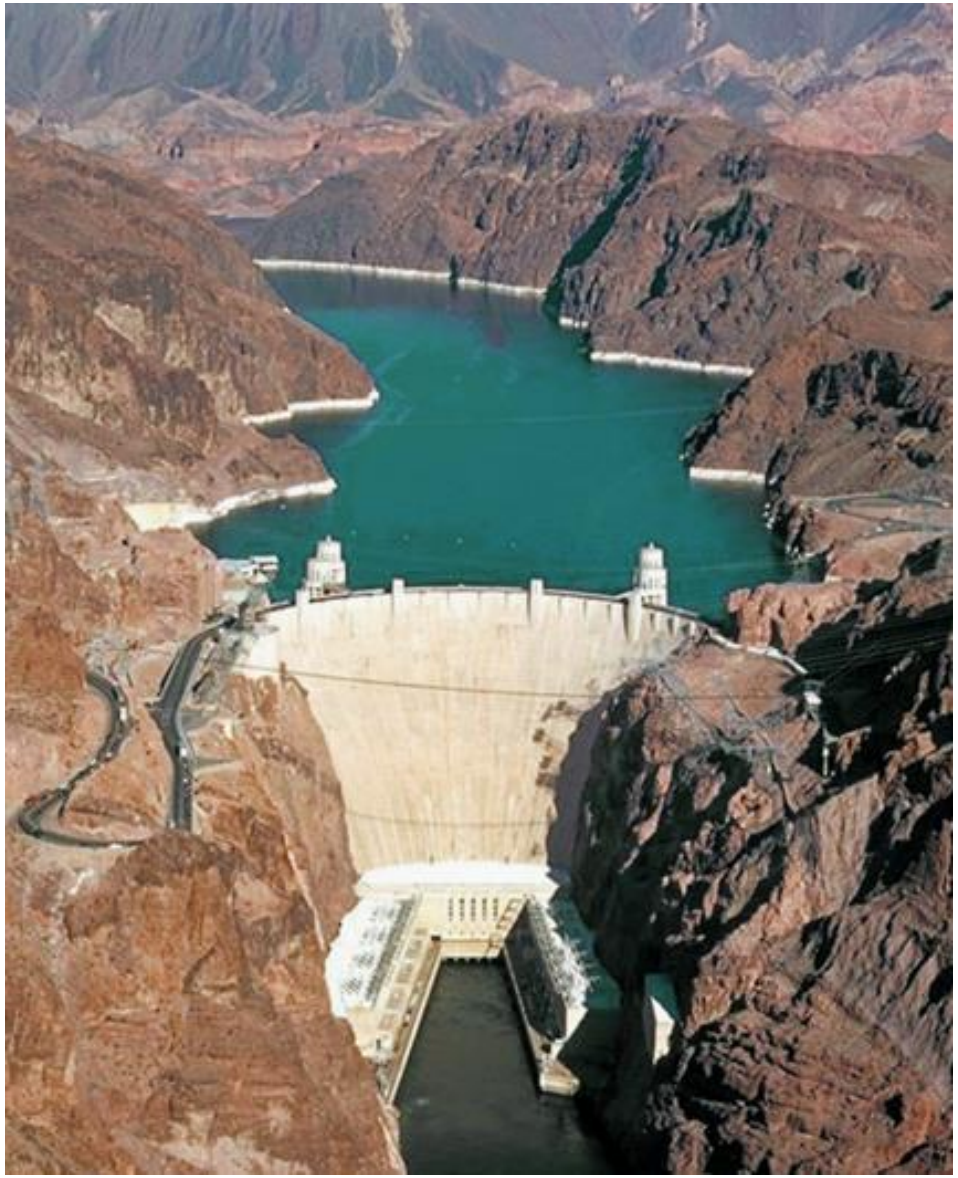
BUREAU OF RECLAMATION

Colorado River Operations and Conditions

Noe Santos, P.E.
LCB River Operations Manager
September 14, 2023

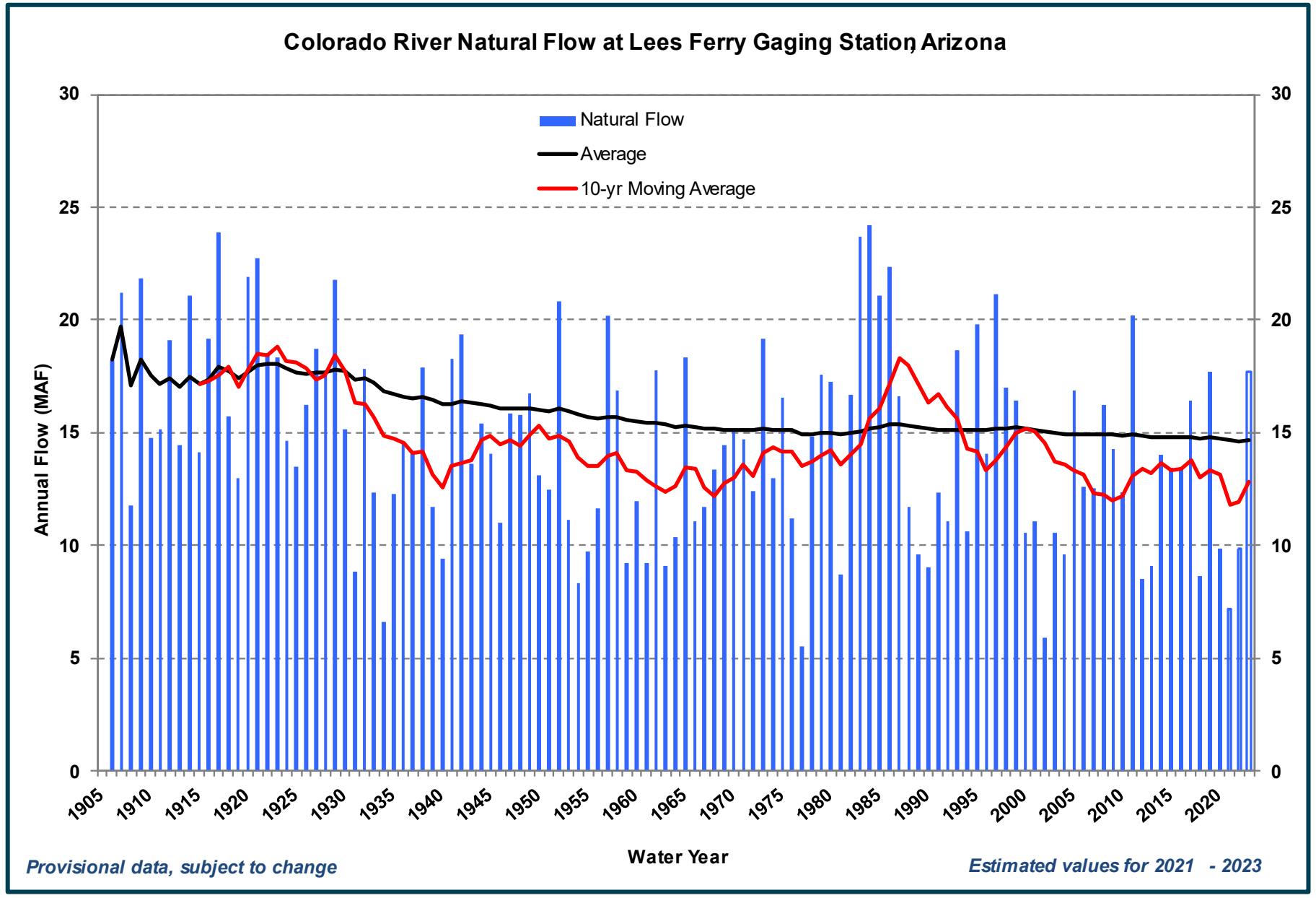
Colorado River Drought



Lake Mead near Hoover Dam in 2000

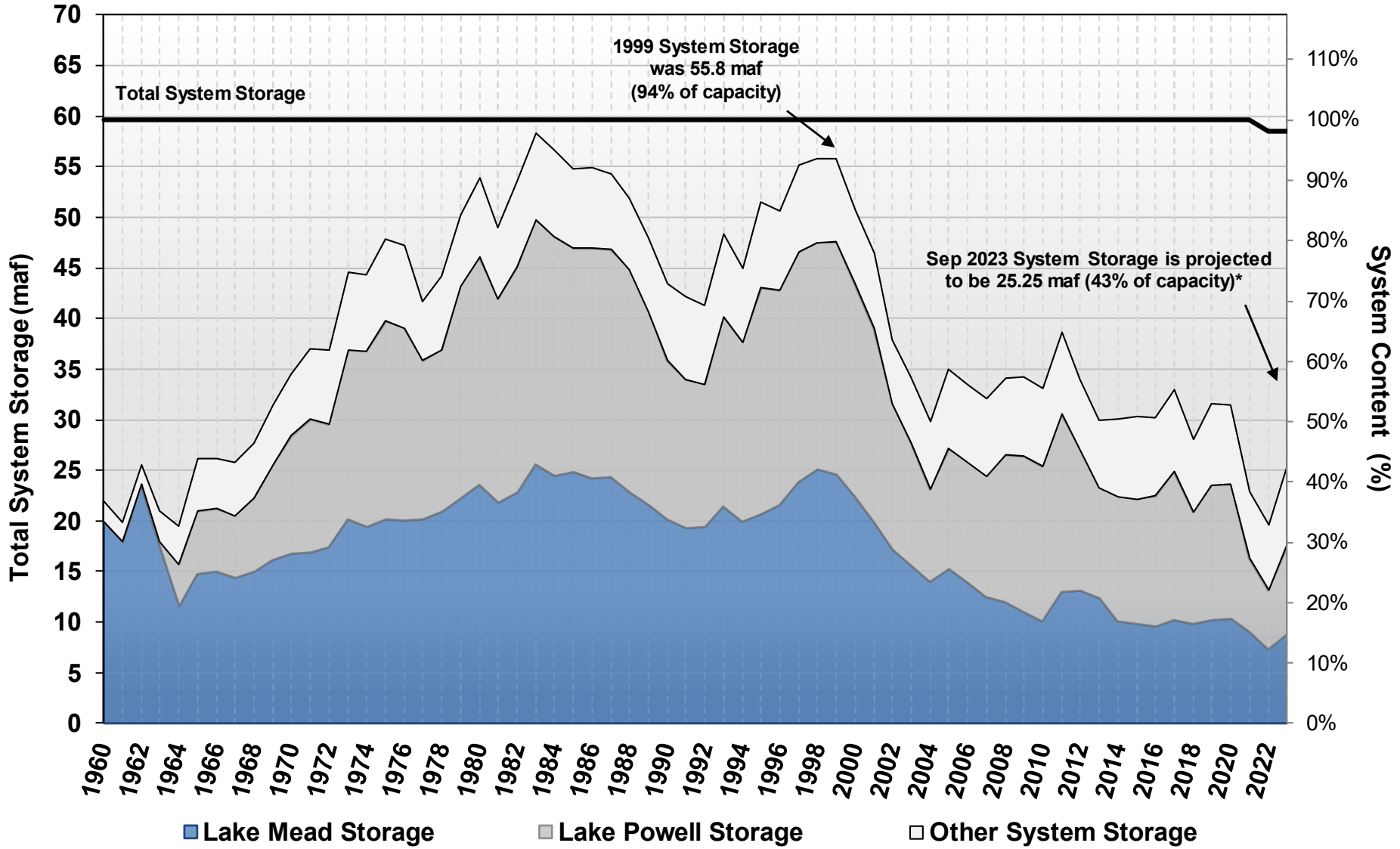
Lake Mead near Hoover Dam in 2022

Natural Flow
Colorado River at Lees Ferry Gaging Station, Arizona
Water Year 1906 to 2023



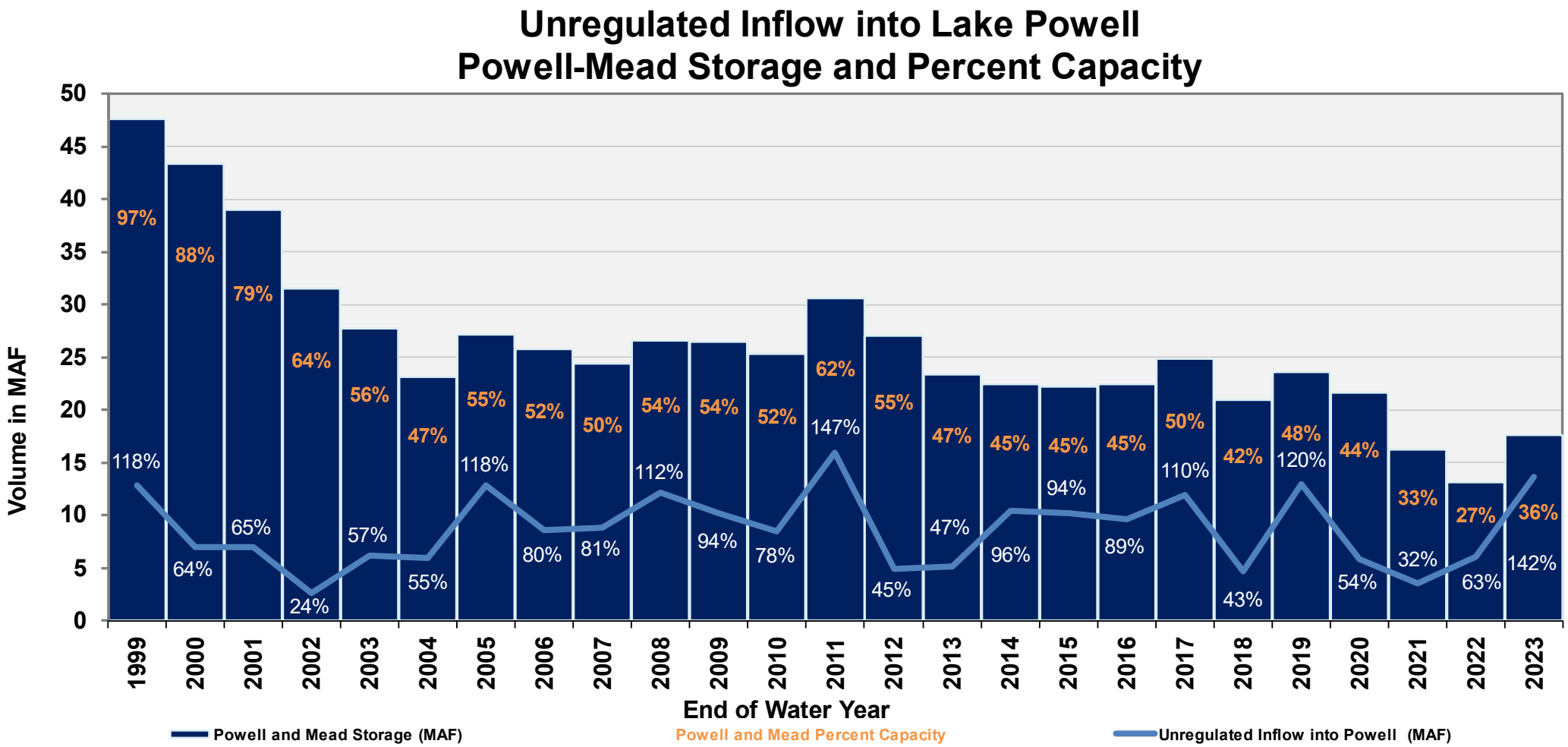
End of Water Year Colorado River Basin Total System Storage

Water Years 1960 - 2023*



*Storage value for the end of WY 2023 is based on the August 2023 24-Month Study projection.

