Upper Gunnison River Water Conservancy District

210 West Spencer Avenue, Suite A • Gunnison, Colorado 81230
Telephone (970) 641-6065 • www.ugrwcd.org

BOARD OF DIRECTORS MEETING AGENDA

Monday, March 23, 2026
5:30 PM
https://us02web.zoom.us/meeting/register/q3C2Gi6ZRiaEfq_XLCpINw

MISSION STATEMENT
To be an active leader in all issues affecting the water resources of the Upper Gunnison River Basin.

REGULAR BOARD MEETING

5:00	*p.m.*		*Dinner is served*
5:30	p.m.	1.	Call to Order
5:31	p.m.	2.	Agenda Approval
5:32	p.m.	3.	Approval of the February 23, 2026 Meeting Minutes
5:35	p.m.	4.	Treasurer's Report • February 2026 Budget Summary • February 2026 Expenses for Consideration • Bank and Bond Balances
5:40	p.m.	5.	*City of Gunnison Water Treatment Plant Update*, Presentation by Peter Rice, City of Gunnison Public Works Director, Frank Campo, Project Manager, and Carly McGowan, City Engineer
6:05	p.m.	6.	General Counsel Update • Legislative Update
6:20	p.m.	7.	Basin Water Supply Report and Larkspur Update - DWR
6:30	p.m.	8.	General Manager's Report • Strategic Planning • Letters of Comment on Post 2026 Operating Guidelines DEIS

- Gunnison River Festival

6:40 p.m. 9. Staff & Committee Reports

- Taylor Local User's Group
  - Draft Minutes from March 10, 2026 Meeting
- Grant Committee
  - ACTION: Approval of 2026 District Grant Awards
- Education and Outreach
- Wet Meadows Program
- Water Resources Projects
  - Gunnison County Road & Bridge Meeting Report Out
  - Anticipated 2026 Project Implementation Summary
  - Watershed Management Planning Update
- Water Quality and Quantity Program Update
- Gunnison Basin Roundtable
- Scientific Endeavors
  - SBEADMR & Taylor Park AMG Annual Meeting

7:40 p.m. 10. Miscellaneous Matters

- 2026 Board Vacancies – Applications due to Judge Kellie Starritt by May 22, 2026
  - Terms Expiring:
    Division 6 – Stu Asay (Ohio Creek)
    Division 7 – Andy Spann (Gunnison River)
    Division 8 – Brian Stevens and John Perusek (City of Gunnison)

7:45 p.m. 12. Citizen Comments

7:50 p.m. 13. Future Meetings

- Reminder of May Board Meeting on TUESDAY, MAY 19, 2026 due to GBRT Meeting on Monday, May 18 and Memorial Day on Monday, May 25, 2026

7.52 p.m. 14. Summary of Meeting Action Items

7:55 p.m. 15. Adjournment

Note: This agenda is subject to change, including the addition of items or the deletion of items at any time. All times are approximate. Regular meetings, public hearings, and special meetings are recorded, and action can be taken on any item. The Board may address individual agenda items at any time or in any order to accommodate the needs of the Board and the audience. Persons with special needs due to a disability are requested to call the District at (970)641-6065 at least 24 hours prior to the meeting.

AGENDA ITEM 2
Agenda Approval

AGENDA ITEM 3

Approval of Meeting Minutes

Upper Gunnison River Water Conservancy District
Board of Directors Regular Meeting Minutes
Monday, February 23, 2026 at 5:30 p.m.

The Board of Directors of the Upper Gunnison River Water Conservancy District (UGRWCD) conducted a regular Board Meeting on Monday, February 23, 2026 at 5:30 p.m. at the Upper Gunnison River Water Conservancy District, 210 West Spencer, Suite A, Gunnison, Colorado and via Zoom video/teleconference.

Board members present: Stuart Asay, Rosemary Carroll, Joellen Fonken, Rebie Hazard, John Perusek, Camille Richard, Don Sabrowski, Andy Spann, Jeff Writer, and Brooke Zanetell.

Board members absent: Brian Stevens

Others present:

Amanda Aulenbach, UGRWCD Wet Meadows Program Director
Ashley Bembenek, Coal Creek Watershed Coalition
Tonya Carr, Gunnison Conservation District (via Zoom)
Sonja Chavez, UGRWCD General Manager
Peter Fleming, CRWCD General Counsel
Raquel Flinker, CRWCD Director of Interstate and Regional Water Resources
Bailey Friedman, UGRWCD Water Resources Project Manager
Burt and Sandra Guerrieri, Guerrieri Ranch
Julia Iovino, UGRWCD Water Resources Fellow
Leon Katona, Colorado Department of Public Health and Environment
John McClow, UGRWCD General Counsel
Luke Mecklenburg, Colorado Attorney General's Office (via Zoom)
Amy Moyer, CRWCD Chief of Strategy
Greg Peterson, Peterson Ranch
Beverly Richards, UGRWCD Office / Senior Program Manager
Tom Rozman, Colorado Division of Water Resources
Sue Uerling, UGRWCD Administrative Asst. / Communications Specialist
Ari Yamaguchi, UGRWCD Water Resources Specialist

1. CALL TO ORDER

President Don Sabrowski called the meeting to order at 5:30 p.m.

2. AGENDA APPROVAL

Director Stu Asay moved and Director Rosemary Carroll seconded approval of the agenda. The motion carried.

3. APPROVAL OF JANUARY 26, 2026 BOARD MEETING MINUTES:

Director John Perusek moved and Director Brooke Zanetell seconded approval of the January 26, 2026 Board Meeting Minutes. The motion carried.

4. TREASURER'S REPORT

Treasurer John Perusek referred to his Memorandum in the packet. No questions were asked regarding the report.

5. FINANCE COMMITTEE

The Finance Committee met on February 4, 2026, to review year-end financial information. Also discussed at this meeting was the selection of a new auditor and the draft Cash Reserve Policy.

Director Camille Richard moved and Director Revie Hazard seconded approval of the General Manager entering into contract for auditing services from McMahan & Associates. The motion carried.

Treasurer and Chair of the Finance Committee, John Perusek, moved to approve the recommendation of the Finance Committee to adopt the UGRWCD General Fund Reserve Policy. The motion carried.

Treasurer and Chair of the Finance Committee, John Perusek, moved to approve the recommendation of the Finance Committee to adopt the updated financial policies as included in the meeting packet. The motion carried.

6. GENERAL COUNSEL UPDATE

Legislative Update:

Counselor McClow reported that the Outdoor Opportunities Act is still being revised so there are no additional updates. In addition, there are now two bills in the works that deal with the development of data centers in the state. The first bill introduced would create tax incentives for companies to develop data centers in the state. More recently, a second bill is in development that deals more with the requirements of data center infrastructure and impacts on power and water resources and infrastructure. Both bills are currently being revised, and Mr. McClow thinks it might be possible that the two bills will be combined in some format.

Aspinall Record of Decision: Counselor McClow explained that Record of Decision modifies Aspinall Unit reservoir operations in an attempt to provide higher and more natural downstream spring flows and moderate base flows, while continuing to meet the Aspinall Unit's authorized purposes, which include supporting the Upper Basin states' development of their Compact apportionment, storage of water for future beneficial uses, flood control, and generating hydropower. Action Alternative B was selected to avoid jeopardizing the continued existence of fish listed under the Endangered Species Act, while also not resulting in any adverse effects on critical habitat in the Gunnison and Colorado Rivers. Releases under this alternative are based on peak flow and base flow targets at the gage at Whitewater, Colorado, and determined by the forecasted April through July inflows into Blue Mesa Reservoir

UGRWCD's Public Comment on EIS Alternatives for Post-2026 Operating Guidelines for Lake Powell & Mead: General Manager Sonja Chavez said the District will be providing public comments on the EIS by the deadline of March 2nd. Several areas of concern have been identified for the District, including the geographic scope of the alternatives which include federal actions above Lake Powell; limitations on the Secretary of Interior's authority related to operations of the Upper Initial Units; critical data that is missing in the EIS; problems within the Alternatives Analysis, such as the exclusion of the Upper Division's proposal as a viable option; legal issues related to the Law of the River and a lack of other preferred alternatives. In addition, the District plans to comment on impacts of additional withdrawals of water from Blue Mesa Reservoir which were not in the DEIS including economic, social, cultural, public health and safety impacts, and water-quality – eutrophication of the reservoir and impacts to the fishery. The District's comments will be shared with the Board when they are submitted to the USBR.

7. BASIN WATER SUPPLY UPDATE

In addition to the monthly water supply report, Senior Program Manager Beverly Richards provided some summary information from the recent Intermountain West Snow Drought webinar. The region is currently experiencing severe snow drought conditions even with the recent snowfall. Persistent above average temperatures during the recent storms and during long dry spells have greatly increased the severity of low snowpack conditions. It will be difficult for the region to recover at this point in the season and SWE will likely be much below normal. There is also increased chances of fire danger due to the dry conditions and lack of snowpack.

8. PARTNERSHIP UPDATES

Coal Creek Watershed Coalition (CCWC): Executive Director Ashley Bembenek reported that, thanks in part to the District's support, CCWC collected approximately 35 water quality samples in 2025, which are analyzed for several metals, selected anions, and dissolved organic

carbon. CCWC's long-term water quality monitoring program is used to establish site-specific standards for lower Coal Creek and the renewal discharge permit for the Keystone Mine Water Treatment Plant to better protect existing water uses in lower Coal Creek and downstream waters. Copies of the CCWC report will be distributed to all Board members.

Gunnison Conservation District (GCD): GCD Manager Tony Carr reported that since October 2025, the GCD has been working with partners and a consultant to plan and develop a Wildfire Mitigation workshop scheduled for April 25, 2026, at the Fred Field Center. In addition, the GCD is planning the combined Annual Meeting and NRCS Local Work Group Meeting scheduled for March 25, 2026. Following the March 25, 2026, combined meeting, GCD will collaborate with Trout Unlimited and UGRWCD to develop a targeted proposal addressing the top priorities identified by landowners. Potential focus areas include drought resilience, stream and riparian restoration, and wet meadow enhancement or protection. This work will leverage landowner input and partner expertise to prepare a competitive, implementable proposal for future funding opportunities. As part of the GCD's annual grant-writing component, GCD continues to research water resource grant opportunities and support ag infrastructure project grant application development for landowners. This week, GCD submitted a packaged grant application on behalf of a landowner for the Cochetopa Creek Aquatic Organism Passage and Irrigation Diversion Restoration and Improvement project.

9. A CONVERSATION WITH THE COLORADO RIVER DISTRICT (CRWCD)

Peter Fleming, CRWCD General Counsel, Raquel Flinker, CRWCD Director of Interstate and Regional Water Resources and Amy Moyer, CRWCD Chief of Strategy, provided a presentation to the Board regarding a brief history of the CRWCD and the draft west slope principles they have developed related to any potential future Conserved Consumptive Use program in the State of Colorado. Ms. Moyer explained that CRWCD was formed in 1937 to protect and serve water users across the 15 West Slope Colorado counties that form the headwaters of the Yampa, White, Gunnison, and Colorado Rivers. Through legal and legislative advocacy, technical and engineering support, community outreach and education, and multi-benefit water project grant funding, the CRWCD exists to protect water interests within its borders. It also supports the State of Colorado in ensuring water interests within the greater Colorado River Basin are protected when federal and interstate negotiations around Colorado River Basin water and water management occur.

Ms. Moyer reported that within the Upper Gunnison River Basin, the CRWCD specifically has addressed water issues and rights related to the Aspinall Units and Black Canyon Water Rights, and together with the UGRWCD, successfully defeated the Union Park Transmountain Diversion project that proposed to move water from the Western Slope to the Front Range.

Ms. Flinker explained that the Law of the River was dictated by the Colorado River Compact, which was adopted in 1922 between the Upper and Lower Division states, and the United States, to "equitably allocate and distribute the flows of the Colorado River." Since then, various legislative agreements, guidelines, treaties, and decrees were developed to deal with ever-changing water supply needs and hydrology, until Interim Guidelines were established in 2007 to try to address challenges related to ongoing drought. The Interim Guidelines are set to expire in October 2026, and currently, the Upper and Lower Basin states have been unable to reach a consensus on a post-2026 operating agreement for the Colorado River. Ms. Flinker explained that it is a system out of balance with a shrinking water supply that is not sufficient to meet all of the demands for water from a growing population. She showed a graph illustrating the storage at Lake Powell and explained that based on current snowpack and predicted runoff, Lake Powell will likely soon fall beneath the critical elevation of 3,490 feet necessary to provide hydropower.

Ms. Flinker also addressed the difference between "Conservation versus Curtailment" and noted that an alternative water management strategy being proposed would support conservation through a government-sponsored program that is voluntary, temporary and provides compensation to water users who agree to participate in the program. Curtailment would mean uncompensated water rights administration as directed by the government.

The state engineer, Jason Ullmann, is conducting listening sessions to gather input on potential Compact curtailment rules. The Board discussed the challenges of shepherding conserved water downstream and the need to ensure system benefits, particularly for Lake Powell. They also explored the complexities of multi-year impacts and the importance of providing adequate notice for funding programs to encourage participation from irrigators (e.g., having a 5-year timeframe in which to agree to participate). The CRWCD and UGRWCD highlighted the need for local involvement. Discussion ensued about what proper stewardship of conserved water might entail, and how compensation might or might not offset agricultural impacts to water users. The Board discussed the challenges of implementing such programs, including the need to properly ensure that conserved water makes it to Lake Powell

Potential long-term impacts on agriculture and the economy in the Upper Gunnison Basin were addressed. The conversation also emphasized the need for the Lower Basin states to contribute more significantly to solve the overall water imbalance in the Colorado River system by reducing their consumption. There was a consensus among the ag producers present that any conservation program must include shepherding the water to Lake Powell, and that it not just be available for the next water user in line to use.

10. GENERAL MANAGER UPDATE

General Manager Chavez asked if the Board had any questions regarding her manager's report in the packet. None were raised.

District Grant Program: Senior Program Manager Beverly Richards gave a brief summary of the grant applications she received for the 2026 District Grant cycle. She said over $350,000 has been requested, so it will be a very competitive grant cycle. Staff will be reviewing the applications this week to make recommendations to the Grants Committee. The committee will then meet on Monday, March 9th at 3 p.m. to review the applications.

Ms. Richards also reported that a grant that was awarded in 2024 to Western Colorado University for the completion of a HAB Study has not yet met the deliverable requirements for the grant. Ms. Richards said this is primarily due to a lack of communication between the student performing the research, her advisor and thesis advisory committee and partners responsible for in-kind contributions of data. General Manager Sonja Chavez said she would like to give Western an opportunity to complete the deliverables as the study as originally proposed is important for the District. This would be a second extension on the grant and would not provide any additional funding only a timeline extension. Grant Committee Chairwoman, Joellen Fonken, noted that this is not the first application where the District has granted a second timeline extension.

Director Stuart Asay motioned and Director Camille Richard seconded approval for the District to grant a second no-cost timeline extension to Western Colorado University to complete the HAB study by the end of December 2026. The motion carried.

Education and Outreach Committee: It was announced that the District will be a sponsor of the 34th Annual Rotary Fishing Tournament on May 2 and 3rd at Blue Mesa Reservoir. As part of the sponsorship benefits, the District may have a two-person team compete in the tournament for free. If anyone is interested, please let Sue Uerling know.

11. MISCELLANEOUS MATTERS

2026 Colorado Water Congress Annual Conference: Board members who attended reported that they learned a lot and that the details shared about water supply and negotiations around Post 2026 Operating Guidelines development were "sobering."

Slate River Streamgage at Baxter Gulch: General Manager Chavez said that she has had conversations with the USGS and Gunnison County Assistant Manager for Operations and Sustainability, John Cattles, regarding impacts to the stream gage at Baxter Gulch. An alternative location for a temporary gage has been selected and will be installed most likely in April. John Cattles will now be in direct communication with the USGS to assist in project communication around the temporary gage installation and reclamation of the riverbed and banks. Ms. Chavez reported that the water infrastructure for Whetstone Village now requires the contractor to bore

beneath the Slate River.

12. CITIZEN COMMENTS

Citizens Greg Peterson and Burt and Sandra Guerrieri all thanked the District for the opportunity to attend the meeting and for supporting them in the challenging river negotiations moving forward. Leon Katona, new Gunnison Valley resident and CDPHE employee introduced himself and thanked the board for a very educational evening and he looks forward to engaging with us in the future.

13. FUTURE MEETINGS

Board members were reminded that the first 2026 Taylor Local User's Group Meeting will be held March 9, 2026 at 10 a.m.

14. SUMMARY OF MEETING ACTION ITEMS

- Senior staff will bookmark the request to have additional conversations around the Reserve as part of the Strategic Planning Process.
- Counselor McClow will share the new proposed legislation on data centers.
- The District will follow up with the Colorado River District regarding DEIS comments to be submitted by the March 2nd deadline.
- Staff will forward the Coal Creek Watershed Coalition end-of-year report to the Board via email.
- Senior staff will provide Board members with a copy of the District's comments on the Draft EIS when finished.

14. ADJOURNMENT

Board President Don Sabrowski adjourned the February 23, 2026 Board Meeting at 8:38 p.m.

Respectfully submitted,

_____

Rebie Hazard, Secretary

_____

Don Sabrowski, President

RETURN TO AGENDA

AGENDA ITEM 4

Treasurer's Report/ Financial Reports

Return to Agenda

MEMORANDUM

TO: Board of Directors

FROM: Director Perusek, Treasurer
Beverly Richards, Office / Senior Program Manager
Sonja Chavez, General Manager

DATE: March 23, 2026

SUBJECT: Treasurer's Report – March 2026

I. February Financial Information:

Consideration of Expenses: Below are those expenses that were above $5,000 for the month of February.

Payee	Amount	Budget Line Item / Purpose
CEBT	$6,771.10	Payroll-Medical
Cattleman's Days	$6,500	Education & Outreach - Sponsorship
Gunnison River Festival	$13,000	Gunnison River Festival - Sponsorship
North American Weather Consultants	$21,372.25	Cloudseeding
Wilson Water Group	$6,255	Aspinall Subordination – Reporting Requirement

Monthly Budget Summary: The items highlighted in the monthly expenses for approval are budget line items of note for February.

II. ColoTrust

The decision was made to transfer $64,137 from the Spencer Building checking account at Gunnison Bank and Trust to ColoTrust Plus where it will earn interest (currently 3.79%). There is still just over $10,000 in the checking account for any potential building maintenance items that may come up. Funds are liquid and can easily be moved back to the checking account if needed with no financial penalties.

Upper Gunnison River Water Conservancy District
Monthly Budget Summary 2026

	Feb 26	Jan - Feb 26	YTD Budget	% of Budget
Ordinary Income/Expense				
Income				
Total Regional Water Supply Income	0.00	23,750.00	438,546.00	5.42%
Total Watershed Impl Outside Grants	0.00	0.00	116,800.00	0.0%
Asp Water Sales	56.11	56.11	27,000.00	0.21%
Total Rent Income	3,275.00	7,000.00	40,000.00	17.5%
Interest Income	21,119.84	36,906.29	110,000.00	33.55%
Total Property Tax Income	81,235.15	88,780.66	2,333,749.00	3.8%
Reimbursed Exp Income	0.00	573.38	45,500.00	1.26%
Total Watershed Mgmt Income	8,751.00	8,751.00	105,921.00	8.26%
Wet Meadows Income	0.00	0.00	349,187.00	0.0%
WQ Monitoring Inc	0.00	20,225.00	36,697.00	55.11%
Additional Contribution Reserve	0.00	0.00	474,424.00	0.0%
Total Income	114,437.10	186,042.44	4,077,824.00	4.56%
Expense				
Op X				
Admin.Travel & Exp.	0.00	-520.55	36,750.00	-1.42%
Audit Expense	0.00	0.00	25,000.00	0.0%
Accounting & Professional Fees	4,465.00	11,161.02	48,500.00	23.01%
BOD Expenses	0.00	714.00	15,750.00	4.53%
BOD Mileage	316.80	444.96	5,775.00	7.71%
BOD Mtg Fees	1,500.00	2,600.00	26,400.00	9.85%
Bonding and Insurance	401.00	569.00	30,000.00	1.9%
Building Rep/Maint	0.00	0.00	10,000.00	0.0%
CAM	78.63	319.35	7,500.00	4.26%
Computer Exp	1,290.12	2,811.17	40,500.00	6.94%
Copier Expenses	274.83	681.32	7,000.00	9.73%
County Treasurers' Fees	4,243.50	4,251.18	75,000.00	5.67%
Spencer Bldg Reserve Contrib	0.00	0.00	10,000.00	0.0%
Dues, Memberships&Subscriptions	0.00	6,764.17	18,350.00	36.86%
Legal Publication	58.52	433.56	5,000.00	8.67%
Manager's Discretionary	0.00	1,343.37	25,000.00	5.37%
Meeting Expenses	509.70	680.38	5,000.00	13.61%
Office Cleaning	630.00	1,406.25	8,000.00	17.58%
Office Supplies & Misc Expenses	162.52	1,242.77	12,000.00	10.36%
Payroll Exp	88,105.89	175,260.02	1,140,000.00	15.37%
Postage	0.00	0.00	2,000.00	0.0%
Telephone	385.63	738.76	6,000.00	12.31%
Utilities	725.29	1,593.73	10,000.00	15.94%
Vehicle Expense	-22.01	122.88	29,500.00	0.42%
Total Op X	103,125.42	212,617.34	1,599,025.00	13.3%
Non-Op X				
Total Watershed Impl Outside Grant Ex	1,118.26	2,154.01	116,800.00	1.84%
Aquatice Nuisance Species	0.00	0.00	20,000.00	0.0%
Asp Subordination Report	6,255.00	6,255.00	7,500.00	83.4%
Aspinall Contract Costs	0.00	0.00	24,000.00	0.0%
Gunnison County Hazardous Waste	0.00	0.00	2,000.00	0.0%
Consulting/Engineering	4,915.00	8,888.75	50,000.00	17.78%
Coal Creek Watershed Coalition	0.00	0.00	17,000.00	0.0%
Donation Dust on Snowpack	0.00	0.00	3,500.00	0.0%
Grant Program	0.00	16,615.98	446,420.00	3.72%
Gunnison Conservation District	0.00	0.00	10,000.00	0.0%
Gunnison River Festival	13,000.00	13,000.00	13,000.00	100.0%

Upper Gunnison River Water Conservancy District
Monthly Budget Summary 2026

Endanger Fish Recovery Program	0.00	3,750.00	3,750.00	100.0%
Lake Fork Conservancy	0.00	0.00	10,000.00	0.0%
LSC Expenses	0.00	0.00	13,464.00	0.0%
Public Outreach	9,135.00	11,797.72	70,430.00	16.75%
Regional Water Supply Imp. Exp.	21,410.70	39,828.15	797,127.00	5.0%
Strategic Planning	0.00	14,168.75	61,500.00	23.04%
Taylor Park Projects Exp	0.00	0.00	8,200.00	0.0%
Watershed Mgmt X	1,446.25	1,446.25	105,921.00	1.37%
Wet Meadow X	0.00	834.62	359,187.00	0.23%
WQ Monitoring	0.00	0.00	250,000.00	0.0%
Total Non-Op X	57,280.21	118,739.23	2,389,799.00	4.97%
Capital Outlay Expense	0.00	0.00	65,000.00	0.0%
Contingency	0.00	0.00	24,000.00	0.0%
Total Expense	160,405.63	331,356.57	4,077,824.00	8.13%
Net Ordinary Income	-45,968.53	-145,314.13	0.00	100.0%
Net Income	-45,968.53	-145,314.13	0.00	100.0%

10:27 AM
03/12/26
Accrual Basis

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
5B's BBQ			
02/12/2026	5B's BBQ	82530 · Meeting Expenses	509.70
Total 5B's BBQ			509.70
Andy Spann BOD			
02/28/2026	Andy Spann BOD	81602 · BOD Mtg Fees	100.00
02/28/2026	Andy Spann BOD	81601 · BOD Mileage	5.04
Total Andy Spann BOD			105.04
Anthem			
02/01/2026	Anthem	74166 · Medical Insurance	407.41
Total Anthem			407.41
Applegate Group, Inc.			
02/28/2026	Applegate Group, Inc.	81520 · Consulting/Engineering	1,205.00
Total Applegate Group, Inc.			1,205.00
Atmos Energy			
02/28/2026	Atmos Energy	Utilities - Unit A	106.72
02/28/2026	Atmos Energy	Utilities - Unit A	186.50
Total Atmos Energy			293.22
Beverly Richards			
02/01/2026	Beverly Richards	74166 · Medical Insurance	202.90
Total Beverly Richards			202.90

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
Brooke Zanatell BOD			
02/28/2026	Brooke Zanatell BOD	81602 · BOD Mtg Fees	200.00
Total Brooke Zanatell BOD			200.00
Camille Richard BOD			
02/28/2026	Camille Richard BOD	81602 · BOD Mtg Fees	100.00
02/28/2026	Camille Richard BOD	81601 · BOD Mileage	80.64
Total Camille Richard BOD			180.64
Capital Business Systems, Inc.			
02/28/2026	Capital Business Systems, Inc.	80541 · Copier Expenses	274.83
Total Capital Business Systems, Inc.			274.83
Cattlemen's Days`			
02/28/2026	Cattlemen's Days`	80513B · General Public Outre...	6,500.00
Total Cattlemen's Days`			6,500.00
CEBT			
02/01/2026	CEBT	74166 · Medical Insurance	6,771.10
Total CEBT			6,771.10
City of Gunnison			
02/28/2026	City of Gunnison	Utilities - Unit A	46.85
02/28/2026	City of Gunnison	Utilities - Unit A	125.36
02/28/2026	City of Gunnison	Utilities - Unit A	226.09
02/28/2026	City of Gunnison	Utilities - Unit A	33.77

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
Total City of Gunnison			432.07
Crested Butte News			
02/28/2026	Crested Butte News	80548 · Legal Publication	14.72
Total Crested Butte News			14.72
CTSTelecom			
02/28/2026	CTSTelecom	81543 · Computer Repair/IT Su...	271.16
Total CTSTelecom			271.16
Don Sabrowski BOD			
02/28/2026	Don Sabrowski BOD	81602 · BOD Mtg Fees	200.00
02/28/2026	Don Sabrowski BOD	81601 · BOD Mileage	46.08
Total Don Sabrowski BOD			246.08
Fullmer's Ace Hardware			
02/28/2026	Fullmer's Ace Hardware	Vehicle Expense	17.99
02/28/2026	Fullmer's Ace Hardware	80557 · Office Supplies & Misc ...	51.95
Total Fullmer's Ace Hardware			69.94
GEI Consultants			
02/28/2026	GEI Consultants	CWCB 2023-3317 (WMP Phase 3)	796.25
02/28/2026	GEI Consultants	CWCB 2023-3317 (WMP Phase 3)	650.00
Total GEI Consultants			1,446.25
Golden Eagle Trash Service			

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
02/28/2026	Golden Eagle Trash Service	84550 · CAM	78.63
Total Golden Eagle Trash Service			78.63
Gunnison Bank and Trust			
02/09/2026	Gunnison Bank and Trust	80517 · Accounting & Professio...	5.00
Total Gunnison Bank and Trust			5.00
Gunnison Country Chamber of Commerce			
02/28/2026	Gunnison Country Chamber of Commerce	80513B · General Public Outre...	300.00
Total Gunnison Country Chamber of Commerce			300.00
Gunnison River Festival			
02/28/2026	Gunnison River Festival	Gunnison River Festival	13,000.00
Total Gunnison River Festival			13,000.00
Humana			
02/01/2026	Humana	74166 · Medical Insurance	94.00
Total Humana			94.00
Jeff Writer BOD			
02/28/2026	Jeff Writer BOD	81602 · BOD Mtg Fees	100.00
02/28/2026	Jeff Writer BOD	81601 · BOD Mileage	43.20
Total Jeff Writer BOD			143.20
Joellen Fonken BOD			
02/28/2026	Joellen Fonken BOD	81602 · BOD Mtg Fees	100.00

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
02/28/2026	Joellen Fonken BOD	81601 · BOD Mileage	7.20
Total Joellen Fonken BOD			107.20
John McClow			
02/01/2026	John McClow	74166 · Medical Insurance	202.90
Total John McClow			202.90
John Perusek BOD			
02/28/2026	John Perusek BOD	81602 · BOD Mtg Fees	200.00
Total John Perusek BOD			200.00
KEJJ Radio			
02/28/2026	KEJJ Radio	80513A · Advertising Radio & N...	275.00
Total KEJJ Radio			275.00
KVLE FM			
02/28/2026	KVLE FM	80513A · Advertising Radio & N...	125.00
Total KVLE FM			125.00
Melinda McCawmedia			
02/28/2026	Melinda McCawmedia	CWCB PEPO 2025-2026 Expense	82.51
Total Melinda McCawmedia			82.51
Nationwide			
02/28/2026	Nationwide	80522 · Bonding and Insurance	401.00

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
Total Nationwide			401.00
New Morning Improvement, LLC			
02/28/2026	New Morning Improvement, LLC	Office Cleaning	630.00
Total New Morning Improvement, LLC			630.00
North American Weather Consultants, Inc.			
02/28/2026	North American Weather Consultants, Inc.	85540 · Cloud Seeding	21,372.25
Total North American Weather Consultants, Inc.			21,372.25
O'Rourke Media Group			
02/28/2026	O'Rourke Media Group	80548 · Legal Publication	19.60
Total O'Rourke Media Group			19.60
OffCenter Designs, LLC			
02/28/2026	OffCenter Designs, LLC	80513B · General Public Outre...	60.00
Total OffCenter Designs, LLC			60.00
Pinnacol Assurance			
02/01/2026	Pinnacol Assurance	74200 · Work Comp Ins	782.00
Total Pinnacol Assurance			782.00
QuickBooks			
02/03/2026	QuickBooks	81558 · Computer Software	92.00
Total QuickBooks			92.00

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
Rebie Hazard-BOD			
02/28/2026	Rebie Hazard-BOD	81602 · BOD Mtg Fees	200.00
02/28/2026	Rebie Hazard-BOD	81601 · BOD Mileage	84.96
Total Rebie Hazard-BOD			284.96
RigNet Inc			
02/28/2026	RigNet Inc	85540 · Cloud Seeding	38.45
Total RigNet Inc			38.45
Rosemary Carroll - BOD			
02/28/2026	Rosemary Carroll - BOD	81602 · BOD Mtg Fees	100.00
02/28/2026	Rosemary Carroll - BOD	81601 · BOD Mileage	43.20
Total Rosemary Carroll - BOD			143.20
Rotary Club of Gunnison			
02/28/2026	Rotary Club of Gunnison	80513B · General Public Outre...	1,000.00
Total Rotary Club of Gunnison			1,000.00
Silicon Plains			
02/01/2026	Silicon Plains	81543 · Computer Repair/IT Su...	800.00
Total Silicon Plains			800.00
Silver World Publishing			
02/28/2026	Silver World Publishing	80548 · Legal Publication	24.20
02/28/2026	Silver World Publishing	80513A · Advertising Radio & N...	80.00

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
Total Silver World Publishing			104.20
Stuart Asay - BOD			
02/28/2026	Stuart Asay - BOD	81602 · BOD Mtg Fees	200.00
02/28/2026	Stuart Asay - BOD	81601 · BOD Mileage	6.48
Total Stuart Asay - BOD			206.48
Sue Uerling			
02/28/2026	Sue Uerling	80557 · Office Supplies & Misc ...	30.67
Total Sue Uerling			30.67
Sunshine Creatives			
02/28/2026	Sunshine Creatives	CWCB PEPO 2025-2026 Expense	1,035.75
02/28/2026	Sunshine Creatives	80513B · General Public Outre...	795.00
Total Sunshine Creatives			1,830.75
The Paper Clip			
02/28/2026	The Paper Clip	80557 · Office Supplies & Misc ...	79.90
Total The Paper Clip			79.90
Thomas N Stoeber, CPA			
02/28/2026	Thomas N Stoeber, CPA	80517 · Accounting & Professio...	4,460.00
Total Thomas N Stoeber, CPA			4,460.00
UnitedHealthcare			
02/01/2026	UnitedHealthcare	74166 · Medical Insurance	151.90

Upper Gunnison River Water Conservancy District
Expenses For Approval (Paid & Payable)
February 2026

Date	Name	Account	Amount
Total UnitedHealthcare			151.90
Verizon Wireless			
02/28/2026	Verizon Wireless	80534 · Telephone	385.63
Total Verizon Wireless			385.63
Visionary Broadband			
02/01/2026	Visionary Broadband	81556 · Internet	126.96
Total Visionary Broadband			126.96
Wilson Water Group			
02/28/2026	Wilson Water Group	84558 · Asp Subordination Rep...	6,255.00
02/28/2026	Wilson Water Group	81520 · Consulting/Engineering	2,310.00
02/28/2026	Wilson Water Group	81520 · Consulting/Engineering	1,400.00
Total Wilson Water Group			9,965.00
Upper Gunn Riv Water Conservancy District			
02/26/2026	Upper Gunn Riv Water Conservancy District	11158 · Spencer Res Ckg Acct	10,000.00
02/27/2026	Upper Gunn Riv Water Conservancy District	10112 · CO Trust 8001	64,137.00
Total Upper Gunn Riv Water Conservancy District			74,137.00
TOTAL			150,845.45

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UGRWCD	Instrument	Balance	Cost	Interest	Maturity	Date
Account Name: LPL Bonds	Type	2/28/2026	Basis	Rate	Date	Callable
LPL Bond 23 (FEDL) CUSIP 3130ALLD4	BOND	249,708.75	250,000.00	0.875%	3/17/2026	3/17/2025
LPL Bond 24 (FHLB) CUSIP 3130AMDY5	BOND	497,139.50	500,000.00	1.000%	5/20/2026	2/20/2025
LPL Bond 26 (FHLB) CUSIP 3130APBE4	BOND	157,551.52	160,000.00	1.000%	9/30/2026	3/30/2025
LPL Bond 34 (FAMC) CUSIP 31424WN99	BOND	400,703.60	400,000.00	4.040%	8/12/2030	8/12/2027
LPL Bond 35 (FHLB) CUSIP 3130B7X90	BOND	299,750.40	300,000.00	4.150%	10/8/2030	10/8/2026
LPL Bond 36 (FHLB) CUSIP 3130B9GN4	Bond	400,040.40	400,000.00	4.000%	2/19/2031	2/19/2027
LPL BOND SUBTOTAL:		*$ 2,004,894.17*	*$ 2,010,000.00*	2.511%		
Account Name: LPL Certificates of Deposit						
LPL 31 Morgan Stanley Bank CD CUSIP 61690D4C9	CD	220,899.36	220,000.00	4.050%	5/7/2027	
LPL 32 Morgan Stanley PVT Bank CD CUSIP 61776NSJ3	CD	247,506.84	245,000.00	4.150%	5/22/2028	
LPL 33 Toyota Financial Savings Bank CD CUSIP 89235MSK8	CD	247,246.89	245,000.00	4.100%	5/22/2028	
LPL CD SUBTOTAL:		*$ 715,653.09*	*$ 710,000.00*	4.100%		
Account Name: LPL Money Markets Savings						
LPL Money Market Savings Account	M.M. SAVINGS	16,770.71	-	0.900%	N/A	
LPL MM SUBTOTAL:		$ 16,770.71				

	INSTRUMENT	Balance	Cost	Interest	Maturity	
Account Name	TYPE	2/28/2026	Basis	Rate	Date	Notes
Community Banks of Colo. Lake City CD 7668	CD	109,228.30	105,015.89	4.01%	11/20/2026	*Updated on an Annual Basis
10520 Gunnison Bank & Trust CD 6637	CD	229,821.89	200,000.00	4.00%	2/26/2030	*Updated on an Annual Basis
Gunnison Bank & Trust CD 26831	CD	250,000.00	250,000.00	3.90%	1/22/2030	
Gunnison Bank & Trust CD 26832	CD	250,000.00	250,000.00	3.90%	1/22/2030	
10540 Gunnison Bank & Trust MM - Spencer Building Acct. 3589	CHKG	10,348.75		0.50%		
Gunnison Bank & Trust 8756	CHKG	62,572.92		0.05%		
				Average Mo. Yield		
COLOTRUST PLUS 8001	COLO.	1,319,328.52		4.24%	N/A	
COLOTRUST PLUS UGRWCD EHOP 8003	COLO.	111,524.58		4.24%	N/A	
COLOTRUST PLUS SPENCER BUILDING 8005	COLO.	83,479.63		4.24%		
COLOTRUST PRIME 4001	COLO.	6,625.93		4.05%	N/A	
10200 Petty Cash	PETTY	76.75		N/A	N/A	
MISCELLANEOUS BANK & COLOTRUST SUBTOTAL:		$ 2,433,007.27				
TOTAL UGRWCD		$ 5,170,325.24				

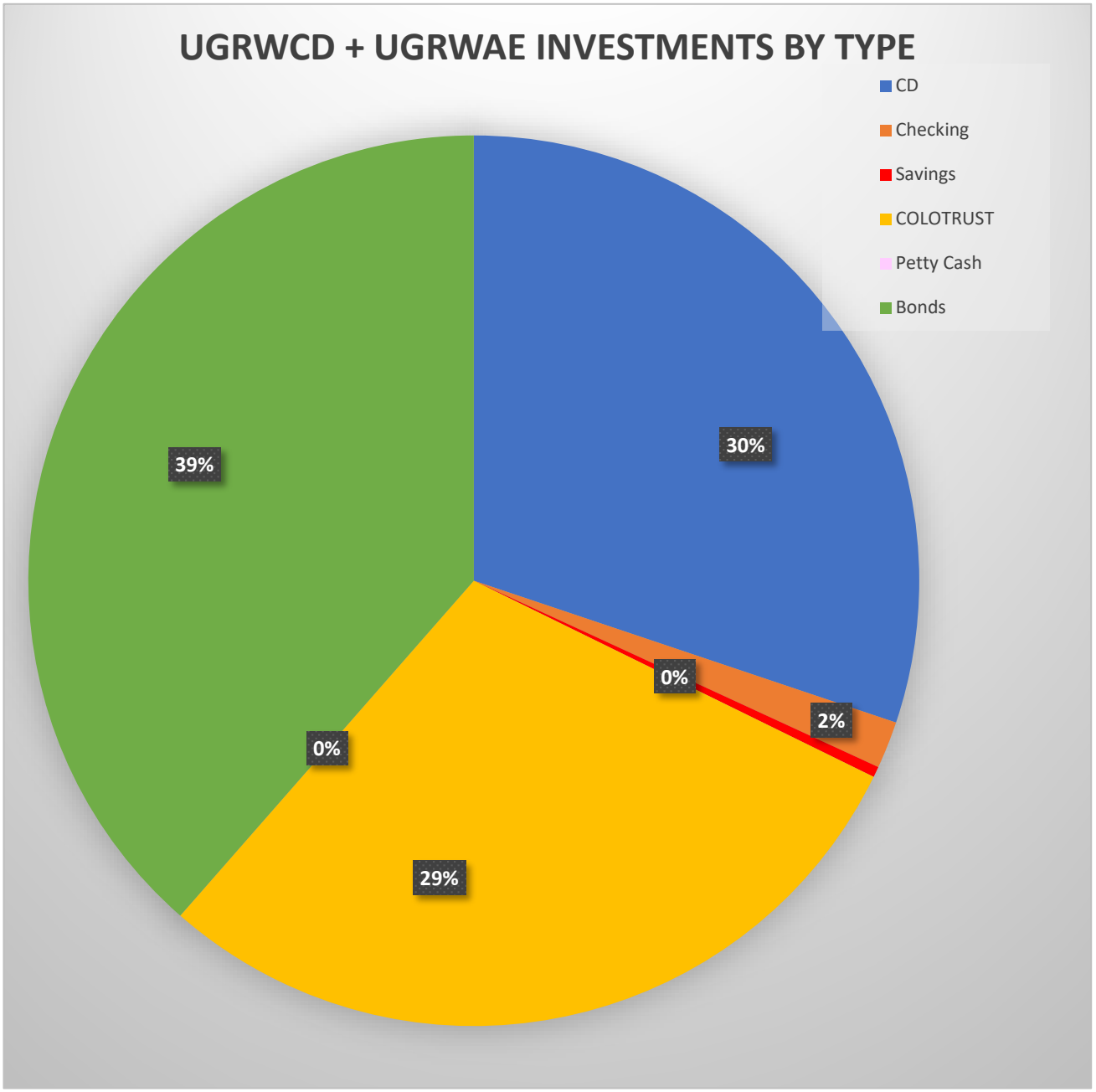
UGRWAE	INSTRUMENT	Balance	Cost	Interest	Maturity	Date
Account Name	TYPE	2/28/2026	Basis	Rate	Date	Callable
LPL Bond CUSIP 31424WK43 (FAMC)	Bond	301,782.00	300,000.00	4.26%	7/16/2030	7/16/2027
Gunnison Bank & Trust 26814	CD	250,000.00	$ 250,000.00	3.99%	12/4/2029	
Gunnison Bank & Trust 8764	CHKG	29,604.60		0.05%		
COLOTRUST PLUS 8002	COLO.	225,378.89		4.24%	N/A	
MISCELLANEOUS BANK & COLOTRUST SUBTOTAL:		$ 806,765.49				
Account Name: LPL Money Markets Savings						
LPL Money Market Savings Account	M.M. SAVINGS	6,392.28	-	0.250%	N/A	
LPL MM SUBTOTAL:		$ 6,392.28				
TOTAL UGRWAE		$ 813,157.77				

TOTAL UGRWCD + UGRWAE	**$ 5,983,483.01**

Total UGRWCD and UGRWAE by Bank			Total UGRWCD & UGRWAE by Investment Type			
			CD	30%		1,804,703.28
LPL Financial	$ 3,045,492.25	51%	Checking	2%		102,526.27
Community Banks of Colo.	109,228.30	2%	Savings	0%		23,162.99
Gunnison Bank & Trust	1,082,348.16	18%	COLOTRUST	29%		1,746,337.55
COLOTRUST	1,746,337.55	29%	Petty Cash	0%		76.75
Petty Cash	76.75	0%	Bonds	39%	$	2,306,676.17
TOTAL ALL SOURCES	$ 5,983,483.01	100%	Total	100%	$	5,983,483.01

UGRWCD & UGRWAE INVESTMENTS BY TYPE

CD	30%	$	1,804,703.28
Checking	2%	$	102,526.27
Savings	0%	$	23,162.99
COLOTRUST	29%	$	1,746,337.55
Petty Cash	0%	$	76.75
Bonds	39%	$	2,306,676.17
Total	**100%**	**$**	**5,983,483.01**



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AGENDA ITEM 5

City of Gunnison Water Treatment Plant Update by Peter Rice, Frank Campo and Carly McGowan

AGENDA ITEM 6

General Counsel's Update

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LEGISLATIVE ACTIVITY REPORT
COLORADO GENERAL ASSEMBLY
2026 REGULAR SESSION

March 16, 2026

This report summarizes bills of interest to the District introduced in the General Assembly during this session and reviewed by the Legislative Committee. The links lead to the full text of the bills as introduced. Items in red are updates from last month's report.

HOUSE BILLS

HB26-1008 Amended CONCERNING MEASURES TO ENHANCE OUTDOOR RECREATION OPPORTUNITIES IN THE STATE, AND, IN CONNECTION THEREWITH, EXPANDING THE DIVISION OF PARKS AND WILDLIFE'S CAPACITY FOR OUTDOOR RECREATION COORDINATION, PLANNING, AND MANAGEMENT.

House Sponsors: ***Lukens and Taggart***

Senate Sponsors: ***Marchman and Rich***

The bill requires the division of parks and wildlife (division) in the department of natural resources to expand the division's capacity for outdoor recreation coordination, planning, and management and take a leading role in state-level coordination, strategic planning, and implementation of Colorado's outdoors strategy. The division is directed to, among other things, engage with relevant partners, stakeholders, and agencies to coordinate and incorporate wildlife, conservation, recreation, and climate-resilience considerations across agency planning and decision-making processes. In addition, the division is required to support, in consultation with relevant entities, the planning, development, and maintenance of outdoor recreation infrastructure to enhance outdoor recreation opportunities while protecting private property rights, wildlife, and natural resources. The bill also requires the division to create, and update at least annually, integrated regional outdoor recreation and conservation planning reports to inform division awareness and operational decision-making. The bill was substantially amended in both House and Senate.

UGRWCD Legislative Committee position: Monitor

CWC State Affairs Committee position: Amend

03/12/2026 Introduced In Senate - Assigned to Agriculture & Natural Resources

03/09/2026 Third Reading Passed - No Amendments

03/06/2026 Second Reading Special Order - Passed with Amendments - Committee, Floor

03/06/2026 House Committee on Appropriations Refer Amended to House Committee of the Whole

01/14/2026 Introduced In House - Assigned to Agriculture, Water & Natural Resources

02/23/2026 House House Committee on Agriculture, Water & Natural Resources Refer Amended to Appropriations

HB26-1030 **CONCERNING FACILITATION OF DATA CENTER DEVELOPMENT WHILE SUPPORTING UTILITY RESOURCES, AND, IN CONNECTION THEREWITH, CREATING THE "COLORADO DATA CENTER WORKFORCE, CLEAN ENERGY, GRID MODERNIZATION, AND CONSUMER AND ENVIRONMENTAL PROTECTION ACT".**

House Sponsors: ***Valdez and Duran***

Senate Sponsor: ***Mullica***

The bill creates the data center development and incentive program (program) operated by the Colorado data center development authority (authority), which is newly created in the Colorado office of economic development (office) (section 1 of the bill). The authority consists of 9 members, as follows:

- 2 members appointed by the governor with the consent of the senate;
- The director of the Colorado energy office or the director's designee;
- One member who has experience in water projects or water resource management, appointed by the president of the senate;
- One member who has experience in clean and renewable energy, appointed by the speaker of the house of representatives;
- 2 members who have experience in data center development, with one member appointed by the speaker of the house of representatives and one member appointed by the president of the senate;
- One member representing a statewide organization that represents workers in trade crafts who construct data centers, appointed by the speaker of the house of representatives; and
- One member representing a statewide organization that represents contractors who construct data centers, appointed by the president of the senate.

To incentivize efficient data center development, the program allows a 100% state sales and use tax exemption on qualified purchases to the operator of a certified data center. To be eligible for certification, the operator of the data center, or a data center operator collectively with participating data center tenants, must:

- Have initiated a preliminary consultation with the utility that will provide electricity for the data center project regarding interconnection feasibility, capacity, and infrastructure requirements;
- Commit to making a $250 million minimum investment in data center infrastructure within 5 years;
- Commit to creating new full-time jobs, including employees and long-term service and maintenance positions, that satisfy specified criteria and breaking ground on the data center project within 2 years of obtaining certification;
- Commit to complying, and ensure that the utility that provides electricity to the data center also complies, with craft labor requirements, apprenticeship utilization requirements, and prevailing wage requirements; and
- Commit to obtaining certification under one of several energy efficiency standards, implementing water stewardship strategies that optimize operational water

management, ensuring that all backup power generation associated with the data center project meets specified requirements, and consulting with the department of natural resources.

To obtain certification, a data center operator must apply to the authority in a form and manner to be determined by the authority. The authority is required to review a data center operator's application for certification and may award certification to a data center operator that has demonstrated that it will satisfy the certification criteria (section 1).

A data center operator that obtains certification for a data center project is eligible for a 100% state sales and use tax exemption on the purchase and use of qualified data center infrastructure and systems for 20 years from the date that the data center project was certified, so long as the data center satisfies ongoing post-certification requirements and submits annual compliance reports to the authority. As long as the data center meets post-certification requirements as demonstrated in the annual compliance reports, a data center operator of a certified data center may apply to the authority for an extension of the sales and use tax exemption for an additional 10 years. If the authority determines that a data center operator is not fulfilling its obligations and commitments to retain certification, the authority may revoke the certification and the data center operator is required to repay the state for the sales and use tax benefits that it received (**sections 1 and 5**). The exemption for a certified data center does not apply to local sales and use taxes unless the exemption is expressly included at the time of adoption or amendment of the local sales tax ordinance or resolution (**section 4**).

The bill allows a utility regulated by the public utilities commission (commission) to submit a targeted resource acquisition application to the commission to propose methods of meeting emerging large-load customer needs. The bill also specifies how a utility may finance resource and infrastructure needs in connection with emerging large-load customers (**section 3**).

UGRWCD Legislative Committee position: Oppose

CWC State Affairs Committee position: Tabled pending review of competing bill

01/14/2026 Introduced In House - Assigned to Energy & Environment

HB26-1112 CONCERNING STATE REGULATION OF UNDERGROUND INJECTION CONTROL WELLS.

House Sponsors: ***Paschal and Smith***

Senate Sponsors: ***Hinrichsen and Simpson***

The bill grants the energy and carbon management commission (commission) authority over class I, class IV, and class V injection wells and allows the commission to seek and adopt rules related to primacy from the United States environmental protection agency (EPA) for these classes of injection wells. The commission may assess and collect fees related to the regulation of class I, class IV, and class V injection wells. A person that willfully violates a rule, permit, authorization, or order of the commission related to these classes of injection wells commits a misdemeanor and is subject to certain penalties.

The bill also grants the mined land reclamation board (board) authority over class III injection wells and allows the board to seek and adopt rules related to primacy from the EPA for class III injection wells. The board may assess and collect fees related to the regulation of class III injection wells. A person that violates a rule, permit, authorization, or order of the board related to class III injection wells or that operates a class III injection well without a permit from

the board is subject to certain penalties. The bill also provides that a class III injection well is not eligible for an exemption from designated mining operation status, which status subjects the operator to certain rules adopted by the board. Six amendments in the House.

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Tabled to 2/23 pending amendments

03/02/2026 House Committee on Finance Refer Amended to Appropriations

02/25/2026 House Committee on Energy & Environment Refer Amended to Finance

02/03/2026 Introduced In House - Assigned to Energy & Environment

HB26-1145 **CONCERNING WATER QUALITY IN MOBILE HOME PARKS.**

House Sponsors: ***Velasco and Phillips***

Senate Sponsor: ***Cutter***

Under current law, the water quality control division (division) administers a program to test for and remediate water quality issues for mobile home parks (program). The program tests for water quality issues that pose a risk to not only health or safety but also the welfare of park residents. The bill authorizes the division to require remediation of welfare-related water quality violations.

One of the requirements of the program is for the park owner to certify that the park owner has made certain water-quality-related notices to park residents. The bill authorizes the division to issue an order requiring the park owner to comply with the park resident notice certification requirement.

Under the program, the park owner is prohibited from imposing the cost of compliance with certain remediation-related requirements on park residents. The bill provides that, for a park owner who is also a park resident, the owner may nonetheless bear this cost.

The program authorizes the division to issue orders requiring the park owner to perform additional water testing, perform temporary measures necessary to address acute health risks, make additional reports to the division, create a remediation plan, implement a remediation plan, or respond to the division in connection with a remediation plan. The bill clarifies that a park owner may ask for a hearing only regarding the orders that concern remediation plans.

The bill also clarifies that:

- The division has authority to enforce the requirements of the program; and
- The division has authority to issue cease-and-desist orders to address violations related to the program, regardless of whether the issues are related to water quality violations.

The bill also provides that:

- The additional monthly penalty of up to $5,000 for a continuing violation may be imposed for the first 30 days of noncompliance; and
- A park owner is not entitled to an administrative hearing to contest an imposed civil penalty but may seek judicial review.

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: No action.

03/10/2026 Introduced In Senate - Assigned to Local Government & Housing

03/05/2026 House Third Reading Passed - No Amendments

03/04/2026 House Second Reading Special Order - Passed with Amendments - Committee

02/27/2026 House Second Reading Laid Over Daily - No Amendments

02/24/2026 House Committee on Transportation, Housing & Local Government Refer Amended to House Committee of the whole.

02/04/2026 Introduced In House - Assigned to Transportation, Housing & Local Government

Note the Fact Sheet provided by CDPHE included in the Board Packet.

HB 26-1323 CONCERNING WILDFIRE RESILIENCY THROUGH A PROHIBITION ON THE TAKING OF BEAVERS ON PUBLIC LAND IN THE STATE.

House Sponsors: ***Lindsay and Velasco***

Senate Sponsors: ***Cutter and Kipp***

The bill prohibits the taking of beavers on public land for a recreational purpose or commerce in beaver fur, parts, or products. The parks and wildlife commission may adopt rules to implement the prohibition and, if the commission adopts rules, the rules must ensure that the role of beavers in the wildfire resiliency of public land is protected. A violation of the prohibition carries certain penalties.

UGRWCD Legislative Committee position: Monitor

CWC State Affairs Committee position: Oppose

03/05/2026 Introduced In House - Assigned to Agriculture, Water & Natural Resources

SENATE BILLS

SB26-064 CONCERNING MODIFYING THE COLORADO AGRICULTURAL FUTURE LOAN PROGRAM TO ALLOW CERTAIN ELIGIBLE ENTITIES TO QUALIFY FOR FUNDING FROM THE PROGRAM.

Senate Sponsors: ***Simpson and Roberts****, Amabile, Bridges, Coleman, Exum, Gonzales J., Hinrichsen, Jodeh, Kipp, Kolker, Lindstedt, Liston, Marchman, Michaelson Jenet, Pelton R., Rodriguez, Snyder, Wallace, Weissman*

House Sponsors: ***McCormick and Soper***

The bill modifies the Colorado agricultural future loan program (program) to permit certain eligible entities to receive funding from the program. An eligible entity is defined as an entity that is certified by the division of conservation or an entity that:

- Is a district that has authority to conduct water activities, an irrigation district, or a ditch and reservoir company; and
- Has a letter of support from an entity certified by the division of conservation.

The bill directs the commissioner of agriculture to adopt rules that prioritize the provision of loans to eligible entities that apply for loans in order to acquire and conserve agriculturally productive land and to transfer ownership of that land to an eligible farmer or rancher who qualifies for a loan from the program.

UGRWCD Legislative Committee position: Support

CWC State Affairs Committee position: Tabled to 2/23 for amendments

03/10/2026 House Second Reading Passed - No Amendments

03/11/2026 House Third Reading Passed - No Amendments

03/10/2026 House Second Reading Special Order - Passed - No Amendments

03/05/2026 House Second Reading Laid Over Daily - No Amendments

03/02/2026 House Committee on Agriculture, Water & Natural Resources Refer Unamended to House Committee of the Whole

02/12/2026 Introduced In House - Assigned to Agriculture, Water & Natural Resources

02/11/2026 Senate Third Reading Passed - No Amendments

02/10/2026 Senate Second Reading Passed - No Amendments

02/05/2026 Senate Committee on Agriculture & Natural Resources Refer Unamended - Consent Calendar to Senate Committee of the Whole

01/28/2026 Introduced In Senate - Assigned to Agriculture & Natural ResourcesCWC State Affairs Committee position: Table pending amendments.

SB 26-102 CONCERNING MEASURES TO ENSURE ACCOUNTABILITY FOR LARGE-LOAD DATA CENTERS.

Senate Sponsor: ***Kipp***

House Sponsor: ***Brown***

The bill creates certain requirements for large-load data centers, which are defined in the bill as:

- A new data center that has a peak load of more than 30 megawatts or multiple new data centers with a collective peak load of more than 60 megawatts; or
- An existing data center that adds a peak load of more than 30 megawatts or multiple existing data centers that add a collective peak load of more than 60 megawatts.

No later than June 30, 2030, the public utilities commission (commission) is required to make a determination on whether 100% hourly matching by large-load data centers is technically and economically feasible. If the commission determines that 100% hourly matching is not technically and economically feasible, the commission must make a determination of the highest percentage of hourly matching by large-load data centers that is technically and economically feasible (hourly matching requirement), which percentage the commission must update on a regular basis.

Beginning January 1, 2031, an operator of a large-load data center (operator) must generate, purchase, or otherwise acquire a quantity of electricity generated from renewable resources

necessary to meet 100% of the operator's large-load data center's total annual electricity consumption. An operator must also achieve the hourly matching requirement. An operator must comply with these requirements through a tariff, contract, or program entered into with a utility, one or more power purchase agreements entered into with an independent power producer, or a self-supply of electricity.

An operator must enter into contracts of at least 15 years with a utility to pay for certain infrastructure and resource costs. An operator must also contribute to utility demand-side management programs and comply with certain operational water management and on-site backup generation requirements.

No later than June 30, 2028, and no later than each June 30 thereafter, an operator must report to the department of public health and environment certain information about the large-load data center, including information about the large-load data center's annual electricity and water consumption. The department of public health and environment must compile the information reported and provide a report to the general assembly and commission and make the report publicly available on the department's website.

A utility is prohibited from interconnecting or supplying electricity to a large-load data center unless:

- The operator has either provided an up-front payment or entered into a contract of at least 15 years with the utility, which up-front payment or contract must require the operator to pay for certain infrastructure and resource costs;
- On or after January 1, 2031, the utility has verified that the operator is in compliance with the hourly matching requirement; and
- The utility determines and ensures that the addition of the large-load data center to the utility's system does not negatively affect the utility's ability to provide reliable service to customers or meet applicable clean energy targets or increase the utility's greenhouse gas emissions.

A utility is prohibited from offering economic development rates to large-load data centers and is required to develop and offer demand response programs or flexible connection tariffs to the utility's customers that are operators. A utility is required to solicit and accept voluntary financial contributions from operators to certain utility programs, which contributions must supplement, rather than substitute, the utility's funding of those programs. A utility that is rate-regulated by the commission with customers that are operators is required to describe efforts to comply with the bill in the utility's annual report filed with the commission.

On or before June 30, 2027, the department of local affairs must publish model codes for the development of large-load data centers, which model codes must consider certain best practices. In developing the model codes, the department of local affairs must conduct a robust stakeholder and engagement process and evaluate, update, and review the model codes every 5 years.

With its development permit application for a large-load data center, the person responsible for the initial development of a large-load data center (developer) must submit a site assessment to the local government reviewing the application. A site assessment must include certain components.

If the siting of a large-load data center is proposed in a disproportionately impacted community or if an operator of an existing data center in a disproportionately impacted community plans to expand the data center's peak load such that the data center will become a large-load data

center, the developer or operator must undergo a cumulative impacts analysis before the development or expansion begins. The developer or operator is required to contract with a third-party contractor selected by the department of public health and environment to perform the cumulative impacts analysis.

In reviewing a development permit application for a large-load data center that is in a disproportionately impacted community or is proposed to be in a disproportionately impacted community, the applicable local government is required to consider the applicant's cumulative impacts analysis and whether the mitigation strategies described by the applicant are sufficient to avoid any negative impacts identified in the cumulative impacts analysis. Prior to applying for a development permit that is in a disproportionately impacted community or is proposed to be in a disproportionately impacted community, a developer or operator must comply with certain public hearing, notice, and community outreach requirements.

If the siting of a large-load data center is proposed in a disproportionately impacted community or if an operator of an existing data center in a disproportionately impacted community plans to expand the data center's peak load such that the data center will become a large-load data center, the developer or operator must enter into a community benefit agreement with the disproportionately impacted community before the development or expansion begins. The developer is required to consult with the applicable local government and certain coalition groups and consider certain topics during community benefit agreement negotiations.

An operator is required to comply with certain labor standards.

UGRWCD Legislative Committee position: **Monitor**

CWC State Affairs Committee position: No position

02/11/2026 Introduced In Senate - Assigned to Transportation & Energy

SB 26-131 CONCERNING PROTECTIONS AGAINST ABUSIVE PRACTICES IN SPORTS BETTING.

Senate Sponsors: ***Ball and Pelton, B.***

House Sponsors: ***Woodrow and Woog***

The bill creates certain requirements and prohibitions related to sports betting.

Section 2 of the bill adds definitions to the statutes regulating sports betting.

Section 3 prohibits a person licensed by the Colorado limited gaming control commission (commission) to operate an internet sports betting operation (internet sports betting operator) from:

- Accepting more than 5 separate deposits from an individual in a 24-hour period;
- Limiting the size and frequency of deposits or bets because an individual obtains a financial benefit as a result of placing the bet or due to the individual's betting activities, unless the betting activities constitute a suspicious betting activity or are indicative of a gambling disorder; or
- Initiating or sending mobile device push notifications or text messages to account holders in the state soliciting bets or deposits.

Section 4 prohibits a person from:

- Including enhanced payout promotions or information on how to place a sports bet in an advertisement or promotion for a sports betting operation; or
- Broadcasting an advertisement or promotion for a sports betting operation from 8 a.m. to 10 p.m. or during a live broadcast of an athletic competition.

Section 4 also requires:

- A sports betting operator or internet sports betting operator to comply with certain requirements in contracting with and compensating a third party for marketing and advertising services; and
- An internet sports betting operator to provide to the division of gaming in the department of revenue data and metrics related to the operator's sports betting operation for the preceding calendar year. The division must comply with certain confidentiality requirements and compile the data into a public report every 3 years starting on January 1, 2029.

Section 5 prohibits an internet sports betting operator from offering or accepting a proposition bet or directly or indirectly accepting deposits using a credit card in connection with the acceptance of a sports bet (prohibitions). A violation of a prohibition constitutes a class 2 misdemeanor.

Section 6 allows the commission to assess a maximum penalty of $25,000 against a violator of a prohibition.

Section 7 requires that the amount of money annually transferred from the sports betting fund to the water plan implementation cash fund is no less than the amount transferred to the water plan implementation cash fund in the previous state fiscal year, to the extent the unexpended and unencumbered money in the sports betting fund permits.

