

March 24-Month Study
Date: March 15th 2023

From: Water Resources Group, Salt Lake City
To: All Colorado River Annual Operating Plan (AOP) Recipients

Current Reservoir Status

	February Inflow (unregulated) (acre-feet)	Percent of Average (percent)	March 14 Midnight Elevation (feet)	March 14, Midnight Reservoir Storage (acre-feet)
Fontenelle	27,760	97	6,473.68	128,040
Flaming Gorge	32,271	73	6,005.69	2,451,186
Blue Mesa	19,852	89	7,447.96	298,247
Navajo	18,434	68	6,019.38	860,657
Powell	270,192	74	3,520.49	5,288,912

Expected Operations

The operation of Lake Powell and Lake Mead in the March 2023 24-Month Study is pursuant to the December 2007 Record of Decision on Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations of Lake Powell and Lake Mead (Interim Guidelines), and reflects the 2023 Annual Operating Plan (AOP). Pursuant to the Interim Guidelines, the August 2022 24-Month Study projections of the January 1, 2023, system storage and reservoir water surface elevations set the operational tier for the coordinated operation of Lake Powell and Lake Mead during 2023.

In light of the prolonged drought, low runoff conditions, and depleted storage at Lake Powell, the Department of the Interior implemented an action under Sections 6 and 7.D of the 2007 Interim Guidelines specifically reducing the Glen Canyon Dam annual releases to 7.00 million acre-feet (maf) in water year (WY) 2022.¹ This action was undertaken in conjunction with the 2022 Drought Response Operations Plan² (2022 Plan) actions which together are anticipated to add approximately one million additional acre-feet of storage to Lake Powell by April 2023. The Department of Interior and Reclamation will work to determine the manner in which to operate Glen Canyon Dam to ensure the benefits of these actions are preserved.

The 2022 Plan provisions to protect a target elevation at Lake Powell of 3,525 feet through adjusting Glen Canyon Dam monthly volume releases have been incorporated into the March 2023 24-Month Study and include an adjusted monthly release volume pattern for Glen Canyon Dam that will hold back a total of 0.523 maf in Lake Powell from December 2022 through April 2023. There are continued discussions when and how that same amount of water (0.523 maf) will be released later in the water year. The annual

¹ For more information: <https://www.usbr.gov/uc/DocLibrary/Plans/20220503-2022DROA-GlenCanyonDamOperationsDecisionLetter-508-DOI.pdf>

² For more information: <https://www.usbr.gov/uc/DocLibrary/Plans/20220429-2022DroughtResponseOperationsPlan-ApprovalMemo-508-DOI.pdf>

release volume from Lake Powell for WY 2023 will continue to be 7.00 maf, or higher, according to the provisions outlined below. If future projections indicate the monthly adjustments are insufficient to protect Powell's elevation, Reclamation will again consider additional water releases from the upstream initial units of the Colorado River Storage Project according to the provisions of the 2022 Plan.

The reduction of releases from Lake Powell from 7.48 maf to 7.00 maf in WY 2022 resulted in a reduced release volume of 0.480 maf that normally would have been released from Glen Canyon Dam to Lake Mead as part of the 7.48 maf annual release volume, consistent with routine operations under the 2007 Interim Guidelines. The reduction of releases from Glen Canyon Dam in WY 2022 (resulting in increased storage in Lake Powell) did not affect the operating determinations for 2023 and was accounted for "as if" this volume of water had been delivered to Lake Mead. The 24-Month Study will continue to model 2023 and 2024 operations at lakes Powell and Mead as if the 0.480 maf had been delivered to Lake Mead for operating condition purposes both for the U.S. Lower Basin and for Mexico unless otherwise determined through additional consultation and communication as described below. The elevations listed in this report reflect the projected physical elevations at each reservoir after implementing operations as described.