State of the System (Water Years 1999-2023)[1,2]

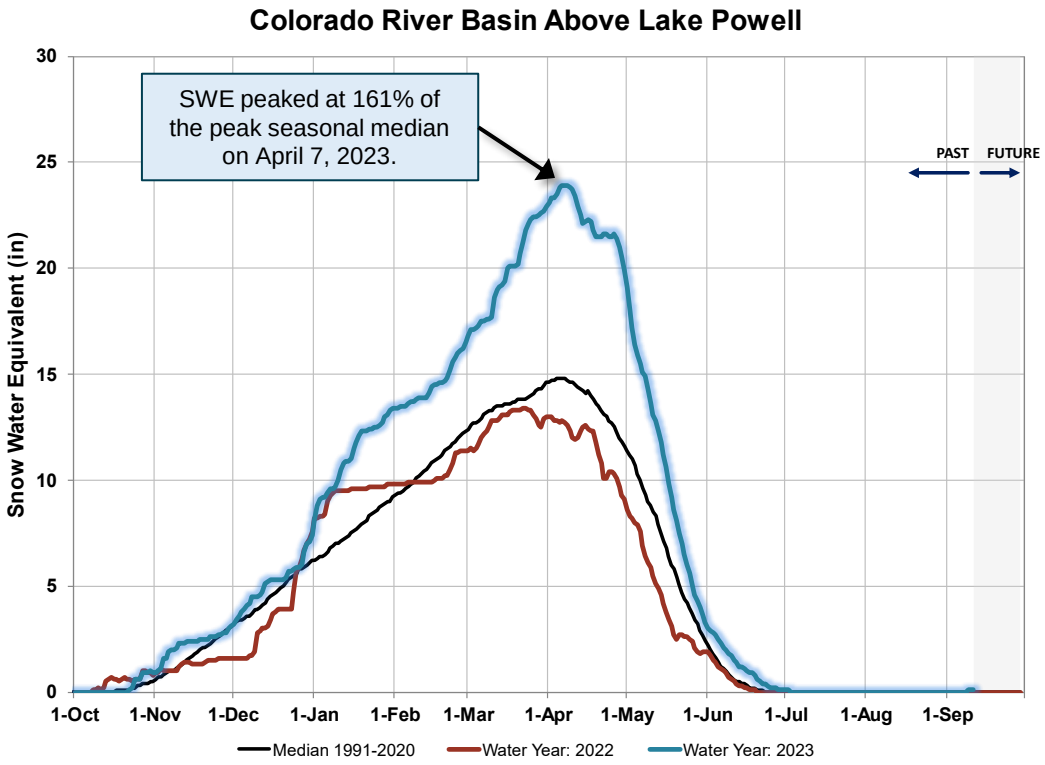


[1] Values for Water Year 2023 are projected. Unregulated inflow is based on the latest CBRFC forecast dated September 1, 2023. Storage and percent capacity are based on the August 2023 24-Month Study.

[2] Percentages on the light blue line represent percent of average unregulated inflow into Lake Powell for a given water year. The percent of average is based on the period of record from 1981-2010 for Water Years 1999-2021. Percent of average from Water Year 2022 to present is based on the period of record from 1991-2020.

