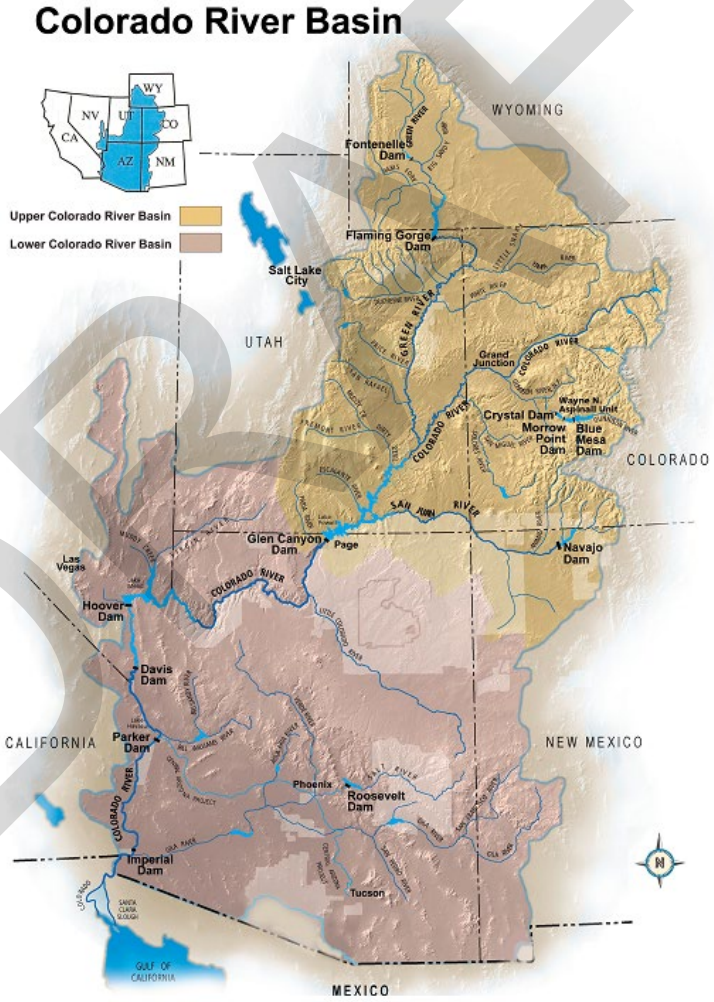
BUREAU OF RECLAMATION

DRAFT 2025 Annual Operating Plan for Colorado River Reservoirs



U.S. Department of the Interior

October 31, 2024

TABLE OF CONTENTS

LIST OF TABLES

INTRODUCTION

Background

Each year's Annual Operating Plan (AOP) for Colorado River Reservoirs reports both on the past operations of the Colorado River reservoirs for the completed year and projected operations and releases from these reservoirs for the current (i.e., upcoming) year. Accordingly, this 2025 AOP reports on 2024 operations as well as projected operations for 2025. In recent years, additions to the Law of the River such as operational rules, guidelines, and decisions have been put into place for Colorado River reservoirs including the 1996 Glen Canyon Dam Record of Decision[1] (ROD), the Operating Criteria for Glen Canyon Dam,[2] the 1999 Off-stream Storage of Colorado River Water Rule (43 Code of Federal Regulations [CFR] Part 414),[3] the 2001 Interim Surplus Guidelines[4] addressing operation of Hoover Dam, the 2006 Flaming Gorge Dam ROD,[5] the 2006 Navajo Dam ROD[6] to implement recommended flows for endangered fish, the 2007 Interim Guidelines for the operations of Lake Powell and Lake Mead,[7] the 2012 Aspinall ROD,[8] the 2016 Glen Canyon Dam Long-Term Experimental and Management Plan Environmental Impact Statement and ROD (2016 LTEMP EIS ROD),[9] Minutes No. 323 and 330 between the United States and Mexican Sections of the International Boundary and Water Commission (IBWC),[10, 11] the agreements related to the 2019 Colorado

[1] ROD for the Operation of Glen Canyon Dam, October 9, 1996. Available online at: https://www.usbr.gov/uc/envdocs/rod/Oct1996_OperationGCD_ROD.pdf.
[2] Following the implementation of the 2016 LTEMP EIS ROD, the Glen Canyon Dam operating criteria were revised and available online at: https://www.usbr.gov/uc/water/crsp/studies/GCOC.pdf.
[3] Off-stream Storage of Colorado River Water; Development and Release of Intentionally Created Unused Apportionment in the Lower Division States: Final Rule (43 CFR Part 414; 64 *Federal Register* 59006, November 1, 1999). Available online at: https://www.usbr.gov/lc/region/g4000/contracts/FinalRule43cfr414.pdf.
[4] ROD for the Colorado River Interim Surplus Guidelines, January 16, 2001 (67 *Federal Register* 7772, January 25, 2001). Available online at: https://www.usbr.gov/lc/region/g4000/surplus/surplus_rod_final.pdf.
[5] ROD for the Operation of Flaming Gorge Dam, February 16, 2006. Available online at: https://www.usbr.gov/uc/envdocs/rod/fgFEIS/final-ROD-15feb06.pdf.
[6] ROD for Navajo Reservoir Operations, Navajo Unit – San Juan River, New Mexico, Colorado, Utah, July 31, 2006. Available online at: https://www.usbr.gov/uc/envdocs/eis/navajo/pdfs/NavWaterOpsROD2006.pdf.
[7] ROD for Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead (73 *Federal Register* 19873, April 11, 2008). The ROD adopting the 2007 Interim Guidelines was signed by the Secretary on December 13, 2007. Available online at: https://www.usbr.gov/lc/region/programs/strategies/RecordofDecision.pdf.
[8] ROD for the Aspinall Unit Operations, Final Environmental Impact Statement, April 2012. Available online at: https://www.usbr.gov/uc/envdocs/eis/AspinallEIS/ROD.pdf.
[9] ROD for the Glen Canyon Dam Long-Term Experimental and Management Plan Final Environmental Impact Statement, December 2016. Available online at: http://ltempeis.anl.gov/documents/docs/LTEMP_ROD.pdf.
[10] IBWC Minute No. 323, Extension of Cooperative Measures and Adoption of a Binational Water Scarcity Contingency Plan in the Colorado River Basin dated September 21, 2017. Available online at: https://www.ibwc.gov/wp-content/uploads/2023/03/Min323.pdf.
[11] IBWC Minute No. 330, Expansion of Colorado River Temporary Measures dated March 21, 2024. Available online at: https://www.ibwc.gov/wp-content/uploads/2024/04/Minute-330-English-Spanish-Version-Signed-Clean.pdf.

River Drought Contingency Plans (DCPs)[12] as authorized by Public Law 116-14,[13] the 2024 Supplemental Environmental Impact Statement (SEIS) for Near-term Colorado River Operations ROD (2024 Interim Guidelines SEIS ROD),[14] and the 2024 Glen Canyon Dam Long-Term Experimental and Management Plan Supplemental Environmental Impact Statement and Record of Decision (2024 LTEMP SEIS ROD).[15] Each AOP incorporates these and other rules, guidelines, and decisions, and reports on how the criteria contained in the applicable decision document or documents are implemented. Thus, the AOP makes projections and reports on how the Bureau of Reclamation (Reclamation) will implement these decisions in response to changing water supply conditions as they unfold during the upcoming year, when conditions become known. Congress has charged the Secretary of the Interior (Secretary) with stewardship and responsibility for a wide range of natural, cultural, recreational, and tribal resources within the Colorado River Basin. The Secretary has the authority to operate and maintain Reclamation facilities within the Colorado River Basin addressed in this AOP to help manage these resources and accomplish their protection and enhancement in a manner fully consistent with applicable provisions of federal law including the Law of the River, applicable provisions of State law, and other project-specific operational limitations.

The Secretary recognized in the 2007 Interim Guidelines that the AOP provides an integrated report on reservoir operations affected by numerous federal policies: *"The AOP is used to memorialize operational decisions that are made pursuant to individual federal actions (e.g., ISG* [the 2001 Interim Surplus Guidelines]*, 1996 Glen Canyon Dam ROD, this* [2007 Interim Guidelines] *ROD). Thus, the AOP serves as a single, integrated reference document required by section 602(b) of the CRBPA of 1968* [Colorado River Basin Project Act of September 30, 1968 (Public Law 90-537)][16] *regarding past and anticipated operations."*

Authority

This 2025 AOP was developed in accordance with the processes set forth in: Section 602 of the CRBPA; the Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968 (Public Law 90-537) (Operating Criteria), as amended, promulgated by the Secretary;[17] and Section 1804(c)(3) of the Grand Canyon Protection Act of 1992 (Public Law 102-575).[18]

[12] The agreements related to the 2019 Colorado River DCPs, as authorized by Public Law 116-14, were executed on May 20, 2019, and consist of an Upper Basin DCP (Drought Response Operations and Demand Management Storage) and a Lower Basin DCP including Lower Basin Drought Operations. Available online at: https://www.usbr.gov/dcp/finaldocs.html.

[13] The Colorado River Drought Contingency Plan Authorization Act (Public Law 116-14) was signed into law on April 16, 2019. Available online at: https://www.congress.gov/116/bills/hr2030/BILLS-116hr2030enr.pdf.

[14] 2024 Interim Guidelines SEIS ROD is available online at: https://www.usbr.gov/ColoradoRiverBasin/documents/NearTermColoradoRiverOperations/20240507-Near-termColoradoRiverOperations-SEIS-RecordofDecision-signed_508.pdf.

[15] 2024 LTEMP SEIS ROD is available online at: https://www.usbr.gov/uc/DocLibrary/EnvironmentalImpactStatements/GlenCanyonDamLong-TermExperimentalManagementPlan/20240703-GCDLTEMP-FinalSEIS-RecordofDecision-508-AMWD.pdf.

[16] Available online at: https://www.usbr.gov/lc/region/pao/pdfiles/crbproj.pdf.

[17] Available online at: https://www.usbr.gov/lc/region/g4000/lroc/frmar2905.pdf.

[18] Available online at: https://www.usbr.gov/uc/legal/gcpa1992.pdf.

Section 602(b) of the CRBPA requires the Secretary to prepare and *"transmit to the Congress and to the Governors of the Colorado River Basin States a report describing the actual operation under the adopted criteria* [i.e., the Operating Criteria] *for the preceding compact water year and the projected operation for the current year."*

This AOP has been developed consistent with: the Operating Criteria; applicable federal laws; the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, the Treaty Between the United States of America and Mexico, signed February 3, 1944 (1944 United States-Mexico Water Treaty);[19] interstate compacts; court decrees; the Colorado River Water Delivery Agreement;[20] the 2007 Interim Guidelines; the 2019 Colorado River DCP agreements; the 2024 Interim Guidelines SEIS ROD; and other documents relating to the use of the waters of the Colorado River, which are commonly and collectively known as the Law of the River.

The 2025 AOP was prepared by Reclamation on behalf of the Secretary, working with other Interior agencies and the Western Area Power Administration (WAPA). Reclamation consulted with the seven Colorado River Basin States Governors' representatives, representatives from Mexico, the Upper Colorado River Commission (UCRC), Native American tribes, other appropriate federal agencies, representatives of academic and scientific communities, environmental organizations, representatives of the recreation industry, water delivery contractors, contractors for the purchase of federal power, others interested in Colorado River operations, and the general public through the Colorado River Management Work Group.

Article I(2) of the Operating Criteria allows for revision of the projected plan of operation to reflect current hydrologic conditions with notification to the Congress and the Governors of the Colorado River Basin States of any changes by June of each year. The process for revision of the AOP is further described in Section 7.C of the 2007 Interim Guidelines. Any revision to the final AOP may occur only through the AOP consultation process as required by applicable federal law.

Purpose

The purpose of the AOP is to report on the past year's operations and illustrate the potential range of reservoir operations that might be expected in the upcoming year, and to determine or address: (1) the quantity of water considered necessary to be in storage in the Upper Basin reservoirs as of September 30, 2025, pursuant to Section 602(a) of the CRBPA; (2) water available for delivery pursuant to the 1944 United States-Mexico Water Treaty and Minutes No. 242,[21] 323, 327,[22] and 330 of the IBWC; (3) whether the reasonable consumptive use requirements of mainstream users in the Lower Division States will be met under a "Normal,"

[19] Available online at: https://www.ibwc.gov/wp-content/uploads/2022/11/1944Treaty.pdf.
[20] Colorado River Water Delivery Agreement: Federal Quantification Settlement Agreement for Purposes of Section 5(B) of Interim Surplus Guidelines, October 10, 2003 (69 *Federal Register* 12202, March 15, 2004). Available online at: https://www.usbr.gov/lc/region/g4000/crwda/crwda.pdf.
[21] IBWC Minute No. 242, Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River dated August 30, 1973. Available online at: https://www.ibwc.gov/wp-content/uploads/2023/05/Min242.pdf.
[22] IBWC Minute No. 327, Emergency Deliveries of Colorado River Waters for use in the city of Tijuana, Baja California dated January 28, 2022. Available online at: https://www.ibwc.gov/wp-content/uploads/2022/11/Min327.pdf.

