April 24-Month Study
Date: April 15, 2025

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

Current Reservoir Status

	March Inflow (unregulated) (acre-feet)	Percent of Average (percent)	April 14, Midnight Elevation (feet)	April 14, Midnight Reservoir Storage (acre-feet)
Fontenelle	51,781	91%	6475.35	135,568
Flaming Gorge	81,378	77%	6026.28	3,128,24
Blue Mesa	42,650	113%	7479.75	500,18
Navajo	30,792	37%	6036.58	1,025,12
Powell	366,053	61%	3558.48	7,679,481

Expected Operations

The operation of Lake Powell and Lake Mead in the April 2025 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),[1] the Supplemental Environmental Impact Statement for Near-term Colorado River Operations Record of Decision (2024 Interim Guidelines SEIS ROD),[2] and reflects the draft 2025 Annual Operating Plan (AOP). Pursuant to the Interim Guidelines, the August 2024 24-Month Study projections of the January 1, 2025, system storage and reservoir water surface elevations set the operational tier for the coordinated operation of Lake Powell and Lake Mead during 2025.

On May 6, 2024, Reclamation published the 2024 Interim Guidelines SEIS ROD, which included modifications to Sections 2, 6, and 7 of the 2007 Interim Guidelines. Subsequent 24-Month Studies reflect the 2024 Interim Guidelines SEIS ROD in modeled operations.

The August 2024 24-Month Study projected the January 1, 2025, Lake Powell elevation to be less than 3,575 feet and at or above 3,525 feet and the Lake Mead elevation to be at or above 1,025 feet. Consistent with Section 6.C.1 of the Interim Guidelines, as amended by the 2024 Interim Guidelines SEIS ROD, the

[1] For modeling purposes, simulated years beyond 2026 assume a continuation of the 2007 Interim Guidelines including the 2024 Supplement to the 2007 Interim Guidelines (no additional SEIS conservation is assumed to occur after 2026), the 2019 Colorado River Basin Drought Contingency Plans, and Minute 323 including the Binational Water Scarcity Contingency Plan. With the exception of certain provisions related to Intentionally Created Surplus 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.

[2] 2024 Interim Guidelines SEIS ROD is available online at: https://www.usbr.gov/ColoradoRiverBasin/documents/NearTermColoradoRiverOperations/20240507-Near-termColoradoRiverOperations-SEIS-RecordofDecision-signed_508.pdf.

operational tier for Lake Powell in water year (WY) 2025 is the Mid-Elevation Release Tier and the water year release volume from Lake Powell is projected to be 7.48 million acre-feet (maf).

The August 2024 24-Month Study projected the January 1, 2025 Lake Mead elevation to be below 1,075 feet and above 1,050 feet. Consistent with Section 2.D.1 of the Interim Guidelines, a Shortage Condition consistent with Section 2.D.1.a will govern the operation of Lake Mead for calendar year (CY) 2025. In addition, Section III.B of Exhibit 1 to the Lower Basin Drought Contingency Plan (DCP) Agreement will also govern the operation of Lake Mead for CY 2025. Lower Basin projections for Lake Mead take into consideration additional conservation efforts under the LC Conservation Program.

Current runoff projections into Lake Powell are provided by the National Weather Service's Colorado Basin River Forecast Center. The observed unregulated inflow into Lake Powell for the month of March was 0.366 maf or 61% of the 30-year average from 1991 to 2020. The April 2025 unregulated inflow forecast for Lake Powell is 0.550 maf or 61% of the 30-year average. The 2025 April through July unregulated inflow forecast for Lake Powell is 4.30 maf or 67% of average. The WY 2025 unregulated inflow forecast for Lake Powell is 6.78 maf or 71% of average.

The draft 2025 Annual Operating Plan is available online at:
https://www.usbr.gov/uc/water/rsvrs/ops/aop/AOP25_draft.pdf.
The Interim Guidelines are available online at:
https://www.usbr.gov/lc/region/programs/strategies/RecordofDecision.pdf.
The Colorado River Drought Contingency Plans are available online at:
https://www.usbr.gov/ColoradoRiverBasin/dcp/finaldocs.html.
The Upper Basin Hydrology Summary is available online at:
https://www.usbr.gov/uc/water/crsp/studies/24Month_04_ucb.pdf.
Information on the Lower Colorado Basin (LCB) Conservation Program is available online at:
https://www.usbr.gov/lc/LCBConservation.html.
Information on the 2024 Interim Guidelines SEIS is available online at:
https://www.usbr.gov/ColoradoRiverBasin/interimguidelines/seis/index.html.

Fontenelle Reservoir

As of April 7, 2025, the Fontenelle Reservoir pool elevation is 6473.70 feet, which amounts to 38 percent of live storage capacity. Inflows for the month of March totaled approximately 51,780 acre-feet (af) or 91 percent of average.