UGRWCD Legislative Committee position: **Monitor**

CWC State Affairs Committee position: Oppose

02/25/2026 Introduced In Senate - Assigned to Finance

RETURN TO AGENDA

AGENDA ITEM 7

Basin Water Supply Update

Return to Agenda

MEMORANDUM

TO: UGRWCD Board Members

FROM: Beverly Richards, Water Supply Planning Manager

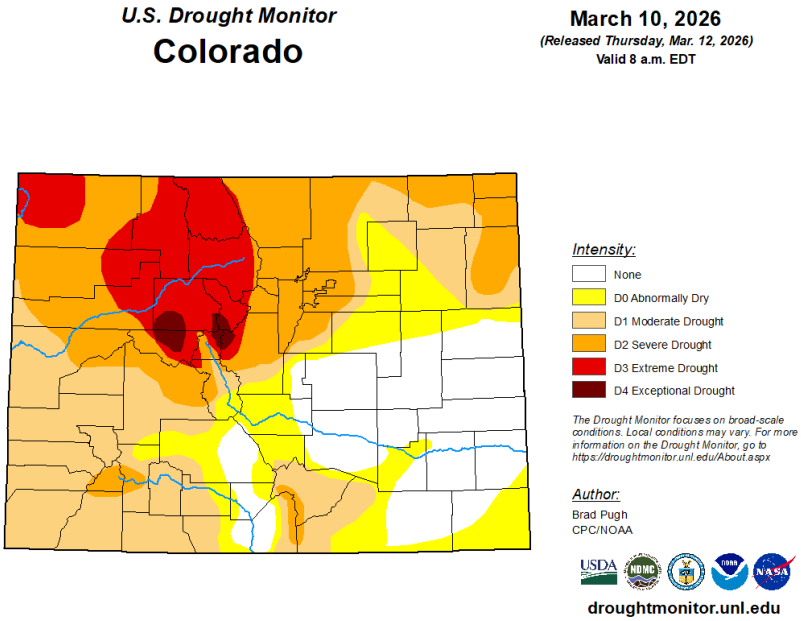
DATE: March 23, 2026

SUBJECT: March Basin Water Supply Information

The information supplied as part of this memorandum is a monthly feature and includes information about drought, precipitation, snow water equivalent, soil moisture, reservoir storage, and cloudseeding.

Drought Conditions

Drought categories are determined by precipitation, temperature, and soil moisture and are reflected in the map provided below. According to the *Drought Monitor* dated March 10, 2026, drought conditions in the basin remained the same as those seen in February. The forecast shows that the area will likely see degradation in these drought conditions as we move into spring and summer.



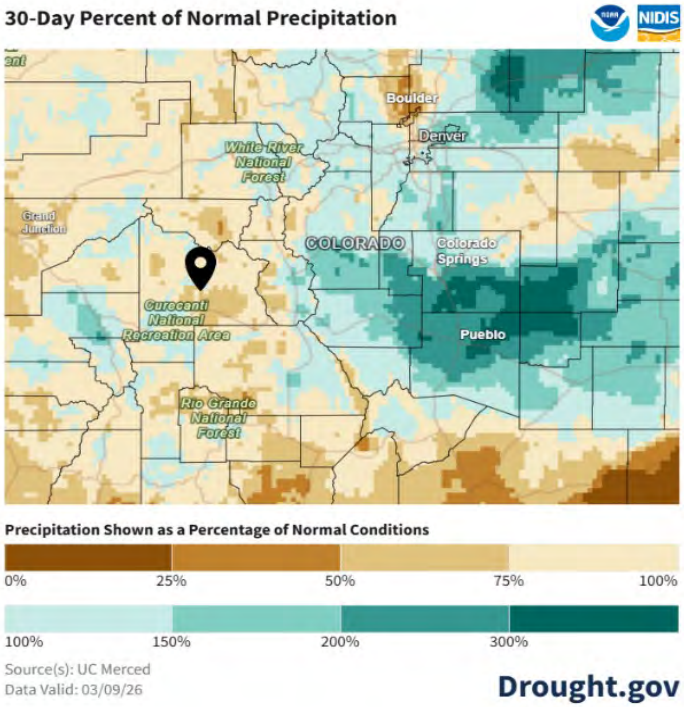
In February, 97% of Gunnison County was experiencing abnormally dry (D1) and moderate (D2) drought conditions. As of March 10, 2026, 3% of the County remains in the abnormally dry (D0) category, 55% of the County is in the moderate (D1) category, and 42% of the County is now experiencing severe (D2) and extreme (D3) drought conditions, 40.85% and .64% respectively.

Drought conditions in Saguache County basically remained the same as those seen in February. As of March 10, 30% of the county is experiencing no drought conditions and this is due to precipitation events that occurred over the past month. The remaining 70% of the County remains in the abnormally dry (D0) to moderate (D1) drought condition categories.

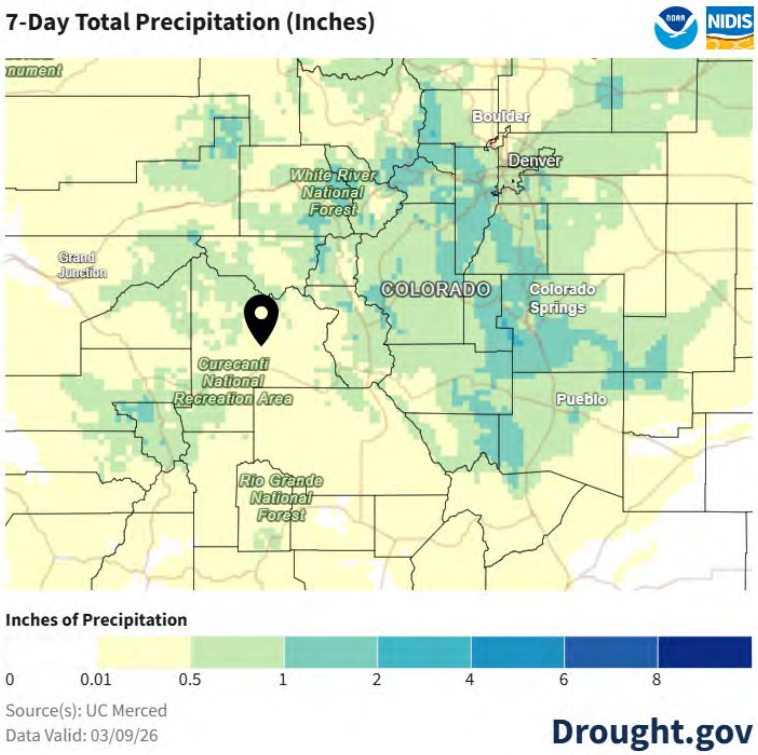
Hinsdale County saw some improvement in conditions from February to March. In February, 49% of the County moved into severe (D2) drought conditions. This amount decreased to 23% in March. The remaining 77% of the county remains in abnormally dry (D0) to moderate (D1) drought conditions.

Precipitation

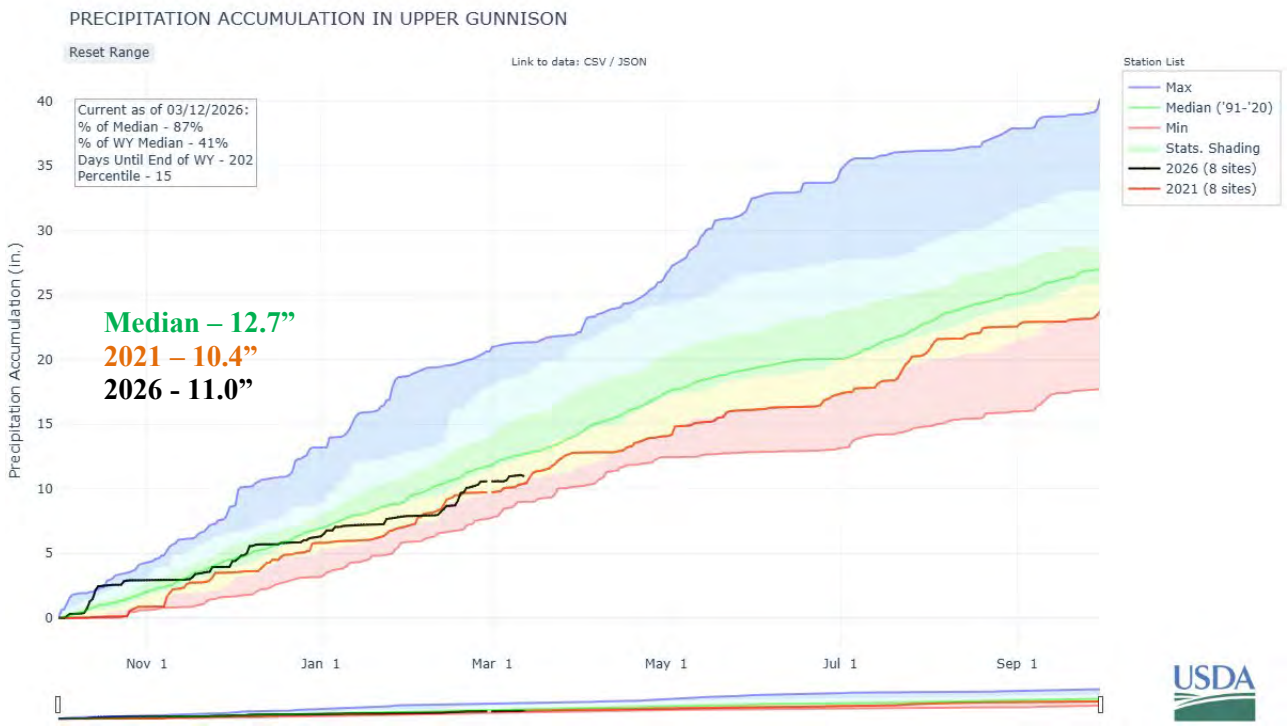
The map below represents the precipitation amounts for the basin over the past 30 days (February 10-March 9), *Drought.gov, March 9, 2026*. The warmer colors represent no precipitation to 100% of normal precipitation amounts and the cooler colors represent precipitation amounts from 100 to over 300% of normal. As the map shows, Gunnison County received precipitation amounts ranging from 50% to 150% of normal precipitation. In the same time frame, precipitation in Hinsdale and Saguache counties ranged from 50% to a small area in Saguache County that saw 200% of normal precipitation.



Over the past seven days (March 2-March 9) as shown in the map provided below (*Drought.gov, March 9, 2026),* precipitation amounts ranged from 0.01" to 0.5" as indicated by the yellow and light green areas on the map.

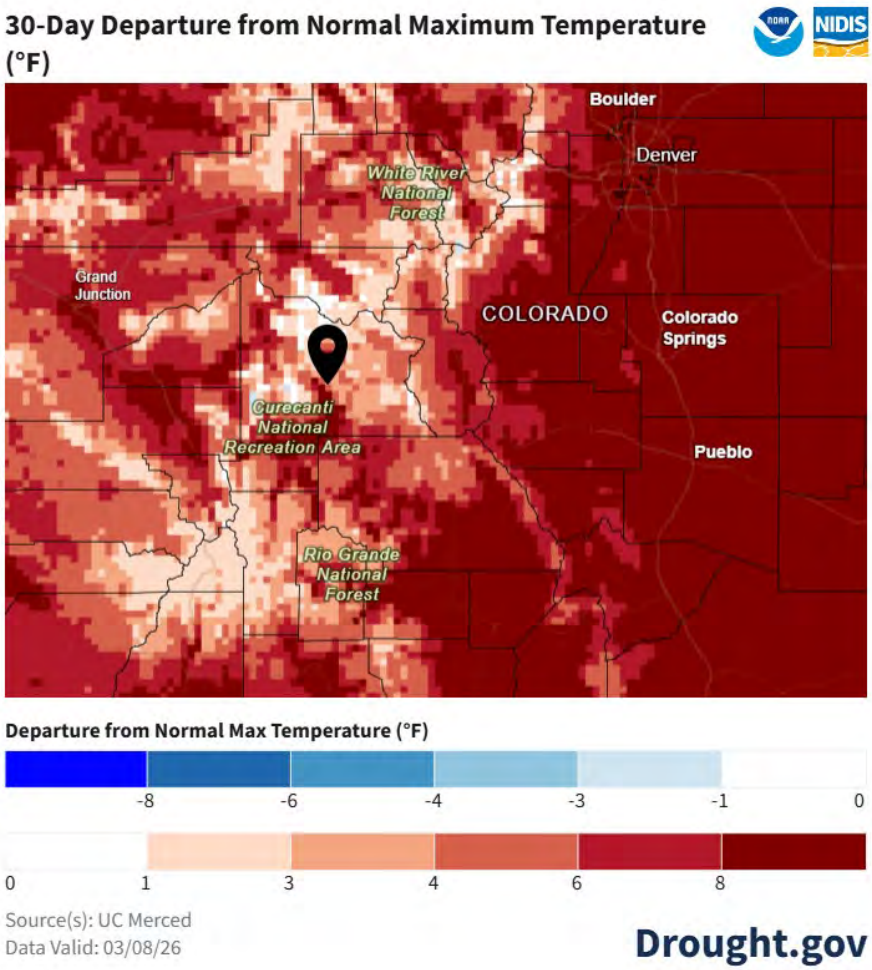


The precipitation trend graph provided below for the entire Upper Gunnison Basin is compiled from data from eight SNOTEL sites located in the basin where precipitation is measured (*NRCS, March 12, 2026)*. This graph shows that precipitation in the Upper Gunnison Basin has remained below the median amount (12.7") at 11.0" which is 87% of the median. This water year is now trending closely with WY2021 which is included in the graph. WY2021 had 10.4" of precipitation on March 12 and this is shown by the orange line. That amount was 82% of the median amount for that date. The current precipitation amount is now in the 15th percentile.

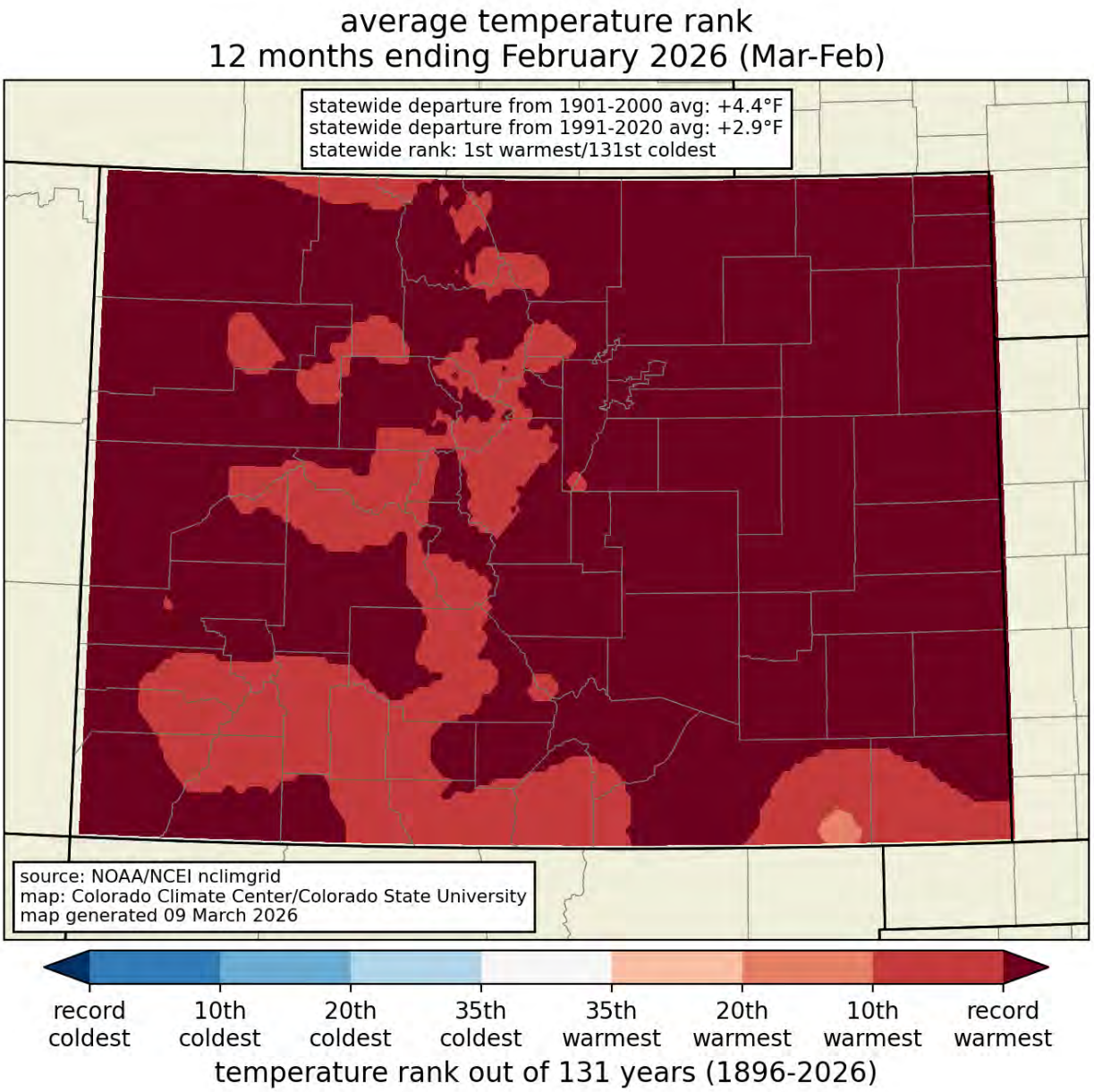


Temperature

Temperature has also been an issue over the past 30 days (February 10-March 9) as shown in the map provided below (*Drought.gov, March 9, 2026).* According to this map, most of the state has seen departures from normal maximum temperatures in the range of 1 to more than 8 degrees above the normal temperatures for this time of year. There was some relief in some areas of Gunnison and Hinsdale County where the range was only 0 to 3 degrees departure from the normal maximum temperature as shown by the lighter colors.



According to the *Colorado Monthly Climate Summary* and as shown in the map provided below, temperature conditions have been consistently warmer than average for the past twelve months (*Colorado Climate Center, February 28, 2026*). Temperatures have been ranked as the record warmest for much of the state and the remainder ranked in the 10th warmest for the period of record (1896-2026).

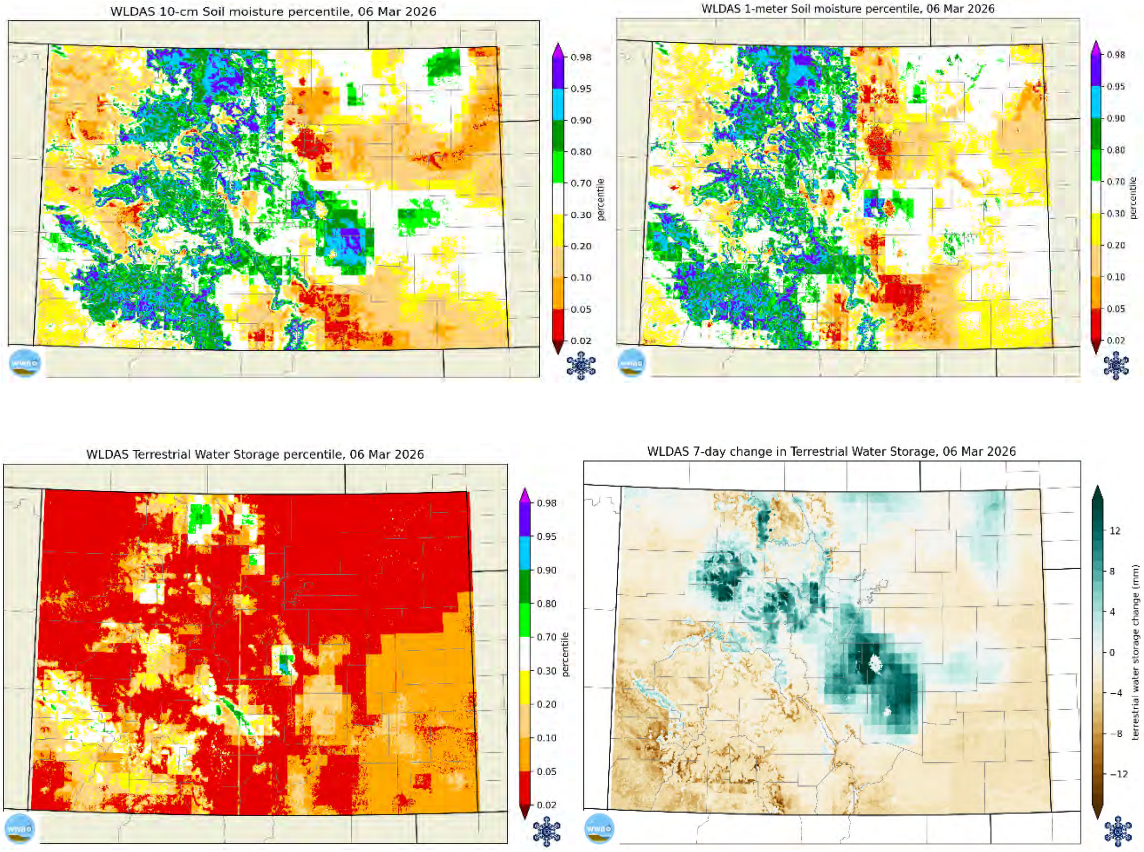


Soil Moisture

Provided below are current soil moisture maps for the State *(Colorado Climate Center, March 6, 2026)*. These maps include soil moisture percentiles at depths of 10-cm; 1-meter; and terrestrial water storage which includes groundwater, soil moisture and snowpack components. Also included is a change map showing the change in terrestrial water storage conditions over the past seven days. The warmer colors represented on the maps are lower percentiles and the cooler colors are higher percentiles.

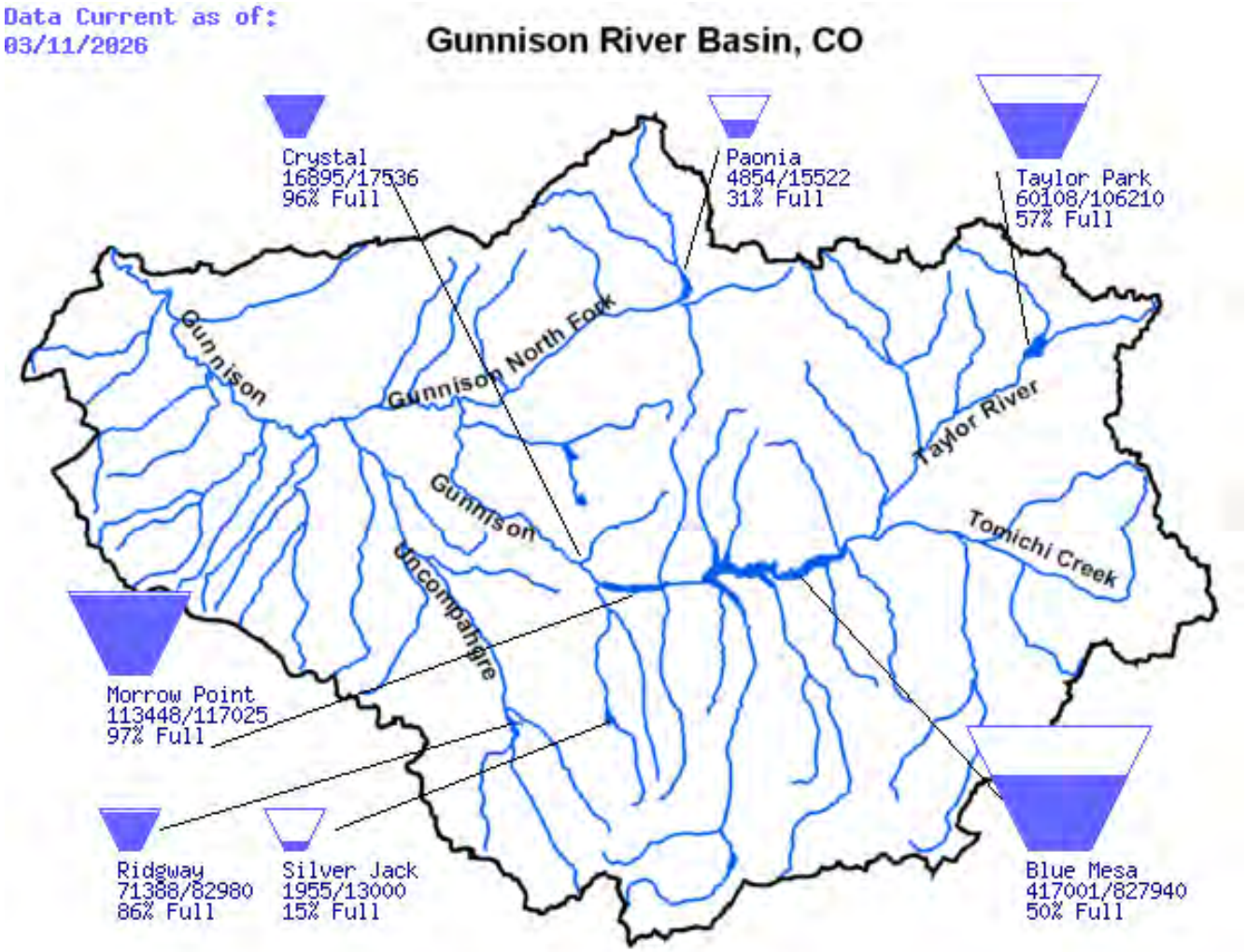
Soil moisture at 10-cm and 1-m for most of the basin remains in the 70th to 95th percentile as of this date and this continues to be due to precipitation events that occurred earlier in the water year. However, water supply forecasters also indicate that these favorable conditions remain due to some snow melt already occurring and precipitation events that are occurring as rain instead of snow.

The terrestrial water storage represents the basin differentially as it includes snowpack in its calculations. Based on this, the percentiles are much lower, ranging from the 2nd to the 70th percentile throughout most of the basin. The change map shows that there has been some change in soil moisture in the basin due to drying conditions such as no precipitation and warm temperatures. This is indicated by the warm colors in the change map.

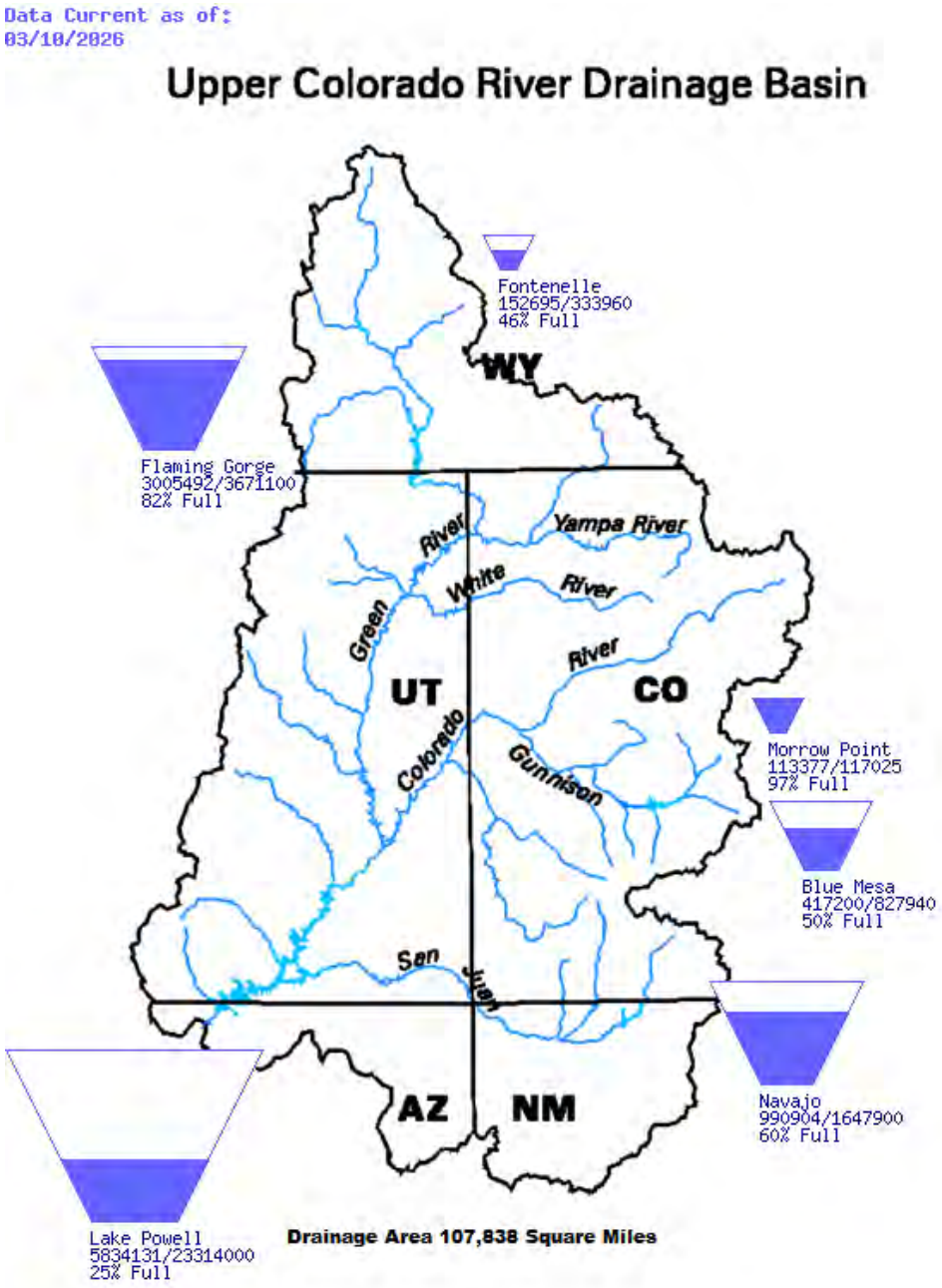


Reservoir Storage and Operations

Reservoir storage in the entire Gunnison Basin is 62% full, which is an increase of 2% from the February report. Reservoirs in the Upper Gunnison Basin include Taylor Park and Blue Mesa, which are at 57% and 50% full, respectively. The total reservoir storage amount in the Upper Gunnison basin is 53% full, which is the same as the February report. (*USBR, River Basin Tea-cup Diagrams, March 11, 2026)*.



Reservoir storage in the Upper Colorado River Basin is 60% full, which is a decrease of 1% from the February report. This is reflected in the tea-cup diagram provided below dated March 10, 2026.



Aspinall Unit Operations

The following information is from the Aspinall Unit Operations webpage (*US Bureau of Reclamation dated March 10, 2026).*

The February unregulated inflow volume to Blue Mesa was approximately 23,000 acre-feet, which is 103% of normal. Unregulated inflow volumes forecasted for Blue Mesa for the next three months (March, April, and May) are projected to be: 35,000 acre-feet or 93% of average; 45,000 acre-feet or 58% of average; and 113,000 acre-feet or 56% of average, respectively.

The forecasted WY2026 unregulated inflow volume to Blue Mesa is projected to be a total of 564,000 acre-feet which is 80% of average. The water supply period (April-July) for 2026 is currently forecasted to have an unregulated inflow volume of 320,000 acre-feet (49% of average).

Under this forecast, operation of the Aspinall Unit under the Aspinall Record of Decision (2012) would require a spring peak release to provide one day of sustained flows in the Gunnison River in the Whitewater reach at or above 900 cfs. This forecast would also require Aspinall releases to provide a single day peak flow in the Black Canyon of 944 cfs per the Black Canyon Reserved Water Right Decree.

Blue Mesa is projected to fill to approximately 7,477 feet by late June with approximately 480,000 acre-feet of storage which is 58% full. This is approximately 42 feet from full pool elevation (7519.4 feet) with approximately 348,000 acre-feet of unfilled storage space in Blue Mesa Reservoir.

The next Aspinall Unit Operations Group meeting will be held on April 23, 2026, at 1:00 p.m. at a location to be determined. District staff will attend and will provide updates from this meeting.

Taylor Reservoir Operations

The Taylor Local Users Group held its first meeting for 2026 on March 9, 2026. Conor Felletter from the US Bureau of Reclamation presented his March 1 forecast report to the group. The forecast shows 53,000 acre-feet of runoff occurring in the water supply period of April-July which is 56% of average. This is a decline of 2,000 acre-feet from the February 1 forecast. This current forecast puts the year type in the Dry Year category. This category has no requirement for a spring peak release.

The operations plan provided in this update showed the reservoir filling to a maximum seasonal content of 53,334 acre-fee. Based on this amount, the original operations plan showed current releases from Taylor Park Dam at the winter rate of 80 cfs and keeping releases at that rate until May 1. After some discussion with the TLUG members a new operations plan was proposed in an effort to keep the end of year content near 60,000 acre-feet as per the stipulation. The new plan is provided below and includes reducing the releases immediately to 60 cfs and holding that release through April. On May 1 the releases will be increased to 100 cfs and then to 125 on May 16th through the end of the month. The next meeting of the Taylor Local Users Group will be held on April 7, 2026, beginning at 10:00 a.m.

Proposed Operation
Taylor Park Reservoir
March forecast = 56% (53,000) af
March 10, 2026

Month	Inflow ac-ft	Average Inflow cfs	Outflow ac-ft	Average Outflow cfs	EOM Content ac-ft	EOM Elevation ft
					59,826	
Nov 1-15	2,200	74	2,350	79	64,308	9,306
Nov 16-30	1,960	66	2,360	79	63,917	9,306
Dec 1-15	1,860	63	2,360	79	63,423	9,306
Dec 16-31	2,010	63	2,510	79	62,932	9,305
Jan 1-15	1,790	60	2,370	80	62,354	9,305
Jan 16-31	1,570	49	2,550	80	61,370	9,304
Feb 1-15	1,510	54	2,250	81	60,628	9,304
Feb 16-28	1,770	64	2,170	78	60,238	9,304
Mar 1-15	2,070	70	2,180	73	60,122	9,304
Mar 16-31	2,020	64	1,900	60	60,239	9,304
Apr 1-15	3,060	103	1,790	60	61,512	9,305
Apr 16-30	3,940	132	1,790	60	63,669	9,306
May 1-15	6,470	217	2,980	100	67,161	9,308
May 16-31	9,530	300	3,970	125	72,727	9,312
Jun 1-15	14,220	478	5,950	200	81,267	9,317
Jun 16-30	6,780	228	5,950	200	81,826	9,317
Jul 1-15	4,660	157	7,440	250	79,049	9,316
Jul 16-31	4,340	137	7,930	250	75,454	9,313
Aug 1-15	3,190	107	7,440	250	71,211	9,311
Aug 16-31	2,810	89	7,930	250	66,082	9,308
Sep 1-15	2,520	85	5,950	200	62,654	9,305
Sep 16-30	2,480	83	5,950	200	59,181	9,303
Oct 1-15	3,140	106	2,980	100	59,347	9,303
Oct 16-31	2,860	90	2,380	75	59,826	9,303

53,000 = April-July inflow
56% of normal
82,160 = Maximum Content

Lake Powell Operations

This information is provided by the *Lake Powell Water Database* webpage (*lakepowell.water-data.com)* and is dated March 11, 2026.

Lake Powell elevation is currently at 3529.91 feet with a content of 5.8 million acre-feet (maf) or 25% full (24,322,000). Total inflows for WY26 as of March 12, 2026, are 1,879,947 acre-feet which is 68% of the March 12 average. The total releases out of Glen Canyon Dam for WY26 to date have been 2.81 maf which is 37% of the minimum 7.5 maf for the water year.

During WY26 to date, storage has fallen by 916,927 acre-feet with total outflows exceeding total inflows by 927,095 acre-feet. Inflows for WY26 to date are 98.71% of WY25. The thirty-four tracked reservoirs above Lake Powell are currently at 69% of capacity and the rivers feeding into Lake Powell are running at 61% of the March 12 average. Lake Powell is now 170.09 feet below the full pool. The current elevation of 3529.91 is 4.91 feet above the critical elevation of 3,525 feet and is a drop of 3.4 feet from the February report.

Cloudseeding

This report comes from the February monthly report from *North American Weather Consultants (NAWC)* dated March 2, 2026.

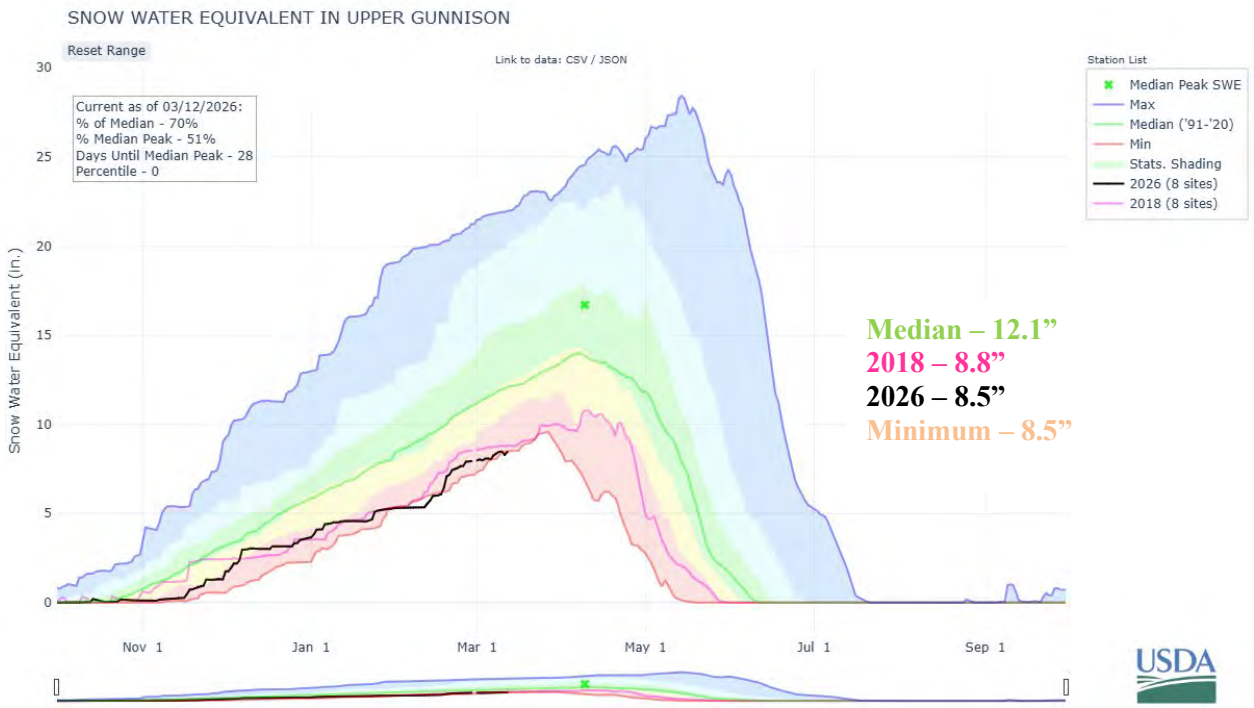
February was another very mild month across the region, although storm events were more frequent and provided at least closer to normal precipitation than the previous couple of months. There was a total of four seeded periods in the Upper Gunnison Basin in February. The following table shows generator hours for the month of February.

Storm Number	Dates	No. of Manual Generators Used	No. of Manual Hours	No. of Remote Sites Used	Remote Hours
12	February 11-12	2	35.0	1	14.0
13	February 13	5	33.75	0	0.0
14	February 17-18	7	162.75	1	33.25
15	February 20	3	19.5	2	6.0
February Total	---	---	251.0		53.25
Season To Date	**---**	**---**	**802.50**		**150.5**

The table below shows the amount of snow water equivalent (SWE) accumulated at select SNOTEL sites during these seeding events.

Dates	SNOTEL Site			
	Schofield Pass	Park Cone	Porphyry Creek	Slumgullion
February 11	0.8	0.2	0.0	0.0
February 12	0.5	0.1	0.0	0.1
February 13	0.4	0.2	0.3	0.4
February 17	0.9	0.3	0.2	0.5
February 18	2.0	0.4	0.2	0.2
February 20	0.6	0.2	0.2	0.2

As of March 12, 2026, SWE in the Upper Gunnison basin is still well below normal, with a basin-wide average of 70% of the median as shown in the SWE plot provided below (*NRCS, March 12, 2026).* This amount puts the basin in the zero percentile and is equal to the minimum amount of 8.5" for the period of record (1991-2020). Also included in this plot is a comparison with 2018 which had a SWE amount of 8.8" on March 12. The current amount of SWE is 51% of the median peak SWE amount of 16.7" and the date for the median peak is April 9.



RETURN TO AGENDA

AGENDA ITEM 8

General Manager's Report

Return to Agenda

MEMORANDUM

TO: Board of Directors

FROM: Sonja Chavez, General Manager

DATE: March 16, 2026

SUBJECT: General Manager Report

I. General Manager's Report

A. Letters of Comment on Draft Environmental Impact Statement for the Post 2026 Operating Guidelines for Lakes Powell and Mead

1. UGRWCD Letter
2. Colorado River District Letter
3. State of Colorado Letter
4. Conservation Organization Letter

B. Debriefing - West slope water meeting with Senator Michael Bennett

II. Staff & UGRWCD Committee Reports

A. Taylor Local Users Group

Please see attached draft meeting minutes from March 9. Chairman Sabrowski will also provide a verbal update.

B. UGRWCD Grant Committee

Please see attached memorandum from UGRWCD Grant Program Manager, Beverly Richards.

GRANT COMMITTEE RECOMMENDATION FOR BOARD ACTION: Approve the 2026 Grant Committee recommendations for funding award as presented.

C. Education and Outreach Program Update

Please see attached memorandum from Sue Uerling, Administrative Assistant/Communications Support Specialist, and Jules Iovino, Water Resources

Fellow.

D. Wet Meadows Program Update

Please see attached memorandum from Amanda Aulenbach, Wet Meadows Program Director.

E. Water Resources Project Updates

Please see attached memorandum from Bailey Friedman, Water Resources Project Manager.

F. Water Quality & Quantity Program Update

Please see attached memorandum from Ari Yamaguchi, Water Resources Specialist.

G. Gunnison Basin Roundtable Update

A verbal update will be given by General Manager and General Counsel following the March 16 meeting in Montrose which is to be followed by the Colorado River District Lower Gunnison State of the River meeting.

H. Gunnison River Festival (GRF) Update

Festival was moved to June 12th and 13th to avoid conflicting with Fibark which takes place in Salida June 18th through 21st.

I. Scientific Endeavors Update

A verbal update will be given by Director Carroll followed by General Manager's Update on:

- Gap weather radar
- Rain seeding
- Using high-precision Global Navigation Satellite Systems surface displacement to constrain changes in groundwater storage.

Upper Gunnison River Water Conservancy District

March 2, 2026

Sent via electronic mail: crbpost2026@usbr.gov

U.S. Bureau of Reclamation
Attn: BCOO-1000
P.O. Box 61470
Boulder City, NV 89006

RE: Draft EIS Comments regarding Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead

Dear Acting Commissioner Cameron:

Please accept the comments of Upper Gunnison River Water Conservancy District (UGRWCD) in response to Reclamation's Draft Environmental Impact Statement (DEIS) for Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead.

Our District's mission is *to be an active leader in all issues affecting the water resources of the Upper Gunnison River Basin.*

Our Upper Gunnison River Basin water user community desires guidelines that restore system balance and long-term sustainability and prevent overuse in the Lower Basin which has kept our system in a perpetual state of crisis at the sacrifice of the security of all water users in the Colorado River Basin.

To that end, we are providing the following comments related to the draft operating guidelines which we see as necessary to the successful development of guidelines that will result in long-term balance between supply and demand across the Colorado River Basin.

Before we provide our comments, we wish to state that we have received a copy and conducted a review of the comments provided by the Colorado River Water Conservation District. We strongly ask that you identify our organization as supporting those comments and that you incorporate their suggestions for further analysis and revisions during the development of the Final EIS.

The Colorado River District's comments are as follows:

Reclamation Must Prioritize Hydrologic Reality Over Predictability: *The DEIS places undue emphasis on "predictability" for water users. Predictability cannot be achieved under future hydrologic conditions unless demands are permanently adjusted to align with reduced supply.*

Flows in the Colorado River have declined approximately 20% over the past two decades and reservoir elevations remain critically low. The DEIS' focus on predictability disproportionately favors Lower Basin users who rely on reservoir releases, while Upper Basin communities live with hydrologic variability and limited storage buffering.

The proposed federal action must focus on restoring long-term structural balance across the basin and performing under all ranges of hydrology, including critically dry conditions.

The Final EIS Must Evaluate and Adjust the Scale of Upper Basin Conservation: *Several alternatives rely on assumed Upper Basin conservation volumes of up to 500,000 acre-feet annually. However, the DEIS does not analyze the reasonably foreseeable environmental and socioeconomic impacts required to achieve conservation at that scale.*

In Upper Basin communities, conservation at these levels would likely require significant and sustained reductions in irrigated acreage and municipal uses and decreased economic activity.

Such reductions would have direct and potentially permanent impacts on:

- *Agricultural economies and employment*
- *Rural tax bases and county revenues*
- *Habitat for aquatic and terrestrial species*
- *Community stability and small business viability*

These impacts must be analyzed programmatically and cumulatively under NEPA. Furthermore, the modeled conservation volumes exceed demonstrated program performance to date. The Final EIS should evaluate how alternative outcomes are impacted utilizing real world conservation program amounts.

Upper Basin Shortages Must Be Explicitly Disclosed: *The DEIS repeatedly quantifies Lower Basin shortages in the main body of the document while relegating Upper Basin shortages to Appendix I.*

Failure to clearly disclose these shortages in the main body of the EIS creates a misleading narrative regarding risk distribution across basins.

Lower Basin Water Use Must Account for System Losses: *Approximately 1.5 million acre-feet annually represents system losses, including evaporation and transit losses. These losses are an integral part of Lower Basin consumptive use and should not be classified as "shortages." Failure to account for these losses contributed to storage decline under the 2007 Interim Guidelines. No basin or contractor should be permitted to deplete water beyond legal apportionments unless Lake Powell is in full or flood-control conditions.*

Lower Basin conservation water must be subject to realistic, recurring evaporation and transit loss accounting. One-time assessments are insufficient.

At Least One Alternative Must Perform Under Critically Dry Hydrology and Hydrology Must Drive Post-2026 Operations*: None of the DEIS alternatives perform adequately under critically dry hydrology. Given declining natural flows at Lees Ferry and current reservoir elevations, at least one alternative must achieve performance metrics at least 90% of the time under critically dry conditions.*

Additionally, operating regimes based solely on comparative reservoir elevations have failed to protect storage at Lake Powell. The Draft EIS must model realistic operations and its effects instead of allowing reservoirs to drop below critical elevations. This is critical for the public to understand and evaluate impacts of likely operations given current reservoir levels and hydrologic conditions.

Interbasin Transactions Must Not Be Allowed: *The interstate compacts were designed to provide legal certainty and prevent interstate water marketing across basins. Interstate marketing mechanisms threaten Upper Basin water security, economic stability, and legal clarity. Colorado law also reflects a long-standing public policy limiting interstate export of waters of the state. We will not support any mechanism authorizing interstate or interbasin water marketing between the Upper and Lower Colorado River Basins.*

Alternatives Must Contain Clearly Defined and Modeled Actions: *The Basic Coordination Alternative includes non-specific actions above Lake Powell (i.e. in the Upper Basin) regarding additional reductions for infrastructure protection without modeling or clearly defining those triggers. These additional and unspecified actions must be disclosed and modeled to allow decision-makers and the public an opportunity to fully understand and assess the impact of these actions.*

Similarly, the Supply Driven Alternative includes undefined "Gap Water," with modeling assumptions that do not exclude Lower Basin system loses. The concept of "Gap Water" must be fully defined with disclosure on how often it is introduced to the system and the range of its magnitude.

Upper Basin Conservation Water and CRSP Upper Initial Units Water Must Remain in Lake Powell: *If Upper Basin conservation is included, conserved water must be operationally neutral with respect to Lake Powell releases and Lower Basin shortage determinations. Conserved water should only be released at the direction of the Upper Colorado River Commission for Compact compliance or meaningful reservoir recovery.*

Releases from CRSP Upper Initial Units for infrastructure protection must remain operationally neutral and remain in Lake Powell until sufficient system recovery occurs. Repeated modeled releases raise feasibility and NEPA concerns that must be analyzed.

At this point, we now turn to specific comments from the Upper Gunnison River Water Conservancy District:

Limitation on Geographic Scope of the EIS:

1. The DEIS correctly identifies the proposed federal action of "adopting specific guidelines and coordinated reservoir management strategies to address operations of Lake Powell and Lake Mead through their full operating ranges."

   However, Reclamation repeatedly identifies federal action in the Upper Basin above Lake Powell for which the Secretary of the Interior does not have authority under the 1956 Colorado River Storage Project Act (CRSPA).[1] Reclamation cannot modify operations (i.e., make any additional releases at the CRSPA Upstream Initial Units) and must limit its alternatives and actions to the geographic scope from Lake Powell to the Mexican international boundary.

Secretary's Authority

Reclamation states that the goal of the DEIS "…was to develop a reasonable and broad range of alternatives for managing the Colorado River system and its resources post-2026," but the Secretary's authority is much more limited in the Upper Basin than it is in the Lower Basin. Reclamation's reference to the *Colorado River System* is inaccurate as to the Secretary's actual authority and is in direct conflict with the Law of the River. UGRWCD requests that Reclamation correct the DEIS goal statement to make it consistent with the Secretary's actual authority.

Exclusion of Critical Data

1. Reclamation's exclusion of the Consumptive Uses and Losses (CU&L) report for the Lower Basin creates an appearance of Reclamation bias, creates doubt as to the adequacy

[1] 43 USC. §§ 620-620o

of the alternatives presented and the analyses in the DEIS. Under NEPA, federal agencies are *required* to make information like this available and include it in the analyses of the proposed federal action. UGRWCD requests that this data be included and analyzed. Importantly, this data highlights the impact of not accounting for evaporation and system losses in the Lower Basin as well as years of overuse by the Lower Basin States which have all contributed to the current crisis in the system.

2. Reclamation's exclusion of the Consumptive Uses and Losses (CU&L) data for 2006-2024 from the DEIS does not support Reclamation's statements throughout the DEIS that drought response and conservation activities in the Lower Basin "have resulted in continued reduction in use." This statement would only be applicable to the mainstream uses and would exclude transit and evaporation losses. UGRWCD requests that this clarification be made throughout the document.

3. The exclusion of the Central Arizona Project's underground storage of water that is not consumed in a given water year is a critical piece of missing information in Reclamation's accounting of basin storage. UGRWCD requests that this data be disclosed, included and considered in the DEIS.

4. The exclusion of data related to the Lower Division's tributary consumptive uses is also a fatal flaw in the DEIS putting into doubt the alternatives analyses. UGRWCD requests that this data be included and analyzed.

5. Reclamation's exclusion of the alternative presented by the Upper Division States is short sighted. Although Reclamation may not see it as a "complete" solution – none of the proposals in the DEIS are - but it should not be entirely disregarded. UGRWCD requests that the Bureau include the analysis of the Upper Basin States alternative in the DEIS.

Alternatives Analysis

1. The inclusion of federal actions that involve the use of CRSPA Upstream Initial Units may conflict with existing law and exceed Reclamation's authority and are therefore not feasible and should be removed.

2. Reclamation's inclusion of Upper Basin contributed water from CRSPA Upstream Initial Units is outside the DEIS geographic scope and authority of the Secretary and should be removed, or if included, must be analyzed in the final DEIS.

3. Reclamation's inclusion of impermissible legal authorities for contemplated releases made from CRSPA Upstream Initial Units, such as Blue Mesa Reservoir, excludes any analyses of impacts to the Upper Basin, blurs the geographic scope and clearly demonstrate Reclamation's bias toward the Lower Basin and the disparity in how Reclamation treats the Lower Basin and Upper Basin in the DEIS.

4. Reclamation's treatment of 1.48MAF for the Lower Basin as "conservation" is entirely inappropriate. The 1.48MAF is not conservation as it only accounts for the Lower Basin's need to account for evaporation and system losses in their uses. Reclamation continues to ignore this inconvenient truth and this fact has contributed to the current crisis the system is experiencing.

5. Reclamation's impact analysis and modeling entirely ignores the environmental, social, public health, and economic and cultural impacts of proposed releases from CRSPA Upstream Initial Units including Blue Mesa Reservoir.

A. Environmental:

i. A U.S. Geological Survey Scientific Investigations Report (2025-5109) titled *Environmental Characterization of Blue Mesa Reservoir and Potential Causes of and Management Strategies for Harmful Algal Blooms, 1970 through 2023, Curecanti National Recreation Area, Colorado,* shows a direct causal relationship between the formation of Harmful Algal Blooms (HABs) and Blue Mesa Reservoir levels (https://doi.org/10.3133/sir20255109). The study period covered the 2021 DROA "emergency" release period which when coupled with drought caused the lowest reservoir levels on record since initially filling the reservoir following construction and when a 1984 intentional release was made for flood control.

Any additional contemplated reservoir releases which lead to water quality degradation and eutrophication of CRSPA Upper Initial Units like Blue Mesa Reservoir must be evaluated consistent with NEPA requirements. The USGS report above also showed the reservoir trophic state transitioning in 2021 from normally mesotrophic conditions to eutrophic or hypereutrophic conditions not previously ever reported (https://doi.org/10.3133/sir20255109; pages 27-28).

B. Public Health Impacts:

i. Cyanobacteria produce a variety of toxins that can have adverse acute and chronic health impacts to humans and animals. There are various exposure routes including direct ingestion through activities like swimming and airborne inhalation via water spray or dust. Boating activity which creates spray can create a potential exposure route and impact public health. High winds are also a common occurrence most afternoons on Blue Mesa Reservoir. When reservoir levels are low due to drought or emergency DROA releases, significant dust storm events occur on the lake bottom that can result in microcystin becoming airborne and creating a public health risk to recreationists on or around the reservoir and to the local community.

A May 2025 review published in *Molecules* (2025, 30, 2320) by scientists from the Department of Biological Sciences at Bowling Green State University and the Department of Neurology, Geisel School of Medicine at Dartmouth, Dartmouth-Hitchcock Medical Center emphasized concerns regarding airborne cyanobacterial neurotoxins, research gaps, health effects, and the need for management practices to protect human and animal health (https://doi.org/10.3390/molecules30112320).

ii. An April 2024 Review of *Microcystin Contamination of Irrigation Water and Health Risk* was published in Toxins (2024, 16, 196) and highlighted that Microcystins (MCs) "…can bioaccumulate, migrate, potentially biodegrade, and pose health hazards to humans within the terrestrial food systems." This study highlights Gunnison Basin concerns around HAB formation and potential public health impacts as a result of downstream agricultural water uses (e.g., Lower Gunnison Project Area) and consumption of crops irrigated with water contaminated with cyanotoxins (https://www.mdpi.com/2072-6651/16/4/196).

C. **Economic Impacts**: The exclusion of economic impacts for any federal action above Lake Powell is in violation of NEPA requirements. In 2024, Curecanti National Recreation Area which includes Blue Mesa Reservoir had a total of $57.2M in economic output, contributed $51.5 million dollars to the local economy, created 412 jobs, $19 million in labor income, and $35.7 million dollars in value added (e.g., groceries, gas, restaurants, hotels, etc.). Drought years and low reservoir and stream flows have a significant impact on the Upper Gunnison basin community which are only exacerbated by DROA releases from Blue Mesa Reservoir.

For example, Elk Creek Marina, normally operates through October but in the 2021 following Reclamation's DROA emergency release were forced to eventually shut down operations at the Marina in August because the boat docks were non-functional.

Elk Creek Marina continued operating at a 180 percent deficit and only at the Lake Fork Marina with 4 employees. The Lake Fork Marina was the only boat docking system that was functional that year on Blue Mesa Reservoir. In most years, Elk Creek Marina operates with 20 staff members. This year due to uncertainty around future releases, they are unsure if they will be successful in hiring staff because they can't guarantee these people that they will have jobs throughout the entire summer/fall tourist season.

In conclusion, the Upper Gunnison River Water Conservancy District has significant interest and knowledge of Upper Gunnison Basin water resources. Our rural agricultural and recreation-based tourism economy is dependent upon a healthy and sustainable water supply. Not having a large storage bucket above our community, we live within annual available hydrology each year. We are very accustomed to water rights administration in our state and what it means to suffer shortage as water rights are curtailed almost every year somewhere in our basin due to varying hydrology

and snowpack.

We appreciate the opportunity to provide public comment on behalf of our constituents and appreciate your full and fair consideration of these comments.

Sincerely,

Sonja Chavez

Sonja Chavez, General Manager

Cc: John McClow, General Counsel
UGRWCD Board of Directors

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COLORADO RIVER DISTRICT
PROTECTING WESTERN COLORADO WATER SINCE 1937

February 27, 2026

Via electronic mail: crbpost2026@usbr.gov
Bureau of Reclamation
Attn: BCOO-1000
P.O. Box 61470
Boulder City, NV 89006

RE: Draft EIS Comments regarding Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead

Dear Acting Commissioner Cameron:

Please accept the Colorado River Water Conservation District's (Colorado River District) comments on Reclamation's Draft Environmental Impact Statement (EIS) for Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead.

By way of background, the Colorado River District is a political subdivision of the State of Colorado formed by the Colorado legislature (*see* C.R.S. §§ 37-46-101, *et seq.*) in 1937 for the purpose of safeguarding that portion of the waters of the Colorado River apportioned to the state by interstate compact and for promoting the welfare of the inhabitants of the River District. Geographically, the Colorado River District encompasses an area of approximately 29,000 square miles, including all of twelve and parts of three western Colorado counties (approximately 28% of the State of Colorado). Included in that area are the headwaters and tributaries of the Colorado River mainstem and its principal tributaries, the Gunnison, the White, and the Yampa Rivers. Importantly, precipitation within our District alone provides an average of 65% of the natural flow of the mainstem of the Colorado River.

The Colorado River District represents municipal, industrial, agricultural, commercial, and recreational water users. Like all water users, the Colorado River District and its constituents seek reliable water supplies to meet their respective needs. Unfortunately, the 2007 Interim Operating Guidelines and subsequent management actions (the 2007 IGs) resulted in operations that perpetuated continued system imbalances, instead of promoting stability for all water users. The impacts of climate change and drought make clear that substantial changes must be adopted to avoid perpetuating the existing system imbalance in river operations.

We believe that Reclamation must institute bold and meaningful changes but that those changes must be implemented in a manner that is consistent with the 1922 Colorado River Compact, the 1944 binational treaty with Mexico, the 1948 Upper Basin Compact, and the other foundational elements of the Law of the River.

Please consider the following comments in the development of the Final EIS for Post-2026 operations:

1. **Reclamation must prioritize hydrologic reality over predictability for Lower Basin users.** The Draft EIS places undue emphasis on predictability[1] for water users, a goal that is unattainable under future climate conditions unless system storage is replenished and overall demands are permanently reduced to match the supply. Hot temperatures over the last 26 years have diminished the flows of the Colorado River by 20%, and sound science demands that we anticipate and plan for future long-term reductions. Since the pre-scoping period began in June 2022, Lakes Powell and Mead remain at critically low, crisis levels, despite the temporary relief from a wet 2023 Water Year.

   Further, the focus on predictability favors Lower Basin water users because of their long-standing reliance on steady reservoir releases. Hydrologic variability and the lack of massive storage facilities have always made predictability a difficult proposition in the Upper Basin. The Draft EIS's prioritization of predictability would perpetuate the current systemic imbalance and operational bias that favors Lower Basin water users. Further, this prioritization continues to unduly and unfairly look to upstream actions to protect critical infrastructure.

   Rather, the proposed federal action must recognize climate science, prepare for a hotter and drier future, and focus on achieving a long-term balance between supply and demand across the Colorado River Basin.

   a. Recommendation: The Colorado River District recommends revising the stated purpose of the proposed federal action to: "Provide mechanisms to ensure a long-term balance of supply and demand within the Colorado River Basin system that recognizes and performs in all ranges of hydrology, including critically dry hydrology."

2. **The Final EIS must evaluate and adjust the scale of Upper Basin conservation.** Although the geographic scope of analysis does not extend upstream of Lake Powell, several of the Draft EIS' alternative actions include management strategies that rely on Upper Basin conservation without analyzing or disclosing future impacts. The Draft EIS inappropriately sidesteps the need for proper analysis by claiming that specific

[1] Page 1-7 in the Purpose and Need: Provide Colorado River water users a greater degree of predictability with respect to annual water availability in future years under anticipated increasing variability, low runoff, and low reservoir conditions.

conservation activities are unknown, and therefore, will be assessed outside of the EIS.[2] This remains contrary to the NEPA requirement to analyze reasonably foreseeable and cumulative environmental effects of a proposed action, that in this instance, could result in long-term impacts to Upper Basin resources.

More specifically, several alternatives include Upper Basin water conservation ranging from zero to 500,000 acre-feet annually. This conserved water is explicitly included in modeling and is assumed to be available to stabilize system conditions. However, the Draft EIS fails to analyze the environmental or socioeconomic impacts associated with these conservation volumes. Large scale conservation in the Upper Basin would require significant reductions in irrigated acreage and municipal use. To illustrate, based on the Colorado River District's analyses of previous conservation programs, achieving approximately 200,000 acre-feet of annual conserved consumptive use in the Upper Basin could result in fallowing roughly 52,000 acres on Colorado's West Slope alone, and result in substantial economic and environmental impacts.[3] The Draft EIS assumes conservation volumes increasing to as much as 500,000 acre-feet under certain alternatives, further exacerbating impacts. Conservation at this scale would have significant and potentially permanent adverse consequences, including economic impacts to agricultural communities, reductions in late season streamflow that provides critical habitat for aquatic species, reduction in habitat for terrestrial species, and loss of wetland habitat for migratory birds and other species. These impacts are reasonably foreseeable but ignored by the current Draft EIS and must be analyzed programmatically in the EIS in the same manner as the impacts to the Lower Basin.

Additionally, these assumed volumes exceed the scale of any Upper Basin conservation program implemented to date. Under the Upper Basin System Conservation Pilot Program (SCPP), the largest amount of water conserved in a single year occurred in 2024 and totaled approximately 64,000 acre-feet.[4] While Upper Basin conservation is used in several alternatives as a backstop during dry hydrologic conditions to limit large Lower Basin shortages, the Draft EIS does not clearly disclose how much alternative performance

[2] Page 1-9 states "With respect to Upper Basin conservation, the nexus to the proposed federal action is the storage and delivery of that conserved water in Lake Powell. The effects of this storage in and delivery from Lake Powell are within the scope of the EIS (see Section 3.3, Hydrologic Resources, and TA 3, Hydrologic Resources), while specific activities that may be undertaken in the Upper Basin to generate the conserved water are not within the scope of this EIS. Any such activities are unknown at this time and will not necessarily require federal decision making. Any federal decisions associated with these conservation activities will be assessed outside of this EIS."