"Surplus," or "Shortage" Condition as outlined in Article III of the Operating Criteria and as implemented by the 2007 Interim Guidelines; (4) whether management and/or operational regimes will be required or considered as described in the 2019 Colorado River DCPs; (5) whether management and/or operations will be required or considered as described in the 2024 Interim Guidelines SEIS ROD; and (6) whether water apportioned to, but unused by one or more Lower Division States, exists and can be used to satisfy beneficial consumptive use requests of mainstream users in other Lower Division States as provided in the Consolidated Decree of the Supreme Court of the United States in *Arizona v. California*, 547 U.S. 150 (2006) (Consolidated Decree).[23]

Consistent with the above determinations and in accordance with other applicable provisions of the Law of the River, the AOP was developed with "appropriate consideration of the uses of the reservoirs for all purposes, including flood control, river regulation, beneficial consumptive uses, power production, water quality control, recreation, enhancement of fish and wildlife, and other environmental factors" (Operating Criteria, Article I(2)).

Since the hydrologic conditions of the Colorado River Basin can never be completely known in advance, the AOP presents projected operations resulting from three different hydrologic scenarios: the minimum probable, most probable, and maximum probable reservoir inflow conditions. Projected reservoir operations are modified during the water year (October – September) as runoff forecasts are adjusted to reflect existing snowpack, basin storage, flow conditions, and as changes occur in projected water deliveries.

Summary of Projected 2025 Operations

Upper Basin. Taking into account (1) the existing water storage conditions in the basin, (2) the August 2024 24-Month Study[24] projection of the most probable near-term water supply conditions in the basin, and (3) Section 6.C.1 of the 2007 Interim Guidelines and Section 6.E. of the 2024 Interim Guidelines SEIS ROD, the Mid-Elevation Release Tier will govern the operation of Lake Powell for water year 2025. The August 2024 24-Month Study of the most probable inflow scenario projects the water year 2025 release from Glen Canyon Dam to be 7.48 million acre-feet (maf) (9,230 million cubic meters [mcm]).

Reclamation will continue to monitor hydrologic and operational conditions and assess the need for additional responsive actions and changes to operations. Reclamation will continue to consult with the Basin States, Native American tribes, the Republic of Mexico, and other partners on Colorado River operations to consider future protective measures for both Lake Powell and Lake Mead.

For further information about the variability of projected inflow into Lake Powell, see the 2025 Water Supply Assumptions section and the Lake Powell section within the Summary of Reservoir Operations in 2024 and Projected 2025 Reservoir Operations, and Tables 3 and 4.

[23] Available online at: https://www.usbr.gov/lc/region/pao/pdfiles/scconsolidateddecree2006.pdf.
[24] The 24-Month Study refers to the operational study conducted by Reclamation to project future reservoir operations. The most recent 24-Month Study report is available on Reclamation's Water Operations websites and is updated each month. Available online at: https://www.usbr.gov/uc/water/crsp/studies/index.html and https://www.usbr.gov/lc/region/g4000/24mo/index.html.

Lower Basin. Taking into account (1) the existing water storage conditions in the basin, (2) the most probable near-term water supply conditions in the basin, and (3) Section 2.D.1 of the 2007 Interim Guidelines, a Shortage Condition, consistent with Section 2.D.1.a, will govern the operation of Lake Mead for calendar year (January – December) 2025 in accordance with Article III(3)(c) of the Operating Criteria and Article II(B)(3) of the Consolidated Decree. In addition, the Lower Basin Drought Contingency Plan Agreement (LB DCP Agreement) will also govern the operation of Lake Mead for calendar year 2025. Consistent with Sections III.B.1.a and III.B.2.a of Exhibit 1 to the LB DCP Agreement, DCP contributions will be required by Arizona and Nevada, respectively, in calendar year 2025. Creation and/or delivery of Intentionally Created Surplus (ICS) may be made consistent with Section 3 of the 2007 Interim Guidelines and Sections III and IV of Exhibit 1 to the LB DCP Agreement, as applicable. In calendar year 2025, reservoir protection conservation will be implemented consistent with Section 2.E of the 2007 Interim Guidelines as amended in the SEIS ROD.

No unused apportionment for calendar year 2025 is anticipated. If any unused apportionment becomes available after adoption of this AOP, Reclamation, on behalf of the Secretary, may allocate any such available unused apportionment for calendar year 2025. Any such allocation shall be made in accordance with Article II(B)(6) of the Consolidated Decree, the Lower Colorado Region Policy for Apportioned but Unused Water (Unused Water Policy),[25] and giving further consideration to the water conservation objectives of the July 30, 2014 agreement for a pilot system conservation program (PSCP),[26] the Lower Colorado River Basin System Conservation and Efficiency Program (LC Conservation Program),[27] and as specified in Section 4.b of the LB DCP Agreement.

In calendar year 2025, Colorado River water may be stored off-stream pursuant to individual Storage and Interstate Release Agreements (SIRAs) and 43 CFR Part 414 within the Lower Division States. The Secretary shall make Intentionally Created Unused Apportionment (ICUA) available to contractors in Arizona, California, or Nevada pursuant to individual SIRAs and 43 CFR Part 414.

The Inadvertent Overrun and Payback Policy (IOPP),[28] which became effective January 1, 2004, will not be in effect during calendar year 2025 because overruns are not permitted in a Shortage Condition. In accordance with Section 2.6.e of the IOPP, further accumulation of inadvertent overruns in calendar year 2025 will be suspended.

Conserved Colorado River water, created through the PSCP,[29] the LB DCP Agreement, the LC Conservation Program, and other voluntary agreements, is anticipated to be added to Lower

[25] Lower Colorado Region Policy for Apportioned but Unused Water, February 11, 2010. Available online at: https://www.usbr.gov/lc/region/g4000/UnusedWaterPolicy.pdf.
[26] Available online at: https://www.usbr.gov/lc/region/programs/PilotSysConsProg/PilotSCPFundingAgreement7-30-2014.pdf.
[27] More information on the LC Conservation Program: https://www.usbr.gov/lc/LCBConservation.html.
[28] ROD for Implementation Agreement, Inadvertent Overrun and Payback Policy, and Related Federal Actions, Final Environmental Impact Statement, October 10, 2003 (69 *Federal Register* 12202, March 15, 2004). Available online at: https://www.usbr.gov/lc/region/g4000/crwda/crwda_rod.pdf.
[29] More information about the PSCP in the Lower Basin can be found at: https://www.usbr.gov/lc/region/programs/PilotSysConsProg/pilotsystem.html.

Basin reservoirs pursuant to system conservation agreements in the Lower Basin in calendar year 2025.

The 2007 Interim Guidelines adopted the ICS mechanism, which was expanded upon in the LB DCP Agreement, that among other things encourages the efficient use and management of Colorado River water in the Lower Basin. ICS may be created and delivered in calendar year 2025 pursuant to the 2007 Interim Guidelines, the LB DCP Agreement, and applicable forbearance and delivery agreements, and consistent with approved ICS plans of creation.

Consistent with Section 4 of the 2007 Interim Guidelines, Developed Shortage Supply (DSS) may be created and delivered in calendar year 2025.

1944 United States-Mexico Water Treaty. A volume of 1.450 maf (1,790 mcm) of water will be available to be scheduled for delivery to Mexico during calendar year 2025 in accordance with Article 15 of the 1944 United States-Mexico Water Treaty, IBWC Minutes No. 242 and 327, and Section III.A of IBWC Minute No. 323. The volume delivered may also be adjusted for water savings contributions as required under Section IV of IBWC Minute No. 323 and system water and Mexico's Water Reserve conservation as required under Resolutions 1 and 2 of IBWC Minute No. 330. Pursuant to IBWC Minute No. 323 and IBWC Minute No. 330, Mexico may create water for or take delivery of water from Mexico's Water Reserve pursuant to Section III.C and Section V of IBWC Minute No. 323 and Resolution 3 of IBWC Minute No. 330.

BASINWIDE DROUGHT RESPONSE OPERATIONS

The Colorado River Basin is experiencing a prolonged period of drought and record-low runoff conditions resulting in historically low reservoir levels at Lake Powell and Lake Mead. The period from 2000 through 2022 is the lowest 23-year inflow in the historic record and one of the lowest in the past 1,200 years.[30] As a result of the exceptionally low runoff conditions over three recent years (2020, 2021, and 2022), drought response operations have been triggered at Lake Powell and Lake Mead consistent with the 2007 Interim Guidelines, Minutes No. 323 and 330, the 2019 Colorado River DCP agreements, and the 2024 Interim Guidelines SEIS ROD.

Upper Basin Drought Response Operations Agreement (DROA)

Reclamation staff have worked with the DROA[31] Parties to develop and implement the DROA Plans which include two components, (1) a Framework document, which will remain relatively static from year to year and contains provisions the DROA Parties will use to develop annual plans, and (2), attachments which are updated yearly that identify specific operations for each Initial Unit during the DROA operational year. A DROA year spans from May 1st through April 30th.[32]

[30] Study on the tree-ring reconstruction record for the Upper Colorado River Basin is available online at: https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2007GL029988.

[31] Available online at: https://www.usbr.gov/dcp/docs/final/Attachment-A1-Drought-Response%20Operations-Agreement-Final.pdf.

[32] Information regarding DROA Plans and previous related actions can be found at the following link: https://www.usbr.gov/ColoradoRiverBasin/dcp/droa.html.

2023 DROA Plan

On May 26, 2023, the DROA Parties, including Reclamation, agreed to the 2023 DROA Plan. The 2023 DROA Plan reflected the impact of much above average Colorado River inflows in water year 2023 and did not include any DROA releases, but rather provided for recovery of prior DROA releases from the units upstream of Powell.[33] The Secretary of the Interior through her designee approved the 2023 DROA Plan, as summarized in the following key operational elements:

- Anticipate full recovery of DROA release volumes at Flaming Gorge and Blue Mesa through the term of the 2023 DROA Plan.
- No additional action is anticipated during the 2023 DROA Plan; the DROA Parties will continue to monitor hydrological conditions and, if needed, will make adjustments at Glen Canyon Dam, and then the upstream initial units (Flaming Gorge, Aspinall, and Navajo).

Recovery of Blue Mesa and Flaming Gorge was completed on December 29, 2023, and February 28, 2024, respectively. Accounting and recovery of DROA releases from Flaming Gorge and Blue Mesa were completed in accordance with the definitions and processes outlined in Section 6 of the 2023 DROA Plan. [34]

2024 Interim Guidelines SEIS

As directed by the Secretary, on November 17, 2022, Reclamation published a Federal Register Notice indicating its intent to prepare a SEIS.[35, 36] The purpose of the SEIS was to supplement the Environmental Impact Statement completed in 2007 for the 2007 Interim Guidelines in order to modify operating guidelines for the operation of Glen Canyon and Hoover Dam to address the historic drought and low runoff conditions in the Colorado River Basin through 2026. The need for the revised operating guidelines was based on the potential that continued low runoff conditions in the Colorado River Basin could lead to critically low reservoir conditions at Lake Powell and Lake Mead that impact both water delivery and hydropower operations from 2023 through 2026. The 2024 Interim Guidelines SEIS ROD, which includes modifications to Sections 2, 6, and 7 of the 2007 Interim Guidelines, was signed on May 6, 2024.[37]

Additional conserved water in accordance with Section 2.E of the 2007 Interim Guidelines as amended by the 2024 Interim Guidelines SEIS ROD will be accounted for in the Colorado

[33] The 2023 DROA Plan is available online at: https://www.usbr.gov/dcp/droa.html.
[34] For more information regarding DROA accounting, which includes monthly release and recovery volumes, visit the summary available online at: https://www.usbr.gov/ColoradoRiverBasin/documents/dcp/DROA/DROSummarySheet.pdf.
[35] Federal Register Notice available online at: https://www.federalregister.gov/documents/2022/11/17/2022-25004/notice-of-intent-to-prepare-a-supplemental-environmental-impact-statement-for-december-2007-record.
[36] Information regarding the SEIS is available online at: https://www.usbr.gov/ColoradoRiverBasin/interimguidelines/seis/index.html.
[37] The final SEIS is available online at: https://www.usbr.gov/ColoradoRiverBasin/documents/NearTermColoradoRiverOperations/20240300-Near-termColoradoRiverOperations-FinalSEIS-508.pdf.

River Accounting and Water Use Report: Arizona, California, and Nevada (Water Accounting Report).[38]

System Conservation

System conservation agreements have allowed water users to participate in projects designed to determine whether voluntary, temporary, and compensated programs to conserve or reduce consumptive use of Colorado River water can benefit the entire Colorado River system by mitigating the effect on declining storage levels in Colorado River reservoirs. ,[39]

UC Conservation Program

In December 2022, Congress authorized the System Conservation Pilot Program (SCPP) in the Upper Division States.[40] Reclamation executed a SCPP funding agreement with the Upper Division States acting through the UCRC in January 2023. The UCRC executed 110 SCPP implementation agreements in Utah, Wyoming, Colorado, and New Mexico for 2024. The UCRC estimates approximately 66,000 acre-feet (81 mcm) of system water was conserved in 2024.

LC Conservation Program

Reclamation has continued its efforts to address the drought crisis with prompt and responsive actions and investments to ensure the entire Colorado River Basin can function and support all who rely on it. The LC Conservation Program[41] is intended to provide new opportunities for system conservation in the Lower Colorado River Basin that also led to additional conservation and bridge the immediate need while moving toward improved system efficiency and more durable long-term solutions for the System. As of October 2024, Reclamation has entered into 29 agreements to conserve 2.35 maf (2,900 mcm), of which 2.28 maf (2,810 mcm) will be conserved through 2026. [42] Additional projects or agreements to create or conserve system water in the Lower Basin may also be implemented in calendar year 2024 and/or 2025.