Releases were reduced starting March 31st to 800 cfs, due to powerplant annual maintenance. Releases will be maintained at 800 cfs until maintenance is completed. Maintenance is scheduled to be completed on or before April 18th, 2025.

The April final forecast for unregulated inflows into Fontenelle for the next three months projects near average conditions. April, May, and June Most Probable inflow volumes amount to 80,000 af (95 percent of average), 140,000 af (80 percent of average), and 295,000 af (96 percent of average), respectively.

The next Fontenelle Working Group meeting is April 16, 2025 at 10 AM MT and will be held virtually and at the Joint Powers Water Board in Green River, Wyoming. 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 Reservoir

As of April 7, 2025 (end of day), Flaming Gorge Reservoir pool elevation is 6026.36 feet, which amounts to 85 percent of live storage capacity. Unregulated inflow volume for the month of March is approximately 81,400 acre-feet (af), which is 77 percent of the average unregulated inflow volume.

Current average daily release is approximately 1200 cfs. Flaming Gorge has started the Transition Period (March-April). Releases will fluctuate pending hydrology to meet the May 1st pool elevation target of approx. 6027 ft.

The April unregulated inflows into Flaming Gorge for the next three months project below average conditions. April, May, and June forecasted unregulated inflow volumes 115,000 af (92 percent of average), 185,000 af (74 percent of average), and 320,000 af (82 percent of average), respectively.

The April water supply forecast of the April through July unregulated inflow volume into Flaming Gorge Reservoir is 770,000 acre-feet (80 percent of average). Current snowpack is 100 percent of median for the Upper Green Basin.

Reclamation is planning to hold Flaming Gorge Working Group meetings on April 15, 2025, at 12:00 pm Virtually-via Teams and tentatively in-person. 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 Alex Pivarnik at (385) 475 – 8329.

Aspinall Unit Reservoirs

As of April 9, 2025, releases from Crystal Dam are approximately 1,200 cfs. Flows of the Gunnison River in the Black Canyon are being maintained at about 570 cfs. Flows in the Whitewater Reach of the Gunnison River are about 1,400 cfs.

The unregulated inflow volume in March to Blue Mesa was 43,000 af (113 percent of average). Unregulated Inflow volumes forecasted for Blue Mesa for the next three months (April, May, and June) are projected to be: 69,000 af (88 percent of average), 175,000 af (87 percent of average), and 215,000 af (86 percent of average) respectively.

The forecasted 2025 water year unregulated inflow volume to Blue Mesa is projected to be 808,000 af (89 percent of average). The water supply period (April-July) for 2025 is forecasted currently for an unregulated inflow volume of to be 540,000 af of unregulated inflow (83 percent of average).

Under this forecast, operation of Aspinall under the Aspinall Record of Decision (2012) would require a spring peak release to provide 10 days of sustained flows in the Gunnison River in the Whitewater reach at or above 8,070 cfs. This forecast would also require Aspinall releases to provide a single day peak flow in the Black Canyon of 3,578 cfs per the Black Canyon Reserved Water Right Decree. Given this current projection of the most probable operating scenario, Blue Mesa is projected to fill to approximately 7,495 feet by early July with approximately 620,000 acre-feet of storage. This is approximately 24 feet from full pool elevation (7519.4 feet) with approximately 210,000 acre-feet of unfilled storage space in Blue Mesa Reservoir.

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 on April 24, 2025 at 1:00 p.m. The meeting will be held virtually. 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 April 7th the release was 400 cfs. Reservoir inflow was averaging 510 cfs. The water surface elevation was 6036.20 feet above sea level. At this elevation the live storage was 1.02 maf (62 percent of live storage capacity) and the active storage is 0.395 maf (39 percent of active storage capacity). Diversions to Cutter Reservoir for the Navajo Indian Irrigation Project (NIIP) and the Navajo Gallup Water Supply Project (NGWSP) are 152 cfs. The San Juan-Chama project was diverting at a rate of 31 cfs. SNOTEL stations above Navajo Reservoir are showing 57 percent of median with 10.45 inches on this date.

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 (SJRIP) 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).

In the month of March, the release averaged 412 cfs and totaled 25.3 kaf, which was 41 percent of average for the month. Preliminary modified unregulated inflow (MUI) into Navajo was 30.6 kaf, which was 37 percent of average for the month. Calculated evaporation for the month was 1.3 kaf. NIIP diverted 4.7 kaf. Navajo had a net storage change of -6.9 kaf in March.

The most probable inflow forecast for April, May, and June is 61 kaf, (42 percent of average), 152 kaf (62 percent of average), and 83 kaf (44 percent of average), respectively.

The April-July runoff forecast is as follows:
MIN: 225 kaf (32 percent of avg, an increase of 25 kaf since the March forecast)
MOST: 300 kaf (43 percent of avg, a decrease of 25 kaf since the March forecast)
MAX: 455 kaf (66 percent of avg, a decrease of 100 kaf since the March forecast)

The release is expected to remain between 350 and 400 cfs throughout the remainder of the spring.