Using the approach described in the immediately preceding paragraph, the August 2022 24-Month Study projected the January 1, 2023, Lake Powell elevation to be less than 3,525 feet. Consistent with Section 6.D.1 of the Interim Guidelines, Lake Powell's operations in WY 2023 will be governed by the Lower Elevation Balancing Tier with an initial projected WY release volume of 7.00 maf. Because the 2022 operations were designed to protect critical elevations at Lake Powell, Reclamation will implement Lower Elevation Balancing Tier operations in a way that continues to protect these critical elevations, or preserves the benefits of the 2022 operations to protect Lake Powell, in WY 2023. Specifically, Reclamation modeled operations in WY 2023 as follows:

- The Glen Canyon Dam annual release has initially been set to 7.00 maf and in April 2023 Reclamation will evaluate hydrologic conditions to determine if balancing releases may be 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;
- Balancing releases will take into account operational neutrality of the 0.480 maf that was retained in Lake Powell under the May 2022 action.¹ Any Lake Powell balancing release volume will be calculated as if the 0.480 maf had been delivered to Lake Mead in WY 2022; and
- The modeling approach for WY 2023 will apply to 2024.

Consistent with the operating approach described above, the March 2023 24-Month Study projects a WY release volume of 7.83 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 consultations 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 2022 Drought Response Operations Agreement (DROA) Plan for May 2022 through April 2023 has been amended to suspend 2022 DROA Plan releases for the remainder of March and April 2023. The suspension of 2022 DROA Plan releases occurred on March 7, 2023. A total DROA release of approximately 463 kaf occurred under the 2022 DROA Plan.

Reclamation continues to consult with the Drought Response Operating Agreement Parties and the other Colorado River Basin States on the implementation of the Drought Response Operations Plans and potential consideration of 2023 Drought Response Operations. The results of these consultations and other factors may result in adjustments from what is presented in this 24-Month Study.

Reclamation will continue to carefully monitor hydrologic and operational conditions and assess the need for additional responsive actions and/or changes to operations. Reclamation will continue to consult with the Basin States, Basin Tribes, the Republic of Mexico, and other partners on Colorado River operations to consider and determine whether additional measures should be taken to further enhance the preservation of these benefits, as well as recovery protocols, including those of future protective measures for both Lakes Powell and Mead.

The August 2022 24-Month Study projected the January 1, 2023 Lake Mead elevation, determined as if the 0.480 maf had been delivered to Lake Mead in WY 2022, to be below 1,050 feet and above 1,045 feet. Consistent with Section 2.D.1 of the Interim Guidelines, a Shortage Condition consistent with Section 2.D.1.b will govern the operation of Lake Mead for Calendar Year (CY) 2023. In addition, Section III.B of Exhibit 1 to the Lower Basin Drought Contingency Plan (DCP) Agreement will govern the operation of Lake Mead for CY 2023. Efforts to conserve additional water in Lake Mead under a 2021 Lower Basin Memorandum of Understanding (MOU) to facilitate near-term actions to maintain the water surface elevation of Lake Mead will also take place in CY 2023.

Current runoff projections into Lake Powell are provided by the National Weather Service's Colorado Basin River Forecast Center and are as follows. The observed unregulated inflow into Lake Powell for the month of February was 0.270 maf or 74 percent of the 30-year average from 1991 to 2020. The March 2023 unregulated inflow forecast for Lake Powell is 0.450maf or 75 percent of the 30-year average. The 2023 April through July unregulated inflow forecast is 8.000 maf or 125 percent of average.

The 2023 AOP is available online at:

<https://www.usbr.gov/uc/water/rsvrs/ops/aop/AOP23.pdf>.

The Interim Guidelines are available online at:

<https://www.usbr.gov/lc/region/programs/strategies/RecordofDecision.pdf>.

The Colorado River DCPs are available online at:

<https://www.usbr.gov/dcp/finaldocs.html>.

The 2021 Lower Basin MOU is available online at:

https://www.usbr.gov/lc/region/g4000/2021_MOU.pdf.

The Upper Basin DROA is online at:

<https://www.usbr.gov/dcp/droa.html>.

The Upper Basin Hydrology Summary is available online at:

https://www.usbr.gov/uc/water/crsp/studies/24Month_03_ucb.pdf.

Fontenelle Reservoir

As of March 5, 2023, the Fontenelle Reservoir pool elevation is 6475.61 feet, which amounts to 41 percent of live storage capacity. Inflows for the month of February totaled approximately 27,760 acre-feet (af) or 97 percent of average.

Winter release has been set at 950 cfs to meet spring elevation targets and are forecasted to remain at this level through winter, subject to hydrology. The winter release is planned to be maintained until March or April when the ice along the Green River begins to melt.

