COLORADO
Colorado Water Conservation Board
Department of Natural Resources

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Jared Polis, Governor

Dan Gibbs, DNR Executive Director

Lauren Ris, CWCB Director

TO: Colorado Water Conservation Board Members

FROM: Amy Ostdiek and Michelle Garrison

DATE: November 20, 2025

SUBJECT: Agenda Item 16: Colorado River Updates

This is an informational item with no board action requested.

1. Hydrology and operations update

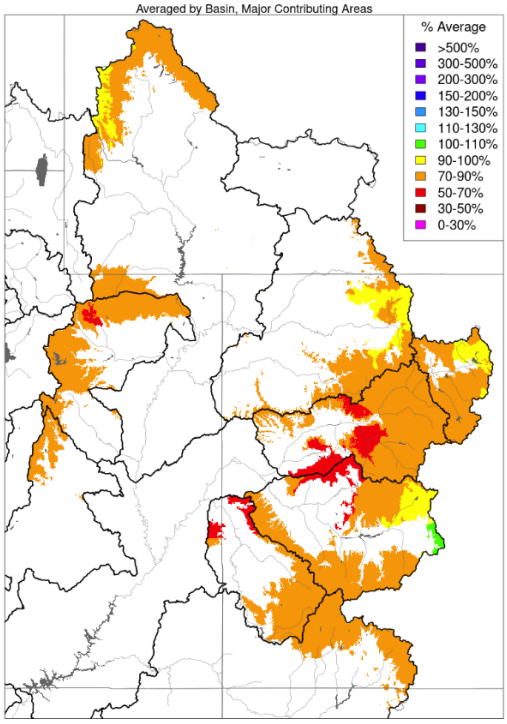
Hydrology

Aridification and extended drought conditions have placed significant strain on basin storage and on water users in the Upper Basin. Water Year 2024 precipitation was near average, while streamflow was below average. WY 2025 precipitation and streamflow were significantly below average. Inflow into Lake Powell was only 49% of average, making WY 2025 the fifth driest on record. For WY 2026, tropical storm remnants produced heavy precipitation in some areas of the Upper Basin in October, while November precipitation is expected to be below average. Below-average Lake Powell inflow forecasts for WY 2026 reflect recent precipitation, snowpack and soil moisture conditions. Climate forecasts indicate an increased likelihood of warmer than average conditions and drier than average conditions throughout the winter and spring, particularly in the southern subbasins.

Drought conditions increased in severity and reservoir storage conditions deteriorated in western Colorado and throughout the basin. Long-term impacts from depleted storage are expected to continue, as indicated in current forecasts for reservoir operations.

Water Year Precipitation, October 2024 - September 2025

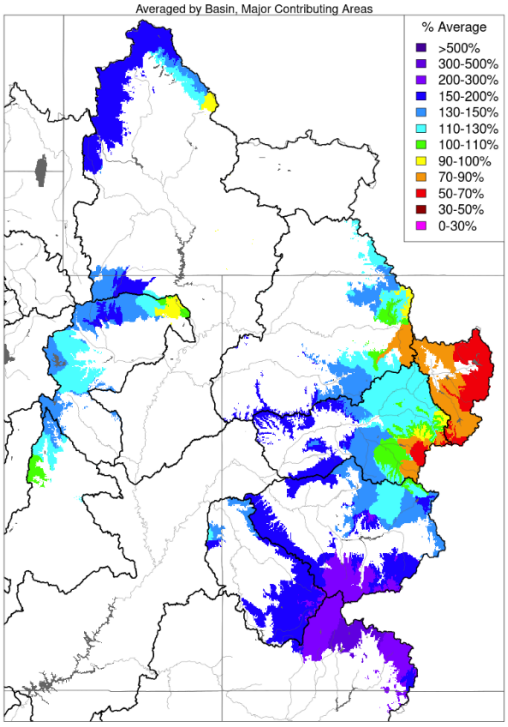
Averaged by Basin, Major Contributing Areas