Water Year 2023
Precipitation & Snowpack[1]
as of September 11, 2023

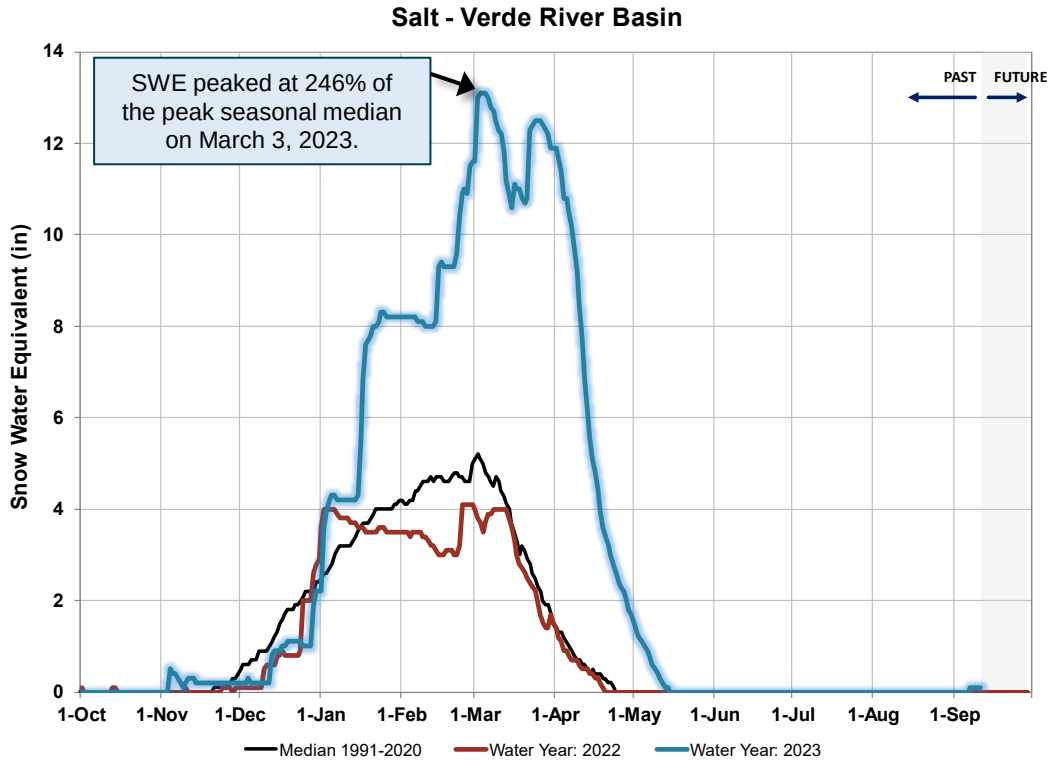
Upper Colorado River Basin



Precipitation - 115%

Basin Snowpack - NA%

Salt - Verde River Basin

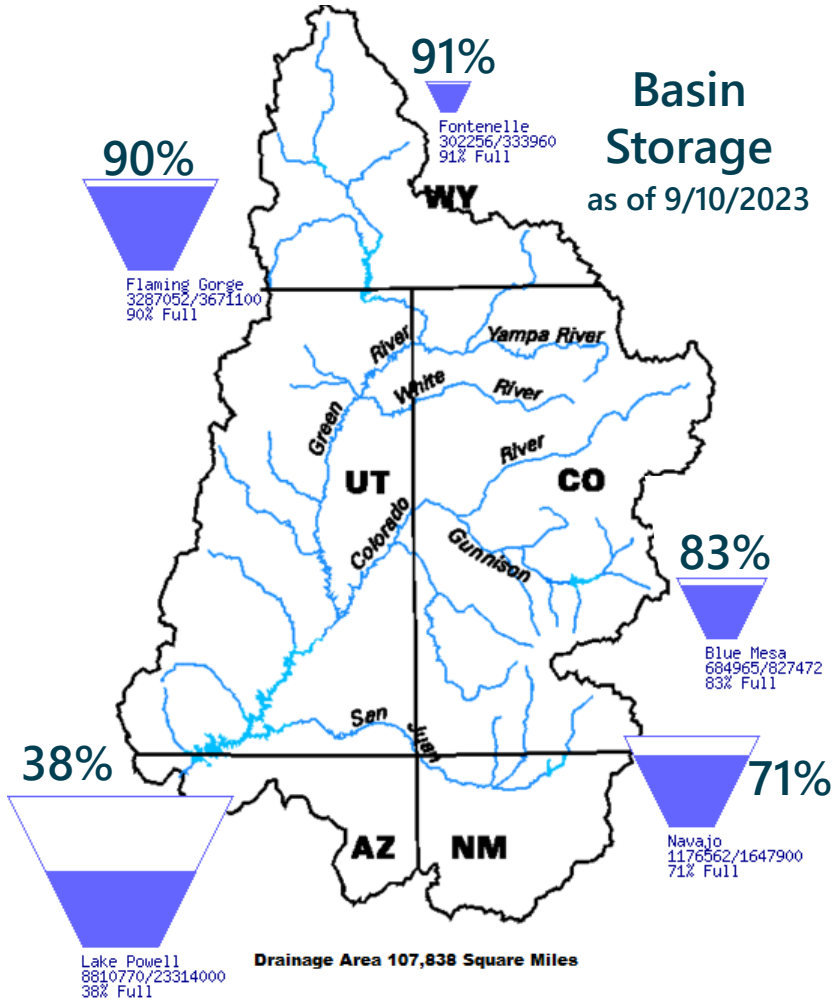


Precipitation - 133%

Basin Snowpack - NA%

[1] Percent of normal precipitation is based on an arithmetic mean, or average; percent of normal snowpack is based on the median value for a given date. Water Year statistics are based on the 30-year period from 1991-2020.

Upper Basin Storage



Basin Storage
as of 9/10/2023

Available online at: www.usbr.gov/uc/water/basin/index.html

Unregulated Inflow Forecast
as of September 1, 2023

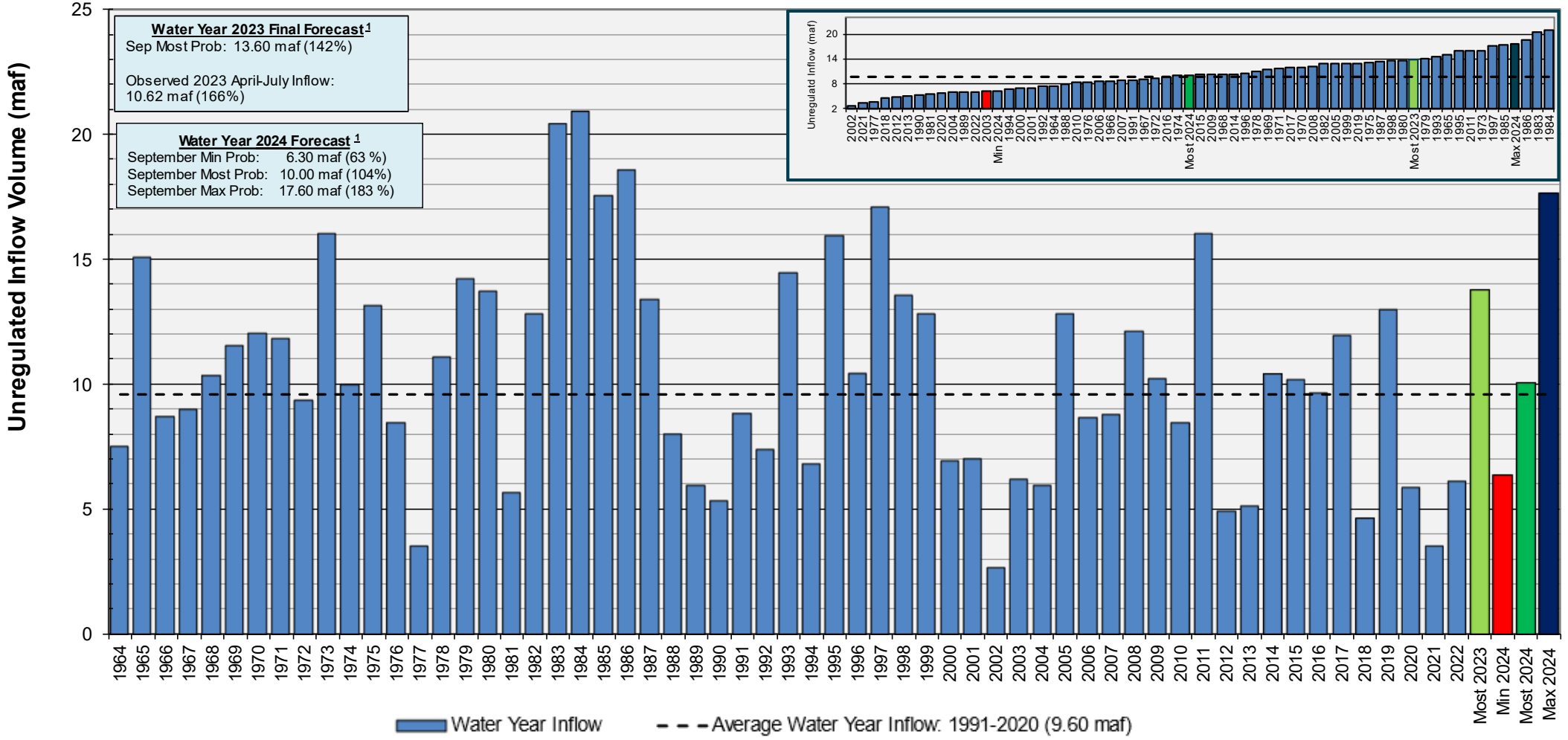
Month/Period	Inflow (kaf)	Percent of Average[1]
Aug 2023 *(Observed)*	307	82
Sep 2023	400	116
Oct 2023	525	116
Nov 2023	515	123
Apr-Jul 2023 *(Observed)*	10,619	166
WY 2023	13,598	142

[1]WY 2023 statistics are based on the 30-year period of record from 1991-2020.