The March final forecast for unregulated inflows into Fontenelle for the next three months projects below average conditions. March, April, and May Most Probable inflow volumes amount to 45,000 af (79 percent of average), 70,000 af (83 percent of average), and 125,000 af (71 percent of average), respectively.

The next Fontenelle Working Group meeting is scheduled for April 27, 2023 at 10:00 a.m. at Green River, WY, tentatively. Details on the meeting will be provided as we get closer to the meeting date. Prior Fontenelle Working Group meeting minutes are available online on USBR's website at <https://www.usbr.gov/uc/water/crsp/wg/ft/ftcurrnt.html>. The Fontenelle Working Group is an open public forum for information exchange between Reclamation and other parties associated with the operation of Fontenelle Reservoir.

Flaming Gorge

As of March 8, 2023 (end of day), Flaming Gorge Reservoir pool elevation is 6005.73 feet, which amounts to 67 percent of live storage capacity. Unregulated inflow volume for the month of February is approximately 58,000 af, which is 73 percent of the average February unregulated inflow volume. The current average daily release is 1,175 cfs.

The 2022 Drought Response Operations Agreement (DROA) Plan for May 2022 through April 2023 has been amended to suspend 2022 DROA Plan releases for the remainder of March and April 2023. The suspension of 2022 DROA Plan releases occurred on March 6, 2023. A total DROA release of approximately 463 kaf occurred under the 2022 DROA Plan.

The approved Amendment is posted at <https://www.usbr.gov/dcp/droa.html>. The 2023 DROA Plan is under discussion and proposals developed will be provided through processes outlined in the DROA Framework.

A new operation will be finalized in early May 2023, and this will contain an operation plan from May 2023 through April 2024.

The March forecast for unregulated inflows into Flaming Gorge for the next three months projects slightly below average. March, April, and May forecasted unregulated inflow volumes amount to 105,000 af (99 percent of average), and 125,000 af (100 percent of average), and 210,000 af (84 percent of average), respectively.

Reclamation is planning to hold Flaming Gorge Working Group meetings in March and April similar to the last couple of years. The March meeting will be held on March 16, 2023 at 10 a.m. at the Uintah Conference Center Vernal, Utah (313 E 200 S, Vernal, Utah) and will be held virtually. The April meeting will be held on April 20, 2023 at 10:00 a.m. at the Carbon County Event Center Price, UT (450 S

Fairgrounds Way, Price, Utah) and will be held virtually. The Flaming Gorge Working Group is an open public forum for information exchange between Reclamation and the stakeholders of Flaming Gorge Dam. The public is encouraged to attend and comment on the operations and plans presented by Reclamation at these meetings. Meeting notes from past Working Group meetings are posted on the Working Group webpage. For more information on this group and these meetings please contact Dale Hamilton at 801-379-1186.

Aspinall Unit Reservoirs

As of March 7, 2023, releases from Crystal Dam are approximately 353 cfs. Flows of the Gunnison River in the Black Canyon are being maintained at about 347 cfs while flows in the Whitewater Reach of the Gunnison River are about 824 cfs.

The unregulated inflow volume in February to Blue Mesa was 19,850 af (90 percent of average). Unregulated Inflow volumes forecasted for Blue Mesa for the next three months (March, April and May) are projected to be: 28,000 af (73 percent of average), 60,000 af (78 percent of average) and 215,000 af (107 percent of average), respectively. The March 24-Month Study will be reflective of these new forecasted inflows.

The forecasted 2023 water year unregulated inflow volume to Blue Mesa is projected to be 905,000 af (100 percent of average). The water supply period (April-July) for 2023 is forecasted to be 665,000 af of unregulated inflow (105 percent of average).

Blue Mesa elevation has been steady over the past month and as of March 7, 2022, was 7,447.58 feet above sea level corresponding to a live storage of 296,216 acre-feet which is 36 percent of capacity. By the end of water year 2023 (September 30, 2023) Blue Mesa elevation is projected to be approximately 7,491 feet with about 585,000 acre-feet of storage which will be 71 percent of capacity.

The Aspinall Unit Operations Group is an open public forum for information exchange between Reclamation and the stakeholders of the Aspinall Unit. The public is encouraged to attend and comments on the operations and plans presented by Reclamation at these meetings. Meeting notes from past working Group meetings are posted on the Operations Group webpage. For more information on this group and these meetings please contact Erik Knight in the Grand Junction Area Office at (970) 248-0629.