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

Water Year Precipitation, October 2025 - October 2025

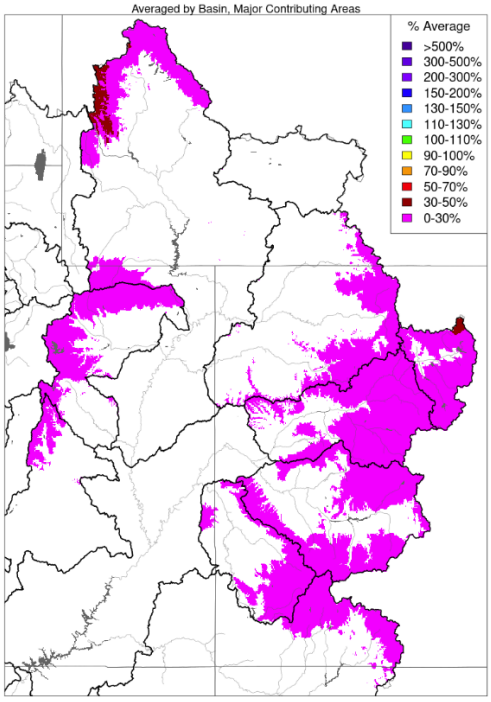
Averaged by Basin, Major Contributing Areas



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

Month to Date Precipitation - November 07 2025

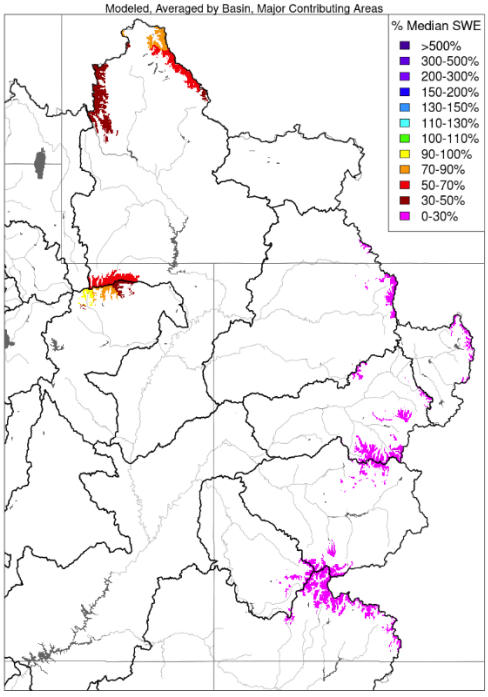
Averaged by Basin, Major Contributing Areas



