

Draft SEIS for Near-Term Colorado River Operations and the 7-States Agreement

CSG West

09/14/2023

2 to 4 MAF Reduction Request

Supplemental EIS: 2007 Interim Guidelines

- In June 2022, BOR stated that Between 2 and 4 million acre-feet of additional conservation was needed in 2023 to protect critical levels in Lakes Powell and Mead.
 - BOR wanted a plan agreed upon between the States in place before the August 24-month Study
 - The States were unable to agree upon a plan by August
- In November, BOR issued a Notice of Intent to modify the 2007 Interim Guidelines for reservoir operations in 2023- 24, which may also inform operations in 2025-26.
 - Scoping Comments were due on December 20th
- States Submission January 2023
 - The States committed to a process to develop a consensus Framework Agreement Alternative
 - The States did not agree on a consensus alternative
 - 6 States (AZ, CO, NM, NV, UT, WY) submitted a consensus based model alternative
 - CA submitted a separate alternative

CONSENSUS BASED MODELING ALTERNATIVE – LAKE POWELL OPERATIONS

Lake Powell Elevations	IG + DCP	6 State Consensus (CBMA)	California Alternative
3666'	EQZ	EQZ	EQZ
3575'	UEBT	UEBT	UEBT Withheld 480 Release DROA Recovery
3550'	MERT	MERT = 7.48 MAF	MERT = 7.48 to 8.23 MAF, Mandatory up to 100KAF from DM
3525'	LEBT	LEBT = 7.0 MAF without balancing	LEBT = 7.48 to 7.0 MAF
		Additional Upper Division voluntary contributions after consideration of hydrologic shortages, Up to 500KAF DROA within the DROA process Reduce releases to protect 3,500'	Mandatory up to 500KAF from DM Mandatory up to 500KAF DROA Reduce releases to protect 3,500'

EQZ =Equalization Tier

UEBT = Upper Elevation Balancing Tier

MERT = Mid-Elevation Release Tier

LEBT = Lower Elevation Balancing Tier

CONSENSUS BASED MODELING ALTERNATIVE – LAKE MEAD OPERATIONS

Lake Mead Elevations	IG + DCP	6 State Consensus (CBMA)	California Alternative
1145'	Normal	1.543MAF Mandatory Reduction Allocated to Contractors and Mexico	1.0MAF Voluntary contributions: 560KAF AZ, 400KAF CA, 40KAF NV
1090'	DCP	1.543MAF + DCP = 1.785MAF	1.0MAF + DCP = 1.241MAF
1075'	DCP + T1	1.543MAF + DCP + T1 = 2.156MAF	1.0MAF + DCP + T1 = 1.613MAF
1050'	DCP+T2	1.543MAF + DCP +T3 = 2.918MAF	1.0MAF + DCP + T2 = 1.721MAF
1045'	DCPa+T2		1.0MAF + DCPa+T2 = 2.013MAF
1040'	DCPb+T2		1.0MAF + DCPb+T2 = 2.071MAF
1035'	DCPc+T2		1.0MAF + DCPc+T2 = 2.129MAF
1030'	DCPd+T2	1.543MAF + DCP + T3 + 250KAF (allocated to Contractors) = 3.168MAF	1.0MAF + DCPd+T2 = 2.188MAF
1025'	DCP + T3		1.0MAF +DCP+T3+150KAF = 2.525MAF
1020'		1.543MAF + DCP + T3 + 450KAF (allocated to Contractors) = 3.368MAF	1.0MAF +DCP+T3+300KAF = 2.675MAF
1015'			1.0MAF +DCP+T3+500KAF = 2.875MAF
1010'			1.0MAF+DCP+T3+750KAF = 3.125MAF
1005'			1.0MAF+DCP+T3+950KAF = 3.325MAF
1000'		= 3.368MAF & Reduced releases to protect 1,000'	= 3.325MAF & Reduced releases to protect 1,000'

