BUREAU OF RECLAMATION

Draft Supplemental Environmental Impact Statement for Near-term Colorado River Operations

Virtual Public Meetings – May 4, 8, 10, and 16, 2023

The meeting will begin at 5:30 p.m., Mountain Time

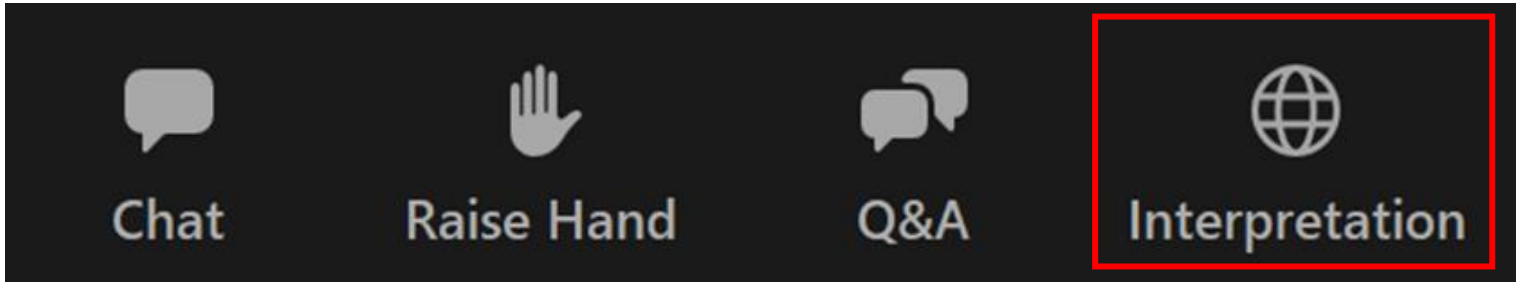
La interpretación en vivo será disponible en español. Live interpretation will be available in Spanish.

Dial In: (720) 928-9299 or (602) 753-0140; Webinar ID: 996 0050 5024

F

For technical support, please contact Jessica Sams: jessica.sams@swca.com

La interpretación en vivo es disponible en español



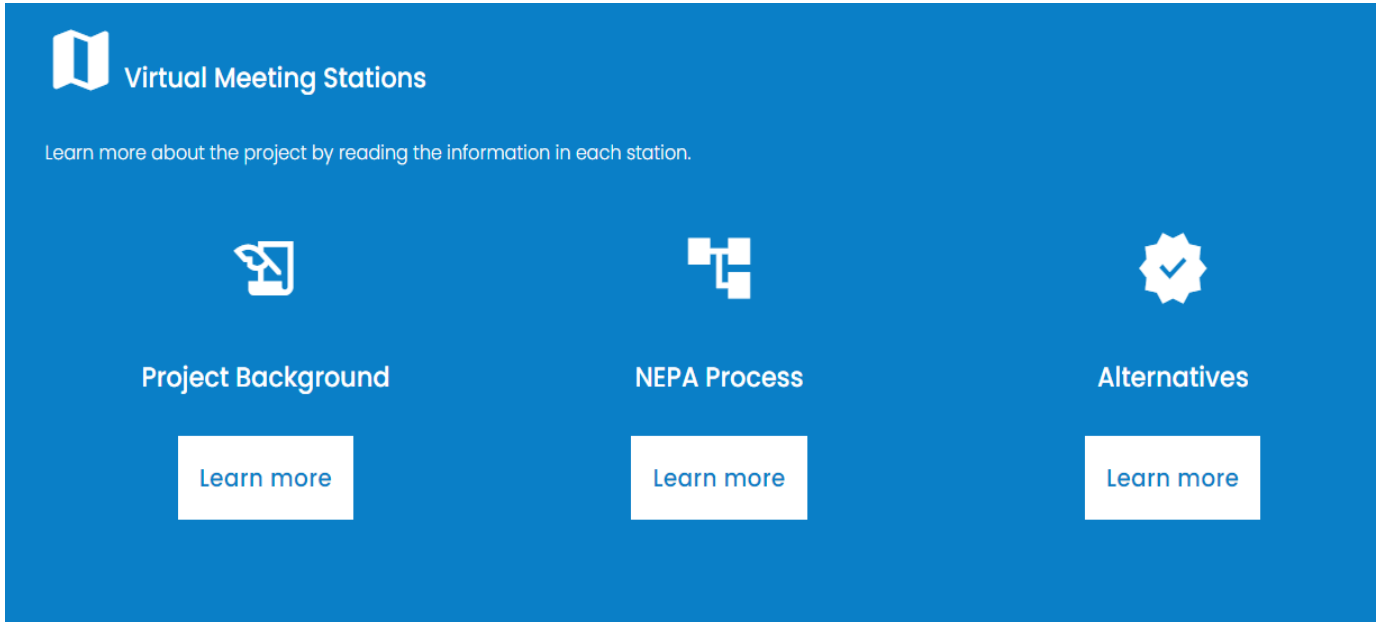
Live language interpretation is available in Spanish