The next Operations Group meeting will be held April 20, 2023 at 1:00 p.m., in person in Grand Junction Colorado and also broadcast virtually. The in-person meeting will be at Reclamation's Western Colorado Area Office located at 445 West Gunnison Avenue in Grand Junction, Colorado. Contact Erik Knight in the Grand Junction Area Office at (970) 248-0629 to get more information regarding this Operation Group meeting.

Navajo Reservoir

On March 5th, the daily average release rate from Navajo Dam was 300 cfs while reservoir inflow was averaging 600 cfs. The water surface elevation was 6017.55 feet above sea level. At this elevation the live storage is 0.844 maf (51 percent of live storage capacity) and the active storage is 0.218 maf (21 percent of active storage capacity). An average of 13 cfs is currently being diverted to Cutter Reservoir for the Navajo Indian Irrigation Project (NIIP). No water is being diverted to the San Juan-Chama Project (SJC) due to insufficient instream flows above Navajo.

Releases from Navajo Dam are made for authorized purposes of the Navajo Unit and are pursuant to the Record of Decision for the Navajo Reservoir Operations. Releases target the San Juan River Recovery Implementation Program's (SJ RIP) recommended downstream baseflow range of 500 cfs to 1,000 cfs through the critical habitat reach of the San Juan River (Farmington, NM to Lake Powell).

Preliminary modified unregulated inflow (MUI) into Navajo in February was 18.4 kaf, which was 68 percent of average for the month. The release averaged 320 cfs and totaled 17.9 kaf, which was 61 percent of average for the month.

The most probable MUI forecast for March, April, and May, is 52 kaf (63 percent of average), 135 kaf (92 percent of average), and 320 kaf (131 percent of average), respectively.

The official April-July inflow forecasts are as follows:

Min: 540 kaf (86 percent of average, an increase of 115 kaf since the February Official Forecast)

Most: 735 kaf (117 percent of average, an increase of 115 kaf since the February Official Forecast)

Max: 960 kaf (153 percent of average, an increase of 60 kaf since the February Official Forecast)

The median forecast peak elevation at Navajo for spring of 2023 is 6056 ft.

Reclamation conducts Public Operations Meetings three times per year to gather input for determining upcoming operations for Navajo Reservoir. Input from individuals, organizations, and agencies along with other factors such as weather, water rights, endangered species requirements, flood control, hydro power, recreation, fish and wildlife management, and reservoir levels, will be considered in the development of these reservoir operation plans. In addition, the meetings are used to coordinate activities and exchange information among agencies, water users, and other interested parties concerning the San Juan River and Navajo Reservoir. The next meeting will be held on Tuesday, April 18th at 1:00 PM. This meeting is open to the public, and will be held at the Farmington Civic Center, 200 West Arrington, in Farmington, New Mexico (subject to change based on guidance at the time). The meeting will also have a virtual option.

Glen Canyon Dam / Lake Powell

Current Status

The reduction of releases from Lake Powell from 7.48 maf to 7.00 maf in water year 2022 will result in a reduced release volume of 0.480 maf that normally would have been released from Glen Canyon Dam to Lake Mead as part of the 7.48 maf annual release volume, consistent with operations under the 2007 Interim Guidelines. The reduction of releases from Glen Canyon Dam in water year 2022 (resulting in increased storage in Lake Powell) will not affect future operating determinations and will be accounted for "as if" this volume of water had been delivered to Lake Mead. The August 2022 24-Month Study modeled 2023 and 2024 operations at Lakes Powell and Mead as if the 0.480 maf had been delivered to Lake Mead for operating tier/condition purposes both for the U.S. Lower Basin and for Mexico. The elevations listed in the August 2022 24-Month Study report reflected the projected physical elevations at each reservoir after implementing operations as described for water year 2023 tier determination purposes.