The Secretary's efforts to create or conserve 0.100 maf (123 mcm) or more of Colorado River system water annually in the Lower Basin under the LB DCP Agreement continue in 2024 and

[38] Available online at: https://www.usbr.gov/lc/region/g4000/wtracct.html.
[39] Pursuant to Public Law 113-235, a report from the Secretary evaluating the effectiveness of the water conservation pilot projects was submitted to Congress, including a recommendation that the activities undertaken by the pilot projects should be continued. More information is available online at: https://www.usbr.gov/lc/region/programs/PilotSysConsProg/report_to_congressW_appendices2021.pdf.
[40] Public Law 117-328 extended the System Conservation Pilot Program in the Upper Colorado River Basin through September 2024. UCRC is the contracting entity for the program and has entered into agreements for the 2023 season. More information is available online at: http://www.ucrcommission.com/ucrc-provides-scpp-status-update/.
[41] More information on the LC Conservation Program can be found online at: https://www.usbr.gov/lc/LCBConservation.html.
[42] Draft summary table of executed agreements is available online at: https://www.usbr.gov/lc/region/programs/LCBConservation&EfficiencyProgram/SystemConservationAgreements.pdf.

2025. Agreements previously executed under the PSCP in the Lower Basin also continue to be implemented in 2024 and 2025.[43]

2024 HYDROLOGY SUMMARY AND RESERVOIR STATUS

Below average streamflow[44] was observed throughout much of the Colorado River Basin during water year 2024. Unregulated[45] inflow to Lake Powell in water year 2024 was 7.98 maf (9,840 mcm), or 83 percent of the 30-year average[46] which is 9.60 maf (11,840 mcm). Unregulated inflow to Flaming Gorge, Blue Mesa, and Navajo Reservoirs was 83, 102, and 65 percent of average, respectively.

Precipitation in the Upper Colorado River Basin was near average[47] during water year 2024. On September 30, 2024, the cumulative precipitation received within the Upper Colorado River Basin for water year 2024 was 100 percent of median.

Snowpack conditions trended near average to above average across most of the Colorado River Basin throughout the water year 2024 snow accumulation season. The basin wide snow water equivalent measured 114 percent of the median peak on April 3, 2024, which is three days earlier than the peak seasonal accumulation day of April 6. On April 1, 2024, the snow water equivalents for the Green River, Upper Colorado River Headwaters, and San Juan River Basins were 103, 108, and 108 percent of median, respectively.

During the 2024 spring runoff period, inflows to Lake Powell peaked on June 13, 2024, at approximately 48,320 cubic feet per second (cfs) (1,370 cubic meters per second [cms]). The April through July unregulated inflow volume for Lake Powell was 5.33 maf (6,570 mcm) which was 83 percent of average.[48]

[43] More information on the PSCP in the Lower Basin can be found online at: https://www.usbr.gov/lc/region/programs/PilotSysConsProg/pilotsystem.html.

[44] Streamflow statistics throughout this document are provided by the National Weather Service's Colorado Basin River Forecast Center and are based on the average/median for the 30-year period 1991-2020, unless otherwise noted. Hydrologic conditions are described in the following manner: much above average/median (greater than 130%), above average/median (111%-130%), near average/median (90%-110%), below average/median (70%-89%), and much below average/median (less than 70%). Reservoir specific ROD descriptions are used in place of this terminology where applicable.

[45] Unregulated inflow adjusts for the effects of operations at upstream reservoirs. It is computed by adding the change in storage and the evaporation losses from upstream reservoirs to the observed inflow. Unregulated inflow is used because it provides an inflow time series that is not biased by upstream reservoir operations.

[46] Inflow statistics throughout this document will be compared to the mean of the 30-year period 1991-2020, unless otherwise noted.

[47] Snowpack, snow water equivalent and precipitation statistics throughout this document are provided by the Natural Resources Conservation Service and are based on the median for the 30-year period 1991-2020, unless otherwise noted. Hydrologic conditions are described in the following manner: much above average/median (greater than 130%), above average/median (111%-130%), near average/median (90%-110%), below average/median (70%-89%), and much below average/median (less than 70%). Reservoir specific ROD descriptions are used in place of this terminology where applicable.

[48] Water year 2024 forecast information from the Colorado Basin River Forecast Center (CBRFC) is available online at: https://www.cbrfc.noaa.gov/wsup/graph/espgraph_hc.html?year=2024&id=GLDA3.

Lower Basin tributary inflows above Lake Mead were much below average for water year 2024. Tributary inflow measured at the Little Colorado River near Cameron gage for water year 2024 totaled 0.048 maf (59 mcm), or 41 percent of average. Tributary inflow measured at the Virgin River at Littlefield gage for water year 2024 totaled 0.127 maf (157 mcm), or 74 percent of average.

Below Hoover Dam, tributary inflow for water year 2024 measured at the Bill Williams River below Alamo Dam gage totaled 0.018 maf (22 mcm), and tributary inflow measured at the Gila River near Dome gage totaled 0.010 maf (12 mcm).[49]

The Colorado River total system storage experienced a net decrease of 0.105 maf (132 mcm) in water year 2024. Reservoir storage in Lake Powell increased during water year 2024 by 0.351 maf (433 mcm). Reservoir storage in Lake Mead decreased during water year 2024 by 0.164 maf (202 mcm). At the beginning of water year 2024 (October 1, 2023), Colorado River total system storage was 43 percent of capacity. As of September 30, 2024, total system storage was 43 percent of capacity.

Tables 1 and 2 list the October 1, 2024 reservoir vacant space, live storage, water elevation, percent of capacity, change in storage, and change in water elevation during water year 2024.

[49] Tributary inflows from the Bill Williams River and Gila River to the mainstream are very sporadic. These flows occur very seldom and when they do, they are typically of high magnitude.

Table 1. Reservoir Conditions on October 1, 2024 (English Units)

Reservoir	Vacant Space (maf)	Live Storage (maf)	Water Elevation (ft)	Percent of Capacity (%)	Change in Storage (maf)	Change in Elevation (ft)
Fontenelle	0.097	0.237	6,492.86	71	-0.048	-6.7
Flaming Gorge	0.518	3.15	6,026.99	86	-0.103	-2.8
Blue Mesa	0.269	0.559	7,487.54	67	-0.071	-9.0
Morrow Point	0.005	0.112	7,153.18	95	0.002	3.2
Crystal	0.004	0.014	6,741.65	77	-0.003	-10.4
Navajo	0.559	1.09	6,042.68	66	-0.058	-5.2
Lake Powell	14.17	9.14	3,578.08	39	0.351	4.5
Lake Mead	17.41	8.71	1,063.71	33	-0.164	-2.1
Lake Mohave	0.218	1.59	639.03	88	0.005	0.2
Lake Havasu	0.054	0.565	447.22	91	-0.017	-0.9
Total	33.30	25.17		43	-0.105	

Table 2. Reservoir Conditions on October 1, 2024 (Metric Units)

Reservoir	Vacant Space (mcm)	Live Storage (mcm)	Water Elevation (m)	Percent of Capacity (%)	Change in Storage (mcm)	Change in Elevation (m)
Fontenelle	119	293	1,979.02	71	-59	-2.05
Flaming Gorge	638	3,890	1,837.03	86	-127	-0.85
Blue Mesa	331	689	2,282.20	67	-88	-2.73
Morrow Point	6	138	2,180.29	95	2	0.97
Crystal	4	17	2,054.85	77	-4	-3.15
Navajo	689	1,340	1,841.81	66	-72	-1.58
Lake Powell	17,480	11,280	1,090.60	39	433	1.37
Lake Mead	21,470	10,740	324.22	33	-202	-0.64
Lake Mohave	270	1,960	194.78	88	6	0.06
Lake Havasu	70	697	136.31	91	-21	-0.28
Total	41,080	31,040		43	-132	

2025 WATER SUPPLY ASSUMPTIONS

For 2025 operations, three reservoir unregulated inflow scenarios were developed and analyzed: minimum probable, most probable, and maximum probable.

There is considerable uncertainty associated with streamflow forecasts and projections of reservoir operations made a year in advance. The National Weather Service's CBRFC forecasts the inflow for the minimum probable (90 percent exceedance), most probable (50 percent exceedance), and maximum probable (10 percent exceedance) inflow scenarios using an Ensemble Streamflow Prediction model. Based upon the August CBRFC forecast, the range of unregulated inflows is projected to be as follows:

- The forecasted minimum probable unregulated inflow to Lake Powell in water year 2025 is 5.25 maf (6,480 mcm), or 68 percent of average.
- The forecasted most probable unregulated inflow to Lake Powell in water year 2025 is 8.97 maf (11,060 mcm), or 93 percent of average.
- The forecasted maximum probable unregulated inflow to Lake Powell in water year 2025 is 16.60 maf (20,480 mcm), or 173 percent of average.

Projected unregulated inflow volumes[50] into Lake Powell for specific time periods for these three forecasted inflow scenarios are shown in Tables 3 and 4.

Inflows to the mainstream from Lake Powell to Lake Mead, Lake Mead to Lake Mohave, Lake Mohave to Lake Havasu, and below Lake Havasu are projected using historic data over the five-year period of January 2019 through December 2023, inclusive. These five years of historic data are representative of the most recent hydrologic conditions in the Lower Basin. The most probable side inflows into each reach are estimated as the arithmetic mean of the five-year record. The maximum probable and minimum probable projections for each reach are the 10 percent and 90 percent exceedance values, respectively, of the five-year record. For the reach from Lake Powell to Lake Mead, the minimum probable inflow during water year 2025 is 0.724 maf (893 mcm), the most probable inflow is 0.896 maf (1,110 mcm), and the maximum probable inflow is 1.11 maf (1,370 mcm).

The projected monthly volumes of inflow were input into the 24-Month Study and used to project potential reservoir operations for 2025. Starting with the August 2024 24-Month Study projection of the October 1, 2025 reservoir storage conditions, the projected monthly releases for each reservoir were adjusted until release and storage levels best accomplished project purposes and applicable operational objectives.

For the latest monthly projections for the major reservoirs in the Colorado River system, please see the most recent 24-Month Study report available on these Reclamation websites:

https://www.usbr.gov/uc/water/crsp/studies/index.html, or
https://www.usbr.gov/lc/region/g4000/riverops/coriver-projections.html.

[50] 24-Month Study projections using the CBRFC unregulated inflow forecast do not represent the full range of future possibilities that could occur with different scenarios.

Table 3. Projected Unregulated Inflow into Lake Powell for Water Year 2025 (English Units)[51]

Time Period	Minimum Probable (maf)	Most Probable (maf)	Maximum Probable (maf)
10/2024 – 12/2024	0.85	1.19	1.88
1/2025 – 3/2025	0.66	1.16	2.19
4/2025 – 7/2025	3.36	5.94	11.24
8/2025 – 9/2025	0.38	0.68	1.29
10/2025 – 12/2025	1.04	1.26	1.66
Water Year 2025	5.25	8.97	16.60
Calendar Year 2025	5.44	9.04	16.38

Table 4. Projected Unregulated Inflow into Lake Powell for Water Year 2025 (Metric Units)

Time Period	Minimum Probable (mcm)	Most Probable (mcm)	Maximum Probable (mcm)
10/2024 – 12/2024	1,050	1,470	2,320
1/2025 – 3/2025	810	1,430	2,700
4/2025 – 7/2025	4,140	7,330	13,860
8/2025 – 9/2025	470	840	1,590
10/2025 – 12/2025	1,280	1,550	2,050
Water Year 2025	6,480	11,060	20,480
Calendar Year 2025	6,710	11,150	20,200

[51] All values in Tables 3 and 4 are projected inflows based upon the August 2024 CBRFC forecast. The CBRFC Most Probable forecast is issued as monthly values. The CBRFC Minimum and Maximum Probable forecasts are issued as water year totals, which Reclamation disaggregates to monthly values using monthly proportions of the 10th and 90th percentiles, respectively, of the 1991-2020 unregulated inflow.

SUMMARY OF RESERVOIR OPERATIONS IN 2024 AND PROJECTED 2025 RESERVOIR OPERATIONS

The operation of the Colorado River reservoirs has affected some aquatic and riparian resources. Controlled releases from dams have modified temperature, sediment load, and flow patterns, resulting in increased productivity of some riparian and non-native aquatic resources and the development of economically significant sport fisheries. However, these same releases can have detrimental effects on endangered and other native species. Operating strategies designed to protect and enhance aquatic and riparian resources have been established after appropriate National Environmental Policy Act compliance at several locations in the Colorado River Basin.

In the Upper Basin, public stakeholder work groups have been established at Fontenelle Dam, Flaming Gorge Dam, the Aspinall Unit, and Navajo Dam. These work groups provide a public forum for dissemination of information regarding ongoing and projected reservoir operations throughout the year and allow stakeholders the opportunity to provide information and feedback with respect to ongoing reservoir operations. Additionally, the Glen Canyon Dam Adaptive Management Work Group (AMWG)[52] was established in 1997 as a chartered committee under the Federal Advisory Committee Act of 1972 (Public Law 92-463).

Modifications to projected operations are routinely made based on changes in forecasted conditions or other relevant factors as discussed below. Within the parameters set forth in the Law of the River and considering the Upper Colorado River Endangered Fish Recovery Program (UCRIP),[53] the San Juan River Basin Recovery Implementation Program (SJRIP),[54] Section 7 consultations under the Endangered Species Act, and other downstream concerns, modifications to projected monthly operations may be based on other factors in addition to changes in streamflow forecasts. Decisions on spring peak releases and downstream habitat target flows may be made midway through the runoff season. Reclamation will conduct meetings with Recovery Program participants, the USFWS, other federal agencies, representatives of the Basin States, and with public stakeholder work groups to facilitate the discussions necessary to finalize site-specific projected operations.