Lake Powell Water Year Unregulated Inflow

Forecast as of September 1, 2023

Comparison with History



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

Colorado River Basin Storage

(as of September 10, 2023)

Reservoir	Percent Full	Storage (maf)	Elevation (feet)
Lake Powell	38%	8.80	3,573.75
Lake Mead	34%	8.90	1,066.20
Total System Storage	44%	25.58	- - -

Total system storage was 34% of capacity, or 19.76 maf in storage, at this time last year.

Lower Basin Side Inflows – WY/CY 2023[1,2]

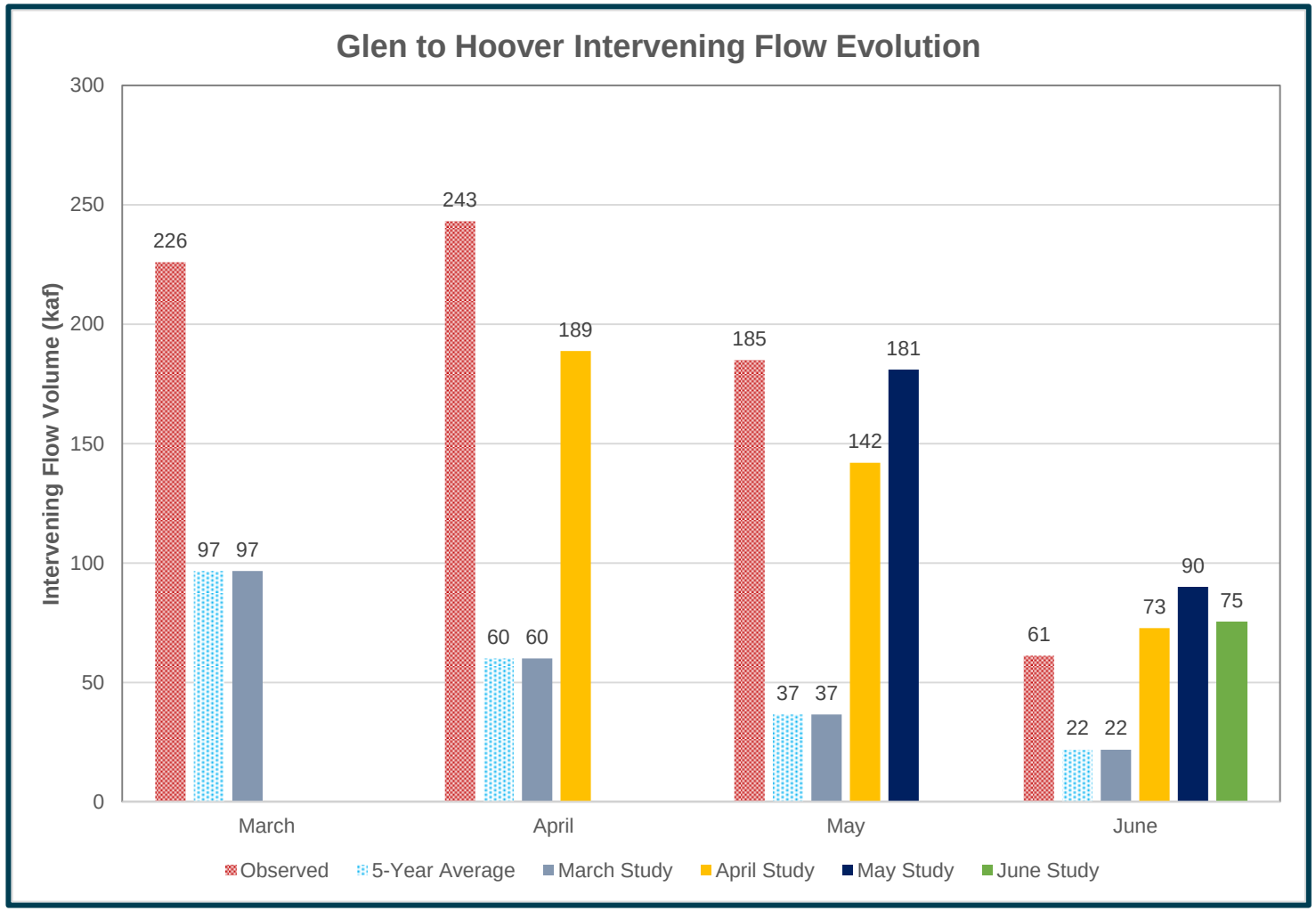
Intervening Flow from Glen Canyon to Hoover Dam

	Month in WY/CY 2023	5-Year Average Intervening Flow (kaf)	Observed Intervening Flow (kaf)	Observed Intervening Flow (% of Average)	Difference From 5-Year Average (kaf)
Observed	October 2022	77	94	122%	17
	November 2022	63	18	29%	-45
	December 2022	72	63	87%	-9
	January 2023	75	103	137%	28
	February 2023	71	46	65%	-25
	March 2023	97	226	234%	129
	April 2023	60	243	405%	183
	May 2023	37	185	505%	148
	June 2023	22	62	282%	40
	July 2023	55	61	112%	6
	August 2023	86	114	132%	28
Projected	September 2023	72			
	October 2023	77			
	November 2023	63			
	December 2023	72			
	WY 2023 Totals	786	1,286	164%	500
	CY 2023 Totals	786	1,324	168%	538

[1] Values were computed with the LC's gain-loss model for the most recent 24-month study.

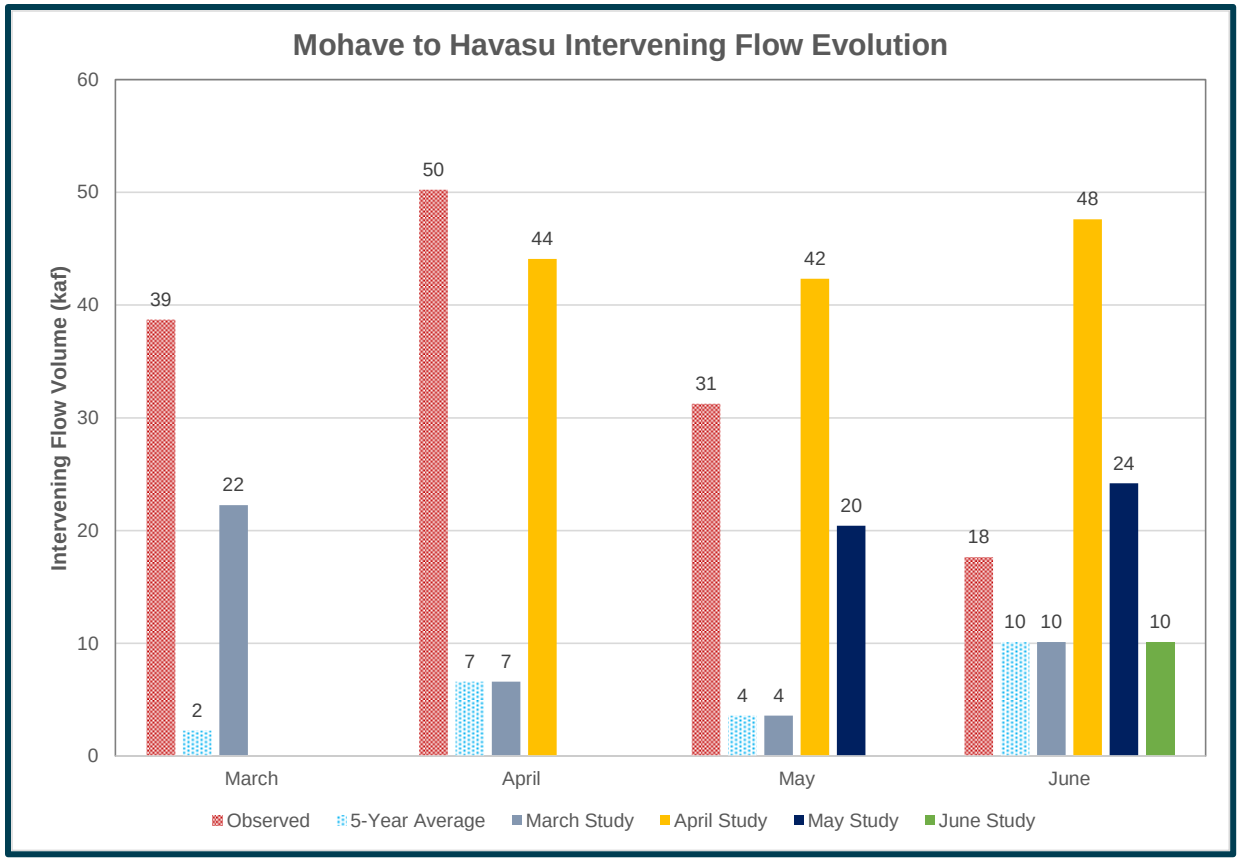
[2] Percents of average are based on the 5-year mean from 2018-2022.