Using the approach described in the immediately preceding paragraph, the August 2022 24-Month Study projected the January 1, 2023, Lake Powell elevation to be less than 3,525 feet. Consistent with Section 6.D.1 of the Interim Guidelines, Lake Powell's operations in water year 2023 are governed by the Lower Elevation Balancing Tier (LEBT) with an initial projected water year release volume of 7.00 maf. Because the

2022 operations were designed to protect critical elevations at Lake Powell, Reclamation will implement Lower Elevation Balancing Tier operations in a way that continues to protect these critical elevations or preserves the benefits of the 2022 operations to protect Lake Powell, in water year 2023. Specifically, Reclamation modeled operations in WY 2023 as follows in the August and September 24-Month Studies:

- The Glen Canyon Dam annual release has initially been set to 7.00 maf, and in April 2023 Reclamation will evaluate hydrologic conditions to determine if balancing releases may be 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;
- Balancing releases will take into account operational neutrality of the 0.480 maf that was retained in Lake Powell under the May 2022 action ([May 3rd Letter](#)). Any Lake Powell balancing release volume will be calculated as if the 0.480 maf had been delivered to Lake Mead in WY 2022; and
- The modeling approach for WY 2023 will apply to 2024.

In accordance with the May 3rd Letter, 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.

Reclamation will continue to carefully monitor hydrologic and operational conditions and assess the need for additional responsive actions and/or changes to operations. Reclamation will continue to consult with the Basin States, Basin Tribes, the Republic of Mexico and other partners on Colorado River operations to consider and determine whether additional measures should be taken to further enhance the preservation of these benefits, as well as recovery protocols, including those of future protective measures for both Lakes Powell and Mead. For additional information, the news release can be found here: <https://www.usbr.gov/newsroom/news-release/4294>.

The Bureau of Reclamation announced on May 3, 2022, two separate urgent drought response actions that will help prop up Lake Powell by nearly 1 maf of water over the next 12 months (May 2022 through April 2023). To protect Lake Powell, more water will flow into the lake from upstream reservoirs and less water will be released downstream:

- Under a Drought Contingency Plan adopted in 2019, approximately 500 thousand acre-feet (kaf) of water will come from Flaming Gorge Reservoir, located approximately 455 river miles upstream of Lake Powell.
- Another 480 kaf will be left in Lake Powell by reducing Glen Canyon Dam's annual release volume from 7.48 maf to 7.00 maf, as outlined in the 2007 Interim Guidelines that control operations of Glen Canyon Dam and Hoover Dam.

The 2022 Drought Response Operations Agreement (DROA) Plan for May 2022 through April 2023 has been amended to suspend 2022 DROA Plan releases for the remainder of March and April 2023. The suspension of 2022 DROA Plan releases occurred on March 7, 2023. A total DROA release of

approximately 463 kaf occurred under the 2022 DROA Plan. The plan can be found at the following website: <https://www.usbr.gov/dcp/droa.html>.

For additional information, see the following news release: <https://www.usbr.gov/newsroom/#/news-release/4196>

The unregulated inflow volume to Lake Powell during February was 270 kaf (74 percent of average). The release volume from Glen Canyon Dam in February was 480 kaf. The end of February elevation and storage of Lake Powell were 3,521.04 feet (179 feet from full pool) and 5.32 maf (23 percent of live capacity), respectively.

Current Operations

In addition to daily scheduled fluctuations for power generation, the instantaneous releases from Glen Canyon Dam may also fluctuate to provide 40 megawatts (MW) of system regulation. These instantaneous release adjustments stabilize the electrical generation and transmission system and translate to a range of about 1,300 cfs above or below the hourly scheduled release rate. Under normal system conditions, fluctuations for regulation are typically short lived and generally balance out over the hour with minimal or no noticeable impacts on downstream river flow conditions.

Releases from Glen Canyon Dam can also fluctuate beyond scheduled releases when called upon to respond to unscheduled power outages or power system emergencies. Depending on the severity of the system emergency, the response from Glen Canyon Dam can be significant, within the full range of the operating capacity of the power plant for as long as is necessary to maintain balance in the transmission system. Glen Canyon Dam currently maintains 30 MW (approximately 1,300 cfs) of generation capacity in reserve in order to respond to a system emergency even when generation rates are already high. System emergencies occur infrequently and typically require small responses from Glen Canyon Dam. However, these responses can have a noticeable impact on the river downstream of Glen Canyon Dam.

Inflow Forecasts and Model Projections

The forecast for water year 2023 unregulated inflow to Lake Powell, issued on March 3, 2023, by the Colorado Basin River Forecast Center, projects that the most probable (median) unregulated inflow volume in water year 2023 will be 10.87 maf (113 percent of average).