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

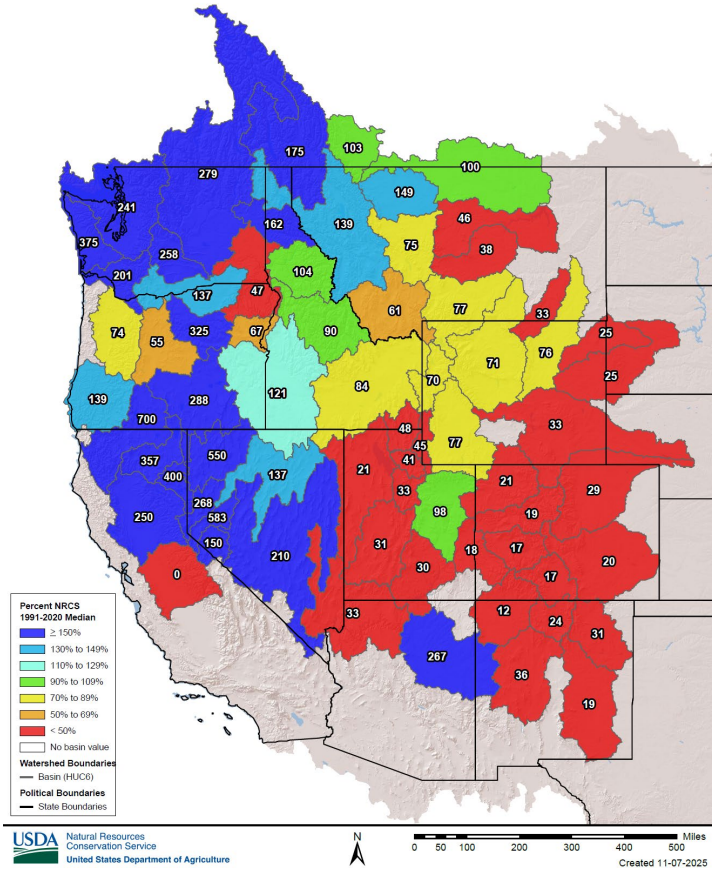
Snow Conditions - November 06 2025

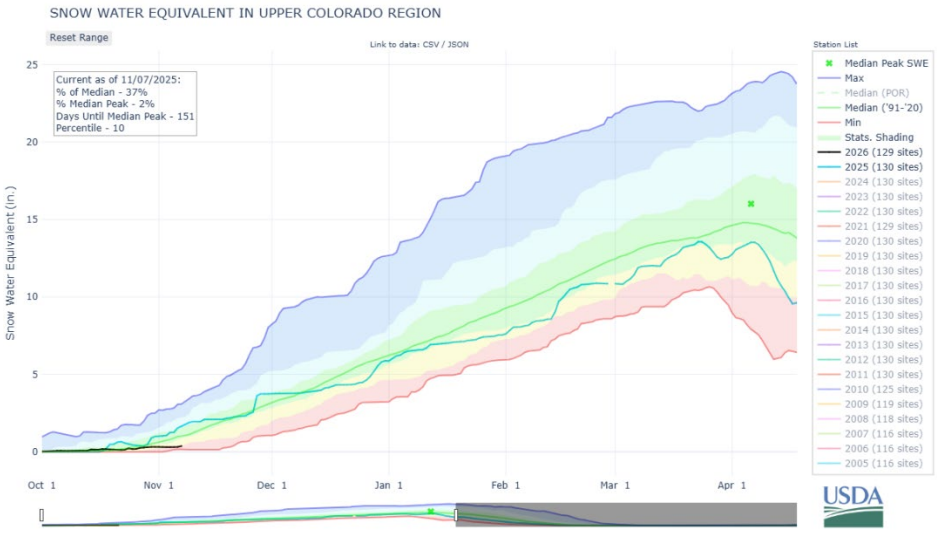
Modeled, Averaged by Basin, Major Contributing Areas

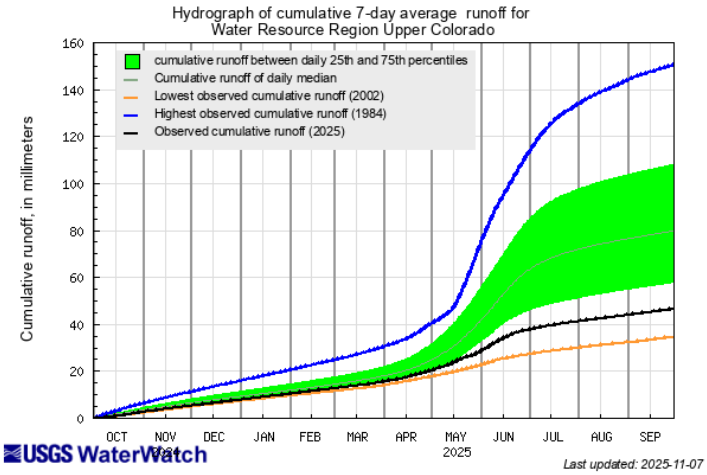


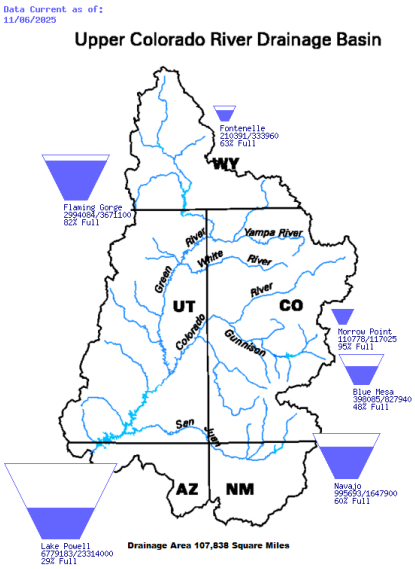
Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