DCP = Drought Contingency Plan reductions per the DCP schedule (DCPa – d = reductions 1045-1025)

T1 – T3 = Lower Basin Tier 1 – 3 reductions per Interim Guidelines

Draft SEIS

- **The Draft SEIS was announced on April 11, 2023 and Notice in the Federal Register on April 17, 2023.**
- **Comments were Due May 30, 2023**
- **Contents**
 - No Action Alternative.
 - Maintains the actions and authorities currently in place (07 Guidelines).
 - Action Alternative #1 - Based on Strict Priority to Assess Shortages in the Lower Basin.
 - Modifies Releases for Lakes Powel and Mead.
 - Shortages are assessed in order of Priority to Lower Basin contractor.
 - Does not include assessment of Evaporation and System Losses in the Lower Basin.
 - Does Not Identify shortages or Actions in the Upper Basin.
 - Action Alternative #2 - Based on a Pro-rata Share of Shortages in the Lower Basin.
 - Modifies Releases for Lakes Powel and Mead.
 - Shortages are assessed to Lower Basin contractors as an equal percentage to all contractors.
 - Considers DROA actions in the Upper Basin, up to 500 kAF.
 - Does not identify any other actions or reductions in the Upper Basin.
 - Does not explicitly assess Evap. and System Losses but it is similar in concept.

No-Action Alternative

Table 2-2
Lake Powell Operational Tiers, No Action Alternative

Lake Powell Operational Tiers (subject to April adjustments or mid-year review modifications)		
Lake Powell Elevation (feet)	Lake Powell Operational Tier	Lake Powell Active Storage (maf)*
3,700	Equalization Tier Equalize, avoid spills, or release 8.23 maf	23.31
3,636-3,666 <small>(see Table 2.3-1 in the 2007 FEIS)</small>	----- Upper Elevation Balancing Tier Release 8.23 maf; if Lake Mead <1,075 feet, balance contents with a minimum/maximum release of 7.0/9.0 maf	14.65-18.36 <small>(2008-2026)</small>
3,575	----- Mid-Elevation Release Tier Release 7.48 maf; if Lake Mead <1,025 feet, release 8.23 maf	8.90
3,525	----- Lower Elevation Balancing Tier Balance contents with a minimum/maximum release of 7.0/9.5 maf	5.55
3,370		0

*Active storage values have been updated from 2007 based on the 2018 bathymetry.

Table 2-1
Lower Division States' Shortages and DCP Contributions, No Action Alternative*

Lake Mead Elevation (feet)	No Action Alternative		
	2007 ROD** Shortage (1,000 af)	2019 DCP Contributions (1,000 af)	Total Shortage + Contributions (1,000 af)
1,090 – >1,075	0	200	200
1,075 – 1,050	333	200	533
<1,050 – >1,045	417	200	617
1,045 – >1,040	417	450	867
1,040 – >1,035	417	500	917
1,035 – >1,030	417	550	967
1,030 – 1,025	417	600	1,017
<1,025 – 1,000	500	600	1,100
<1,000 – 975	500	600	1,100
<975 – 950	500	600	1,100
<950	500	600	1,100

* This table only shows combined Lower Division State shortage volumes and DCP contributions. In addition to the volumes shown in this table, the analysis for each alternative includes water delivery reductions to Mexico under low-elevation reservoir conditions and Mexico's savings that contribute to the Binational Water Scarcity Contingency Plan (BWSCP), in accordance with Minute 323 to the 1944 Water Treaty.