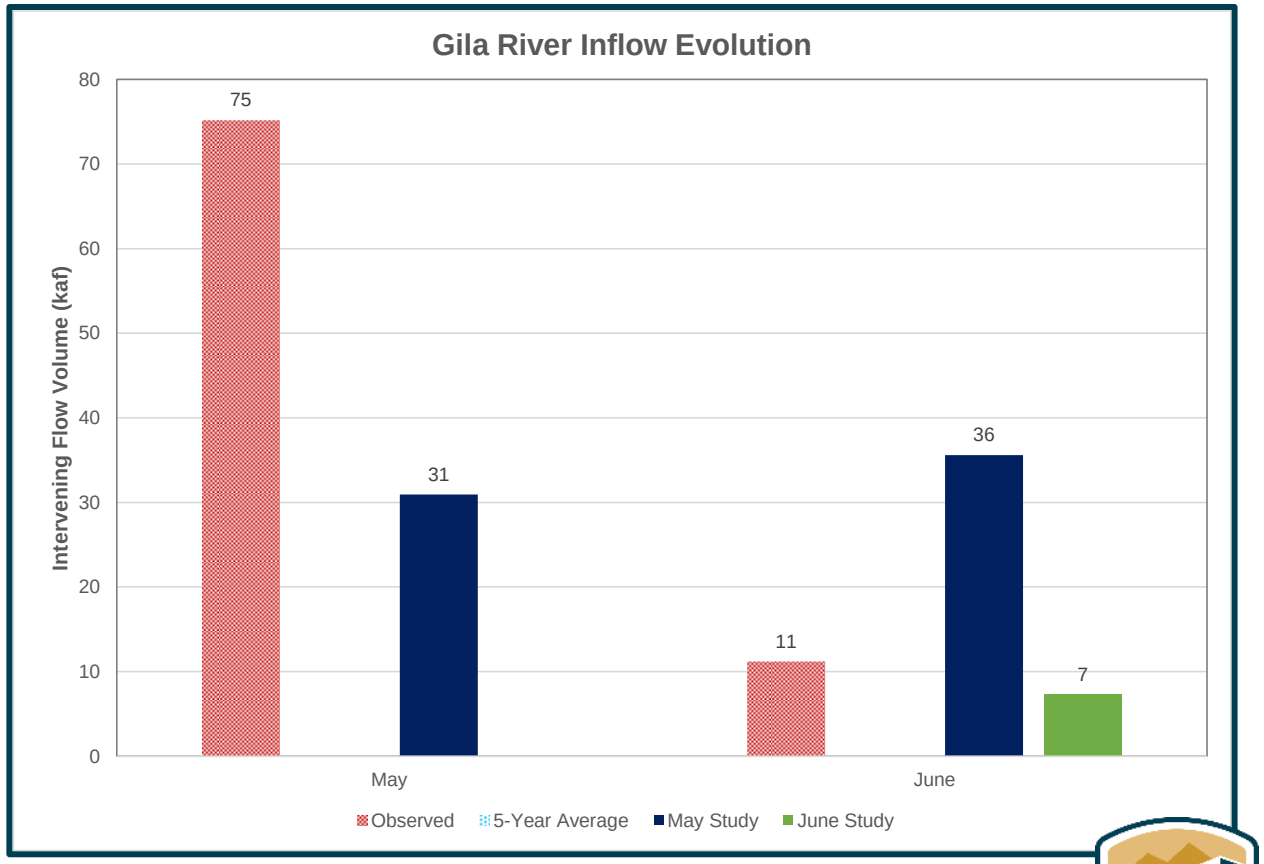
Lower Basin Intervening Flows
Modeled versus Actual (March –June)



- Starting in April, the CBRFC adjusted forecast for Glen to Hoover was used in the 24-Month Study instead of the 5-year average
- Tributary gains from Mohave to Havasu were adjusted to incorporate additional releases from Alamo Dam due to high reservoir elevations at Lake Alamo
- Gila River inflow was adjusted to incorporate Painted Rock Dam releases into the Gila River which would enter the Colorado River near Yuma, AZ.

Lower Basin Intervening Flows
Modeled versus Actual (March –June)





Lake Powell & Lake Mead Operational Table

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

3,568.57 ft
Jan 1, 2024
Projection

Lake Powell			Lake Mead		
Elevation (feet)	**Operation According to the Interim Guidelines**	**Live Storage (maf)[1]**	**Elevation (feet)**	**Operation According to the Interim Guidelines**	**Live Storage (maf)[1]**
3,700	**Equalization Tier** Equalize, avoid spills or release 8.23 maf	24.3	1,220	**Flood Control Surplus or Quantified Surplus Condition** Deliver > 7.5 maf	25.9
3,636 - 3,666 (2008-2026)	**Upper Elevation Balancing Tier[3]** Release 8.23 maf; if Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf	15.5 - 19.3 (2008-2026)	1,200 (approx.)[2]	**Domestic Surplus or ICS Surplus Condition** Deliver > 7.5 maf	22.9 (approx.)[2]
			1,145		15.9
			1,105	**Normal or ICS Surplus Condition** Deliver ≥ 7.5 maf	11.9
3,575		9.5	1,075		9.4
	Mid-Elevation Release Tier Release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf			**Shortage Condition** Deliver 7.167[4] maf	
			1,050		7.5
3,525		5.9		**Shortage Condition** Deliver 7.083[5] maf	
			1,025		5.8
3,490	**Lower Elevation Balancing Tier** Balance contents with a min/max release of 7.0 and 9.5 maf	4.0	1,000	**Shortage Condition** Deliver 7.0[6] maf Further measures may be undertaken[7]	4.3
3,370		0	895		0

Diagram not to scale

[1] Acronym for million acre-feet

[2] This elevation is shown as approximate as it is determined each year by considering several factors including Lake Powell and Lake Mead storage, projected Upper Basin and Lower Basin demands, and an assumed inflow.

[3] Subject to April adjustments which may result in a release according to the Equalization Tier

[4] Of which 2.48 maf is apportioned to Arizona, 4.4 maf to California, and 0.287 maf to Nevada

[5] Of which 2.40 maf is apportioned to Arizona, 4.4 maf to California, and 0.283 maf to Nevada

[6] Of which 2.32 maf is apportioned to Arizona, 4.4 maf to California, and 0.280 maf to Nevada

[7] Whenever Lake Mead is below elevation 1,025 feet, the Secretary shall consider whether hydrologic conditions together with anticipated deliveries to the Lower Division States and Mexico is likely to cause the elevation at Lake Mead to fall below 1,000 feet. Such consideration, in consultation with the Basin States, may result in the undertaking of further measures, consistent with applicable Federal law.

[1] Lake Powell and Lake Mead operational tier determinations will be documented in the draft 2024 AOP.

Lake Powell & Lake Mead Operational Table

Lake Mead Operating Condition Determination for CY 2024[1]

Lake Powell			Lake Mead		
Elevation (feet)	**Operation According to the Interim Guidelines**	**Live Storage (maf)[1]**	**Elevation (feet)**	**Operation According to the Interim Guidelines**	**Live Storage (maf)[1]**
3,700	**Equalization Tier** Equalize, avoid spills or release 8.23 maf	24.3	1,220	**Flood Control Surplus or Quantified Surplus Condition** Deliver > 7.5 maf	25.9
3,636 - 3,666 (2008-2026)		15.5 - 19.3 (2008-2026)	1,200 (approx.)[2]		22.9 (approx.)[2]
	Upper Elevation Balancing Tier[3] Release 8.23 maf; if Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf		1,145	**Domestic Surplus or ICS Surplus Condition** Deliver > 7.5 maf	15.9
			1,105	**Normal or ICS Surplus Condition** Deliver ≥ 7.5 maf	11.9
3,575		9.5	1,075		9.4
	Mid-Elevation Release Tier Release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf			**Shortage Condition** Deliver 7.167[4] maf	
			1,050		7.5
3,525		5.9		**Shortage Condition** Deliver 7.083[5] maf	
	Lower Elevation Balancing Tier Balance contents with a min/max release of 7.0 and 9.5 maf		1,025		5.8
3,490		4.0	1,000	**Shortage Condition** Deliver 7.0[6] maf Further measures may be undertaken[7]	4.3
3,370		0	895		0

1,065.27 ft
Jan 1, 2024
Projection

Diagram not to scale

[1] Acronym for million acre-feet

[2] This elevation is shown as approximate as it is determined each year by considering several factors including Lake Powell and Lake Mead storage, projected Upper Basin and Lower Basin demands, and an assumed inflow.