[3] The Colorado River District believes that the burden of any conservation program must be shared by **all** of the state's Colorado River water users and would strongly oppose any program that puts a disproportionate burden on West Slope agricultural users. For information regarding the adverse economic impacts resulting from large scale conserved consumptive use on Colorado's West Slope, see BBC Research & Consulting, ERO Resources Corporation, Headwaters Corporation, "Upper Basin Demand Management Economic Study in Western Colorado", Revised Final Report, September 27, 2020.

[4] Colorado River Authority of Utah, *System Conservation Pilot Program (SCPP)*, available at https://cra.utah.gov/system-conservation-pilot-program/ (accessed February 11, 2026).

depends on these conservation assumptions. The Final EIS should include a sensitivity analysis showing system outcomes under a range of conservation scenarios so that decision-makers can understand the role conservation plays in both short and long-term system performance and the true robustness of each alternative.

Further, we agree with the statement in the Draft EIS that operations at the CRSP Upper Initial Units must remain within the scope of their respective existing Records of Decision (RODs). To the extent any action deviates from the scope of the existing RODs, that action must be fully analyzed under NEPA and documented by a new or amended ROD for the applicable unit.

a. Recommendation: Upper Basin conservation volumes must be fully analyzed programmatically in the Final EIS in the same manner as the impacts to the Lower Basin.

b. Recommendation: The Final EIS should perform a sensitivity analysis using realistic levels of Upper Basin conservation consistent with demonstrated program performance, such as those achieved under SCPP, and disclose how alternative outcomes change under reduced or no Upper Basin conservation.

3. **Upper Basin shortages must be explicitly analyzed and disclosed.** In the Draft EIS, Lower Basin shortages are repeatedly quantified, graphed, tabulated and used as core metrics of alternative performances. Upper Basin shortages are only referenced in Appendix I, which states that *"For all demand scenarios, the modeled depletion is always less than the input demand… water use is limited based on the available supply."*[5] This appendix indicates that Upper Basin shortages occur across all demand scenarios and alternatives, driven by hydrologic constraints particularly in dry and critically dry conditions. Figure I-2[6] indicates that across demand scenarios ranging from 4.5 to 6 million acre-feet, median Upper Basin shortages are on the order of 1-2 million acre-feet under critically dry hydrology. Additionally, even under wet hydrology, the median shortages remain substantial and are approximately 0.8-1.4 million acre-feet. This aligns with Upper Basin water users lived experience of continually reducing usage based on the natural and variable supply provided each year.

Although Reclamation has limited authority in the Upper Basin, the failure to disclose Upper Basin shortages in the main body of the document creates the impression that the Upper Basin experiences little or no shortage and only contributes voluntary conservation, while incorrectly implying that the Lower Basin bears the burden of reductions in demand. The modeling shows that the Upper Basin already absorbs drought risk through recurring

[5] U.S. Bureau of Reclamation *Post-2026 Colorado River Reservoir Operation Draft EIS, Appendix I, Section I.3.1, Page I-7.*
[6] U.S. Bureau of Reclamation *Post-2026 Colorado River Reservoir Operation Draft EIS, Appendix I, Section I.3.1, Page I-6.*

shortages, as modeled depletions fall below assumed demand, while also contributing additional conservation volumes that can reach several hundred thousand acre-feet annually under certain alternatives. The failure to explicitly disclose or analyze these Upper Basin shortages introduces a messaging and operational bias that obscures the true distribution of risk due to increasingly dry hydrologic conditions across the basin.

a. Recommendation: Explicitly identify that Upper Basin modeled depletions fall below assumed demand in the main body of the Final EIS.

b. Recommendation: Add a quantitative summary of the frequency and magnitude of Upper Basin shortages across hydrologic scenarios.

4. **Lower Basin water use must be reduced by 1.5 million acre-feet at all times, regardless of the alternative.** This amount represents system losses (i.e., transit losses and reservoir evaporation) and should not be classified as shortage. Lower Basin reductions should only be classified as "shortages" to the extent the reductions exceed the Lower Basin's system losses. In alignment with the Bureau's Lower Colorado River Mainstream Evaporation and Riparian Evapotranspiration Losses Report[7], losses are an integral part of putting Colorado River water to beneficial use across the entire basin. We request the USBR use their Lower Colorado River System Consumptive Uses and Losses report and their Lower Colorado River Mainstream Evaporation and Riparian Evapotranspiration Losses Report to consider their definition of shortages and to inform the Final EIS. The failure to account for Lower Basin system losses has been a major contributor to the failure of the 2007 Interim Guidelines and the associated dramatic decline of storage in Lakes Powell and Mead. No contractor, state, or basin should be allowed to deplete more water than their legal allotment unless Lake Powell storage is full or in flood control operations. Reclamation must recognize and assess the hydrologic reality of system losses and ensure the Lower Basin limits its usage, at a minimum, to its apportionment, including accounting for tributary use as defined by Article 3.b. of the Colorado River Compact.

a. Recommendation: Across all alternatives, always reduce Lower Basin use by 1.5 million acre-feet and define this not as a shortage, but as recognition of, and accounting for, Lower Basin system losses. Revise the definition and reporting of Lower Basin shortages throughout the document to reflect reductions in use greater than 1.5 million acre-feet.[8]

b. Recommendation: Update the robustness and vulnerability analysis for each alternative, assuming the Lower Basin usage accounts for these system losses and is always reduced by at least 1.5 million acre-feet.

[7] Bureau of Reclamation. 2023. Lower Colorado River Mainstream Evaporation and Riparian Evapotranspiration Losses Report.

[8] We recognize that Lower Basin system losses vary from year-to-year. This reduction aligns with averages reported across the Basin.

5. **The range of alternatives must include option(s) that perform under critically dry hydrology.** Currently, none of the alternatives in the Draft EIS perform under critically dry hydrology. At least one alternative must protect critical infrastructure and respond effectively to significantly lower river flows than historically observed. The average natural flow at Lees Ferry has dropped from 14.9 million acre-feet to 12.4 million acre-feet and science indicates that this downward trend will continue (as acknowledged in Appendix E[9] and in the Technical Appendix 3[10]). Failure to anticipate continued reductions in flow was a key mistake in the 2007 Interim Operating Guidelines (2007 IGs) and the subsequent adaptive and emergency actions. The latest 24-month study indicates that there is a substantial probability that Lake Powell will fall below minimum power pool this summer. Reservoirs no longer have sufficient buffer to repeat past mistakes.

    a. Recommendation: Include an analysis of the minimum Lower Basin shortage required for each alternative to meet the performance metrics at least 90% of the time under the critically dry hydrology.

    b. Recommendation: Add an alternative that would meet the performance metrics at least 90% of the time under critically dry hydrology and carry out the robustness analysis for the first five years instead of 20 years using updated initial conditions (see Figure ES-5). This will likely require additional Lower Basin shortages as the Draft EIS shows that the best performing alternative, the Maximum Operational Flexibility Alternative, allows for Lower Basin shortages of up to 4 million acre-feet. This alternative would still put Lake Powell under 3,500 ft over 10% of the time, Lake Mead below elevation 975 ft 45% of the time, and Lake Mead at dead pool (resulting in forced delivery reductions to the Lower Basin) over 20% of the time. The other alternatives perform even worse. Additionally, Appendix G acknowledges that the set of initial conditions used in the Draft EIS are higher than the November 2025 projections. Continued dry conditions have worsened this discrepancy and currently, only one of the three initial conditions used falls within the latest range of projections[11]. The current 20-year analysis masks the actual impact of initial conditions and the fact that the reservoirs are currently at critically low elevations. A shorter-term analysis, using updated initial conditions, would better reflect current risks and the current state of storage levels.

[9] *Appendix E, Section E.1, Page E-1:* "Future hydrology is expected to be drier (Lukas and Payton, 2020, p. 385, 2020; Salehabadi et al., 2022; Wang et al., 2025), but the magnitude and rate of drying is unknown."
[10] *Technical Appendix 3, Section TA 3.1.1, Page 3-2:* "Since issuance of the 2007 Final EIS, changes in the Basin have included further increases in temperature, ongoing years of below-normal precipitation, declining snowpack water volume and annual streamflow, and earlier snowmelt runoff. Since 2000, the average temperature across the Lower Basin has been 2.2 degrees Fahrenheit warmer than the twentieth-century average. Since 2007, the average temperature of the Lower Basin has trended upward, with the warmest 10-year period on record occurring from 2012 to 2022 (NOAA 2025)."
[11] February 2026 24-month study.

c. Recommendation: Update the vulnerability analysis (see results in Table ES-6) of Lake Powell falling below elevation 3,500 feet at least once in the first five years with more current projections of initial conditions[12]. The vulnerability analyses included in the Draft EIS are very insightful and highlight real risks as most of the average natural flows that would cause Lake Powell to fall below elevation 3,500 feet have occurred historically or are plausible in the future. We recommend revising this analysis with updated initial conditions to better reflect current risks.

6. **Hydrology must drive Post-2026 operations.** Operating guidelines based upon comparative reservoir elevations which do not factor in real time hydrology have been disastrous for protecting storage in Lake Powell and thus, have failed to provide the water supply certainty for the Upper Basin intended by the Law of the River, including the 1968 Colorado River Basin Project Act (with specific reference to Section 602a). Post-2026 guidelines must be designed to respond effectively to different hydrologic futures, including critically dry conditions, and to rebuild storage in both Lake Powell and Lake Mead to avoid perpetual crisis management. Furthermore, as stated in Chapter 1, Section 1.8.4.1, Glen Canyon Dam was not envisioned to be operated below minimum power pool and doing so could compromise its safety and stability. The Draft EIS must model realistic operations and its effects instead of allowing reservoirs to drop below critical elevations. This is critical for the public to understand and evaluate impacts of likely operations given current reservoir levels and hydrologic conditions.

   a. Recommendation: Model realistic reservoir operations that protect critical elevations at Lake Powell and Lake Mead.

7. **The proposed action must not be limited to incremental changes to existing policies and must include long-term operating guidelines.** The temporary measures adopted in recent years to address declining water elevation levels at Lakes Powell and Mead have been incremental and stop-gap in nature, resulting in an ongoing cycle of crisis-based operations and decision-making. Reclamation's adoption of new guidelines must not be constrained to "tweaks" of existing guidelines and should not be limited to long-term adoption of the moderate measures contemplated by Reclamation's anticipated Supplemental EIS for Near-Term Operations. We believe that a short-term or phased approach continues a decision-making process driven by a crisis mindset.

   a. Recommendation: The proposed action should include long-term operating guidelines.

[12] The initial conditions as defined on page G-1 of Appendix G are projected reservoir elevations for December 31st, 2026.

8. **Interbasin transactions must not be allowed in the proposed action.** The primary purposes of the 1922 Colorado River Compact and the 1948 Upper Colorado River Basin Compact are to provide legal certainty regarding how much water each Basin can develop, to allow states to develop their water resources when the water is needed, and to preclude the interstate application of the prior appropriation doctrine. These, and other benefits of the compacts outweigh any short-term benefit that may accrue to one state from interbasin marketing of its compact-allocated water across basins and violates the fundamental agreement set forth in the 1922 Compact.

   Additionally, interbasin transactions pose significant risks and pressures to communities in the Upper Basin. The State of Colorado has a strong public policy against interbasin and interstate water marketing and has a long-standing limitation of use of the waters of the state outside of our state boundaries.[13] The proposal for interstate marketing will lead to the permanent deprivation of the Upper Basin's water supply and significantly impact the environment and economy of those states.

   Further, interstate transactions in the Upper Basin introduce significant uncertainty due to the lack of a clearly quantified allocation between the states. In contrast, interstate water storage agreements and consensual water marketing among Lower Basin states have been important tools to manage limited supplies of and increasing demands for Colorado River water. Because of the structure and operation of the Colorado River, consistent with the Colorado River Compact of 1922, the River District supports water marketing among the Lower Division states within the Lower Basin of the Colorado River, contingent upon their mutual agreement.

   a. Recommendation: The proposed action must not include any mechanism or action that allows or creates a market of Colorado River water between the Upper Colorado River Basin and Lower Colorado River Basin.[14]

9. **Alternatives must contain clear actions that can be modeled and analyzed in the Final EIS.** The Basic Coordination Alternative includes three non-specific actions related to identifying critical conditions[15] when additional reductions and actions may be needed to avoid reaching critically low elevation and to protect infrastructure. While the public can

[13] See Colorado Revised Statutes, § 37-81-101, et. seq.

[14] The concept of interbasin transactions in included on page 2-41 within the Maximum Operational Flexibility Alternative: "Extensive flexibilities for all users: transactions within and across basins, including interstate and interbasin." Interstate transactions are included as concepts within the Maximum Operational Flexibility Alternative, the Enhanced Coordination Alternative, and the Supply Driven Alternative.

[15] Basic Coordination Alternative table on page 2-39: "Identify conditions when additional reductions may be needed to avoid reaching critically low elevations", "Identify conditions when additional action may be needed for infrastructure protection", and "Identify conditions when additional Upper Basin actions may be needed for infrastructure protection".

speculate on what these actions might entail, none are modeled or analyzed in the Draft EIS. As a result, the public cannot fully understand and evaluate its impacts.

Additionally, the Supply Driven Alternative includes the concept of "Gap Water" but does not define it or specify how it would be generated. In this alternative, "Gap Water" is introduced into the system when Lake Powell cannot meet its required water year release because of low elevation. However, the Draft EIS does not define this water or specify where it would come from. Appendix A explains how "Gap Water" is modelled, which raises two major concerns. First, the maximum annual "Gap Water" is equivalent to 23% of Upper Basin water use, minus the volume of Upper Basin conservation. For example, if Upper Basin use is 4 million acre-feet, "Gap Water" would be equivalent to almost 1 million acre-feet (minus Upper Basin conservation). The magnitude is unrealistic, ignores Upper Basin shortages caused by hydrologic constraints, and is disproportionate compared to Lower Basin shortages. Second, the 23% factor is equivalent to the maximum modeled reductions in the Lower Basin (2.1 million acre-feet) divided by the combined Lower Basin and Mexico apportionment (9 million acre-feet). This formula fails to exclude the 1.5 million acre-feet of Lower Basin reduction in usage that merely accounts for system losses and must be revised.

a. Recommendation: In the Basic Coordination Alternative, clearly define, model, and analyze the additional reductions and actions that would be required to prevent critically low reservoir elevations and to protect infrastructure, including the triggers for implementing these measures.

b. Recommendation: In the Supply Driven Alternative, fully define "Gap Water" and disclose how it would be generated. Revise the maximum allowable volume formula by excluding 1.5 million acre-feet of Lower Basin system losses. Present modelled results, including how often "Gap Water" is introduced into the system and the range of its magnitude. Beyond further specificity and analysis, we continue to have significant concerns surrounding this concept.

10. **Upper Basin conservation water must remain in Lake Powell.** If the proposed action includes an Upper Basin water conservation program, any conserved water must be operationally neutral with respect to releases from Lake Powell and determinations of Lower Basin shortages. Conserved water should only be released from Lake Powell at the direction of the UCRC for the sole purpose of protecting the Upper Basin's obligations under the 1922 Compact or when Lake Powell and the other initial CRSP units are sufficiently recharged to a point where flood control is a real, predictable, and tangible reality. This is not accomplished through the conversion concepts currently outlined in the Draft EIS as conversion is triggered when Lower Basin reductions in use are minimal. As noted earlier in this letter, Lower Basin system losses of 1.5 million acre-feet are not a shortage, they are simply an integral part of the Lower Basin's consumptive use.

a. Recommendation: If the proposed action includes an Upper Basin water conservation program, any conserved water must be operationally neutral with respect to releases from Lake Powell and determinations of Lower Basin shortages. Additionally, conserved water should only be released from Lake Powell at the direction of the UCRC.

11. **CRSP Upper Initial Units water must remain in Lake Powell.** Post-2026 operational guidelines should protect all water released from any initial Colorado River Storage Project Act (CRSP) reservoirs for the purposes of protecting infrastructure in Lake Powell, such that the water stays in Lake Powell and is operationally neutral with respect to releases from Lake Powell and Lower Basin shortages determination. Water released to protect the infrastructure at Lake Powell needs to stay in Lake Powell until Lake Powell and the other initial CRSP reservoirs have sufficiently recharged. Additionally, Appendix O indicates that 60% of the years would require releases from CRSP Upper Initial Units under critically dry conditions. We are concerned about the feasibility of these reoccurring releases, their magnitudes, reservoir recovery, and whether they can be implemented under the existing Records of Decisions.

    a. Recommendation: If the proposed action contemplates releases from CRSP Upper Initial Units, released water must be operationally neutral with respect to releases from Lake Powell and Lower Basin shortages determination. Additionally, this water must stay in Lake Powell until it, and the other initial CRSP reservoirs have sufficiently recharged.

    b. Recommendation: Include analysis on how modeled CRSP Upper Initial Units releases can be accomplished under the existing Records of Decisions and if these reoccurring releases and their magnitudes are feasible.

12. **Realistic evaporation and transit assessments must be applied to Lower Basin conservation water.** A one-time system assessment does not account for annual reoccurring evaporation losses. This conservation water must be realistically accounted for over time.

    a. Recommendation: In the proposed action, realistic transit assessments and annual evaporation assessments must be applied to Lower Basin conservation water.

13. **Section 602(a) of the 1968 Act must be honored by the guidelines.** Post 2026 operational guidelines should be consistent with the principle of Section 602(a) of the 1968 Colorado River Basin Projects Act with respect to the non-impairment of annual consumptive uses in the Upper Basin.

Thank you for your efforts and consideration. Please contact me should you have any questions or concerns about our suggestions contained herein.

Sincerely,

Andrew Mueller
General Manager

cc: Rebecca Mitchell, Colorado Commissioner to the Upper Colorado River Commission
Brandon Gebhart, Wyoming Commissioner to the Upper Colorado River Commission
Estevan Lopez, New Mexico Commissioner to the Upper Colorado River Commission
Gene Shawcroft, Utah Commissioner to the Upper Colorado River Commission

COLORADO
Upper Colorado River Commissioner
Department of Natural Resources

March 2, 2026

Bureau of Reclamation
Attn: BCOO-1000
P.O. Box 61470
Boulder City, NV 89006

VIA ELECTRONIC MAIL
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RE: The State of Colorado's Comments on the Draft Environmental Impact Statement for Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead, 91 Fed. Reg. 2131 (Jan. 16, 2026)

Dear Acting Commissioner Cameron:

The State of Colorado, acting through the Governor's Representative and the Colorado Water Conservation Board (collectively "Colorado"), submits the following comments in response to the Bureau of Reclamation's ("Reclamation") *Draft Environmental Impact Statement for Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead* ("DEIS"), 91 Fed. Reg. 2131 (Jan. 16, 2026).

In addition to joining the Comment Letter submitted by the Upper Division States of Colorado, New Mexico, Utah, and Wyoming through the Upper Colorado River Commission ("UCRC"), Colorado submits the following comments and requests that they be incorporated into the preparation of the Final Environmental Impact Statement ("FEIS").

Colorado appreciates the opportunity to engage in this process and looks forward to continued coordination with Reclamation and the Secretary of the Interior ("Secretary") in advance of the FEIS being published. Colorado also remains committed to engage with the other Basin States, Colorado River Basin Tribes, water users, and stakeholders.

The Colorado River is nearing a crisis due to the failure of the 2007 Colorado River Interim Guidelines for Lower Basin Shortages and the Coordinated Operations for Lake Powell and Lake Mead ("2007 Interim Guidelines") and in the face of more frequent drought.[1] Under the 2007 Interim Guidelines, the Secretary released water to the Lower Basin based on demand, largely ignoring worsening hydrology and dropping reservoir levels. During the term of those 2007 Interim Guidelines, Lake Powell experienced the lowest inflows in the historical record. Despite ongoing drought conditions, the Secretary did not reduce deliveries from Lake Mead until 2022. During the term of the 2007 Interim Guidelines, natural flows averaged 13.0 million-acre feet ("maf") and flows into Lake Powell averaged 8.8 maf. Of that, the Lower Basin average uses totaled 11.0 maf per year, not including deliveries to Mexico—roughly 2.5 maf per year more than their compact apportionment. Meanwhile, the Upper Basin average uses totaled only 4.3 maf per year—3 maf less per year than their compact apportionment.[2] The 2007 Interim Guidelines were adopted in part to coordinate operations between Lake Powell and Lake Mead in the face of ongoing drought and to develop shortage criteria for the Lower Basin. Yet the 2007 Interim Guidelines have proven insufficient to protect Lake Powell and Lake Mead from being drawn down to dangerous levels.

The DEIS recognizes the need for operating rules that can correct the deficiencies of the 2007 Interim Guidelines and sustain the Colorado River and its communities throughout a wide range of hydrologies—including the increasingly dry conditions that are the new reality.[3] However, the DEIS does not achieve this critical objective.

As set forth in Colorado's comments herein, each of the proposed alternatives in the DEIS fails for several reasons, including violation of the Law of the River,[4] requiring federal action that exceeds the Secretary's existing authorities, and failing to sustain the system.

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[1] 73 Fed. Reg. 19873 (Apr. 11, 2008).

[2] The Upper Basin is upstream of both Lake Mead and Lake Powell. With far less reservoir capacity than the Lower Basin, the Upper Basin relies heavily on annual precipitation. Accordingly, in times of drought, the Upper Division States have required their water users to take significant cuts to their water supply. This average use includes evaporation from the Colorado River Storage Project Act Initial Units of Lake Powell, Flaming Gorge, Aspinall, and Navajo.

[3] *See generally*, DEIS Ch. 1.

[4] The "Law of the River" refers to the body of law affecting interstate and international use, management, and allocation of water in the Colorado River System, including the 1922 Colorado River Compact, the 1944 Mexican Water Treaty, the 1948 Upper Colorado River Basin Compact, United States Supreme Court decisions and the United States Supreme Court Decree in *Arizona v. California*, and numerous federal statutes and agreements.

With respect to the Law of the River, all the alternatives in the DEIS prioritize uses in the Lower Basin at the expense of the Upper Basin, thereby violating the required equitable division of the river set forth in the 1922 Colorado River Compact ("1922 Compact").[5] Similarly, the alternatives that rely on releases from smaller Upper Basin reservoirs[6] for the benefit of the Lower Basin violate the 1948 Upper Colorado River Basin Compact ("1948 Compact"),[7] which reserves to the Upper Basin states the use of those upstream reservoirs. The DEIS compounds this problem by failing to analyze the impacts of such releases in the Upper Basin. The proper geographic scope of the federal action is confined to the portions of the river over which the Secretary has existing authority—from Lake Powell to the International Border. Alternatives that go beyond existing authority and have impacts beyond the geographic scope should be excluded.

With respect to the core thread of the DEIS's stated purpose and need—sustaining the system—three of the proposed alternatives fail to produce sufficient shortages to ensure Lake Powell and Lake Mead stay above unsafe levels of operation. Tellingly, one alternative—the Supply Driven Alternative—relies on fictitious "gap" water in the modeling to make the alternative work. And three of the alternatives require additional legal authorities and/or agreements before they can be implemented; any such authorities or agreements are too remote and speculative to be considered as part of a reasonable alternative. For example, as noted above, the Secretary has no authority to rely on releases from Upper Basin reservoirs[8] absent agreements with the Upper Division States. Even if the Secretary gained the authority to use such reservoirs to benefit Lake Powell or Lake Mead, there is not enough water in these reservoirs to supply even one year of use in the Lower Basin. Accordingly, even if those alternatives were legal, they would not stabilize the system in practice.

In short, none of the proposed alternatives has the requisite combination of sufficiently robust and feasible operations consistent with current legal authority under the Law of the River. In the FEIS, the Secretary must include alternatives that reflect the reality of available supply, adequately assess and impose shortages in the Lower Basin to sustain storage and protect operations at Lake Powell and Lake Mead, and fit within the Law of the River, anchored by the 1922 Compact and the 1948 Compact. The Upper Division States' Alternative (as refined December 30, 2024) ("UDS Alternative") meets all three of those criteria and should be analyzed.

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[5] Colorado River Compact of 1922, 70 Cong. Rec. 324 (1928) ("1922 Compact").
[6] The Colorado River Storage Project Act Upstream Initial Units of Flaming Gorge, Aspinall, and Navajo ("CRSP Upstream Initial Units").
[7] Upper Colorado River Basin Compact of 1948, Ch. 48, 63 Stat. 31 (1949) ("1948 Compact").
[8] The CRSP Upstream Initial Units of Flaming Gorge, Aspinall, and Navajo.

I. Colorado's Interests

Colorado is a headwaters state, in which seven major river basins originate and whose waters flow out of state to nineteen downstream states. Partnering with downstream neighbors is an important part of managing water in Colorado, and Colorado shares water with other states via nine interstate water compacts and two United States Supreme Court equitable apportionment decrees. Colorado is subject to four interstate water compacts in the Colorado River Basin alone. The Colorado River and its tributaries supply water to most of Colorado's six million residents and many of the State's most productive agricultural lands. Because Colorado is a headwaters state, we lack the benefit of large reservoirs above our places of use to provide a steady, reliable source of supply. Instead, Colorado must manage its water demands from the water that nature provides as snowpack, some of which is captured in seasonal and modestly sized reservoirs.[9] As a result, Colorado's water supply and use are highly variable each year.

Throughout its history, Colorado has strictly administered water rights according to the physical and legal availability of water in a particular location at a particular time. During the last twenty-five years of severe drought, this means that water users in Colorado have often not received the full amount of their decreed right that they can place to beneficial use, which has significantly impacted Colorado's farms, ranches, cities, towns, and industry. Hydrologic shortage also impacts tourism, hunting, fishing, and other sectors of the recreational economy, as well as the environment. For the last twenty-five years, Colorado water users have taken shortages and have had to cut uses accordingly nearly every year, including cuts to water rights that had not previously been curtailed in most years and are senior to the 1922 Compact. Colorado regularly experiences significant shortages averaging 600,000 acre-feet per year that are administered by the Colorado State Engineer through strict priority administration. Colorado's strict administration of water rights is mandatory and uncompensated and results in more water flowing out of state than would otherwise occur.

In addition to strictly administering water, Colorado has invested over $308 million state dollars in multi-benefit water projects across the state that build resiliency, conserve water, and promote efficiency—all of which adds water to the system that would not otherwise be there if not for Colorado's sole actions. Colorado has invested more than $22 million to restore and protect the headwater watersheds of the Colorado River, build wildfire and flood resilience, stabilize

[9] Colorado contributes 70-80% of the entire Colorado River Basin's supplies in most years.

streams, and reconnect land and water, all of which protects the system for the benefit of Colorado and the other downstream states.

As a signatory of the 1922 Compact and the 1948 Compact, Colorado has significant rights and interests in the Colorado River and fully supports the robust and sustainable management of Lake Powell and Lake Mead. Colorado supports effective solutions that will help rebuild over two decades of depleted storage in Lake Powell and Lake Mead and minimize risk for the entire Colorado River System. We believe Lake Powell and Lake Mead must be administered and managed in a manner that is supply-driven with guidelines that help develop sustainable storage supplies to satisfy the rights of all of the Colorado River Basin States without impairing Colorado's rights or compromising its ability to serve the present and future uses of its citizens. It is in the interest of protecting these rights and the interests of its citizens that Colorado submits these comments.

II. Legal Framework

For over 100 years, the Colorado River has been apportioned, allocated, and managed pursuant to a complex legal framework known as the Law of the River. Colorado is affected by, and has been closely involved in, the development of the Law of the River, including negotiating interstate compacts and helping to develop federal laws and regulations concerning the Colorado River System. The Law of the River apportions the use of the Colorado River System between the Upper Basin and Lower Basin, among the Basin States, and between the United States and Mexico. It regulates construction and operation of federal storage facilities, and it establishes the processes under which the Secretary must operate Colorado River facilities and report to Congress and the Basin States on such operations.[10] The Secretary's authority is limited in the Upper Basin. Importantly, the Law of the River serves as the foundation against which environmental review related to management of Colorado River reservoirs remains subject.

[10] 1922 Compact; 1948 Compact; Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Mex.-U.S., Nov. 14, 1944, Treaty Series 944; Boulder Canyon Project Act of 1928, Pub. L. No. 70-642, 45 Stat. 1057 (codified as amended at 43 U.S.C. §§ 617-619b) ("1928 Act"); Colorado River Storage Project Act of 1956, Pub. L. 84-485, 70 Stat. 105 (codified as amended at 43 USC. §§ 620-620o) ("1956 Act"); *Arizona v. California*, 373 U.S. 546 (1963) ("1963 Opinion"); *Arizona v. California*, No. 8, Orig. (1964) ("1964 Decree"); *Arizona v. California*, 547 U.S. 150 (2006) ("Consolidated Decree"); Colorado River Basin Project Act of 1968, Pub. L. No. 90-537, 82 Stat. 885 (codified as amended at 43 U.S.C. §§ 1501-56) ("1968 Act").

a. Law of the River

The 1922 Compact is the predominant law governing the Colorado River System. It forms the foundation for and governs all aspects of the Law of the River. The 1922 Compact equitably divides and apportions the use of the waters of the entire Colorado River System in perpetuity for all present and future uses between the Upper Basin and the Lower Basin. The 1922 Compact provides certainty and security for all the Basin States and their citizens. In particular, it allowed the States to determine how the use of water from the river would be apportioned, it specified that the apportionments made are exclusive to each basin, and it required that the apportionments are to satisfy all uses within the respective basins. The 1922 Compact does not apportion the use of Colorado River System water among individual Basin States, though it recognizes the authority of each Basin State to regulate and control the appropriation, use, and distribution of water within its boundaries.

The 1948 Compact apportions and governs the use of the Upper Basin's compact apportionment among the Upper Division States. This apportionment is based on a percentage of water available for use in a given year.[11] The 1948 Compact also established the UCRC.[12] The UCRC is an interstate administrative agency that administers the 1948 Compact. Importantly, the UCRC does not control the in-state administration of water rights, which remains the responsibility of the individual Upper Division States in accordance with the 1922 Compact.

The 1928 Boulder Canyon Project Act ("1928 Act") and the U.S. Supreme Court decision ("1963 Opinion") and decree in *Arizona v. California* ("1964 Decree") [13] allocate and govern the use of the Lower Basin's compact apportionment among the Lower Division States. The 1928 Act authorized the Secretary to contract for water storage and deliveries to Lower Basin entities from Lake Mead, and all uses of water from Lake Mead must be made pursuant to such contract.[14] The 1928 Act further outlined allocations of water from the mainstream to the Lower Division States that were upheld by the Supreme Court Opinion and Decree. The Supreme Court Opinion and Decree are subject to and do not amend the 1922 Compact, which, as mentioned above, applies to the entire Colorado River System.[15]

Subsequent components of the Law of the River serve to implement, but not amend, the 1922 Compact and the 1948 Compact. These subsequent components

[11] 1948 Compact, art. III.
[12] *Id.*, art. VIII.
[13] Updated in *Arizona v. California*, 547 U.S. 150 (2006) ("Consolidated Decree").
[14] 1928 Act, §§ 1, 5.
[15] 1963 Opinion at 565–68; 1964 Decree, art. VIII(D); 1922 Compact, arts. II(a), III.

are subject to these Compacts. For example, the apportionments created by the 1922 Compact were predicated on storage that would require significant federal investment and cooperation. Congress therefore authorized the construction and operation of Colorado River storage facilities to help ensure that both the Upper and Lower Division States could develop their legal apportionments under the 1922 Compact. The 1928 Act authorized Hoover Dam and Lake Mead, from which the Secretary contracts water supplies to Lower Division State water users. The 1956 Colorado River Storage Project Act ("1956 Act") authorized Glen Canyon Dam and Lake Powell, and the Upper Initial Units of Flaming Gorge, Aspinall, and Navajo ("CRSP Upstream Initial Units") to provide storage to support the Upper Basin's development of its Colorado River apportionment.[16] The CRSP Upstream Initial Units can also meet 1922 Compact obligations if determined necessary by the UCRC. But preference is given to storage for Upper Basin consumptive uses.[17] Importantly, the Secretary is required to operate these Colorado River storage facilities in a manner consistent with and subject to the 1922 Compact and the 1948 Compact.[18]

The 1968 Colorado River Basin Project Act ("1968 Act") further supports the development of the apportionments made under the 1922 Compact, and builds upon, but does not amend, the 1928 Act and 1956 Act with respect to the Secretary's authority and obligations regarding the operation of Lake Powell and Lake Mead. The 1968 Act directs the Secretary to develop criteria for the coordinated long-range operation of Lake Powell and Lake Mead and sets the order of priorities for releases from Lake Powell.[19] These priorities serve to meet the authorized purposes of Lake Powell, and provide storage in Lake Powell and the CRSP Upstream Initial Units intended to allow the Upper Division States to continue to meet their obligations under the 1922 Compact without impairing their ability to consumptively use the water apportioned to them in perpetuity by the 1922 Compact and 1948 Compact.[20] In operating the reservoirs as directed by the 1968 Act, the Secretary cannot reduce or prejudice the rights of the Upper Basin to consumptive use of water apportioned under the 1922 Compact and the 1948 Compact by uses in the Lower Basin.[21] Indeed, the 1968 Act requires the Secretary to operate Lake Powell and Lake Mead in a manner consistent with and subject to the Law of the River.[22]

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[16] 1956 Act, § 1.
[17] 1948 Compact.
[18] 1956 Act, §§ 4, 9.
[19] 1968 Act, § 602(a).
[20] *Id.* This storage is referred to as "602(a) Storage."
[21] 1968 Act, § 603(a).
[22] *Id.*, § 601.

The Secretary complied with the mandate in the 1968 Act to develop criteria for the coordinated long-range operation of Lake Powell and Lake Mead in 1970.[23] The Criteria for Coordinated Long-Range Operations ("LROC") does not create new law or modify existing law; rather, it sets forth criteria and procedural sequencing necessary to ensure operations are consistent with underlying law.

The 1968 Act also directs the Secretary to make reports on the annual consumptive uses and losses of water from the Colorado River System on a state-by-state basis every five years.[24] This accounting is distinct from accounting pursuant to the Consolidated Decree because it includes Lower Basin tributaries as well as evaporation and system losses.

b. Secretarial Authority

Within the complex legal framework described above, the Secretary has broad authority as the "water master" in the Lower Basin. For example, the Secretary delivers water from Lake Mead to water users in the Lower Division States under the authorities of federal statutes and the U.S. Supreme Court's 1964 Decree.[25] The Secretary serves as water master and plays a unique role in the management of the lower Colorado River.[26] The Secretary has broad authority in the Lower Basin to manage water supplies and determine how much and under what circumstances deliveries of water are made from Lake Mead, subject to the 1922 Compact. Included in this broad authority is the ability to determine surplus, normal, and shortage conditions and implement meaningful and significant shortages in the Lower Basin when the Secretary determines water is not available. Such a determination is based on the process and criteria identified in the 1968 Act and the 1964 Decree.[27]

The Secretary's authority in the Upper Basin is far more limited. With respect to federal storage facilities, Reclamation is required to operate Lake Powell and the CRSP Upstream Initial Units in compliance with the 1922 Compact and the 1948 Compact.[28] The primary purpose of these reservoirs is to store water for beneficial consumptive use of the Upper Basin's compact apportionment by the

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[23] Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968, Pub. L. No. 90-537 (1970) (as amended by 70 Fed. Reg. 15873 (Mar. 29, 2005)) ("LROC").
[24] 1968 Act, § 601(b).
[25] 1928 Act, §§ 4(a), 5; 1964 Decree, art. II.
[26] 1963 Opinion at 589 – 90.
[27] *See* 1968 Act, § 601(b)(2), § 602(a); 1964 Decree, art. II.
[28] 1956 Act, § 14.

Upper Division States.[29] The 1948 Compact provides for the designation by the UCRC of some Upper Basin reservoirs to be for both the storage of water for beneficial consumptive use in the Upper Basin and to help meet the Upper Division States' obligations if determined to be necessary.[30] The designation of such reservoirs and the release of water to meet obligations under the 1922 Compact are within the authority of the UCRC.[31]

III. Relationship to Existing Law

Any Post-2026 Operational Guidelines are subject to the Law of the River. Therefore, the proposed action and range of alternatives outlined in the DEIS must describe operations that can fit within that overarching legal framework. Alternatives that conflict with the 1922 Compact or the 1948 Compact, expand federal authorities, or require contentious modifications to laws and contracts, or otherwise impair legally protected rights and interests of Colorado, are not implementable.

For example, the DEIS exceeds existing authorities if it contemplates operations that undermine the 1922 Compact's apportionment between the Upper Basin and Lower Basin for exclusive beneficial uses in each basin, or circumvents the authority of the 1922 Compact with respect to obligations to Mexico, or modifies obligations thereunder. Further, the DEIS cannot recommend, determine, or define the Upper Division States' compact rights or obligations. Any determination or finding relating to Upper Basin compliance with the 1922 Compact is the sole authority of the UCRC pursuant to the 1948 Compact.

a. Proposed Federal Action

The National Environmental Policy Act ("NEPA")[32] requires all federal agencies to conduct an environmental review of major federal actions.[33] Excluded from the scope of a major federal action are activities and decisions that are nondiscretionary and made in accordance with the agency's statutory authority.[34] The proposed federal action must therefore recognize the areas where the agency has no discretion and exclude those elements from the NEPA analysis. Moreover,

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[29] *Id.*, § 1; *see also* 1968 Act, § 602(a)(3); LROC, art. II(1)(f).
[30] 1948 Compact, art. V.
[31] *Id.*, arts. IV, V, VIII.
[32] National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970) (codified as amended at 42 U.S.C. §§ 4321 *et seq.*).
[33] *Id.*, §§ 102, 111.
[34] *Id.,* §§ 105, 106, 111.

NEPA does not affect "specific statutory obligations of any Federal agency…to comply with criteria or standards of environmental quality…."[35]

Here, the DEIS identifies the proposed federal action as "adopt[ing] specific guidelines and coordinated reservoir management strategies to address operations of Lake Powell and Lake Mead through their full operating ranges."[36] The operational elements considered in the proposed action are: water availability in the Lower Basin; coordinated reservoir operations of Lake Powell and Lake Mead; and storage and delivery of conserved water in Lake Mead and Lake Powell.[37] Reclamation intends to use the Post-2026 Operational Guidelines to implement the LROC.[38]

Given this proposed federal action, Reclamation must ensure the alternatives analyzed adhere to the nondiscretionary mandates imposed by the Law of the River. Federal statutes impose specific nondiscretionary mandates on the Secretary in the operation of Lake Powell and Lake Mead. These mandates are inherent operational elements of any proposed action, and are therefore not subject to modification in this NEPA analysis. For example, LROC prescribes a process based on nondiscretionary mandates expressed in the 1968 Act. These mandates must be interpreted consistent with the 1922 and 1948 Compacts. While LROC does not impose its own substantive law, it prescribes objective criteria and processes intended to fulfill the statutory mandates that aid in the exercise of the rights obtained in the Compacts. Reclamation cannot disregard these mandates in the alternatives analysis. Moreover, the operational elements that Reclamation describes in the DEIS implicate these mandates related to storage in Lake Powell and accurate assessment of water uses and losses in the Lower Colorado River System, as discussed below.

b. Storage in Lake Powell

Pursuant to the 1968 Act and LROC, one of Reclamation's essential annual obligations is determining the quantity of water necessary to be in storage in the Upper Basin reservoirs pursuant to Section 602(a)(3). The determination of the Section 602(a) storage quantity is a necessary prerequisite to determining the appropriate release from Lake Powell.[39] Section 602(a)(3) allows the Upper Division States to continue to meet their obligations under the 1922 Compact without impairing their ability to consumptively use the waters of the Colorado River

[35] *Id.*, § 104.
[36] DEIS at 1-4.
[37] *Id.* at 1-5.
[38] *Id.* at 1-5.
[39] LROC, art. II(1).

System apportioned to them in perpetuity by the Compact.[40] Section 602(a)(3) effectively serves as a proactive storage mechanism for the Upper Division States and serves as the mechanism in which to proactively store water in Lake Powell. Therefore, 602(a) Storage is of profound importance to both the Upper and the Lower Basins, and it is a nondiscretionary mandate Reclamation cannot disregard or misapply in this EIS without exceeding its legal authority.

c. Lower Basin Tributary Use

Another key operational component of the proposed federal action is water availability in the Lower Basin. It is critical that Reclamation use the best available data for consumptive uses and losses in the Colorado River System to adequately and appropriately conduct the NEPA analysis for the proposed federal action while complying with statutory mandates.[41]

On December 19, 2025, Reclamation released Consumptive Uses and Losses ("CU&L") data for the Lower Colorado River System covering the period 2006–2024. While this is not an official CU&L report as is required pursuant to the 1968 Act, Colorado appreciates the publication of the data to better inform decision-making in the Colorado River Basin, particularly decision-making for new operations of Lake Powell and Lake Mead. That said, Colorado was surprised to see the updated data was not incorporated into the DEIS. Indeed, the discussion of historic basin-wide uses notably excludes full system uses and losses that are covered by the updated CU&L data.[42]

NEPA requires federal agencies to make available useful information regarding the quality of the environment to better assess the impacts of the proposed action.[43] Federal agencies are required to ensure the professional and scientific integrity of the process and make use of reliable data and resources in the analysis.[44] It is a fatal flaw to not include the updated CU&L data in this DEIS. At a minimum, Reclamation should disclose and analyze this new data and information in the FEIS.[45]

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[40] 1968 Act, § 602(a)(3); LROC, art. II(1)(f).
[41] NEPA, § 102; *see also* DEIS at ES-19 (citing Restoring Gold Standard Science, Exec. Order No. 14303, 90 Fed. Reg. 22601 (May 23, 2025)).
[42] DEIS at 1-19 fig.1-3.
[43] NEPA, § 102.
[44] *Id.*, § 102.
[45] *Id.*, § 108 (requiring agency to reevaluate programmatic analysis when there are new circumstances or information that bears on the analysis).

Moreover, the updated CU&L data does not support Reclamation's statements throughout the DEIS that drought-response activities and conservation efforts in the Lower Basin "have resulted in continued reductions in use."[46] Reclamation should clarify that such statements relate to mainstream uses only and also exclude evaporation and transit losses.

Review of the data Reclamation recently released for the 2006–2024 period shows an average consumptive use by the Lower Division States is 11.0 maf per year. Colorado's estimate of Lower Division States' consumptive use during this period are set forth below.

Year	Arizona Consumptive Use[1]	California Consumptive Use	Nevada Consumptive Use	Mainstream Evaporation	Estimated Transit Losses[2]	Total
2006	5,024,759	4,293,712	463,341	914,010	545,913	**11,241,735**
2007	5,041,914	4,370,753	470,176	868,330	545,913	**11,297,086**
2008	5,206,385	4,498,865	450,433	847,729	545,913	**11,549,325**
2009	5,085,792	4,358,122	439,087	842,667	545,913	**11,271,581**
2010	5,075,986	4,356,887	412,359	753,843	545,913	**11,144,988**
2011	5,076,797	4,312,708	412,881	859,313	545,913	**11,207,612**
2012	5,033,394	4,416,718	436,197	867,252	545,913	**11,299,474**
2013	5,011,649	4,475,835	415,450	844,832	545,913	**11,293,679**
2014	5,207,313	4,649,780	426,439	803,918	545,913	**11,633,363**
2015	5,306,216	4,620,801	422,386	784,428	545,913	**11,679,744**
2016	4,996,307	4,381,139	395,990	769,566	545,913	**11,088,915**
2017	5,048,764	4,026,554	399,150	803,151	545,913	**10,823,532**
2018	5,017,835	4,265,565	400,399	795,297	545,913	**11,025,009**
2019	4,865,934	3,840,726	378,222	756,050	545,913	**10,386,845**
2020	5,163,531	4,059,950	417,713	824,239	545,913	**11,011,346**
2021	5,148,069	4,404,767	404,150	786,692	545,913	**11,289,591**
2022	4,683,232	4,424,287	382,322	736,341	545,913	**10,772,095**
2023	4,657,136*	3,699,195	347,625	730,229	545,913	**9,980,098**
2024	4,575,402*	3,943,779	380,978	776,597	545,913	**10,222,669**
Total	**95,226,415***	**81,400,143**	**7,855,298**	**15,364,484**	**10,372,347**	**210,218,687**
Average	**5,011,917***	**4,284,218**	**413,437**	**808,657**	**545,913**	**11,064,141**

[1] Total of Mainstream, Tributary, and CAP Underground Storage Facility Net Delivery.

[2] Estimated Transit Losses from Lower Colorado River Mainstream Evaporation and Riparian Evapotranspiration Losses Report, Bureau of Reclamation (December 2023).

* No data available for CAP Underground Storage Facility Net Delivery in 2023 and 2024.

The exclusion of this critical data raises questions about the adequacy of the alternatives and impacts analyses in the DEIS, because Reclamation's own data show a much greater consumptive use by the Lower Division States than the DEIS

[46] DEIS at 1-19 to 1-20.

assumes. This in turn raises questions about assumptions underpinning Reclamation's operations that bear on the analysis.

d. Lower Basin Groundwater Use

Underground water storage in Arizona is another critical component of available water supply in the Lower Basin that is disregarded in the DEIS. The most recent Arizona Department of Water Resources data available through 2022 indicates that Arizona's five original aquifer management areas hold a net total balance of 12.24 maf of Colorado River water available for recovery in the subsurface.[47]

Furthermore, the updated CU&L data Reclamation released does not account for the water delivered by the Central Arizona Project ("CAP") to underground storage that is not consumed in the current year. Colorado estimates that CAP has directly delivered approximately 3.3 maf between 2006 – 2022 to underground recharge that does not appear in Reclamation's accounting. This obscures the timing and potential magnitude of depletions to the Colorado River System by deferring accounting for consumptive use until stored groundwater is withdrawn. Such withdrawals could occur decades later, if at all. Colorado reiterates the UCRC's request that Reclamation correct this flaw in the CU&L methodology.[48]

Moreover, this water was withdrawn from the Colorado River mainstream, is a part of the Colorado River System, is stored in the Lower Basin, and is intended to supply Lower Basin users. In fact, it appears Arizona's underground storage of Colorado River water as of 2022 holds more than one-and-a-half times the current contents in Lake Mead as of 2026.[49] Any FEIS that fails to consider stored Colorado River water in the Lower Basin aquifer system creates a significant discrepancy in Reclamation's analysis.

IV. Scope

Reclamation's outlined scope of the proposed federal action in this DEIS has geographic, temporal, and substantive components.

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[47] Ariz. Dep't of Water Resources, Underground Water Storage, Savings and Replenishment, https://www.azwater.gov/recharge/accounting (last visited Jan. 26, 2026).
[48] Letter from UCRC to Genevieve Johnson, Acting Reg'l Manager, Interior Region 8: Lower Colo. River, Bureau of Reclamation (Nov. 7, 2025).
[49] As of January 1, 2026, Lake Mead elevation was 1,055' MSL, which equates to about 8.05 maf. In 2022, the underground storage in Arizona from the Colorado River was 12.24 maf.

a. Geographic Scope

Colorado agrees with Reclamation that the geographic scope of the proposed federal action should be limited to Lake Powell down to the Southerly International Boundary with Mexico. If the proposed action were confined to this geographic area, it would be within the Secretary's authority. However, Reclamation goes beyond this geographic scope by considering potential actions in both the Upper Basin and Mexico.[50] This exceeds the Secretary's authority. The DEIS's analysis of the Enhanced Coordination, Maximum Operational Flexibility, and Supply Driven Alternatives are flawed as a result.[51]

Including actions above Lake Powell or actions by Mexico in the DEIS is beyond the Secretary's authority. In addition, the impacts to the Upper Basin from those actions are not analyzed in the DEIS. Reclamation has no authority to modify operations at the CRSP Upstream Initial Units constructed under the 1956 Act, including the respective Records of Decision that govern each of those reservoirs, in this proposed federal action. Moreover, it is beyond the scope of the DEIS to rely on actions by Mexico that assume contested interpretations of the 1922 Compact. Accordingly, Reclamation must limit the alternatives, underlying assumptions for those alternatives, and the impacts analysis to the geographic boundary described in the DEIS.

b. Temporal Scope

Colorado appreciates that Reclamation is considering a twenty-year term for the Post-2026 Operational Guidelines. However, Reclamation states that it remains open to a shorter duration.[52] Such temporal variability has significant implications for the DEIS. Alternatives applied over the course of a five-year period will have different outcomes than the same alternatives over the course of a twenty-year period. An alternative may meet the purpose and need over a twenty-year period, but fail to meet the purpose and need over a five-year period. If Reclamation elects to consider a shorter duration, the analysis must evaluate the impact of alternatives for both long- and short-term periods.

In addition, Colorado requests clarification that the Post-2026 Operational Guidelines will be used for development of the 2027 Annual Operating Plan and will

[50] *See, e.g.*, DEIS at E-1, E-6 – E-7, E-11 – E-14, E-17 – E-18, E-32, A-7 – A-13; A-34, A-36 – A-37, A-39 – A-41; A-45 – A-48, A-51 – A-54, A-60.
[51] *See, e.g.*, *id.* at A-27 – A-28, A-30 – A-31, A-34, A-36 – A-37, A-39 – A-42, A-44, A-46 – A-54, A-60, B-21 – B-22, B-34 – B-36 , B-41 – B-42; Appendix I; Appendix K.
[52] *Id.* at ES-3, 1-2, 1-5.

be effective October 1, 2026. Reclamation should modify any language in the DEIS to the contrary.[53]

c. Substantive Scope

Colorado appreciates that Reclamation recognizes the proposed federal action is limited by the legal framework of the Law of the River and the scope of the Secretary's authorities pursuant to federal law. However, the DEIS confuses that scope in several statements throughout, such as: "The goal…was to develop a reasonable and broad range of alternatives for managing the Colorado River system and its resources post-2026,"[54] and "[t]he Secretary has the vested authority and responsibility to operate the [Colorado River] System through coordinated operations…."[55] The DEIS's implication that the Secretary has equal authority over the entire Colorado River System is incorrect. The Secretary's authority to manage water in the Upper Basin is far more limited and beyond the scope of this proposed action. For instance, the use of Compact apportionments in Colorado are determined by the physical and legal availability of water at a particular time and location. The authority to administer and distribute the waters of the State of Colorado are vested exclusively with the Colorado State Engineer. And allocations of water in the Upper Basin as among the Upper Division States are governed by the 1948 Compact.

V. Purpose and Need

NEPA requires a purpose and need for a proposed federal action because it sets the range of feasible alternatives to be carried forward for further detailed analysis.[56] The purpose and need should describe the goal or objective the agency is trying to achieve and the underlying problem or opportunity to which the agency is responding with the proposed action.

Reclamation's purpose for this proposed federal action is to update and expand coordinated operations of Lake Powell and Lake Mead in order to provide greater predictability given increasing hydrologic variability.[57] In addition, Reclamation's purpose includes creating additional mechanisms for conservation, to build resilience, and accommodate future needs and growth, with the caveat that

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[53] For example, the effective date of the guidelines varies across the DEIS at ES-19, 1-1, 1-4, and 2-11.
[54] DEIS at 2-1.
[55] *Id.* at 2-5.
[56] *See* NEPA, § 102(2)(C)(iii); *Webster v. U.S. Dep't of Agric.*, 685 F.3d 411, 422 (4th Cir. 2012) (citing *Wyoming v. U.S. Dep't of Agric.*, 661 F.3d 1209, 1244 (10th Cir. 2011)).
[57] DEIS at 1-7.

future needs and growth are supported by available water supplies.[58] With respect to Basin Tribes, Reclamation's purpose is to provide enhanced opportunities for Basin Tribes to benefit from their water rights and to integrate unquantified Tribal water rights.[59]

Reclamation needs to undertake the proposed federal action because the Secretary is subject to certain mandatory legal requirements encapsulated in LROC.[60] Within its prescribed framework, LROC provides the Secretary significant discretion in the Lower Basin.[61] The current 2007 Interim Guidelines that implement LROC are expiring, and through experience, were shown to be inadequate.[62] Reclamation asserts that going forward, new, specific, and objective guidelines to implement LROC are needed to provide more advance notice and predictability for annual operations.[63] Reclamation's stated need describes that there already exists a supply-demand imbalance in the Colorado River System and this is likely to get worse over the course of the new guidelines.[64] The Post-2026 Operational Guidelines should be robust enough to reestablish a sustainable balance in the Basin and should integrate more innovative conservation and address Tribal concerns.[65]

To the extent the DEIS incorporates conservation as a component of the purpose and need for the federal action, it is flawed. Conservation is not the purpose or the need for new operational guidelines for Lake Powell and Lake Mead, but rather a mechanism to achieve or address the purpose and need.

In addition, Colorado requests clear definitions with respect to a number of the terms used in Reclamation's identified purpose and need and requests clarification to the extent Reclamation's intent differs from the description above.[66]

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[58] *Id.* at 1-7.
[59] *Id.*
[60] *Id.* at 1-6.
[61] *See,* LROC, arts. I - III.
[62] DEIS at 1-6; *see also* Bureau of Reclamation, Review of the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, at 41 - 42 (Dec. 2020).
[63] *Id.* at 1-6.
[64] *Id.*
[65] *Id.* at 1-6 – 1-7.
[66] In Reclamation's purpose, the terms "Colorado River reservoirs," "Colorado River water supplies," and "Colorado River water users" seems to imply that Reclamation is limiting application to the Colorado River *mainstream* as defined in the Consolidated Decree. If this is correct, it should be made explicit, or if incorrect, clarified and made explicit. Reclamation should provide definitions for "conservation," "enhanced opportunities...to benefit," and "flexibility to build resilience" because these words and phrases are susceptible to multiple interpretations. In addition to the terms above,

a. **Learned Experience from Prior Operations**

Reclamation recognizes repeatedly in the DEIS that past experience is critical to informing future operations.[67] Over the past twenty years, storage in Lake Powell and Lake Mead has been depleted largely due to reservoir releases that do not respond to actual hydrologic conditions. Releases from storage under the 2007 Interim Guidelines ignored critical components of the mass balance of water across the Basin. Moreover, as has been clear since 2020, shortage conditions imposed by the 2007 Interim Guidelines and the 2019 Drought Contingency Plans ("DCPs") did not begin early enough and did not reduce uses to sustain critical infrastructure elevations at Lake Powell and Lake Mead during multi-year drought periods. In order to assure stability into the future, the Post-2026 Operational Guidelines must address the imbalance between available supply and demand, considering increased hydrologic variability exacerbated by climate change, and must rebuild storage in Lake Powell and Lake Mead.

Since Reclamation initiated this NEPA process in June 2022, Reclamation identified the need to develop sufficiently robust and adaptive operational strategies that could withstand a broad range of future conditions. On June 14, 2022, then-Reclamation Commissioner Touton testified to the Senate Committee on Energy and Natural Resources that the Basin States must develop plans to provide an additional 2 – 4 maf of water in the next year to respond to drought and stabilize the depleted system storage at Lake Powell and Lake Mead.[68] At that time, Reclamation outlined the significant changed conditions in the Colorado River Basin since the adoption of the 2007 Interim Guidelines.[69]

From 2000 to 2022, the natural flow at Lees Ferry was less than 11 maf in 50% of those years, and less than 8 maf in 13%.[70] "The 21st century has been 20 percent drier than the 20th century, and the 5-year average has declined by 33 percent in 23 years."[71] Reclamation acknowledged that "[f]uture strategies should consider these conditions and the likelihood of continued declines in supply."[72] In

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the following words or phrases from the need require clarification: "major mainstream Colorado River reservoirs and system resources," "conserve," "efficiency improvements," and "augmentation."

[67] *See, e.g.*, DEIS at 1-1 – 1-2, 1-5 – 1-7, 1-30.

[68] *See* Letter from UCRC to M. Camille Calimlim Touton, Comm'r, Bureau of Reclamation (July 18, 2022) (Upper Division States' 5 Point Plan for Additional Actions to Protect Initial Units).

[69] Request for Input on Development of Post-2026 Colorado River Reservoir Operational Strategies for Lake Powell and Lake Mead Under Historically Low Reservoir Conditions, 87 Fed. Reg. 37884, 37885 – 37887 (June 24, 2022).

[70] *Id.* at 37885.

[71] *Id.* at 37886.

[72] *Id.*

fact, the 2007 Interim Guidelines "were based primarily on the modeling assumption of a stationary climate where future inflows were adequately represented in the observed historical record."[73] Now the "climate science tells us that the future temperatures in the Colorado River Basin will continue to warm and that we can expect an increased likelihood of experiencing deep, prolonged droughts."[74]

Given the realities of the hydrology of the Colorado River, Reclamation concluded that there is a need for guidelines that adapt to a "nonstationary, drying system," employ a deep uncertainty approach, and robust policies that withstand a broad range of future conditions that are not based on a single set of assumptions about water supply and demand.[75] Reclamation believed, moreover, that future policies must be tested across drought sequences that are longer and more severe than those that have been observed. "Absent such an approach," Reclamation emphasized, "policies are likely to be insufficiently robust, adaptable, and successful."[76] Subsequently, in August 2022, Reclamation declared a shortage condition in the Lower Basin for the first time.[77]

In June 2023, Reclamation reiterated this purpose and need for the guidelines in the scoping Notice of Intent for the EIS.[78] And in October 2023, when Reclamation published the scoping report, Reclamation identified the major purposes of the action: to update and expand management guidelines to provide a greater degree of predictability in water availability and build resilience to accommodate future needs and growth in the Basin.[79] These purposes stemmed from the fact that the Secretary is legally required to coordinate operations of Lake Powell and Lake Mead, the 2007 Interim Guidelines were expiring, and they had proved insufficient to protect the system and reduce risk. And Reclamation sought "more robust and adaptive guidelines…for the efficient and sustainable management of the major mainstream Colorado River reservoirs and system resources."[80]

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[73] *Id.*
[74] *Id.*
[75] *Id.* at 37886 – 87.
[76] *Id.* at 37887.
[77] Bureau of Reclamation, Annual Operating Plan for Colorado River System Reservoirs 2022 (Dec. 8, 2021); *see* Bureau of Reclamation, Press Release, "Reclamation announces 2022 operating conditions for Lake Powell and Lake Mead" (Aug. 16, 2021), https://www.usbr.gov/newsroom/news-release/3950.
[78] Notice of Intent to Prepare an Environmental Impact Statement and Notice to Solicit Comments and Hold Public Scoping Meetings on the Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead, 88 Fed. Reg. 39455, 39456 (June 16, 2023).
[79] Colorado River Reservoir Operations: Development of Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead, 88 Fed. Reg. 72535, 72536 (Oct. 20, 2023).
[80] *Id.*

Here, the DEIS describes the prolonged drought in the Colorado River Basin. Reclamation acknowledges that "[d]espite additional responsive actions to reduce the risk to the Colorado River system's critical infrastructure and water supplies,…storage in Lake Powell and Lake Mead continued to fall…[and] the reservoirs are currently near the historic low elevations seen in 2022 and 2023."[81] Notably, in 2022 and 2023, Reclamation developed the Supplemental EIS to the 2007 Interim Guidelines ("SEIS") to respond to those critical conditions and reduce risk to the System.[82] However, Reclamation changed its approach to the SEIS when the hydrology improved in 2023.[83] Colorado, and the other Upper Division States, warned Reclamation that a single good runoff year would not sufficiently reduce risk such that the System would recover after enduring 23 years of drought and overuse in the Lower Basin.[84] On the contrary, continued dry conditions coupled with the imbalance between available supply and demand in the Lower Basin would result in the Colorado River System remaining destabilized.[85] Reclamation nonetheless proceeded with the SEIS that included voluntary conservation goals for Lake Mead and modified modeling that showed a minimal risk of reaching critical elevations due to the improved hydrology.[86]

Also due to the above-average water year in 2023, Reclamation released water that had been moved to Lake Powell pursuant to the 2019 Drought Response Operations Agreement ("DROA"). In 2023, when Lake Powell was in the lowest elevation operating tier, Lake Powell released 8.58 maf, including approximately 131,000 acre-feet of DROA water that was intended to protect elevations in Lake Powell. An additional 40,000 acre-feet was also inadvertently released due to an operational error in balancing. This error is over 60% of what the Upper Basin

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[81] DEIS at 1-2.
[82] Notice of Intent to Prepare a Supplemental Environmental Impact Statement for December 2007 Record of Decision Entitled Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, 87 Fed. Reg. 69042, 69042 - 45 (Nov. 17, 2022); *see also* Bureau of Reclamation, Near Term Colorado River Operations, Draft Supplemental Environmental Impact Statement 1-7 – 1-8, 2-8, 2-15, 3-31, 3-57 (Apr. 2023).
[83] Bureau of Reclamation, Near-Term Colorado River Operations, Final Supplemental Environmental Impact Statement, unpaginated preamble letter beginning "Dear Reader for Final SEIS" (Mar. 2024); *see also* 88 Fed. Reg. 34151 (May 26, 2023) (withdrawing Draft EIS No. 20230051); EIS No. 20230146, Draft Supplement, BR, CO, Near-term Colorado River Operations Revised Draft Supplemental EIS, 88 Fed. Reg. 73840 (Oct. 27, 2023) ("SEIS").
[84] Letter from UCRC to Reclamation 2007 Interim Guidelines SEIS Project Manager, 1 (Dec. 11, 2023).
[85] *Id.*
[86] *See generally* SEIS Record of Decision (May 2024).

conserved in the 2024 System Conservation Pilot Project.[87] Subsequently, 2025 was the fifth lowest inflow on record, and Lake Powell released 7.48 maf. Today, Lake Powell is at 26% capacity and Lake Mead is at 29%. Current hydrologic forecasts project 2026 will be the third lowest inflow on record.