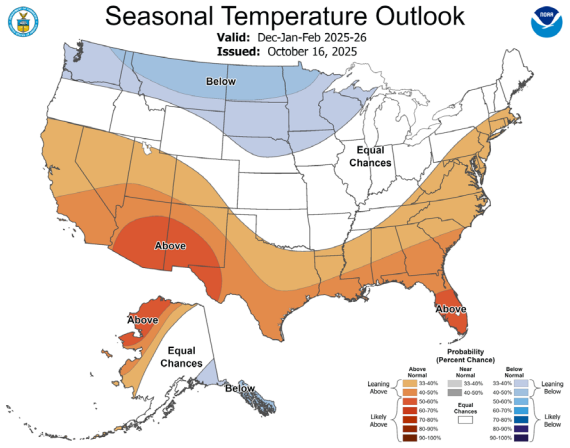
Snow Water Equivalent	Westwide SNOTEL Percent NRCS 1991-2020 Median	November 6, 2025, end of day

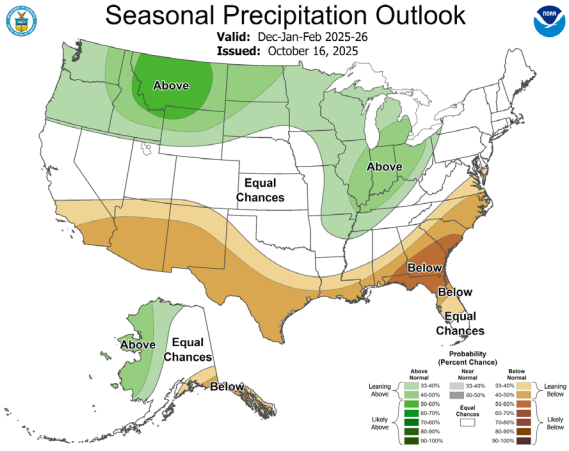


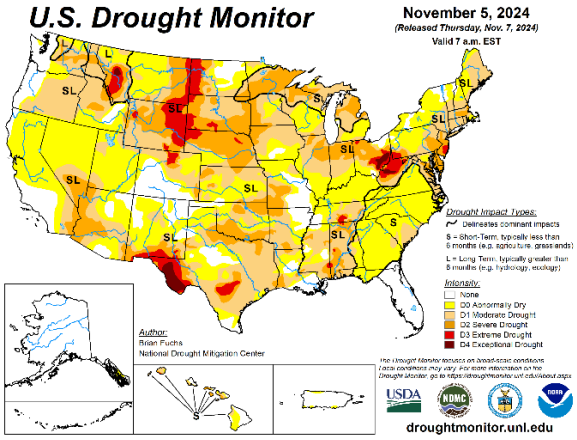


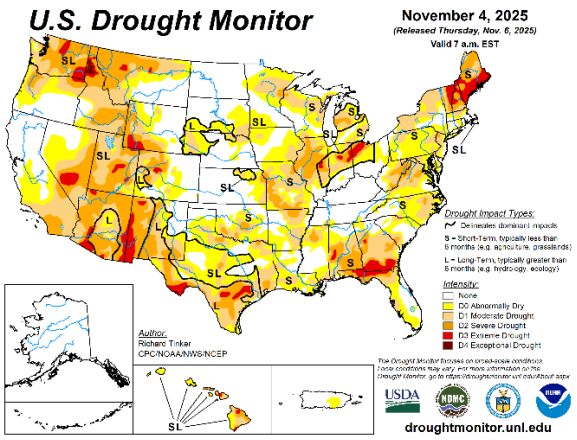

Hydrograph of cumulative 7-day average runoff for
Water Resource Region Upper Colorado
cumulative runoff between daily 25th and 75th percentiles
Cumulative runoff of daily median
Lowest observed cumulative runoff (2002)
Highest observed cumulative runoff (1984)
Observed cumulative runoff (2025)
Cumulative runoff, in millimeters
0
20
40
60
80
100
120
140
160
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
2025
USGS WaterWatch
Last updated: 2025-11-07