** Shortages listed in the 2007 ROD

Lake Powell – Comparison of Alternatives

Table 2-10
Comparison of Coordinated Reservoir Operations by Alternative

Lake Powell Elevation (feet)	No Action Alternative	Action Alternatives 1 and 2	Lake Powell Active Storage (maf)
3,700	Equalization Tier Equalize, avoid spills, or release 8.23 maf	Equalization Tier Equalize, avoid spills, or release 8.23 maf	23.31
3,636–3,666 <small>(see Table 2.3-1 in the 2007 FEIS)</small>	Upper Elevation Balancing Tier Release 8.23 maf; if Lake Mead <1,075 feet, balance contents with a minimum/maximum release of 7.0/9.0 maf	Upper Elevation Balancing Tier Release 8.23 maf; if Lake Mead <1,075 feet, balance contents with a minimum/maximum release of 7.0/9.0 maf	14.65–18.36 (2008–2026)
3,575	Mid-Elevation Release Tier Release 7.48 maf; if Lake Mead <1,025 feet, release 8.23 maf	Lower Elevation Release Tier Set initial release: 6.0 maf; adjust releases based on April Lake Powell end-of-water-year elevation projection: ≥3,575 feet, release 8.23 maf <3,575 feet AND ≥3,550 feet, release 7.48 maf <3,550 feet AND ≥3,525 feet, release 7.0 maf	8.90
3,525	Lower Elevation Balancing Tier Balance contents with a minimum/maximum release of 7.0/9.5 maf	<3,525 feet AND ≥3,500 feet, maintain release of 6.0 maf <3,500 feet, then reduce releases (gains equals losses) such that Lake Powell ends the operating year at 3,500 feet	5.55
3,500		Protection Level <3,500 feet in any month, reduce releases (gains equals losses) such that Lake Powell ends the operating year at 3,500 feet	4.22
3,370			0

*Active storage values have been updated from 2007 based on the 2018 bathymetry.

No-Action vs Alternatives 1 and 2 (2024)

Table 2-3
Lower Division States' Shortages and DCP Contributions, Action Alternatives 1 and 2 (2024)*

Lake Mead Elevation (feet)	No Action Alternative			Additional Shortages under Action Alternatives 1 and 2 (2024)	
	2007 ROD Shortages (1,000 af)	2019 DCP Contributions (1,000 af)	No Action Total (1,000 af)	2024 Additional Shortages (1,000 af)	2024 Total Shortages + Contributions (1,000 af)
1,090 – >1,075	0	200	200	200	400
1,075 – 1,050	333	200	533	533	1,066
<1,050 – >1,045	417	200	617	617	1,234
1,045 – >1,040	417	450	867	867	1,734
1,040 – >1,035	417	500	917	1,166	2,083
1,035 – >1,030	417	550	967	1,116	2,083
1,030 – 1,025	417	600	1,017	1,066	2,083
<1,025 – 1,000	500	600	1,100	983	2,083
<1,000 – 975	500	600	1,100	983	2,083
<975 – 950	500	600	1,100	983	2,083
<950	500	600	1,100	983	2,083

* This table only shows combined Lower Division State shortage volumes and DCP contributions. In addition to the volumes shown in this table, the analysis for each alternative includes water delivery reductions to Mexico under low-elevation reservoir conditions and Mexico's savings that contribute to the Binational Water Scarcity Contingency Plan, in accordance with Minute 323 to the 1944 Water Treaty.

Action Alt. 1 vs. Action Alt. 2 (2024)

Lower Division States' Shortage

Lake Mead Elevation (feet)	2007 ROD Shortage + 2019 DCP Contributions (1,000 af)		
	AZ	NV	CA
1,090 – >1,075	192	8	0
1,075 – 1,050	512	21	0
<1,050 – >1,045	592	25	0
1,045 – >1,040	640	27	200
1,040 – >1,035	640	27	250
1,035 – >1,030	640	27	300
1,030 – 1,025	640	27	350
<1,025 – 1,000	720	30	350
<1,000 – 975	720	30	350
<975 – 950	720	30	350
<950	720	30	350

*The additional shortage volumes decrease as the 2007 Interim Guidelines increase by the same amount. Therefore, the additional shortage and contribution volumes are lower.