[3] Subject to April adjustments which may result in a release according to the Equalization Tier

[4] Of which 2.48 maf is apportioned to Arizona, 4.4 maf to California, and 0.287 maf to Nevada

[5] Of which 2.40 maf is apportioned to Arizona, 4.4 maf to California, and 0.283 maf to Nevada

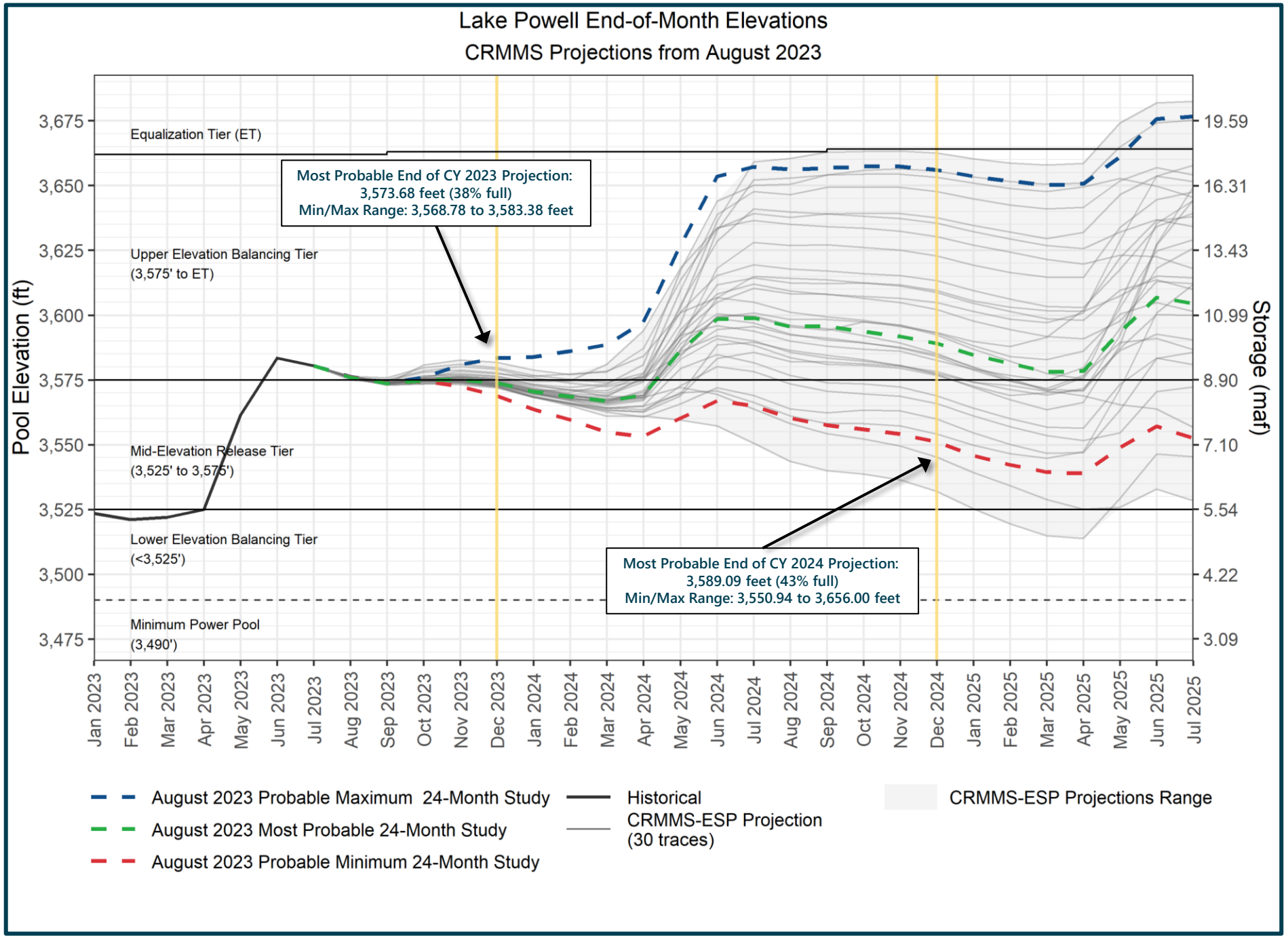
[6] Of which 2.32 maf is apportioned to Arizona, 4.4 maf to California, and 0.280 maf to Nevada

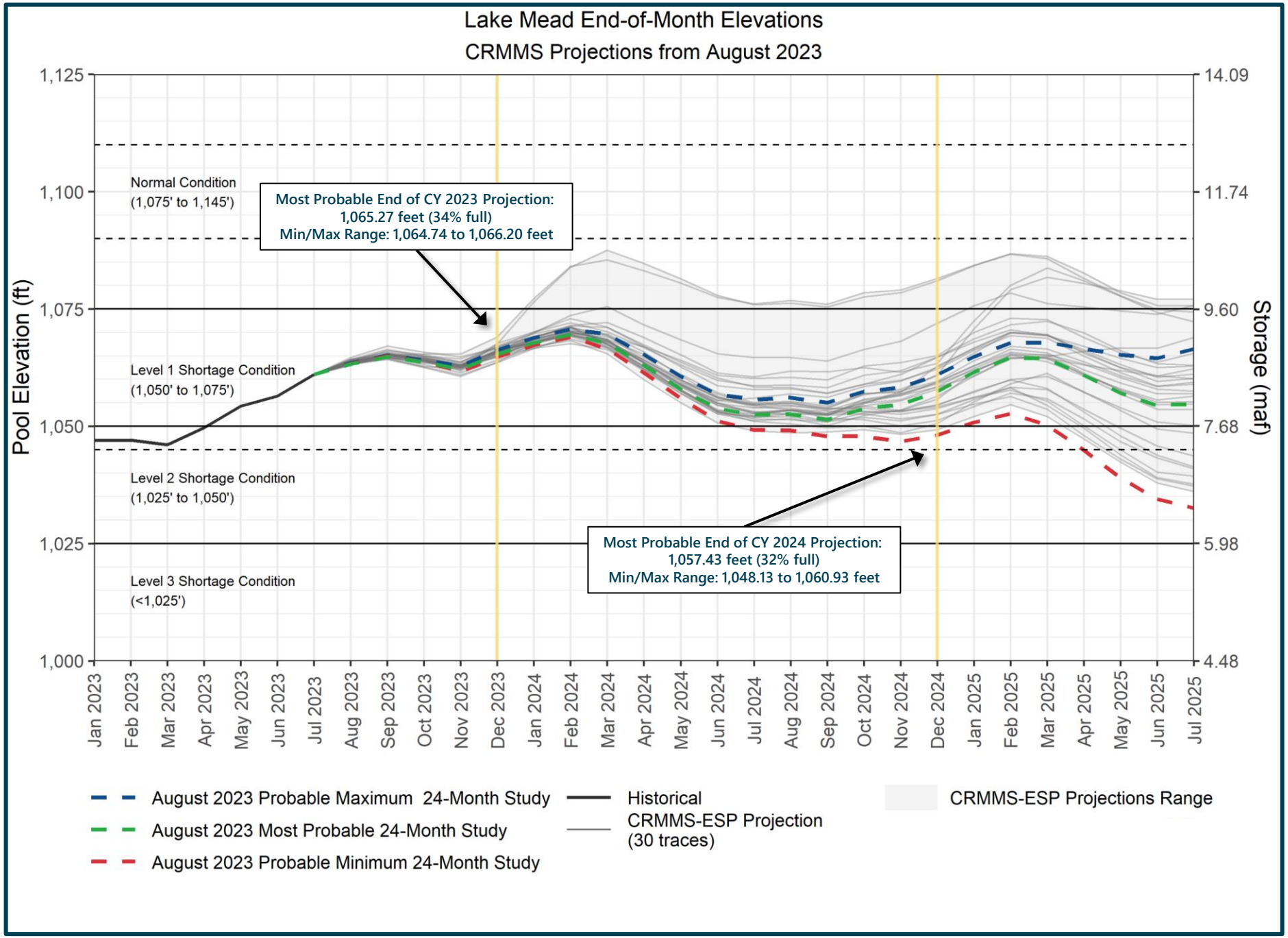
[7] Whenever Lake Mead is below elevation 1,025 feet, the Secretary shall consider whether hydrologic conditions together with anticipated deliveries to the Lower Division States and Mexico is likely to cause the elevation at Lake Mead to fall below 1,000 feet. Such consideration, in consultation with the Basin States, may result in the undertaking of further measures, consistent with applicable Federal law.

[1] Lake Powell and Lake Mead operational tier determinations will be documented in the draft 2024 AOP.

Upper Basin Reservoir Operations *in Water Year 2023*

- 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's projected end of calendar year (CY) 2022 "tier determination" elevation in the August 2022 24-Month Study determined Lake Powell's operating tier in water year (WY) 2023
  - Lake Powell will operate in the Lower Elevation Balancing Tier where Lake Powell and Lake Mead will balance contents with Glen Canyon Dam release volumes no less than 7.0 maf and no more than 9.5 maf
- Consistent with the provisions of the 2007 Interim Guidelines, and to preserve the benefits to Glen Canyon Dam facilities from 2022 Operations into 2023 and 2024, Reclamation will consult with the Basin States on monthly and annual operations. 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.
  - The Glen Canyon Dam annual release was initially set to 7.00 maf
  - In April 2023, Reclamation evaluated hydrologic conditions and determined balancing releases are appropriate under the conditions established in the 2007 Interim Guidelines
  - Balancing releases will be limited (with a minimum of 7.00 maf) to protect Lake Powell from declining below elevation 3,525 feet at the end of December 2023. Lake Powell will release between 7.0 MAF and 9.5 MAF in WY 2023
  - Reclamation will remove the operational neutrality of the 0.480 maf that was retained in Lake Powell under the May 2022 action, such that balancing releases are based on physical elevations of Lake Powell and Lake Mead