The following paragraphs discuss reservoir operations in 2024 and the range of probable projected 2025 operations of each of the reservoirs with respect to applicable provisions of compacts, the Consolidated Decree, statutes, regulations, contracts, agreements, and instream flow needs for maintaining or improving aquatic and riparian resources where appropriate.

Fontenelle Reservoir

Reservoir storage in Fontenelle decreased during water year 2024. At the beginning of water year 2024, Fontenelle storage was 85 percent of live capacity at elevation 6,499.60 feet (1,981.08 meters), with 0.285 maf (352 mcm) in storage. The unregulated inflow to Fontenelle during water year 2024 was 0.834 maf (1,030 mcm) which is 78 percent of average. At the end

[52] Information on the AMWG can be found at: https://www.usbr.gov/uc/progact/amp/amwg.html.
[53] Information on the UCRIP can be found at: http://coloradoriverrecovery.org.
[54] Information on the SJRIP can be found at: https://www.fws.gov/southwest/sjrip.

of the water year, September 30, 2024, Fontenelle storage was at 71 percent of live capacity at elevation 6,492.86 feet (1,979.02 meters), with a storage of 0.237 maf (293 mcm) resulting in a net decrease during water year 2024 of 0.048 maf (59 mcm).

A near average snowpack condition was observed during the winter months of water year 2024 in the Upper Green River Basin above Fontenelle. Peak snow water equivalent reached 103 percent of seasonal median on April 8, 2024. The observed inflow during the April through July period was 0.516 maf (636 mcm), or 70 percent of average.

Fontenelle Reservoir storage peaked at 87 percent of full capacity in water year 2024. The reservoir elevation peaked at 6,500.49 feet (1,981.35 meters) on June 19, 2024, which was 5.51 feet (1.68 meters) below the spillway crest. Daily inflow peaked at 7,750 cfs (219 cms) on June 13, 2024. Reservoir releases were made to balance downstream water resources needs and power production, while also allowing for filling the reservoir to maintain sufficient water in storage for use through the fall and winter months. Due to the below average hydrologic conditions, there was a below average spring peak release at Fontenelle Reservoir.

Based on the August 2024 24-Month Study, the most probable April through July inflow for Fontenelle Reservoir during water year 2025 is 0.640 maf (789 mcm) or 87 percent of average. This volume exceeds the 0.334 maf (412 mcm) live storage capacity of Fontenelle Reservoir. For this reason, the most probable and maximum probable inflow scenarios would require releases during the spring that exceed the capacity of the powerplant to avoid uncontrolled spills from the reservoir. It is likely that Fontenelle Reservoir will fill during water year 2025. In order to minimize high spring releases and to maximize downstream water resources and power production, the reservoir will most likely be drawn down to about elevation 6,469.86 feet (1,972.01 meters) by late March 2025, which is 6.86 feet (2.09 meters) above the minimum operating level and corresponds to a volume of 0.099 maf (122 mcm) of live storage.

Flaming Gorge Reservoir

Reservoir storage in Flaming Gorge decreased during water year 2024. At the beginning of water year 2024, Flaming Gorge storage was 89 percent of live capacity at elevation 6,029.73 feet (1,837.86 meters), with 3.25 maf (4,010 mcm) in storage. The unregulated inflow to Flaming Gorge during water year 2024 was 1.17 maf (1,440 mcm) which is 83 percent of average. At the end of the water year, Flaming Gorge storage was at 86 percent of live capacity at elevation 6,026.99 feet (1,837.03 meters), with 3.15 maf (3,890 mcm) resulting in a net decrease during water year 2024 of 0.103 maf (127 mcm).

A near average snowpack condition was observed during the winter months of water year 2024 in the Upper Green River Basin above Flaming Gorge. Peak snow water equivalent reached 103 percent of seasonal median on April 7, 2024. The observed inflow during April through July period was 0.713 maf (879 mcm), or 74 percent of average. The observed inflow from the Yampa River Basin during the April through July period fell into the average hydrologic condition.

A 2023 DROA Plan[55] was approved by the Upper Division States, the Upper Colorado River Commission, and the Department of the Interior. The 2023 DROA Plan emphasized recovery of prior DROA releases totaling 0.588 maf (725 mcm) from Flaming Gorge. Recovery of Flaming Gorge was completed on February 28, 2024.

The Flaming Gorge Operation Plan for May 2024 through April 2025 (FG-Ops) was developed and approved by Reclamation pursuant to the 2006 Flaming Gorge ROD. The FG-Ops outlines UCRIP flow requests for the average (below median) and drier, average (above median), moderately wet, and wet hydrologic classifications.[56] The average (above and below median), and drier scenarios include the Larval Trigger Study Plan (LTSP) spring release (spring release based on a biological trigger)[57] and smallmouth bass (SMB) flow spike (to disrupt the spawning success of non-native smallmouth bass).[58] Experiments that are outlined in the FG-Ops Plan implement flow ranges and targets from LaGory et al. (2019).[59] The May forecast for the April through July inflow into Flaming Gorge Reservoir was 0.800 maf (987 mcm), or 83 percent of average, which designated Flaming Gorge spring operations to an average (below median) classification.

LTSP spring releases were timed with a biological trigger. After public notification, releases from Flaming Gorge Dam were increased to the full powerplant capacity of 4,600 cfs (130 cms) and the partial bypass capacity of 2,400 cfs (67.9 cms) on May 23, 2024 for approximately 7 days then ramped down by approximately 2,000 cfs/day (28.3 cms/day) to conclude LTSP spring releases. [58] Yampa River flows at the Deerlodge gage during the spring peak releases peaked at 12,200 cfs (345 cms) on May 22, 2024. The peak release from Flaming Gorge Dam occurred after the Yampa River peak. Flows measured on the Green River at the Jensen, Utah gage reached levels at or above 14,000 cfs (396 cms) for 5 days in May 2024, with an average daily peak of 14,400 cfs (408 cms) on May 28, 2024. The spring peak target for Reach 2 for this hydrologic classification was greater than or equal to 14,000 cfs (396 cms) for 7 days.

[55] Drought Response Operations Framework and Plan: https://www.usbr.gov/dcp/docs/DROA/20230517-2023DROAPlan-508-UCRO.pdf.

[56] The adaptive management process will rely on ongoing or added Recovery Program activities for monitoring and studies to test the outcomes of modifying the flows and release temperatures from Flaming Gorge Dam. ROD Operation of Flaming Gorge Dam Final Environmental Impact Statement, February 2006. Available online at: https://www.usbr.gov/uc/envdocs/rod/fgFEIS/final-ROD-15feb06.pdf.

[57] The LTSP's primary objective is to determine the effects of timing of Flaming Gorge spring release on razorback sucker larvae in the reach below the confluence of the Green and Yampa Rivers. The LTSP Report is available online at: https://www.usbr.gov/uc/water/crsp/wg/fg/twg/twgSummaries.html.

[58] Smallmouth bass flow spike study plan titled: Evaluate effects of flow spikes to disrupt reproduction of smallmouth bass in the Green River downstream of Flaming Gorge Dam. K.R. Bestgen, 2018. Available online at: https://www.coloradoriverrecovery.org/documents-publications/technical-reports/isf/Bestgen2018Smallmouth%20bass%20study%20planNovember2018.pdf.

[59] LaGory, K.E., K.R. Bestgen, H. Patno, J. Wilhite, D. Speas, and M. Trammell. 2019. *Evaluation and Suggested Revisions of Flow and Temperature Recommendations for Endangered Fish in the Green River Downstream of Flaming Gorge Dam*. Final report to the U.S. Fish and Wildlife Service Colorado River Endangered Fish Recovery Program, Denver, Colorado, October 2019 and pending approval through the UCRIP Management Committee.

The releases for the SMB flow spike began increasing to full powerplant capacity on June 24, 2024. Full power plant releases, 4,600 cfs (130 cms), were sustained for 3 days (June 24-27, 72 hours) followed by a 2-day ramp down at a maximum of 2,000 cfs/day (56.6 cms/day). The experiment concluded on June 29, 2024.

In water year 2024, Flaming Gorge Reservoir was operated in accordance with the 2006 Flaming Gorge ROD. Water year 2024 winter base flow releases ranged from 2,000 cfs (56.6 cms) to approximately 2,120 cfs (60.0 cms). The April through July observed unregulated inflow resulted in an initial hydrologic classification of moderately dry for the summer baseflow period and a moderately dry hydrologic operation. Per the Flaming Gorge ROD, the hydrologic condition for the baseflow period is to be evaluated monthly and is subject to change pending hydrologic conditions. Summer baseflow releases were within the 2000 Flow and Temperature Recommendations range of 1,100 cfs (31.1) to 1,500 cfs (42.4 cms) at Reach 2 including being within the +/-40 percent range flexibility. To meet CPM flow targets in August and September, the flow range specified for CPM in LaGory et al. (2019)[59] was achieved in Reach 2 for a moderately dry hydrologic classification. Summer base flow average daily releases ranged from 1,350 cfs (38.2 cms) to 1,610 cfs (45.6 cms).

A spring peak release is projected to occur in May or June 2025 and will be timed to coincide with either the peak flows of the Yampa River or emergence of razorback sucker larvae. Reclamation is considering long-term implementation strategies for the UCRIP LTSP.

Based on the August 2024 24-Month Study, the most probable April through July unregulated inflow scenario for Flaming Gorge Reservoir during water year 2025 is 0.815 maf (1,010 mcm), or 85 percent of average. The peak elevation is expected to be approximately 6,027.95 feet (1,837.32 meters) near July 2025. By the end of water year 2025, Flaming Gorge Reservoir is projected to be at elevation 6,025.76 feet (1,836.65 meters), with a storage of 3.11 maf (3,840 mcm), or 85 percent of live capacity.

Under the minimum probable 2025 April through July inflow forecast of 0.494 maf (609 mcm), a 4,600 cfs (130 cms) 2025 spring peak release will be implemented. Under the maximum probable 2025 April through July inflow forecast of 1.58 maf (1,950 mcm), an 8,600 cfs (243 cms) spring peak release will be implemented.

The UCRIP, in coordination with Reclamation, USFWS, and WAPA, will continue conducting studies associated with floodplain inundation. Such studies may result in alternatives for meeting flow and temperature recommendations at lower peak flow levels where feasible.

Blue Mesa, Morrow Point, and Crystal Reservoirs (Aspinall Unit)

Reservoir storage content in Blue Mesa decreased during water year 2024. At the beginning of water year 2024, Blue Mesa storage content was 76 percent of live capacity at elevation 7,496.50 feet (2,284.93 meters), with 0.629 maf (776 mcm) in storage. The unregulated inflow to Blue Mesa during water year 2024 was 0.921 maf (1,140 mcm), which was 102 percent of average. During water year 2024, the peak elevation of Blue Mesa Reservoir occurred on July 9 at an elevation of 7,499.75 feet (2,285.92 meters), which is at 79 percent of live capacity. At

the end of the water year, Blue Mesa storage content was 67 percent of live capacity at elevation 7487.54 feet (2,282.20 meters), with 0.559 maf (690 mcm) resulting in a net decrease during water year 2024 of 0.071 maf (87 mcm).

A 2023 DROA Plan was approved by the Upper Division States, the Upper Colorado River Commission, and the Department of the Interior. The 2023 DROA Plan emphasized recovery of prior DROA releases totaling 0.036 maf (44 mcm) from Blue Mesa. Recovery of Blue Mesa was completed on December 29, 2023.

A near average snowpack condition occurred during the winter months of water year 2024 in the Gunnison River Basin. Snow measurement sites in the basin reported near median seasonal snow water equivalent levels throughout the winter and into the spring of 2024 resulting in an April 1, 2024 snow water equivalent for the Gunnison River Basin that was 104 percent of median.

The fall-through-winter releases from Crystal Dam were consistently near 570 cfs (16.1 cms) after the Gunnison Tunnel ended diversions for irrigation season on November 14, 2023. On March 19, 2024, releases from Crystal Dam were increased for the 2024 irrigation season as operation of the Gunnison Tunnel began diverting approximately 200 cfs (5.66 cms). Flows through the Black Canyon were maintained within the range of approximately 500 cfs (14.2 cms) to approximately 600 cfs (17.0 cms) until May 13, 2024.

The May 2024 final forecast[60] for the unregulated inflow to Blue Mesa for the April through July runoff period was 0.570 maf (703 mcm), which was 90 percent of average. This forecast was used to establish the hydrologic category for water year 2024 as average dry with a peak flow target established for the Gunnison River of 8,070 cfs (228 cms) for 10 days as measured at the Gunnison River near Grand Junction, CO stream gage (Whitewater gage).[61] The actual April through July unregulated inflow into Blue Mesa Reservoir in 2024 was 0.653 maf (805 mcm), which was 103 percent of average.