Data Current as of:
11/06/2025
Upper Colorado River Drainage Basin
WY
UT
CO
AZ
NM
Green River
White River
Yampa River
Colorado
Gunnison
San Juan
Fontenelle
210391/333960
63% Full
Flaming Gorge
2594084/3671100
82% Full
Morrow Point
117778/170125
95% Full
Blue Mesa
388985/827940
48% Full
Navajo
995691/1647900
60% Full
Lake Powell
6779183/23314000
29% Full
Drainage Area 107,838 Square Miles


Seasonal Temperature Outlook
Valid: Dec-Jan-Feb 2025-26
Issued: October 16, 2025
Below
Equal Chances
Above
Above
Above
Equal Chances
Below
Probability (Percent Chance)


Seasonal Precipitation Outlook
Valid: Dec-Jan-Feb 2025-26
Issued: October 16, 2025
Above
Above
Equal Chances
Below
Below
Equal Chances
Above
Equal Chances
Below
Probability (Percent Chance)


U.S. Drought Monitor
November 5, 2024
(Released Thursday, Nov. 7, 2024)
Valid 7 a.m. EST
Drought Impact Types:
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Brian Fuchs
National Drought Mitigation Center
droughtmonitor.unl.edu


U.S. Drought Monitor
November 4, 2025
(Released Thursday, Nov. 6, 2025)
Valid 7 a.m. EST
Drought Impact Types:
Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought
Author:
Richard Tinker
CPC/NOAA/NWS/NCEP
droughtmonitor.unl.edu