Given the inadequacy of the 2007 Interim Guidelines based on the history of operations, overuse in the Lower Basin, and unprecedented hydrologic conditions, the proposed federal action and EIS should include operations that are rooted in the reality of available supply and depleted storage in Lake Powell and Lake Mead. To avoid future mistakes, it is critical that the Post-2026 Operational Guidelines use actual hydrologic conditions for decision-making and allow for the restoration and protection of storage in both reservoirs.

b. **Meeting the Purpose and Need in this Action**

On the whole, Reclamation seeks to provide more robust operating provisions to address the continued loss of storage and potential for increasing severity of drought and low runoff conditions. Going forward, Reclamation aims to prudently manage Lakes Powell and Mead to ensure sustainable operations within its authority under the Law of the River.[88]

As set forth above, certain aspects of the LROC are mandatory because they derive from statutory mandates and Compact considerations. At the same time, LROC affords the Secretary significant discretion in implementing its criteria. The alternatives Reclamation proposes must be consistent with Reclamation's authority under the Law of the River, built upon LROC's scaffold, and meet the purpose and need of the proposed action. Alternatives that do not meet these standards should not be considered in the DEIS.

Given past operating experience, Colorado suggests that the operational actions contained in Reclamation's proposed alternatives should include (1) operations for a drier, more variable future that adapt and respond to actual hydrology; (2) mechanisms to rebuild depleted storage in Lake Powell and Lake Mead and to protect storage into the future; (3) shortages that recognize actual uses in the Lower Colorado River System and how they are currently unsustainable and put the entire System at risk; and (4) operations that do not favor one basin over the other. Only these types of concrete, objective operational actions can meet the

[87] The Upper Basin conserved a total of 63,630 af in 2024. UCRC, Seventy-Sixth Annual Report of the Upper Colorado River Commission 21 (Sept. 30, 2024), http://www.ucrcommission.com/wp-content/uploads/2025/07/UCRC-WY2024-Annual-Report.pdf.
[88] DEIS at 1-2, 1-4.

stated purpose and need of the federal action. These objectives are missing from the alternatives proposed in the DEIS.

VI. Alternatives Analysis

Reclamation must analyze a reasonable range of alternatives in the EIS, and each alternative must be rigorously explored and objectively evaluated.[89] A reasonable alternative is one that is technically and economically feasible and meets the purpose and need of the proposed action.[90] As drafted and modeled in the DEIS, Reclamation's alternatives contain operational components that may conflict with existing law, exceed Reclamation's authority, are not feasible, and ultimately do not meet the purpose and need of the proposed federal action.

a. Insufficient Range of Reasonable Alternatives

1. Majority of Alternatives Require Additional Authorities

Reclamation states that, with the exception of the No Action Alternative and the Basic Coordination Alternative, Reclamation's range of alternatives incorporates "components that would require new authorities" to fully implement.[91] It is unclear from the DEIS what specific new authorities Reclamation intends to pursue to fully implement the Enhanced Coordination, Maximum Operational Flexibility, and Supply Driven Alternatives. Reclamation must expressly and specifically identify what additional authorities are needed to implement these alternatives. Based on Colorado's review of these alternatives, it appears that they would not only require significant statutory overhauls, but some aspects would also require agreement of the States. As recognized by Reclamation,[92] extensive statutory modification or changes to the law that are unlikely to be acceptable among stakeholders, are too remote and speculative to include in this DEIS. Therefore, the Enhanced Coordination, Maximum Operational Flexibility, and Supply Driven Alternatives should not be subject to detailed consideration in the FEIS.

This leaves the No Action Alternative and the Basic Coordination Alternative, which Reclamation asserts can be implemented immediately without additional authority or State consensus. However, as currently formulated, the No Action Alternative does not meet the purpose and need and includes elements that are inconsistent with no-action by Reclamation. Similarly, the Basic Coordination

[89] NEPA, § 102(2)(c).
[90] *See* NEPA, § 102(2)(c)(iii).
[91] DEIS at ES-8.
[92] *Id.* at 2-36.

Alternative as currently contemplated would require Reclamation to "identify the conditions under which further action would be required, including adjustment of operations and prompt action to seek additional authorities, if needed."[93]

Out of the five alternatives proposed in the DEIS: three are remote and speculative, one does not meet the purpose and need, and one might meet the purpose and need but not for the full duration of a potential twenty-year term of the Post-2026 Operational Guidelines. This does not constitute a reasonable range of alternatives required by NEPA.[94]

2. Majority of Alternatives Do Not Impose Sufficient Lower Basin Shortage

Similarly, the DEIS likely does not analyze a reasonable range of alternatives because the No Action, Basic Coordination, and the Supply Driven Alternatives do not provide sufficient shortage reductions in the Lower Basin to meet the purpose and need of the proposed action. Reclamation recognizes in this DEIS that "[g]enerally, higher shortages correspond to lower frequency and smaller volumes of dead pool–related reductions…[and in] most cases, more aggressive shortage policies can improve system robustness."[95] In the past twenty years, shortages imposed under the 2007 Interim Guidelines and the DCPs occurred too late and in insufficient quantities. The first shortage condition in the Lower Basin was declared in 2022, even though Reclamation recognized the Basin was experiencing a historic drought since 2000.[96] Despite the 2007 Interim Guidelines and the DCPs, Reclamation required additional "operating tools to sufficiently protect system operations,"[97] because "it is foreseeable that without appropriate responsive actions and under a continuation of poor hydrologic trends, major Colorado River reservoirs could continue to decline to "dead pool"…."[98]

Therefore, in this EIS, a reasonable range of alternatives should include shortages in the Lower Basin consistent with the Secretary's authority, and in amounts that have the potential to result in sustainable, long-term operations. The No Action, Basic Coordination, and Supply Driven Alternatives in the DEIS do not produce sufficiently robust shortages and would likely repeat the same outcomes we have seen from the 2007 Interim Guidelines and DCPs.

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[93] *Id.* at 2-12.
[94] *See* NEPA, § 102(2)(c).
[95] DEIS at 3-58.
[96] *See* Bureau of Reclamation, 2023 Annual Operating Plan (Nov. 22, 2022).
[97] Revised Draft SEIS at 1-12 (Oct. 2023).
[98] *Id.* at 1-7.

b. **Comments Applicable Across Alternatives**

Colorado has a number of comments that apply to more than one alternative. These comments are set forth below to minimize duplication.

1. Assumptions for Upper Basin Conserved or Contributed Water

With respect to the Upper Basin conservation actions contemplated by the Enhanced Coordination, Maximum Operational Flexibility, and Supply Driven Alternatives, Reclamation assumes rules for conversion of Upper Basin water to "system water."[99] Reclamation does not have the unilateral authority to determine conversion of Upper Basin water, nor can Reclamation require mandatory contributions from the Upper Basin because such actions "would require agreements outside of Reclamation's control."[100] Therefore, the alternatives analysis in the DEIS is flawed due to these impermissible assumptions.

Further, the DEIS impermissibly assumes certain authorities and rules that result in infeasible alternatives. Reclamation recognizes in the DEIS that any Upper Basin contribution program would be subject to separate agreements with the Upper Division States and the contribution amount in any given year would depend on hydrology. The DEIS should model alternatives that do not rely on reduced water use in the Upper Basin, effectively treating those reductions as mandatory.[101] After all, without inclusion of the Upper Basin's conserved or contributed water, these alternative modeling outcomes would be different.

Finally, to the extent the DEIS relies upon releases from CRSP Upstream Initial Units to protect infrastructure at Lake Powell, it is flawed. Reclamation does not have the unilateral authority to make such releases for the proposed purposes provided in the DEIS. And even if it did, Reclamation fails to properly analyze the impacts of those releases. Reclamation assumes certain releases from the CRSP Upstream Initial Units will occur in order to protect infrastructure at Glen Canyon Dam and, in some alternatives, help offset shortages in the Lower Basin. But Reclamation dismisses any active recovery operations at those facilities, simply assuming natural recovery will occur in years without such releases.[102] And Reclamation does not analyze the impacts of such releases in the Upper Basin. Alternatives that go beyond Reclamation's existing authority and have impacts beyond the stated geographic scope must be excluded from analysis.

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[99] DEIS at ES-17.
[100] *Id.* at 2-16.
[101] *See id.* at B-21; B-35; B-42.
[102] *Id.* at A-13, A-14.

Reclamation also relies on impermissible legal authorities for these contemplated releases. The DEIS contains repeated statements regarding unilateral releases from the CRSP Upstream Initial Units for unauthorized purposes. In fact, in several instances the reservation of authority is overly broad and undefined.[103] While Colorado supports Reclamation evaluating options to address infrastructure limitations at Glen Canyon Dam as a matter of operational security, Reclamation must do so in a separate action and pursuant to Reclamation's actual authorities. Moreover, Reclamation asserts in the DEIS that hydrologic conditions have "confound[ed] ongoing efforts to manage system risk,"[104] for the last twenty-five years. Ongoing dry hydrology, and as described above, operations that mined the contents of Lake Powell and Lake Mead for the last twenty-five years resulting in crisis-to-crisis management does not constitute an emergency, and Reclamation cannot create an emergency by making excess releases to the Lower Basin.

2. Assumptions for Lower Basin Conservation

Reclamation proposes expanding the Intentionally Created Surplus ("ICS") mechanism in its Enhanced Coordination, Maximum Operational Flexibility, and Supply Driven Alternatives. Colorado questions the legal validity of any form of carryover storage accounts in Lake Mead under the Law of the River and preserves all of its arguments in this regard, including, but not limited to, whether such activities are consistent with the 1922 Compact and the Consolidated Decree.

The language used to describe this program should accurately reflect the nature of the program, which is water banking, not conservation. In the Alternatives with a Lake Mead Mechanism, water that is not withdrawn from Lake Mead in a particular year is banked to be withdrawn in the future. When the program expires and the banked water is all withdrawn, there will be no long-term net reduction of water use as a result of the program. Instead, the program results in a change to delivery timing. Conversely, any Lake Powell Mechanism is necessarily water conservation because water users will forgo use of water to pass downstream, never to be used by Upper Basin water users again. In fact, this water will ultimately be consumed by Lower Basin water users.

Reclamation should use clear and unambiguous definitions that objectively describe the mechanism and the legal foundation thereof. Transparent terminology and process should be key components of the mechanism to support sustainable operations and better accounting. Operations related to individual water user accounts in Lake Mead must not affect operations upstream of Lee Ferry and must

[103] *Id.* at ES-6 n.1; ES-8; ES-10; 1-8; 1-9 n.10; 1-30; 2-5.
[104] *Id.* at ES-25.

include mechanisms that result in verifiable net benefits to the Colorado River System in the Lower Basin. Losses must be assessed at a rate that reflects reasonable and defensible assumptions for actual losses to prevent individual water user accounts from absorbing System water over time. Finally, Reclamation must be cognizant of perverse incentives that accompany the transfer of a public resource and be prepared to implement the mechanism in a way that ensures transparency, accountability, and the adaptability to resolve issues with such a program should they arise.

3. Assumptions Regarding Mexico

All of the alternatives include operational assumptions for water deliveries to Mexico and assumptions for Mexico shortage sharing with the Lower Basin.[105] Although disclaimers accompanying these assumptions indicate Reclamation's intent not to interfere with the 1944 Treaty with Mexico, Reclamation does not explicitly disclaim any authority to interpret the 1922 Compact regarding the Upper and Lower Basins' obligation with respect to Mexico. Within the United States, division of the 1944 Mexico Treaty obligation between the Upper and Lower Basins is exclusively governed by the 1922 Compact. To the extent the DEIS makes assumptions about a contested interpretation of the 1922 Compact, it exceeds the Secretary's authority and is outside the scope of this DEIS.

Additionally, Reclamation should provide an update on the discussions with Mexico to date. While coordination with Mexico adheres to procedures that are appropriately outside the scope of this EIS, there could be implications in the alternatives analysis if the alternatives rely too much on actions by Mexico. For example, if an alternative relies on a substantial action by Mexico, and if outside discussions with Mexico are not aligned with this NEPA process, that alternative could be too speculative and remote to adequately analyze and meet the standards of NEPA.

4. Colorado River Simulation System ("CRSS") Modeling

"CRSS…is the core simulation tool, providing monthly and annual outputs of key variables including reservoir storage, reservoir elevations, dam releases, and river flows. The simulation is based on a mass-balance calculation that accounts for water entering the system, water uses (diversion and consumptive use), water losses (evaporation), intervening gains and losses, and water movement through the system."[106] System-wide water resources in the Upper Basin are well represented in

[105] *See id.* at A-36, A-44 – A-45, A-47 – A-48.
[106] *Id.* at 3-7; *see also* A-2.

the CRSS model; Reclamation touts that it includes 12 Upper Basin reservoirs and 222 Upper Basin water users.[107]

However, the same cannot be said for the Lower Basin. In the Lower Basin, only the mainstream is considered. This leaves out most of South and Central Arizona and the Nevada tributaries of the Virgin and Muddy Rivers. The DEIS depicts how most of Arizona is simply greyed out and not even identified in the "Colorado River Natural Flow Basins."[108] Within this grey area is the Salt River Project as well as nearly a dozen Reclamation-managed surface reservoirs.[109] In fact, Reclamation is currently financially supporting an interconnect that would allow two-way flow that would intermingle mainstream Colorado River water and water from the grey zone.[110] Reclamation's own data indicates that Arizona tributaries consumed an average of 2.3 maf annually between 2006 and 2024.[111] However, little of this is reflected in the CRSS modeling.

As a consequence, the simulation tool underpinning Reclamation's analysis does not allow for informed decision-making as to the viability of the alternatives or make use of reliable data or available resources as required by NEPA. Instead, it includes the Upper Basin in detail, but omits an entire basin's tributary river systems occupying most of a Lower Division State and consumption of millions of acre-feet that are otherwise unaccounted for.

5. Continuing Current Strategies

Reclamation describes Continuing Current Strategies as a point of comparison for the other alternatives.[112] While this tool is not inherently problematic, comparison is only possible if the discretionary elements of the Continuing Current Strategies are not duplicative of those used in the No Action and Basic Coordination Alternatives. Therefore, the Continuing Current Strategies, No Action Alternative, and Basic Coordination Alternative should use different

[107] *Id.* at A-7.
[108] *Id.* at A-5 map A-2.
[109] These include: C.C. Cragin Dam, Horseshoe Dam, Bartlett Dam, Theodore Roosevelt Dam, Horse Mesa Dam, Mormon Flat Dam, Stewart Mountain Dam, New Waddell Dam, and Imperial Diversion Dam.
[110] *See* Kyle Tilghman, Director of Water Strategy, Salt River Project Agricultural Improvement and Power District, Presentation at Salt River Project Agricultural Improvement and Power District Water Committee Meeting on Updates on the Verde Reservoirs Sediment Mitigation Project and the SRP - CAP Interconnection Facility, at slide 9 (Sept. 23, 2025) (indicating that Reclamation agreed to a $154 million dollar grant to help fund the SRP-CAP Interconnection Facility).
[111] *See* updated CU&L data released December 19, 2025.
[112] DEIS at 3-7.

elements so long as they are consistent with the Law of the River and follow LROC's framework.

c. No Action Alternative

In addition to the general comments that apply across the alternatives, as discussed in the previous section, the No Action Alternative, as drafted and modeled in the DEIS, contains operational components that may conflict with existing law, are not feasible, and ultimately do not meet the purpose and need of the proposed federal action. If Reclamation requires additional federal authorities to implement this alternative, Colorado requests that Reclamation identify the specific Congressional authority needed and clarify how this alternative meets the criteria for no action.

Under NEPA, the No Action Alternative does not have to meet the purpose and need but must provide a basis for consideration of the "consequences of taking no action."[113] Accordingly, the DEIS' No Action Alternative must show what would happen if management of Lake Mead and Lake Powell reverted to the surviving operational authorities for those facilities. As acknowledged by Reclamation, that authority is reflected in the LROC framework.[114] As further acknowledged by Reclamation, the LROC provides the opportunity to craft guidelines that include the specificity and predictability Reclamation seeks as a part of its purpose and need.[115] But Reclamation's No Action Alternative in the DEIS does not meet the requirements of NEPA.

Instead of focusing on a reasonable range of operations under the LROC, the No Action Alternative improperly fixes the No Action Alternative to rigid prior assumptions that fail to properly implement LROC. For example, the No Action Alternative establishes a de facto fixed minimum release of 8.23 maf from Lake Powell, a decision that prejudices the Upper Basin's position under the Law of the River, despite the specific admonishment in the LROC not to prejudice the positions of the parties in this regard and a Secretarial determination that LROC does not prescribe a fixed minimum release of 8.23 maf per year but an "objective" of 8.23 maf per year.[116] Further, it carries over the equalization process from the 2007 Interim Guidelines, which misapplies the order of operations in LROC, undermining protection of 602(a) Storage. Finally, it caps Lower Basin shortages at

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[113] *See*, *e.g.*, *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d 723, 734-35 (9th Cir. 2020).
[114] DEIS at 2-6.
[115] DEIS at 2-6.
[116] *See* LROC, art. II(5); *see also* Bureau of Reclamation, The Colorado River Documents 2008, at A-379 - 83 (2010) (Letter from Gale Norton, Secretary, U.S. Dep't of the Interior, to Jon Huntsman, Governor of Utah (May 2, 2005)).

an amount that is not sufficient to address even evaporation and system losses. It is unclear why the DEIS uses this cap because the maximum shortage under the 2007 Interim Guidelines was 625,000 acre-feet,[117] yet as Reclamation recognizes, the 2007 Interim Guidelines were unquestionably not robust enough. Reclamation then attempts to reframe these incorrect substantive policy decisions as "refinements."[118]

The DEIS properly identifies the LROC as the No Action Alternative. But Reclamation used flawed inputs and assumptions in applying the LROC to the No Action Alternative here. If Reclamation had properly applied the framework of the LROC within the Law of the River, the DEIS would reflect Reclamation's discretion to select different inputs than those used for the 2007 Interim Guidelines. The No Action Alternative does not meet the purpose and need of the proposed federal action as it is currently formulated. But this appears to be the result of Reclamation's subjective inputs rather than a reflection of what it would be compelled to implement following expiration of the 2007 Interim Guidelines and pursuant to the LROC process.

d. **Basic Coordination Alternative**

Unlike the other action alternatives proposed in the DEIS, Reclamation asserts that the Basic Coordination Alternative could be implemented immediately in WY2027 because it purports to operate within Reclamation's existing authorities and within the framework of the Law of the River.[119] Colorado is encouraged to see Reclamation looking to its existing authorities rather than relying on extensive modifications to the Law of the River. Such an alternative would likely be feasible and able to meet the purpose and need. However, as drafted and modeled in the DEIS, the Basic Coordination Alternative contains operational components that may exceed Reclamation's authority and do not meet the purpose and need of the proposed federal action. If Reclamation does not require additional federal authorities to implement this alternative, Colorado requests that Reclamation identify the existing authorities for the proposed components identified below.

Reclamation asserts that this Alternative does not require additional authority from Congress, nor does it contemplate modifications that would run contrary to the 1922 Compact. However, the Basic Coordination Alternative

[117] The maximum shortages for the Lower Division States in the 2007 Interim Guidelines is 500,000 acre-feet. In combination with the shortages for Mexico under Minute 323, the total shortage under the 2007 Interim Guidelines was 625,000 acre-feet. It is unclear why Reclamation chose 600,000 acre-feet as it does not align with either of these values.
[118] *See* DEIS at 2-6. The full scope of Reclamation's "assumptions" and planned operational "refinements" is not clear and should be fully disclosed.
[119] *Id.* at ES-11.

incorporates operational elements that include the CRSP Upstream Initial Units. Specifically, this Alternative provides for an elevation trigger in Lake Powell of 3,525 feet, which causes increased releases from the CRSP Upstream Initial Units, and provides for recovery actions at such facilities.[120] As drafted in the DEIS, this operational element would require additional authorities to implement.

Further, in order for this Alternative to properly comply with the Law of the River as Reclamation asserts it does, several aspects of the Basic Coordination Alternative should be corrected. Specifically, it must properly apply aspects of LROC that are directly derived from mandatory aspects of the Law of the River. Reclamation hints that implementation of this Alternative depends upon "legal, operational, and engineering judgment regarding future operations…."[121] While this may be true with respect to certain discretionary actions under the Law of the River, it is not true with respect to the Secretary's mandatory obligations that may not be ignored or overlooked. To the extent that Reclamation is exercising "legal" judgment with respect to the Basic Coordination Alternative, Reclamation must clearly explain what judgments it is making.[122]

In addition to the mandatory obligations imposed by underlying law, LROC provides the Secretary considerable discretion and opportunity to craft an alternative, or even several alternatives, that could be analyzed as part of this NEPA process so long as they adhere to certain basic requirements. Contrary to Reclamation's critique of LROC, this flexible framework provides the Secretary the opportunity to exercise discretion and develop the guidelines considered necessary to provide specificity and predictability as explained below.

1. Shortage Guidelines to Reduce Deliveries from Lake Mead

The Basic Coordination Alternative limits Lower Basin Shortage to 1.48 maf. Reclamation attempts to explain that 1.48 maf is the estimate that will ensure "an assumed minimum flow is available for infrastructure protection and delivery for municipal use by CAP users and other Fourth Priority mainstem entitlement holders in Arizona when mainstream shortage is distributed by priority."[123] However, this is an arbitrary limit and Lower Basin shortages need not be limited to this amount. Indeed, Reclamation's 2025 Alternatives Report[124] proposed Lower Basin shortages up to 3.5 maf per year in the "Federal Authorities" Alternative, the

[120] *Id.* at 2-16.
[121] *Id.* at 2-11.
[122] *See Loper Bright Enters. v. Raimondo*, 603 U.S. 369 (2024).
[123] DEIS at 2-12.
[124] Bureau of Reclamation, Alternatives Report[:] Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead (Jan. 2025) ("2025 Alternatives Report").

prior iteration of this Alternative,[125] "to achieve protection of critical infrastructure within the Department's and Reclamation's current statutory authorities and absent new stakeholder agreements."[126] Reclamation does not explain why it changed its position from the Alternatives Report shortage volume to the DEIS volume, nor does it provide any reasoned analysis for its dramatically different view of its authority to impose shortages in the Lower Basin. The shortage determination is to be made through a rigorous process and analysis that considers "all relevant factors" outlined in the Law of the River.[127] Based on consideration of all of these criteria, the Secretary may declare a mainstream shortage, and thereafter, allocate the shortage to the Lower Basin mainstream users as required by law.

In revising the Basic Coordination Alternative, Reclamation should revisit its legal authority to impose Lower Basin mainstream shortages in order to properly apply the relevant law, while also availing itself of the opportunity to craft guidelines that meet the stated purpose and need of the federal action. Colorado believes that greater maximum shortages will likely improve the long-term performance of this Alternative.

2. Coordinated Reservoir Operations of Powell and Mead

The proposed implementation of the Basic Coordination Alternative also fails to adhere to the process prescribed by the LROC and undergirded by statutory obligations and ignores opportunities to craft specific and predictable guidelines. The LROC prescribes an order of operations process to coordinate operations between Lakes Powell and Mead. The process ensures sufficient storage in Lake Powell and the CRSP Upstream Initial Units pursuant to Section 602(a),[128] and then coordinates operations between Lake Powell and Lake Mead through adjustment of Powell releases based on the determination of the 602(a) Storage quantity.[129] This process requires the Secretary to consider all relevant factors, including but not limited to factors specified in the 1968 Act and other enumerated factors in the LROC.

Colorado notes that coordinating releases in a manner that considers a variety of relevant factors and is intended to maintain storage in Lake Powell when appropriate, may serve the purpose of protecting Lake Powell infrastructure more effectively than any alternative that seeks to leverage nonexistent or questionable authority over the CRSP Upstream Initial Units.

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[125] 2025 Alternatives Report at 18 fig.3.
[126] *Id.* at 16.
[127] LROC, art. III(3)(c).
[128] *Id.*, art. II(1).
[129] *Id.*, art. II(2) – (3).

3. Surplus Guidelines for Lake Mead

Finally, as with Lower Basin mainstream shortages and coordination between Lake Powell and Mead, the LROC provides a process and criteria to be used with respect to surplus guidelines to increase deliveries from Lake Mead. Currently, the Basic Coordination Alternative allows surplus determinations based exclusively on a single Lake Mead elevation or on a modeling concept that is used to provide storage capacity for flood events. Clearly, the LROC, and its underlying legal authorities, require and allow a greater variety of considerations with respect to mainstream surplus, so long as the appropriate process is followed and criteria are considered. Reclamation should revisit this element consistent with the process in the LROC.

e. **Enhanced Coordination Alternative**

As drafted and modeled in the DEIS, the Enhanced Coordination Alternative contains operational components that may conflict with existing law, exceed Reclamation's authority, are not feasible, and ultimately do not meet the purpose and need of the proposed federal action. If Reclamation requires additional federal authorities to implement this alternative, Colorado requests that Reclamation identify the specific Congressional authority required.

1. Upper Basin Conservation Mechanism

The Enhanced Coordination Alternative contemplates conservation activities in the Upper Basin that would contribute to a pool in Lake Powell. It is unclear whether this Alternative contemplates individual user accounts in the conservation pool. The DEIS also assumes contribution targets up to specified annual amounts to the pool, increasing over the period of analysis. One of the stated primary purposes of the Upper Basin conservation pool under this Alternative is to offset shortages in the Lower Basin above 1.5 maf. The DEIS states that when Lower Basin shortages are greater than 1.5 maf, "a volume equal to one-third of the volume above 1.5 maf would be converted from the Lake Powell pool into system water such that the total of Lower Basin shortages and conversion of Upper Basin water equal the required total shortage volume…. If the prescribed 2-to-1 volume is not available in the Lake Powell conservation pool, 100 percent of the available volume would be converted, and the Lower Basin would take the balance of shortages."[130]

These operational components are problematic legally and practically. The concept of shortage sharing between the Upper Basin and the Lower Basin in this

[130] DEIS at 2-21.

manner conflicts with fundamental provisions of the Law of the River. Moreover, these operations are not technically feasible. The shortage amounts and triggers ignore the actual uses in the Lower Colorado River System as provided in the CU&L data. And because evaporation and system losses total at least 1.2 maf, there will always be a demand for conversion of Upper Basin conserved water. This, in effect, makes water from the Upper Basin apportionments mandatory to offset shortages in the Lower Basin in all but the wettest years.

2. Influences on Lake Powell Releases

The Enhanced Coordination Alternative bases Lake Powell's releases, in part, on physical storage contents in Lake Mead, which includes conservation pools in Lake Mead. Tying Lake Powell releases to the contents in Lake Mead may not meet the purpose and need of providing more robust guidelines and sustaining the System. This operation is similar to balancing under the 2007 Interim Guidelines, and like those guidelines have demonstrated, would allow opportunities for manipulation and a heightened risk of System failure when Lake Powell is at low elevations. The influences on Lake Powell releases under this Alternative may introduce greater operational uncertainty, contribute to unsustainable releases, and not provide more robust or sustainable guidelines than the 2007 Interim Guidelines.

Moreover, Reclamation's modeling in the past has shown a heightened risk of System failure with balancing releases when Lake Powell is at low elevations. In order to protect critical elevations at Lake Powell, protect critical infrastructure at Glen Canyon Dam, and continue to provide a secure source of supply for ongoing releases to Lake Mead, all Powell releases that are based on the storage contents of Mead should be removed from potential operations in the FEIS.

3. Lake Powell Releases and the Long-term Experimental and Management Plan ("LTEMP")

The Enhanced Coordination Alternative seeks to use the LTEMP to constrain annual operations at Glen Canyon Dam.[131] This proposed operation is inconsistent with the structure and scope of the LTEMP, which is necessarily based on the annual release from Glen Canyon Dam. Operations pursuant to the LTEMP dictate monthly, daily, and hourly releases from Glen Canyon Dam. The LTEMP cannot impact annual release volumes from Glen Canyon Dam and is tailored to the annual release dictated by other components of the Law of the River. Importantly, the projected annual release volume from Glen Canyon Dam under the 2007

[131] *Id.* at 2-20.

Interim Guidelines becomes the basis for the monthly LTEMP operations. As Reclamation acknowledges, the LTEMP will likely be revisited after issuance of the Record of Decision in this process. Reclamation must not base annual releases from Glen Canyon Damon LTEMP parameters.

The Enhanced Coordination Alternative would also grant Reclamation the sole discretion to modify annual releases to protect downstream resources between Lake Powell and Lake Mead.[132] This may not be consistent with the Grand Canyon Protection Act of 1992, and would negate the purpose and process of the LTEMP. The modification of annual releases to meet downstream resource goals is inconsistent with the Law of the River. Even though the Grand Canyon Protection Act requires the Secretary to consider downstream resources in the operation of Glen Canyon Dam, the Secretary is required to do so in a manner fully consistent with and subject to the Law of the River.[133] This would include the separate and distinct annual determinations of storage and releases required by the 1968 Act.[134] Pursuant to the requirements of the Grand Canyon Protection Act, the LTEMP implements adaptive management processes and criteria by providing input from stakeholders regarding sub-annual modifications to Glen Canyon Dam operations, in order to meet the directives of the Grand Canyon Protection Act in compliance with the Law of the River.[135] The stakeholder process includes input from the Basin States, Tribal Nations, federal agencies, environmental groups, recreation interests, and hydropower interests. If Reclamation were granted sole discretion to modify annual release operations given downstream resource considerations, it would likely negate the purpose and process of the LTEMP and contravene the directives of the Grand Canyon Protection Act.

Ultimately, the mid-year adjustment and Reclamation's unrestricted discretion to modify releases at any point during the year may introduce more uncertainty and unpredictability into annual operations. This would directly defeat one of the primary purposes of the proposed federal action. Colorado notes that any unilateral decisions by Reclamation or the Secretary to alter the annual release from Lake Powell do not constitute an action by Colorado or the other Upper Division States for the purposes of determining compliance with Article III of the 1922 Compact. Any such action taken by Reclamation or the Secretary will not constitute consent, endorsement, or acquiescence from the Upper Division States.

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[132] *Id.* at 2-20.
[133] Grand Canyon Protection Act of 1992, Pub. L. No. 102-575, § 1802(b), 106 Stat. 4669, 4669.
[134] 1968 Act, § 601(a)–(b); *see also* Grand Canyon Protection Act, §§ 1802(b), 1804(c)(2).
[135] *See* Bureau of Reclamation, Record of Decision for the Glen Canyon Dam Long-Term Experimental and Management Plan Final Environmental Impact Statement, at 12 – 15 (Dec. 2016).

4. Lake Mead Conservation Pools

Because the Enhanced Coordination Alternative ties Lake Powell releases to the physical contents in Lake Mead and requires additional releases of Upper Basin water to offset shortages in the Lower Basin above 1.5 maf, the operational elements of the conservation pools in Lake Mead are critical to the performance of the Alternative. As drafted, the conservation and protection pools in this Alternative include operational elements that may be feasible and increase stability, sustainability, and certainty in operations. For example, the Alternative requires a one-time 7% assessment at the time water is conserved in the conservation pool in addition to an annual proportional evaporation deduction. Colorado encourages Reclamation to adopt this method of assessment, which includes annual actual evaporation in addition to any proposed assessments for conservation pools, in the Preferred Alternative.

Additionally, Colorado requests further clarification regarding the federal protection pool in Lake Mead. It is unclear how this federal pool would operate within the legal framework of the Law of the River. The DEIS does not specify the verification, accounting, and operational considerations for the protection pool.

f. **Maximum Operational Flexibility Alternative**

As drafted and modeled in the DEIS, the Maximum Operational Flexibility Alternative contains operational components that may conflict with existing law, exceed Reclamation's authority, are not feasible, and ultimately do not meet the purpose and need of the proposed federal action. If Reclamation requires additional federal authorities to implement this alternative, Colorado requests that Reclamation identify the specific Congressional authority needed.

1. Indicators for Operations

The Maximum Operational Flexibility Alternative bases Lower Basin shortages on the storage contents of seven reservoirs, including the CRSP Upstream Initial Units. Not only does this conflict with the Law of the River, it also does not meet the standards required by NEPA. The CRSP Upstream Initial Units do not serve as a supply for Lower Basin water users. It would be arbitrary and legally flawed to modify Lower Basin shortages on volumes in reservoirs that do not serve Lower Basin entities. Because of this inappropriate indicator, the performance of this Alternative is likely flawed, and thereby would not meet the standards required by NEPA.

Additionally, because this Alternative uses the CRSP Upstream Initial Units to determine Lake Powell releases as well as Lower Basin shortages, it is unclear what "run of the river" operations would look like. Reclamation should specify what it means for "run of river" operations in the context of this Alternative.

Finally, while this Alternative uses the 7-reservoir combined storage concept to quantify sources of supply for Upper Basin and Lower Basin water users, the DEIS excludes the largest pool of mainstream Colorado River water in the Basin: water stored in Arizona aquifers as Long-Term Storage Credits. As described above, as of 2022, there were 12.2 maf of Colorado River water Long-Term Storage Credits available for recovery in Arizona aquifers. This volume is greater than the 8.7 maf and 6.2 maf that currently reside in Lake Mead and Lake Powell, respectively.

2. Basin-Wide Conservation Reserve

A key operational component of the Maximum Operational Flexibility Alternative is a Basin-wide conservation reserve that would be distributed between Lake Powell and Lake Mead. The Alternative expressly contemplates transactions across the Upper Basin and Lower Basin, creates new purposes for stored water in the reservoirs, and privatizes storage in Lake Powell and Lake Mead. The authorities needed to implement this Alternative extend far beyond the scope of legislative action. The fundamental elements of this operational component would require vast changes throughout the Law of the River, all of which are far too remote and speculative to constitute a reasonable alternative in this NEPA process.

Moreover, this Alternative grants Reclamation the sole discretion to modify annual releases from Lake Powell in allocating the reserve volume between reservoirs to meet infrastructure or downstream environmental resource goals.[136] As described above regarding the Enhanced Coordination Alternative, if Reclamation were granted sole discretion to modify annual releases given downstream resource considerations, it would negate the purpose and process of the LTEMP and contravene the directives of the Grand Canyon Protection Act. It is also unclear how Reclamation would legally and practically move water between the reservoirs for the purposes of the reserve.

Finally, the Alternative contemplates that the reserve would serve to offset Lower Basin shortages. Despite the characterization of the reserve as Basin-wide, any water stored from Upper Basin water users would be used to offset shortages in the Lower Basin above 2.0 maf. The conversion of this water would occur automatically, subject only to water availability in the reserve. These operational

[136] DEIS at 2-29.

components are problematic legally and practically. The concept of shortage sharing between the Upper Basin and the Lower Basin in this manner conflicts with fundamental provisions of the Law of the River. Moreover, these operations are not technically feasible. Because the reserve is used for offsetting shortage only to the extent water is available in the reserve, Reclamation should specify what occurs when there is no water available in the reserve and shortages in the Lower Basin exceed 2.0 maf.

It is also important that Reclamation clarify how the basis of total system storage (including CRSP Upstream Initial Units) for Lower Basin shortages impacts the shortage offsetting from the reserve. Additionally, the shortage amounts and triggers ignore the actual uses in the Lower Colorado River System as provided in the CU&L data. And it is likely that the evaporative losses exceed the one-time 10% assessment provided in this Alternative. A similar provision in the Lower Basin DCP resulted in vast under-assessment of evaporation in Lake Mead. A system assessment plus proportional actual evaporation should be assessed to any stored water, similar to what is contemplated in the Enhanced Coordination Alternative.

The DEIS notes that any operation of the conservation reserve "would not affect tracking of Lee Ferry flows."[137] Reclamation should clarify how the movement of water between basins, between Lake Powell and Lake Mead, and discretionary changes in the annual release from Lake Powell would not affect tracking of Lee Ferry flows. Colorado notes that any unilateral decisions by Reclamation or the Secretary to alter the annual release from Lake Powell do not constitute an action by Colorado or the other Upper Division States for the purposes of determining compliance with Article III of the 1922 Compact. Any such action taken by Reclamation or the Secretary will not constitute consent, endorsement, or acquiescence from the Upper Division States.

3. Coordinated Reservoir Operations

The primary mechanism used in this Alternative to coordinate operations of Lake Powell and Lake Mead is the conservation reserve. But this Alternative "does not have specific coordinated operations at high elevations."[138] Reclamation should clarify how this fits within the scope of the proposed action to implement guidelines that address Lake Powell and Lake Mead operations through their full operating range.

Moreover, the coordinated reservoir operations are based on the effective storage in CRSP reservoirs. As described above, there is no mechanism to release

[137] *Id.*
[138] *Id.* at 2-28.

water from the CRSP Upstream Initial Units to serve as supply for Lower Basin water users. The bases for the coordinated operations under this Alternative are arbitrary and inappropriate.

g. **Supply Driven Alternative**

As drafted and modeled in the DEIS, the Supply Driven Alternative contains operational components that may conflict with existing law, exceed Reclamation's authority, are not feasible, and ultimately do not meet the purpose and need of the proposed federal action. If Reclamation requires additional federal authorities to implement this alternative, Colorado requests that Reclamation identify the specific Congressional authority needed.

1. Fixed Annual Flow Amount

The Supply Driven Alternative bases Lake Powell releases on a fixed annual percentage of natural flow, specifically 65%. While this approach purports to be supply-driven and grounded in hydrology, it is legally and practically problematic and is not a sustainable or robust operation. This Alternative expressly relies on Lake Powell meeting a new required annual release amount.[139] In fact, it expressly requires the release of Upper Basin conserved water in Lake Powell to meet the flow obligation. Legally, this Alternative would conflict with the existing rights and obligations accorded under the Law of the River. Absent agreement among the States, any fixed natural flow release violates the Law of the River. And the specified amount of 65% necessarily includes impermissible legal assumptions under the 1968 Act and the 1922 Compact. Reclamation should specify how it arrived at 65%. Practically, this Alternative does not perform, drains the system, and therefore is not technically feasible and does not meet the purpose and need. Over the full modeling period of the DEIS, this Alternative protects elevation 3,500 feet in Lake Powell in fewer futures than even the Continuing Current Strategies comparative baseline, which Reclamation has stated does not meet the purpose and need.[140] Moreover, this Alternative requires up to 1.1 maf of "gap water" to perform and meet the desired purpose and need. Any alternative that requires fictitious water in order to work is not a feasible or reasonable alternative. Even if this Alternative is just a "modeling exercise," it was put forward as an action alternative in this DEIS. A reasonable action alternative, by definition, is one that is technically and economically feasible and that meets the purpose and need. By definition, the Supply Driven Alternative is not technically feasible and does not meet the purpose and need because it relies on speculative "gap water" and impermissible legal assumptions.

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[139] *Id.* at 2-35.
[140] *Id.* at 3-32 fig.3-9.

2. "Gap Water"

The Supply Driven Alternative relies on "gap water" to perform and meet the required 65% flow obligation. The DEIS does not identify where "gap water" would come from or how it would specifically operate in this Alternative, except insofar as being "additional water…introduced into the system…."[141] Reclamation should specify from where "gap water" would be "injected" into Lake Powell. Additionally, including "gap water" in the analysis does not accurately reflect realistic impacts. The DEIS discusses at-length the deep uncertainty modeling used for the alternatives analysis, emphasizing that the focus of the approach is to convey actual risks facing the system and to contribute to sufficient protection against ongoing drought.[142] An alternative that relies on fictitious water does not show the actual risk to the system, which undermines the alternatives analysis and does not meet the standards under NEPA.

The DEIS specifies that the amount of "gap water" would be limited to no more than 23% of the Upper Basin's modeled depletion for that year, because that percentage is proportional with Lower Basin shortages. This is legally and technically problematic. First, imposing any amount of "shortage" on the Upper Basin in this proposed federal action conflicts with the Law of the River, especially to meet a newly imposed annual flow obligation that is contrary to existing law. Moreover, imposition of that "shortage" would not account for the significant shortages the Upper Division States already take due to hydrology. Second, the Lower Basin shortages from which the "gap water" amount derives is underestimated given the full uses shown in the updated CU&L data. Third, it impermissibly assumes a shortage sharing arrangement between the Upper Basin and the Lower Basin. Colorado reiterates that any assumption of reductions in use or curtailment in the Upper Basin is beyond the scope of this EIS. Uses in Colorado are determined by hydrology and the physical and legal availability of water at a particular time and location. The authority to administer and distribute the waters of the State are vested with the Colorado State Engineer.

3. Lower Basin Shortage and Conservation

The Supply Driven Alternative assumes as part of the total 2.1 maf Lower Basin shortage that Mexico will take 16% (up to 250,000 acre-feet), in either the priority or pro rata scenario. As described above, because the Supply Driven Alternative relies on a substantial action by Mexico, and if outside discussions with Mexico are not aligned with this NEPA process, this Alternative could be too speculative and remote to adequately analyze and meet the standards of NEPA.

[141] *Id.* at 2-35.
[142] *Id.* at ES-18.

Further, the amount of Lower Basin shortage provided in the Supply Driven Alternative is likely too low to meet the purpose and need of the proposed federal action. The operating experience under the 2007 Interim Guidelines and the Lower Basin DCP underscores the inadequacy of the shortage triggers imposed at critical reservoir elevations to address the impacts of dry hydrology and depleted storage. That inadequacy was exacerbated by continued overuse in the Lower Division States that triggered excess releases from Lake Powell despite decreased inflows into Lake Powell. The Supply Driven Alternative has the same failings. Because the Lower Division States' average use is at least 11.0 maf per year, as shown in the updated CU&L data, the 2.1 maf shortage limit is grossly inadequate.[143] This limit is especially inadequate given that evaporation and system losses alone are at least 1.2 maf, and as the Alternative assumes, Mexico would take 250,000 acre-feet of shortage. Because the shortage limit is too low, operations at Lake Mead are likely unsustainable, and would only serve to draw more water from Lake Powell as evidenced by the need to create "gap water" for the alternative to work. Moreover, the Supply Driven Alternative contemplates that water contributed to the Lower Basin conservation pool would have a one-time 5% assessment and then a 3% assessment in subsequent years, which would be converted to "system water." This would be an inaccurate way to treat an evaporation assessment because the water physically leaves the system. Reclamation should ensure, in any scenario, that credit is not given for water that does not physically exist. Regarding the method of distribution of shortages in the Lower Basin, Colorado takes no position, so long as the method complies with the Law of the River.

4. Upper Basin Actions

The Supply Driven Alternative incorporates operational elements specific to the CRSP Upstream Initial Units that mimic actions authorized pursuant to the 2019 DROA. Specifically, the Supply Driven Alternative provides for an elevation trigger in Lake Powell of 3,525 feet, which causes releases of up to 500,000 acre-feet per year from the CRSP Upstream Initial Units. This operational element includes recovery actions when Lake Powell's elevation is above 3,535 feet. As drafted, this operational element would require additional authorities to implement. While similar actions were performed under the 2019 DROA, they were importantly conducted pursuant to agreements between the Upper Division States and Reclamation. Moreover, a key component of the 2019 DROA that is notably absent in this Alternative is the planning process that utilizes the best available science to inform the release amounts, duration, triggers for recovery, and all the details required for such operations.

[143] As noted above, Reclamation should revise its consumptive uses and losses data to account for underground storage within the year such deliveries are made.

VII. Affected Environment & Environmental Consequences

NEPA requires that the EIS analyze all reasonably foreseeable environmental effects of the proposed federal action, including adverse effects that cannot be avoided, and irreversible and irretrievable commitments of federal resources.[144] Within the zone of reasonably foreseeable impacts are those that have a reasonably close causal relationship with the proposed federal action.

a. Disparate Treatment of Basins

The DEIS's impacts analysis notably excludes impacts to the Upper Basin. While this is seemingly consistent with the stated geographic scope of the proposed federal action,[145] there is a significant discrepancy between modeling assumptions for the alternatives analysis and assumptions for the impacts analysis that blur that geographic scope. In fact, the DEIS presents a problem where either the alternatives analysis is flawed or the impacts analysis is flawed, but both cannot be accurate in how Reclamation has drafted it. This problem highlights a disparity in how Reclamation treats the Upper Basin and the Lower Basin throughout the DEIS, undermining the balance of equities provided in the 1922 Compact.

The problem presented in the DEIS is this: either the impacts analysis appropriately excludes the Upper Basin because the actions contemplated in the Upper Basin are speculative, or the actions relied upon in the alternatives modeling are not speculative and, accordingly, impacts in the Upper Basin should be analyzed.[146] If Reclamation intends to look upstream of Lake Powell for operational components of the proposed federal action, it must analyze the reasonably foreseeable impacts of that action in the Upper Basin. But importantly, alternatives that go beyond Reclamation's existing authority and have impacts beyond the geographic scope must be excluded from analysis in the EIS.

1. Modeling Assumptions for Alternatives

The DEIS relies on modeling assumptions in the alternatives analysis that maximize the potential conservation activities in the Upper Basin.[147] Reclamation reasons that it must maximize these potential activities due to the "need to bound the analysis by evaluating maximum potential impacts."[148] But notably Reclamation

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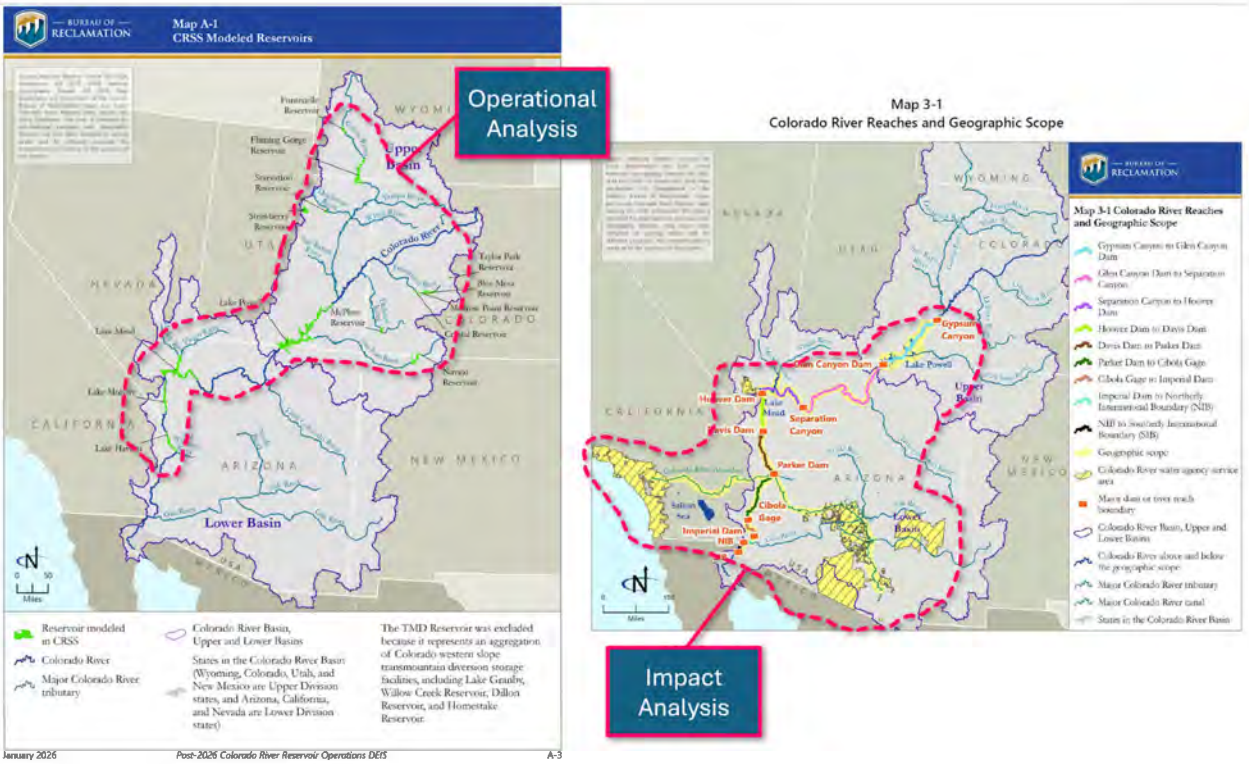
[144] NEPA, § 102.
[145] *See* DEIS at 3-25 ("[T]he Draft EIS does not expand the geographic scope of analysis upstream of Lake Powell.").
[146] *Id.* at 3-2.
[147] *Id.* at B-1.
[148] *Id.* at B-1.

focuses on the "maximum potential impacts on river flows downstream of Hoover Dam."[149] This modeling assumption for Upper Basin conservation, taken together with the sole focus of impacts in the Lower Basin highlights a disparity in how the DEIS treats the Upper Basin and the Lower Basin, undermining the balance of the equities provided by the 1922 Compact. In effect, the DEIS maximizes volumes of conservation in the Upper Basin to see how it will impact the Lower Basin, but it does not show how Upper Basin conservation would impact the Upper Basin. This error is particularly egregious because any activities in the Upper Basin are inherently limited by hydrology.

2. Assumptions for Impacts Analysis

For the impacts analysis, the DEIS first expands the geographic scope to include affected "water users in the Lower Division States in service areas that extend beyond the Colorado River floodplain."[150] This is emphasized in a comparison of DEIS Map 3-1 and Map A-1 below:



[149] *Id.* at B-1.
[150] *Id.* at 3-2.

Second, the impacts analysis excludes impacts of CRSP Upstream Initial Unit releases because such releases would operate within the existing Records of Decision at those facilities. But Reclamation continually states throughout the DEIS that releases from CRSP Upstream Initial Units could occur under an undefined and overly broad "emergency" authority necessary to respond to hydrologic conditions. As evidenced by the "emergency releases" made from the Aspinall Unit in 2021, there are vast environmental and economic impacts caused by such releases.

Third, with respect to Upper Basin conservation, the DEIS does not analyze impacts to the Upper Basin, even though it assumes maximum volumes in the alternatives analysis. Reclamation reasons that because Upper Basin activities are "unknown at this time and will not necessarily require federal decision making,"[151] impacts to the Upper Basin are excluded. It is accurate that Upper Basin activities would be subject to programs established by the Upper Division States and appropriately excluded from the scope of this DEIS. It is nonetheless confounding that Reclamation would model assumptions for Upper Basin conservation as a part of the alternatives analysis and then choose to ignore any possible impacts from those activities that were assumed to make the alternatives perform. Indeed, the Enhanced Coordination, Maximum Operational Flexibility, and Supply Driven Alternatives consider a range of operations above Lake Powell,[152] yet the impacts analysis does not consider the environmental impacts to the same geographic locations.

Finally, Reclamation asserts that the impacts analysis properly excludes the Upper Basin because the proposed federal action will have no impact on Upper Basin apportionments.[153] While any impact to compact apportionments is beyond the scope and authority of the Post-2026 Operational Guidelines, Upper Basin conservation activities would necessarily impact Upper Basin use of its apportionments because it involves water generated from activities that require water users to reduce or eliminate water use.

The DEIS appropriately identifies the geographic scope of the proposed action as Lake Powell and below to the Southerly International Boundary. However, Reclamation attempts to expand that scope in its assumptions with respect to actions above Lake Powell, while ignoring any impacts of those actions. The cure to this problem is not for Reclamation to conduct an impacts analysis in the Upper Basin. The cure is to exclude actions that go beyond Reclamation's authorities and stated geographic scope.

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[151] *Id.* at 3-2.
[152] *See, e.g.*, *id.* at 2-5 ("Additional Activities Above Lake Powell").
[153] *Id.* at 3-48.

b. **Impacts to LTEMP Resources**

The DEIS recognizes that the LTEMP will likely be revisited given the new annual operating guidelines.[154] Colorado agrees: the LTEMP is subject to annual releases from Glen Canyon Dam and should not constrain the Post-2026 Operational Guidelines. Notably, though, the DEIS shows that long-term operations that rebuild storage in Lake Powell benefit sub-annual management options and offer greater protection of downstream resources below Glen Canyon Dam.[155] For example, the DEIS shows that Lake Powell elevations above 3,525 feet significantly reduce the risk of escapement of nonnative warm water fish species from Lake Powell into the river below the dam, which would significantly decrease the risk to the large population of humpback chub downstream. While LTEMP should not constrain the annual release operations of these Post-2026 Operational Guidelines, Reclamation must not overlook alternatives that rebuild storage and are therefore able to benefit a wide range of resources, consistent with the Law of the River.

However, Reclamation seems to take a step too far in this regard by inappropriately analyzing impacts of the reservoir itself rather than impacts of operations of the reservoir. For example, the DEIS inaccurately concludes that higher Lake Powell elevations may negatively impact fish passage and Endangered Species Act listed species habitat in the Colorado River and San Juan River inflow reaches.[156] Importantly, these stream reaches have not only been inundated before when Lake Powell was full, but were inundated when the Upper Colorado River and San Juan River Endangered Fish Recovery Implementation Programs ("Recovery Programs") were established. The Recovery Programs did not rely on these stream reaches as necessary components for the recovery of the listed species because inundation did not negatively impact the species of concern. Moreover, inundation of these reaches, including the Piute Farms Waterfall, may benefit the listed species by enabling movement upstream to spawn. And the San Juan Recovery Program could be capable of implementing fish passage structures that would mitigate nonnative fish movement upstream.

While Reclamation must analyze all reasonably foreseeable impacts of the proposed federal action, in this EIS Reclamation must analyze the impacts of the operations of the reservoir, not the impacts of the reservoir itself.

[154] *Id.* at ES-40.
[155] *Id.* at 3-61 – 3-66; 3-92 – 3-93; 3-149; 3-161.
[156] *Id.* at 3-92.

VIII. Other Considerations: Analysis of the UDS Alternative

Reclamation eliminated the UDS Alternative from analysis because it "did not sufficiently address the lack of an appropriate basis for the comprehensive and coordinated operations of Lake Powell and Lake Mead."[157] And Reclamation further purports that the Supply Driven Alternative incorporates elements of the UDS Alternative.[158] NEPA requires Reclamation to study, develop, and describe all technically and economically feasible alternatives.[159] A reasonable alternative is technically and economically feasible and meets the purpose and need of the proposed action.[160] The Supply Driven Alternative fails to adequately analyze the UDS Alternative. Moreover, detailed components of the Lower Basin Alternative are incorporated in the Supply Driven Alternative, but the detailed operational components of the UDS Alternative are not. NEPA requires Reclamation to fully analyze it as a reasonable alternative.[161] Therefore, the UDS Alternative should have been analyzed.

IX. Technical Addendum

Colorado has compiled a number of technical comments related to detailed provisions in the DEIS. The Technical Addendum is attached to this comment letter and incorporated herein by reference.

X. Reservation of Rights

Colorado's comments are intended to highlight overarching issues that will require acknowledgement or clarification as the EIS process continues. Colorado's failure to provide specific comments regarding details of this NEPA process shall not be construed as an admission with respect to any factual or legal issue or the waiver of rights for the purposes of any future legal, administrative, or other proceeding. Furthermore, Colorado reserves the right to comment further on the EIS documentation as Reclamation proceeds with subsequent phases of the NEPA process for Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead.

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[157] *Id.* at 2-2.
[158] *Id.* at ES-8, 2-2, 2-30.
[159] NEPA, § 102(2)(C), (F).
[160] *See* NEPA, § 102(2)(C)(iii).
[161] *See, e.g., Nat. Res. Def. Council, Inc. v. Morton*, 458 F.2d 827, 836 (D.C. Cir. 1972) ("We reiterate that the discussion of environmental effects of alternatives need not be exhaustive. What is required is information sufficient to permit a reasoned choice of alternatives so far as environmental aspects are concerned.…Nor is it appropriate…to disregard alternatives merely because they do not offer a complete solution to the problem.").

XI. **Conclusion**

As a Colorado River Basin State, Colorado has a unique interest in the water supplies of the Colorado River Basin. As a signatory to the interstate compacts that govern the use and allocation of the Colorado River, Colorado has an obligation to protect the interests of its water users who rely on the Colorado River. We are committed to working with Reclamation and the Secretary as this NEPA process continues. Moreover, Colorado remains a partner and committed to engage with the other Basin States, Colorado River Basin Tribes, water users, and stakeholders.

Colorado appreciates the opportunity to provide these comments on the DEIS. We look forward to continuing our partnership with you and our partners across the Colorado River Basin as we move forward in protecting and managing this critical resource into the future.

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TECHNICAL ADDENDUM

Note: Initial citations to the DEIS are included next to the relevant comments for convenience. However, the same comment may apply to more than one part of the DEIS. The same comment should be assumed to apply to all parts of the DEIS with the same or similar content.

Cite	Comment
ES-1	Reclamation states that the actions taken over the past two decades have not been robust enough to prevent the continued decline of Lakes Powell and Mead. Reclamation must also recognize that certain discretionary actions taken by Reclamation contributed to this decline.
ES-5	Reclamation states that the purpose of the proposed federal action is to "update and expand" management guidelines. Reclamation should specifically explain how it intends to expand management operations consistent with the Law of the River.
ES-6	Demand management is not pertinent to the analysis in the DEIS, and Reclamation should remove it.
ES-8	Reclamation states that the 2019 Colorado River Drought Contingency Authorization Act provided authorization necessary to fully implement the DCPs. Given the expiration of the DCPs and accompanying congressional authorization, Reclamation should clarify and specify what actions are included in the current proposed alternatives that would require similar authorization.
ES-10	Reclamation includes a footnote that its modeling assumptions are not intended to constitute an interpretation of application of the 1944 Water Treaty. However, Reclamation omits reference to the 1922 Compact, which governs how the Mexico treaty obligation and any recognized deficiency attributable to the Upper Division States will be achieved among the Basin States. Reclamation must therefore clarify in these footnotes that its modeling assumptions for water deliveries to Mexico are also contingent upon application of, and are not intended to constitute an interpretation of, the 1922 Compact.

ES-15	The DEIS states that additional restrictions in water deliveries to the Lower Basin will occur when Lake Mead is near dead pool, resulting in large reductions (referred to as "dead-pool related reductions"), but that these reductions are not considered an operational element of the alternatives. Reclamation should consider these reductions as an operational element of the alternatives.
1-12	Reclamation includes average annual flows in the Lower Basin including inflow from the Little Colorado River, Virgin River, and Bill Williams River, but omits reference to the Gila River. The Gila River is the largest tributary in the Lower Basin, is part of the Colorado River System, and should be added.
1-13	Reclamation's summary description of the 1963 Opinion is incomplete and misleading. Reclamation should describe the law as written.
1-13	Reclamation's summary description of the 1964 Decree is incomplete and misleading. Reclamation should describe the law as written.
1-14	Reclamation's description of the 1968 Act is incomplete and misleading. Reclamation should describe the law as written.
1-15 - 16	Reclamation's description of the apportionments to the Upper and Lower Basins under the 1922 Compact is incomplete and misleading. Reclamation should describe the law as written.
1-16	Reclamation's description of the Upper Division States' apportionment is incomplete and misleading. Reclamation should describe the law as written.
1-16	Reclamation's description of the Lower Division State apportionments is incomplete and misleading. Reclamation should describe the law as written.
1-16	Reclamation states that water that is stored off-stream by a Lower Division State (for future use by that state or by another Lower Division State) is accounted as consumptive use to the State that stored the water in the year it was stored. However,

	this description is inconsistent with historical descriptions of groundwater recharge in the CU&L reports. This should be clarified.
1-17	Reclamation states that almost all mainstream Colorado River waters apportioned to the Lower Basin have been fully allocated to specific entities for permanent irrigation or domestic use entitlements. It is unclear whether or how this statement takes into account off-stream storage. This should be clarified in the FEIS.
1-19 - 20	Reclamation's description of "Colorado River Basin water" use and Figure 1-3 are incomplete and misleading. Consumptive use in the Colorado River Basin must include consumptive uses and losses from the entire Colorado River System, including all tributaries. Further, although Reclamation's definition of "use" includes evaporation and seepage, it is not clear that such losses are accounted for in the Lower Basin. Finally, Reclamation's discussion of the Lower Division States' conservation efforts and drought response activities fails to take into account Reclamation's consumptive uses and losses data recently made available for the period 2006 – 2024. Reclamation's statements are not supported by the CU&L data, do not reflect a total reduction in use, are temporary, and do not include assessment of losses.
1-25 - 26	Reclamation's description of equalization does not reflect the process set forth in LROC or underlying law from the 1968 Act. Reclamation should describe the law as written.
1-28	Reclamation's description of off-stream storage of Colorado River water and development and release of intentionally created unused apportionment requires greater explanation, detail, and specificity. Reclamation should account for consumption of Colorado River System water upon its delivery to off-stream storage. Further, Reclamation should describe how deliveries of mainstream Colorado River System water in exchange for recovery of water in off-stream storage account for the constraints of recovery of off-stream storage.
2-13	Reclamation indicates that under the Basic Coordination Alternative, when Lake Mead is approaching the elevation 1,000

	feet, the Secretary will determine and implement additional measures as necessary to protect critically low elevations, consistent with the Law of the River. Reclamation should model reasonable assumptions with respect to these additional measures to identify and analyze the environmental impact thereof.
2-14	Reclamation notes that under the Basic Coordination Alternative, the annual release volume from Lake Powell would be based on flexible implementation of the LROC and provides for specified releases both above and below 8.23 maf. Colorado supports Reclamation's statement, but notes that the proposed release curve has a floor of 7.0 maf. The SEIS determined 7.0 maf was insufficient to provide Reclamation the tools it needed and recognized that releases down to 6.0 maf may be required to protect critical infrastructure.
3-4	Imperial Valley and Coachella Valley service areas should be depicted in Map 3-1 consistent with their listing as an "affected" water agency service area on page 3-2.
3-25	Reclamation's description of the purpose of the 1956 Act is inaccurate. Reclamation should describe the law as.
3-25	Reclamation should correct the typo "Blume" Mesa to "Blue" Mesa.
3-25	Reclamation's description of Lake Powell should be revised to reflect an operating range of 3,370 feet to 3,700 feet, which is consistent with Reclamation's description of Lake Powell's total live storage capacity and the operating range used for Lake Mead (3-27).
3-45	Reclamation's list of the most notable documents in the Law of the River should also include the 1948 Compact and the 1956 Act.
3-45 - 46	Reclamation's description of apportionments under the 1922 Compact is misleading and incomplete. Reclamation should describe the law as written.