On May 14, 2024, releases from Crystal, Morrow Point, and Blue Mesa were increased to target downstream flow levels and durations described in the Aspinall ROD and the Black Canyon Water Right Decree.[62] These releases targeted a 10-day peak flow of 8,070 cfs (228 cms) as measured at the Whitewater gage and a 24-hour peak flow of 4,040 cfs (114 cms) in the Black Canyon. During spring peak operations, flows in the Gunnison River as measured at the Whitewater gage achieved an average daily peak flow above 8,070 cfs (228 cms) for nine days on May 22 through 24 and May 29 through June 3, 2024, reaching 8,640 cfs (245 cms) on May 22, 2024. These releases resulted in a 24-hour average peak flow through the Black Canyon and the Gunnison River Gorge of 6,570 cfs (186 cms) on May 23, 2024, as measured at the stream gage located on the Gunnison River below the Gunnison Tunnel. Gunnison River flows

[60] The term "final forecast" or "official forecast" refers to the CBRFC runoff forecast for unregulated inflow into CRSP reservoirs that is received by Reclamation during the first few business days of each month.
[61] Link to the Gunnison River near Grand Junction, CO USGS gage: https://waterdata.usgs.gov/monitoring-location/09152500/#parameterCode=00065&period=P7D.
[62] Decree quantifying the Federal Reserved Water Right for Black Canyon of the Gunnison National Park (State of Colorado District Court, Water Division Four, Case Number 01CW05), signed on December 31, 2008.

in the Black Canyon met or exceeded the flows described in the Black Canyon Water Right Decree.

For water year 2025, the Aspinall Unit will be operated in compliance with the 2012 Aspinall ROD, including all required consultations and consistent with applicable law, while maintaining and continuing to meet its Congressionally authorized purposes.

Based on the August 2024 24-Month Study, the projected most probable unregulated inflow for water year 2025 into Blue Mesa Reservoir is 0.617 maf (761 mcm), or 97 percent of average. The reservoir is expected to reach a seasonal low elevation of 7,479.28 feet (2,279.68 meters) in March 2025. The peak elevation is expected to be approximately 7,505.61 feet (2,287.71 meters) near the end of June 2025. By the end of water year 2025, Blue Mesa Reservoir is projected to be at elevation 7,496.41 feet (2,284.91 meters), with a storage content of 0.629 maf (776 mcm), or 76 percent of capacity.

Under the minimum probable 2025 April through July inflow forecast of 0.368 maf (454 mcm), there will be 1-day spring peak release during the spring of 2025. Under the maximum probable 2025 April through July inflow forecast of 0.936 maf (1,150 mcm), a 10-day spring peak release will be implemented as described in the 2012 Aspinall ROD for water year 2025.

Navajo Reservoir

Storage in Navajo Reservoir decreased during water year 2024. At the beginning of water year 2024, Navajo storage was 70 percent of live capacity at elevation 6,047.77 feet (1,843.36 meters), with 1.15 maf (1,420 mcm) in storage. The modified unregulated inflow[63] to Navajo during water year 2024 was 0.592 maf (731 mcm), or 65 percent of average. At the end of the water year, Navajo storage was at 66 percent of live capacity at elevation 6,042.58 feet (1,841.78 meters), with 1.09 maf (1,340 mcm) resulting in a net decrease during water year 2024 of 0.057 maf (71 mcm).

Reservoir storage in Navajo peaked at an elevation of 6,053.49 feet (1,845.10 meters) on July 4, 2024. This was 31.54 feet (9.61 meters) below full pool. The April through July modified unregulated inflow into Navajo Reservoir in water year 2024 was 0.447 maf (551 mcm), or 71 percent of average.

The San Juan Flow Recommendations,[64] completed by the SJRIP in May 1999 and updated in 2018, provide flow recommendations that promote the recovery of the endangered CPM and razorback sucker, maintain important habitat for these two species as well as the other native species, and provide information for the evaluation of continued water development in the basin. In water year 2024, Navajo Reservoir operated under the 2006 Navajo Unit ROD. Under the 2006 Navajo Unit ROD, releases recommended by the SJRIP for recovery purposes are dependent on annual hydrology and available water may be recommended to be released as a spring peak release, an augmentation of existing target base flows, or for some other SJRIP

[63] Modified unregulated inflow into Navajo Reservoir is calculated as the observed inflow adjusted for the San Juan Chama diversions and change in storage at Vallecito Reservoir.
[64] Flow Recommendations for the San Juan River, May 1999. Available online at: https://www.fws.gov/southwest/sjrip/pdf/DOC_Flow_recommendations_San_Juan_River.pdf.

purposes. The Flow Recommendations specify that the reservoir releases will be calculated to target an End of Water Year Storage Target elevation of 6,063.00 feet (1,848.00 meters). The Flow Recommendations also specify a minimum elevation of 6,050.00 feet (1,844.04 meters) for the purposes of calculating water available to release as a spring peak release. All available water over this target, minus the water required for minimum releases and contracts, will be considered for release as a spring peak hydrograph if the SJRIP requests. The SJRIP recommends that the available water equates to at least 21 days at 5,000 cfs (142 cms) to be released.

Navajo Reservoir was operated in compliance with the 2006 Navajo Unit ROD in 2024, including targeting the SJRIP's recommended base flows. The target base flow was calculated using the weekly average of gaged flows throughout the critical habitat area from Farmington to Lake Powell. Based on the SJRIP's recommendation for water year 2024, there was no recommended Spring Peak Release from Navajo Reservoir.

During water year 2025, Navajo Reservoir will be operated in accordance with the 2006 Navajo Unit ROD. Navajo Reservoir storage levels are expected to be near average in 2025 under the most probable inflow forecast. Base releases from the reservoir will likely range from 250 cfs (7.07 cms) to 600 cfs (17.0 cms) through the winter. Based on the August 2024 most probable April through July modified unregulated inflow forecast of 0.565 maf (697 mcm) in 2025, the August 2024 24-Month Study projects no spring peak release would be recommended by the SJRIP for water year 2025. The reservoir is projected to reach a peak elevation of 6,063.06 feet (1,848.02 meters) in June 2025. The reservoir is projected to reach a minimum elevation of 6,041.13 feet (1,841.34 meters) in February of 2025.

Under the minimum probable 2025 April through July inflow forecast of 0.303 maf (374 mcm), there will be no spring peak release during the spring of 2025. Under the maximum probable 2025 April through July inflow forecast of 1.01 maf (1,250 mcm), a 60-day spring peak release is likely to be recommended by the SJRIP for water year 2025.

Lake Powell

Reservoir storage in Lake Powell increased during water year 2024. At the beginning of water year 2024, Lake Powell storage was 38 percent of live capacity at elevation 3,573.58 feet (1,089.23 meters), with 8.79 maf (10,840 mcm) in storage. The unregulated inflow to Lake Powell during water year 2024 was 7.98 maf (9,840 mcm) which is 83 percent of average. At the end of the water year, Lake Powell storage was at 39 percent of live capacity at elevation 3,578.08 feet (1,090.60 meters), with 9.14 maf (11,280 mcm) resulting in a net increase during water year 2024 of 0.351 maf (433 mcm).

The August 2023 24-Month Study was run to project the January 1, 2024, elevations of Lake Powell and Lake Mead and determine the water year 2024 operating tier for Lake Powell. Using the most probable inflow scenario, and with an 8.23 maf (10,150 mcm) annual release pattern for Lake Powell, the January 1, 2024, reservoir elevations of Lake Powell and Lake Mead were projected to be 3,568.57 feet (1,087.70 meters) and 1,070.57 feet (326.22 meters), respectively. Given these projections, the operating tier and annual release volume from Lake Powell during water year 2024 was consistent with the Mid-Elevation Release Tier (Section

6.C.1 of the 2007 Interim Guidelines) and, under Section 6.C.1, the annual release would be 7.48 maf (9,230 mcm).

The April through July unregulated inflow to Lake Powell in water year 2024 was 5.33 maf (6,570 mcm) which was 83 percent of average. During the 2024 April through July runoff period, Lake Powell's water surface elevation peaked on July 10, 2024, at 3,587.17 feet (1,093.37 meters), which was 112.83 feet (34.39 meters) below full pool. This elevation corresponds to a live storage content of 9.88 maf (12,190 mcm).

In water year 2024, Glen Canyon Dam was operated in compliance with the 2016 LTEMP EIS ROD.

On October 4, 2023, Reclamation published a Federal Register Notice indicating its intent to prepare an SEIS for the 2016 LTEMP EIS ROD.[65] The 2024 LTEMP SEIS ROD was signed on July 3, 2024.[66] The 2024 LTEMP SEIS: (1) analyzed sub-annual flow options designed to disrupt the establishment of smallmouth bass and other warmwater nonnative, invasive fish below Glen Canyon Dam by limiting additional recruitment, which could threaten populations of humpback chub listed under the Endangered Species Act, through reservoir releases with varying combinations of temperature and timing; and (2) explored changes, using the best available science, to the sediment accounting periods associated with the 2016 LTEMP EIS ROD high-flow experiment protocol. Any changes to operations resulting from the 2024 LTEMP SEIS ROD will affect hourly, daily, monthly, and experimental releases from Glen Canyon Dam; annual releases from Glen Canyon Dam will not be affected.

Glen Canyon Dam was operated in compliance with the 2024 LTEMP SEIS ROD after signing. Operations to limit additional recruitment of smallmouth bass and other warmwater nonnative, invasive fish spawning using bypass releases began on July 9, 2024.

The ten-year total flow of the Colorado River at Lee Ferry[67] for water years 2015 through 2024 is 86.03 maf (106,120 mcm). This total is computed as the sum of the flow of the Colorado River at Lees Ferry, Arizona, and the Paria River at Lees Ferry, Arizona, surface water discharge stations which are operated and maintained by the United States Geological Survey.

2025 Operating Tier and Projected Operations for Glen Canyon Dam. The January 1, 2025 reservoir elevations of Lake Powell and Lake Mead are projected under the most probable inflow scenario, with an 8.23 maf (10,150 mcm) release pattern in water year 2025, to be 3,568.99 feet (1,087.83 meters) and 1,062.32 feet (323.80 meters), respectively, based on the August 2024 24-Month Study. Given these projections, the operating tier and annual release volume from Lake Powell during water year 2025 will be consistent with the Mid-Elevation Release Tier (Section 6.C.1 of the 2007 Interim Guidelines and Section 6.E. of the 2024

[65] Federal Register Notice available online at: https://www.federalregister.gov/documents/2023/10/04/2023-22077/notice-of-intent-to-prepare-a-supplemental-environmental-impact-statement-for-the-december-2016.
[66] 2024 LTEMP SEIS ROD is available online at: https://www.usbr.gov/uc/DocLibrary/EnvironmentalImpactStatements/GlenCanyonDamLong-TermExperimentalManagementPlan/20240703-GCDLTEMP-FinalSEIS-RecordofDecision-508-AMWD.pdf.
[67] A point in the mainstream of the Colorado River one mile below the mouth of the Paria River.

Interim Guidelines SEIS ROD) and, under Section 6.C.1, the annual release would be 7.48 maf (9,230 mcm).

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, Native American tribes, the Republic of Mexico, and other partners on Colorado River operations to consider future protective measures for both Lake Powell and Lake Mead.

Maintenance of the eight generating units at Glen Canyon Dam requires them to be taken out of service, in pairs, once each year for approximately one month. Additionally, in water years 2020 through 2024, all four transformers were replaced, requiring the units to be taken out of service, in pairs. This work completed on March 28, 2024. Reclamation is planning to perform maintenance on each of the four hollow jet valves in water year 2024 and water year 2025, which may be extended to water year 2026. Outages for annual maintenance and unit replacements are coordinated between Reclamation offices in Salt Lake City, Utah, and Page, Arizona, and WAPA to minimize impacts to operations.

Because of less than full storage conditions in Lake Powell resulting from drought in the Colorado River Basin, releases from Glen Canyon Dam for dam safety purposes are highly unlikely in 2025. If implemented, releases greater than powerplant capacity would be made consistent with the 1956 Colorado River Storage Project Act,[68] the CRBPA, the 2016 LTEMP EIS ROD, the 2024 LTEMP SEIS ROD, and the Glen Canyon Dam Operating Criteria.

Releases from Lake Powell in water year 2025 will continue to reflect consideration of the uses and purposes identified in the authorizing legislation for Glen Canyon Dam. Monthly releases will also be consistent with the 2016 LTEMP EIS ROD, 2024 LTEMP SEIS ROD and applicable Secretarial decisions and are updated to be consistent with annual volumes determined pursuant to the 2007 Interim Guidelines and the 2024 Interim Guidelines SEIS ROD.

For the latest monthly projections for Lake Powell, please see the most recent 24-Month Study report available on Reclamation's Upper Colorado Region Water Operations website: https://www.usbr.gov/uc/water/crsp/studies/index.html.

Daily and hourly releases in 2025 will be made according to the parameters of the Glen Canyon Dam Operating Criteria. These parameters set the maximum and minimum flows and ramp rates within which reservoir releases must be made. Exceptions to these parameters will be made in accordance with the Emergency Exception Criteria as described in the Glen Canyon Dam Operating Criteria.

During water year 2025, the Department of the Interior will coordinate planning for experimental flows from Glen Canyon Dam in accordance with the 2016 LTEMP EIS ROD and the 2024 LTEMP SEIS ROD.

[68] Available online at: https://www.usbr.gov/lc/region/pao/pdfiles/crspuc.pdf.