Operations

Upper Basin

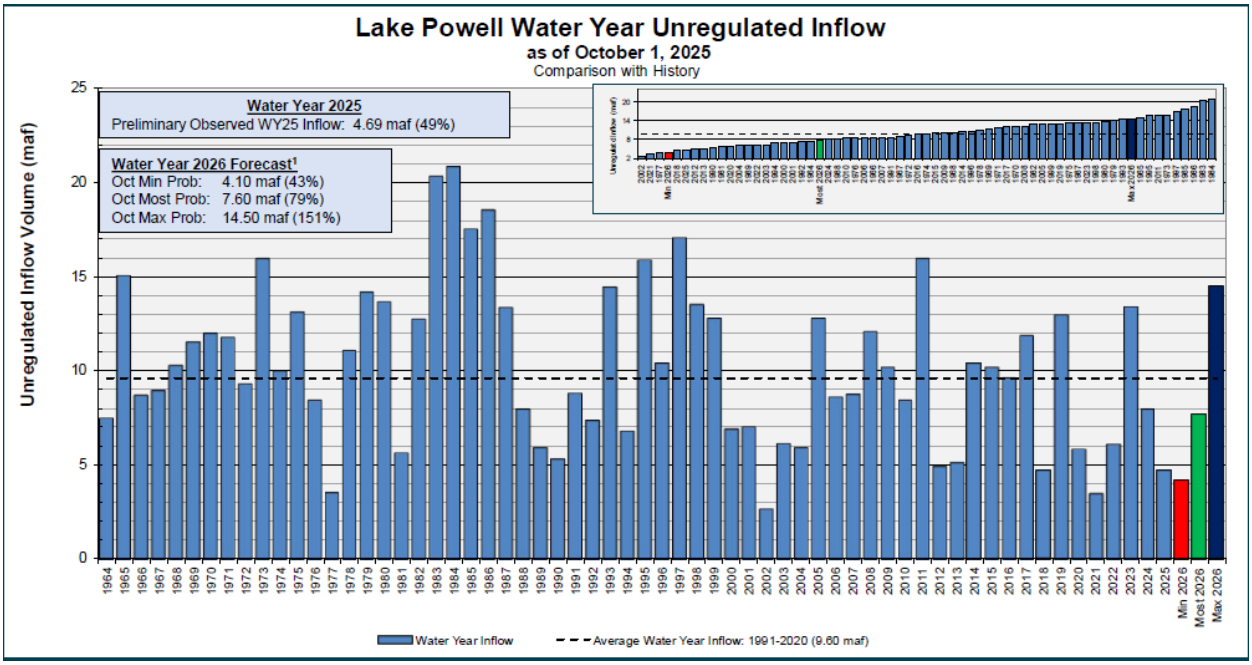
Low inflows and reservoir storage prompted multiple reservoir operation changes and Upper Basin Drought Contingency Plan (DCP) activities in WY 2022 and early 2023 to protect critical infrastructure in Lake Powell, including Drought Response Operations Agreement (DROA) releases from Blue Mesa and Flaming Gorge reservoirs to increase Lake Powell elevations. With wet hydrologic conditions in WY 2023, Lake Powell elevations rose significantly in April 2023 and have remained above the 3525' threshold. Blue Mesa and Flaming Gorge reservoirs recovered the previously released water in WY 2024. However, due to release of half of the DROA water from Lake Powell in summer 2023 as part of Lower Elevation Balancing Tier operations, Lake Powell elevations are now lower than they would have been without DROA releases, leaving Lake Powell at increased risk of dropping below critical elevations in the future. The lack of long-term effectiveness of the DROA releases does not match the goals and objectives of the DROA and may factor into future Upper Basin DCP decisions.

As determined by Reclamation's August 2025 24-Month Study, Lake Powell is operating in the Mid-Elevation Release Tier in WY 2026 with a fixed annual release of 7.48 MAF. Streamflow at the Lees Ferry gage includes Lake Powell releases, flow of water around the Glen Canyon dam through bank storage and leakage, and inflows from the Paria River. The 10-year cumulative streamflow at Lees Ferry through WY 2025 was slightly more than 84 million acre-feet.

Lake Powell storage declined significantly in WY 2025 due to extremely low inflows. Lake Powell elevations are projected to drop slightly below the 3525' threshold beginning in early 2026. Reclamation is planning to alter monthly release volumes from Glen Canyon Dam starting in December 2025. Releases will be decreased in winter and spring to maintain higher elevations in Lake Powell through spring runoff and then increased for the remainder of the water year to achieve the 7.48 MAF annual release for WY 2026. The current proposed monthly operational changes are detailed in the table below. Actual monthly operations will be adjusted based on updated Lake Powell inflow forecasts. Significant decreases in forecasted inflows could prompt discussion of potential additional actions to maintain Lake Powell elevations. Staff will provide updates as the snow accumulation and runoff seasons progress.

7.48 LTMP Comparison to Proposed Pattern - using Oct 24MS Most

	7.48 LTMP Pattern (kaf)	Proposed (kaf)	Retained Volume (kaf)	Additional Releases (kaf)	Powell Elevation OCT MOST with 7.48 maf Pattern (ft)	Powell Elevation OCT MOST with Proposed Pattern (ft)	Mead Elevation OCT MOST with 7.48 maf Pattern (ft)	Mead Elevation OCT MOST with Proposed Pattern (ft)
Oct	480	480			3,543.40	3,543.40	1,056.39	1,056.39
Nov	500	500			3,541.07	3,541.07	1,056.62	1,056.62
Dec	600	500	100		3,536.36	3,537.85	1,059.79	1,058.55
Jan	723	625	98		3,529.18	3,532.26	1,062.93	1,060.50
Feb	639	525	114		3,523.63	3,528.61	1,064.97	1,061.17
Mar	675	500	175		3,519.09	3,527.00	1,064.74	1,058.78
Apr	601	490	111		3,517.79	3,527.52	1,061.32	1,053.86
May	599	600		1	3,530.00	3,539.01	1,056.76	1,049.16
Jun	628	800		172	3,547.12	3,552.95	1,053.33	1,047.89
Jul	709	890		181	3,547.17	3,550.50	1,052.40	1,049.32
Aug	758	900		142	3,541.57	3,542.96	1,053.38	1,052.16
Sep	568	670		102	3,538.43	3,538.33	1,052.73	1,052.82
Totals	7480	7480	598	598				



