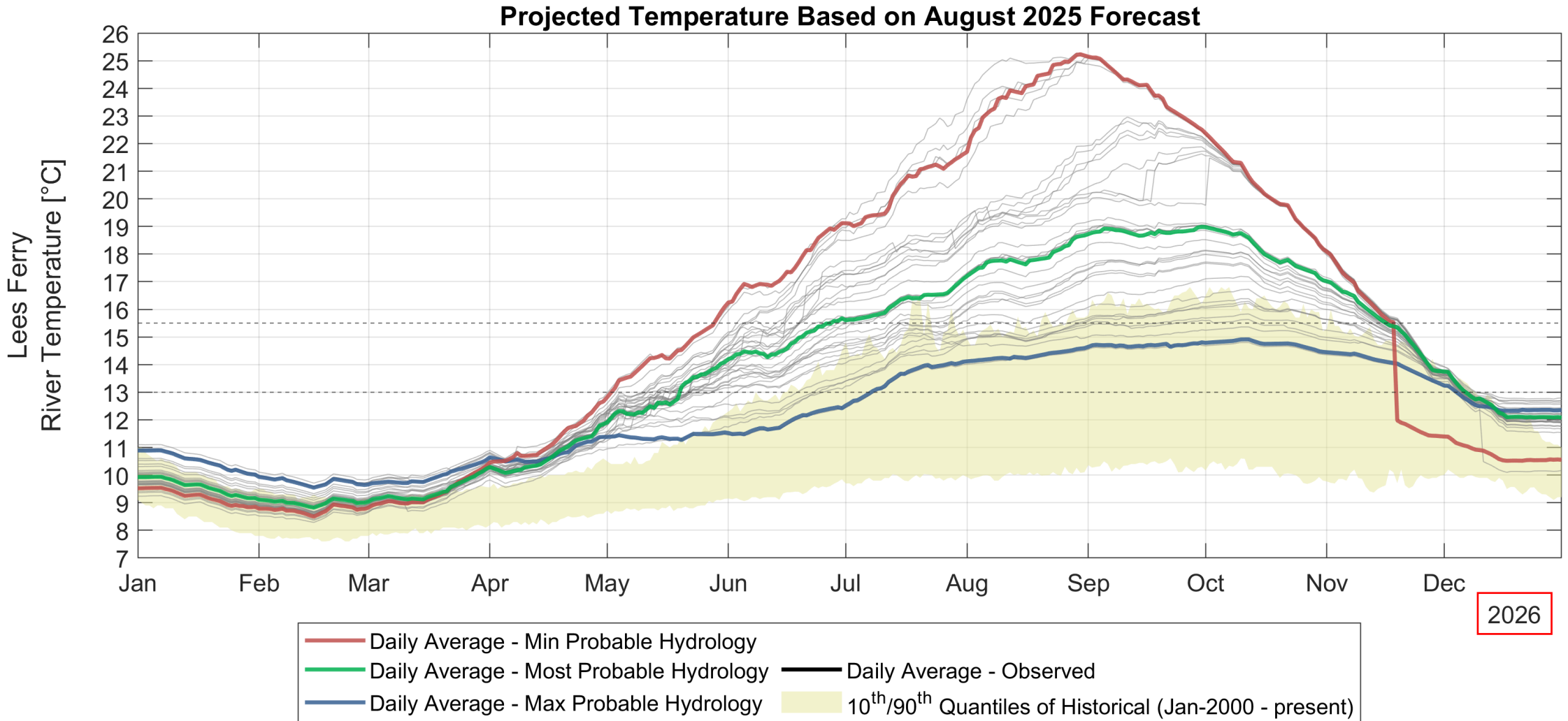


2026

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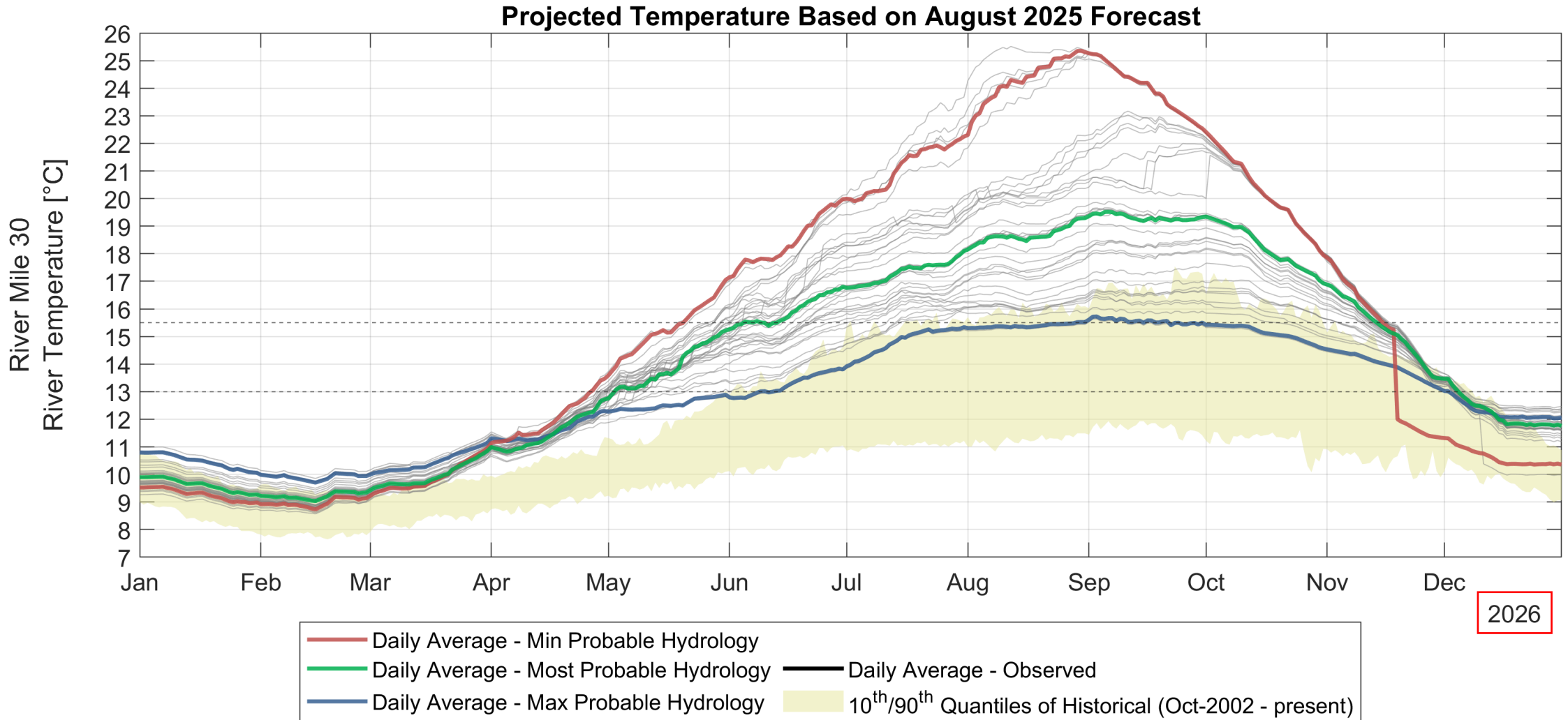


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River Mile 30 Temperature (*Dibble et al, 2020 model)



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Questions?



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