Lake Powell End-of-Month Elevations
CRMMS Projections from August 2023
Pool Elevation (ft)
Storage (maf)
3,675
3,650
3,625
3,600
3,575
3,550
3,525
3,500
3,475
19.59
16.31
13.43
10.99
8.90
7.10
5.54
4.22
3.09
Equalization Tier (ET)
Upper Elevation Balancing Tier
(3,575' to ET)
Mid-Elevation Release Tier
(3,525' to 3,575')
Lower Elevation Balancing Tier
(<3,525')
Minimum Power Pool
(3,490')
Most Probable End of CY 2023 Projection:
3,573.68 feet (38% full)
Min/Max Range: 3,568.78 to 3,583.38 feet
Most Probable End of CY 2024 Projection:
3,589.09 feet (43% full)
Min/Max Range: 3,550.94 to 3,656.00 feet
Jan 2023
Feb 2023
Mar 2023
Apr 2023
May 2023
Jun 2023
Jul 2023
Aug 2023
Sep 2023
Oct 2023
Nov 2023
Dec 2023
Jan 2024
Feb 2024
Mar 2024
Apr 2024
May 2024
Jun 2024
Jul 2024
Aug 2024
Sep 2024
Oct 2024
Nov 2024
Dec 2024
Jan 2025
Feb 2025
Mar 2025
Apr 2025
May 2025
Jun 2025
Jul 2025
August 2023 Probable Maximum 24-Month Study
August 2023 Most Probable 24-Month Study
August 2023 Probable Minimum 24-Month Study
Historical
CRMMS-ESP Projection
(30 traces)
CRMMS-ESP Projections Range


Lake Mead End-of-Month Elevations
CRMMS Projections from August 2023
Pool Elevation (ft)
Storage (maf)
1,125
1,100
1,075
1,050
1,025
1,000
14.09
11.74
9.60
7.68
5.98
4.48
Normal Condition
(1,075' to 1,145')
Level 1 Shortage Condition
(1,050' to 1,075')
Level 2 Shortage Condition
(1,025' to 1,050')
Level 3 Shortage Condition
(<1,025')
Most Probable End of CY 2023 Projection:
1,065.27 feet (34% full)
Min/Max Range: 1,064.74 to 1,066.20 feet
Most Probable End of CY 2024 Projection:
1,057.43 feet (32% full)
Min/Max Range: 1,048.13 to 1,060.93 feet
Jan 2023
Feb 2023
Mar 2023
Apr 2023
May 2023
Jun 2023
Jul 2023
Aug 2023
Sep 2023
Oct 2023
Nov 2023
Dec 2023
Jan 2024
Feb 2024
Mar 2024
Apr 2024
May 2024
Jun 2024
Jul 2024
Aug 2024
Sep 2024
Oct 2024
Nov 2024
Dec 2024
Jan 2025
Feb 2025
Mar 2025
Apr 2025
May 2025
Jun 2025
Jul 2025
August 2023 Probable Maximum 24-Month Study
August 2023 Most Probable 24-Month Study
August 2023 Probable Minimum 24-Month Study
Historical
CRMMS-ESP Projection
(30 traces)
CRMMS-ESP Projections Range

2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan, and Binational Water Scarcity Contingency Plan

Total Volumes (kaf)

2024 Reductions + Contributions →

Lake Mead Elevation (feet msl)	2007 Interim Guidelines Shortages		Minute 323 Delivery Reductions	Total Combined Reductions	DCP Water Savings Contributions			Binational Water Scarcity Contingency Plan Savings	Combined Volumes by Country *US: (2007 Interim Guidelines Shortages + DCP Contributions)* *Mexico: (Minute 323 Delivery Reductions + Binational Water Scarcity Contingency Plan Savings)*					Total Combined Volumes
	AZ	NV	Mexico	***Lower Basin States + Mexico***	AZ	NV	CA	Mexico	*AZ Total*	*NV Total*	*CA Total*	*Lower Basin States Total*	*Mexico Total*	***Lower Basin States + Mexico***
1,090 - 1,075	0	0	0	***0***	192	8	0	41	192	8	0	*200*	*41*	***241***
1,075 - 1050	320	13	50	***383***	192	8	0	30	512	21	0	*533*	*80*	***613***
1,050 - 1,045	400	17	70	***487***	192	8	0	34	592	25	0	*617*	*104*	***721***
1,045 - 1,040	400	17	70	***487***	240	10	200	76	640	27	200	*867*	*146*	***1,013***
1,040 - 1,035	400	17	70	***487***	240	10	250	84	640	27	250	*917*	*154*	***1,071***
1,035 - 1,030	400	17	70	***487***	240	10	300	92	640	27	300	*967*	*162*	***1,129***
1,030 - 1,025	400	17	70	***487***	240	10	350	101	640	27	350	*1,017*	*171*	***1,188***
<1,025	480	20	125	***625***	240	10	350	150	720	30	350	*1,100*	*275*	***1,375***

← 2024 Reductions + Contributions

The Secretary of the Interior will take affirmative actions to implement programs designed to create or conserve 100,000 acre-ft per annum or more of Colorado River System water to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the lower basin. All actions taken by the United States shall be subject to applicable law, including availability of appropriations.

Executed System Conservation Agreements

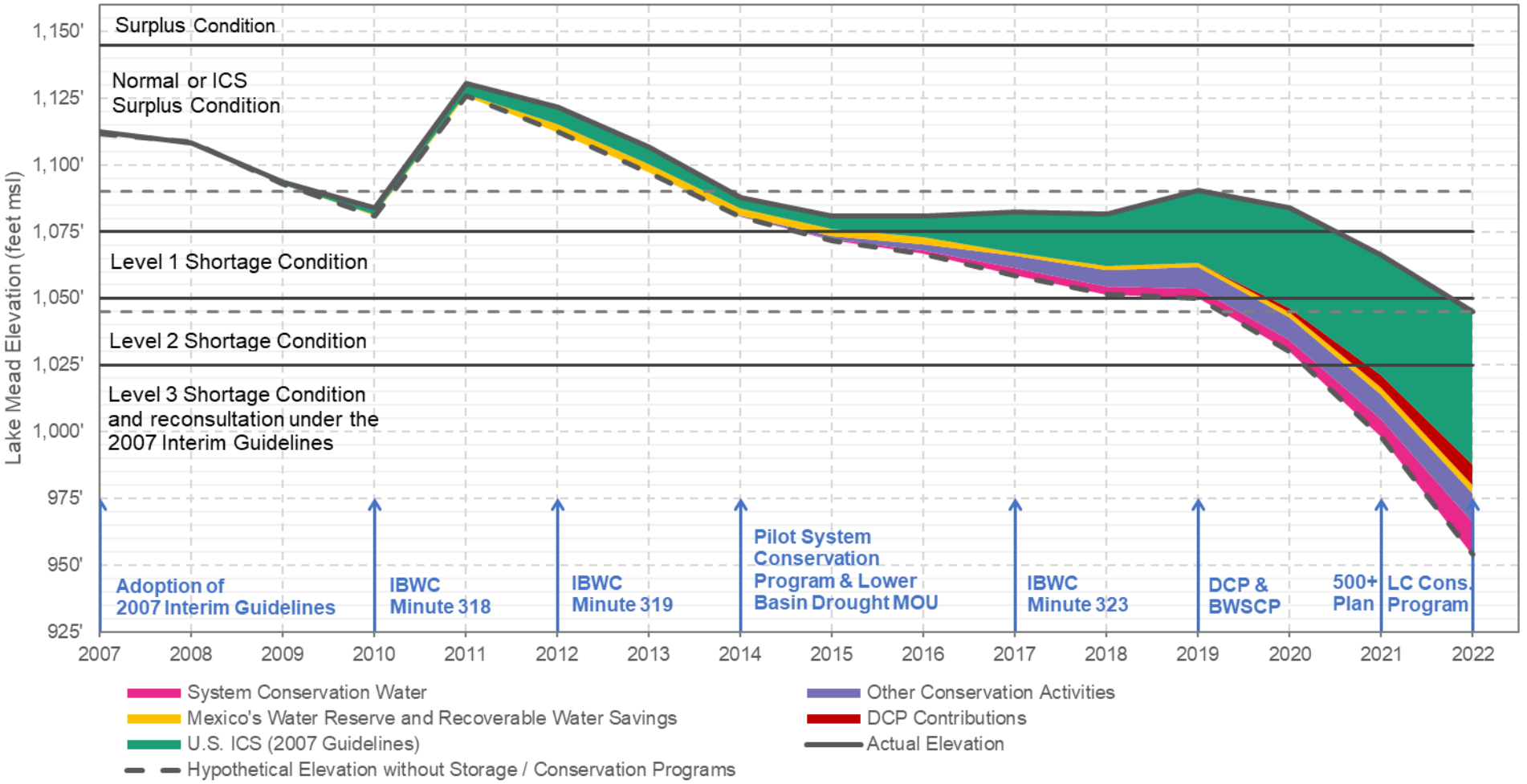
As modeled in the August 2023 Most Probable 24-Month Study[1]

Conservation Activity *(volumes in AF)*	2023	2024	2025	Total
CAP System Conservation Agreements	141,400	127,400	126,400	**395,200**
Fort McDowell Yavapai Nation System Conservation	13,933	13,933	13,933	**41,799**
San Carlos Apache Tribe System Conservation	23,275	0	0	**23,275**
Coachella Groundwater System Conservation	35,000	35,000	35,000	**105,000**
GRIC System Conservation	91,950	125,000	125,000	**341,950**
Cibola Valley IDD System Conservation	2,700	0	0	**2,700**
Gabrych System Conservation	3,240	3,240	3,240	**9,720**
YMIDD System Conservation (500+ Plan)[2]	13,670	0	0	**13,670**
MVIDD System Conservation (500+ Plan)[2]	12,819	0	0	**12,819**
PVID System Conservation (500+ Plan)[2]	58,400	39,800	0	**98,200**
Pilot System Conservation Program	645	545	545	**1,735**
242 Wellfield (Lower Basin DCP activity)	2,000	25,000	25,000	**52,000**
Annual Total *(Non-Shortage/DCP)*	**399,032**	**369,918**	**329,118**	**1,098,068**
Cumulative Total	**399,032**	**768,950**	**1,098,068**	

[1] Volumes reflect executed agreements and/or current operational projections and are subject to change. Additional conservation activities are being considered. After new agreements are finalized and executed, these additional activities will be included in Reclamation's operational modeling.
[2] New agreements under the LC Conservation Program are being developed.