**In this elevation tier, the 2019 DCP contributions for California exceed the 2007 total shortage and contribution volume. While the total amount of the three states' total shortage and contribution volume exceeds 2,083 maf in the elevation tiers below elevation 1,035 feet, the ROD would not exceed a total shortage and contribution volume of 2,083 maf in calendar year 2024.

2024 Action Alternative 1 Additional Shortage* (1,000 af)				
AZ	NV	CA	Total	
192	8	0	200	
511	22	0	533	
593	24	0	617	
1,025	42	0**	1,067	
1,098	56	12	1,166	
1,098	56	0**	1,154	
1,098	56	0**	1,154	
1,018	53	0**	1,071	
1,018	53	0**	1,071	
1,018	53	0**	1,071	

State, Action Alternative 1

2024 Total Shortages + Contributions (1,000 af)			
AZ	NV	CA	Total
84	16	0	400
223	43	0	1,066
185	49	0	1,234
665	69	200	1,734***
738	83	262	2,083
738	83	300	2,083***
738	83	350	2,083***
738	83	350	2,083***
738	83	350	2,083***
738	83	350	2,083***

*The additional shortage volumes decrease as the 2007 Interim Guidelines increase by the same amount. Therefore, the additional shortage and contribution volumes are lower.

**In this elevation tier, the 2019 DCP contributions for California exceed the 2007 total shortage and contribution volume. While the total amount of the three states' total shortage and contribution volume exceeds 2,083 maf in the elevation tiers below elevation 1,035 feet, the ROD would not exceed a total shortage and contribution volume of 2,083 maf in calendar year 2024.

***Because the 2019 DCP contributions for California exceed the 2007 total shortage and contribution volume as modeled by the Shortage Allocation Model, the sum of the three state totals exceeds the total shortage and contribution volume. While the total amount of the three states' total shortage and contribution volume exceeds 2,083 maf in the elevation tiers below elevation 1,035 feet, the ROD would not exceed a total shortage and contribution volume of 2,083 maf in calendar year 2024.

2024 Lower Division States' Shortage

Lake Mead Elevation (feet)	2007 ROD Shortage + 2019 DCP Contributions (1,000 af)		
	AZ	NV	CA
1,090 – >1,075	192	8	0
1,075 – 1,050	512	21	0
<1,050 – >1,045	592	25	0
1,045 – >1,040	640	27	200
1,040 – >1,035	640	27	250
1,035 – >1,030	640	27	300
1,030 – 1,025	640	27	350
<1,025 – 1,000	720	30	350
<1,000 – 975	720	30	350
<975 – 950	720	30	350
<950	720	30	350

*The additional shortage volumes decrease as the 2007 Interim Guidelines increase by the same amount. Therefore, the additional shortage and contribution volumes are lower.

**Percentage of 2021 consumptive use

2024 Additional Shortage* (1,000 af)				
Percentage Additional Reduction**	AZ	NV	CA	Total
2.67%	75	8	117	200
7.11%	199	21	313	533
8.23%	230	25	362	617
11.56%	324	35	509	867
15.55%	435	47	684	1,166
14.88%	417	45	655	1,116
14.21%	398	43	625	1,066
13.11%	367	39	577	983
13.11%	367	39	577	983
13.11%	367	39	577	983

State, Action Alternative 2

2024 Total Shortages + Contributions (1,000 af)		
NV	CA	Total
16	117	400
42	313	1,066
50	362	1,234
62	709	1,734
74	934	2,083
72	955	2,083
70	975	2,083
69	927	2,083
69	927	2,083
69	927	2,083

*The additional shortage volumes decrease as the 2007 Interim Guidelines increase by the same amount. Therefore, the additional shortage and contribution volumes are lower.