3-56	Reclamation's footnote 10 appears to contain a typo: "Lake Powell" should be changed to "Lake Mead."
3-144	It appears Reclamation is not listing federally recognized tribes but rather historic tribal associations. Reclamation should clarify and be consistent in the manner it refers to tribes here and in Technical Appendix 18.
3-200	Reclamation states that the Upper Basin Tribal agricultural operations would benefit from conservation pools contemplated in several of the DEIS's alternatives. Reclamation should clarify this statement given the geographic scope of the proposed federal action and the DEIS's exclusion of impacts to the Upper Basin.
Glossary – 1	"Annual Operating Plan" should be clarified to include its purpose to operationalize mandatory obligations of the Secretary under the Consolidated Decree and the 1968 Act.
Glossary – 2	Reclamation should include a definition of "augmentation."
Glossary – 2	Reclamation should include a definition of water "banking" that is distinct from "conservation."
Glossary – 2	Reclamation should revise "Basin States" to be consistent with 1922 Compact.
Glossary – 2	Reclamation should clarify the mechanism of creation for Binational ICS.
Glossary – 3	Reclamation should include a definition of "Colorado River water" as this term is used in the DEIS, but it is unclear how if differs from other terms such as "Colorado River system" water.
Glossary – 3	Reclamation should add to the definition of "Colorado River Compact" that it was ratified by Arizona in 1944; and therefore, ratified by all Basin States.
Glossary – 4	Reclamation should add a definition of water "conservation."
Glossary – 4	Reclamation should clarify the definition of "Consumptive Use." Reclamation should also clarify its use of the word "deplete" and

	how it differs from "diversions" used elsewhere in the definition. Last, Reclamation should clarify how evaporation, seepage, and transit losses exist relative to "consumptive use" as they also "lessen[] the amount of water available for another use" as stated in the definition.
Glossary – 5	Reclamation should clarify the definition of "deplete(ion)" and how it differs from "consumptive use," "diversion," and "losses."
Glossary – 5	Reclamation should clarify the definition of "diversion(s)," which is currently confined to the "mainstream," a term defined in the Consolidated Decree.
Glossary – 5	Reclamation should add a definition of "efficiency" and how it differs from "augmentation" and "conservation."
Glossary – 5	Reclamation should add a definition of "effective storage/elevation" and how it relates to determination of mainstream shortage.
Glossary – 6	Reclamation should add a definition of "exchange" in the Lower Basin and its relation to relevant aspects of the Law of the River including the Consolidated Decree.
Glossary – 6	To the extent the alternatives rely on continuing ICS or expanding upon ICS, Reclamation should clarify the details of "Extraordinary Conservation" ICS.
Glossary – 7	Reclamation should add a definition of "full operating range(s)" for Lake Powell and Lake Mead and how this relates to "minimum power pool" and "dead pool."
Glossary – 8	Reclamation should clarify whether or how "Imported" ICS differs from "augmentation" as defined in § 603(g) of the 1968 Act.
Glossary -8	Reclamation should revise its definition of "Law of the River." The "Law of the River" refers to the body of law affecting interstate and international use, management, and allocation of water in the Colorado River System, including the 1922 Colorado River Compact, the 1944 Mexican Water Treaty, the 1948 Upper

	Colorado River Basin Compact, United States Supreme Court decisions and the United States Supreme Court Decree in *Arizona v. California*, and numerous federal statutes and agreements. The Law of the River does not authorize the Secretary to regulate the use and management of the Colorado River among the seven Basin States and Mexico.
Glossary - 9	Reclamation should add a definition of "losse(s)" and how it differs from "deplete(ion)."
Glossary – 9	Reclamation should revise "Lower Basin (States)" to be consistent with the 1922 Compact.
Glossary – 10	Reclamation should add a definition of "National Critical Infrastructure" and explain the legal significance, if any, of this designation.
Glossary – 10	Reclamation should add a definition of "Lower Basin user" as and how it differs from a "contractor," "present perfected right" holder and "entitlement holder."
Glossary – 10	Reclamation should clarify whether the definition of "Natural Flow" includes depletions due to evaporation, seepage, and transit losses.
Glossary – 11	Reclamation should clarify what "non-system water" relates to.
Glossary – 13	Reclamation should clarify the definition of "return flow" and how it relates to "depletion," "diversion," and "consumptive use."
Glossary – 13	Reclamation should clarify definition of "Return Flow Credit" consistent with the revised definition of Return Flow.
Glossary – 14	Reclamation should clarify that a "Shortage condition" as defined here only applies to the Colorado River mainstream as defined in the Consolidated Decree, Art. II(B)(3) and is separate and distinct from a deficiency under the 1922 Compact, Art. III(c).
Glossary – 15	Reclamation should clarify that a "Surplus condition" as defined here only applies to the Colorado River mainstream as defined in

	the Consolidated Decree, Art. II(B)(2) and is separate and distinct from a surplus under the 1922 Compact.
Glossary – 15	Reclamation should clarify the mechanism of creation for "System Efficiency" ICS.
Glossary – 15	Reclamation should clarify the meaning of "system storage." Reclamation uses the term "Colorado River Basin," which itself requires additional clarification as noted above as being overly broad and beyond the geographic scope of this analysis. It is not clear whether Reclamation is referring to both surface and groundwater or what "available" means.
Glossary – 15	Reclamation should clarify the meaning of "system water" to make it consistent with 1922 Compact and the other terms using the word "system" such as "non-system water," "system storage," and "system conservation."
Glossary – 16	Reclamation should clarify the meaning of "tributary" to ensure that it is consistent with 1922 Compact, which does not use the word "flowing" but rather the phrase "naturally drains into."
Glossary – 16	Reclamation should revise its definition of "Upper Basin (States)" to be consistent with the 1922 Compact.
Glossary – 16	Reclamation must revise its definition of "Upper Colorado River Commission" to match the purpose and scope of authority as set forth in the 1948 Compact.
Glossary – 16	Reclamation should add a definition for "Upper Basin users."
A-14	Reclamation indicates that the Lake Powell modeling includes assumptions for the storage and delivery of conserved system and non-system water. Reclamation should clearly and separately explain what assumptions are made with respect to non-system water and identify the source thereof.
A-31	Reclamation indicates that the Lake Mead modeling includes assumptions for the conservation, storage, and delivery of conserved system and non-system water. Like with Lake Powell

	modeling, Reclamation should clearly and separately explain what assumptions are made with respect to non-system water and identify the source thereof.
B-1 - 2	Reclamation should provide greater explanation of the mechanisms contemplated with respect to Lake Powell and Lake Mead Storage and Delivery of Conserved Water and their impacts on major operational determinations. As a result, Reclamation must clarify how losses will be assessed against the banked water, and how those without bank accounts will be impacted.
B-1	Reclamation should clarify what it means by: "Conservation mechanism that offer water users flexibility to conserve and/or augment water supplies can increase stability of reservoirs, thereby reducing the need for and mitigating impacts of large shortages." This description is vague and specifically, the words and terms "conservation" and "conserve;" "augment"; "increase stability of reservoirs"; and "reducing the need for… shortages" and "mitigating impacts of shortage" require discrete definitions and meaningful explanation.
B-2 - 3	Reclamation indicates that its modeling assumptions are not intended to constitute a position on the storage mechanisms by any specific water users nor are they an interpretation of the law, contracts or a legal position. To properly assess the reasonableness of alternatives, it is necessary to consider whether the alternatives' components are consistent with exiting law, and if not, to consider what changes to the existing law are necessary to implement such components. This is also necessary to put the DMDU's results into context. Because the modeling assumptions will affect the outcome of the DMDU's analysis, an alternative may perform favorably in the DMDU framework, but still be inviable because it is legally speculative.
B-4	Reclamation's table B-1 must show the total accumulated volume of all types of ICS (including System Efficiency ICS) to make clear how much water is currently banked and owed back to users as an initial condition.

B-5	Reclamation indicates that when storage credits are created, the model assumes either a delivery from Lake Mead is decreased or a new gain in the system is introduced. Reclamation should clarify the meaning and circumstances under which a new gain in the system is introduced including the source of the new gain.
B-6	Reclamation includes assumptions for Nevada's Tributary Conservation, however it is unclear how this mechanism functions.
C-11	Reclamation's discussion of allocation of mainstream shortage must recognize that this is a separate and distinct legal inquiry from a "deficiency" under the Colorado River Compact. Reclamation should describe the law as written.
Appendix D	Reclamation's analysis cannot overlook or combine Mexico's apportionment with the Lower Basin's for the purposes of determining percentage flow. Reclamation should describe the law as written or make clear that its statements reflect Reclamation's legal interpretation of the Law of the River.
D-1	Reclamation uses three percentages for assumed natural flow: 60%, 65%, and 70%. It is unclear why Reclamation selected these percentages for analysis.
G -1 – 2	Reclamation should update the inputs for the low initial condition in Table G-1 because the current inputs do not adequately bookend possible conditions at the end-of-month December 2026.
I-1	Reclamation includes analysis in Appendix I that considers what would happen if the Upper Basin's annual consumptive use were capped at certain levels. Reclamation indicates that the purpose of this analysis is to more transparently examine how combinations of supply, demand, and initial conditions affect system vulnerability. Reclamation should provide additional explanation with regard to its reasoning behind this analysis given its inconsistency with the 1922 Compact and 1948 Compact, and exceedance of the limits of the Secretary's authority and selected scope of the federal action.
I- 1	Reclamation states that the baseline for Lower Basin demand is full apportionment, which is "largely met through deliveries from Lake Mead (as adjusted for tributary inflows and losses below

	Lake Mead).” Reclamation should provide further explanation relative to the adjustment for tributary inflows and losses below Lake Mead.
J-4 - 5	Reclamation should incorporate the recent 19-year critical period of record results in the DEIS.
K-1	Reclamation omits reference to the 1922 Compact, which governs how the Mexico treaty obligation will be met among the Upper and Lower Basins. Reclamation must clarify that its modeling assumptions for water deliveries to Mexico are also contingent upon application of, and are not intended to constitute an interpretation of, the 1922 Compact.
N-1	Reclamation indicates that this appendix contains schedules of projected Colorado River system depletions by the Lower Division States. Use of “system” is misleading because it implies that it includes depletions from Lower Basin tributaries. However, such depletions are omitted. Reclamation should make clear the source of the depletions included, as well as those excluded, from its modeling. To the extent Reclamation intends to consider the “system,” it must consider depletions and from the Lower Basin tributaries.
TA 3, 3-4, n.1	Reclamation states that the Secretary will consider and prioritize operations at CRSP Upstream Initial Units that are consistent with existing Records of Decision, but that the Secretary retains the authority to operate outside those Records of Decision if necessary. It’s unclear what authority this refers to. Reclamation should identify any such authority for the Secretary to operate outside of the Records of Decision.
TA 3, 3-5	Reclamation quotes a single provision from LROC, that the objective shall be to maintain a minimum release of water from Lake Powell of 8.23 maf for that year. The selective reference misrepresents LROC and ignores the other requirements in LROC, including section II(1) for the Secretary to make determinations on necessary “602(a) Storage” and the conditions to be considered under section II(2). Reclamation should accurately include all other relevant LROC provisions.
TA 3, 3-5	In describing when more than 8.23 maf could be released from Lake Powell under LROC, Reclamation omits the

	requirement that such releases be made to the extent they can be reasonably applied in the States of the Lower Division to the uses specified in Article III(e) of the Colorado River Compact. Reclamation should faithfully include all requirements under section III(3) of LROC.
TA 3, 3-15	Reclamation states that the Compact apportioned 7.5 maf of water per year for beneficial consumptive use to the Lower Basin states. Reclamation should also reference the additional 1.0 maf of water per year from the Colorado River System apportioned to the Lower Basin under Article III(b) of the Compact.
TA 3, 3-51	Reclamation states that the CRSP Upstream Initial Unit reservoirs can be operated in a way that releases help to bolster elevations in Lake Powell and protect Glen Canyon Dam infrastructure (within their Records of Decision). Reclamation should describe the authorities to (a) include operations above Lake Powell in this statement; (b) for the release of this water absent agreement with the Upper Division States; and (c) how these operations would be consistent with the applicable Records of Decision that are not also part of this NEPA process.
TA 4, 4-1	Reclamation lists the "most notable" documents that comprise the Law of the River. Reclamation should modify this list to also include the 1948 Compact and the 1956 Act.
TA 4, 4-2	Reclamation states that the 1922 Compact apportions 7.5 maf of water per year to the Upper Basin and 7.5 maf to the Lower Basin. Reclamation should also reference the additional 1.0 maf of water per year from the Colorado River System apportioned to the Lower Basin under Article III(b) of the Compact.
TA 4, 4-2	In describing Table TA 4-2, Reclamation states that water apportionments to the Lower Division States were established by the 1928 Act. Reclamation should revise this statement to clarify that the apportionments to the Lower Division States described in that table are for water from the Colorado River mainstream downstream from Lake Mead.

TA 4, 4-3	Reclamation states that rights to use Colorado River water within the Lower Division States, known as entitlements, are established in accordance with the 1928 Act and the Consolidated Decree and that all the water apportioned to the Lower Division States is allocated in accordance with these documents. Reclamation must revise these statements to clarify that they apply only to Colorado River mainstream water downstream from Lake Mead.
TA 4, 4-3	Reclamation states that any user of Colorado River water in the Lower Basin is required to have a contract with the Secretary. Reclamation should revise this statement to clarify that it applies to any user of Colorado River mainstream water in the Lower Basin downstream from Lake Mead.
TA 18-3	Reclamation lists the Navajo Nation as an "Upper Basin reservation" and the Hopi Tribe as a "Lower Basin reservation." This is confusing because the Hopi Reservation is contained entirely within the boundaries of the Navajo Reservation, and the Navajo Reservation resides within both the Upper Basin and the Lower Basin. On pages TA 18-4 and 18-6, it appears that the distinction is based on quantified rights. Reclamation should clarify this distinction and if the tribes are being treated differently based on that distinction.
TA 3, 3-4, n.1	Reclamation states that the Secretary will consider and prioritize operations at CRSP Upstream Initial Units that are consistent with existing Records of Decision, but that the Secretary retains the authority to operate outside those Records of Decision if necessary. It's unclear what authority allows Reclamation to include CRSP Upstream Initial Unit operations in this NEPA process or to operate "outside the [Records of Decision]." Reclamation should identify any such authority to the extent it exists.
TA 3, 3-5	Reclamation quotes a single provision from LROC, that the objective shall be to maintain a minimum release of water from Lake Powell of 8.23 maf for that year. This single selective reference misrepresents LROC and ignores the other requirements in LROC, including section II(1) for the Secretary to make determinations on necessary "602(a) Storage" and the

	conditions to be considered under section II(2). Reclamation should accurately state all other relevant LROC provisions.
TA 3, 3-5	In describing when more than 8.23 maf could be released from Lake Powell under LROC, Reclamation omits the requirement that such releases be made to the extent they can be reasonably applied in the States of the Lower Division to the uses specified in Article III(e) of the Colorado River Compact. Reclamation should accurately state all requirements under section III(3) of LROC.

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March 2, 2026

Bureau of Reclamation, Department of the Interior
Attn: Post-2026 Colorado River Reservoir Operations (EIS No. 20250184)
CRBpost2026@usbr.gov

Re: *Joint Comment Letter on the Draft Environmental Impact Statement for Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead.*

On behalf of our respective organizations, we appreciate the opportunity to provide comments on the Draft Environmental Impact Statement (Draft EIS) for the *Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead*, as noticed in the Federal Register at 91 Fed. Reg. No. 11 (2026).

This joint comment letter reflects the shared interests of the undersigned conservation organizations (Conservation Groups) at this critical stage of the National Environmental Policy Act (NEPA) process for post-2026 operations of the Colorado River system. Our organizations have a deep history of engagement in Colorado River Basin management. To advance our missions, we remain committed to working collaboratively with Basin states, Tribal Nations, federal agencies, Mexico, water users, and other stakeholders to develop science-based solutions capable of managing the Colorado River under increasingly hot, dry, and hydrologically uncertain conditions.

The Conservation Groups occupy a unique position in the Basin. Our interests span state and national borders, Tribal and federal jurisdictions, Upper and Lower Basin dynamics, and multiple water use sectors. This vantage point requires us to understand the interconnected nature of the river and how actions (or inactions) in one part of the Basin reverberate throughout the entire system. Because ecological health, water quality, supply reliability, and community resilience are deeply interconnected, our organizations regularly focus on the system-wide implications of operational decisions.

The Colorado River Basin is at a defining moment. After more than two decades of persistent drought, compounded by rising temperatures and increasing hydrologic variability, the Basin has entered a fundamentally different operating reality. Declining snowpack, higher

evapotranspiration, depleted reservoir storage, and reduced streamflows are no longer intermittent challenges; they represent systemic, compounding risks that will intensify absent effective, adaptive post-2026 operations. As supplies decline, the Basin must adjust to living with less water. Stabilizing the system will require not only allocating shortages and improving reservoir coordination, but also achieving sustained reductions in consumptive use aligned with long-term hydrologic realities.

The Draft EIS appropriately recognizes this shift. It confirms that the Basin's core challenge is how to operate Colorado River reservoirs to preserve functionality and sustain communities, economies, and ecosystems under highly variable and increasingly constrained conditions. The decision before the Department of the Interior and the Bureau of Reclamation is not between "impact" and "no impact," but between operational frameworks that deliberately manage risk and those that allow it to cascade through increasingly frequent emergency interventions.

The Draft EIS represents an important step forward. By moving beyond assumptions of near-term hydrologic recovery and applying a Decision Making Under Deep Uncertainty (DMDU) framework, it evaluates operational tools in the context of a hotter, drier Basin. It demonstrates that continued reliance on crisis-driven, temporary measures is not a viable long-term strategy and that post-2026 operations must improve predictability, minimize dependence on emergency authority, and embed flexibility capable of managing a wide range of plausible futures. Failure to do so risks regional and national economic disruption, increased uncertainty for hydropower and grid reliability, heightened threats to Tribal resources and ecological systems, and recurring year-to-year instability for Basin communities.

Importantly, the Draft EIS also makes clear that not all paths forward are equally effective. Alternatives that rely on rigid rules, delayed responses, or limited coordination increase the likelihood of rapid storage decline and escalating emergency actions. By contrast, frameworks that incorporate proactive action, flexible tools deployed at useful scales, coordinated reservoir management, aligned mitigation, and intentional participation by Tribal Nations and both Upper and Lower Basin States show the greatest potential to stabilize the system under sustained stress.

This finding has profound implications. It underscores that the Basin's future does not depend on selecting a single standalone alternative as defined in the Draft EIS. Rather, specific strategies and tools from several alternatives are what drive performance, depending on how early, flexibly, and coherently they are applied. It also reinforces that ecological integrity, inclusion of Tribal Nations, and investment in mitigation and water security are not secondary considerations but core system objectives that directly influence operational viability, legal risk, and long-term resilience.

This moment demands clarity and resolve for the Basin and its communities. The Colorado River reservoir system cannot be stabilized simply by reallocating scarcity. A viable operational framework must also create incentives to reduce overall water use as supplies decline. An approach that preserves minimum operability while allowing unmanaged harm would neither

meet the Purpose and Need nor be defensible under NEPA. Nor can the Basin withstand a framework that institutionalizes emergency management as a substitute for proactive planning.

Accordingly, this joint comment letter urges Reclamation to use the Final EIS not to select among discrete alternatives, but to synthesize a preferred post-2026 framework built from the operational elements that the analysis shows actually work. This includes operations that:

- **Provide clarity and predictability** so Basin stakeholders can understand future risk, move away from crisis management, and plan accordingly.
- **Incorporate flexible, adaptive tools for conserving, storing, and managing water** across a wide range of hydrologic conditions, including extreme and sustained drought.
- **Embed environmental stewardship into operations**, recognizing that long-term water security is inseparable from the health of the River and its ecosystems.
- **Provide for meaningful and voluntary Tribal participation** grounded in sovereignty and self-determination regarding Tribal perspectives, water rights, and interests in decision-making, and
- **Preserve pathways for advancing in-basin mitigation** and resilience-building opportunities as well as **binational cooperation with Mexico**.

In furtherance of these objectives, this letter focuses on relevant findings regarding the Draft EIS and the elements necessary to stabilize the Basin under variable and drier, low-flow conditions.[1] It is organized into sections as follows:

[1] These comments focus on the issues and recommendations the undersigned organizations consider most relevant at this stage of the Draft EIS process. They do not necessarily reflect the full range of observations, analyses, or conclusions that the organizations may draw from review of the Draft EIS and supporting technical materials. The undersigned request and reserve the right to provide additional comments, analyses, or recommendations in response to the Final EIS, any identified Preferred Alternative, or subsequent related decision documents.

Savings Pool Program in Lake Powell.

I. Priority Takeaways

The Draft EIS offers clear signals about which operational approaches reduce systemic risk, and which defer consequences until crisis conditions force action. An effective post-2026 framework preserves system operability, reduces reliance on emergency interventions, manages risk across users and resources, and sustains ecological integrity and Tribal values under the hydrologic conditions the Basin is most likely to face.

The priority takeaways below distill the policy-relevant conclusions from the Draft EIS and identify the core elements that should be advanced and strengthened in the Final EIS to support a coherent and defensible operating framework capable of managing continued climate stress.

1. Early, proactive action consistently outperforms delayed or emergency-driven management. Modeled results indicate that planned contributions and reductions in consumptive use approaching approximately 3 million acre-feet (MAF) may be required under sustained low-flow conditions. Delayed or insufficient responses increase the likelihood of deeper, less predictable deadpool-avoidance reductions and greater uncertainty for water users. While any reduction is consequential, appropriately scaled, policy-based shortages[2] reduce exposure to abrupt emergency measures. Emergency authority may remain necessary as a backstop, but it cannot substitute for proactive management. This is borne out not only by the modeling, but also by the experience over the last 25 years, during which temporary or emergency measures have proven inadequate to prevent the steady decline in system storage.

2. Focus on deadpool and deadpool-related reductions in isolation masks escalating risk. While deadpool elevation represents a critical threshold, severe impacts to communities, economies, infrastructure, and ecosystems occur well before that endpoint is reached. Prolonged operation near critical elevations as highlighted in the Draft EIS impacts hydropower reliability, reduces operational flexibility, strains infrastructure, and increases ecological and delivery uncertainty, even when deadpool is technically avoided. Evaluating alternatives based solely on deadpool-related reductions obscures escalating risks of sustained low storage and masks meaningful differences among alternatives that defer impacts rather than reduce them.

3. The value of Decision Making Under Deep Uncertainty depends on its policy application. The DMDU framework provides a robust, science-based platform for evaluating risk under deep uncertainty. Its value lies not only in modeling a broad range of futures but in using those results transparently to compare alternatives and identify strategies capable of withstanding prolonged drought and uncertain water futures. The Draft EIS's vulnerability analyses help identify the hydrologic conditions under which alternatives begin to breach critical reservoir thresholds. This information can be used to frame what level of stress a post-2026 operating framework should withstand without triggering destabilizing outcomes. Executive

[2] For purposes of this letter, "policy-shortages" refers to the proactive, intentional shortages deployed as part of system operations as compared to reactionary reductions and shortages that are imposed to avoid deadpool, which are referred to as "deadpool-avoidance reductions."

Summary Tables ES-6 and ES-7 provide near-term context, while ES-4, ES-5, and Vol. 3, Technical App. 4, Figure TA 4-3 helps characterize longer-term vulnerability and robustness under sustained altered hydrology.

4. Effective operations must anchor to Basin trends - not optimistic recovery assumptions. The Draft EIS appropriately evaluates a broad range of hydrologic futures. However, robustness metrics effectively assign equal analytical weight to scenarios with high starting storage assumptions and wetter hydrologic futures, both of which are increasingly inconsistent with observed Basin conditions and trends. Current reservoir storage levels and recent water year hydrology make clear that these risks are not theoretical. Recent 24-Month Study projections indicate that critical infrastructure at Lakes Powell and Mead remains vulnerable under low-inflow conditions, with the likelihood of emergency actions prior to implementation of new operating guidelines growing. Because system performance is highly sensitive to initial reservoir elevations, assumptions of rapid, multi–million acre-foot recovery in 2026 can mask near-term vulnerabilities and understate the risk of early emergency actions.

Near-term system stability will depend heavily on operational decisions related to storage preservation, reliability, and risk management under realistic inflow assumptions. A focused five-year stress test using plausible post-2026 starting elevations and plausible yet critically low hydrologic conditions (as was conducted by Reclamation in 2022) would help identify the tools and authorities necessary to protect critical reservoir elevations, reduce reliance on emergency measures, and stabilize the system during its most constrained implementation period. Aligning analysis with observed trends and realistic initial conditions will better illuminate strategies capable of managing a hotter, drier, and more variable Basin future.

Over the longer term, meaningful performance differences among alternatives emerge under average-to-critically dry condition categories. For the Final EIS, greater emphasis should be placed on clearly presenting alternative performance across key metrics within the range of preceding three-year average Lees Ferry Natural Flows of approximately 8–13 MAF. Highlighting results in this planning-relevant band will better inform the development of practical operating guidelines that reflect prevailing Basin trends—without defaulting to worst-case assumptions—and support sound, risk-aware Post-2026 policy decisions.

5. Flexible tools are the linchpin of system reliability and should form the backbone of any selected framework. Near-term system functionality and long-term system reliability depend on scalable tools and strategies that can be activated before crisis conditions emerge. Verifiable conservation reserves or savings pools, hydrology-informed triggers, and operationally neutral exchanges between Lakes Powell and Mead can materially improve performance under sustained stress while creating structured opportunities for Tribal Nations and Basin water users to participate directly in stabilization efforts.

Alternatives lacking flexibility face greater risk of rapid storage decline and recurring emergency intervention. Rather than selecting a standalone alternative wholesale, the Final EIS should synthesize the most effective risk-reducing elements across alternatives into a coherent, tools-based preferred framework, and clearly identify the federal actions and authorities it will

rely on to operate the system. Properly structured and deployed, flexible tools can preserve critical elevations and reduce reliance on emergency releases—demonstrating how proactive management stabilizes the system before crisis conditions force reactive action.

6. Ecological integrity is foundational to system functionality, not a secondary impact. Declining storage, altered release patterns, and persistent low-flow conditions intensify ecological stress with direct consequences for water quality, water quantity, infrastructure reliability, regulatory compliance, and operational flexibility. Post-2026 operations that impair ecological conditions undermine long-term system reliability and increase operational, economic, and legal risk across the Basin.

The Draft EIS demonstrates that ecological outcomes are closely linked to reservoir elevations, release volumes, and temperature management. Flexible tools can serve not only reliability objectives but also ecological integrity and mitigation. Integrating ecological performance into the core design of post-2026 operations, including consideration of obligations under the Endangered Species Act (ESA), the Lower Colorado River Multi-Species Conservation Program (MSCP), and the Grand Canyon Protection Act (GCPA), will also allow ecological objectives to be addressed proactively rather than through emergency measures or supplemental processes.

7. Tribal Inclusion and federal trust responsibilities are essential. Given the scale and seniority of Tribal water rights in the Colorado River Basin and the federal government's trust responsibilities, no operating framework can be effective without structured, meaningful Tribal participation. Post–2026 operations must integrate Tribal Nations into governance, program design, conservation and storage mechanisms, mitigation strategies, and shortage administration in ways that respect sovereignty, protect settled and unsettled rights, and uphold settlement expectations.

8. Mitigation must be a component of post-2026 operations, not a deferred add-on. Deciding the post-2026 operations is about more than avoiding or minimizing the impacts of a federal action. It is about using federal authorities proactively to mitigate the effects of a drier, hotter, and more variable hydrology. A framework that preserves operability while allowing unmanaged harm to communities, Tribal Nations, and ecosystems is neither effective nor defensible under NEPA. Mitigation and resilience must be integrated into the considerations for designing an operating framework through long-term programming, sustained investment, and strong in-basin coordination to reduce compounding impacts, strengthen resilience, and minimize reliance on emergency interventions.

9. A credible framework must reduce risk through planning not emergency distributions. Operational performance within system-level metrics alone does not demonstrate operational success. A resilient framework must account for real-world consequences to municipal and industrial water supply reliability, Tribal water protections, ecological integrity, infrastructure, hydropower, and regional economies. Integrating system performance with resource-level impacts ensures that risk is transparently evaluated, proportionately managed, and substantively reduced—not simply assigned or transferred under duress.

10. Consensus is absolutely essential to secure stable post-2026 operations. The flexible tools, coordinated reservoir operations, and meaningful participation needed to stabilize the Colorado River system cannot be established or function at scale without agreement among the Basin States, Tribal Nations, the federal government, and key water users regarding how the "Law of the River" will be applied after 2026. A preferred alternative capable of meeting the Purpose and Need must be grounded in such consensus. Where agreement cannot be achieved, Reclamation should clearly identify the authorities it will exercise and those it will seek to secure to operate the system responsibly while preserving pathways for future negotiated solutions.

Whether these priority takeaways can be carried forward into a legally supported and operationally credible Record of Decision depends on the clarity, transparency, and application of the underlying analytical frameworks. Accordingly, the following sections review the strengths of the Draft EIS's analytical foundation and identify targeted refinements that would help to ensure the Final EIS fully informs decision-makers about risk, tradeoffs, and real-world consequences.

II. Analytical Foundation: Strengths and Opportunities for Clarification and Refinement

The Draft EIS reflects substantial analytical effort in Colorado River planning. Supported by extensive system modeling, performance metrics, and robustness and vulnerability assessments, Reclamation's application of a DMDU framework provides a technically useful foundation for evaluating post-2026 operational strategies in a basin defined by climatic non-stationarity and compounding risk.

By moving away from reliance on probabilistic or deterministic futures, the Draft EIS appropriately embraces uncertainty as a central planning condition. The use of large ensembles of hydrologic traces, combined with comparative performance metrics, allows the analysis to stress-test operational elements across a wide range of possible futures and to illuminate where flexibility, early action, and coordination improve system performance. (See e.g., Vol. 1, Ch. 3, pp. 3-10-22; Vol. 2, Apps. E & F). This represents a clear advancement over prior guideline evaluations and aligns with best practices in water resources planning.

The Draft EIS also demonstrates analytical transparency through system-level performance indicators, including reservoir elevations, storage trajectories, release volumes, shortages to water users, and conditions under which these indicators approach or cross critical thresholds. (See Vol. 1, Ch. 3, pp. 3-10 - 3-22; Vol. 2, App. E). These metrics provide a common basis for comparing alternatives and help clarify how different operational approaches influence overall system stability and infrastructure protection. The inclusion of sensitivity analyses examining inflow ranges, starting conditions, and parameter choices further strengthens the analytical record by acknowledging that outcomes depend on assumptions and boundary conditions. (See Vol. 2, Apps. D, H, J, K, and O).

Importantly, the Draft EIS begins to clarify tradeoffs among operational objectives, including storage preservation, delivery reliability, infrastructure protection, and ecological considerations. (See Figure ES-5, p. ES-21). The comparative presentation of alternatives makes clear that no single alternative analyzed in the Draft EIS eliminates risk under extreme drought, but that certain tools and approaches consistently perform better under these conditions. This insight directly supports the Purpose and Need for post-2026 guidelines and provides a credible platform for identifying risk-reducing operational elements.

Collectively, this analytic framework reflects a clear effort to integrate science-based decision support into federal reservoir management. When rigorously applied and transparently interpreted, the analytical structure adopted in the Draft EIS can support informed decision-making regarding operation of the Colorado River system under prolonged drought and deep uncertainty.

At the same time, the full value of this analytical foundation depends on how modeling choices, assumptions, performance metrics, and results are interpreted and carried forward into comparative evaluations and impact analysis. Certain aspects of the Draft EIS constrain its ability to illuminate the most likely risks facing the Basin and the real-world consequences of alternative operating approaches. The targeted clarifications and refinements identified below are recommendations to help strengthen transparency, sharpen comparative evaluation, and enhance policy relevance and practical application in the Final EIS, supporting a Record of Decision that reflects rigor and clarity consistent with both NEPA's purpose and the Administration's commitment to "Restoring Gold-Standard Science" in policymaking. Detailed technical discussion is provided in Technical Comment Appendix A.[3]

A. Aligning Analysis with Observed Hydrologic Trends

The Draft EIS appropriately employs a broad ensemble of hydrologic futures to evaluate the alternatives. Consistent with DMDU principles, the evaluation does not optimize for a single projected outcome. However, in practice, the analysis risks treating all futures as equally informative, including wetter recovery scenarios that are increasingly inconsistent with observed Basin trends.

The Draft EIS itself acknowledges that "Recent history combined with the increasing temperature trend, which is associated with lower streamflow, suggests that focusing more on the Average and Dry categories is warranted. However, Critically Dry conditions have been observed and could become more common" (See Vol. 1, Ch. 3, p. 3-15). This consequential planning judgment should be consistently reflected in the presentation and weighting of results.

[3] Specific comments on the Draft EIS modeling framework, performance metrics, and interpretation of results are intentionally provided in the Technical Comment Appendix A to avoid overburdening the main narrative while ensuring that reviewers and decision-makers have access to a broad assessment of how analytical choices may influence the reported outcomes.

Across many figures and summaries of resource impacts, Wet through Critically Dry categories are presented with equal visual and interpretive emphasis, implicitly suggesting equal planning relevance. This framing dilutes focus on the inflow conditions that most clearly differentiate operational performance under sustained low flows. (See Section III, Alternatives Evaluation, below). It consequently risks favoring alternatives that perform well under wetter futures but are less robust under sustained Average-to-Dry and Critically Dry conditions, hydrologic regimes that the Draft EIS identifies as more consistent with recent history and increasing temperature trends.

This issue is compounded by assumptions regarding initial starting reservoir conditions. (See Vol. 2, App. G). The high- and middle- initial storage scenarios assume recovery volumes on the order of multiple million acre-feet increases at Lakes Powell and Mead within short timeframes. Such assumptions are difficult to reconcile with current reservoir levels, hydrologic conditions, and near-term forecasts. (See Technical Comment, App. A, pp. 4-5). As the Basin regularly experiences with the modeling as applied under the present-day guidelines, optimistic assumptions regarding starting points or other aspects of reservoir operations can mask near-term vulnerability and understate the likelihood of exposure to emergency conditions in the next few years.

The Final EIS can improve planning relevance by: (a) elevating and prioritizing analysis and interpretation of Average, Dry, and Critically Dry flow categories in figures and comparative summaries, consistent with the DEIS's own narrative with particular emphasis on sustained average-to-below-average and sustained hot-dry flow ensembles; and (b) constraining initial starting reservoir conditions to reflect current and plausible near-term storage trajectories. (See e.g., U.S. Bureau of Reclamation, *24-Month Study Projections for the Colorado River Basin,* (2026, February); NRCS/NWCC Upper Colorado Region SWE Plot, accessed February 2026), Together, these refinements would sharpen comparisons among alternatives, align the analysis more closely with observed and projected conditions, and better support the Purpose and Need to reduce reliance on emergency actions that have been used to sustain the system over the past 25 years.

B. Deadpool or Deadpool-Related Reductions as Indicators of System Stress

Deadpool and deadpool-related reductions are consequential thresholds, and their inclusion as performance indicators in the Draft EIS modeling provides useful insight into extreme system outcomes. However, significant operational, ecological, Tribal, and socioeconomic impacts occur well before those thresholds are reached. Alternatives may technically avoid deadpool while operating for prolonged periods at elevations just above deadpool, resulting in sustained policy shortages, declining hydropower reliability, infrastructure stress, and reduced operational flexibility. (See Technical Comment App. A, Section III.C).

Because deadpool outcomes and deadpool-related reductions are analyzed separately from policy shortages, the Draft EIS does not consistently show how long the system operates in degraded conditions, how close alternatives remain to critical thresholds, or whether impacts are reduced or merely deferred. As illustrated in Section III - Alternatives Evaluation, below, the

separation of policy-based shortages from deadpool avoidance reductions can mask the ways in which system stress accumulates and impacts compound, obscuring tradeoffs between early, managed action and deeper, involuntary cuts imposed under emergency conditions.

Metrics capturing proximity to critical elevations, duration of impaired operations, and the combined magnitude and timing of planned and emergency reductions would provide a more realistic depiction of stress on the system. Presenting policy shortages and deadpool avoidance reductions together as total shortages in single graphs with marked thresholds of where the policy shortages end and the deadpool avoidance reductions begin would also more clearly illustrate tradeoffs among different operating alternatives. (See Technical Comment Appendix A, Section V). Providing this information would better support the identification of a post-2026 operating framework capable of managing under drier conditions rather than deferring systemic risk until crises force action.

C. Translation of Modeled Outcomes to Resource-Level Impacts

While the Draft EIS includes robust system-level modeling, those results are not consistently carried through to resource-specific impact analyses. Modeled shortages, low-elevation operations, and extreme conditions do not regularly translate into impacts described for water supply reliability, ecosystems, Tribal resources, infrastructure, recreation, or local economies.

Concrete examples, which are detailed in Technical Appendix A, Section VI, include:

- Shortage frequency and duration should be used not only to define impacts to irrigated agriculture but also in the assessments of municipal, industrial, and Tribal economic impacts;
- Modeled shortages to National Wildlife Refuges and irrigation districts supplying Lower Colorado River Multi-Species Conservation Program habitats should be consistently reflected in vegetation, wildlife, and refuge analyses;
- Extended operation near minimum power pool should be carried into analyses of water supply reliability for key sectors as well as infrastructure stress;
- Salinity projections should be considered in the alternatives analysis, including evaluation of how salinity management under each alternative influences Lake Mead releases, storage trajectories, and water supply outcomes;
- Modeled outputs should be linked to qualitative and quantitative impact conclusions specific to Grand Canyon National Park, allowing for clearer comparison of ecological risk and long-term resource outcomes across alternatives; and
- Timing and duration of resource impacts should receive as much attention and interpretation as to whether impacts occur at all.

Strengthening the linkages between modeled outcomes and real-world consequences for water supply reliability, Tribal resources, ecosystems, local economies, infrastructure, and public health would offer important insight into who bears risk, when impacts occur, and how long degraded conditions persist under different alternatives.

Together, these topics regarding further clarification and refinement – summarized in Table 1 – represent opportunities to align the analysis more closely with the hydrologic conditions the Basin is most likely to face and clarify tradeoffs between proactive management and deadpool avoidance outcomes in support of selecting a post-2026 operating framework that is both effective and defensible.

Table 1: Analytical Foundation – Summary of Strengths and Opportunities for Clarification and Refinement			
Topic	**Location in Draft EIS**	**Observation and Why It Matters**	**Recommendation for Final EIS**
DMDU Framework & System Modeling (Strength)	Vol. 1, Ch. 3 - Affected Environment, pp. 3-10-22; Vol 2, App. E – DMDU Overview and Approach	Robust application of DMDU with large hydrologic ensembles, performance metrics, sensitivity analysis, and vulnerability assessment. Strong foundation for climate-informed planning.	Maintain and clearly apply DMDU in comparative evaluation; ensure consistent interpretation of modeling outputs; and carry performance insights through to impact conclusions to support transparent and defensible decision-making.
Alignment with Observed Hydrologic Trends	Vol. 1, Ch. 3 (p. 3-15); Vol. 2, App. F - Hydrologic Uncertainty; figures summarizing Wet–Critically Dry categories	All hydrologic futures are presented with equal visual emphasis, including wetter recovery scenarios that are increasingly inconsistent with observed trends. This framing risks obscuring the inflow conditions that most clearly differentiate alternative performance under sustained low flows.	Focus on Average, Dry, and Critically Dry categories (e.g., 8–13 MAF range) in conclusions, figures, and summaries; provide a near-term stress test with plausible post-2026 starting conditions and assuming low-flow conditions to provide a comparative evaluation consistent with observed trends.
Initial Reservoir Starting Conditions	Vol. 2, generally, Apps. B & G specifically; figures and tables in Vol. 1 & technical appendices)	High- and middle-storage scenarios assume rapid multi-MAF recovery, inconsistent with current conditions and forecasts, potentially masking near-term vulnerability.	Constrain starting reservoir conditions to reflect current and plausible near-term storage levels; clearly present declining or constrained starting conditions.
Deadpool as Proxy for System Stress	Vol. 1, Ch. 3 - Affected Environment (Performance Metrics); Vol. 2, App. O, Analysis of Powell Infrastructure Protection Releases	Deadpool and related reductions are emphasized as key thresholds, yet severe impacts occur well before storage approaches deadpool. Focus on this indicator as the proxy for system stress oversimplifies risk and masks resource impacts occurring before deadpool, including loss of flexibility and escalating emergency exposure.	Incorporate metrics showing proximity to critical elevations, duration of impaired operations, and accumulated system stress as central stress tests within DMDU.

Table 1: Analytical Foundation – Summary of Strengths and Opportunities for Clarification and Refinement			
Topic	**Location in Draft EIS**	**Observation and Why It Matters**	**Recommendation for Final EIS**
Separation of Policy Shortages and Deadpool Avoidance Reductions	Vol. 1, Ch. 3 (Performance Results); Vol. 1, Ch. 3 - (Affected Environment - Water Deliveries); see also, Technical Comment App. A, Section III.C	Policy shortages and deadpool avoidance reductions are presented separately, obscuring cumulative water unavailable to users (total reductions) and masking tradeoffs between early managed action and deeper emergency cuts.	Present total shortages (policy + deadpool avoidance) in integrated figures with clear thresholds; compare timing, magnitude, and duration of reductions across alternatives.
Duration and Proximity to Thresholds	Vol. 1, Ch. 3 (Assumptions on Operations Under Extreme Conditions)	Draft EIS does not consistently show how long the system remains near critical elevations or under degraded operations. Duration and proximity are central to evaluating operational fragility and long-term resilience.	Add metrics tracking duration near key elevations, frequency of threshold proximity, and persistence of impaired conditions to better evaluate durability.
Translation to Resource-Level Impacts	Vol. 1, Ch. 3 (Affected Environment and Environmental Consequences - Comparative Analysis); Vol. 3 Resource chapters.	System modeling results are not consistently linked to consequences for municipal & industrial reliability, Tribal resources, ecosystems, infrastructure, recreation, or local economies. This limits understanding of who bears risk, when impacts occur, and whether impacts are reduced or deferred.	Explicitly connect modeled elevations, shortages, and release patterns to sector-specific and geographic impacts, including timing and duration.
Municipal, Industrial & Tribal Economic Impacts	Vol. 1, Ch. 3 (Affected Environment and Environmental Consequences - (Socio Economics); Vol. 2 - Shortage Modeling Appendices (i.e., Apps. C & H)	Economic impacts of shortages beyond agricultural considerations are not included. Understates risks to public health, housing, energy systems, employment, and Tribal economies.	Link modeled shortage, frequency, magnitude, and duration to municipal, industrial, and Tribal economic impacts and resilience indicators.

Table 1: Analytical Foundation – Summary of Strengths and Opportunities for Clarification and Refinement			
Topic	**Location in Draft EIS**	**Observation and Why It Matters**	**Recommendation for Final EIS**
Lower Colorado River & Refuge Impacts	Vol. 1, Ch. 3 pp. 3-89 -3-118 (Biological and refuge sections); Technical Appendix 8 - Fish & Aquatic Resources	Modeled shortages to refuges and MSCP areas are not consistently reflected in vegetation and wildlife analyses.	Integrate modeled flow and elevation outcomes with established refuge and MSCP analytical methods for clearer alternative comparison.
Impacts to Resources in the Grand Canyon	Vol. 1, Ch. 3; Vol. 3, Technical Apps. 5, 8, and 9.	Alternative-specific ecological consequences for Grand Canyon National Park are not consistently synthesized.	Provide clear translation of modeled differences into impact conclusions specific to Grand Canyon resources, including sandbar persistence, riparian condition, ESA species recovery, and cumulative ecosystem stress.
Hydropower & Infrastructure Stress	Vol. 1, Ch. 3, pp 3-160-3-171(Dams & Electrical Power Resources); Vol. 2, modeling figures	Extended operation near minimum power pool not fully carried into reliability and infrastructure risk analyses.	Evaluate infrastructure stress and hydropower reliability implications under sustained low elevations and incorporate into comparative performance summaries.

III. Alternatives Evaluation - Tools-Based Comparison

The Draft EIS presents alternatives as discrete operational packages combining different rules, coordination mechanisms, and shortage responses. However, the results show that long-term system performance might be best under guidelines that incorporate elements and tools from more than one alternative —and that effective operations depend on how early, flexibly, and coherently those tools are applied. The Draft EIS acknowledges that "Reclamation may refine these Draft EIS alternatives or develop additional alternatives for the Final EIS" (Vol. 1, Executive Summary, p. ES-9).

Viewed through a tool-based lens, the Draft EIS offers insights into which operational elements help improve system stability, provide predictability, reduce reliance on emergency operations, and offer opportunities to embed environmental operating considerations under variable conditions. This perspective is particularly relevant for the Final EIS as it allows decision-makers to identify which components should be carried forward, refined, or combined into a preferred alternative capable of meeting the Purpose and Need for any future federal action.

A. Key Emerging Patterns from Draft EIS Results

1. Early, scalable action under average to low annual inflows informs effective system operations. The Draft EIS shows that meaningful performance differences among alternatives emerge under sustained average-to-critically dry conditions, as defined by the preceding three-year average Lee Ferry Natural Flow. Exploring each alternative's performance across key metrics within ~8–13 MAF range of these categories will be informative to develop operating guidelines that reflect reasonable trends in the Basin. This range reflects recent hydrologic experience and avoids assigning equal weight to optimistic recovery scenarios or to rare, multi-year dry extremes that no currently contemplated policy is likely to fully manage. Alternatives that incorporate earlier, scalable actions (such as Maximum Operational Flexibility (MOF) and Enhanced Coordination (EC) alternatives) maintain higher elevations and reduce reliance on emergency interventions under these conditions, while delayed or constrained approaches show steeper storage declines and greater exposure to crisis-driven measures. (See Table ES-4, p. ES-23).

Table G-2 (Vol. 2, App. G) further indicates that average annual Lee Ferry natural flow during the 2020s has been approximately 11.1 MAF, and Water Year 2026 is trending toward potentially record-low inflows that may require federal action prior to issuance of a Record of Decision for Post-2026 operations. These conditions reinforce the conclusion that Basic Coordination (BC) and certain Supply-Driven (SD) configurations may be insufficient to manage a continuation of recent hydrologic trends over the Post-2026 operating period (see Executive Summary, Table ES-6).

Accordingly, the Final EIS would benefit from a complementary five-year stress test using plausible post-2026 starting elevations and representative average annual inflows of approximately 9.5, 11, and 13 MAF. This focused analysis would help identify the operational tools and authorities necessary to stabilize reservoirs, protect hydropower production and

regulatory compliance, and minimize reliance on emergency measures during the most constrained implementation period. Such refinement would not replace the long-term DMDU framework; rather, it would strengthen it by ensuring that Post-2026 guidelines are resilient in the near term—when storage is limited, risks are elevated, and policy decisions carry the greatest consequence.

2. Tradeoffs between policy shortages and deadpool risks are relevant to operational decisions—and must be evaluated together. Alternatives that incorporate earlier policy-based shortages—most notably MOF and EC—are substantially more effective at limiting deep, emergency interventions, particularly under dry and critically dry hydrologies. Conversely, alternatives that limit policy shortages (including No Action, BC*,* and SD variants) experience significantly greater exposure to deadpool-related risks and reductions, exceeding in some cases the magnitude of policy shortages applied under MOF and EC. (See Vol. 1, Ch. 3, Figures 3-12, 3-13, and 3-14; Vol. 3, Technical App. Figures 4-1, 4-2 and 4-3). As discussed further in Section VI of Technical Comment Appendix A, the relative risks and benefits of alternatives are confounded or understated if policy shortages and deadpool-related reductions are not considered together. For example:

- Major Lower Basin municipal contractors face increasing constraints on access to and conveyance of water as Lake Mead approaches minimum operating levels, well before deadpool.
- Ecological systems experience compounding stress as altered flow regimes and declining elevations affect riverine, riparian, and refuge-dependent habitats prior to basin-scale failure.
- Tribal trust responsibilities and delivery reliability may be affected by changes in release timing or flexibility not captured by deadpool metrics.
- Hydropower reliability is increasingly compromised as head decreases and reservoir levels decline.

In short, the central question for deciding post-2026 operations must not simply be which approach avoids deadpool, but which tools and framework reduce prolonged exposure to degraded conditions and limit reliance on emergency operations.

3. Shortage distribution methodology materially affects outcomes and implicates unresolved governance questions. The timing of Lower Basin shortages and resulting system performance depends in part on whether shortages are distributed on a priority or pro rata basis (compare impacts of Lake Mead elevations for the Supply Driven (LB Priority) versus Supply Driven (LB Pro Rata) in Vol. 1 Ch. 3, Figure 3-10; Vol. 3, Technical App. 18). However, some alternatives had modeled certain pro rata reductions by assuming individual contractor shortages rather than attributing pro rata reductions at the interstate level while maintaining prior appropriation for intrastate reductions. (See Vol. 2, App. B- Modeling Assumptions; Vol. 3, Technical App. 18). This modeling choice materially influences performance results while implicitly deciding legal, contractual, and governance questions that are not the purview of the Draft EIS.

While this comment letter does not take a position on whether a pro rata or priority-based shortage distribution framework should govern post-2026 operations, the Final EIS should clarify and focus its analysis of any pro rata component on how it would be structured and applied among the states. Any additional pro rata considerations, if required, should be accompanied by expressly stated assumptions that explain the need for and reasoning of assigning pro-rata distributions among water users within a state.

4. Flexible management tools materially improve performance—and their value should be made fully visible in results. As further clarified in Section V below, several flexible tools are important to the efforts needed to stabilize the system and provide opportunities for maintaining social, economic, and ecological integrity of the Basin. These tools are most fully developed in the MOF and EC alternatives (e.g., flexible storage and movement of conservation pool water as needed, including resource management as part of reservoir operations) and are partially incorporated in the SD alternatives. However, the Draft EIS does not consistently report how often these tools are activated, how full conservation pools become, how frequently water is moved between reservoirs, or how environmental objectives modify releases. Nor do they report how the tools can be used to mitigate risk. (See e.g., Figures 1A and 1B in Technical Comment App. Section V). As a result, the performance benefits of flexibility—particularly the conservation pools—are understated in the analysis.

In addition to conservation and storage pools, certain Draft EIS alternatives incorporate hydrology-informed release mechanisms and shortage triggers that respond to observed conditions. Alternatives that integrate recent hydrologic conditions into release decisions and shortage triggers—such as the rolling average approach in EC, the climate response indicator in MOF, and the hydrology-driven structure of SD—demonstrate how responsive, flexible frameworks can reduce reliance on emergency authority. As drying trends continue, operational approaches that factor in observed conditions rather than historical assumptions will become increasingly important.

Recent hydrologic conditions underscore this principle. If comparable conditions arise under new guidelines, verifiable conservation pools combined with coordinated reservoir exchanges could preserve critical elevations at Lake Powell without impairing water rights or deliveries. Such tools would reduce reliance on emergency releases, including measures similar to those adopted under the 2024 Supplemental EIS, demonstrating how integrated flexibility manages risk proactively rather than reactively.

5. Comparative evaluation of conservation/contribution and storage pool design is necessary to identify what works. The Draft EIS includes multiple conservation, contribution, and storage pool strategies across alternatives, but these mechanisms are not directly comparable in structure or application. (See Executive Summary, pp. ES-12-14; Vol. 1, Ch. 2, pp. 2-40-42). For example, MOF is designed to accommodate continued implementation of operations under the Long-Term Experimental and Management Plan (LTEMP) and preserves the greatest capacity to implement future High Flow Experiments. The EC alternative, on the other hand, provides entity-level accounting and explicit provisions for Tribal inclusion, enabling crediting of conservation actions, prioritization of protections, evaluation of Tribal contributions to

system stability, and implementation of compensation or leasing mechanisms. (See Vol. 2, App. B, Tables B-10 - B13 and Vol. 3, Technical App. 18). While the MOF and SD alternatives allow for Tribal participation, they do not provide the same specificity or structural integration of Tribal water into flexible management tools. (See Vol. 2, App. B, Tables B-22, -26, -27, and -30). These alternatives also consider varying levels of Upper Basin contributions to operationalize the pools (SD up to 200 KAF; MOF averaging 200 KAF with a 0–500 KAF range depending on hydrology). (See Vol. 1, Chap. 2, pp. 2-41-42).

A clear, side-by-side comparison of how these different pools function (how water is credited, stored, mobilized, protected, and compensated) would help to avoid overstating parity among alternatives and understating the significance of key design features as part of the EIS analysis. A transparent comparison in the Final EIS would also help decision-makers identify key tools to incorporate into the preferred alternative by determining which elements meaningfully enhance flexibility, participation, and system stability, and which are unlikely to perform as effectively at scale. (See Section I.B of Technical Comment Appendix A for a broader discussion on recommended comparison considerations in the Final EIS).

6. Maximum theoretical shortage caps built into different alternatives do not reflect likely outcomes. While the MOF alternative authorizes up to 4 MAF in policy shortages, modeled results show reductions above 3 MAF are rare and occur only under extreme conditions. Conversely, alternatives that limit early policy-based shortages—such as BC and SD variants—encounter a greater risk of deadpool-related reductions (up to ~6.0 MAF in some scenarios). (See Vol. 1, Ch. 3, Figure 3-12; Vol. 3, Technical App. 4, Figures 4-1 and 4-2). Under critically-dry conditions, all alternatives show similar total shortages to Lower Basin users. When policy shortages and deadpool-related reductions are evaluated together as total water unavailable, the relative risk profile of the alternatives shifts between planned and unplanned responses. The central tradeoff is not the size of authorized policy cuts, but whether early, managed reductions reduce prolonged exposure to degraded conditions and emergency interventions.

7. Deadpool and emergency operations to avoid deadpool are a symptom of framework fragility. The Draft EIS reveals alternatives that regularly approach or trigger critical thresholds, risk loss of entire water supplies for Tribal Nations or municipalities, and create unacceptable and potentially irreversible ecological and socioeconomic consequences. Reliance on such emergency authority signals operational fragility rather than resilience. For the Basin to move beyond perpetual crisis management toward operations that proactively maintain storage, provide predictability, and protect critical infrastructure, alternatives that heavily rely on emergency responses should not be considered viable long-term solutions.

8. Supply-Driven outcomes depend heavily on parameter choices and warrant refinement and potentially additional review. The SD alternative at a 65% parameter improves Lake Mead elevations, but does so largely by transferring risk to Lake Powell, increasing reliance on Initial Units, and accelerating depletion of Upper Basin storage. Sensitivity analyses indicate that lower percentages (e.g., 62–64%) could distribute risk more evenly between reservoirs and reduce reliance on Powell Infrastructure Protection releases, suggesting that the SD framework

has potential value if carefully calibrated. (See Vol. 2, Appendix D – Sensitivity Analysis (Effects of Natural Flow % for SD)).

The SD alternative also relies on "gap water" (See Vol. 1, Ch. 2, pp. 2-35), which underscores the Draft EIS's acknowledgement that integrating the SD options into the final guidelines implicates additional actions that would require affirmative state cooperation and additional NEPA review in the Upper Basin. The use of gap water represents a significant policy and operational choice with potential implications for Upper Basin water users, storage behavior, and environmental conditions that are not fully explored in the current analysis. If the SD alternative elements are carried forward, further refinement and focused evaluation will be necessary to ensure that parameter selection, gap water use, and associated risks are transparent and consistent with NEPA requirements as well as other applicable laws.

9. Basic Coordination requires additional measures to be effective. The BC alternative, as formulated in the Draft EIS, lacks the predictability, flexibility, and resilience needed to manage a continuation of current drought conditions and the uncertainties anticipated in the near term or over the full post-2026 guideline period. As defined, this alternative relies on limited coordination and constrained operational tools, and the analysis indicates this increases the risk of more frequent declines below key elevation thresholds and a greater likelihood of emergency or exigent operations.

The Draft EIS acknowledges that, under BC, Reclamation may need to employ "additional measures to protect critical infrastructure," including further reductions to Lake Powell releases and expanded use of CRSP Upper Initial Units. (See Vol. 1, Ch. 2, p. 2-15). However, as discussed in Section IV, below, the BC alternative must be modified to incorporate additional flexible operations and clearly defined management strategies if it is to function as a credible operational framework—even in the near term. Absent these modifications, BC risks deferring critical operational and governance decisions until crisis conditions force action outside the analyzed framework.

10. Ecological tradeoffs are real but can be managed through flexible tools like the Conservation Reserve or similar storage pools in the Upper and Lower Basins. Most biological resources benefit from higher and more stable Lake Powell and Lake Mead elevations and from larger, more consistent releases. This is particularly true in the Lower Basin, where increased releases improve salinity dilution, support habitat under the MSCP, and enhance delivery reliability to Mexico. Consistent with these dynamics, the MOF and EC alternatives most reliably support basin-wide ecological integrity.

At the same time, the analysis demonstrates that higher reservoir elevations introduce important tradeoffs, including reduced upstream riverine habitat near the Colorado and San Juan River inflows and inundation of the Piute Farms Waterfall above approximately 3,660 feet, which currently limits the spread of non-native warmwater predators. (See Vol. 1, Ch. 3, p. 3-149). Downstream temperature management presents similar tensions, underscoring that ecological outcomes depend on balancing elevation, temperature, habitat availability, and species response. (See Vol. 3, Technical App. 8, p.8-48).

These tradeoffs cannot be resolved through static rule curves alone. Rather it is through operationally neutral tools, such as the Conservation Reserve and storage pools embedded in MOF and EC, that options for navigating these dynamics can be introduced to enable adaptive deployment of conserved water. For example, a verifiable conservation pool in Lake Powell could provide Reclamation with the ability, when hydrologic conditions warrant, to limit maximum annual releases to approximately 10 MAF or below in order to reduce sediment-scouring flows in the Grand Canyon, while preserving infrastructure protections and compact compliance. (See generally, Vol. 1, Ch. 2 – MOF alternative release provisions and coordinated operations; Vol. 3, Technical App. 8 (sediment mass balance and sandbar response to release magnitude)). Such flexibility illustrates how integrated tools can manage ecological objectives proactively rather than through reactive or emergency adjustments.

B. Implications for the Final EIS

The Draft EIS demonstrates that system stability and predictability are achieved through early action, flexibility, and coordinated use of storage across the system. To this end, the Draft EIS analysis supports moving away from a binary comparison of alternatives and toward a tools-based evaluation that identifies which operational elements consistently improve outcomes. It will therefore be important for the Final EIS to:

> *Carry forward operational elements from MOF, EC, and SD alternatives that demonstrably stabilize the system, support ecological integrity, enable Tribal participation, preserve binational cooperation, and reduce reliance on emergency operations.*

To assemble a preferred alternative that reflects what the analysis shows works in the face of an uncertain water future, the Final EIS should also:

- Explicitly compare how individual tools perform across alternatives under sustained low-flow conditions;
- Integrate policy shortages and deadpool-related reductions to reflect the full scope of water unavailable to users;
- Clarify how flexible tools—especially conservation and storage mechanisms—are activated and mitigate risk;
- Refine the parameter-sensitive alternatives in the SD approaches; and
- Integrate ecological tradeoffs into operational design.

IV. Basic Coordination Alternative - A Bridge Operation?

The Draft EIS acknowledges that the BC alternative may be the option Reclamation can implement absent basin-wide consensus. It also recognizes that, as currently formulated, this alternative does not fully meet the Purpose and Need and is unlikely to sustain the Colorado River system over the full post-2026 period. (See Vol. 1, Ch. 2, pp. 2-11). As defined, BC functions at best as a limited operational bridge. If it is to serve that role responsibly, it must be strengthened in the Final EIS.

BC relies on limited shortages, constrained tools, and minimal coordination. (See Vol. 1, Ch. 2, pp. 2-11-15). Without deeper analysis of the operational consequences of this approach, the alternative risks repeated declines below critical elevation thresholds and greater reliance on emergency or exigent operations without evaluating the associated risks to Basin resources. The Final EIS should thoroughly assess the sustained impacts of operating under constrained coordination, including the potential for extended run-of-the-river conditions and the resulting implications for ecological stability alongside effects to storage trajectories, infrastructure reliability, water supply certainty, hydropower production.

While the Draft EIS anticipates that Reclamation may employ "additional measures to protect critical infrastructure" including further reductions in Lake Powell releases and expanded use of CRSP Upper Initial Units (See Vol. 1, Ch. 1, p. 1-31; Ch. 2, pp. 2-11-15), the authorities, decision triggers, and governance processes for implementing such measures are not clearly articulated.

To avoid institutionalizing emergency management as the default operating posture, the Final EIS should explicitly identify the full suite of existing federal authorities that could support more proactive and flexible management under BC and clarify which authorities Reclamation intends to operationalize. In addition to core elements of the Law of the River that govern allocation, appropriation, development, and exportation of the waters of the Colorado River Basin (namely, Colorado River Compact, the Upper Colorado River Basin Compact, the Water Treaty of 1944 with Mexico, the decree of the Supreme Court in *Arizona v. California*, the Colorado River Storage Project Act of 1956 and the Colorado River Basin Project Act of 1968), this analysis should address whether and how it will execute, at minimum, authorities under the:

- 1902 Reclamation Act (as amended),
- 43 Code of Federal Regulations Part 417, Boulder Canyon Project Act Lower Basin Water Conservation Measures
- Applicable Records of Decision for the Upper Initial Units authorized under the Colorado River Storage Project Act and major Lower Basin facilities,
- Upper Colorado River and San Juan River Recovery Implementation Programs,
- Endangered Species Act,
- Grand Canyon Protection Act and related Long-Term Experimental and Management Plan,
- Authorizing legislation and contracts governing federal facilities, relevant Tribal water settlements and trust responsibilities, and
- Salinity control obligations under the Salinity Control Act and Treaty Minute 242.

Clarifying how Reclamation will invoke these and other authorities (and how they would enable coordinated reservoir management, conservation and storage mechanisms, transactional water sharing, and infrastructure protection) will make clear whether BC can function as a credible interim framework rather than one that defers difficult decisions until crisis conditions force action outside the NEPA-assessed framework.

V. Role and Risks of Emergency and Exigent Operations

Across all alternatives, Reclamation retains the authority to invoke emergency or exigent operations to avoid critical thresholds, including deadpool. (See Vol. 1, Ch. 1, p. 1- 31; Ch. 2, p. 2-11-15). The Draft EIS makes clear, however, that some alternatives rely on this emergency lever far more frequently than others. A post-2026 framework that depends repeatedly on emergency measures is, by definition, not providing the predictability, stability, or durability that the Basin needs—and does not satisfy the Purpose and Need of the proposed action under NEPA.