Lake Mead Storage and Conservation[1]

Lake Powell WY Release (maf)															
8.23	8.98	8.24	8.23	12.5	9.47	8.23	7.48	9.00	9.00	9.00	9.00	9.00	8.23	8.23	7.00



[1]*End of calendar year 2022 balances of U.S. ICS and Mexico's Water Reserve, system conservation water, and other voluntary contributions to Lake Mead are provisional and are subject to change.*

Summary of 5-Year Projections: August 2023

In August 2023, Reclamation used the Colorado River Midterm Modeling System (CRMMS) to provide the 5-Year Probabilistic Projections.

CRMMS uses unregulated Upper Basin streamflow forecasts provided by the Colorado Basin River Forecasting Center (CBRFC). The CBRFC generates these forecasts using a technique known as Ensemble Streamflow Prediction (ESP). This technique generates multiple time series, i.e. traces, of forecasted streamflow. Forecasts are created using the Sacramento Soil Moisture Accounting hydrologic model, which is initialized with current basin conditions for soil moisture and snowpack and forced with a set of historical time series of precipitation and temperature that matches the model calibration period (currently 1991 through 2020). This process results in a 30-member ensemble for monthly streamflow forecasts with temperature and precipitation that match the 1991-2020 climatological period.

Key Results

Event or System Condition	2024	2025	2026	2027[1]	2028[1]
	Lake Powell				
Lake Powell less than 3,525 feet	0%	7%	13%	13%	13%
Below Minimum Power Pool (Powell < 3,490 ft in any month)	0%	0%	0%	0%	3%
	Lake Mead				
(Mead ≤ 1,020 ft)	0%	0%	3%	10%	7%
(Mead < 1,000 ft)	0%	0%	0%	0%	3%

[1] For modeling purposes, simulated years beyond 2026 assume a continuation of the 2007 Interim Guidelines, the 2019 Colorado River Basin Drought Contingency Plans, and Minute 323, including the Binational Water Scarcity Contingency Plan. Except for certain provisions related to ICS recovery and Upper Basin demand management, operations under these agreements are in effect through 2026. Reclamation initiated the process to develop operations for post-2026 in June 2023, and the modeling assumptions described here are subject to change for the analysis to be used in that process.

Upper Basin – Lake Powell
Percent of Traces with Event or System Condition
Results from August 2023 CRMMS-ESP (values in percent)

Event or System Condition	2024	2025	2026	2027[5]	2028[5]
Equalization Tier (Powell ≥ Equalization [EQ] Elevation)	**0**	**10**	**17**	**20**	**23**
Equalization – annual release > 8.23 maf	*0*	*10*	*17*	*20*	*23*
Equalization – annual release = 8.23 maf	*0*	*0*	*0*	*0*	*0*
Upper Elevation Balancing Tier (Powell < EQ Elevation and ≥ 3,575 ft)	**0**	**60**	**60**	**57**	**57**
Upper Elevation Balancing – annual release > 8.23 maf	*0*	*57*	*60*	*53*	*40*
Upper Elevation Balancing – annual release = 8.23 maf	*0*	*0*	*0*	*3*	*17*
Upper Elevation Balancing – annual release < 8.23 maf	*0*	*3*	*0*	*0*	*0*
Mid-Elevation Release Tier (Powell < 3,575 and ≥ 3,525 ft)	**100**	**30**	**17**	**13**	**10**
Mid-Elevation Release – annual release = 8.23 maf	*0*	*0*	*0*	*0*	*3*
Mid-Elevation Release – annual release = 7.48 maf	*100*	*30*	*17*	*13*	*7*
Lower Elevation Balancing Tier (Powell < 3,525 ft)	**0**	**0**	**7**	**10**	**10**
Lower Elevation Balancing – annual release > 8.23 maf	*0*	*0*	*0*	*3*	*3*
Lower Elevation Balancing – annual release < 8.23 maf	*0*	*0*	*7*	*7*	*7*

Notes:
[1] Modeled operations include the 2007 Interim Guidelines, Upper Basin Drought Response Operations, Lower Basin Drought Contingency Plan, and Minute 323, including the Binational Water Scarcity Contingency Plan.
[4] Reservoir conditions for 2023-2028 were simulated using the August 2023 CRMMS in ensemble mode using the CBRFC unregulated inflow forecast ensemble (CRMMS-ESP) dated August 1, 2023.
[5] For modeling purposes, simulated years beyond 2026 assume a continuation of the 2007 Interim Guidelines, the 2019 Colorado River Basin Drought Contingency Plans, and Minute 323, including the Binational Water Scarcity Contingency Plan. Except for certain provisions related to ICS recovery and Upper Basin demand management, operations under these agreements are in effect through 2026. Reclamation initiated the process to develop operations for post-2026 in June 2023, and the modeling assumptions described here are subject to change for the analysis to be used in that process.
[6] Percentages shown in this table may not be representative of the full range of future possibilities that could occur with different modeling assumptions.
[7] Percentages shown may not sum to 100% due to round to the nearest percent.

Lower Basin – Lake Mead
Percent of Traces with Event or System Condition
Results from August 2023 CRMMS-ESP (values in percent)

Event or System Condition	2024	2025	2026	2027[5]	2028[5]
Surplus Condition – any amount (Mead ≥ 1,145 ft)	**0**	**0**	**0**	**3**	**7**
Surplus – Flood Control	0	0	0	0	0
Normal or ICS Surplus Condition (Mead < 1,145 and > 1,075 ft)	**0**	**7**	**23**	**20**	**30**
Recovery of DCP ICS / Mexico's Water Savings (Mead >/≥ 1,110 ft)	0	0	0	3	7
DCP Contribution / Mexico's Water Savings (Mead ≤ 1,090 and > 1,075 ft)	0	7	13	7	17
Shortage Condition – any amount (Mead ≤ 1,075 ft)	**100**	**93**	**77**	**77**	**63**
Shortage / Reduction – 1st level (Mead ≤ 1,075 and ≥ 1,050)	*100*	*90*	*53*	*57*	*47*
DCP Contribution / Mexico's Water Savings (Mead ≤ 1,075 and > 1,050 ft)	100	90	53	57	47
Shortage / Reduction – 2nd level (Mead < 1,050 and ≥ 1,025)	*0*	*3*	*23*	*17*	*7*
DCP Contribution / Mexico's Water Savings (Mead ≤ 1,050 and > 1,045 ft)	0	3	3	3	0
DCP Contribution / Mexico's Water Savings (Mead ≤ 1,045 and > 1,040 ft)	0	0	13	0	3
DCP Contribution / Mexico's Water Savings (Mead ≤ 1,040 and > 1,035 ft)	0	0	7	3	3
DCP Contribution / Mexico's Water Savings (Mead ≤ 1,035 and > 1,030 ft)	0	0	0	0	0
DCP Contribution / Mexico's Water Savings (Mead ≤ 1,030 and ≥/> 1,025 ft)	0	0	0	10	0
Shortage / Reduction – 3rd level (Mead < 1,025)	*0*	*0*	*0*	*3*	*10*
DCP Contribution / Mexico's Water Savings (Mead </≤ 1,025 ft)	0	0	0	3	10

Notes:
[1] Modeled operations include the 2007 Interim Guidelines, Upper Basin Drought Response Operations, Lower Basin Drought Contingency Plan, and Minute 323, including the Binational Water Scarcity Contingency Plan.
[4] Reservoir conditions for 2023-2028 were simulated using the August 2023 CRMMS in ensemble mode using the CBRFC unregulated inflow forecast ensemble (CRMMS-ESP) dated August 1, 2023.
[5] For modeling purposes, simulated years beyond 2026 assume a continuation of the 2007 Interim Guidelines, the 2019 Colorado River Basin Drought Contingency Plans, and Minute 323, including the Binational Water Scarcity Contingency Plan. Except for certain provisions related to ICS recovery and Upper Basin demand management, operations under these agreements are in effect through 2026. Reclamation initiated the process to develop operations for post-2026 in June 2023, and the modeling assumptions described here are subject to change for the analysis to be used in that process.
[6] Percentages shown in this table may not be representative of the full range of future possibilities that could occur with different modeling assumptions.
[7] Percentages shown may not sum to 100% due to round to the nearest percent.

Summary

- Operations in the Colorado River basin have had to adapt due to the 23 years of drought and warming temperatures.
- Lake Powell will operate in a Mid-Elevation Release Tier in WY 2024
- Lake Mead will be operating under a Level 1 Shortage Condition in CY 2024.
- Additional agreements, including with Mexico, have yielded a considerable amount of conserved water in Lake Mead
- As high runoff variability continues, additional actions are needed to offset the impacts of low runoff conditions and keep the System sustainable.

Colorado River Drought

For further information:

https://www.usbr.gov/uc/water/index.html

https://www.usbr.gov/lc/riverops.html

https://www.usbr.gov/lc/region/g4000/riverops/coriver-projections.html

BUREAU OF RECLAMATION