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 Tuesday, April 22nd at 1:00 PM. This meeting is open to the public, and will be held virtually using Microsoft Teams.

Glen Canyon Dam / Lake Powell

Current Status
The unregulated inflow volume to Lake Powell during March was 366 thousand acre-feet (kaf) (61 percent of average). The release volume from Glen Canyon Dam in March was 626 kaf. The end of March elevation and storage of Lake Powell were 3,559.30 feet (141 feet from full pool) and 7.74 million acre-feet (maf) (33 percent of live capacity), respectively.

Current Operations
The operation of Lake Powell and Lake Mead in the April 2025 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), the Supplemental Environmental Impact Statement for Near-term Colorado River Operations Record of Decision (2024 Interim Guidelines SEIS ROD),[3] and reflects the draft 2025 Annual Operating Plan (AOP).

[3] 2024 Interim Guidelines SEIS ROD is available online at: https://www.usbr.gov/ColoradoRiverBasin/documents/NearTermColoradoRiverOperations/20240507-Near-termColoradoRiverOperations-SEIS-RecordofDecision-signed_508.pdf.

The August 2024 24-Month study projects the January 1, 2025, Lake Powell elevation to be less than 3,575 feet and at or above 3,525 feet and the Lake Mead elevation to be at or above 1,025 feet. Consistent with Section 6.C.1 of the Interim Guidelines, as amended by the 2024 Interim Guidelines SEIS ROD), the operational tier for Lake Powell in water year 2025 is the Mid-Elevation Release Tier and the water year release volume from Lake Powell is projected to be 7.48 maf.

On May 9, 2024, Reclamation published the 2024 Interim Guidelines SEIS ROD, which included modifications to Sections 2, 6, and 7 of the 2007 Interim Guidelines. The current 24-Month Study reflects these modifications in modeled operations.

On July 3, 2024, Reclamation signed the Glen Canyon Dam Long-Term Experimental and Management Plan Supplemental Environmental Impact Statement Record of Decision (2024 LTEMP SEIS ROD[4]). The 2024 LTEMP SEIS ROD analyzed flow options to disrupt smallmouth bass and other warm water invasive non-native fish from establishing below Glen Canyon Dam by interrupting spawning and species expansion.

The anticipated monthly release volume for April is 600,000 acre-feet and anticipated hourly releases during April 2025 will fluctuate from a low of approximately 8,000 cfs during the early morning hours to a high of approximately 13,400 cfs during the afternoon and evening hours. The May volume is anticipated to be 598 kaf and the hourly pattern will be confirmed with a subsequent directive toward the end of April.

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.

[4] 2024 LTEMP SEIS ROD is available online at: https://www.usbr.gov/uc/DocLibrary/EnvironmentalImpactStatements/GlenCanyonDamLong-TermExperimentalManagementPlan/20240703-GCDLTEMP-FinalSEIS-RecordofDecision-508-AMWD.pdf

Inflow Forecasts and Model Projections
The forecast for water year 2025 unregulated inflow to Lake Powell, issued on April 3, 2025, by the Colorado Basin River Forecast Center, projects that the most probable (median) unregulated inflow volume in water year 2025 will be 6.78 maf (71 percent of average).

In addition to the April 2025 24-Month Study based on the Most Probable inflow scenario, Reclamation has conducted runs to determine a possible range of reservoir elevations. The April 2025 24-Month Study probable most, minimum and maximum probable 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 April forecast for water year 2025 ranges from a minimum probable of 5.54 maf (58 percent of average) to a maximum probable of 9.36 maf (97 percent of average) with the most probable forecast for water year 2025 of 6.78 maf (71 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 2025 of 6.78 maf unregulated inflow for water year 2025, the April 24-Month Study projects Lake Powell elevation will end water year 2025 near 3562.75 feet with approximately 7.98 maf in storage (34 percent of capacity). Projections of end of water year 2025 elevation using the April minimum and maximum inflow forecast results from the 24-Month Study model run are 3,550.65 feet and 3,591.01 feet, respectively. The annual release volume from Lake Powell during water year 2025 is 7.48 maf under the Mid-Elevation Release Tier as determined under Section 6.C.1 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 2025 unregulated inflow to Lake Powell is projected to be 6.78 maf (71 percent of average).

At the beginning of water year 2025, total system storage in the Colorado River Basin was 25.15 maf (43 percent of 58.48 maf total system capacity). This is a decrease of 110 kaf over the total storage at the beginning of water year 2024 when total system storage was 25.26 maf (43 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 beginning of water year 2023 with 19.55 maf (33 percent of capacity). Based on current inflow forecasts, the current projected end of water year 2025 total Colorado Basin reservoir storage is approximately 23.57 maf (40.3 percent of total system capacity). The actual end of water year 2025 system storage may vary from this projection, primarily due to uncertainty regarding this season's runoff and reservoir inflow.