**Percentage of 2021 consumptive use

***Because the 2019 DCP contributions for California exceed the 2007 total shortage and contribution volume as modeled by the Shortage Allocation Model, the sum of the three state totals exceeds the total shortage and contribution volume. While the total amount of the three states' total shortage and contribution volume exceeds 2,083 maf in the elevation tiers below elevation 1,035 feet, the ROD would not exceed a total shortage and contribution volume of 2,083 maf in calendar year 2024.

No-Action vs Alternatives 1 and 2 (2025-26)

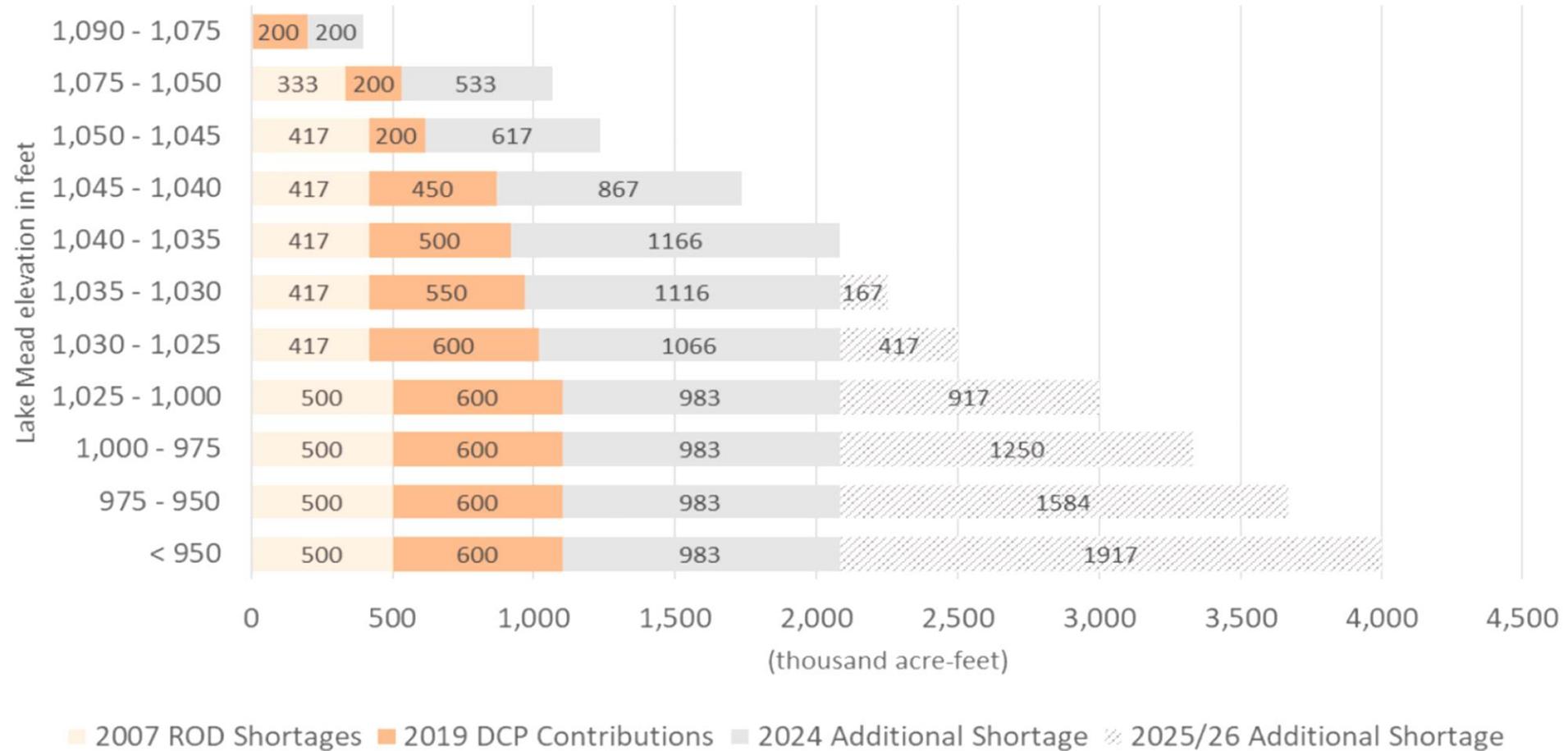
Table 2-5
Lower Division States' Shortages and DCP Contributions, Action Alternatives 1 and 2
(2025–2026)*