Even under more resilient operational frameworks, there may be circumstances in which emergency measures remain necessary. For any such measures, transparency regarding the role, scope, and consequences of emergency operations remains essential. The Draft EIS relies on generalized references to emergency authority without clearly disclosing how, when, or how often such measures would be triggered or used, or what their impacts would be. (See Vol. 1, Ch. 2, pp. 2-13-15). This omission limits the ability of decision-makers and the public to evaluate whether an operating framework meaningfully reduces reliance on crisis-driven management—or simply institutionalizes it.

Alternatives should be evaluated in the Final EIS not only based on whether emergency actions could theoretically avert worst-case outcomes, but on how effectively each alternative minimizes the likelihood and frequency of emergency operations. Frameworks that reduce dependence on emergency interventions and clearly define the role, limits, and consequences of those interventions when they remain necessary should be prioritized.

To this end, the updated analysis needs to move beyond generalized references to emergency authority and provide greater clarity on:

- The process that would be implemented to outline emergency measures or specific actions that would be taken under such measures, including how they would interact with existing shortage provisions, release rules, and operational constraints;
- An estimation of the potential duration and scope of emergency actions, and how they would transition back to normal operations; and
- The impacts of emergency measures on water users, Tribal Nations, ecosystems, and critical infrastructure.

The Final EIS would benefit from additional clarity by describing:

1. **Defined triggers and decision points:** Clarifying the quantitative conditions that function as “triggers” or “tiers” (e.g., elevation bands, infrastructure thresholds, minimum power pool proximity, deadpool-related reduction risk) that may prompt consultation, coordination, or consideration of additional measures, rather than referencing unspecified future actions.
2. **Guardrails distinguishing emergency measures from planned operations:** Describing the intended limits on duration, scope, and frequency of emergency

measures (e.g., short-term stabilization objectives; review and transition back to guideline operations; criteria for escalation and de-escalation), to distinguish temporary responses from core operating frameworks.

3. **Impact and mitigation linkage:** Outlining, where practicable, the primary affected resources associated with each trigger or tier and the mitigation approaches that could reasonably be deployed concurrently with or following stabilization actions, to improve transparency regarding potential impacts.
4. **Process transparency and coordination:** Further describing consultation and coordination processes (including with Tribal Nations and Mexico, as well as the Glen Canyon Dam Adaptive Management Work Group, the Upper Colorado River and San Juan River Recovery Programs, and the Lower Colorado River Multi-Species Conservation Program) before and during emergency actions when feasible, along with documentation procedures when immediate action is required.
5. **Integrated reporting tied to performance metrics:** Explaining how emergency actions would be reported in relation to relevant performance metrics—particularly deadpool-avoidance reductions and shortage magnitudes—to support understanding of how such measures influence overall system performance under each alternative.

Providing this information would help inform the potential frequency and implications of deadpool-avoidance and emergency operations and support evaluation of how alternatives address reliance on crisis-driven management.

VI. The Importance of Flexible Tools and Strategies.

The Draft EIS analysis demonstrates that proactive, scalable, and flexible management tools are the linchpin of any successful post-2026 operational framework for the Colorado River system. (See Vol. 1, Ch. 3, pp. 3-50-51, Figure 3-1(dead pool robustness and vulnerability comparisons); Technical App. 8, p. 8-73 (adaptive alternatives achieve preferred performance under drier conditions)). Alternatives that lack these tools place the Basin at the highest risk of system and resource failure and increase the likelihood that Reclamation will be forced to rely on emergency or exigent operations under plausible water futures. (See Vol. 1, Ch. 2, pp. 2-11-15 (absence of conservation/storage tools under BC; reliance on emergency authority)). In contrast, alternatives that incorporate flexible management strategies are the only frameworks that show potential to meet the Purpose and Need while sustaining Basin communities, economies, infrastructure, and ecosystems in the face of uncertain water futures. (See Vol. 1, Ch. 1, pp. 1-19, 1-31 (Purpose and Need; objectives of certainty and flexibility)).

Flexibility is essential not only for managing water-supply risk but also for navigating complex resource tradeoffs. (See Vol. 3, Technical App. 3, pp. 3-21–3-22, with defined critical thresholds that trigger infrastructure, hydropower, and ecological consequences (See Vol. 3, Technical App. 3, Table 3-2). Biological performance metrics summarized in Technical Appendix 8 (Biological Resources) illustrate this dynamic. Alternatives maintaining higher and more stable Lake Powell and Lake Mead elevations generally support more favorable ecological outcomes, particularly in the Lower Basin. At the same time, reservoir elevations influence downstream temperature and water quality conditions (See Vol. 3, Technical App. 4), further reinforcing that no single

elevation regime optimizes all ecological objectives simultaneously. The analyses also demonstrate that high Lake Powell elevations above 3,660 feet introduce tradeoffs, including compromise of upstream riverine habitat near the Colorado and San Juan River inflows and inundation of the Piute Farms Waterfall, which currently limits the spread of non-native warmwater predators. (See Vol. 3, Technical App-8, pp. 8-37, 8-43–44).

Interactions among reservoir elevation, temperature, habitat availability, and species response are complex and, in some cases, inherently conflicting. Elevations that inundate critical riverine habitat (See Vol. 3, Technical App. 8, Tables 8-3 and 8-4) or submerge the Piute Farms Waterfall, altering fish passage dynamics (See Vol. 3, Technical App. 8, pp. 8-43–44), may simultaneously benefit other habitat metrics, while defined elevation bands also trigger hydropower and infrastructure constraints (See Vol. 3, Technical App. 3, Table 3-2). Because reservoir elevations and releases are primary impact drivers across alternatives (See Vol. 3, Technical App. 3, pp. 3-21–22), successfully navigating such tradeoffs requires flexibility. Mechanisms such as the Conservation Reserve incorporated in the MOF or storage and conservation pools in the EC and SD alternatives allow conserved water to be created, stored, and delivered within defined limits without altering Lee Ferry accounting (See Vol. 1, Ch. 2, Table 2-7), providing tools to address ecological considerations while meeting ongoing water-supply obligations consistent with the Law of the River (See Vol. 1, Ch. 1, pp. 1-4).

Several categories of flexible tools that materially improve system performance are distributed across alternatives and are most effective when considered collectively. They include:

- **Dedicated conservation and storage pools**—most fully developed in the MOF alternative through the Conservation Reserve and EC alternative through the Lake Powell Conservation, Lake Mead Protection and Lake Mead user-controlled pools (See Vol. 1, Ch. 2, Table 2-7)—allow conserved or voluntarily contributed water from both the Upper and Lower Basin to be stored across multiple years and to provide opportunities for proactive resource management without being “lost to the system.” (See Vol. 1, Ch. 2, p. 2-30).
- **Transactional water-sharing mechanisms**, emphasized in the MOF, EC, and SD alternatives, enable conserved or contributed water to be moved across users, sectors, and locations in response to changing hydrologic conditions, increasing operational agility under stress. (See Vol. 1, Ch. 2 (discussion of conservation, contribution, and transfer mechanisms of the MOF, EC, and SD alternatives)).
- **Pathways for Tribal Nation participation**, most clearly articulated in the EC alternative (but may also be available within MOF and SD alternatives) (See Vol. 1, Ch. 2, p. 2-16), provide opportunities for Tribal Nations to voluntarily contribute water and receive operational or economic value from settled water rights. Our groups have worked with Tribal Nations to outline key steps for integrating Tribal participation into conservation/contribution pools in the Upper Basin. See Flexible Tools Concept Paper, *The Case for Innovative Tools and a Savings Pool Program in Lake Powell,* attached as Appendix B.

- **Consideration of storage from multiple reservoirs**, reflected in the EC and MOF alternatives (Vol. 3, Technical App. 3, Table 3-2; Vol. 1, Ch. 2, p. 2-16), shifts management away from isolated reservoir targets in accordance with relevant state and federal authorities toward protecting critical infrastructure and maintaining reliable deliveries across the system as a whole, if accomplished through shared authority and jurisdiction.
- **Opportunities for coordinated engagement with Mexico**, building on existing binational mechanisms and most apparent in MOF, EC, and SD alternatives (See Vol. 1, Ch. 2, Tables 2-7 and SD summary), support shared system resilience and reduce the risk of unilateral actions under low-flow conditions.

By contrast, alternatives that defer difficult legal and operational questions, delay responses, or limit coordination—such as No Action and BC—lack structured conservation and storage mechanisms (See Vol. 1, Ch. 2, pp.2-10, 2-16). The BC alternative is the only action alternative that does not incorporate mechanisms for the storage and delivery of conserved water (Vol. 3, Technical App. 3, p. 3-21). In the absence of flexible tools, these alternatives are forced to modify operations to protect critical infrastructure, including measures whose outcomes are uncertain (Vol. 1, Ch. 2, pp. 2-10, 2-16; Vol. 3, Technical App. 3, p. 3-5). Such structures provide limited capacity to manage sustained low-flow conditions and increase the likelihood that emergency interventions would be required.

The Draft EIS further shows that the scale of these flexible tools must be substantial and that none can function effectively in isolation. Their success depends on coordination and consensus among Basin states, Tribal Nations, federal agencies, and, in some instances, key water contractors. Where consensus cannot be achieved, system viability will depend on Reclamation's ability to clearly identify and, if necessary, rely upon existing federal and state authorities (or secure additional authorities) sufficient to implement flexible strategies capable of withstanding legal scrutiny in the face of continued hydrologic decline. (See Basic Coordination Alternative, Section IV, above).

However, the performance of flexible tools within each of the alternatives is not fully visible in the Draft EIS analysis. It is difficult to identify how frequently the Conservation Reserve in the MOF or storage pools in the EC and SD alternatives are activated, how full those reserves become or remain under sustained stress, how often water is moved between reservoirs, or whether and how environmental objectives could influence releases across alternatives.

Rather than informing the selection of a single alternative as defined in the Draft EIS, the Final EIS should focus analyses on the tools that demonstrably improve performance, and define a preferred alternative that employs these tools to optimize outcomes. Evaluating how the tools embedded in the MOF, EC, and SD alternatives compare and perform at scale—in combination with rule curves, release strategies, and contingency measures—will better inform selection of a viable post-2026 framework. The tools and flexibility identified in the Draft EIS have been the subject of unresolved negotiations for over two years. Because agreement is required to implement many of these tools, Reclamation has the opportunity to use the Final EIS to identify

a package of tools and resources grounded in analytical rigor that can form the basis for necessary agreements.

The Final EIS should also identify the pathways through consensus and/or federal authority by which Reclamation will ensure these appropriate tools are available to manage the risks identified in the analysis. Ultimately, the Draft EIS indicates that flexibility is not an optional enhancement; it is the defining feature of any operational strategy capable of sustaining the Colorado River system and its dependent communities and ecosystems under prolonged drought conditions and uncertain water futures.

VII. Meaningful Tribal Inclusion and Considerations

Basin Tribes hold rights to millions of acre-feet of Colorado River water, including both resolved and unresolved claims, many with senior or otherwise highly protected priority. As climate variability continues to reduce runoff and increase the frequency and severity of shortages, Tribal water rights will both be affected and increasingly shape system functions. Effective post-2026 operations, therefore, require direct involvement of Tribal Nations as sovereign partners in decision-making, governance, and implementation.

The Draft EIS appropriately recognizes that Tribal participation—when paired with flexible management tools—can improve system performance while creating pathways for Tribal Nations to protect water in storage, realize value consistent with Tribal priorities, and participate fully in Basin-wide programs. This is reflected most clearly in Technical Appendix 18, as well as in Chapters 3 and 4, which demonstrate expanded effort by Reclamation to evaluate how storage, conservation, and operational flexibility could support Tribal water management in both the Upper and Lower Basins.

The Draft EIS, however, does not yet provide a complete assessment of how post-2026 operations would affect Tribal rights, resources, and priorities. Certain analytical gaps limit the ability of Tribal Nations, decision-makers, and the public to evaluate how operational choices translate into real-world consequences or whether alternatives meaningfully reduce risk or merely defer it. They include:

A. Moving From Analytical Recognition to Meaningful Inclusion

While Technical Appendix 18 and related Draft EIS analyses reflect progress in identifying how Tribal water may interact with post-2026 operations, they do not clearly explain how Tribal Nations would participate in operational elements in practice. Past Basin programs have demonstrated that program design, eligibility criteria, administrative requirements, and risk allocation can unintentionally limit Tribal participation, even where nominally available. (See, e.g., GAO-20-52 (2019); Colorado River Basin Ten Tribes Partnership Tribal Water Study (2018)).

As the Final EIS carries forward key elements and flexible tools, particularly conservation and storage pools, it is critical that program design explicitly enables robust Tribal participation and removes barriers that have constrained Tribal engagement in prior efforts. Without this clarity,

the analytical benefits identified in Technical Appendix 18 risk remaining theoretical rather than actionable for Tribal Nations.

B. Federal Trust Responsibilities and Post-2026 Operations

Post-2026 operational decisions will directly influence the reliability, protection, and practical usability of Tribal water rights, as well as Tribal economies, and cultural and natural resources. Many Basin Tribes entered into treaties and settlements based on representations regarding access to land and water and the long-term value of those resources. As such, Tribal inclusion is not solely a matter of participation but a core operational consideration that should be integrated into the design, evaluation, and implementation of reservoir operations.

To strengthen the Final EIS and decision-making in the Basin, the analysis needs to more clearly disclose how different operational frameworks affect Tribal trust resources under sustained low-flow and extreme conditions, including how alternatives diminish a Tribal Nation's ability to protect water in storage or realize the value contemplated by treaties and settlements. Clarifying these effects would inform efforts to build mitigation as needed and support more resilient post-2026 operations that reduce the risk that system stability is achieved at the expense of Tribal rights and interests.

C. Tribal Water Rights, Deliveries, and Storage

Although the Draft EIS incorporates Tribal water in multiple alternatives and reports system-level risks such as deadpool-related reductions, it does not clearly disaggregate developed and undeveloped Tribal water, identify how assumptions about developed and undeveloped water influence modeled outcomes, or evaluate how specific alternatives affect Tribal water rights, delivery reliability, storage protections, or conservation opportunities. Without transparent, alternative-specific disclosure of volumes, modeling assumptions, and potential shortages to developed and undeveloped water rights, Tribal Nations and decision-makers cannot meaningfully assess tradeoffs or relative risks across futures.

The Final EIS would benefit from including an assessment of potential shortages and deadpool–related impacts to both developed and undeveloped Tribal water rights under each alternative using explicit modeling assumptions, accompanied by clear disclosure of uncertainty, so Tribal Nations and decision-makers can meaningfully compare outcomes across futures. Clearer reporting and explicit evaluation of Tribal water outcomes will be important to both informed participation and responsible post-2026 decision-making.

D. Socioeconomic Impacts on Respective Rights

The Draft EIS's socioeconomic analysis is primarily centered on agricultural production, farm income, and related employment within defined river reaches and irrigation service areas affected by modeled shortages (Vol. 1, Ch. 3; Technical Appendix 17). While the analysis quantifies economic effects associated with reductions in irrigated acreage and crop output, it does not provide a comparably detailed evaluation of broader community-wide, Tribal, or off-river economic impacts that may result from operational decisions.

For many Basin Tribes, Colorado River water supports municipal and domestic water supplies, economic development, employment, housing, public health, energy access, cultural and spiritual resources, and the provision of essential governmental services. Reductions in water deliveries, increased exposure to deadpool–related risks, or constraints on storage protection may limit Tribal water systems, future development tied to settled or developing rights, and revenues from water-dependent enterprises. These impacts are not captured by acreage-based agricultural production metrics or regional modeling tied primarily to irrigated crop reductions. In addition, the consolidation of socioeconomic impacts across broad geographic areas, rather than disaggregating results by individual Tribes, may obscure meaningful differences in exposure, vulnerability, and adaptive capacity. Without clearer Tribe-specific analysis, it is difficult to assess how alternative operating frameworks may differentially affect Tribal communities or to evaluate whether impacts are proportionately managed.

E. Cultural Resources and Traditional Cultural Places (TCP)

With respect to analysis of cultural resources and TCPs, the Draft EIS frames potential effects largely in relation to reservoir elevations and shoreline exposure. Issue 1 in Technical Appendix 11 is explicitly structured around how changes in dam operations affect lake elevations and downstream flows that may, in turn, affect cultural resources. Tables 11-15 and 11-16 categorize archaeological sites by elevation ranges at Lakes Powell and Mead, reinforcing that reservoir elevation is a primary analytical lens. Similarly, Technical Appendix 13 defines TCPs associated with the Colorado River and its canyons and evaluates how operational changes may affect those resources.

While this elevation-based modeling appropriately evaluates preservation risk associated with shoreline exposure and erosion, the Draft EIS does not yet clearly articulate how higher pool elevations, prolonged inundation, or fluctuating hydrology may affect TCPs and other culturally significant landscapes beyond exposure-related risk. Strengthening this linkage in the Final EIS would improve transparency regarding how alternative operating frameworks may affect cultural resources across the full range of hydrologic and operational conditions.

F. Effects to Natural Resources of Importance to Tribal Nations

The Draft EIS does not clearly evaluate how dam operations affect riparian vegetation, wildlife, and other natural resources of cultural and subsistence importance to Tribal Nations. Technical Appendix 13 recognizes that Tribal resources include habitats, plants, wildlife, and other natural resources essential to traditional culture and sovereignty, and expressly frames Issue 3 as evaluating how changes in dam operations may affect riparian vegetation and wildlife important to Native Americans. However, the analysis is presented at a high level and does not consistently provide spatially explicit, alternative-specific evaluation of downstream riverine and riparian conditions relied upon by Tribal communities.

Vegetation and wildlife analyses are largely structured around reservoir elevations and release variability. For example, Technical Appendix 11 frames effects in terms of how dam operations

influence lake elevations and downstream flows that may affect cultural resources, and categorizes sites and risk by elevation ranges relative to Lake Powell and Lake Mead pool levels. While elevation-based exposure modeling is appropriate for certain preservation risks, the Final EIS should more explicitly link operational decisions to riverine and riparian habitat conditions and natural resources relied upon by Tribal communities along the corridor.

G. Indian Trust Lands and Disaggregation of Impacts

The Draft EIS aggregates Tribal impacts when reporting land fallowing and land use changes. For example, Technical Appendix 18 compares key factors affecting Tribal water deliveries across alternatives but does so by priority group rather than Tribe-specific outcomes. (See Vol. 3, Technical App. 18, Table 18-5). Similarly, reliability modeling is presented by categories such as Present Perfected Rights and CAP Indian priorities rather than by Tribe. While this approach aligns with the structure of the Shortage Allocation Model, it masks materially different effects on individual Tribal Nations. Where feasible, impacts should be disaggregated by Tribe or otherwise clearly described to reflect differentiated outcomes and support equitable mitigation. (See Vol. 3, Technical App. 18, Table 18-5).,

H. Consultation for Culturally Significant Places

The Draft EIS appropriately acknowledges ongoing government-to-government consultation as Reclamation continues compliance with NHPA and entities.

With respect to TCPs, Technical Appendix 13 defines TCPs associated with the Colorado River and its canyons and evaluates potential effects of dam operations on those resources. Technical Appendix 11 similarly structures cultural resource analysis around reservoir elevations and shoreline exposure. While this approach evaluates preservation risks tied to inundation and exposure dynamics, the Final EIS should more clearly commit to engagement with Tribal Historic Preservation Offices and Tribal cultural protection departments, including for culturally significant places that may not yet be formally listed, nominated, or fully identified within the developing Area of Potential Effect.

Overall, meaningful Tribal inclusion is a foundational pillar to post-2026 operations. The issues summarized in Table 2 below reflect core elements necessary to ensure that Tribal sovereignty, trust responsibilities, and water rights are fully integrated into post-2026 operations. Addressing these considerations will strengthen legal defensibility, improve operational resilience, and support meaningful Tribal participation in Basin operations.

Table 2: Tribal Inclusion and Trust Integration - Key Considerations for the Final EIS				
Key Consideration	**What the Draft EIS Shows**	**Gap or Limitation Identified**	**Why It Matters for Decision-Making**	**Recommendation for Final EIS**
From Recognition to Meaningful Participation	Tribal participation in storage and conservation tools and potential system performance benefits associated with such participation.	Does not clearly describe how Tribal Nations would participate in program design and implementation, operational decisions or risk management.	Absent operational clarity, Tribal participation may remain analytical rather than actionable, limiting both effectiveness and trust integration.	Clearly operationalize voluntary Tribal participation in conservation and storage tools, including governance structure, eligibility criteria, accounting protections, and protection of stored water.
Federal Trust Responsibilities	Recognizes Tribal water rights and potential interaction with post-2026 operations.	Lacks alternative-specific analysis of how operations affect Tribal trust resources under sustained low-flow or extreme conditions.	Operational choices may impair reliability, storage protection, or economic value tied to settlements and treaties.	Disclose how each alternative affects Tribal trust resources and water reliability under low-flow conditions; affirm safeguards for Tribal sovereignty and settlement protections.
Tribal Water Rights, Deliveries & Storage	Includes Tribal water in modeling and reports system-level risks (e.g., deadpool-related reductions).	Does not clearly disaggregate developed vs. undeveloped Tribal water or quantify alternative-specific shortages and storage impacts.	Without transparent, Tribe-specific reporting, risks and tradeoffs cannot be meaningfully evaluated.	Provide alternative- and Tribe-specific analysis of developed and undeveloped Tribal water volumes, delivery reliability, storage protection, and potential shortages with clear modeling assumptions and uncertainty disclosure.
Socioeconomic Impacts to	Socioeconomic analysis	Does not fully evaluate	Aggregation obscures	Expand and disaggregate

Table 2: Tribal Inclusion and Trust Integration - Key Considerations for the Final EIS				
Key Consideration	**What the Draft EIS Shows**	**Gap or Limitation Identified**	**Why It Matters for Decision-Making**	**Recommendation for Final EIS**
Tribal Nations	primarily focuses on agricultural impacts within the river corridor.	impacts to Tribal municipal systems, economic development, housing, energy, public health, or governmental services; impacts are often aggregated.	differentiated vulnerability and adaptive capacity among Tribes.	socioeconomic analysis by Tribe; evaluate impacts beyond agriculture, including municipal, energy, housing, and economic development effects.
Cultural Resources & Traditional Cultural Places	Acknowledges ongoing consultation; focuses largely on shoreline TCPs and elevation-based exposure modeling (e.g. TA-11; TA-13).	Does not demonstrate full evaluation of river corridor, floodplain, spring, or upland culturally significant places within Area of Potential Effects.	Reservoir and release changes may cause adverse effects beyond shoreline inundation, or erosion, including impacts associated with fluctuating hydrology and prolonged inundation.	Broaden and substantiate analysis of TCPs; commit to continued consultation with Tribal Historic Preservation Offices (THPOs) and cultural departments.
Natural & Subsistence Resources Important to Tribes	Biological analysis emphasizes reservoir elevations and release variability.	Limited linkage between dam operations and riparian vegetation, wildlife, and subsistence resources relied upon by Tribal communities.	Cultural, subsistence, and natural resource impacts may occur prior to deadpool or reservoir endpoints.	Explicitly connect operational choices to downstream riverine and riparian habitat conditions important to Tribal Nations.
Disaggregation of Tribal Land & Impact Data	Reports Tribal land fallowing and land-use changes in aggregate (e.g., TA-18-5).	Aggregation masks materially different impacts across individual Tribes.	Equity and mitigation planning require Tribe-specific understanding of exposure and impact.	Disaggregate impacts by Tribe where feasible; clearly describe differentiated outcomes to support equitable mitigation and participation.

Table 2: Tribal Inclusion and Trust Integration - Key Considerations for the Final EIS				
Key Consideration	**What the Draft EIS Shows**	**Gap or Limitation Identified**	**Why It Matters for Decision-Making**	**Recommendation for Final EIS**
Consultation & Government-to-Government Engagement	Notes ongoing consultation during Draft EIS development.	Does not clearly commit to continued, structured engagement during Final EIS and implementation phases.	Effective post-2026 operations depend on sustained sovereign-to-sovereign engagement.	Commit to structured, ongoing government-to-government consultation through Final EIS development and implementation, including consultation on preferred alternative design.

VIII. Ecological Integrity Is a Core System Objective

The Colorado River is not solely a water delivery system; its ecological condition underpins the Basin's social, economic, and operational stability. The Draft EIS demonstrates that declining reservoir storage, altered flow regimes, and hotter and drier conditions are already affecting riparian and aquatic ecosystems, water quality, recreation, and cultural resources across the Basin. These conditions are not peripheral. They directly influence whether water supplies remain usable, infrastructure remains operable, regulatory obligations remain manageable, and Basin communities remain resilient to ongoing change.

The Draft EIS makes clear that post-2026 operations cannot focus solely on reallocating scarcity among users. An operational framework that redistributes limited supplies without sustaining ecological integrity will ultimately fail to meet the Purpose and Need of the action as well as destabilize the Basin. Ecological impacts feed back into system risk through water quality impairments, infrastructure constraints, loss of operational flexibility, and increased regulatory and legal exposure. In this sense, the Basin cannot be protected by managing deliveries alone.

Several environmental trends identified in the Draft EIS are directly linked to operational choices. Hydrologic modeling is the driver of environmental consequences across resource areas, including biological resources and recreation (See Vol. 1, Ch. 3, p. 3-7). Because alternative operating rules determine reservoir elevations, releases, and river flows, they directly shape downstream environmental conditions, including:

- **Riparian and terrestrial habitat impacts** are closely tied to changes in river flows and reservoir elevations. Technical Appendix 3 explains that changes in river flows and reservoir elevations affect groundwater elevations where hydraulic connectivity exists. (Vol. 3, Technical App. 3, p. 3-105). The same appendix documents that alternatives produce materially different median annual flows in Lower Basin reaches (Vol. 3, Technical App. 3, p. 3-113). These linkages and others demonstrate that operational differences among alternatives translate directly to documented losses of marsh and woody riparian vegetation, with additional losses projected under multiple alternatives.
- **Stress on aquatic ecosystems and native species** within Lakes Powell and Mead National Recreation Areas, Grand Canyon National Park, and downstream refuges and conservation sites, driven by warmer water temperatures, reduced flows, and habitat impacts associated with low reservoir elevations and altered release patterns. (See Vol. 3, Technical App. 8, p. 8-82).
- **Water quality impacts**, including increasing salinity and temperature stress under lower storage conditions, affect municipal, agricultural, industrial, and ecological uses. (see Vol. 1, Ch. 3, pp. 3-22, 3-153).
- **Recreation and cultural resource impacts**, as declining reservoir elevations reduce recreational access, impair facilities, and expose or degrade culturally significant sites. (See (Vol. 1, Ch. 3, p. 3-153; Vol. 3 Technical App. 16, p. 16-64).

Environmental impacts are most acute under drier, low-flow conditions, which are the same hydrologic regimes where operational differences among alternatives are highly informative. (See Vol. 1, Ch. 3, p. 3-22). Alternatives that delay action or rely on optimistic reservoir recovery assumptions experience sharper storage declines and greater release variability, intensifying ecological stress. Importantly, extended run-of-the-river operations at Lake Powell, and potentially at Lake Mead, are no longer merely theoretical boundary conditions. Under persistent low inflows and constrained coordination, reservoir storage could provide little operational buffering, fundamentally altering temperature regimes, sediment transport, habitat availability, and downstream water quality.

Ecological conditions are also shaped by binding statutory and programmatic requirements. The ESA, the MSCP, and the GCPA as implemented in part through the Long-Term Experimental and Management Plan (LTEMP), establish obligations, some of which overlay and influence reservoir operations. As hydrologic stress intensifies, compliance with these authorities increasingly becomes a determining factor in operational decision-making.

While the Draft EIS acknowledges ongoing and anticipated Biological Opinions and MSCP and LTEMP implementation in conjunction with Post-2026 operations (See Vol. 1, Chap. 3, pp. 3-7, 3-9, 3-22, and Vol. 3, Technical App. 8, p. 8-82 and Technical App. 9, p. 9-41), the impacts to threatened and endangered species, MSCP conservation areas, and GCPA resources as a result of different operating alternatives are not readily identifiable. How mitigation and adaptive management may be deployed to help ensure continued compliance under a range of plausible futures also needs to be made more evident.

More broadly, ecological objectives need to be fully integrated into the comparative evaluation of alternatives. Several analytical gaps illustrate the need for a stronger linkage between operational choices and environmental outcomes in the Final EIS:

- **Lower Colorado River ecology and refuges:** Vegetation and wildlife analyses in the Draft EIS rely primarily on release variability rather than river stage and groundwater response, despite established methodologies in prior MSCP Biological Assessments. Risks to refuges such as Cibola, Havasu, and Imperial National Wildlife Refuges under sustained low flows are acknowledged but not quantified or compared across alternatives. (see Section VI.D in Technical Comment Appendix A);
- **Grand Canyon resources:** Consequences of operating measures on the Grand Canyon ecosystem are not synthesized in a way that allows for straightforward comparison of ecological risk across alternatives. (See Section VI.E in Technical Comment Appendix A).
- **Groundwater systems:** Analysis is largely limited to alluvial aquifers and relies on assumed responses, without evaluating deeper basin-fill aquifers, tributary basins, or increased pumping triggered by surface water shortages. (see Section VI.F in Technical Comment Appendix A);
- **Salinity management:** Salinity management in compliance with Treaty delivery obligations, particularly in the Yuma area, can materially affect Lake Mead releases, yet

salinity modeling is not fully integrated into system performance comparisons. (see Section VI.G in Technical Comment Appendix A); and

- **Air quality:** Agricultural fallowing is evaluated for socioeconomic effects, but associated air quality and public health impacts—particularly in rural and Tribal communities—are not assessed. (see Section VI.H in Technical Comment Appendix A).

To address these gaps and strengthen the analysis relevance, the Final EIS should:

- **Elevate ecological integrity as a core performance objective, not just an impact category.** Environmental conditions should be evaluated as drivers that directly shape system functionality and risk, and not just consequences of different operations. As discussed in the Alternatives Evaluation Section III, above, tools such as conservation and storage pools demonstrate how ecological objectives can be structurally embedded within guideline design rather than deferred to reactive processes.
- **Explicitly link environmental conditions to performance metrics and operational outcomes.** The ecological consequences of reservoir elevations, storage volumes, shortage frequency, and deadpool risk should be consistently connected to avoid obscuring whether apparent system "performance" is achieved at the expense of long-term viability.
- **Focus environmental analyses on flow conditions consistent with observed trends and projections.** While system performance differences are most pronounced under prolonged low flows, environmental analyses often span broad hydrologic ranges that should more clearly identify ecological thresholds crossed under variable stress.
- **Strengthen spatially explicit, process-based analyses in key reaches.** In highly regulated reaches—particularly the Lower Colorado River—the Final EIS should rely on more than proxies such as release variability to also include analysis of river stage, groundwater connectivity, and habitat response directly.
- **Evaluate environmental impacts and degradation as an indicator of future system risk.** The Final EIS should more fully assess how continued ecological decline and prolonged run-of-the river operations could constrain future operations, trigger regulatory or legal actions, or increase reliance on emergency measures, linking impacts to mitigation and adaptive management strategies.
- **Compare performance relative to ESA, MSCP, and GCPA objectives.** Include a side-by-side analysis of how each alternative supports or constrains compliance with the ESA, MSCP, and GCPA. The evaluation should explicitly link, where possible, reservoir elevations, release patterns, and operational flexibility to effects on listed species, habitats, and environmental and cultural resources under drier low-flow conditions.
- **Clarify process for complying with environmental overlays to Post-2026 operations.** The Final EIS should clarify whether ecological compliance is structurally embedded within an alternative or deferred to reactive measures that will be described in different compliance documents. Including these analyses in the Final EIS will improve transparency and ensure ecological durability is assessed alongside water supply and infrastructure performance.

The observations and recommendations discussed above are summarized in Table 3.

Table 3: Ecological Integration and Compliance Matrix			
Ecological Integration Issue	**Draft EIS Limitation**	**Why It Matters for Decision-Making**	**Recommendation for Final EIS**
Ecological Integrity as a Core Objective	Ecological impacts are primarily presented as consequences rather than as conditions that directly shape system performance and risk.	Environmental conditions influence whether water supplies remain usable, compliance remains manageable, and infrastructure remains operable. Sustained low flow conditions or prolonged run-of-river conditions, accelerate ecological impacts, increase regulatory exposure, constrain operations, and elevate long-term system risk.	Elevate ecological integrity as a core performance objective alongside storage, reliability, and infrastructure protection. Evaluate the environmental, infrastructure, and economic consequences of sustained run-of-the-river operations as a stress-test scenario, and explicitly link ecological degradation to future operational constraints, regulatory risk, and emergency reliance.
Lower Colorado River & Refuge Conditions	Analyses rely heavily on release variability rather than river stage, groundwater connectivity, and habitat response. Modeled water supply shortages to National Wildlife Refuges and to irrigation districts delivering water to MSCP habitat areas are not consistently translated into vegetation and wildlife impact comparisons across alternatives.	River stages, groundwater responses, and water delivery shortages to refuges and irrigation districts supplying MSCP sites can reduce habitat maintenance, restoration success, and compliance with programmatic biological commitments.	Incorporate spatially explicit, process-based analyses (river stage, groundwater response, habitat metrics) and quantify and compare water supply shortages to refuges and irrigation districts serving MSCP habitat sites across alternatives under sustained low flows. Clearly link modeled shortages to habitat condition, restoration feasibility, and compliance risk.
ESA, MSCP, and GCPA Compliance	Compliance obligations are referenced but not consistently integrated into comparative performance evaluation.	ESA, MSCP, and GCPA requirements will materially constrain operations under prolonged drought and shape	Provide side-by-side evaluation of how each alternative supports or constrains ESA, MSCP, and GCPA compliance under low-flow

Table 3: Ecological Integration and Compliance Matrix			
Ecological Integration Issue	**Draft EIS Limitation**	**Why It Matters for Decision-Making**	**Recommendation for Final EIS**
		future release decisions.	conditions.
Proximity to Ecological Thresholds	Emphasis on deadpool overlooks ecological stress occurring well before critical elevations.	Species, habitats, and water quality degrade long before infrastructure thresholds are reached.	Add metrics capturing duration near ecological and recreational thresholds (e.g., temperature bands, invasive species risks, sand mass balance loss, habitat triggers, groundwater separation points).
Groundwater & Connected Systems	Focus is on alluvial aquifers; assumes responses without evaluating deeper or tributary systems or shortage-driven pumping.	Surface water shortages may increase groundwater extraction, affecting riparian ecosystems and Tribal resources.	Expand groundwater analysis to include basin-fill aquifers, tributary impacts, and shortage-induced pumping scenarios.
Salinity Management	Salinity compliance (esp. in Yuma area) is not fully integrated into system performance comparisons.	Salinity obligations can materially influence release decisions and international commitments.	Integrate salinity modeling into alternative comparisons, showing operational effect to compliance.
Air Quality & Public Health	Agricultural fallowing is analyzed for socioeconomic impacts but not associated air quality or public health consequences.	Dust and particulate impacts disproportionately affect rural and Tribal communities.	Evaluate air quality impacts associated with land fallowing and incorporate mitigation as needed.
Flexible Management & Mitigation Linkage	Flexible tools are referenced but not clearly embedded within alternative structures.	Without embedded flexibility, compliance may rely on reactive emergency measures.	Clarify how adaptive management and mitigation tools are triggered, governed, and integrated into operations across alternatives.

Table 3: Ecological Integration and Compliance Matrix			
Ecological Integration Issue	**Draft EIS Limitation**	**Why It Matters for Decision-Making**	**Recommendation for Final EIS**
Ecological Tradeoffs at Higher Elevations	Tradeoffs (e.g., Piute Farms Waterfall or Pearce Ferry inundation, and upstream habitat impacts) are identified but not operationalized within flexible tools.	Reservoir elevation strategies create competing ecological outcomes.	Evaluate how conservation reserves or storage pools can be strategically deployed to manage elevation-related ecological tradeoffs.

The Draft EIS demonstrates that the Basin's future cannot be secured by managing deliveries alone. Ecological integrity underpins reliable operations, resilient infrastructure, regulatory stability, and sustainable communities. Elevating ecological objectives as a central selection criterion will strengthen both environmental outcomes and long-term system viability under deep uncertainty.

IX. Mitigation and Parallel Resilience Investments

Mitigation and water security must be treated as core components of any post-2026 action—not ancillary or deferred considerations. Under all Draft EIS alternatives, significant impacts to communities, Tribal Nations, ecosystems, and regional economies are likely as the Basin continues to experience hotter and more variable conditions. A framework that preserves minimum operability while allowing unmanaged harm, or fails to incentivize reduced water use, would not be effective or defensible under NEPA.

Although the Draft EIS acknowledges mitigation tools and related programs, it does not present a coherent strategy for deploying mitigation alongside post-2026 operations. Nor does it fully recognize that mitigation must extend beyond short-term impact management to include long-term, Basin-wide resilience-building and water security programming in support of post-2026 operations. Even under the most resilient operating framework, prolonged low reservoir elevations, sustained shortages, and emergency operations will generate impacts that require proactive and parallel mitigation.

Effective mitigation must be structured to operate in tandem with reservoir management to support sustained reductions in consumptive use and address impacts to Basin resources. This includes helping minimize effects from Colorado River Storage Project operations through Grand Canyon National Park to the Lower Basin reservoirs and recreation areas and downstream refuges. It also requires attention to Tribal water rights and trust responsibilities, municipal and industrial reliability, agricultural transitions, recreation losses, and community economic disruption. Resilience in this context means not only buffering harm but reducing system stress by aligning water use with long-term supply realities. Because these impacts are likely to intensify and persist under prolonged low flows, one-time measures will be insufficient; long-term, adaptive, and adequately resourced approaches are required.

Durable mitigation programs should be supported by long-term funding, transparent governance, and accountability mechanisms. These could include ecosystem restoration, conservation and water savings programs, infrastructure modernization, Tribal water development and valuation support, municipal adaptation investments, and economic transition assistance, among others. It should also include the important monitoring and verification activities needed to successfully implement the operational framework and mitigation activities going forward. Designed in coordination with in-basin expertise, such efforts can reduce system stress, limit reliance on emergency authorities, and strengthen adaptive capacity across the Basin.

To align mitigation with the realities identified in the Draft EIS, the Final EIS should: (1) expressly recognize the need for long-term mitigation programs aligned with the duration of the post-2026 guidelines; and (2) evaluate mitigation opportunities as an integral, parallel component of each alternative, rather than as a generalized or deferred commitment; and (3) build in long-term management practices and adequately resourced approaches for adjusting to changing conditions.

Connecting mitigation and resilience investments with reservoir operations is fundamental to stabilizing the system and transitioning the Basin from crisis response toward long-term reliability.

X. Continued Engagement and Path Forward

The Conservation Groups acknowledge and appreciate the extensive consultation and engagement that Interior and Reclamation have undertaken throughout the scoping, alternatives development, and Draft EIS preparation process. (See Vol. 1, Ch. 1, Public Involvement and Scoping; see also Vol. 1, Ch. 1, pp. 1-5 – 1-8). Engagement with Basin states, Tribal Nations, stakeholders, and the public has meaningfully informed the range of alternatives analyzed, improved transparency, and strengthened the analytical foundation of the Draft EIS. (See Vol. 1, Ch. 1; Ch. 3, p. 3-7) These efforts reflect the intent of NEPA to promote informed decision-making through early and meaningful participation.

Given the significance and long-term implications of post-2026 operating decisions for the Colorado River System, this engagement should be carried forward through the development of the Final EIS, analysis of any future state consensus proposal, identification of a preferred alternative, and issuance of the Record of Decision. The Draft EIS evaluates a broad suite of operational tools, tradeoffs, and analytical results that will necessarily be refined, combined, or modified in the Final EIS. Continued engagement will help ensure that these refinements are well understood, implementable, and aligned with the legal, operational, and practical realities faced by Basin states, Tribal Nations, and affected stakeholders.

Additional engagement is critical as a preferred alternative is developed. Providing states, Tribal Nations, and stakeholders an opportunity to review and comment on the preferred alternative and the supporting analyses will improve understanding of how the framework is intended to function under a range of hydrologic conditions, identify important implementation considerations, and inform targeted refinements that can enhance effectiveness and reduce future conflict.

For Tribal Nations, continued government-to-government consultation is particularly important to ensure that Tribal perspectives, water rights, and interests are fully incorporated into final operational decisions. For Basin states and other stakeholders, ongoing engagement will be needed to clarify how any preferred alternative interacts with existing authorities, agreements, and operational constraints, and whether additional tools or safeguards are necessary.

Maintaining this inclusive and transparent approach through the Final EIS will strengthen decision-making, reduce the risk of unintended consequences or litigation, and increase the likelihood that post-2026 operations can be implemented effectively.Moreover, incorporating the comments and suggestions provide Interior and Reclamation an opportunity to use this process to help the Basin states and stakeholders advance the necessary consensus that has thus far proven difficult to achieve. Far from delaying action, continued engagement will build the shared understanding and trust needed to support timely, effective, and defensible decisions.

Reclamation must advance the robust engagement and consultation practices established during scoping and Draft EIS development by providing additional opportunities—at the state, Tribal, and stakeholder levels—to review and comment on the preferred alternative, the Final EIS analyses, and the proposed operational frameworks before final decisions are made.

XI. Summary of Findings and Recommendations

Through this comment letter, the Conservation Groups identify findings about what drives operational performance under sustained low-flow conditions, what limits the relevance of the current analysis, and what modifications would improve alignment of the Final EIS with the Purpose and Need. Table 4 distills those findings and corresponding recommendations into a consolidated framework of suggested actions.

Table 4: Findings and Recommendations Summary - Post-2026 Colorado River Operations – Final EIS Priorities			
Strategic Theme	**Core Finding from Draft EIS**	**Why It Matters**	**Final EIS Priority Action**
Anchor Decisions in Plausible Hydrology and Initial Reservoir Conditions	Meaningful performance differences emerge under Average-Dry-Critically Dry inflows. Equal emphasis on wetter futures and optimistic starting storage dilutes decision relevance.	The Basin will require active management under persistently dry conditions. Planning should factor in observed trends and avoid undue reliance on recovery assumptions.	Center comparative evaluation of alternatives and tools on the drier, low-flow conditions; constrain starting reservoir storage assumptions to plausible near-term elevations; elevate the drier hydrology categories in conclusions and summaries.
Prioritize Early, Managed Reductions Over Crisis Cuts to Inform the Preferred Alternative	Alternatives with earlier policy-based shortages (MOF, EC, partial SD) preserve storage and reduce emergency reliance; delayed approaches experience deeper deadpool avoidance reductions.	Predictability and system stability improve when reductions are deliberate rather than crisis-driven.	Present total reductions (policy + deadpool avoidance) together; evaluate magnitude, timing, and duration of shortages; prioritize a preferred alternative that reduces emergency exposure.
Elevate Stress Indicators Beyond Deadpool Metrics	Significant impacts occur well before deadpool; deadpool and deadpool-related reductions framing, by itself, masks duration near critical elevations and escalating impacts.	Heavy focus on deadpool related metrics masks prolonged stress and escalating harm.	Elevate metrics for proximity to thresholds, duration of impaired operations, hydropower reliability loss, and escalation frequency toward emergency conditions.
Reduce Structural Reliance on Emergency Authority	Some alternatives depend heavily on emergency/exigent operations to avoid critical thresholds.	Recurring emergency intervention signals operational fragility and increases legal, economic, and operational risk.	Define clear triggers, guardrails, duration limits, consultation commitments, and reporting requirements for any emergency actions.
Make Flexible Tools Fully Visible and Comparable	Conservation/contribution pools, coordinated reservoir management, and transactional	Flexibility drives system resilience, yet performance benefits are understated without transparency.	Provide side-by-side comparison of tool design; disclose activation frequency, pool utilization, volumes mobilized, and

Table 4: Findings and Recommendations Summary - Post-2026 Colorado River Operations – Final EIS Priorities			
Strategic Theme	**Core Finding from Draft EIS**	**Why It Matters**	**Final EIS Priority Action**
	tools materially improve performance, but tool activation and scale are not consistently assessed.		performance under sustained stress.
Identify and Synthesize Effective Tools Across Alternatives to Inform Preferred Alternative	No single alternative performs best across all conditions. Performance differences are driven by specific tools (early policy shortages, flexible conservation/storage pools, coordinated operations, and Tribal participation) within alternatives rather than any individual alternative as a complete package.	Selecting one alternative in its entirety risks carrying forward weaker components while overlooking operational features that more effectively reduce risk under variable flow conditions. A tools-based synthesis better aligns with the Draft EIS's analytical findings.	Explicitly evaluate which operational elements demonstrably reduce systemic risk and integrate those elements into a preferred alternative. Clearly explain which tools are adopted, modified, or excluded and why.
Ensure Meaningful Tribal Inclusion and Satisfaction of Trust Responsibilities	Tribal water assumptions (developed vs. undeveloped) are not clearly articulated; participation mechanisms vary structurally across alternatives.	Tribal rights, sovereignty, and trust responsibilities are materially relevant to the sustainable operation of Colorado River reservoirs.	Clearly describe outcomes for Tribal water volumes and impacts to Tribal resources separately; provide alternative-specific shortage analysis showing how Tribal water rights would be affected; operationalize Tribal participation in decision making and implementation of conservation/storage tools.
Elevate Ecological Integrity as a Relevant Performance Objective	Ecological impacts intensify under the drier, low flows conditions and feed back into system risk; ESA, MSCP, and GCPA overlays are not clearly evaluated.	Ecological stability underpins regulatory compliance, infrastructure operability, and long-term water security.	Provide side-by-side analysis of legal compliance considerations; link elevations and release patterns to listed species, refuges, groundwater, salinity, and cultural resources; strengthen process-based analyses in regulated reaches.
Ensure Modeling Outcomes and Qualitative Assessments are	Modeled shortages and low elevations are not consistently	System-level "performance" may shift risk rather than reduce it.	Explicitly connect modeled outcomes (quantitatively or qualitatively) to

Table 4: Findings and Recommendations Summary - Post-2026 Colorado River Operations – Final EIS Priorities			
Strategic Theme	**Core Finding from Draft EIS**	**Why It Matters**	**Final EIS Priority Action**
Translated into Real-World Impacts	carried into municipal, Tribal, hydropower, or socioeconomic impact analyses.		sector-specific reliability, infrastructure stress, Tribal economies, and ecological consequences.
Integrate Mitigation and Resilience as Parallel Components	Impacts occur under all alternatives; mitigation is acknowledged but not structurally embedded to ensure effective post-2026 operations.	Effective reservoir stabilization and management require anticipating and addressing harm—not simply preserving operability.	Treat mitigation as an integral, long-term element of post-2026 operations with defined funding pathways and decision-making.
Clarify Decision-Making and Implementation Pathways	Consensus is essential to effective operations, but it is not guaranteed. Shortage distribution modeling, conservation assumptions, and SD parameter choices implicate unresolved governance questions.	Effective implementation requires clarity on authority and pathways if agreement falters.	Clarify interstate vs. contractor shortage assumptions; refine SD parameters; identify federal authorities available or needed if consensus cannot be achieved.
Maintain Transparent Engagement and Sovereign to Sovereign Consultations	Continued engagement fulfills obligations, bolsters credibility, and strengthens defensibility.	Trust, equity, and reduced litigation risk depend on meaningful consultation, participation, and engagement.	Provide opportunity to review any state consensus proposal, the preferred alternative, and the Final EIS; commit to ongoing Tribal consultation and transparent reporting.

The Draft EIS demonstrates that early, managed reductions; flexible conservation and storage tools; coordinated reservoir operations; integration of ecological objectives; and meaningful Tribal participation are the elements that most effectively reduce systemic risk under continued aridification. The Final EIS should build on this record by synthesizing these elements into a coherent and transparent post-2026 operating framework, one that minimizes reliance on emergency authority, embeds mitigation and resilience investments as integral components of operations, and aligns decision-making with the hydrologic conditions the Basin is most likely to face.

XII. Preferred Alternative Considerations

This comment letter is not intended to advance a single, standalone alternative. Instead, the Conservation Organizations recommend that the Final EIS synthesize the most effective operational components across alternatives into a tools-based preferred alternative capable of managing trending low-flow conditions, protecting Basin resources, and reducing reliance on emergency interventions.

Based on the Draft EIS analysis and modeled performance across hydrologic futures, the following elements should factor into Reclamation's selection of a preferred alternative to stand the best chance of securing the Basin's future:

1. **Operationally neutral conservation/contribution pools for Lakes Mead and Powell.** The preferred alternative should include conservation and storage pools with broad participation from Tribal Nations and water users in both the Upper and Lower Basins. Accumulation limits should be comparable in scale to those modeled under the EC and MOF alternatives to provide meaningful buffering capacity while maintaining system accounting integrity. These pools should be structured to preserve Lee Ferry accounting, as appropriate, and include transparent activation, accounting, and reporting provisions so that performance benefits are measurable and comparable across hydrologic conditions.
2. **Operational determinations informed by recent hydrology trends**. The preferred alternative should incorporate elements drawn from the EC, MOF, or SD frameworks—such as rolling hydrologic averages, climate response indicators, or flow-percentage approaches—to inform release volumes, shortage triggers, coordinated reservoir operations, and near-term stress testing under plausible starting elevations.
3. **Meaningful Tribal inclusion and fulfillment of federal trust responsibilities.** The preferred alternative should include clear pathways for Tribal Nations to participate in operational decision-making and to voluntarily contribute conserved water through conservation or savings pools. Federal trust responsibilities should be reflected in both operational design and mitigation programming, including transparent modeling of developed and undeveloped Tribal water and management of stored Tribal water protection and management of stored Tribal water.
4. **Robust mitigation with long-term programming and sustained investment.** The preferred alternative should incorporate mitigation as a parallel and durable component of post-2026 operations, not defer or treat it as ancillary, and should establish long-term

programming, defined funding pathways, and monitoring and verification mechanisms to address impacts to communities, Tribal Nations, economies, and ecosystems while supporting sustained reductions in consumptive use and overall system resilience.

5. **Plausible policy shortages and conservation commitments to address the risk of deadpool and deadpool-related reductions.** Consistent with modeled performance outcomes, the preferred alternative should be structured to accommodate conservation/contribution commitments and policy-based shortages approaching approximately 3 MAF under critical conditions in order to reduce the likelihood of deadpool and deadpool-related reductions.
6. **Opportunities for both Upper Basin and Lower Basin water conservation and contributions**. The preferred alternative should define and make available clear pathways for conservation and contributions in Upper and Lower Basin reservoirs, aligned with state, Tribal, and local priorities and capable of strengthening overall system performance under drier, low-flow conditions.
7. **Flexibility to accommodate future binational agreements with Mexico.** The preferred alternative should be structured to accommodate operations that may arise as a result of a successor agreement with Mexico. Embedding this flexibility will preserve opportunities for binational cooperation, reduce legal and operational uncertainty, and ensure that the preferred alternative remains effective as negotiations with Mexico evolve.
8. **Transparent triggers and guardrails for emergency operations.** The preferred alternative should define clear quantitative triggers, scope, duration limits, consultation expectations, and accounting provisions for any emergency or exigent actions. Emergency authority may remain necessary as a backstop, but explicit guardrails should ensure that it supplements—rather than substitutes for—planned operations.
9. **Transactional water-sharing mechanisms.** The preferred alternative should include mechanisms similar to those modeled under the MOF and SD alternatives to enable conserved or contributed water to move across users, sectors, and locations. Such flexibility increases operational agility, incentivizes participation, and allows water to be deployed where it provides the greatest system benefit during stress without impairing compact compliance or Lee Ferry accounting.

XIII. Conclusion

The Draft EIS confirms that the Colorado River Basin has entered a period of sustained and compounding risk, driven by persistent drought, declining storage, and increasing operational stress. The question before Reclamation is no longer whether impacts can be avoided, but whether post-2026 operations will manage risk deliberately and transparently or default to recurring emergency intervention. The latter path is neither effective nor defensible.

The analysis makes clear that system stability depends on early, proactive management; flexible and coordinated use of storage; meaningful Tribal participation; and integration of ecological integrity and mitigation into operational considerations. Frameworks that delay action, rely on rigid rules, or institutionalize emergency operations consistently perform worse under the

hydrologic conditions the Basin is most likely to face. Alternatives that deploy flexible tools early and at scale are more likely to preserve operability, reduce compounding harm, and sustain communities, Tribal Nations, and ecosystems.

The Final EIS, therefore, presents a critical opportunity—not merely to select among discrete alternatives, but to synthesize a preferred post-2026 framework built from the operational elements the analysis shows reduce risk. Doing so will require sharpening the focus on sustained low-flow conditions, clarifying authorities and guardrails, strengthening linkages between modeled outcomes and real-world impacts, and pairing operational reform with effective mitigation and resilience investments. These steps are necessary to meet NEPA's purpose, reduce legal and operational risk, and provide the predictability the Basin urgently needs.

Our organizations remain committed to constructive engagement as Reclamation moves toward a preferred alternative and Record of Decision. Continued, transparent consultation with Basin states, Tribal Nations, Mexico, and stakeholders—particularly once a preferred framework is identified—will be essential to ensuring that post-2026 operations are implementable and resilient. The opportunity to move beyond crisis-driven management is narrowing. The Final EIS must seize this moment to chart a path toward effective, adaptive, and science-based operations capable of sustaining the Colorado River system under deep uncertainty.

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Technical Comments - Appendix A

This Technical Comment Appendix supplements the Conservation Groups' Joint Comment Letter on the Draft Environmental Impact Statement (Draft EIS) for the Post-2026 Operational Guidelines and Strategies for Lake Powell and Lake Mead. It provides additional technical observations, clarification, and supporting rationale for the findings and recommendations presented in the Joint Comment Letter.

The Draft EIS reflects advancement in Colorado River planning through its use of Decision Making Under Deep Uncertainty (DMDU), large-ensemble modeling, and comparative performance metrics. These tools provide the foundation for evaluating risk across a wide range of hydrologic futures.

At the same time, the policy relevance of the analysis would be strengthened by refining how results are framed, aggregated, attributed to specific operational elements, and translated into resource-level consequences. These refinements would improve clarity regarding the drivers of performance differences among alternatives, how risks may accumulate or compound over time, and which operational tools most effectively reduce reliance on emergency actions under the hydrologic conditions the Basin is most likely to face.

This appendix, therefore, aims to:

- Provide technical depth that complements the narrative conclusions of the Joint Comment Letter;
- Clarify how modeling assumptions, analytical framing, and presentation choices influence comparative outcomes;
- Identify analytical gaps that may affect interpretation of real-world risks to water supplies, Tribal resources, ecosystems, infrastructure, and communities; and
- Offer targeted recommendations to improve transparency, comparability, and decision relevance in the Final EIS consistent with the Purpose and Need of the proposed action.

I. Analytical Framing and Comparability Across Alternatives

Each alternative in the Draft EIS bundles multiple operational elements, including base reservoir operations, shortage allocation frameworks, conservation and storage mechanisms, coordination rules, and participation structures. The manner in which these elements are framed, aggregated, and attributed in the EIS analyses influences how differences among the alternatives can be interpreted. When modeling results are presented without parsing out the influence of each element, one cannot determine which specific design features drive the outcomes. As discussed further below, clarifying performance attribution and improving structural comparability in the Final EIS would enhance transparency and enable a more relevant comparison of operational elements across alternatives.

A. Attribution of Performance Drivers Across Alternatives

Across multiple figures and summary statistics in Chapter 3 and related Technical Appendices, the Draft EIS presents material performance differences among alternatives without consistently identifying clearly the operational elements that contribute to those outcomes. Because the alternatives vary simultaneously across base release rules, shortage allocation frameworks, conservation and storage mechanisms, coordinated reservoir operations, and transfer logic, it can be difficult to discern which structural features most directly influence a given result. Additional clarification regarding these relationships would improve transparency and support more precise comparison among alternatives.

For example, robustness and vulnerability figures for key elevation thresholds such as Lake Powell at 3,500 and 3,525 feet and Lake Mead at 975 and 1,000 feet (Vol. 3, Technical App. 3, Figures TA-3-7 through TA-3-15) display meaningful differences in the percent of futures meeting or failing those thresholds. However, these figures do not distinguish whether observed improvements are attributable to larger maximum policy shortages, conservation pool activation, coordinated release logic, reservoir operations beyond Lakes Powell and Mead, or other embedded assumptions. Similarly, combined storage comparisons (Vol. 3, Technical App. 3, Figures TA 3-18 through TA 3-20) reveal divergence between Powell–Mead storage and CRSP or seven-reservoir storage outcomes, yet the analysis does not clearly attribute those differences to reliance on Upper Initial Units, infrastructure protection releases, or coordination provisions.

A comparable issue arises in the treatment of delivery reductions. Dead pool–related reduction robustness and vulnerability results (See Technical App. 4, pp. 4-2-4-3) show substantial variation in the percent of futures avoiding emergency reductions. However, the figures do not explicitly connect those outcomes to maximum policy shortage allocations, shortage sequencing, or conservation assumptions. Likewise, policy shortages and dead pool–related reductions are presented separately (See e.g., Vol. 3, Technical App. 4, Figures TA 4-10 and TA 4-11 where only policy shortages are shown), which obscures how alternative design choices influence total unavailable water across time.

This challenge is amplified by presentation of outcomes across 400 hydrologic traces and three initial reservoir conditions (1,200 futures). While appropriate for testing alternatives across a wide range of potential futures, the distribution of these hydrologies in combined aggregations, obscures policy-relevant distinctions where relatively small percentage changes meaningfully alter the likelihood of critical outcomes such as minimum operating elevations or deadpool exposure. (See Section II.A - Ensemble Design and Planning Relevant Interpretation below).

More explicit separation of results by major operational drivers (such as shortage framework, conservation/storage activation, coordinated releases, and transfer assumptions) would improve transparency and allow decision-makers to understand which elements most effectively reduce risk under sustained dry conditions.

Recommendation for the Final EIS: Where analytically feasible, separate out performance outcomes by primary operational drivers (e.g., maximum policy shortage levels, conservation pool activation, coordinated release rules, and transfer mechanisms), and explicitly describe how those features influence elevation robustness, dead pool exposure, and delivery reductions across alternatives.

Draft EIS references: Executive Summary, Figure ES-5; Vol. 1, Ch. 2 – Description of Alternatives and Proposed Action; Vol. 1, Ch. 3 – Affected Environment and Environmental Consequences (Hydrologic Resources and Water Deliveries; Vol. 3, Technical App. 3, Figures 3-7 through 3-15 and Vol. 3, Technical App. 3, Figures TA 3-18 through TA 3-20; Vol. 3, Technical App. 4, Figures TA 4-2, TA 4-3, TA 4-10, and TA 4-11).

B. Purpose, Structure, and Analytical Treatment of Conservation, Savings, and Tribal Pools Across Alternatives

The Draft EIS appropriately includes conservation and storage pool concepts across multiple alternatives. The pools modeled under the Maximum Operational Flexibility (MOF), Enhanced Coordination (EC), and Supply-Driven (SD) alternatives are each intentionally designed to serve different purposes, limiting the ability to compare performance, participation, and benefit realization across alternatives.

Under MOF, water stored in the Conservation Reserve may be adaptively deployed to address system reliability and resource objectives, including Upper Basin conservation and contributions; Lower Basin conservation and shortage management; operational and ecological risk mitigation at Lakes Powell and Mead; temperature and sediment management below Glen Canyon Dam; support for Lower Colorado River National Wildlife Refuge and Multi-Species Conservation Program (MSCP) site maintenance; and added flexibility to respond to evolving conditions.

By contrast, the EC alternative emphasizes Tribal sovereignty and participation, as described in Technical Appendix 18, and provides protection from certain shortage triggers. Its conservation and accounting framework centers on how Tribal water enters the system, how it is tracked and protected, and how Tribes participate directly in Colorado River management. Such structure is informative for ensuring that conserved Tribal water is managed and available to support Tribal priorities, including direct use and leasing or marketing opportunities that exist or may develop in the future.

The SD alternative contemplates conservation pools primarily as accounting mechanisms to manage Upper Basin contributions relative to natural-flow targets and Lower Basin conservation to buffer policy shortages. These constructs function largely at a policy-balancing level rather than as entity-level participation or flexible operational tools.

Because MOF and SD do not include entity-level Tribal storage constructs or comparable transaction mechanisms, the Colorado River Simulation System (CRSS) analysis as presented is unable to provide a consistent analytical basis for evaluating Tribal participation, attribution of

conserved water, or Tribal benefit realization across alternatives. As a result, cross-alternative comparisons may inadvertently overstate parity and understate the significance of EC's Tribal-specific design features.

For the Final EIS, targeted modeling modifications or sensitivity analyses for MOF and SD could create analytically comparable representations of Tribal conserved water accounts or participation mechanisms. Such analysis would allow decision-makers to evaluate how alternative design choices affect Tribal engagement, risk exposure, and benefit realization under common hydrologic conditions, improving transparency and ensuring that structural differences among alternatives are clearly understood.

Importantly, these tools are not mutually exclusive and may be employed in complementary, time-sequenced ways. For example, Tribal water conserved and banked under an EC-style framework could, on an interim basis, support non-consumptive system and resource benefits (such as reservoir elevation protection, temperature management, sediment flows, or habitat support) while remaining fully attributed to participating Tribal Nations. When Tribal priorities shift to out-of-reservoir or off-river benefits, that same water could be called upon consistent with Tribal sovereignty and shared decision-making authority. Similar interim, non-consumptive applications could apply to conserved water held in MOF or SD pools without foreclosing later use to meet defined delivery or contribution objectives.

Recommendation for the Final EIS: The Final EIS should consider identifying and evaluating the strongest pool elements of the action alternatives. Specifically, it should analyze a combination of MOF's treatment of the Conservation Reserve as a flexible operational tool with EC's Tribal accounting and sovereignty framework to allow for transparent tracking, protection, and future availability of conserved Tribal water. These elements need not be activated simultaneously; rather, they may operate in complementary or time-sequenced ways. Evaluating such a combined construct would better reflect the practical deployment of conservation and contribution tools, improve analytical comparability, and support a more adaptive, durable, and administratively workable post-2026 operating framework.