Lake Mead

For calendar year 2024, a Shortage Condition was the criterion governing the operation of Lake Mead in accordance with Article III(3)(c) of the Operating Criteria, Article II(B)(3) of the Consolidated Decree, Section 2.D.1.a of the 2007 Interim Guidelines, applicable provisions of the LB DCP Agreement, and Sections III.B.1.a and III.B.2.a of Exhibit 1 to the LB DCP Agreement, and taking into consideration water conservation efforts under the LB DCP Agreement, a December 15, 2021 MOU to facilitate near-term actions to maintain the water surface elevation at Lake Mead (the "500 Plus Plan"),[69] the LC Conservation Program, and Section 2.E of the 2007 Interim Guidelines as amended by the 2024 Interim Guidelines SEIS ROD. Delivery of water to Mexico was scheduled in accordance with Article 15 of the 1944 United States-Mexico Treaty and Minutes No. 242, 323, 327, and 330 of the IBWC.

Lake Mead began water year 2024 on October 1, 2023, at elevation 1,065.82 feet (324.86 meters), with 8.87 maf (10,940 mcm) in storage, which is 34 percent of the conservation capacity[70] of 26.12 maf (32,220 mcm). Lake Mead ended water year 2024 at elevation 1,063.71 feet (324.22 meters) with 8.71 maf (10,740 mcm) in storage (33 percent of capacity) on September 30, 2024.

The total release from Lake Mead through Hoover Dam during water year 2024 was 7.63 maf (9,410 mcm). The total release from Lake Mead through Hoover Dam during calendar year 2024 is projected to be 7.84 maf (9,670 mcm).

The total inflow into Lake Mead is a combination of water released from Glen Canyon Dam plus inflows in the reach between Glen Canyon and Hoover Dams. In water year 2024, inflow into Lake Mead was 8.14 maf (10,040 mcm), consisting of 7.48 maf (9,230 mcm) of water released from Glen Canyon Dam and 0.661 maf (815 mcm) of inflows between Glen Canyon and Hoover Dams. For water year 2025, under the most probable inflow scenario, total inflow into Lake Mead is projected to be 8.38 maf (10,340 mcm).

Based on the August 2024 24-Month Study, Lake Mead's elevation on January 1, 2025 is projected to be 1,062.32 feet (323.80 meters). In accordance with Section 2.D.1 of the 2007 Interim Guidelines and the applicable provisions of the LB DCP Agreement, a Shortage Condition, consistent with Section 2.D.1.a of the 2007 Interim Guidelines, as well as Sections III.B.1.a and III.B.2.a of Exhibit 1 to the LB DCP Agreement, respectively, will govern the releases and diversions from Lake Mead in calendar year 2025. Releases from Lake Mead through Hoover Dam may also be adjusted for the creation and/or delivery of ICS, consistent with Section 3 of the 2007 Interim Guidelines and Sections III and IV of Exhibit 1 to the LB DCP Agreement, in calendar year 2025. In calendar year 2025, reservoir protection conservation will be implemented consistent with Section 2.E of the 2007 Interim Guidelines as amended in the 2024 Interim Guidelines SEIS ROD.

[69] Available online at: https://www.usbr.gov/lc/region/g4000/2021_MOU.pdf.

[70] Conservation capacity is the amount of space available for water storage between Lake Mead's water surface elevations 895.00 feet (272.80 meters) and 1,219.64 feet (371.75 meters), the start of the exclusive flood control space as defined in the Field Working Agreement Between Department of the Interior, Bureau of Reclamation and Department of the Army, Corps of Engineers for Flood Control of Hoover Dam and Lake Mead, Colorado River, Nevada-Arizona, February 8, 1984.

Under the October 2024 most probable inflow scenario, Lake Mead is projected to end water year 2025 at elevation 1,058.82 feet (322.73 meters), with 8.33 maf (10,270 mcm) in storage (32 percent of capacity). Following the end of the water year, Lake Mead is projected to rise to elevation 1,060.04 feet (323.10 meters) with 8.43 maf (10,400 mcm) in storage (32 percent of capacity) at the end of calendar year 2025. The total release from Lake Mead through Hoover Dam during water year 2025 is projected to be 8.10 maf (9,990 mcm). The total release from Lake Mead through Hoover Dam during calendar year 2025 is projected to be 8.03 maf (9,900 mcm).

For the latest monthly projections for Lake Mead, please see the most recent 24-Month Study report available on Reclamation's Lower Colorado Region Water Operations website: https://www.usbr.gov/lc/region/g4000/riverops/coriver-projections.html.

Lake Mohave and Lake Havasu

Lake Mohave started water year 2024 at an elevation of 638.85 feet (194.72 meters) with 1.59 maf (1,960 mcm) in storage. The water level of Lake Mohave was regulated between elevation 635.96 feet (193.84 meters) and 644.34 feet (196.39 meters) during the water year, ending at an elevation of 639.03 feet (194.78 meters), with 1.59 maf (1,960 mcm) in storage. During water year 2024, 7.38 maf (9,100 mcm) was released from Davis Dam. The calendar year 2024 total release is projected to be 7.61 maf (9,390 mcm).

For water and calendar years 2025, Davis Dam is projected to release nearly the same amount of water as in 2024, less any reductions in deliveries and adjustments for the creation and/or delivery of ICS and reservoir protection conservation actions. The water level in Lake Mohave will be regulated between an elevation of approximately 633.00 feet (192.94 meters) and 645.00 feet (196.60 meters).

Lake Havasu started water year 2024 at an elevation of 448.12 feet (136.59 meters) with 0.582 maf (718 mcm) in storage. The water level of Lake Havasu was regulated between elevation 446.99 feet (136.24 meters) and 448.77 feet (136.79 meters) during the water year, ending at an elevation of 447.22 feet (136.31 meters), with 0.565 maf (697 mcm) in storage. During water year 2024, 5.54 maf (6,830 mcm) was released from Parker Dam. The calendar year 2024 total release is projected to be 5.60 maf (6,910 mcm).

For water and calendar years 2025, Parker Dam is expected to release nearly the same amount of water as in 2024, less any reductions in deliveries and adjustments for the creation and/or delivery of ICS and reservoir protection conservation actions. The water level in Lake Havasu will be regulated between an elevation of approximately 446.00 feet (135.94 meters) and 450.00 feet (137.16 meters).

Lakes Mohave and Havasu are scheduled to be drawn down in the late summer and fall months to provide storage space for local storm runoff and will be filled in the winter to meet higher summer water needs. This drawdown also corresponds with normal maintenance at both Davis and Parker powerplants scheduled for October through May.

Bill Williams River

Alamo Lake elevation and storage decreased during water year 2024. Alamo Lake started water year 2024 at elevation 1,126.02 feet (343.21 meters) with 0.143 maf (176 mcm) in storage and ended water year 2024 at elevation 1,118.78 feet (341.00 meters) with 0.117 maf (145 mcm) in storage. In water year 2024, average daily releases from Alamo Lake ranged between 20 cfs (0.57 cms) and 40 cfs (1.13 cms). During water year 2024, the USACE conducted three short duration higher flow releases to flush sediment from the outlet conduit. These releases took place on December 7, 2023, June 25, 2024, and August 29, 2024. None of the water released during these periods reached Lake Havasu. Water released from Alamo Lake totaled 0.018 maf (22 mcm) for water year 2024.

Senator Wash and Laguna Reservoirs

Senator Wash Reservoir is an off-stream regulating storage facility below Parker Dam (approximately 142 river miles downstream) and has a storage capacity of 0.014 maf (17 mcm) at full pool elevation of 251.00 feet (76.50 meters). The reservoir is used to store excess flows from the river caused by water user cutbacks, side wash inflows due to rain, and other factors. Stored waters are utilized to meet the water demands in Arizona and California and the delivery obligation to Mexico.

Since 1992, elevation restrictions have been in place on Senator Wash Reservoir due to potential piping and liquefaction of foundation and embankment materials at Xanyō Xamshré Dike and Senator Wash Dam. Senator Wash Reservoir is restricted to an elevation of 240.00 feet (73.15 meters) with 0.0090 maf (11 mcm) of storage, a loss of about 0.0050 maf (6.2 mcm) of storage from its original capacity. Whenever Senator Wash Reservoir exceeds an elevation of 237.00 feet (72.24 meters) Reclamation must conduct a visual inspection report. This reservoir restriction is expected to continue through 2025.

Laguna Reservoir is a regulating storage facility located approximately five river miles downstream of Imperial Dam and is primarily used to capture sluicing flows from Imperial Dam. The storage capability of Laguna Reservoir has diminished from about 0.0015 maf (1.9 mcm) to approximately 0.0004 maf (0.5 mcm) due to sediment accumulation and vegetation growth. Sediment accumulation in the reservoir has occurred primarily due to flood releases that occurred in 1983 and 1984, and flood control or space building releases that occurred between 1985 and 1988 and from 1997 through 1999.

Sediment removal at Laguna Reservoir to reestablish operational sluicing began in 2013; however, the project was put on hold until a dredging project at Imperial Dam is completed. The revised estimated completion date is after 2025. In total, the Laguna Basin Dredging project will dredge approximately 3.55 million cubic yards (2.7 mcm) of sediment, reestablishing 140 acres (0.57 square kilometers) of open water. As of June 2024, approximately 2.72 million cubic yards (2.1 mcm) of material have been removed. All dredged material has been disposed of in a designated area adjacent to the project site. The project has incorporated the use of both land-based and waterborne heavy equipment. The project permit was obtained from the United States Army Corps of Engineers (USACE) in May 2013 and was

valid through May 2020. The project permit from the USACE may be extended after the completion of the Imperial Dam dredging project.

Imperial Dam

Imperial Dam is the last major diversion dam on the Colorado River in the United States. From the head works at Imperial Dam, water is diverted into the All-American Canal on the California side of the dam and into the Gila Gravity Main Canal on the Arizona side of the dam. These diversions provide water to the Gila Project, the Yuma Project, the Imperial Irrigation District (IID), the Coachella Valley Water District, and the City of Yuma, and through Siphon Drop and Pilot Knob to the Northerly International Boundary (NIB) for diversion at Morelos Dam by Mexico. Flows arriving at Imperial Dam for calendar year 2024 are projected to be 5.53 maf (6,820 mcm). The flows arriving at Imperial Dam for calendar year 2025 are projected to be 5.30 maf (6,540 mcm).

Reclamation started a dredging project above Imperial Dam in March 2021. The purpose of this project is to remove sediment deposited immediately upstream of Imperial Dam that threatens to constrict and/or prevent the operation of Imperial Dam facilities. Large amounts of sediment deposits are detrimental to Imperial Dam water operations. Excessive sediment build up in the reservoir limits reservoir storage capacity and can impede gate operations. Periodic removal of sediment is necessary to allow delivery of water to the Gila Gravity Main Canal and the All-American canal. This project has been extended to remove an additional 0.300 million cubic yards (0.230 mcm) and is scheduled to be completed by October 1, 2025. As of October 2024, approximately 1.548 million cubic yards (1.183 mcm) of material have been removed. The project permit was obtained from the USACE and is valid through 2025.

Gila River Flows

During water year 2024, there was above median snowfall in the Gila River Basin, including the Salt and Verde River watersheds. The Salt River Project did not release water from its system in excess of diversion requirements at Granite Reef Diversion Dam in water year 2024. No water reached or was released from Painted Rock Dam by the USACE in water year 2024.

Warren H. Brock Reservoir

The Warren H. Brock (Brock) Reservoir is located near the All-American Canal in Imperial County, California. The purpose of the 0.0080 maf (9.9 mcm) Brock Reservoir is to reduce non-storable flows and to enhance beneficial use of Colorado River water within the United States. The reservoir reduces the impact of loss of water storage at Senator Wash due to operational restrictions and provides additional regulatory storage, allowing for more efficient management of water below Parker Dam. In 2021, Reclamation completed the Warren H. Brock Reservoir Conservation Summary Report which includes, among other matters, a summary of water conserved by Brock Reservoir from 2013 through 2019.[71] Water conserved by Brock Reservoir from 2020 through 2022 may be found in the respective annual Colorado River Accounting and Water Use Report, Arizona, California, and Nevada.[72]

[71] Available online at: https://www.usbr.gov/lc/region/programs/strategies/agreements/BrockReport.pdf.
[72] Available online at: https://www.usbr.gov/lc/region/g4000/wtracct.html.

Yuma Desalting Plant

The Yuma Desalting Plant (YDP) was authorized in 1974 under the Colorado River Basin Salinity Control Act (Public Law 93-320)[73] which authorized the federal government to construct the YDP to desalt the drainage flows from the Wellton-Mohawk Division of the Gila Project. This would allow the treated water to be delivered to Mexico as part of its 1944 United States-Mexico Water Treaty allotment. The United States has met salinity requirements established in IBWC Minute No. 242 primarily through use of a canal to bypass Wellton-Mohawk drain water to the Ciénega de Santa Clara, a wetland of open water, vegetation, and mudflats within a Biosphere Reserve in Mexico. In calendar year 2024, the amount of water discharged from the Wellton-Mohawk Division through the bypass canal[74] is anticipated to be 0.114 maf (140 mcm) measured at gaging station 0+00 and 0.118 maf (146 mcm) measured at the gaging station near the Southerly International Boundary (SIB), at an approximate concentration of total dissolved solids of 2,456 parts per million (ppm).

Off-stream Storage Agreements

Colorado River water may be stored off-stream pursuant to individual SIRAs and 43 CFR Part 414 within the Lower Division States. The Secretary shall make ICUA available to contractors in Arizona, California, or Nevada pursuant to individual SIRAs and 43 CFR Part 414. The Southern Nevada Water Authority (SNWA) may propose to make unused Nevada basic apportionment available for storage by the Metropolitan Water District of Southern California (MWD)[75] and/or Arizona Water Banking Authority (AWBA)[76] in calendar years 2024 and 2025.