Lake Mead Elevation (feet)	No Action Alternative			Additional Shortages under Action Alternatives 1 and 2 (2025–2026)	
	2007 ROD Shortage (1,000 af)	2019 DCP Contributions (1,000 af)	No Action Total (1,000 af)	2025–2026 Additional Shortage** (1,000 af)	2025–2026 Total Shortages + Contributions (1,000 af)
1,090 – >1,075	0	200	200	200	400
1,075 – 1,050	333	200	533	533	1,066
<1,050 – >1,045	417	200	617	617	1,234
1,045 – >1,040	417	450	867	867	1,734
1,040 – >1,035	417	500	917	1,166	2,083
1,035 – >1,030	417	550	967	1,283	2,250
1,030 – 1,025	417	600	1,017	1,483	2,500
<1,025 – 1,000	500	600	1,100	1,900	3,000
<1,000 – 975	500	600	1,100	2,233	3,333
<975 – 950	500	600	1,100	2,567	3,667
<950	500	600	1,100	2,900	4,000

* This table only shows combined Lower Division State shortage volumes and DCP contributions. In addition to the volumes shown in this table, the analysis for each alternative includes water delivery reductions to Mexico under low-elevation reservoir conditions and Mexico's savings that contribute to the Binational Water Scarcity Contingency Plan, in accordance with Minute 323 to the 1944 Water Treaty.

The scope of this NEPA analysis, including potential actions in 2025–2026, is discussed further in **Sections 1.2 and 1.5.

Modeled Lower Division States' Shortages and DCP Contributions Action Alternatives 1 and 2



7-State Agreement

- States continued to discuss an consensus alternative
- Lower Basin States Presented a Proposal to the UB States
 - Voluntary, not Secretarial action
 - Conserve 3 MAF by the end of 2026, 1.5 MAF by the end of 2024
 - Mandatory, enforceable, measurable, verifiable and non-retrievable
 - 2.3 - 2.5 MAF Federally funded
 - Additional consultation if Lake Mead is projected to fall below 1025'
 - Allows for as low as 6 MAF release from Lake Powell under certain circumstances

7-State Agreement

- Upper Basin Agreement
 - Agreed that Reclamation should analyze the plan as part of the Draft SEIS process
 - Agreed to suspension of comment period until analysis occurred
 - Encouraged focus on long term solutions under Post 2026 Operating Rules
 - UB did not endorse the plan, only that the plan should be analyzed because we did not have time or the necessary details to fully assess the plan

7-State Agreement

- Plan and 7-State Agreement submitted May 22, 2023
- Reclamation withdrew the Draft SEIS
- Reclamation is in the process of analyzing the plan
- Results are expected soon

Lower Basin Alt. 3 Plan

- Proposed Lower Basin Plan
 - Conserve an additional 1.5 MAF by the end of 2024, and 3 MAF total by the end of 2026.
 - Additional conservation achieved primarily through system conservation projects (IRA funding), but also through ICS creation, unused apportionment, or other conservation.
 - Approximately 1 MAF of LB contracts executed. 1.3 to 1.4 MAF still require execution. IID proposal is 800 KAF.

State	2023	2024	2025	2026	4-year Total
California	392,000	434,000	428,000	346,000	1,600,000
Arizona	379,662	376,062	340,062	20,000	1,115,786
Nevada	75,000	75,000	70,000	65,000	285,000
Total	846,662	885,062	838,062	431,000	3,000,786

Questions?