Draft EIS references: Vol. 1, Ch. 2 – Alternatives Including Proposed Action (MOF, EC, SD descriptions); Vol. 3, Technical App. 3, pp. 3-40 and 3-41, Table 3-8 through 3-10, (Conservation Assumptions) and p. 3-48 (Vulnerability Conditions); Vol. 3, Technical App. 4, pp. 4-78-79, Table 4-4 Tribal Shortage Impacts); Vol. 3, Technical App. 4, p. 4-78 (cross-reference to Technical App. 18, Indian Trust Assets).

II. Hydrologic Futures and Scenario Design

The Draft EIS relies on a broad ensemble of hydrologic futures and sensitivity analyses to evaluate alternative performance under deep uncertainty. The selection, weighting, and interpretation of hydrologic futures—as well as assumptions regarding starting reservoir conditions and alternative parameters—inform how risk is characterized and compared across alternatives. Clarifying how these design choices shape modeled outcomes will help ensure the

Final EIS reflects planning-relevant conditions, accurately portrays near-term vulnerability, and transparently evaluates tradeoffs among operational strategies.

The following sections identify targeted opportunities to refine interpretation and presentation of hydrologic futures, initial conditions, and parameter sensitivities.

A. Ensemble Design and Planning Relevant Interpretation

The Draft EIS's use of hydrologic future ensembles is generally consistent with Decision Making under Deep Uncertainty (DMDU) principles. However, treating all futures as equally informative can blur the important distinction between stress-testing system limits and evaluating conditions that are most relevant for near- and mid-term planning. In particular, scenarios that reflect recent hotter and drier trends in the Basin warrant focused analytical attention.

Meaningful performance differences among alternatives emerge under the average-to-critically dry inflow categories, as defined by the preceding three-year average Lee Ferry Natural Flow. These conditions are not extreme outliers; rather, they align closely with observed Basin hydrology over the past two decades. Accordingly, the Final EIS should more explicitly evaluate and summarize each alternative's performance across key metrics within the approximately 8–13 MAF range of these categories. Tables, figures, and narrative summaries should clearly distinguish how alternatives perform under these planning-relevant conditions.

Centering analysis in this range will better inform the development of practical operating guidelines that reflect prevailing Basin trends—without defaulting to worst-case assumptions—while supporting sound, risk-aware Post-2026 policy decisions.

In addition, the Final EIS would benefit from a complementary stress test using plausible post-2026 starting reservoir elevations and plausibly low five-year average annual inflows (e.g., approximately 9.5, 11, and 13 MAF, which reflect the range of recent historical five-year conditions). Because near-term inflow assumptions materially influence storage preservation, reliability, and exposure to critical thresholds, this focused analysis would help clarify which operational tools and authorities are necessary to stabilize reservoirs, protect hydropower and regulatory compliance, safeguard key elevations, and minimize reliance on emergency measures during the most constrained implementation period.

Such a refinement would not replace the broader long-term DMDU framework. Rather, it would strengthen it by ensuring that post-2026 guidelines are resilient under realistic near-term conditions—when storage is limited, risks are elevated, and policy choices carry the greatest leverage. Aligning ensemble interpretation with observed hydrologic trends and plausible initial conditions would better identify strategies capable of managing continued aridification and variability in the Basin.

Recommendation for the Final EIS: Refine presentation of the full hydrologic ensemble to focus on updated and observed Basin conditions since publication of the Draft EIS. While

maintaining consistency with DMDU principles, the Final EIS should more clearly distinguish between stress-test extremes and planning-relevant futures that reflect recent hotter and drier trends. This may include:

- Providing focused analysis and supplemental reporting on the average-to-critically dry inflow categories—particularly within the approximately 8–13 MAF range, as defined by the preceding three-year average Lee Ferry Natural Flow.
- Applying plausible post-2026 starting reservoir elevations to better reflect realistic implementation conditions.
- Including a complementary stress test using representative five-year average annual inflows (e.g., approximately 9.5, 11, and 13 MAF) to evaluate near-term storage preservation, reliability, and exposure to critical thresholds.

Presenting targeted subsets, conditional summaries, and clearly distinguished performance tables and figures alongside the full ensemble would improve transparency regarding near- and mid-term vulnerability. This refinement would strengthen the final analyses by ensuring that Post-2026 guidelines are informed by the most useful information to be resilient under constrained storage conditions and better aligned with observed hydrologic trends in the Basin.

Draft EIS references: Vol. 3, Technical App. 3, Table 3-5 (Critical Elevations at Lake Mead), Table 3-6 (Lake Mead Elevations), Table 3-6, Lake Mead Elevations); Table 3-8 (Statistical Summaries), at pp. 3-48 (Vulnerability Conditions by 20-Year Drought); pp. 3-63–3-66 (10-Year Glen Canyon and Compact Point Flows); Vol. 2, App. E, pp. E-1–E-3, E-4, Table E-1); Vol. 2, Appendix F, pp. F-1–F-3, F-5, F-9–F-10).

A. Initial Reservoir Conditions and Near-Term Vulnerability

Sensitivity results demonstrate that system performance is highly dependent on assumed starting elevations at Lakes Powell and Mead. The high- and middle-initial storage scenarios make assumptions that are inconsistent with observed hydrology, current reservoir conditions, and recent forecasts. For example, the February 2026 24-Month Study projects a most probable Lake Powell elevation of 3,488.42 feet in December 2026, which is more than 10 feet below the lowest bound (Trace 14) of 3,511.36 feet used in the Draft EIS modeling. Use of unrealistic or overly optimistic starting conditions in the Final EIS modeling would mask near-term vulnerability and understate the likelihood of early exposure to emergency actions.

Recommendation: Constrain starting conditions in the Final EIS to reflect current and plausible near-term storage, and clearly present performance under declining or constrained starting scenarios.

Draft EIS references: U.S. Bureau of Reclamation, *24-Month Study Projections for the Colorado River Basin,* (2026, February). See Vol. 2, App. E, p. E-3 (discussion of 400 hydrologic traces combined with three initial reservoir storage conditions); Vol. 2, App. G (CRSS Initial Conditions and discussion of high-, middle-, and low-initial storage scenarios); See also Vol.1, Ch. 3 (robustness and sensitivity results reported by initial condition).

B. Supply-Driven (SD) Alternative Sensitivities

Outcomes under the SD alternative are highly sensitive to parameter selection (e.g., 60%, 65%, 70% thresholds). Relatively small adjustments can materially shift risk between Lakes Powell and Mead, underscoring the need for careful calibration if this framework is advanced.

The Draft EIS's Technical Appendix D shows that:

- A 60% threshold increases Powell storage but reduces flexibility to meet Grand Canyon ecological objectives and increases risk to Lake Mead and of Lower Basin shortages;
- A 65% threshold shifts risk toward Powell while benefiting Mead; and
- Intermediate thresholds (62–64%) may produce more balanced reservoir outcomes.

Additionally, Appendix D reports policy shortages but does not consistently present the frequency or magnitude of deadpool-constrained reductions. Because SD parameters directly influence reservoir balance and deadpool exposure, evaluating policy shortages alone provides an incomplete view of overall system performance. Threshold adjustments that appear modest when measured by policy shortages may materially alter deadpool exposure and total unavailable water.

Technical Appendix 3, Figures TA 3-18 and TA 3-19 also show a divergence between the outcomes of the SD alternatives relative to others when examining Powell + Mead storage versus combined storage from the Colorado River Storage Project (CRSP) Initial Units. When evaluated using Powell + Mead storage, the SD alternatives perform well; however, when evaluated using CRSP combined storage, SD performs comparatively worse, indicating more frequent reliance on Initial Units under the SD framework. Interpretation is complicated by the inconsistent application of Powell Infrastructure Protection (PIP) releases across alternatives. A more systematic and transparent analysis of PIP use across scenarios would improve comparability and decision-making relevance in the Final EIS.

Moreover, the alternative's reliance on "gap water" introduces additional policy and legal considerations. Modeled contributions are capped at approximately 23% of Upper Basin depletions minus conservation (2.1/9.0) and modeled policy shortages are capped in the Lower Basin, which raises the question of what should occur if additional basin adjustments are needed under worsening hydrology. Moreover, it is our understanding that **i**ntegrating gap water will require affirmative state action and potentially additional NEPA review in the Upper Basin as the Draft EIS does not fully analyze the implications for Upper Basin users, reservoir operations, or environmental outcomes at this time.

Recommendation: If SD elements are carried forward, refine parameter selection, report both policy shortages and deadpool-constrained reductions for each threshold (60%, 65%, 70%), and conduct a focused review of gap-water implications consistent with NEPA.

Draft EIS references: Vol. 1, Ch. 2 (SD alternative description and percentage thresholds); Vol. 1, Ch. 3 (comparative reservoir performance and shortage results); Vol. 2, Technical App. D (60%, 65%, 70% threshold comparisons and intermediate sensitivities); Vol. 3, Technical App. 3,

Figures TA 3-18 and TA 3-19 (discussion of Powell+Mead vs. CRSP Initial Units storage and PIP release assumptions); Vol. 3, Technical App. 4 (deadpool-related delivery reductions and policy shortages by alternative).

III. Performance Metrics and Results Presentation

The Draft EIS employs a sophisticated set of performance metrics and visualization tools. These include conditional box plots, robustness and vulnerability analyses, elevation thresholds, and comparative reservoir summaries to assess alternative performance under deep uncertainty. The structure and presentation of these tools shape how risk and tradeoffs are interpreted. Choices regarding aggregation, hydrologic categorization, threshold selection, and threshold framing can amplify or dampen perceived risk, obscure short-duration high-impact events, and influence whether alternatives appear to reduce systemic vulnerability or merely defer or redistribute it.

Refining how results are categorized, displayed, and integrated would improve transparency and better align the analysis with real-world decision-making, where timing, duration, sequencing, and responsiveness to emerging risk are critical. The sections below identify specific opportunities to strengthen the clarity, comparability, and policy relevance of key performance metrics in the Final EIS.

A. Conditional Box Plots and Hydrologic Categorization

Conditional box plots are a central tool used in the Draft EIS to help describe modeled outcomes across hydrologic futures. Because these figures heavily influence interpretation of storage trajectories, shortages, and threshold exposure, the way hydrology is categorized and how distributions are summarized influences the perceived level of risk and the relative performance of alternatives. Two related issues warrant clarification in the Final EIS: (1) how antecedent hydrologic categorization affects interpretation of current-year risk, and (2) how emphasis on central tendency can obscure tail risk outcomes that are highly consequential for operational decision-making.

1. Hydrologic Framing and What It Means for Risk Assessment

The Draft EIS frequently presents modeling results using conditional box plots categorized by the preceding three-year average natural flow. This approach is appropriate for evaluating reservoir-integrated responses—such as storage trajectories and elevation-dependent thresholds—because those outcomes reflect antecedent hydrologic conditions and system memory (e.g., Technical App. 3, Figures TA 3-6 and TA 3-11).

However, this framework complicates interpretation of decision-relevant conditions tied to current-year hydrology. A critically dry year following several wet years is grouped within a wetter category, even though operational, ecological, and socioeconomic impacts may be severe and require immediate response. As a result, short-duration, high-impact drought events may be obscured within aggregated distributions that emphasize antecedent conditions rather than contemporaneous stress.

This limitation is most evident in shortage and reduction figures (e.g., Vol. 1, Chap. 3, Figure 3-12; Technical App. 4 series), where policy shortages and deadpool-related reductions are conditioned on prior hydrology, making it difficult to assess the frequency, implications and required responsiveness to abrupt single-year droughts. The effect is particularly consequential for decision-sensitive variables—such as shortages, conservation activation, water transactions, and participation in flexible tools—that are triggered by current conditions rather than cumulative reservoir memory.

2. Tail Risk, Threshold Metrics, and Summary Statistics

The Draft EIS places primary interpretive emphasis on the 25th–75th percentile range of box plots, suggesting that distribution 'tails' outside that range largely reflect "extreme conditions occurring before the [antecedent] three years used to sort the data." This characterization, however, may be analytically incomplete. The plotted values represent modeled outcomes for the current timestep, conditioned on antecedent hydrology. The tails, therefore, capture valid modeled responses to abrupt hydrologic shifts—including severe single-year droughts—not artifacts of earlier extremes.

Low-end dots outside the box plot ranges within wetter antecedent categories illustrate system vulnerability to rapid deterioration despite favorable prior conditions. For example, Lake Mead elevations falling below 1,000 feet within the "wet preceding three years" category (e.g., Vol. 3, Technical App. 3, Figure TA 3-10) demonstrate exposure to abrupt collapse scenarios even after multi-year above-average inflows. De-emphasizing these tail outcomes may understate low-probability, high-consequence events that often drive emergency operational decision-making.

A similar issue arises in the reporting of shortages and deadpool-related reductions. In critically dry conditions, the Draft EIS frequently reports median annual values. For deadpool-related reductions, medians of zero across most action alternatives do not indicate negligible risk; rather, they indicate that more than half of modeled futures avoid reductions, while a meaningful portion still experience them. Because deadpool exposure is inherently a lower probability, high-consequence outcome, median values obscure the magnitude and likelihood of risk that managers must plan for.

For threshold-driven outcomes—such as minimum power pool, deadpool, or large-scale shortage reductions—reliance on median metrics is insufficient. As discussed above, a substantial portion of the 1,200-member ensemble reflects optimistic initial reservoir conditions; consequently, emphasis on medians or the central tendency understates near-term exposure under realistic starting scenarios. Decision-makers require visibility into both exceedance probabilities and the severity of outcomes when they occur, not solely whether they fall within an interquartile range.

Recommendation for the Final EIS: Refine both hydrologic categorization and summary-statistic presentation in conditional box plots to:

- Supplement existing conditional box plots (See e.g., Vol. 1, Chap. 3, Figure 3-12, Vol. 3 Technical App. 3, Figures TA 3-7 through TA 3-10, and Vol. 3, Technical App. 4, Figure TA 4-series) with analyses organized by current-year hydrology for decision-sensitive variables, including shortages, conservation and storage activation, transactional mechanisms, and flexible tool participation;
- Clearly distinguish between stress-testing applications of antecedent categorization and planning-relevant interpretation tied to real-time operational triggers;
- Explicitly clarify that distribution tails represent valid modeled current-year outcomes, not artifacts of earlier hydrologic extremes; and
- For critical threshold metrics (e.g., minimum power pool, deadpool, large-scale shortage reductions), supplement medians and interquartile ranges with percent exceedance plots(e.g., percent of futures or years with any level of reduction), upper- and lower-tail percentiles (e.g., 75th/90th/95th), and conditional severity metrics (e.g., mean reduction when reductions occur).

Elevating these refinements in Chapter 3 and the Executive Summary would ensure that both central tendencies and low-probability, high-consequence risks are transparently presented and aligned with real-world operational decision-making.

B. Cross Chapter Consistency in Shortage Metrics and Hydrology Categories

Figure ES-5 in the Executive Summary presents “average shortages,” while Chapter 3 emphasizes medians in box plots. Because shortage distributions are skewed under dry conditions, averages exceed medians. As a result, the Executive Summary may appear to report larger shortages than those implied by median-focused presentations elsewhere in the document. In addition, Figure ES-5 uses 20-year average hydrology classifications, whereas Chapter 3 uses preceding three-year averages. These frameworks are not interchangeable: a 20-year window smooths drought sequences, while a preceding three-year window reflects operational memory.

The result is a comparison that differs both in magnitude (mean versus median) and hydrologic context (20-year versus three-year classification), which complicates direct cross-chapter interpretation.

Recommendation for the Final EIS: Harmonize reporting by presenting both mean and median shortages (plus an upper percentile), and either align hydrologic classification methods or provide parallel views so comparisons are consistent across chapters.

C. Capturing System Stress Beyond Deadpool - Total Unavailable Water and Duration Near Critical Elevations

Deadpool is a consequential threshold, but it is an incomplete proxy for indicators of system health or failure. Severe impacts may occur well before deadpool is reached, including loss of hydropower reliability, constrained release flexibility, infrastructure stress, delivery uncertainty, and escalating reliance on emergency actions. Several alternatives technically avoid deadpool

while operating for extended periods near minimum power pool at Lakes Powell and Mead (Vol. 1, Ch. 3; Technical App. 3 elevation figures). Figure ES-5 further demonstrates that duration near critical elevations varies substantially across alternatives, yet those durations are not consistently translated into impact analyses.

Prolonged operation near minimum operating thresholds presents materially different risks than short-duration excursions. Sustained low elevations affect dam operations, hydropower generation, maintenance demands, ecological conditions, and emergency preparedness. Although the modeling evaluates reservoir elevations approaching minimum operating thresholds, a focus primarily on whether deadpool is reached or avoided obscures these degraded operating states and their cumulative consequences.

In addition, policy shortages and deadpool-related reductions are frequently analyzed separately (e.g., Vol. 1, Chap. 3, Figure 3-12 and related Technical App. 3 figures), making it difficult to assess total unavailable water under each alternative. This separation masks the tradeoff between earlier, planned reductions and later, less predictable emergency losses.

Technical Appendix 4 illustrates this tradeoff. Alternatives with larger maximum policy shortage allocations—such as MOF and EC—avoid deadpool-related reductions more consistently than those with smaller planned shortages. Technical App. 4, Figure TA 4-2 shows that MOF avoids deadpool-related reductions in approximately 91 percent of modeled futures, while EC and the SD (Lower Basin Pro Rata) alternative avoid such reductions in roughly 84 to 85 percent of futures. In contrast, Basic Coordination avoids deadpool-related reductions in only about 62 percent of futures and, in some scenarios, experiences substantially larger magnitudes of emergency reductions, approaching 6.0 MAF.

These results demonstrate that while total shortages under critically dry conditions may appear similar across alternatives, frameworks that limit early policy shortages face materially greater exposure to abrupt and larger emergency reductions.

Finally, deadpool-avoidance itself is treated as an undefined reactionary response rather than an explicit operational element. The analysis assumes unspecified actions would be taken if risk emerges, without identifying triggers or interactions with shortage policies. This limits transparency and complicates comparison of how alternatives manage risk under sustained dry conditions.

Recommendation for the Final EIS: To improve decision relevance -

- Elevate metrics capturing proximity to critical elevations, duration near minimum operating levels, and frequency of emergency triggers, and treat sustained operation near threshold conditions as a performance indicator in its own right;
- Integrate policy shortages and deadpool-related reductions into a single metric showing the total magnitude, timing, and duration of unavailable water under each alternative.This metric should visually distinguish between planned policy shortages and

deadpool-related reductions to clarify how early, structured reductions compare to later emergency losses; and

- Explicitly define deadpool-avoidance actions, including triggers, operational adjustments, and interactions with shortage policies, to clarify whether alternatives meaningfully reduce risk or simply defer the most extreme outcomes.

Draft EIS references: Vol. 1, Ch. 3, Figures 3-10 and 3-12 (discussion of conditional box plots categorized by preceding three-year average natural flow and interpretation of interquartile ranges); Vol. 3, Technical App. 3, Figures TA 3-6 through TA 3-11 (conditional storage and elevation results by antecedent hydrology); Vol. 3, Technical App. 4, Figure TA 4-series (policy shortages and deadpool-related reductions by hydrologic category); Vol. 2, App. E, pp. E-3–E-4 (1,200 futures; threshold and vulnerability metrics)).

D. Robustness and Vulnerability Metrics

The Draft EIS employs robustness heatmaps, robustness profiles, and vulnerability bar plots to evaluate alternative performance under deep uncertainty. These tools represent a meaningful application of DMDU methods. However, certain methodological choices limit their relevance and, in some cases, may oversimplify how failure conditions manifest under sustained low flow conditions.

1. Robustness Heatmaps

The robustness heatmaps (pp. 3-15 to 3-17) measure the percentage of modeled futures in which a threshold is met or exceeded over the 34-year modeling period. While this provides a useful aggregate indicator, the metric counts exceedances without distinguishing whether they occur sequentially or are dispersed across time.

This distinction is critical. Five isolated years below a threshold over 34 years have fundamentally different operational, ecological, and policy implications than five consecutive years below the same threshold. Sequential exceedances can trigger sustained emergency posture, infrastructure stress, cumulative ecological impacts, escalating economic disruption, and long-term recovery challenges. Dispersed exceedances do not present the same compounding risks. Without distinguishing duration or contiguity, the robustness metric may obscure exposure to multi-year drought sequences—the conditions most likely to drive exigent management decisions.

Threshold selection also warrants greater explanation. The rationale for choosing particular elevation or shortage thresholds is not consistently documented in each figure, and numerical values are not displayed directly within each heatmap cell. Providing explicit threshold justification—linked to operational constraints, infrastructure limits, statutory obligations, or ecological triggers—and displaying numerical robustness values directly within each heatmap cell would improve transparency and comparability.

2. Robustness Profiles

The robustness profiles (p. 3-18) present the percentage of hydrologic futures meeting a given performance criterion and suggest that, for example, an alternative that fails in 10 percent of futures likely fails under the driest 10 percent of hydrologies. This mapping assumes a simple monotonic relationship between average flow and failure probability.

In practice, failure outcomes may reflect interactions among hydrologic sequencing, initial storage conditions, operational triggers, parameter selections, and reservoir dynamics—not solely long-term average flow. A future with moderate average flow but adverse sequencing could produce failure, while a drier long-term average with favorable timing might not. Accordingly, mapping failure percentages directly to the driest hydrologic percentiles should be presented as an analytical inference rather than a deterministic conclusion.

Clarifying these causal assumptions would improve confidence in the interpretation of robustness results and avoid overstating the precision of the hydrologic–failure relationship.

3. Vulnerability Bar Plots and Skillful Metrics

The vulnerability bar plots (p. 3-19) identify “skillful metrics” that statistically correlate with performance failure and hydrologic conditions that begin to breach key thresholds. While analytically valid, the framing is highly technical and may not translate clearly to decision-making.

The concept would be more useful if reframed around a central planning question:

Under what average hydrologic conditions should an operating framework be designed or selected for?

Currently, references to 10-year, 20-year, and 34-year averages appear in different parts of the analysis without clear framing. Consolidating vulnerability results into a clear planning-relevant summary that identifies the hydrologic conditions at which key thresholds are breached would improve interpretability and decision relevance.

Figure TA 4-3 in Technical Appendix 4 (Lake Mead Dead Pool-Related Reductions: Vulnerability), as well as similar figures throughout Technical Appendix 3 (e.g., Figure TA 3-8, TA 3-10, TA 3-13) are particularly important in this regard. This portrayal of results directly informs the question of what hydrologic future the Basin should plan for, yet it is buried in the technical appendices. Notably, these figures also include a reference hydrology that draws from the “drying with variability” ensemble, which may be the most realistic representation of future hydrology from the full ensemble. Elevating this type of risk representation and clarifying which structural features of alternatives shift vulnerability thresholds upward or downward would strengthen the Final EIS’s policy relevance.

Recommendation for Final EIS: Better align the DMDU reporting framework with real-world decision needs, where duration, sequencing, and causal clarity are as important as aggregate exceedance counts by -

- Distinguishing between dispersed and sequential threshold exceedances to better capture multi-year drought exposure.
- Explicitly justifying threshold selections and displaying numerical robustness values directly in heatmaps.
- Clarifying the assumptions underlying mapping of failure percentages to driest hydrologic percentiles.
- Reframing “skillful metrics” in policy-relevant terms that directly address planning hydrology.
- Elevating and contextualizing key vulnerability figures similar to the vulnerability figures included in Technical Appendices 3 and 4.
- Providing sensitivity analysis identifying which operational elements most influence vulnerability thresholds.

Draft EIS references: Vol. 1, Ch. 3, pp. 3-15-19 (robustness heatmaps, robustness profiles, and vulnerability bar plots); Vol. 2, App. E, pp. E-2–E-4 (definition of robustness as percent of futures meeting a threshold and vulnerability methodology), Table E-1 (streamflow statistics); Vol. 3, Technical App. 3 (threshold-based elevation performance metrics, e.g., minimum power pool and 3,500-ft criteria); Vol. 3, Technical Apps. 3 and 4 (e.g., Figure TA 4-3 Lake Mead Dead Pool-Related Reductions: Vulnerability and discussion of policy shortages and deadpool-constrained reductions by hydrologic statistics).

IV. Reservoir Performance and Mainstream Release Patterns

Modeled reservoir elevations and downstream release patterns reveal important structural differences among alternatives. However, the Draft EIS does not consistently distinguish whether observed performance reflects durable risk reduction, redistribution of risk between reservoirs, or the embedded shortage allocation frameworks that shape downstream deliveries. Clearer attribution would improve understanding of how each alternative balances system stability, distributional consequences, and exposure to sustained dry conditions.

A. Lake Powell versus Lake Mead Trends

EC and MOF provide the strongest protection for Lake Powell. However, under average and dry hydrologies, median end-of-water-year Powell elevations approach ~3,600 feet or above, raising questions about whether rule curves for these alternatives may be over-protective and potentially create imbalances elsewhere in the system.

The SD alternative at 65 percent performs similarly to the Current Coordinated Strategy, No Action, and Basic Coordination alternatives, increasing risks for Powell while providing some benefit to Lake Mead.

Across most alternatives and hydrologies, Lake Mead exhibits substantially greater variability than Lake Powell. MOF and both SD alternatives maintain median elevations at Mead well above 1,000 feet even in critically dry conditions, though the SD alternatives show wider ranges than MOF. The EC alternative shows comparatively lower variability, which warrants further explanation. Basic Coordination does not perform as well, with frequent years below 1,000 feet in dry and critically dry hydrologies.

NOTE: Glen Canyon 10-year release comparison in Appendix D should likely reference 82.3 million acre feet rather than 82.5 MAF (or better, the Compact compliance point).

B. Mainstream Release Patterns - Parker Dam Releases

The Draft EIS's discussion of Parker Dam releases (Vol. 1, Ch. 4, p. 3-40; Technical App. 3, p. 3-86) would benefit from a narrative reconciliation with the modeled results shown in Technical App. 3, Figure TA 3-30. In that figure, the EC and SD (Lower Basin Pro Rata) alternatives exhibit a noticeable decline in releases from Parker Dam relative to other alternatives. This pattern appears to reflect structural allocations embedded in those alternatives, including reduced deliveries to senior downstream users (e.g., Imperial Irrigation District) combined with comparatively smaller reductions to Central Arizona Project diversions from Lake Havasu.

Because Parker releases integrate upstream shortage allocation decisions with downstream delivery priorities, these modeled differences are not incidental. They represent material shifts in how reductions are distributed among Lower Basin contractors. However, the Draft EIS does not clearly attribute these release changes to the specific shortage allocation frameworks driving them. Without that attribution, it is difficult to determine whether observed differences reflect intentional policy design or secondary modeling artifacts.

Recommendation for the Final EIS: Clarify structural drivers to more fully evaluate whether alternatives meaningfully reduce long-term risk or reallocation exposure across reservoirs and user groups by -

- Clearly distinguishing whether reservoir performance differences represent durable system risk reduction or redistribution of risk between Lakes Powell and Mead;
- Explaining how rule curves, release constraints, and coordination provisions influence median Powell elevations near ~3,600 feet and variability patterns at Lake Mead;
- Attributing Parker Dam release differences explicitly to the underlying shortage allocation rules and diversion assumptions embedded in each alternative; and
- Carrying forward any distributional consequences of altered mainstem releases into resource-level impact analyses, including irrigation districts, refuges, salinity management, and downstream habitat conditions.

Draft EIS references: Vol. 1, Ch. 3 (reservoir elevation comparisons by hydrologic category and discussion of Lake Powell and Lake Mead variability and median elevations); Vol. 1, Ch. 4, p. 3-40 (discussion of Parker Dam releases and downstream delivery effects); Vol. 3, Technical App. 3, Figures TA 3-6 through TA 3-11 (Powell and Mead elevation results), Figure 3-30 and p.

3-86 (Parker Dam releases and mainstem delivery patterns and discussion of rule curves, coordinated operations, and release constraints); Vol. 2, Technical App. D (Glen Canyon Dam 10-year release assumptions and SD 60–70% threshold comparisons); Vol. 3, Technical App. 4 (policy shortages and deadpool-related reductions affecting downstream allocations).

V. Flexible Tools Transparency

Flexible operating tools like hydrologic triggers, conservation and storage pools, coordinated reservoir operations, transactional mechanisms, environmental release provisions, and adaptive response triggers are central to the performance of several post-2026 alternatives. In particular, the MOF and EC alternatives rely on these tools to manage risk, preserve storage, and reduce reliance on emergency actions under hotter and dry conditions.

While the Draft EIS describes these tools conceptually (Vol. 1, Ch. 2), it does not consistently report how frequently they are activated, how much water they move, or how their use shapes modeled system outcomes. Without this information, it is difficult to determine whether observed performance improvements reflect durable operational design or infrequent discretionary interventions.

For example, certain core elements of the MOF would benefit from clearer reporting, including:

- Climate Response Indicator (MOF): The Draft EIS explains the indicator and associated triggers, but does not show how often it is activated across hydrologic categories or how activation affects storage trajectories and shortages (Vol. 1, Ch. 2; Technical App. 3).
- Conservation Reserve**:** Figures in Technical App. 3 show aggregate storage performance but do not consistently summarize the Conservation Reserve fill levels, depletion rates, duration of drawdown, or carryover behavior under sustained dry sequences.
- Powell–Mead Transfers: Transfer logic is embedded in the modeling framework for the Conservation Reserve, yet the frequency, magnitude, and cumulative effects of inter-reservoir transfers are not presented in comparative tables.
- Environmental Release Modifications: Where alternatives allow flexibility in release patterns for stewardship or ecological purposes, the analysis does not quantify how often such adjustments occur or how they interact with shortage rules.

With clearer reporting of activation frequency, triggers, and volumetric magnitude, it would be easier to assess whether tools function as intended under prolonged stress, how they interact with shortage allocation frameworks, or whether observed improvements reflect structural design or intermittent intervention. Figures 1A and 1B below provide illustrative examples of how activation frequency and volumetric deployment could be reported in the Final EIS.

Moreover, because flexible tools influence the timing and severity of shortages and low-elevation operations, their activation patterns directly shape the resource-level consequences discussed in Section VI (Linking Modeled Operations to Resource-Level

Impacts). Additional documentation of tool performance is therefore important for meaningful comparison among alternatives and for understanding downstream resource implications.

Figure 1A – Example of Total Shortages (policy + dead pool) resulting from the Maximum Flexibility Alternative considered with and without the use of conservation pools. This plot evaluates the percent exceedance of all modeled years produced with Reclamation's 400 traces and using the middle initial reservoir conditions.

The results show that shortages exceeding 2 maf occur in 36% of all modeled years without the use of the conservation pools, but this declines to 24% with the use of conservation pools.

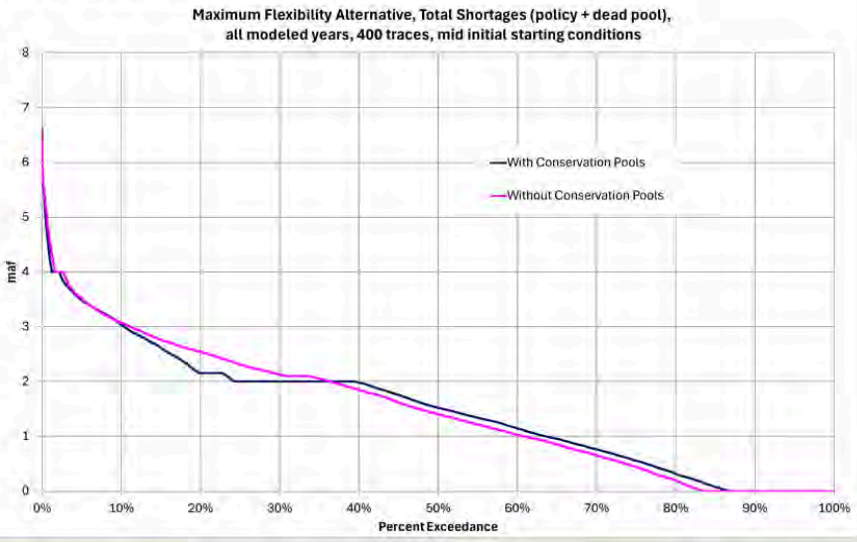
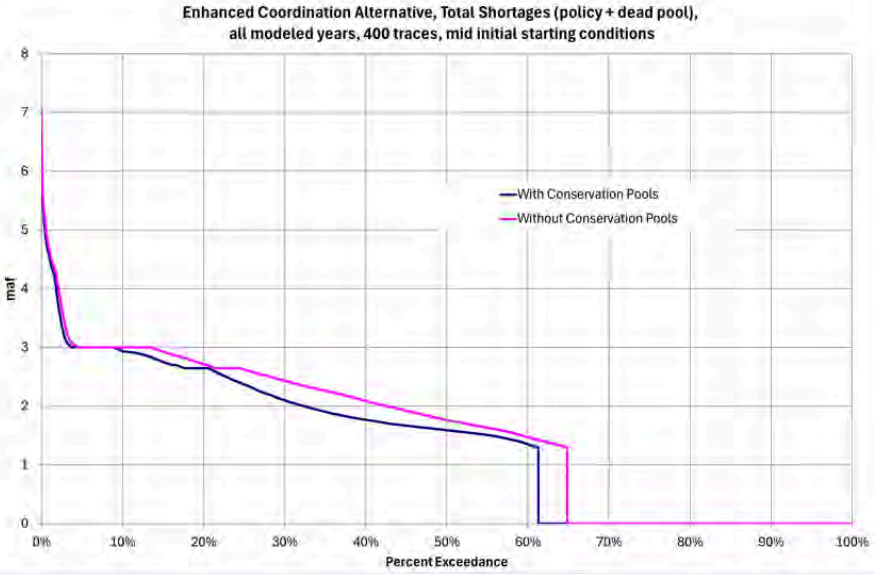


Figure 1B – Example of Total Shortages (policy + dead pool) resulting from the Enhanced Coordination Alternative considered with and without the use of conservation pools. This plot evaluates the percent exceedance of all modeled years produced with Reclamation's 400 traces and using the middle initial reservoir conditions.

The results show that shortages exceeding 2 maf occur in 43% of all modeled years without the use of the conservation pools, but this declines to 32% with the use of conservation pools.



Recommendation for the Final EIS: Improve transparency and decision relevance by -

- Reporting the frequency, triggers, and volumetric magnitude of flexible tool activation across hydrologic categories;

- Summarizing Conservation Reserve fill and depletion patterns, transfer volumes, and interactions with shortage rules in comparative tables;
- Explicitly documenting how flexible tools function under sustained multi-year drought sequences, not only isolated stress years; and
- Clearly distinguishing between structural design features and discretionary operational assumptions embedded in the modeling framework.

Draft EIS references: Vol. 1, Ch. 2 (description of flexible operating tools, including the Climate Response Indicator, Conservation Reserve, coordinated reservoir operations, transactional mechanisms, and environmental release provisions under MOF and EC); Vol. 1, Ch. 3 (comparative performance outcomes influenced by flexible tool activation); Vol. 3, Technical App. 3 (discussion of Conservation Reserve mechanics, inter-reservoir transfers, rule curves, and elevation outcomes; figures reflecting aggregate storage performance); Vol. 3, Technical App. 4 (policy shortages and reductions influenced by operational triggers and flexible mechanisms); Vol. 2, App. E, pp. E-3–E-4 (performance criteria and threshold-based robustness/vulnerability framework).

VI. Linking Modeled Operations to Resource-Level Impacts

The Draft EIS evaluates system-level performance metrics—including shortage frequency and magnitude, reservoir elevations, vulnerability thresholds, and deadpool exposure—across a wide range of hydrologic futures. These metrics provide important insight into basin-wide dynamics. However, consistent translation of modeled system outcomes into resource-level consequences are required.

The connection between system performance and real-world impacts on communities, Tribal Nations, ecosystems, hydropower systems, and regional economies is often implicit rather than explicit in the impact analyses. The gap is especially consequential when evaluating flexible operating tools in each alternative —such as the Conservation Reserve or similar storage pool concepts, water transfers, and hydrologic triggers—because tool activation can affect the timing, duration, and distribution of impacts across sectors.

Without clearer linkages between modeled outcomes and resource-level analyses, it remains difficult to assess whether alternatives that perform well on aggregate metrics meaningfully reduce real-world risk or simply shift impacts across sectors or over time. This limitation constrains the ability of decision-makers and the public to evaluate tradeoffs, understand the distribution of impacts, and distinguish among alternatives based on their consequences under sustained low-flow and extreme conditions. Key examples are outlined below.

A. Water Supply Reliability and Tribal Water Assumptions

The Draft EIS's robust set of modeling analyses that evaluate reservoir operations, shortages, and system performance across a wide range of hydrologic conditions provide valuable information regarding basin-wide dynamics and comparative alternative performance. However, in some key areas, the connection between modeled outcomes and their implications for water

supply reliability—particularly for Tribal water users—could be strengthened to better inform decision-making.

Certain assumptions and sensitivities that can influence modeled results are not fully disaggregated or clearly explained, making it difficult to determine what is driving differences among alternatives. Greater clarity regarding how specific demand components and operational conditions affect water availability, reliability, and risk for different user groups would improve transparency and strengthen evaluation of tradeoffs.

This need is particularly evident in the treatment of Tribal water. The Draft EIS incorporates Tribal water in multiple analytical scenarios, including sensitivities that evaluate system operations with and without Tribal water and scenarios reflecting both developed and undeveloped Tribal water. While this inclusion is important, the analytical treatment would benefit from greater transparency to allow meaningful interpretation of outcomes.

In addition, the volumetric contribution of Tribal water under each alternative is not easily discernible from the presentation of results. Without clearer reporting, it is difficult to independently evaluate how Tribal water assumptions influence system performance or to assess implications for Tribal water reliability. This lack of visibility reflects a broader need to more explicitly connect modeled system outputs with resource-level impact analyses.

Recommendation for the Final EIS: Advance analytical transparency and meaningful comparison among alternatives by -

- Explicitly calling out where the analysis disaggregates and tabulates the contribution of Tribal water to modeled system performance metrics;
- Explaining how differences in modeled outcomes among alternatives are sensitive to Tribal water assumptions; and
- Describing the uncertainties and limitations associated with modeling undeveloped Tribal water, and how those uncertainties should inform interpretation of performance tradeoffs.

B. Shortage and Deadpool

Modeled shortages, low-elevation operations, and deadpool avoidance actions are relevant and could be more consistently reflected in impact analyses of water supply reliability. A notable example is the treatment of shortages and deadpool. Executive Summary Figure ES-5, *Key Performance Tradeoffs in Different Hydrologic Conditions*, presents information on the projected number of months that Lakes Powell and Mead would be at or below deadpool under different hydrologic conditions and alternatives. This information is decision-relevant, yet it is not carried forward into subsequent chapters or resource analyses to describe what deadpool conditions would mean for affected resources. Extended operation at or below deadpool would have severe system-wide consequences, including loss of water delivery capability, collapse of hydropower generation, and severe impacts to aquatic and riparian ecosystems, vegetation and terrestrial resources, water quality, recreation, and local economies. Without translating modeled deadpool duration into resource-specific impacts, the Draft EIS may understate the severity and

breadth of consequences associated with alternatives that approach or remain near this threshold.

More broadly, as stated above, the Draft EIS models the frequency, magnitude, and duration of shortages separate and distinct from deadpool under each alternative, including periods of sustained reductions. However, these modeled outcomes are not consistently translated into analyses of water supply reliability for municipal, industrial, or Tribal users. As a result, impact sections describe changes in deliveries without articulating how repeated or prolonged shortages affect planning horizons, operational flexibility, or long-term reliability for affected communities.

Recommendation for the Final EIS: Explicitly integrate modeled shortage and deadpool results into resource-level impact analyses by -

- Translating projected months at or below deadpool (e.g., Figure ES-5) into clear descriptions of operational, ecological, hydropower, infrastructure, and socioeconomic consequences, including the implications of extended duration at or near critical thresholds;
- Analyzing the frequency, magnitude, and duration of shortages in terms of water supply reliability for municipal, industrial, and Tribal users, including effects on planning horizons, operational flexibility, and long-term system stability;
- Distinguishing between short-duration events and sustained degraded conditions to clarify how prolonged shortages or low-elevation operations compound risk over time; and
- Presenting an integrated assessment of how modeled shortage and deadpool exposure under each alternative translate into impacts across sectors, rather than describing delivery reductions in isolation.

C. Socioeconomics

The Draft EIS includes a socioeconomic assessment that evaluates agricultural production impacts and changes in municipal deliveries. While this analysis provides useful sector-specific information, modeled shortage frequency, magnitude, and duration to broader regional economic outcomes need to be consistently connected. Consequently, the full range of cascading economic implications associated with declining water supply reliability under different post-2026 alternatives remains unclear.

1. Disconnect between Modeled Reliability and Economic Outcomes

The modeling framework in Chapter 3 and Technical Appendix 3 evaluates the frequency, magnitude, and duration of shortages and deadpool-related reductions across hydrologic futures. These outputs represent reliability indicators with direct economic implications. However, the socioeconomic analysis in Chapter 5 does not consistently connect these modeled reliability metrics to economic outcomes for:

- Municipal and industrial users;
- Tribal Nations;
- Urban service economies dependent on municipal water supply;
- Energy systems tied to hydropower generation; or
- Secondary and tertiary economic sectors dependent on water-intensive industries.

Instead, the analysis largely treats delivery reductions as volumetric changes without evaluating how repeated or prolonged shortages alter capital planning, rate structures, infrastructure investment, employment stability, or regional economic resilience.

Under a DMDU framework, duration and sequencing of shortages are as economically consequential as total magnitude. For example, repeated moderate shortages over consecutive years may create greater long-term economic disruption than a single severe reduction, particularly where municipal systems rely on debt-financed infrastructure or industrial users depend on supply certainty. These dynamics should be more fully explored in the Final EIS analysis.

2. Municipal and Industrial Impacts

The Colorado River supplies water to more than 35 million people and supports a regional economy exceeding $1 trillion annually (Arizona State University, 2014). For major municipal contractors—including the Central Arizona Project and the Metropolitan Water District of Southern California—declining reservoir elevations and increasing shortage frequency affect:

- Conveyance capacity and operational flexibility;
- Cost of supply portfolios (including transfers and groundwater banking);
- Infrastructure investment timing and financing;
- Ratepayer impacts; and
- Long-term land-use and housing development patterns.

The Final EIS should more clearly assess how modeled shortage frequency, low-elevation operations, or deadpool-related reductions influence these broader economic drivers. It could also more fully evaluate whether alternatives that defer shortages but increase exposure to Deadpool avoidance activities could produce more abrupt and economically disruptive outcomes.

3. Tribal Economic Implications

The socioeconomic link between modeled water supply reliability and Tribal economic conditions could also be clarified. Tribal water rights support agriculture, community development, leasing opportunities, and long-term economic self-determination. Prolonged or unpredictable shortages may affect:

- Agricultural productivity and revenue;
- Economic development projects dependent on water certainty;
- Leasing and exchange revenue;

- Public services and community health outcomes; and
- Cultural resource management and place-based economies.

The Final EIS analysis should more fully illuminate differential impacts among alternatives to these and related resources.

4. Hydropower and Energy System Effects

Extended operation at near minimum power pool has direct economic consequences beyond lost generation revenue. Hydropower reductions can also:

- Increase wholesale power costs;
- Shift reliance to higher-cost or higher-emission generation sources;
- Affect rural electric cooperatives and irrigation districts; and
- Alter regional grid stability and rate structures.

Although reservoir elevations and power pool thresholds are modeled, their economic implications should be more fully integrated into the Final EIS socioeconomic analysis.

Recommendation for Final EIS:

- Translate modeled shortage frequency, magnitude, duration, and low-elevation operations into economic indicators tied to supply reliability thresholds, infrastructure cost implications, and rate impacts.
- Evaluate cascading and secondary economic effects associated with municipal, industrial, Tribal, and energy-sector disruptions under sustained low-flow conditions;
- Distinguish between isolated events and multi-year shortage sequences when assessing economic consequences, consistent with DMDU principles;
- Assess distributional consequences for Tribal Nations, municipal ratepayers, agricultural communities, and vulnerable populations; and
- Explicitly link hydropower modeling to economic outcomes, including revenue impacts, cost shifts, and reliability implications associated with extended operation near minimum power pool.

D. Lower Colorado River Ecology and Refuges

The Colorado River reach between Hoover Dam and the Southerly International Boundary (SIB) is among the most highly regulated segments of the Basin and has experienced extensive loss of native habitat. Nevertheless, it remains ecologically important, providing scarce riparian and wetland habitat for resident and migratory wildlife in the Mojave and Sonoran deserts, including federally listed species such as the Southwestern Willow Flycatcher and Yellow-billed Cuckoo, as well as migratory species such as Sandhill Cranes. Understanding how post-2026 operations affect these habitats is therefore essential to a relevant evaluation of alternatives (Vol. 1, Ch. 3; Vol. 1, Ch. 4).

The vegetation and wildlife analyses (Technical App. 9; Technical App. 10) rely primarily on variability in releases from Hoover Dam as a proxy for downstream ecological conditions. However, river stage, groundwater connectivity, and habitat response are the physical mechanisms that directly control riparian vegetation extent and habitat availability. While the Draft EIS states that more detailed analysis is not feasible due to data limitations, Reclamation has previously conducted more robust river-stage–based analyses for the Lower Colorado River MSCP, including the Biological Assessments completed in 2005, 2022, and 2024. Those analyses routed modeled releases through multiple river cross-sections to evaluate river stage, groundwater response, and impacts to marsh and woody riparian habitats. Comparable analysis is feasible here and would materially strengthen the ecological assessment.

A similar gap exists in the treatment of National Wildlife Refuges—including Cibola, Havasu, and Imperial NWRs—and irrigation districts supplying habitats maintained under the MSCP. While Technical App. 9 acknowledges potential impacts if river stage drops below diversion or pump intakes, these risks are not quantified or compared across alternatives, despite documented U.S. Fish and Wildlife Service concerns regarding habitat stranding under low-flow conditions. Because alternatives apply different shortage allocation frameworks (Vol. 1, Ch. 4; Technical App. 3), their impacts on refuges and MSCP habitats vary substantially. Yet modeled shortages, low-flow conditions, and duration of degraded states are not consistently carried forward into vegetation, wildlife, or refuge impact analyses.

As a result, the Draft EIS may understate ecological risk and obscure key tradeoffs among alternatives, particularly under sustained dry and critically dry hydrologic conditions. The Final EIS should more fully integrate modeled outcomes for projected river stage, groundwater effects, shortage allocations, and the frequency and duration of low-elevation and deadpool conditions into vegetation, wildlife, and refuge analyses (see Fig. ES-5; Vol. 1, Ch. 4; Technical App. 3). This includes linking model results to refuge operations, habitat conditions and species support. Doing so would clarify ecological tradeoffs among alternatives and better inform mitigation needs, resulting in a more complete, relevant, and defensible assessment of post-2026 impacts.

Recommendation for the Final EIS: More directly translate modeled operational outcomes into river-stage, groundwater, and habitat-based impact analyses for the Lower Colorado River and associated National Wildlife Refuges. Specifically, supplement release-variability proxies with river-stage modeling consistent with prior MSCP Biological Assessments. Quantify and compare habitat stranding, diversion impairment, and refuge supply risks across alternatives, and integrate shortage allocations, low-elevation operations, and duration of impacted conditions into vegetation and wildlife analyses.

E. Grand Canyon National Park

The Draft EIS includes modeling relevant to Grand Canyon resources, including analyses of water temperature, sediment transport, sandbar volume, high-flow experiment (HFE) frequency, riparian vegetation robustness, and aquatic species performance downstream of Glen Canyon Dam. Technical Appendices 5, 8, and 9 appropriately evaluate key indicators such as

temperature thresholds affecting humpback chub growth and spawning, smallmouth bass entrainment risk, sand mass and sandbar response to flow regimes, and vegetation sensitivity to elevation and release variability. These indicators are directly relevant to the ecological condition of the Colorado River corridor through Grand Canyon National Park.

However, modeled performance among alternatives are not consistently translated into clear, place-based impact conclusions for Grand Canyon resources. A number of outputs are presented in terms of “percent of futures meeting thresholds” or robustness heat maps, without fully articulating what those differences mean for long-term sandbar persistence, backwater habitat availability, riparian recruitment, culturally important sites, camping beaches, aquatic food base stability, or ESA-listed species recovery within the Grand Canyon corridor.

For example, while differences among alternatives in HFE frequency, sand mass retention, and temperature exceedance days are quantified, the Draft EIS does not expressly articulate how those differences could impact the potential for sandbar erosion or rebuilding, the condition of riparian habitat, or compounding ecosystem stress over the post-2026 period. Similarly, although fish performance indicators are modeled, the consequences of prolonged low-elevation operations or deadpool avoidance measures for Grand Canyon ecosystem integrity, the results could be expressly synthesized to provide a straightforward comparison of ecological risk across alternatives.

Recommendation for Final EIS: Identify express linkages between modeled outputs and qualitative and quantitative impact conclusions specific to Grand Canyon National Park resources. Strengthening this linkage would provide transparency regarding how alternative operating frameworks influence sediment dynamics, temperature regimes, habitat stability, and long-term ecosystem condition, and would better reflect the real-world implications of reservoir operations for one of the most ecologically and culturally significant river corridors in the Basin.

F. Groundwater

The Draft EIS evaluates groundwater impacts primarily through changes in surface water and shallow alluvial groundwater conditions associated with altered reservoir operations and river flows. While this approach captures some localized interactions between river stage and adjacent aquifers, the analysis does not address broader groundwater systems, including deeper basin-fill aquifers, groundwater in tributary basins, or groundwater resources supporting export uses. As a result, it remains unclear as to how reduced surface water availability under different alternatives may drive increased groundwater development in Lower Basin tributaries or export basins. How such responses could create secondary impacts to water availability, ecosystems, or communities is also not clarified. Given the role groundwater plays as a drought buffer during surface water shortages, such results are important to highlight.

For the Lower Colorado River, groundwater impacts are largely inferred through assumptions rather than quantitative analysis. Groundwater elevations are assumed to decline from Parker Dam to Cibola and from Cibola to Imperial Dam in response to reduced flows, while groundwater conditions from Imperial Dam to the Northerly International Boundary are assumed

to remain relatively stable. These assumptions are not supported by quantitative modeling, site-specific analysis, or sensitivity testing to evaluate the magnitude, spatial extent, or duration of groundwater impacts under different alternatives.

In Reach 7, between the Northerly and Southerly International Boundaries, the Draft EIS concludes that the proposed alternatives would not affect irrigation to nearby agricultural fields and therefore would not result in groundwater impacts. This conclusion may be overstated for certain operational scenarios analyzed. Under pro rata shortage frameworks, reductions in surface water deliveries could reasonably be expected to alter irrigation practices and increase reliance on groundwater. Moreover, under priority-based shortage frameworks, it is implausible that transactions involving the Central Arizona Project and Yuma-area irrigators would not occur, which could in turn reduce irrigation diversions and affect groundwater levels in the Yuma Valley. These potential pathways are not evaluated in the Draft EIS.

In addition, the Draft EIS appears to rely on baseline groundwater conditions that are assumed to be comparable to those used in the 2007 Interim Guidelines EIS, without substantiating the validity of that assumption. Given prolonged drought, increased groundwater pumping, and land-use changes since 2007, reliance on outdated baselines introduces additional uncertainty into the impact analysis.

Recommendation for Final EIS: To strengthen the analytical foundation, the Final EIS should expand the groundwater analysis beyond alluvial aquifers, update and document baseline groundwater conditions, and more fully evaluate how post-2026 surface water operations—including different shortage allocation frameworks and potential transactions—may influence groundwater use and groundwater-dependent resources over time.

Draft EIS references: Vol. 1, Ch. 3 (Water Resources); Vol. 2, Groundwater Appendices (TA-13, TA-16).

G. Salinity

Reclamation's salinity management practices in the Yuma area can materially affect release volumes from Lake Mead. In recent years, reduced flow volumes and lower salinity in water reaching Imperial Dam—driven by both voluntary and mandatory reductions in Lower Basin use—have resulted in increased reliance on releases from Lake Mead, rather than Yuma-area return flows, to meet Treaty delivery and salinity obligations to Mexico (see Vol. 1, Ch. 3 – Water Deliveries and International Obligations; Vol. 2, Lower Colorado River Operations and Salinity Modeling Appendices). As voluntary and required reductions in Lower Basin uses are projected to increase after 2026 (see Vol. 1, Ch. 4 – Alternatives Analysis and Performance Results), this dynamic is likely to intensify, with corresponding implications for Lake Mead storage, release volumes, and system reliability.

Recommendation for Final EIS: The Final EIS would be strengthened by explicitly incorporating salinity projections into the alternatives analysis and evaluating how salinity management under each alternative affects Lake Mead releases, storage trajectories, and water

supply outcomes. Integrating these effects into system performance metrics would improve transparency and ensure that salinity compliance is fully considered as a driver of operational risk under sustained low-flow conditions. Reclamation has developed a Yuma-area salinity model that could be used for the Final EIS to assess how compliance with the Minute 242 salinity standard would be achieved under each post-2026 alternative (see Vol. 1, Ch. 3 – Affected Environment: Water Quality and Salinity; Vol. 2, Salinity and Water Quality Technical Appendices).

H. Air Quality

While the Draft EIS considers agricultural fallowing in socioeconomic and visual analyses, it does not evaluate associated air quality impacts, despite the potential scale of fallowing under several alternatives.

The Draft EIS asks “How would changing flow characteristics affect the potential exposed shoreline, *fallowed agricultural lands,* and fugitive dust?” (See Chapter 3, pp. 3-79). It does not include, however, analysis of how fallowed agricultural lands could affect air quality. Large acreages of irrigated agricultural lands may be fallowed under certain alternatives, and the impact of fallowing on air quality would help communities and decision makers understand the scope of projected changes. Nonetheless, analysis of air quality impacts appears to be limited to changing levels of exposed shorelines at Lakes Powell and Mead and along the Lower Colorado River mainstem. This is despite the fact that the Draft EIS considers impacts of fallowed agricultural lands in other resource impact assessments, including the socioeconomic resources (Technical App. 16) and visual resources (Technical App. 19). Analysis for the Final EIS would be strengthened by including an assessment of how the alternatives’ differing impacts for fallowing could impact rural community air quality.

Recommendation for Final EIS: Expand the performance metric suite and incorporate existing methodologies where feasible to better link system operations to Air Impact outcomes and improve decision relevance.

Draft EIS References for Section VI: Vol. 1, Ch. 2 (alternative descriptions, Tribal water treatment, flexible tools); Executive Summary Figure, ES-5, Vol. 1, Ch. 3, Figures TA 3-10, TA 3-12 (robustness and vulnerability metrics; deadpool and shortage results; hydropower and water deliveries); Vol. 1, Ch. 4 (shortage allocation frameworks; Lower Basin contractor effects; refuge and ecological discussion); Vol. 1, Ch. 5 (socioeconomics analysis); Vol. 2, App. E, pp. E-2–E-4 (robustness and vulnerability framework; 1,200 futures)); Vol. 3, Technical App. 3 (reservoir elevations, shortages, CRSP storage comparisons, operational triggers); Vol. 3, Technical App. 4, Figure TA 4-3 (Lake Mead Dead Pool-Related Reductions: Vulnerability; policy shortages and reduction frequency/magnitude); Vol. 3, Technical Apps. 5, 8, 9 (Grand Canyon temperature, sediment, vegetation and wildlife performance indicators); Vol. 3, Technical App. 13 and 16 (groundwater and socioeconomic analyses); Vol. 1, Ch. 3 (Minute 242 compliance discussion); Vol. 3, Technical App. 6, (Lower Colorado River salinity modeling methods and projections).Vol; Vol. 3, Technical App. 19 (visual resources; fallowing considerations).

VII. Conclusion

The Draft EIS provides a strong analytical foundation and a meaningful application of DMDU and large-ensemble modeling. Its decision value, however, depends on clearer attribution of performance drivers; more explicit distinction between stress-testing and planning-relevant interpretation of hydrologic futures and initial conditions; and improved presentation of metrics that capture sequencing, duration, and tail-risk for threshold outcomes such as minimum power pool and deadpool.

The Final EIS would benefit from improved cross-chapter consistency in reporting, greater transparency regarding activation and volumetric use of flexible tools, and clearer linkage between modeled operational states (shortages, sustained low elevations, emergency triggers), and resource-level consequences, including Tribal water reliability, hydropower and infrastructure risk, ecological outcomes, and socioeconomic impacts.

Addressing these issues would enhance transparency, comparability, and policy relevance, and support selection of a defensible post-2026 framework capable of managing sustained aridification under deep uncertainty while reducing reliance on emergency actions and clarifying distributional tradeoffs.

FLEXIBLE TOOLS CONCEPT PAPER - Appendix B
The Case for Innovative Tools and a Savings Pool Program in Lake

Powell EXECUTIVE SUMMARY

The Colorado River Basin faces a future of deepening hydrologic uncertainty, driven by prolonged drought and a persistent structural imbalance between supply and demand. Existing water management strategies, heavily reliant on short-term crisis responses, are no longer sufficient to meet the complex and compounding pressures on the system. As key agreements governing the River near expiration, policymakers have a critical window to reshape management frameworks toward greater flexibility and long-term resilience.

This Concept Paper introduces two actionable tools that would support this shift:

1. **The Upper Basin Savings Pool Program at Lake Powell** – A mechanism for the temporary, voluntary, and compensated storage of water in Lake Powell to help stabilize system operations and enhance the effectiveness of post-2026 Colorado River operating guidelines currently under development.

2. **The Upper Basin Tribal Deferred Development Tool** – A tool to provide near-term relief to the system while protecting Upper Basin Tribes' future development options by compensating Tribes to defer future water development, on a voluntary, temporary basis for a specified quantity of water and a specified amount of time.

After introducing the tools, this paper provides a **Working Outline** of core components needed to establish a Savings Pool Program at Lake Powell, including considerations related to participation eligibility, allocation, contribution approval, storage operations, and monitoring. It identifies the sovereign role of Tribes and the need for any new programs to be inclusive and legally sound.
The proposed tools reflect a forward-looking approach to water management—one that not only strengthens the durability of the system but also respects and supports the rights of Tribal Nations to Colorado River water while considering the rights and interests of other water users and stakeholders in the Basin. As policymakers engage in shaping the post-2026 Colorado River operational framework, this Concept Paper aims to inform and guide decisions for incorporating tools that have the support of Tribes, conservation groups and others to help stabilize system operations and provide water users a mechanism for maintaining the benefits of their water rights while working to adjust to uncertain and changing conditions in the Basin into the future.

I. Introduction

Water management in the Colorado River Basin has been shaped by an increasingly unsustainable cycle of crisis response—short-term fixes to long-term challenges. Intensifying drought, rising temperatures, and structural imbalances between supply and demand have converged into a persistent challenge, with water users, ecosystems, and economies all bearing the strain.

As the Basin moves toward a future defined by hydrologic uncertainty, there is a growing and urgent need for flexible, adaptive, and durable water management tools that reflect the dynamic nature of water availability in the region. The impending expiration of key agreements

and operational guidelines that currently govern the Colorado River system presents a rare and timely opportunity for the Colorado River community to reshape management frameworks that can move beyond reactive, crisis-driven approaches toward proactive planning and preparedness. To succeed, this shift must be guided by strategies and tools that operate within the agreed-upon legal and policy frameworks, promote system stability, and provide water users—including Tribes, agricultural producers, municipalities, recreational interests, and environmental stakeholders—with the continued ability to realize the benefits of their water rights while adjusting to changing conditions.

To be effective, any future management strategy must acknowledge and incorporate the central and sovereign role of Tribal Nations. Tribes across the Basin hold rights to a significant portion of the River's annual flow—estimated at over 25%—yet many have not fully developed or used their water. The need and desire to develop these Federally Indian Reserved Water Rights to benefit Tribal homelands and communities cannot be overstated. However, doing so in a system already burdened by low storage levels and mounting shortages presents complex challenges. It is, therefore, essential that any new tools or management frameworks not only recognize Tribal rights but actively support their exercise in a way that contributes to, rather than compromises, system-wide sustainability.

This Concept Paper introduces two tools that represent critical first steps toward stabilizing the Basin while honoring water rights in the system: The Upper Basin Savings Pool and the Deferred Development Tool. Both tools ensure the Upper Basin Tribes' involvement and participation in the sustainable management of the Colorado River. Many conservation groups also support consideration of both tools as important to the process of seeking long-term solutions to the Basin's ongoing water supply challenges. Following a general introduction to each tool, the remainder of this paper presents a "Working Outline" of key elements and considerations for creating an Upper Basin Savings Pool in Lake Powell to be factored into the new agreements and operational frameworks currently being negotiated as part of the post 2026 Guidelines development process. Because deferred development is a separate but equally important priority tool for the Upper Basin Tribes, they will continue to pursue it in parallel with the post-2026 NEPA activities.

II. The Tools:

A. The Savings Pool at Lake Powell

The Savings Pool concept will create space in the system—physically and administratively—that will allow Upper Basin Tribes and other water users to contribute water to Lake Powell from agreed-upon sources that can help facilitate commitments and agreements set forth in the post 2026 management framework. This pool would accept both tribal and non-tribal water contributions on a temporary, voluntary, and compensated basis, for storage in Lake Powell, with priority for participation by Upper Basin Tribes when space or funding is limited.

The goal of the Savings Pool would be to: (i) provide an innovative mechanism to include Upper Basin tribal water by contributing to conserved, stored, or other recognized tribal water water; (ii) to contribute to sustainable operations at Lake Powell by rebuilding storage in the Lake, (iii) provide a source of water to assist Upper Division States in meeting whatever release commitment(s) from Lake Powell to the Lower Basin, and (iv) to expand the market for Upper Basin Tribes to use their quantified tribal water, through settlement or adjudication.

B. Tribal Deferred Development Tool

The Deferred Development concept was introduced by the Upper Basin Tribes Group (see Concept Paper for Flexible Tools post-2026) to provide a mechanism for compensated, voluntary, and temporary deferred development and use of specified tribal water, reducing short-term stresses on existing water supplies while the Basin continues to work on strategies for flexible water management and long-term mitigation. Through this tool, the Upper Basin Tribes would agree to delay use of specific amounts of their quantified Federal Indian Reserved Water Rights for agreed-upon time periods in exchange for compensation or other benefits. To this end, the Program would work to respect the rights afforded through tribal water settlements, adjudication, or other tribal/federal/state agreements while also easing the immediate impact of increased development of tribal water on the Basin's water supply.