Intentionally Created Surplus

The 2007 Interim Guidelines included the adoption of the ICS mechanism that, among other things, encourages the efficient use and management of Colorado River water in the Lower Basin. ICS may be created through several types of activities that include improvements in system efficiency, extraordinary conservation, tributary conservation, and the importation of non-Colorado River System water into the Colorado River mainstream over the course of a calendar year. Several implementing agreements[77] were executed concurrent with the issuance of the ROD for the 2007 Interim Guidelines. The LB DCP Agreement, as authorized by Public Law 116-14 through the 2019 Colorado River DCP, expanded upon the ICS concept, including

[73] Available online at: https://www.usbr.gov/lc/region/pao/pdfiles/crbsalct.pdf.
[74] This water does not count towards the delivery of water to Mexico pursuant to IBWC Minute No. 242 adopted by the United States and Mexico pursuant to Article 24 of the 1944 United States-Mexico Water Treaty.
[75] Storage and Interstate Release Agreement among The United States of America, acting through the Secretary of the Interior; The Metropolitan Water District of Southern California; the Southern Nevada Water Authority; and the Colorado River Commission of Nevada, October 21, 2004. Available online at: https://www.usbr.gov/lc/region/g4000/contracts/SNWA_MWDSIRAfinal.pdf.
[76] Storage and Interstate Release Agreement among The United States of America, acting through the Secretary of the Interior; The Arizona Water Banking Authority; the Southern Nevada Water Authority; and the Colorado River Commission of Nevada, December 18, 2002. Available online at: https://www.usbr.gov/lc/region/g4000/contracts/SIRAfinal.pdf.
[77] Information on forbearance and delivery agreements related to the creation and delivery of ICS can be found at: https://www.usbr.gov/lc/region/programs/strategies/documents.html.

the execution of additional implementation agreements[78] and establishment of a DCP ICS category. ICS credits may be created and delivered in calendar years 2024 and 2025 pursuant to Section 3 of the 2007 Interim Guidelines, Sections III and IV of Exhibit 1 to the LB DCP Agreement, including the ICS accumulation limit as outlined in Section IV.C of Exhibit 1 to the LB DCP Agreement, and other applicable implementing agreements. ICS balances by state, user, and type of ICS may be found in the annual Water Accounting Report.

IBWC Minute No. 323 identified cooperative measures that the United States and Mexico will take through December 31, 2026, including water conservation projects in Mexico. Consistent with Section IX.A of IBWC Minute No. 323, these water conservation projects will generate or conserve a volume of water of which 0.109 maf (135 mcm) will be converted to Binational ICS for use in the United States and 0.050 maf (62 mcm) will be allocated to the system for the benefit of all users.

Extraordinary Conservation ICS. Entities with approved plans may create Extraordinary Conservation ICS in 2024 and/or 2025, subject to available capacity to store such ICS within existing ICS accumulation limits. Table 5 provides a summary of submitted or approved Extraordinary Conservation ICS plans of creation in 2024 and 2025. Entities with available Extraordinary Conservation ICS may request delivery of ICS credits in 2024 and 2025.[79]

Table 5. Summary of Extraordinary Conservation ICS Plans of Creation in Calendar Years 2024 and 2025

Entity	2024 Plan of Creation	Status of 2024 Plan	2025 Plan of Creation	Status of 2025 Plan
CAWCD	up to 0.100 maf (123 mcm)	approved	up to 0.080 maf (99 mcm)	submitted
IID	up to 0.062 maf (76 mcm)	approved	up to 0.062 maf (76 mcm)	submitted
MWD	up to 0.450 maf (555 mcm)	approved	up to 0.450 maf (555 mcm)	submitted
SNWA	up to 0.100 maf (123 mcm)	approved	up to 0.100 maf (123 mcm)	submitted

System Efficiency ICS. In 2024 and 2025, the Central Arizona Water Conservation District (CAWCD), MWD, and SNWA may request delivery of Brock Reservoir System Efficiency ICS credits. The annual maximum delivery of Brock Reservoir System Efficiency ICS is 0.065

[78] Information on the agreements related to the creation of ICS under the LB DCP Agreement can be found at: https://www.usbr.gov/lc/region/programs/dcp.html.

[79] The ICS delivery volumes will be reflected in Reclamation's Water Accounting Report. The Water Accounting Report is available online at: https://www.usbr.gov/lc/region/g4000/wtracct.html.

maf (80 mcm). In 2024 and 2025, CAWCD, MWD, and SNWA may request delivery of YDP Pilot Run System Efficiency ICS credits.

Tributary Conservation ICS. SNWA has an approved plan to create up to 0.044 maf (54 mcm) of Tributary Conservation ICS in 2024 and has submitted a plan to create up to 0.044 maf (54 mcm) in 2025. Any Tributary Conservation ICS not delivered for use by SNWA in the calendar year created will, at the beginning of the following year, be converted to Extraordinary Conservation ICS pursuant to the 2007 Interim Guidelines, subject to available capacity to store such ICS within existing ICS accumulation limits.

Imported ICS. SNWA may submit plans to create Imported ICS in 2024 and 2025. Any Imported ICS not delivered for use by SNWA in the calendar year created will, at the beginning of the following year, be converted to Extraordinary Conservation ICS pursuant to the 2007 Interim Guidelines, subject to available capacity to store such ICS within existing ICS accumulation limits.

Binational ICS. In 2024 and 2025, CAWCD, IID, MWD, and SNWA may request delivery of Binational ICS subject to any applicable provisions in the delivery agreements.

DCP ICS. DCP ICS may be created in 2024 and 2025 by entities making DCP contributions consistent with Section III of Exhibit 1 to the LB DCP Agreement and subject to available capacity to store such ICS within existing ICS accumulation limits. Following creation, DCP ICS may be delivered in a subsequent year in accordance with Section III.F of Exhibit 1 to the LB DCP Agreement.

Delivery of Water to Mexico

2024 Operations. As of October 2024, delivery of water to Mexico, pursuant to the 1944 United States-Mexico Water Treaty, IBWC Minute No. 323, and IBWC Minute No. 330, is anticipated to be 1.299 maf (1,600 mcm) in calendar year 2024. This volume reflects a shortage reduction of 0.050 maf (62 mcm) pursuant to Section III.A of IBWC Minute No. 323, recoverable water savings of 0.030 maf (37 mcm) as required by Mexico under Section IV of IBWC Minute No. 323, and the creation of approximately 0.011 maf (14 mcm) of water for Mexico's Water Reserve (0.0078 maf or 9.62 mcm under IBWC Minute No. 323 and 0.0036 maf or 4.44 mcm under IBWC Minute No. 330) and the creation of 0.133 maf (164 mcm) of system water pursuant to Resolutions 1 and 2 of IBWC Minute No. 330. The water savings contribution volume shall be accounted for as described in the Joint Report of the Principal Engineers with the Implementing Details of the Binational Water Scarcity Contingency Plan in the Colorado River Basin (2019 Joint Engineers' Report)[80] and the Joint Report of the Principal Engineers with the Operational Provisions Applicable to Water for the Environment Stipulated in Minute 323 (2021 Joint Engineers' Report).[81] Balances of Mexico's Water Reserve in

[80] Joint Report of the Principal Engineers with the Implementing Details of the Binational Water Scarcity Contingency Plan in the Colorado River Basin. Available online at: https://ibwc.azurewebsites.net/wp-content/uploads/2023/04/Min323_joint_report_eng.pdf.

[81] Joint Report of the Principal Engineers with the Operational Provisions Applicable to Water for the Environment Stipulated in Minute 323. Available online at: https://www.ibwc.gov/wp-content/uploads/2023/04/Min323_joint_report_eng.pdf.

previous years may be found in the annual Colorado River Accounting and Water Use Report, Arizona, California, and Nevada.[82]

Of the scheduled delivery to Mexico in calendar year 2024, approximately 1.159 maf (1,430 mcm) is projected to be delivered at NIB and approximately 0.140 maf (173 mcm) is projected to be delivered at SIB. Under IBWC Minute No. 327 and the Emergency Delivery Agreement,[83] Mexico, through the IBWC, may request water to be delivered to Tijuana, Baja California, through MWD, the San Diego County Water Authority, and the Otay Water District's respective distribution system facilities in California. In calendar year 2024, approximately 1,404 acre-feet (1.7 mcm) is scheduled to be delivered to Tijuana, Baja California.

Of the total delivery at SIB projected in calendar year 2024, approximately 0.081 maf (100 mcm) is projected to be delivered from the Yuma Project Main Drain and approximately 0.028 maf (35 mcm) is projected to be delivered by the Protective and Regulatory Pumping Unit (242 well field) as of September 2024.

Excess flows arriving at the NIB are projected to be approximately 0.024 maf (29 mcm) in calendar year 2024. Excess flows result from a combination of factors, including heavy rain from seasonal storms, water ordered but not delivered to United States users downstream of Parker Dam, inflows into the Colorado River below Parker Dam, releases from Painted Rock Dam, and spills from irrigation facilities below Imperial Dam.

2025 Operations. Pursuant to the 1944 United States-Mexico Water Treaty and Section III.A of IBWC Minute No. 323, a volume of 1.45 maf (1,790 mcm) will be available to be scheduled for delivery to Mexico in calendar year 2025. This volume may be further adjusted for water savings contributions as required under Section IV of IBWC Minute No. 323 and system water and Mexico's Water Reserve conservation as required under Resolutions 1 and 2 of IBWC Minute No. 330. Mexico may create water for or take delivery of water from Mexico's Water Reserve pursuant to Section III.C and Section V of IBWC Minute No. 323 and Resolution 3 of IBWC Minute No. 330. Approximately 0.140 maf (173 mcm) is projected to be delivered at SIB and the remainder of the water to be scheduled for delivery to Mexico in 2025 will be delivered at NIB and Tijuana. Under IBWC Minute No. 327 and the Emergency Delivery Agreement, water may be delivered to Tijuana through MWD, the San Diego County Water Authority, and the Otay Water District's respective distribution system facilities in California.

Other Operational Considerations. As of August 2024, drainage flows to the Colorado River from the South Gila Drain Pump Outlet Channels and the Yuma Mesa Conduit are projected to be 0.0030 maf (3.7 mcm) and 0.026 maf (32 mcm), respectively, for calendar year 2024. Consistent with Articles 11 and 15 of the 1944 United States-Mexico Water Treaty and IBWC Minute No. 242, this water is available for delivery at NIB in satisfaction of the 1944 United States-Mexico Water Treaty.

[82] Available online at: https://www.usbr.gov/lc/region/g4000/wtracct.html.

[83] Agreement for Temporary Emergency Delivery of a Portion of the Mexican Treaty Waters of the Colorado River to the International Boundary in the Vicinity of Tijuana, Baja California, Mexico, and for Operation of Facilities in the United States, dated February 8, 2022.

As stated in IBWC Minute No. 242, water delivered to Mexico upstream of Morelos Dam shall have an annual average salinity of no more than 115 ppm ± 30 ppm United States' count (121 ppm ± 30 ppm Mexican count) over the annual average salinity of Colorado River waters which arrive at Imperial Dam. This difference, known as the salinity differential, is projected to be 141 ppm by the United States' count for calendar year 2024.

Mexico has identified four critical months for agriculture, September through December, regarding improving the quality of water delivered at SIB. Consistent with Section VI.B of IBWC Minute No. 323, the United States has improved the water quality delivered at the SIB to approximately 1,200 ppm during this four-month period.

2025 DETERMINATIONS

The AOP provides projections regarding reservoir storage and release conditions during the upcoming year, based upon Congressionally mandated and authorized storage, release, and delivery criteria and determinations. After meeting these criteria and determinations, specific reservoir releases may be modified within these requirements as forecasted inflows change in response to climatic variability and to provide additional benefits coincident to the projects' multiple purposes.

Upper Basin

Section 602(a) of the CRBPA provides for the storage of Colorado River water in Upper Basin reservoirs and the release of water from Lake Powell that the Secretary finds reasonably necessary to assure deliveries to comply with Articles III(c), III(d), and III(e) of the 1922 Colorado River Compact without impairment to the annual consumptive use in the Upper Basin. The Operating Criteria provide that the annual plan of operation shall include a determination of the quantity of water considered necessary to be in Upper Basin storage at the end of the water year after taking into consideration all relevant factors including historic streamflow, the most critical period of record, the probabilities of water supply, and estimated future depletions. Water not required to be so stored will be released from Lake Powell:

- to the extent it can be reasonably applied in the States of the Lower Division to the uses specified in Article III(e) of the 1922 Colorado River Compact, but these releases will not be made when the active storage in Lake Powell is less than the active storage in Lake Mead

- to maintain, as nearly as practicable, active storage in Lake Mead equal to the active storage in Lake Powell

- to avoid anticipated spills from Lake Powell

Taking into consideration all relevant factors required by Section 602(a)(3) of the CRBPA and the Operating Criteria, it is determined that the active storage in Upper Basin reservoirs projected for September 30, 2025 under the most probable inflow scenario would be below the threshold required under Section 602(a) of the CRBPA.

Taking into account (1) the existing water storage conditions in the basin, (2) the August 2024 24-Month Study projection of the most probable near-term water supply conditions in the basin, and (3) Section 6.C.1 of the 2007 Interim Guidelines and Section 6.E. of the 2024 Interim Guidelines SEIS ROD, the Mid-Elevation Release Tier will govern the operation of Lake Powell for water year 2025. The August 2024 24-Month Study of the most probable inflow scenario projects the water year 2025 release from Glen Canyon Dam to be 7.48 maf (9,230 mcm).