Lower Basin

The table below describes the Interim Guideline Lower Basin shortage tiers, reduction of deliveries to Mexico pursuant to Minute 323, Lower Basin DCP contributions and Binational Water Scarcity Contingency Plan contributions as determined by projected elevations at Lake Mead. As determined by the August 2025 24-Month Study, in Calendar Year 2026 Lake Mead is operating in a Tier 1 shortage condition, as it did in CY 2025.

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

Total Volumes (kaf)

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***

2025 Reductions + Contributions

2025 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.

The Lower Basin proposed up to 3 million acre-feet of compensated conservation and other activities to address drought conditions as part of Reclamation's Supplemental Environmental Impact Statement (SEIS) process to contemplate additional changes to Lake Powell and Lake Mead reservoir operations through the end of the Interim Guidelines ("near-term operations"). Reclamation released its final Interim Guidelines SEIS and issued its Record of Decision (ROD) in 2024. The final SEIS analyzed only two alternatives, a No Action alternative and the Lower Basin alternative, removing the previously proposed action alternatives from final consideration. Reclamation is adding the expected conservation volumes to its models as conservation agreements with participating entities are signed, which is increasing projected Lake Mead elevations. Estimates from May and August 2025 are summarized in the tables below. Note that the conservation numbers for 2023 include large volumes of water that were not a result of intentional conservation actions, but were produced by extremely wet hydrology in certain locations in the Lower Basin.

Status of SEIS ROD Lower Basin Conservation
As of May 2025

Year	Amount Conserved (acre-feet)	Cumulative Conserved (acre-feet)
2023[1]	1,160,697	1,160,697
2024[1]	871,014	2,031,711
2025[2]	876,483	2,908,194
2026[2]	692,098	3,600,292

Projected Modeled Conservation Activities
As anticipated to be modeled in the August 2025 Most Probable 24-Month Study[1,2]

Year	Modeled Activities (acre-feet)	Cumulative Modeled (acre-feet)
2025[2]	899,821	899,821
2026[2]	805,564	1,705,385
2027[2]	68,669	1,774,054

[1] To date, 2.03 maf has been conserved between 2023 and 2024. Information on accounted system conservation is documented in the 2023 and 2024 Water Accounting Reports, respectively, and can be found online at: https://www.usbr.gov/lc/region/g4000/wtracct.html.
[2] All projected volumes are as modeled in the August 2025 24-Month Study and are subject to change. Additional conservation activities are being considered including system conservation, ICS, and other conserved water in 2025, 2026, and 2027. These additional activities will be included in Reclamation's operational modeling.

Lower Basin Modeled Conservation[1]

As of July 2025 (all volumes in acre-feet)