III. Core Specifications for Savings Pool at Lake Powell:

A. Location of Lake Powell Savings Pool

This Concept Paper focuses on a Savings Pool at Lake Powell, recognizing that:(1) Lake Powell has the most storage space available to accommodate an Upper Basin Savings Pool, and (2) the focus of the Guidelines negotiations includes Lake Powell and facilities downstream.

A broader discussion regarding the application and use of parallel activities in the Upper Basin may need to take place before there is any consideration of whether and how to expand a Savings Pool Program to include facilities upstream of Lake Powell.

B. Size of Lake Powell Savings Pool at Lake Powell

The savings pool size at Lake Powell is a critical consideration in any water contribution program because it directly determines the volume of water that can be securely contributed, tracked, and stored to mitigate risks and fulfill the purposes of the Program. Without knowing the maximum volume of water that can be contributed in a given year or during the life of the Program, Tribes and other water users cannot effectively prepare and plan to participate.

The appropriate size for the Upper Basin Savings Pool will need to be addressed through a broad stakeholder group discussion. At minimum, however, such discussion should provide for a sufficient Savings Pool size that enables each Upper Basin Tribe to voluntarily contribute its eligible, compensated water prior to and alongside any non-tribal contributions made available on an annual basis.[4]

C. Allocation of Savings Pool Capacity

Depending on what is agreed to as part of the post-2026 Guidelines process, it may be important to consider how the available capacity of the Savings Pool at Lake Powell will be shared among each of the Upper Basin States and Tribal Nations to minimize burdens and support coordinated efforts across the region. Without a clear and agreed-upon allocation framework, there could be a risk of uncertainty or imbalance in how water that is contributed can be stored and credited, which could hinder participation and reduce the overall

[4] The maximum volume amount will ultimately depend on the details of the agreements made within the Basin as part of the post-2026 process that will inform the full scope of the Program and the purposes it is intended to achieve.

effectiveness of the Program.

The decisions made in response to the questions above should be addressed as part of the negotiated agreements for facilitating a Savings Pool Program following broad stakeholder group discussions. Such discussions must recognize and factor in the Upper Basin Tribes'
opportunity to contribute any eligible water from their respective reserves on an annual basis and benefit from transactional mechanisms built into the Program on the same terms as other pool participants.

IV. Participation and Contribution

A. ***Eligible Water Categories for Savings Pool Contributions***

Any Upper Basin Savings Pool Program at Lake Powell must allow for meaningful participation by both tribal and non-tribal water users in the Upper Basin. This requires consideration of different categories of water that can be made eligible for savings pool contributions.

1. *Upper Basin Tribal Water Categories*

As outlined in the Upper Basin Tribes Group Concept Paper for Flexible Tools post 2026, any one or more of the following categories of tribal water would be eligible for transfer to the Savings Pool at Lake Powell:[5]

(i) conserved consumptive use on par with non-Indian participants in other conservation programs;

(ii) water with a demonstrated but non-continuous history of tribal use subsequent to the adoption of the 2007 Interim Guidelines;

(iii) water that has been placed in storage in an identified reservoir *under a federal contract* for a tribe's specific use regardless of whether the water has been used (e.g. Animas La Plata stored water);

(iv) water that has been placed in an identified reservoir under a federal delivery contract for a tribe's specific use or a specific tribal project regardless of whether the water has been used (e.g. Jicarilla Apache Nation, Navajo Indian Irrigation Project);[6] and

(v) federal reserved tribal water that is stored in an identified reservoir (e.g. Uintah Indian Irrigation Project).[7]

2. Upper Basin Non-Tribal Water Categories

[5] NOTE: This list is based on what is known at the time of this paper. It could be updated or expanded as needed in the future if agreed to by appropriate parties.
[6] Categories (iii) through (v) reflect the specific tribal settlements and their respective state laws.
[7] These categories of water do not reflect the final positions of any contributors to this concept paper regarding the post-2026 Colorado River operations. These concepts will continue to be refined as discussions around the post-2026 operations develop.

The focus of this Working Outline is to specify the interests in classifying eligible Upper Basin tribal contributions to the Savings Pool and ensure those critical interests are integrated into – or at least allowed to work with – a full Upper Basin Savings Pool Program.

Eligible categories for non-tribal water contributions to the Savings Pool should be developed through broad outreach and discussions with the Upper Basin stakeholder community.

B. *Priority Option for Water Contributions to the Savings Pool*

The Savings Pool Program should provide a first option for: (1) any Upper Basin Tribe to contribute tribal water voluntarily to the Savings Pool; and (2) storage space in the Savings Pool to accommodate tribal water contributions on an annual basis.

Considerations regarding timing and storage capacity for contribution of non-tribal water should be addressed through a broad Upper Basin water user and stakeholder group discussion.

C. *Contribution Approval Process*

Determination of how contributions can be made to the Savings Pool will involve detailed discussions and agreements among relevant parties, but at minimum, should include consideration of the following:

1. Does a participant need a Plan for Contribution? If so, to whom should the plan be submitted? What does the plan need to show (how quantifying, where located, how water will get to Powell, how it fits with key elements of any guidelines? What would the timing for application and approval be?)

2. Is there a specified limit on the term of water contribution that needs to be factored into the process? The Savings Pool Program should remain in operation and available to Tribal and non-Tribal participants according to the terms of the Program for the period in which the post-2026 Guidelines are operating.

3. When and how should the estimation of contribution water be accomplished? Note that at present, there are no estimates of Upper Basin Tribal or non-tribal water that could be
contributed annually to the Savings Pool. Relevant factors influencing that calculation have to be identified but likely include hydrologic conditions and potential compensation mechanisms, among others.

4. What verification methodologies, if any, will be needed to confirm water contributions made to the Savings Pool? The proposed methodology for verification of the amount of water contributed to the Savings Pool should be objective and recognize the sovereignty of each of the contributing Tribes.

5. What documentation, if any, regarding any tribal, state, federal permits, or other regulatory approvals will be needed as part of the water contribution process? At a minimum, all water contributions (Tribal or non-Tribal) to the Savings Pool would need to comply with applicable law.

6. What options, if any, would there be to modify a water contribution plan or the Savings Pool Program? The Savings Pool Program should be eligible for modification so long as any changes do not adversely impact the rights of the Tribes to contribute tribal water to the Savings Pool. Upper Basin Tribes should participate in any such modification, and other stakeholders should be included to the extent modifications could affect their interests going forward.

   Any terms for modifying a participant's annual water contribution plan (should they exist) and agreement shall be discussed with the participant for consent to any contribution agreement. Upper Basin Tribes and the larger stakeholder group may comment on and participate in any general discussions to the extent modifications could affect their interests going forward.

7. How should funding factor into the process, and what pricing structures need to be factored into the program itself? The funding process and pricing structure should be decided following discussion with a broader stakeholder group, so long as the pricing is based on an objective variable applied to both tribal water and non-tribal water, and the pricing incentivizes Upper Basin Tribes to contribute tribal water to the Savings Pool.

D. ***Facilitation Agreements***

Agreements separate from and in addition to the negotiated post-2026 Guidelines may be needed to facilitate the operations. This is another key consideration to be worked out with larger stakeholder input, depending on the particular post-2026 agreement and how contributions to a Savings Program should be managed within each Upper Division State.

V. Water Management Operations

A. ***Forbearance/Shepherding***

Considerations regarding timing and storage capacity for contributions of non-tribal water should be addressed through a broad Upper Basin state water user, Tribal, and stakeholder group discussion.

The mechanics of contributing tribal water to the Savings Pool at Lake Powell, as well as the mechanics of shepherding water, should be made following discussion with broader stakeholder discussions.

B. ***Spill and Assessment Considerations***

Whether and how to account for contribution water in the event of a spill should be decided following discussion with a broader stakeholder group.

Similarly, decisions regarding evaporation, system losses, or other assessments on water contributed to the Savings Pool should be made following discussion with a broader stakeholder group.

C. Release Considerations

Terms of release for contribution water from the Savings Pool at Lake Powell will depend, in part, on the negotiated agreements and operational framework that make up the post-2026 Guidelines. Additional consideration should be solicited from a broader stakeholder group.

As part of those future discussions, the larger group may want to explore mechanisms for optimizing flexible management of stored water supplies to protect against threats to both physical and natural infrastructure in a manner that continues to work within the governing framework for allocating Colorado River water and provides comparable opportunities for deploying flexible management tools in both the Upper and Lower Basins.

VI. Monitoring and Accounting

Monitoring and accounting of conserved water will be important to the overall credibility of the Savings Pool Program. Among other things, such systems will be needed to inform compensation estimates for water contributions that make it to Lake Powell. They will also provide important information for reservoir managers and decision makers to anticipate operating conditions and consider flexible water management opportunities as needed.

Proposed methodologies for monitoring and accounting of water contributed to the Savings Pool should be mutually agreeable to the individual Tribes and recognize the sovereignty of each contributing Tribe and their self-governance and self-determination over decisions related to their tribal water.

RETURN TO AGENDA

AGENDA ITEM 9

Staff & Committee Reports

MINUTES
Taylor Local Users Group
March 9, 10:00 a.m.

TLUG Attendees:

TLUG Representatives Present:
Don Sabrowski, TLUG Chair
Ernest Cockrell (Taylor Placer via Zoom)
Roark Kiklevich (Wade Fishing Interests)
Andy Spann (Irrigation Interests)
Ryan Birdsey (Flatwater Recreation Interests Via Zoom)
David Fisher (Property Owners Interests Via Zoom)

Not Present:
Mark Schumacher (Boating Interests)

Other Attendees:
Sonja Chavez (UGRWCD)
Beverly Richards (UGRWCD)
Dustin Brown (Scenic River Tours)
Julio Del Piccolo (Colorado Parks and Wildlife)

Attendees Via Zoom:
David Gochis (Airborne Snow Observatory)
Dennis Cakebread (Taylor at Wilder Resident)
Reece Carpenter (US Bureau of Reclamation)
Conor Felletter (US Bureau of Reclamation)
Andrew Limbach (US Bureau of Reclamation)
Ryan Unterreiner (Colorado Parks and Wildlife)
Rory Birdsey (Uncompahgre Valley Water Users)

I. Approval of Minutes

Don Sabrowski called the meeting to order. The minutes from the September 4, 2025, TLUG meeting were presented for review. The minutes were approved by consensus.

II. Upper Gunnison Basin Water Supply Report – Beverly Richards

Beverly presented PowerPoint slides showing the current drought conditions in the Upper Gunnison Basin, highlighting the development of extreme and exceptional drought areas. She displayed precipitation data, including 30-day and 7-day totals, as well as a 7-day forecast, noting that the basin is currently at 86% of its median precipitation for this time of year. The presentation also included temperature information and snow water equivalent (SWE) information at the Upper Basin level and at the specific SNOTEL sites of Scofield Pass and Upper Taylor. This information highlighted the fact that temperature in the basin is the warmest that has been seen in the period of record (1991-2020) and that Upper Basin SWE is at historical lows.

III. CBRFC Water Supply Update and USBR Model Forecast – Conor Felletter, USBR

The Taylor Park Reservoir March 1, 2026, forecast decreased by 2,000 AF compared to the February 1 forecast.

The forecasted April through July runoff into Taylor Park Reservoir 53,000 AF (56% of average).

Releases from Taylor Park Dam are currently at 79 cfs. The next change in the plan is to increase releases to 125 beginning May 1, 2026 and then to 250 cfs beginning June 1, 2026, until ramping down to 200 cfs on September 1, 2026. In October 2026, releases would be reduced to 100 cfs, leaving the end-of-year storage at 53,334 acre-feet. General Manager Chavez noted that the error in the forecast which should be modeled on not going below an end of year storage target of 60,000 acre-feet.

She read from the current stipulation as follows*: (f) In any year when the June 1 Forecasted Inflow is less than 60,000 acre-feet, the Minimum Storage Objective shall be finally determined based upon actual April through July inflow; provided, however, that releases from the Reservoir shall be managed* ***in order to avoid, if possible, an October 31 Reservoir content less than 60,000 acre-feet*** **(UGRWCD emphasis added).**

Discussion ensued on how accurate the forecast is at this time and whether or not different release scenarios might result in a higher storage content in October 2026.

IV. WRF-Hydro Model Forecast Reports (ASO, Inc.) – Dave Gochis, ASO

David Gochis reported that at this time, he does not have a forecast to present to TLUG as the first ASO flights are scheduled for the week of March 16-20, depending on the weather and cloud cover. He did say, however, that based on SNOTEL data and other resources they use to create their models, he suspects that the snowpack and SWE data is going to be well under normal year averages. He said that thanks to some new technology, he will be able to

create scenarios where they can compare this water year with other low years, such as 2002 and 2018

V. Preliminary TLUG Draft Operational Release Recommendations.

The TLUG representatives weighed in about possible reductions to help conserve more water up front and to try to meet the end-of-year storage objective of 60,000 acre-feet. There were some questions about how low current flows could be reduced before they affect the fishery. After consulting with the CPW and other fishery representatives at the meeting, it was agreed that while we can go as low as 50 cfs, we would cutback releases to 60 cfs immediately and not harm the biological community. TLUG representative Andy Spann was asked when irrigators might need to see increased flows, and he replied that releases would need to start bumping up in the second half of May to meet irrigation needs. Dustin Brown of Scenic River Tours concurred, saying higher flows would be necessary for their raft guide training towards the end of May. After Chairman Don Sabrowski asked for input from all of the TLUG representatives, a consensus was reached that current winter flows of 79 cfs should be reduced to 60 cfs through May 1st, 2026. At that time, releases may be increased to 100 cfs and then On May 16th to 125 cfs.

Conor Felletter (USBR) was asked how often Taylor Park Reservoir Operations would be provided and if he would still be responsible for creating them and sharing them with TLUG. Connor deferred the response to Reece Carpenter, who explained that Conor's duties have changed with the consolidation of their western slope offices. Mr. Carpenter said they are still under a hiring freeze, although Andrew Limbach just started today with the USBR and will be training under Conor and others to assist with the forecasts. At this time, Mr. Carpenter said that Conor will continue to maintain the forecasts for TLUG. David Gochis offered that he can also try to assist more with the forecasts as needed.

Taylor Park Dam Operator Rory Birdsey was asked about how this reduction in flows might affect the GCEA's hydropower operations at the dam and how the bypass valves have been working. Rory explained that the current bypass system has been functioning better since new parts were installed recently. In a worst-case scenario, if he were out of town and a dam operator from Montrose had to come over to manually operate the bypass mechanism, the system would be offline for about two hours. Ms. Chavez reminded the group that the agreement with GCEA states that their hydropower operations are "run of the river" under the Lease of Power Privilege and "…shall have no claim whatsoever for rates of flow or timing of releases for hydroelectric generation or any other purpose". It was agreed that General Manager Chavez will reach out to the Four Parties and GCEA to simply understand any impacts of reduced releases on hydropower infrastructure.

The TLUG representatives decided to wait to amend any of the other releases in the operations report until at least the April meeting, after the ASO flight data is incorporated

into the model. The group also asked Mr. Felletter to project releases so that the end-of-year storage objective meets the 60,000 acre-feet goal. This information will be shared with the representatives at the next meeting.

V. Miscellaneous Matters

Colorado Parks and Wildlife (CPW) representatives Julio Del Piccolo and Ryan Unterreiner were asked about the storage restrictions at Spring Creek Reservoir and whether CPW's junior water rights will be impacted if there is a call on Taylor River. They explained that they are currently under a storage restriction and must keep the reservoir at 10 feet below the spillway when it refills during runoff. Presently, they said the reservoir is empty but that access to the site is currently blocked by snow. They explained that they have received approval from their Executive Management Team to fix the dam and an engineer has been selected and is under contract. Work on the dam probably won't begin until Spring 2027.

Mr. Unterreiner did confirm that as junior rights holders, they would not attempt to fill the reservoir if a call is made. He also said they have some flexibility in their releases later in the summer to empty the reservoir and could work with TLUG on timing these releases if it would benefit the group.

VI. Citizen Comments

Dennis Cakebread thanked the group for sharing the information and offered that he would like to see the fishery protected as much as possible.

VII. Next Meeting Date

The next TLUG meeting was scheduled for April 7, 2026, at 10:00 a.m.

VIII. Adjournment

The March 9th TLUG meeting was adjourned at 11: 19 a.m.

Proposed Operation
Taylor Park Reservoir
March forecast = 56% (53,000) af
March 10, 2026

Month	Inflow ac-ft	Average Inflow cfs	Outflow ac-ft	Average Outflow cfs	EOM Content ac-ft	EOM Elevation ft
					59,826	
Nov 1-15	2,200	74	2,350	79	64,308	9,306
Nov 16-30	1,960	66	2,360	79	63,917	9,306
Dec 1-15	1,860	63	2,360	79	63,423	9,306
Dec 16-31	2,010	63	2,510	79	62,932	9,305
Jan 1-15	1,790	60	2,370	80	62,354	9,305
Jan 16-31	1,570	49	2,550	80	61,370	9,304
Feb 1-15	1,510	54	2,250	81	60,628	9,304
Feb 16-28	1,770	64	2,170	78	60,238	9,304
Mar 1-15	2,070	70	2,180	73	60,122	9,304
Mar 16-31	2,020	64	1,900	60	60,239	9,304
Apr 1-15	3,060	103	1,790	60	61,512	9,305
Apr 16-30	3,940	132	1,790	60	63,669	9,306
May 1-15	6,470	217	2,980	100	67,161	9,308
May 16-31	9,530	300	3,970	125	72,727	9,312
Jun 1-15	14,220	478	5,950	200	81,267	9,317
Jun 16-30	6,780	228	5,950	200	81,826	9,317
Jul 1-15	4,660	157	7,440	250	79,049	9,316
Jul 16-31	4,340	137	7,930	250	75,454	9,313
Aug 1-15	3,190	107	7,440	250	71,211	9,311
Aug 16-31	2,810	89	7,930	250	66,082	9,308
Sep 1-15	2,520	85	5,950	200	62,654	9,305
Sep 16-30	2,480	83	5,950	200	59,181	9,303
Oct 1-15	3,140	106	2,980	100	59,347	9,303
Oct 16-31	2,860	90	2,380	75	59,826	9,303

53,000 = April-July inflow
56% of normal
82,160 = Maximum Content

preliminary

MEMORANDUM

TO: Board of Directors

FROM: Joellen Fonken, Grant Committee Chair
Beverly Richards, Grant Program Manager

DATE: March 9, 2026

SUBJECT: 2026 Grant Program Funding Recommendations

The Grant Committee met on March 9, 2026, to review applications for the 2026 Grant Program. Directors Joellen Fonken, Rebie Hazard, Stu Asay, Andy Spann and Rosemary Carroll participated. District staff Sonja Chavez, Beverly Richards, Bailey Friedman and Amanda Aulenbach were also in attendance. Total funds requested in 2026 were $350,866, which was $100,866 more than the 2026 District Grant budget amount of $250,000

The Grant Committee meeting was called to order at 3:00 p.m. by Committee Chair Joellen Fonken. The Committee discussed each application and as part of the discussion, the funding recommendations are as follows:

Grant Committee Funding Recommendations- New Projects

1.	BeWildfireAware.co Website Redesign	$ 0
2.	Cain Borsum Diversion Modification	$49,304
3.	Cement Creek Ditch Diversion and Rehabilitation	$20,000
4.	Coldharbour Institute Water Education	$ 5,000
5.	Dos Rios Golf Club New Irrigation System	$ 0
6.	CSU Extension Office No Till Drill Seeder	$ 4,250
7.	Gunnison County Whitewater Park Drop 2	$40,000
8.	Illinois and Willow Creek Restoration	$34,566
9.	Kreuger Ranch Aquatic Passage and Diversion	$20,000
10.	Kubler LLC Stockwater Spring Development	$ 0
11.	Lower Cochetopa Restoration	$16,063
12.	Mountain Roots Water Education	$13,583
13.	Robinson and Niccoli Parcels Irrigation Improvement	$15,000
14.	Sargents No. 2 Ditch Diversion Restoration	$10,000
15.	Sunki No. 1 Diversion Rehabilitation	$ 2,000
16.	Tingley Ditch Diversion Rehabilitation	$12,500
17.	Verzuh Young Bifano Ditch Pipe	$27,400
	Total:	**$269,666**

As part of the 2026 budget cycle, outstanding grant funds from 2025 were identified as a funding need in the 2026 Grant Program budget line item as it was anticipated that these projects would be completed in 2026. One of the projects, Bosshard Ranch, was completed and reimbursed in December 2025. Due to this occurring, there is additional funding in the budget line item in the amount of $19,666 and available for use in the 2026 program should the board desire. This additional $19k has currently been distributed among three grants to get them closer to their full funding request, to support new information about revised construction plans and costs, and to keep the projects moving forward in the case that the RESTORE CO funding does not come through in time.

As will be noted in staff's presentation of the projects, several applications will be awarded funding contingent upon receipt of additional information. In addition, there were several projects that the Committee felt were lacking desired detail and which did not meet the District's mission or Grant Program guidelines.

This 2026 Grant Program award package leverages District resources with outside matching grant program resources or landowner and partner match. Total Project Costs in 2026 were $1,315,504 and Total Match was $1,030,705. The Upper Gunnison grant dollars leverage matching funds at approximately 1:3.

Committee and Staff Recommendation for Board Action: Approve the UGRWCD Grant Committee 2026 recommendations for award in the amount of $269,666 which includes $19,666 of unused and budgeted funds from 2025.

Additional Future Action Items for Staff Follow-Up:

- Staff will follow up with applicants on additional information required as part of any contingent funding awards.

The Grant Committee meeting was adjourned at 4:40 p.m.

2026 UGRWCD Grant Applications Summary

1. BeWildfireAware.com Website Redesign – Basinwide

The BeWildfireAware.com Website Redesign project involves redesigning an existing wildfire awareness website to create an effective public education platform focused on fire danger and its direct impact on water quality in the Upper Gunnison River Basin. BeWildfireAware.com would serve the entire Upper Gunnison River Basin, covering Gunnison, Hinsdale, and Saguache Counties within the District's boundaries.

The funding request was submitted by Jim Ramirez and is for $2,750 with $2,750 match (Cash and In-kind). While the Committee felt the website might have potential to be helpful to the community with regard to education around wildfire, the link between the website and its existence resulting in real "improvements to water-quality" was not supported as a conclusion by the Committee. There was also no information about how the applicant proposed to pay for the ongoing maintenance of the website. The application also did not include any support letters from partner organizations.

Recommended funding - $0

2. Cain Borsum Diversion Modification – Tomichi Creek

This multi-beneficial project includes improvement to an existing irrigation diversion on Tomichi Creek and includes incorporation a new log-stop structure with winch system, bypass sand-gate channel and prefabricated fish ladder being piloted by the District. The project will result in improved irrigation water management, reductions in channel erosion and maintenance and eventually opening 4.77 miles of Tomichi Creek to fish passage. This phased diversion improvement and fish passage project will begin with the Cain Borsum Diversion in 2026 then partners plan to update two additional diversions in this stream reach in future years. The Cain Borsum Ditch is located on Tomichi Creek 15 miles east of Gunnison and has senior water rights (3.64 cfs, 1904) and junior water rights (18.36 cfs, 1943) and serves 200 acres of irrigated meadows.

This application was submitted by Greg Peterson for Peterson Ranches. The original funding request was for $32,983 with $70,412 in cash match. These amounts were based on an earlier cost estimate which was just recently revised to incorporate additional infrastructure (bypass gate). The total project costs have since increased from $103,395 to $140,000 and one of the anticipated funding sources may be significantly delayed (RESTORE CO grant). An additional $16,321 was included in the request and ultimately the award to make up for that funding shortfall and keep the project on-track for implementation in 2026. This project is an identified high-priority project by UGRWCD and is a direct result of the District's system optimization planning and engineering efforts.

Recommended funding - $49,304

3. Cement Creek Ditch Diversion and Rehabilitation – Cement Creek

This project is a coordinated effort between the Grand Mesa, Uncompahgre, and Gunnison National Forests (GMUG) (USFS), Norton Family, and Trout Unlimited (TU) to restore the Cement Creek Ditch diversion and channel. The project will address instability and maintenance issues at the diversion, sedimentation of the channel, correct the headgate location and elevation, as well as improve ditch conveyance by piping a problematic section of the ditch. Completion of this work will allow the Forest Service and downstream water right holders to fulfill their senior decreed water rights of 5.33 cfs (1906), improve the functionality of the ditch, and reduce the annual in-channel disturbance.

The grant application was submitted by John Norton for $20,000 with a match of $47,500 ($47,000 cash and $500 in-kind).

Recommended funding - $20,000

4. **Coldharbour Institute Water Education and Water Quality Initiative – Tomichi Creek**

This proposal seeks support for two key elements of Coldharbour Institute's Healthy Watersheds program: support for educational programming to enhance water literacy and support for water quality monitoring activities to inform stream restoration plans on Tomichi Creek. Most of these educational and monitoring activities will occur at Coldharbour Ranch (7 miles east of Gunnison) and work with Gunnison Watershed School District schools and Western Colorado University.

This application was submitted by Coldharbour Institute. The funding request was for $11,020 with a match of $12,720 ($1,440 cash and $11,280 in-kind). The Committee felt that while this project may meet the educational criteria, it did not fill a critical gap in the District's education and outreach programming other than support for the Teachers Institute or the high school riparian education curriculum development.

The Committee discussed that the District's competitive grant program should not be used to support regular annual programming of an organization and that perhaps these activities need to be evaluated as part of the Education and Outreach annual programming if the District sees them as critical activities that it wants to support on an ongoing basis. The Committee also struggled to see the connection between the River Watch water sampling program and how it directly supports development of restoration plans and temperature issues in the stream through the ranch. The Committee recommended a partial contribution of funds to support the Teachers Institute and riparian curriculum development activities.

Recommended funding - $5,000

5. **Dos Rios Golf Club New Efficient Irrigation System – Completed Project – Gunnison River**

This completed project involved the modernization of the golf course's outdated 40-year-old irrigation system to reduce water usage and improve efficiency. This proposal specifically addressed the installation of high density polyethylene (HDPE) pipe for the irrigation distribution system. This proposal stated this led to the 100% elimination of all water loss due to leaking pipes and fittings.

The Committee once again expressed reluctance to fund this project as they felt that this project had been given significant previous 2024 grant support through purchase of a Supervisory Control and Data Acquisition (SCADA) computer system ($50,000) to assist in their irrigation water management and measurement to minimize overwatering and overuse. The Committee and staff felt that this application was essentially a duplication of the completed project application submitted in 2025 which was also not awarded because it was considered deferred maintenance. As with that proposal, the General Manager noted that she participated in a field site visit in late 2023 prior to their 2024 grant request and the SCADA system was discussed with the applicant as the more suitable item to request financial assistance. At that visit, General Manager Chavez also discouraged them from applying for the replacement of 40-year-old lines or sprinkler heads because any conservation benefit would be the result of deferred maintenance activities which runs contrary to the board's grant policy. The use of HDPE pipe is also not "new technology" nor is the activity of replacing pipe with pipe considered to improve irrigation application.

This application was submitted as a "completed project" by the Dos Rios Golf Club and the funding request was for $50,000 with a $50,500 match ($50,000 cash, $500 in-kind).

Recommended funding - $0

6. Gunnison County CSU Extension Office No-Till Drill Seeder - Basinwide

This proposal is for funding to acquire a no-till drill seeder to support agricultural producers in the upper Gunnison Basin. The no-till drill would be available for community use, promoting conservation-focused inter-seeding techniques that enhance soil health, agricultural production, water retention, water conservation, mitigate drought and reduce erosion. Currently, producers must either purchase their own drill, or travel outside the county to rent a no-till drill, incurring prohibitive costs to utilize such equipment and ultimately prevents active implementation. In collaboration with key partners, including the Gunnison Conservation District (GCD) and the Gunnison County Stockgrowers' Association (GCSA), the Extension office will actively advertise and facilitate access to the seeder to maximize its impact across both the Gunnison basin. This initiative aims to empower local producers with tools to improve productivity and environmental stewardship.

This application was submitted by CSU Extension Office. The funding request was for $4,250 with $28, 592 as match (cash). This is a high priority project that had previously been identified by UGRWCD and the committee is glad to have CSU CE take leadership on moving the project forward.

Recommended funding - $4,250

7. Gunnison County Whitewater Park Drop 2 Improvements – Gunnison River

This project involves the completion of final engineering design, environmental coordination, and permitting for the replacement of the Drop #2 structure at the Gunnison Whitewater Park. The structure has experienced progressive structural degradation due to piping, subgrade scour, and cracking, as documented in the 2025 Merrick Whitewater Inspection Report. Failure of the structure poses significant risks to public safety,

instream channel stability, aquatic habitat continuity, and upstream infrastructure, including water utility crossings and diversion structures.

This application was submitted by Gunnison County. The total project cost is estimated at $100,000 and the funding request was for $50,000 with $50,000 in matching funds (cash). This project is a high priority project for the District due to the importance of maintaining the park infrastructure and it's connection to the District's RICD. The committee recommends funding contingent upon receiving an engineer's opinion of cost for the design services or an actual engineering bid.

Recommended funding - $40,000

8. Illinois and Willow Creek Restoration Project – Phase 1 – Taylor River

The Project is a coordinated, multi-year effort to reverse impaired stream conditions on Illinois and Willow Creeks through data-driven assessment and collaborative design. Both project sites are located on private property, adjacent to public lands. Phase 1 of the project involves partner development, LiDAR analysis, hydraulic and geomorphic modeling, technical stakeholder coordination, and completion of the conceptual and 30% restoration designs by September 2027. The broader multi-partner project is supported by funding not yet secured from the Colorado River Sustainability Campaign (CRSC), TU (private and in-kind), and CWCB Water Plan Grant funds.

This grant application was submitted by TU. The funding request was for $50,000 with a match of $321,196 much of which is accumulated outside the 1-year project completion period ($312,141 cash and $9,055 in-kind). The Committee felt that the application included information about the total project and was not as specific about the goals of Phase 1. There were also concerns with lack of detailed budget information to support costs identified and not having letters of support from the private landowners or HOA. It was the consensus of the Committee to direct funding to the Willow Creek Project engineering as it appeared that this was the portion of the project that was most ready to proceed and to be completed within a year. Award contingent upon receiving letters of support from the private landowners. The Committee also limited the award to an indirect cost recovery of 10% of the funding request.

Recommended funding - $34,566

9. Kreuger Ranch Aquatic Organism Passage and Irrigation Diversion Improvement Project – Cochetopa Creek

This project will involve the installation of two modern diversion structures on Cochetopa Creek - one at the South Kreuger Ditch and one at the Moran Ditch - to improve irrigation reliability for existing decreed agricultural water rights, eliminate annual channel manipulation from temporary rock dams, and enhance aquatic habitat by removing a fish passage barrier. Together, these diversions serve approximately 60.5 irrigated acres and deliver a combined 1.1 cfs (1904) and 9.9 cfs (1934 & 1943) of decreed water rights. Along with the Sargents No. 2 and Cain Borsum projects, this will open 804 miles of stream.

This project was submitted by Lance Kreuger. The funding request was for $20,000 with a match of $52,500 (Cash). This multi-beneficial project was identified as a high priority by UGRWCD through system optimization planning efforts and engineering pre-feasibility work. UGRWCD has invested significant staff time and resources fundraising for this multi-beneficial project through CWCB WSRF and Colorado River District CFP grant programs.

Recommended funding - $20,000

10. Kubler LLC Stockwater Spring Development – Ohio Creek

This project involves the development of two new water sources on the Davis Ranch property on Ohio Creek. This will include the installation of a series of new stock water ponds on two more springs, and this would be the most efficient way to develop these springs. The applicant has decreed water rights on the first spring (Spring 3) and has filed on the other spring which is properly known as Spring 5 on the application. Both Spring 3 and Spring 5 have well developed drainages below them. This is an indication of consistent historical discharge from the spring.

The application was submitted by Karen Davis Israel for Davis Ranch. The funding request was for $13,317 with matching funds in the amount of $18,117 ($13,117 cash and $5,000 in-kind). From the application, it was difficult to get a thorough understanding of the project and the benefits claimed (e.g., questions around claimed irrigation supply benefits). Although Applegate was consulted on the project at the owner's expense via remote meeting, a field assessment was not completed. The Committee also indicated concerns around the use of District grant funds for the development of stock water ponds on *private* lands.

Recommended funding - $0

11. Lower Cochetopa Restoration – Cochetopa Creek

This project is a coordinated effort between TU, Jim Woodcock, and Tom Speeze to restore 6,000 feet of Cochetopa Creek on the Woodcock and Speeze properties. This project will use a blend of low-tech process-based restoration and form restoration treatments to reconnect the floodplain, reduce erosion and sediment loading, enhance aquatic habitat, and enhance riparian habitat. Together, these improvements strengthen agricultural water reliability, support healthy rivers, and increase long-term hydrologic resilience across the Cochetopa–Tomichi watershed. This section of Cochetopa creek is denuded of vegetation and exhibits excessive bank erosion that has contributed to over widening, skewed sediment deposition cycle, and poor aquatic habitat.

This project was submitted by Jim Woodcock. The funding request is for $16,063 with $96,937 in matching funds ($92,500 cash and $4,437 in-kind). This project is a joint partnership effort to which UGRWCD has contributed significant staff time toward fundraising efforts through CWCB and Colorado River District CFP grant funding programs.

Recommended funding - $16,063

12. Mountain Roots Irrigation Efficiency and Water Education – Gunnison River and Cement Creek

This proposed project involves the installation of precision-controlled irrigation system featuring zone control, automation, pressure regulation, and rain-sensing technology at Glacier Farm. The proposed project also involves the installation of a new drip irrigation system which will minimize manual watering while supporting consistent garden use at the Gunnison Community School. At Glacier Farm irrigation currently depends on manual pump operations and limited timing control, increasing the risk of overwatering and unnecessary labor. At the Gunnison Community School Garden, the previous irrigation infrastructure was removed during major construction, creating an opportunity to incorporate high-efficient irrigation. In both settings, water can be managed more intentionally after lawful diversion.

This project was submitted by Mountain Roots Food Project. The funding request is for $13,583 with $13,602 in matching funds ($9,396 cash and $4,206 in-kind).

Recommended funding - $13,583

13. Robinson and Niccoli Parcels Irrigation Efficiency Improvements – Washington Gulch and Slate River

This project proposes implementation of irrigation efficiency improvements on two properties owned by the Crested Butte Land Trust: Robinson parcel and Niccoli Ranch. The Robinson parcel consists of 131.5 acres of conserved open space between the towns of Crested Butte and Mt. Crested Butte. Approximately 63 acres of pasture are historically flood irrigated via the Rozich and Meridian ditches which divert from Washington Gulch. The Niccoli Ranch parcel is a 33 acre-parcel near Crested Butte South that is leased to the Niccoli Family. Irrigated pastures on the Niccoli Ranch (and adjacent pastures) are historically flood irrigated via the Bocker Ditch, with water diverted from the Slate River. Both ditch systems are earthen.

The project proposes implementing recommendations provided by Applegate Engineering for irrigation efficiency improvements on the two parcels. The two projects will be contracted separately. For the Niccoli property this will include the installation of three 24" steel gated pipe turnouts to allow the level of the water in the ditch to be controlled more efficiently. On the Robison property, the work would involve the installation of three AgriDrain inline water level control boxes to control the water level in each section of the ditch.

This grant application was submitted by Crested Butte Land Trust. The funding request was for $15,000 with a $15,835 match ($10,375 cash and $5,460 in-kind).

Recommended funding - $15,000

14. Sargents No. 2 Ditch Diversion Restoration – Tomichi Creek

This project is a coordinated effort between the Rhodes Family and TU with support from the Colorado River District, CWCB, and NRCS. The project will modernize the Sargents No. 2 Ditch diversion dam and headgate. The Sargents No. 2 Ditch is decreed for 1.2 CFS with an appropriation date of 1918. The ditch diverts from Tomichi Creek, ¼ mile upstream from the confluence with Marshall Creek, and is used to irrigate approximately 30 acres. The diversion dam is reconstructed on an annual basis using cobble, wood, tin, traps and other debris. Annual maintenance and channel disturbance are required to effectively check water into the ditch, which also contributes to instability of the stream substrate and stream banks resulting in channel erosion and channel widening which affects water quality.

This grant application was submitted by The Rhodes Family. The funding request was $10,000 with $86,500 in matching funds ($85,500 cash and $1,000 in-kind). This project was identified as a high-priority multi-beneficial project identified through UGRWCD system optimization planning and assessment efforts and has been included in UGRWCD's funding request to the Colorado River District CFP program.

Recommended funding - $10,000

15. Sunki No. 1 Diversion Rehabilitation – Ohio Creek

This project is a coordinated effort between the Evans Ranch and Loop Cattle Company to restore the Sunki No. 1 Ditch diversion structure. The Sunki No 1 Ditch holds a 0.875 cfs 1906 water right sourced from Ohio Creek and is located approximately 20 miles northwest of Gunnison. The Sunki No 1 ditch is used to irrigate 18 acres of meadow in the headwaters of Ohio Creek.

The Evans Ranch contacted the District for technical support and scheduled a site visit with Applegate Engineering to assess the diversion condition in the fall of 2025. Applegate Engineering noted that the ability to divert water is limited due to the lack of any check structure at the headgate. The ditch only flows when the water level in the creek rises high enough to flow through the slide gate and during the site visit creek levels were too low to allow diversion. In addition, cobbles and sediment are built up in front of the headgate further restricting the ability to divert during low flows. The project will involve the construction of a simple check structure using local natural materials and check logs. This new diversion will be constructed in the summer/fall of 2026.

This grant application was submitted by Evans Ranch and L Bar Ranch. The funding request was $2,000 with $2,500 in matching funds ($2,000 cash and $500 in-kind).

Recommended funding - $2,000

16. Tingley Ditch Diversion Rehabilitation Project – Phase 2 Construction – Ohio Creek

The Tingley Ditch Diversion Rehabilitation project proposes to restore the upstream/downstream portion of Ohio Creek at the diversion location to stabilize and restore the channel bank and bed and restore access to the senior water right. The existing diversion infrastructure has been nonfunctional for several years due to channel erosion which has isolated the diversion structure from the stream system. This project serves several HOA's (pond and limited outdoor irrigation) as well as both upstream and downstream agricultural lands.

Engineering design for the project was completed in 2024, and this funding request represents Phase Two of the project, focused on construction implementation. The project includes reconstruction of the diversion dam using a rock cross-vane and wingwall configuration, regarding and stabilizing approximately 650 linear feet of the Tingley Ditch channel and installing a new flume for flow-measurement. These improvements will restore the ability to divert and measure water in a controlled manner, improve channel stability, and support improved instream and riparian conditions through the project reach.

This grant application was submitted by Thornton Meadows Homeowners Association. The funding request was $12,500 with $22,985 in matching funds (cash). The Committee felt there were some components of the application which will be noted as a contingency for award (e.g., engineered designs with project bid or engineer's opinion of probable cost). This project has also been included in the UGRWCD's CWCB WSRF funding request.

Recommended funding - $12,500

17. Verzuh Young Bifano Ditch Pipe – East River

This project request is for engineering design associated with piping the Verzuh Young Bifano Ditch. Verzuh Young Bifano Ditch diverts water from the East River to the east of Mt. Crested Butte and delivers it to meadows located to the south of the Buckhorn Subdivision. There are 3 water rights owners on the ditch who irrigate approximately 300 acres of grass hay and pasture. The ditch has 1927 water rights decreed for a total of 25.8 cfs.

Ditch owners are seeking technical assistance to pipe approximately 7,000 feet of the ditch as it contours through the Buckhorn Subdivision. Ditch owners have contacted Applegate Engineering who provided guidance with a pre-feasibility assessment. This assessment compares pipe size, alignment alternatives, and a cost estimate for an engineered design. Piping the Verzuh Young Bifano Ditch will increase water use efficiency, reduce labor required to maintain and deliver water to the irrigated meadows, and reduce risk to human safety as the Buckhorn Subdivision becomes more populated.

Ditch owners plan to proceed with design during the summer of 2026 and work with partners to secure funding support for construction by 2028. Design will be completed to suit NRCS specifications to allow for optional utilization of NRCS funding for construction implementation.

This grant application was submitted by Bill Lacy. The funding request was $27,400 with $27,900 in matching funds ($27,400 cash and $500 in-kind).

Recommended funding - $27,400

2026 UGRWCD Grant Program

Requested Funds:
$350,866.00
Committee Suggested Awards:
$296,666.00

ROZICH & MERIDIAN DITCH

VERZUH YOUNG BIFANO DITCH

CEMENT CR RANGER STA DITCH

SUNKI NO. 1 DITCH

ILLINOIS CREEK

WILLOW CREEK

TINGLEY DITCH

MOUNTAIN ROOTS WATER EDUCATION

GIUNNISON WHITEWATER PARK DROP 2

COLDHARBOUR RANCH

COCHETOPA RESTORATION

CAIN BORSUM DITCH

MORAN DITCH

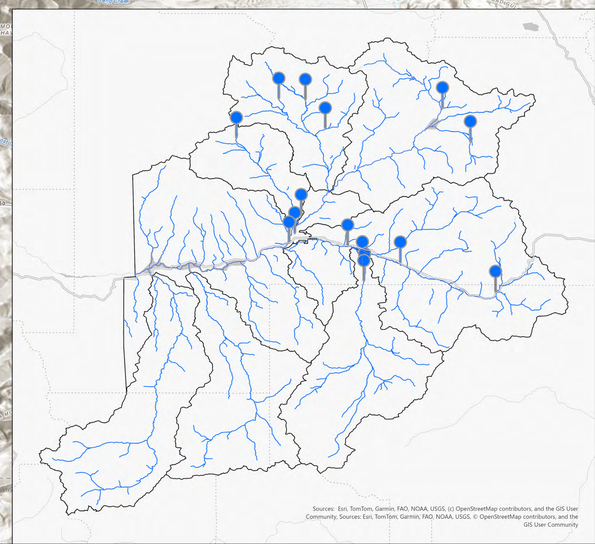
SOUTH KREUGER DITCH

SARGENTS NO. 2

East River = 4
Tomichi Creek = 3
Cochetopa Creek = 3
Gunnison Mainstem = 2
Ohio Creek = 2
Taylor River = 2

N

12 Miles



MEMORANDUM

TO: UGRWCD Board of Directors

FROM: Sue Uerling, Admin. Assistant./Comm. Support Specialist
Jules Iovino, UGRWCD Water Resources Fellow

DATE: March 13, 2026

SUBJECT: Education and Outreach Quarterly Update

The following is an update on 2026 Education and Outreach action items completed since the previous quarterly report.

- **FIRST GRADE WATER BOOK**
  Staff met with Chris and Kirsten Dickey on February 20th to review a draft of the first-grade water book with a locally relevant water theme. Staff worked on simplifying the language and shortening the narrative to better fit a 1st grade audience. The proposed deadline for publication and distribution has now been set for mid May 2026.

- **RADIO ADVERTISING:**
  New radio ads were recorded by Sonja Chavez and Amanda Aulenbach on February 17th regarding snow drought and the Wet Meadows Program. These will run in rotation with an ad about the District's Mini-Grant program through mid-April.

- **PRINT ADVERTISING**:
  The District ran display ads in *Gunnison Country Times, Crested Butte News,* and *SilverWorld* announcing the Watershed Restoration Technician openings for summer. A regular want ad also ran in the *Grand Junction Sentinel* for the positions.

- **SPONSORSHIPS:**
  The District sponsored the **Ice Masters Fishing Tournament** at Taylor Park Reservoir on February 28, 2026. UGRWCD banners were hung at the registration table and at the weigh-in station. Fishing lures and lip balm balls with the UGRWCD logo were given to all 105 participants and announcements about the sponsorship were made throughout the day.

  The District will sponsor the **34th Annual Gunnison Rotary Club Fishing Tournament** at Blue Mesa Reservoir on May 2nd and 3rd, 2026. As the "First Place" sponsor, the District is allowed to have a two-person fishing team compete in the tournament. If any Board members are interested, please let us know.

- The District has signed a contract to once again sponsor the **Golden Circle of Champions Rodeo on Thursday**, July 9, 2026 at the Gunnison County Fairgrounds. As the premier sponsor for the rodeo, the District will receive:

* Flag flies and multiple acknowledgements during Thursday's rodeo
* Video of 1-2 minutes to play at the start of the rodeo on Thursday night
* 30-second video to play Friday and Saturday nights
* Large Banner at entrance to Grandstand
* 4 Grandstand Tickets for Thursday and 4 General Admission tickets
* 1 on-grounds parking pass

- **VIDEO PROJECT FOR THE DISTRICT:**
  Hayden Daiber, Hay Lil Drone Aerial Media, produced a video about the District for "Water Day at the Capitol" on March 11th. Ms. Daiber will also prepare videos that can be used during Cattlemen's Days and for seminars, workshops, and social media.

- **SOCIAL MEDIA:**
  The District has posted a number of social media updates, including data on revised releases from Taylor Park Reservoir, Water Day at the Capitol, committee meetings, staff involvement in conferences, the Watershed Restoration Technician job opportunities and several informational posts on snowpack, river conditions and general information. Since our last meeting, we have gained 10 new Instagram followers (bringing our total to 663) and increased our profile views by approximately 300. Our interactions (likes, reposts, and comments) have also increased.

- **WEBSITE UPDATE:**
  Savannah Nelson of Sunshine Creatives is continuing to work on a draft of the redesigned UGRWCD website. Several new posts were uploaded to the website as well, including meeting information, job opportunities, TLUG meetings and Taylor Park Reservoir releases, and an invitation to Colorado River District's "State of the River" presentation and dinner on May 13th, 2026.

- **EDUCATION AND SCHOOL PROGRAMMING**:
  The District will be providing water education curriculum at the following events: Ag Venture Days – May 7th and 8th; 4th Grade Water Festival – May 21st and Trailhead Children's Museum – Summer (scheduled to be determined).

- **RTA BUS WINDOW BANNERS:**
  All three banners have now been installed in three RTA buses. They read: OUR WATER-OUR VALLEY; WE GO WITH THE FLOW; and WATER YOU WAITING FOR? CONSERVE!

- **PROMOTIONAL PRODUCTS**:
  The District has ordered and received a number of promotional products imprinted with the District logo or acronym, including: lip balm, portable doggie waste containers with bags, aluminum water bottles with spouts, and pens; two linen table coverings, a pull-up display banner and a tri-fold stand-up table display with the District's mission, programs, and water facts about the Upper Gunnison Basin.

- **MINI-GRANT**
  The District received a Mini-Grant application request for $448 from Deborah Saunders with the LEAD Homeschool Group. The application was approved to provide curriculum, books, water test kits and "teachers" for LEAD students to learn about drought and its effects on the watershed during a field trip on Thursday, April 30th at Jorgensen Park/Pacman Pond.

MEMORANDUM

TO: UGRWCD Board of Directors

FROM: Amanda Aulenbach, Wet Meadows Program Director

DATE: 23 March 2026

SUBJECT: Wet Meadows Program Update – March 2026

Following is a memorandum of update to the UGRWCD Board of Directors on Wet Meadows Program (Program) activities over the past quarter and activities anticipated to happen in the next quarter (April 1 through June 30) of 2026.

Planning Activities: Staff advertised the position description for two Watershed Restoration Technicians for the 2026 field season (May 11-October 30). The announcement was advertised in the Crested Butte News, Gunnison Country Times, Lake City Silver World, and Grand Junction Sentinel for two weeks March 5-12th and was shared with local and regional land management personnel via email, to distribute through their connections. The deadline for applying was Friday, March 20th. Applications will be reviewed the week of March 23rd, and candidates selected for interviews by April 1st.

Program staff hosted the annual partner planning meeting on Tuesday, January 27th. Twenty-six people participated from twelve different agencies and organizations. Partners discussed Program funding, monitoring, site assessments, volunteer events, and cheatgrass treatments for the 2026 field season.

Education & Outreach: The Program Director presented during the plenary session at the Colorado Chapter of the Wildlife Society Conference on February 19th. The Program Director and Project Manager attended the Riparian Restoration Conference on March 3-5th. The Program's restoration efforts will be highlighted in the Riverscape Restoration Networks quarterly newsletter in March.

Funding: In collaboration with Gunnison County's Sustainable Tourism and Outdoor Recreation (STOR) Committee, the Wet Meadows Program was awarded $20,000 in funding through the Colorado Parks and Wildlife (CPW) Regional Partnerships Initiative grant. This funding will be used for staff time, equipment costs (e.g., UTV), and contractual costs across land management boundaries. Funding was awarded to STOR Committee in March and will be distributed to the District by May 2026. Funding will expire December 31, 2026.

Staff applied for $91,219 in grant funding through CPW's Wetlands for Wildlife Program. This funding would be used for planning and implementing four restoration projects on private and state land. Awards will be announced in May 2026.

Anticipated Activities (April 1-June 30): Technician onboarding week will start the week of May 11th. They will learn about the District mission and programs, meet Program partners, learn

field and vehicle safety protocols, and attend the CRWCD State of the River meeting on May 13th. Technicians will also attend the May 19th board meeting.

Program staff will complete wet meadow site assessments, wetland/riparian assessments, and cheatgrass surveys, assist with fish pit tagging for monitoring the new fish passage diversion structure on Krueger Ranch, and assist with the Gunnison River Festival and snow surveys.

The Program Director will attend a drought resilience workshop in Grand Junction, CO on March 24th. Program staff will host a partner meeting on April 14th to discuss a potential restoration monitoring project with a PhD student at University of Colorado Boulder. Staff will host a Western Colorado University class field trip on April 20th.

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MEMORANDUM

TO: UGRWCD Board of Directors

FROM: Bailey Friedman, Water Resources Project Manager

DATE: March 15, 2026

SUBJECT: Water Projects Update (Q1 2026)

The following is a summary of UGRWCD water project activities completed during the first quarter of 2026, as well as activities expected in the second quarter of 2026.

1. **Watershed Management Plan (WMP)**
    a. Previous Quarter
        i. The WMP action plans are being developed as smaller individual reports including but not limited to background information like Legal and Regulatory Framework, Sub-basin Water Uses, Agricultural Water Resource Concerns, Environmental Concerns, etc.
    b. Next Quarter
        i. General Manager and General Counsel will continue to review individual reports and sub-basin action plans and work with Ms. Friedman to finalize.
        ii. Committee meetings are expected to resume soon.

2. **UGRWCD Wetland Assessment**
    a. Previous Quarter
        i. Staff finalized field data collection sheets and has identified assessment sites for the 2026 field season.
    b. Next Quarter
        i. Staff will begin field visits to collect wetland and riparian data.

3. **Colorado River District (CRD) – Community Funding Partnership (CFP)**
    a. Previous Quarter
        i. Submitted a request for the project titled *Tomichi Basin Stream Restoration and Irrigation Diversion Improvement Project*.
        ii. Supports the Kreuger, Cain Borsum, Sargents No. 2, and Woodcock Ranch Irrigation Improvements and Stream Restoration Projects.
        iii. Total Projects Cost = $447,128. CFP Request = $106,400.
    b. Next Quarter
        i. Anticipate CRD notification of awards in April 2026

4. **UGRCD Grant Program**
    a. Previous Quarter

i. Assisted in review and ranking of District Grant Program applications and recommendations to the Grant Committee.

5. **Water Resource Infrastructure Assessments**
    a. Continue to coordinate pre-feasibility project assessments, cost estimations, fund raising for high priority projects, and implementation for high priority water resource projects throughout the Basin.

6. **NFWF RESTORE Grant**
    a. Staff has been provided guidance from RESTORE that funding is currently frozen while NRCS funding undergoes national review. UGRWCD remains nimble and staff have reached out to basin partners and other grant agencies to ensure that 2026 projects can move forward with no delays.

7. **Gunnison Basin Roundtable (GBRT) – Water Supply Reserve Fund (WSRF) Grant Application**
    a. CWCB award notification anticipated in May 2026 for the South Krueger, Moran, Cain Borsum, Tingley, and Cement Creek ditches.

8. **Project/Grant Funding Breakdown**

The following table represents the various projects staff has been supporting, grants sources, and total amounts requested:

PROJECT NAME	WSRF	CFP	RESTORE	UGRWCD GRANT PROGRAM	Total Project Cost
Kreuger	X	X		X	$72,500
Cain Borsum	X	X	X	X	$139,920
Woodcock Ranch		X	X	X	$112,000
Sargents No. 2		X	X	X	$96,000
Cement Creek	X			X	$50,000
Tingley	X			X	$34,485
Total Request	**$85,777**	**$106,400**	**$16,000**	**$127,867**	**$504,905**

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MEMORANDUM

TO: UGRWCD Board of Directors

FROM: Ari Yamaguchi, Water Resources Specialist

DATE: March 23, 2026

SUBJECT: Basin Water Quality & Quantity Update

Homestake Pitch Uranium Mine

Background: Homestake Mining Company is pursuing a Discharger-Specific Variance (DSV) on Marshall Creek, which will permit the concentration of uranium to exceed the state standard. This process is driven largely by the proponent (Homestake), and the procedure is overseen by the Water Quality Control Division with input from other stakeholder organizations (e.g., EPA, CPW, UGRWCD).

Update: Following Homestake's Responses to Comments, staff is drafting feedback regarding questions around specific models used to justify the conclusion that there are no further actions that Homestake can or should take to mitigate uranium discharge from the site.

Homestake is retaining the perspective that the Discharger-Specific Variance (DSV) should be granted without further action to mitigate uranium loading from the site and doing so using a novel and unprecedented approach. Other stakeholder groups (state and federal representatives) have stated that DSVs are not granted without some form of Pollution Management Plan (PMP), which, in this case, will likely come in the form of engineering infrastructure; regardless of the arguments and frameworks used, it is unprecedented for a DSV to be granted without a PMP. As a result of the discrepancy between Homestake's position and the DSV process necessitating a PMP, there has been some discussion that the DSV may be an inappropriate mechanism and that Homestake may instead need to seek a Site-Specific Variance from the state, which has different requirements and burdens of proof. As of this writing, Homestake appears to remain on track to continue pursuing the DSV.

As part of the requirements for the DSV, Homestake will be conducting community outreach in late spring of 2026. Outreach will include assessing the community's priorities, including topics such as radioactive runoff impacts on recreation, agriculture, human health, and drinking water. The District has offered to assist Homestake in ensuring the community is informed of the opportunity to participate in these outreach efforts (e.g., use of 1 of the 3 radio spots UGRWCD holds monthly, social media posts, etc.).

Administrative Action Hearing: Implementation of Regulation 93 (a.k.a., 303(d) Impaired Waters Listing Methodology)

Background: As part of the WQCD normal triennial review hearing cycle for Regulation 93, the process of regenerating the 303(d) list of impaired waters has begun for the Gunnison Basin, among other areas in the state.

Update: This process began with a call for all relevant data in Fall 2025, which is currently undergoing consolidation, to be made publicly available in November 2026. Interested entities will have an opportunity to review the WQCD's recommendations for segment listings (e.g., add to 303(d) List, add to M&E List, etc.) and claim party status to provide comments, if necessary, in February 2027. There are no substantive changes in this procedure from the way it has been conducted in the past. For more information, see the original document: https://drive.google.com/drive/folders/1gdTqphNa5nsn8AbfUXB4nDYA_dT-Gffb

To be clear, this notice and its hearings are separate from those dealing directly with Regulation 31 and Regulation 35, which specify the numeric water quality standards for the state and the Gunnison basin, respectively. This document specifies only the administrative procedure by which segments may be assessed in the context of Regulation 93.

This triennial review process will culminate with the release of the next 303(d) List for the Gunnison Basin in May 2027.

Water Quality Roadmap: Arsenic Standards

Background: Arsenic is a naturally occurring element that is known to be a threat to human health. As such, this metal is one of the contaminants considered under Regulations 93, 31, and 35 (discussed above) when determining attainment status of water quality standards. Arsenic is currently the leading cause for waterbodies to be included on the 303(d) List of Impaired Waters in the Upper Gunnison Basin and many other areas of the state, largely due to naturally occurring geology.

Update: Current arsenic standards are infeasible to attain due the limitations of modern treatment technology, and infeasible to enforce because the standard is lower than current instrument detection limits (1 µg/L). The current water supply standard of 0.02 µg/L was established in 2005, and, given these challenges and new scientific research on the topic, the WQCD is including arsenic in the Water Quality Roadmap process, wherein a number of water quality standards will be reevaluated. The arsenic standard is only being reevaluated from a human health perspective, so segments that are designated for human consumption will see a change to the standard, but waters without human consumption designations (e.g., aquatic life) will remain at the current standard (7.6-100 µg/L, depending on use). The new water supply standard will take into account "water supply, water ingestion, and fish ingestion."

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AGENDA ITEM 9

Gunnison Basin Roundtable

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AGENDA ITEM 9

Gunnison River Festival

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AGENDA ITEM 9

Scientific Endeavors

AGENDA ITEM 10

Miscellaneous Matters

UPPER GUNNISON RIVER WATER CONSERVANCY DISTRICT
2026 STATUS OF BOARD OF DIRECTORS

Directors for the Board of the Upper Gunnison River Water Conservancy District are appointed, after receipt of applications, by the appropriate Judicial District Court to serve four-year terms or to fill unexpired terms if a board member resigns. The Directors are appointed to represent geographical divisions described below.

Applications for the vacancies must be received by the Court by 5:00 p.m., May 22, 2026 must specify that the applicant has resided within the District for a period of one year, resides in and is the owner of real property within the division whose Director's term is expiring, and be knowledgeable in water matters. **Applications must be sent to The Honorable Kellie Starritt, District Judge, Gunnison County Courthouse, 200 East Virginia Avenue, Gunnison, CO 81230 by the deadline specified above. The current vacancies are highlighted.**

DIVISION 1

The Hinsdale County division, which shall include that portion of Hinsdale County which lies within the District. That division shall be entitled to one Director.

Camille Richard
Term expires: June 2027

DIVISION 2

The Saguache County division, which shall include that portion of Saguache County which lies within the District. That division shall be entitled to one Director.

Rebie Hazard
Term expires: June 2027

DIVISION 3

The Tomichi division, which shall include all of that portion of the Tomichi Creek drainage which lies east of the Gold Basin Road (County Road 38) except that portion thereof which lies within the City of Gunnison and within Division 2. That division shall be entitled to one director.

Joellen Fonken
Term expires: June 2027

DIVISION 4

The Taylor River division which shall include the following: (a) All of the Taylor River drainage, (b) That portion of the Gunnison River drainage which lies east of the Gunnison River and north of the Gunnison City limits, (c) That portion of the Gunnison River drainage which lies west of the Gunnison River and north of the south section line of Sections 28 and 29, Township 51 North, Range 1 East, N.M.P.M., and east of the ridge line between the Ohio Creek and Gunnison River drainages, and (d) That portion of the East River and Cement Creek drainages which lies south of an east-west line which commences on the west at the southwest corner of Section 15, Township 14 South, Range 86 West, 6th P.M., and continuing easterly along the south section line of said Section 15 and adjoining section lines to the east to a point on the section line between Sections 16 and 21, Township 14 south, Range 84 West, 6th P.M. at which said section line intersects the ridge line between the Taylor River and Cement Creek drainages. That division shall be entitled to one Director.

Don Sabrowski
Term expires: June 2028

DIVISION 5

The Crested Butte division, which shall include all of the East River and Cement Creek drainages except that portion thereof which is located within division 4. That division shall be entitled to two Directors.

Rosemary Carroll
Term expires: June 2027

Jeff Writer
Term expires: June 2029

DIVISION 6

The Ohio Creek division, which shall include all of the Ohio Creek and Antelope Creek drainages and that area of the Gunnison River drainage which lies west of the Gunnison River from its confluence with Antelope Creek on the south to the south boundary of division 4 on the north. That division shall be entitled to one Director.

Stu Asay
Term expires: June 2026

DIVISION 7

The Gunnison River division, which shall include all of the Gunnison River and Tomichi Creek drainages except that portion thereof which lies within divisions 1, 2, 3, 4, 6 and 8. That division shall be entitled to one Director.

Andy Spann
Term expires: June 2026

DIVISION 8

The City of Gunnison division, which shall include that area of the District which lies within the city limits of the City of Gunnison. That division shall be entitled to three Directors.

Brian Stevens
Term expires: June 2026

John Perusek
Term expires: June 2026

Brooke Zanetell
Term expires: June 2028

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Citizen Comments

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AGENDA ITEM 12

Future Meetings

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FUTURE MEETINGS/EVENTS

- UGRWCD Legislative Committee (tent.) - Friday, March 27, 2026, 8:00 a.m.
- UGRWCD Legislative Committee (tent.) - Friday, April 3, 2026, 8:00 a.m.
- UGRWCD Legislative Committee (tent.) - Friday, April 10, 2026, 8:00 a.m.
- UGRWCD Legislative Committee (tent.) - Friday, April 17, 2026, 8:00 a.m.
- UGRWCD Board of Directors Meeting - Monday, April 20, 2026, 5:30 p.m.
- Earth Day - Wednesday, April 22, 2026
- UGRWCD Legislative Committee (tent.) - Friday, April 24, 2026, 8:00 a.m.
- LEAD Homeschool at Jorgensen Park - Thursday, April 30, 2026, 12:30 PM
- UGRWCD Legislative Committee (tent.) - Friday, May 1, 2026, 8:00 a.m.
- Ag Venture Days - Thursday & Friday, May 7-8, 2026, 8 a.m., Fred Field Ctr.
- UGRWCD Legislative Committee (tent.) - Friday, May 8, 2026, 8:00 a.m.
- CRWCD "State of the River" Dinner/Address, May 13, 6-8 pm, Fred Field Ctr
- Blessing of the Ditches - Saturday, May 16, 2026, 11 a,m, Meadows Park
- UGRWCD Board of Directors Meeting - Tuesday, May 19, 2026, 5:30 p.m.

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Summary of Meeting Action Items

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AGENDA ITEM 14

Adjournment