Lower Basin

Pursuant to Article III of the Operating Criteria and consistent with the Consolidated Decree, water shall be released or pumped from Lake Mead to meet the following requirements:

(a) 1944 United States-Mexico Water Treaty obligations;
(b) Reasonable beneficial consumptive use requirements of mainstream users in the Lower Division States;
(c) Net river losses;
(d) Net reservoir losses;
(e) Regulatory wastes; and
(f) Flood control.

The Operating Criteria provide that after the commencement of delivery of mainstream water by means of the Central Arizona Project, the Secretary will determine the extent to which the reasonable beneficial consumptive use requirements of mainstream users are met in the Lower Division States. Reasonable beneficial consumptive use requirements are met depending on whether a Normal, Surplus, or Shortage Condition has been determined. The Normal Condition is defined as annual pumping and release from Lake Mead sufficient to satisfy 7.50 maf (9,250 mcm) of consumptive use in accordance with Article III(3)(a) of the Operating Criteria and Article II(B)(1) of the Consolidated Decree. The Surplus Condition is defined as annual pumping and release from Lake Mead sufficient to satisfy in excess of 7.50 maf (9,250 mcm) of consumptive use in accordance with Article III(3)(b) of the Operating Criteria and Article II(B)(2) of the Consolidated Decree. An ICS Surplus Condition is defined as a year in which Lake Mead's elevation is projected to be above elevation 1,075.00 feet (327.66 meters) on January 1, a Flood Control Surplus has not been determined, and delivery of ICS has been requested. The Secretary may determine an ICS Surplus Condition in lieu of a Normal Condition or in addition to other operating conditions that are based solely on the elevation of Lake Mead. The Shortage Condition is defined as annual pumping and release from Lake Mead insufficient to satisfy 7.50 maf (9,250 mcm) of consumptive use in accordance with Article III(3)(c) of the Operating Criteria and Article II(B)(3) of the Consolidated Decree.

The 2007 Interim Guidelines and 2024 Interim Guidelines SEIS ROD are being utilized in calendar year 2025 and serve to implement the narrative provisions of Article III(3)(a), Article III(3)(b), and Article III(3)(c) of the Operating Criteria and Article II(B)(1), Article II(B)(2), and Article II(B)(3) of the Consolidated Decree for the period through 2026. The 2007 Interim Guidelines and 2024 Interim Guidelines SEIS ROD will be used annually by the Secretary to determine the quantity of water available for use within the Lower Division States.

Consistent with the 2007 Interim Guidelines and the LB DCP Agreement, the August 2024 24-Month Study was used to forecast the system storage as of January 1, 2025. Based on a projected January 1, 2025 Lake Mead elevation of 1,062.32 feet (323.80 meters) and consistent with Section 2.D.1 of the 2007 Interim Guidelines, a Shortage Condition, consistent with Section 2.D.1.a, will govern releases for use in the states of Arizona, Nevada, and California during calendar year 2024 in accordance with Article III(3)(c) of the Operating Criteria and Article II(B)(3) of the Consolidated Decree. In addition, consistent with Sections III.B.1.a and III.B.2.a of Exhibit 1 to the LB DCP Agreement, DCP contributions will be required by Arizona and Nevada, respectively, in calendar year 2025. Additionally, reservoir protection conservation will be implemented consistent with Section 2.E of the 2007 Interim Guidelines as amended in the 2024 Interim Guidelines SEIS ROD in calendar year 2025. Water deliveries in the Lower Basin during calendar year 2025 will be limited to 7.167 maf (8,840 mcm) and will be further adjusted for DCP contributions and creation and/or delivery of ICS credits and/or DSS. In calendar year 2025, reservoir protection conservation will be implemented consistent with Section 2.E of the 2007 Interim Guidelines as amended by the 2024 Interim Guidelines SEIS ROD.

Article II(B)(6) of the Consolidated Decree allows the Secretary to allocate water that is apportioned to one Lower Division State but is for any reason unused in that state to another Lower Division State. This determination is made for one year only, and no rights to recurrent use of the water accrue to the state that receives the allocated water. No unused apportionment for calendar year 2024 is anticipated. If any unused apportionment becomes available after adoption of this AOP, Reclamation, on behalf of the Secretary, may allocate any such available unused apportionment for calendar year 2024 in accordance with Article II(B)(6) of the Consolidated Decree, the Unused Water Policy, and giving further consideration to the water conservation objectives of the July 30, 2014 agreement for the PSCP, the LC Conservation Program, as specified in Section 4.b of the LB DCP Agreement, and in accordance with Section 2.E of the 2007 Interim Guidelines as amended by the 2024 Interim Guidelines SEIS ROD.

In calendar year 2025, water may be stored off-stream pursuant to individual SIRAs and 43 CFR Part 414 within the Lower Division States. The Secretary shall make ICUA available to contractors in Arizona, California, or Nevada pursuant to individual SIRAs and 43 CFR Part 414. SNWA may propose to make unused Nevada basic apportionment available for storage by MWD and/or AWBA in calendar year 2025.

The IOPP, which became effective January 1, 2004, will be in effect during calendar year 2025. In accordance with Section 2.6.e of the IOPP, further accumulation of inadvertent overruns in calendar year 2025 will be suspended. Payback balances by state and user may be found in the annual Colorado River Accounting and Water Use Report, Arizona, California, and Nevada.[84]

In calendar year 2025, conserved Colorado River water, created through the PSCP, the LB DCP Agreement, the LC Conservation Program, and other voluntary agreements, is anticipated to be added to system reservoirs in the Lower Basin pursuant to system conservation agreements.

[84] Available online at: https://www.usbr.gov/lc/region/g4000/wtracct.html.

The 2007 Interim Guidelines included the adoption of the ICS mechanism, which was expanded upon in the LB DCP Agreement, that among other things encourages the efficient use and management of Colorado River water in the Lower Basin. In calendar year 2025, ICS credits will be created and delivered pursuant to Section 3 of the 2007 Interim Guidelines, Sections III and IV of Exhibit 1 to the LB DCP Agreement, and appropriate forbearance and delivery agreements, and consistent with approved ICS plans of creation.

Consistent with Section 4 of the 2007 Interim Guidelines, DSS may be created and delivered in calendar year 2025.

Given the limitation of available supply and recent low inflow amounts within the Colorado River Basin, the Secretary, through Reclamation, will continue to review Lower Basin operations to assure that all deliveries and diversions of mainstream water are in strict accordance with the Consolidated Decree, applicable statutes, contracts, rules, and agreements. As provided in Section 7.C of the 2007 Interim Guidelines, the Secretary may undertake a mid-year review to consider revisions of the current AOP. For Lake Mead, the Secretary shall revise the determination in any mid-year review for the current year only to allow for additional deliveries from Lake Mead pursuant to Section 7.C of the 2007 Interim Guidelines.

1944 United States-Mexico Water Treaty

Under the minimum probable, most probable, and maximum probable inflow scenarios, water in excess of that required to supply uses in the United States and the guaranteed quantity of 1.500 maf (1,850 mcm) allotted to Mexico will not be available, subject to any increased amounts delivered consistent with Section V of IBWC Minute No. 323. Vacant storage space in mainstream reservoirs is substantially greater than that required by flood control regulations.

A volume of 1.450 maf (1,790 mcm) of water will be available to be scheduled for delivery to Mexico during calendar year 2025 subject to and in accordance with Article 15 of the 1944 United States-Mexico Water Treaty, IBWC Minutes No. 242 and 327, and Section III.A of IBWC Minute No. 323. This volume may be further adjusted for water savings contributions as required under Section IV of IBWC Minute No. 323 and Resolutions 1 and 2 of IBWC Minute No. 330. In accordance with Section III.C and Section V of IBWC Minute No. 323 and Resolution 3 of IBWC Minute No. 330, Mexico may create water for or take delivery of water from Mexico's Water Reserve.

Calendar year schedules of the monthly deliveries of Colorado River water are formulated by the Mexican Section of the IBWC and presented to the United States Section before the beginning of each calendar year. Changes to these delivery schedules are coordinated between the United States and Mexican Sections of the IBWC pursuant to Article 15 of the 1944 United States-Mexico Water Treaty and consistent with other applicable agreements.

DISCLAIMER

Nothing in this AOP is intended to interpret the provisions of the Colorado River Compact (45 Stat. 1057); the Upper Colorado River Basin Compact (63 Stat. 31); the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Treaty Between the United States of America and Mexico (Treaty Series 994, 59 Stat. 1219); the United States/Mexico agreements in Minute No. 242 of August 30, 1973 (Treaty Series 7708; 24 UST 1968), Minute No. 323 of September 21, 2017, Minute No. 327 of January 28, 2022, or Minute No. 330 of March 21, 2024; the Consolidated Decree entered by the Supreme Court of the United States in *Arizona v. California* (547 U.S 150 (2006)); the Boulder Canyon Project Act (45 Stat. 1057; 43 U.S.C. 617); the Boulder Canyon Project Adjustment Act (54 Stat. 774; 43 U.S.C. 618a); the Colorado River Storage Project Act (70 Stat. 105; 43 U.S.C. 620); the Colorado River Basin Project Act (82 Stat. 885; 43 U.S.C. 1501); the Colorado River Basin Salinity Control Act (88 Stat. 266; 43 U.S.C. 1951); the Hoover Power Plant Act of 1984 (98 Stat. 1333); the Hoover Power Allocation Act of 2011 (125 Stat. 777); the Colorado River Floodway Protection Act (100 Stat. 1129; 43 U.S.C. 1600); the Grand Canyon Protection Act of 1992 (Title XVIII of Public Law 102-575, 106 Stat. 4669); the Decree Quantifying the Federal Reserved Right for Black Canyon of the Gunnison National Park (Case No. 01CW05, District Court, Colorado Water Division No. 4, 2008); the Colorado River Drought Contingency Plan Authorization Act (Public Law 116-14); or the rules, criteria, guidelines, and decisions referenced within this AOP.

ACRONYMS AND ABBREVIATIONS

500 Plus Plan	Memorandum of Understanding (MOU) to maintain the elevation in Lake Mead, signed December 15, 2021
1944 United States-Mexico Water Treaty	Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, the Treaty Between the United States of America and Mexico, signed February 3, 1944
2016 LTEMP EIS ROD	2016 Glen Canyon Dam Long-Term Experimental and Management Plan Environmental Impact Statement and Record of Decision
2019 Joint Engineers' Report	Joint Report of the Principal Engineers with the Implementing Details of the Binational Water Scarcity Contingency Plan in the Colorado River Basin
2021 Joint Engineers' Report	Joint Report of the Principal Engineers with the Operational Provisions Applicable to Water for the Environment Stipulated in Minute 323
2023 DROA Plan	2023 DROA Plan which spans from May 2023 through April 2024
2024 Interim Guidelines SEIS ROD	Supplemental Environmental Impact Statement for Near Term Colorado River Operations Record of Decision
2024 LTEMP SEIS ROD	2024 Glen Canyon Dam Long-Term Experimental and Management Plan Supplemental Environmental Impact Statement and Record of Decision
AMWG	Glen Canyon Dam Adaptive Management Work Group
AOP	Annual Operating Plan
AWBA	Arizona Water Banking Authority
Brock	Warren H. Brock Reservoir
CAWCD	Central Arizona Water Conservation District
CBRFC	National Weather Service's Colorado Basin River Forecast Center
CFR	Code of Federal Regulations
Cfs	cubic feet per second
Cms	cubic meters per second
Consolidated Decree	Consolidated Decree of the Supreme Court of the United States in *Arizona v. California*, 547 U.S. 150
CPM	Colorado pikeminnow
CRBPA	Colorado River Basin Project Act of 1968
DCP	Drought Contingency Plan
DROA	Drought Response Operations Agreement
DSS	Developed Shortage Supply
FG-Ops	Flaming Gorge Operation Plan
IBWC	International Boundary and Water Commission
ICS	Intentionally Created Surplus
ICUA	Intentionally Created Unused Apportionment
IID	Imperial Irrigation District
IOPP	Inadvertent Overrun and Payback Policy
LB DCP Agreement	Lower Basin Drought Contingency Plan Agreement
LC Conservation Program	Lower Colorado River Basin System Conservation and Efficiency Program

LTSP	Larval Trigger Study Plan
Maf	million acre-feet
Mcm	million cubic meters
MOU	Memorandum of Understanding
MWD	The Metropolitan Water District of Southern California
NIB	Northerly International Boundary
Operating Criteria	Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968
Ppm	parts per million
PSCP	Pilot System Conservation Program
Reclamation	Bureau of Reclamation
ROD	Record of Decision
Secretary	Secretary of the U.S. Department of the Interior
SEIS	Supplemental Environmental Impact Statement
SCPP	System Conservation Pilot Program
SIB	Southerly International Boundary
SIRA	Storage and Interstate Release Agreement
SJRIP	San Juan River Basin Recovery Implementation Program
SMB	Smallmouth bass
SNWA	Southern Nevada Water Authority
UCRC	Upper Colorado River Commission
UCRIP	Upper Colorado River Endangered Fish Recovery Program
Unused Water Policy	Lower Colorado Region Policy for Apportioned but Unused Water
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
WAPA	Western Area Power Administration
Water Accounting Report	Colorado River Accounting and Water Use Report, Arizona, California, and Nevada
YDP	Yuma Desalting Plant

1