State	Conservation Activity	2025	2026	2027	Total
AZ	CAP System Conservation Agreements	125,503	101,000	7,224	233,727
	Cathcart Farms System Conservation	61	61	0	122
	Cibola Valley IDD System Conservation	2,328	2,329	0	4,657
	Fort McDowell Yavapai Nation System Conservation	13,933	13,933	0	27,866
	GM Gabrych System Conservation	3,240	3,240	0	6,480
	GRIC System Conservation	115,000	125,000	26,300	266,300
	Hopi Tribe System Conservation	3,059	3,059	0	6,118
	MVIDD System Conservation	13,694	13,694	0	27,388
	San Carlos Apache Tribe System Conservation	23,451	23,451	0	46,902
	YMIDD System Conservation	22,010	22,010	0	44,020
CA	Coachella Groundwater System Conservation	35,000	35,000	0	70,000
	Coachella Ag System Conservation	3,889	10,000	0	13,889
	IID System Conservation	250,000	192,360	0	442,360
	MWD ICS Creation	0	0	0	0
	MWD System Conservation	0	0	0	0
	PVID-MWD System Conservation	117,021	79,830	0	196,851
	Bard-MWD System Conservation	9,286	11,400	0	20,686
	Quechan Indian Tribe-MWD System Conservation	13,000	13,000	0	26,000
NV	SNWA System Conservation Water	86,000	86,000	0	172,000
	SNWA Tributary Conservation	35,000	35,000	35,000	105,000
Other	242 Wellfield Additional Pumping Agreement	25,000	32,000	0	57,000
	PSCP	3,346	3,197	145	6,688
	Annual Total	899,821	805,564	68,669	1,774,054
	Cumulative Total	899,821	1,705,385	1,774,054	

[1] All projected volumes are subject to change. Additional conservation activities are being considered including system conservation, ICS, and other conserved water in 2025 through 2027. These additional activities will be included in Reclamation's operational modeling.

[2] Reclamation has funded a total of 2.03 maf of conservation between 2023-2024 in accordance with the Reservoir Protection Conservation requirements under the 2007 Interim Guidelines SEIS ROD. Information on accounted system conservation can be found online at: https://www.usbr.gov/lc/region/g4000/wtracct.html.

Minute 330: Expansion of Colorado River Temporary Measures

The United States and Mexico entered into Minute 330 to the 1944 U.S. - Mexico Water Treaty in April 2024. This agreement includes a commitment from Mexico to generate 400,000 acre-feet of water through conservation projects through 2026. 250,000 acre-feet of water will benefit the Colorado River System, and Mexico will receive $65 million from the United States to help fund that conservation effort. The additional 150,000 acre-feet of water will be deferred for delivery beyond CY 2026 as part of Mexico's Water Reserve. These volumes are in addition to any volumes conserved under Minute 323. Both minutes expire in 2026. The schedule for generation of water by Mexico is described in the table below.

Date	Minimum Cumulative Volume (acre-feet)	Minimum Cumulative Volume (cubic meters)
By December 31, 2024	133,000	164,054,000
By December 31, 2025	333,000	410,752,000
By December 31, 2026	400,000	493,396,000

Minute 330 can be accessed at the following link: Minute No. 330

LTEMP

In 2024 Reclamation also released its Final SEIS and ROD for the Glen Canyon Dam Long-Term Experimental and Management Plan (LTEMP) that explores options for changing monthly and daily releases and release temperatures to help prevent establishment of smallmouth bass and other non-native fish in the Grand Canyon and to alter sediment accounting and implementation windows for high flow experiments to distribute sand higher on sandbars. The options include releases through the bypass tubes, limited by new interim operating guidance to prevent further damage to the bypass tubes at low elevations. LTEMP does not alter annual releases, which are determined according to the Interim Guidelines.
Bypass releases to reduce water temperatures from Glen Canyon Dam to disadvantage smallmouth bass reproduction were conducted July – November 2024 resulting in a hydropower cost to the Basin Fund exceeding $18 million. Monitoring indicated the releases were likely effective in reducing smallmouth bass reproduction. Bypass releases were conducted again August – October 2025 with a shortened target stream reach. Decreases in the duration and stream reach are expected to significantly decrease the costs to hydropower in 2025.

2. Post-2026 Operations of Lake Powell and Lake Mead

The Basin States continue negotiations about post-2026 operational guidelines for Lake Powell and Lake Mead. The Bureau of Reclamation has provided a deadline of November 11, 2025, for the Basin States to provide a framework of a deal. At the time of this memo, these discussions are ongoing. Staff will provide a more detailed update at the meeting.