In addition to the March 2023 24-Month Study based on the Most Probable inflow scenario, and in accordance with the Upper Basin Drought Response Operations Agreement (DROA), Reclamation has conducted model runs in March to determine a possible range of reservoir elevations. The January 2023 24-Month Study probable maximum and the March 2023 24-Month Study probable minimum inflow scenarios were used to determine the range of probable outcomes. The probable minimum and probable maximum model runs are conducted simultaneously in January, April, August, and October, or when necessary to incorporate changing conditions. The probable minimum inflow scenario reflects a dry hydrologic condition which statistically would be exceeded 90 percent of the time. The most probable inflow scenario reflects a median hydrologic condition which statistically would be exceeded 50 percent of the time. The probable maximum inflow scenario reflects a wet hydrologic condition which statistically would be exceeded 10 percent of the time. There is approximately an 80 percent probability that a future elevation will fall inside the range of the minimum and maximum inflow scenarios. Additionally, there are possible inflow scenarios that would result in reservoir elevations falling outside the ranges indicated in these reports.

The DROA coordination will continue until either (i) the minimum probable projected elevation remains above 3,525 feet for 24 months or (ii) the process moves to the next step when the most probable

projected elevation indicates Powell elevations below 3,525 feet and a Drought Response Operations Plan is developed. This 2022 Plan is described above and available for review here: <https://www.usbr.gov/dcp/droa.html>.

The March forecast for water year 2023 ranges from a minimum probable of 8.96 maf (93 percent of average) to a January forecasted maximum probable of 14.93 maf (155 percent of average) with the most probable forecast for water year 2023 of 10.44 maf (109 percent of average). There is a 10 percent chance that inflows could be higher than the current maximum probable forecast and a 10 percent chance that inflows could be lower than the minimum probable forecast.

Based on the current forecast for water year 2023 of 10.87 maf unregulated, the March 24-Month Study projects Lake Powell elevation will end water year 2023 near 3556.61 feet with approximately 7.55 maf in storage (32 percent of capacity). Note that projections of elevation and storage for water year 2023 have significant uncertainty at this point in the season. Projections of end of water year 2023 elevation using the March minimum and January maximum inflow forecast results are 3,546.13 feet and 3,582.24 feet, respectively. The annual release volume from Lake Powell during water year 2023 will be 7.82 maf under the Lower Elevation Balancing Tier and will balance the contents between Powell and Mead with annual release volumes from Glen Canyon Dam between 7.00 maf and 9.50 maf as determined under Section 6.D.1 and 7.D of the Interim Guidelines as determined by the Department of the Interior as described above.

Upper Colorado River Basin Hydrology

Upper Colorado River Basin regularly experiences significant year to year hydrologic variability. The 30-year average was updated in October 2022 from 1981 through 2010 to 1991 through 2020. Shifting the period of record decreased the average unregulated inflow 1.20 maf. The period 2000-2022 is the lowest 23-year period since the closure of Glen Canyon Dam in 1963, with an average unregulated inflow of 8.29 maf, or 93 percent of the 30-year average (1991-2020). (For comparison, the 1991-2020 total water year average is 9.60 maf.) The unregulated inflow during the 2000-2022 period has ranged from a low of 2.64 maf (28 percent of average) in water year 2002 to a high of 15.97 maf (166 percent of average) in water year 2011. In water year 2021 unregulated inflow volume to Lake Powell was 3.50 maf (36 percent of average), the second driest year on record above 2002. Under the current most probable forecast, the total water year 2023 unregulated inflow to Lake Powell is projected to be 10.87 maf (113 percent of average).

At the beginning of water year 2023, total system storage in the Colorado River Basin was 19.54 maf (33 percent of 58.48 maf total system capacity). This is a decrease of 3.33 maf over the total storage at the beginning of water year 2022 when total system storage was 22.87 maf (39 percent of capacity). Since the beginning of water year 2000, total Colorado Basin storage has experienced year to year increases and decreases in response to wet and dry hydrology, ranging from a high of 94 percent of capacity at the beginning of 2000 to the now current level of 33 percent of capacity at the beginning of water year 2023. Based on current inflow forecasts, the current projected end of water year 2023 total Colorado Basin reservoir storage is approximately 21.37 maf (37 percent of total system capacity). The actual end of water year 2023 system storage may vary from this projection, primarily due to uncertainty regarding this season's runoff and reservoir inflow.