Meeting Agenda

- Explore Background Information
- Welcome and Agenda Review
- Presentation
  - Background
  - Project Overview
  - Alternatives
  - Impacts Analysis
- Q&A
- Public Comments

Explore Background Information

- Click on the link in chat or navigate to: https://www.swcavirtualpublicinvolvement.com/seis-near-term-operations
- Scroll down to the blue section and click on topics to explore background information:



- Click the Q&A button in Zoom to ask for help accessing the website
- We will resume the presentation at 6:00 P.M. Mountain

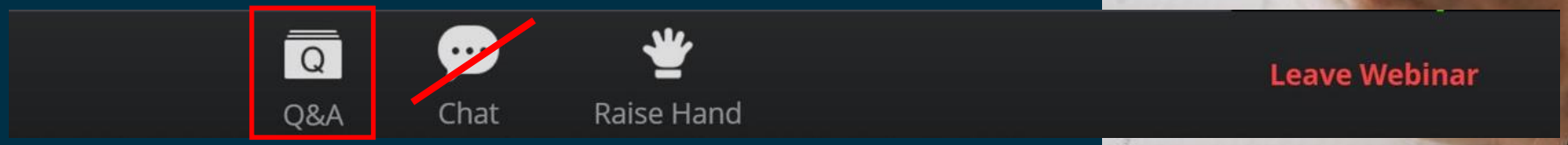
Zoom Etiquette

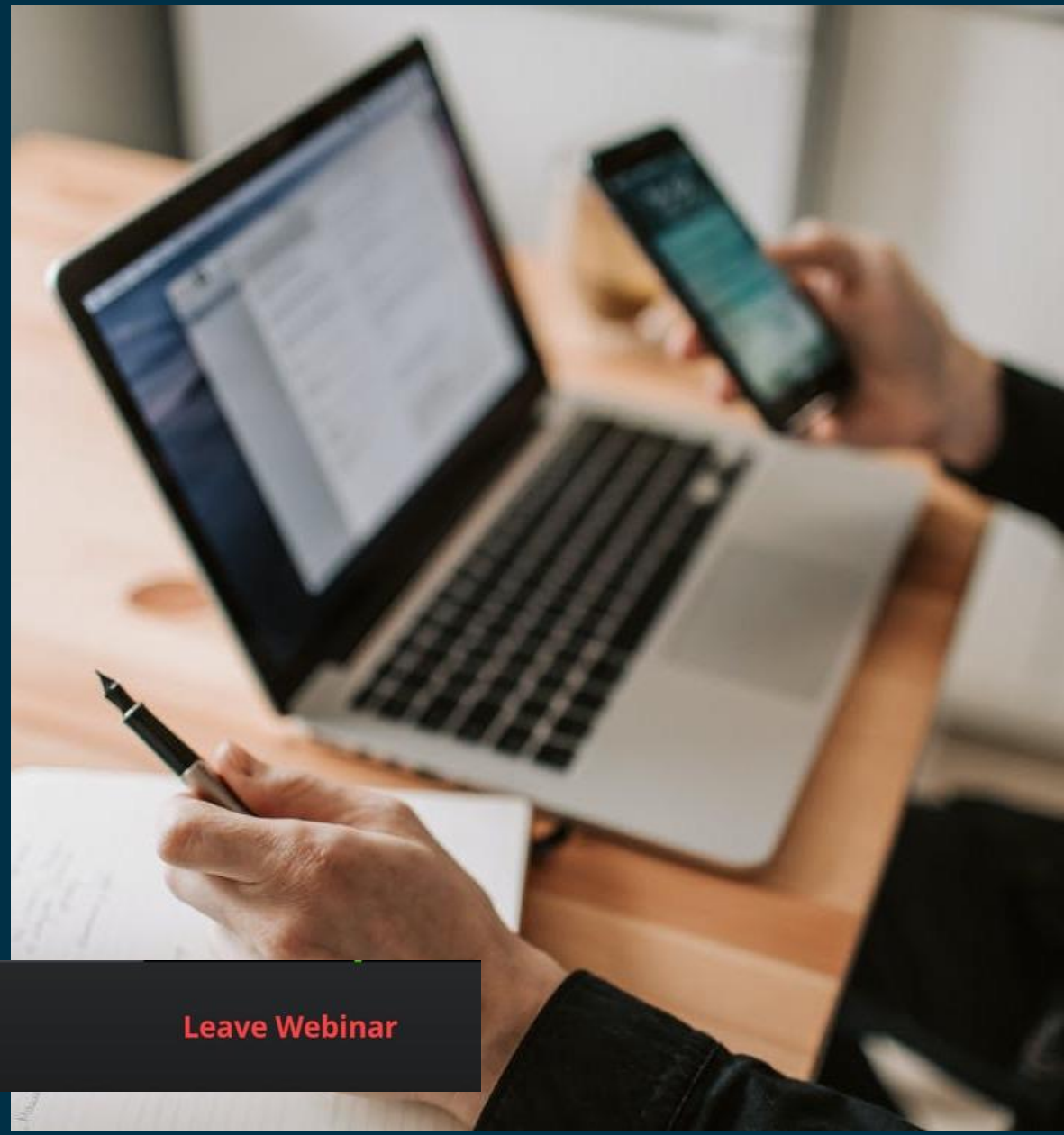
Webinar is being recorded

Microphones are muted

Chat feature is turned off

Submit questions via Q&A during the presentation





Welcome

Camille Calimlim Touton, Commissioner
Bureau of Reclamation

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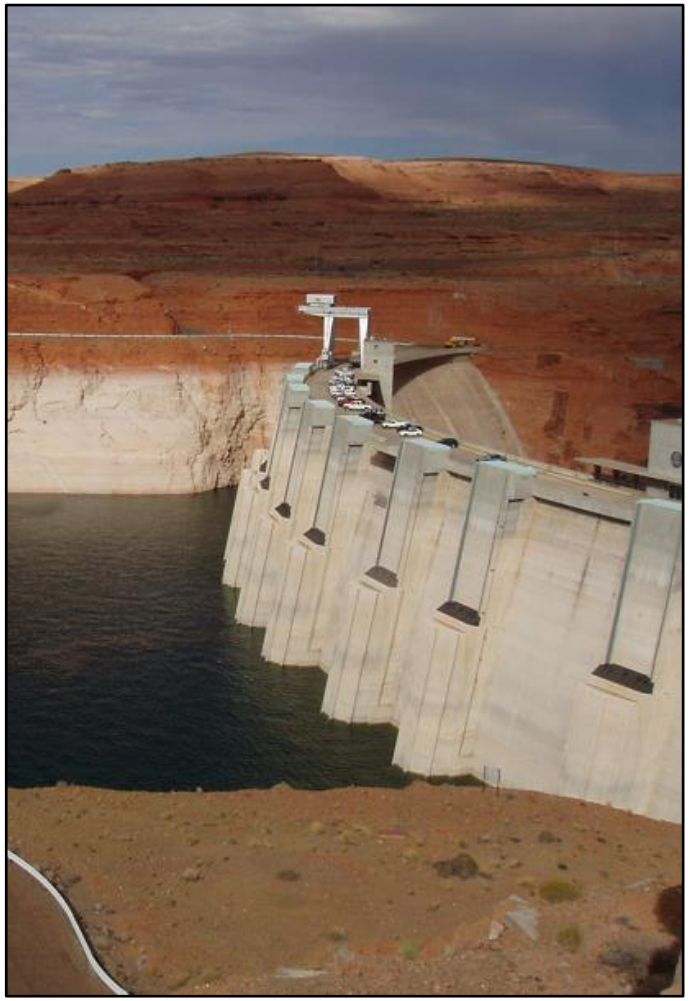
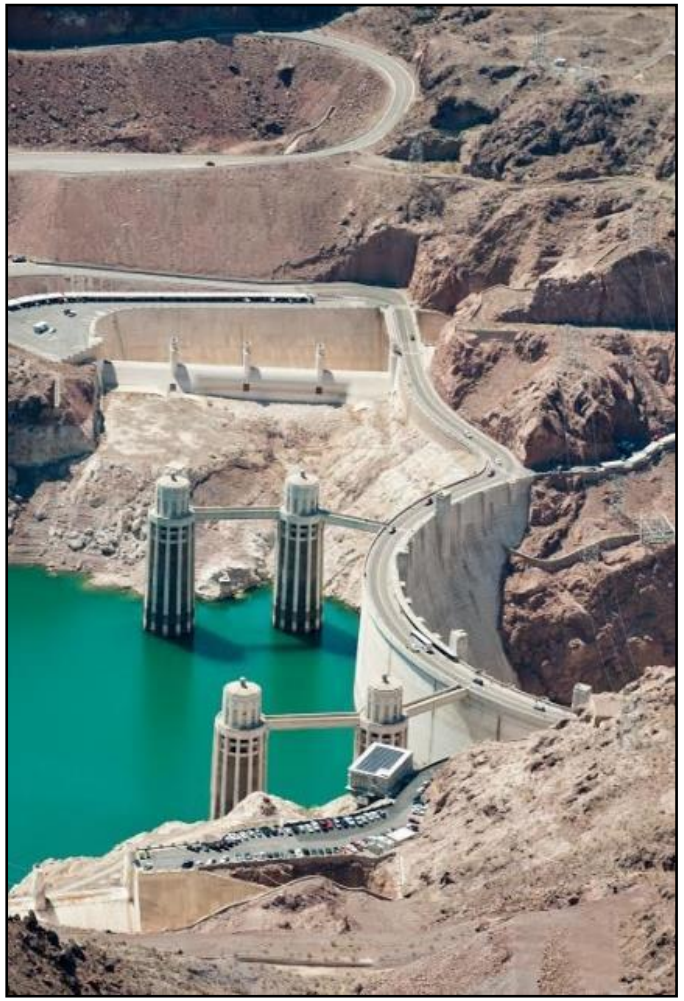
Background

Colorado River – Current Conditions



Lake Powell near Glen Canyon Dam

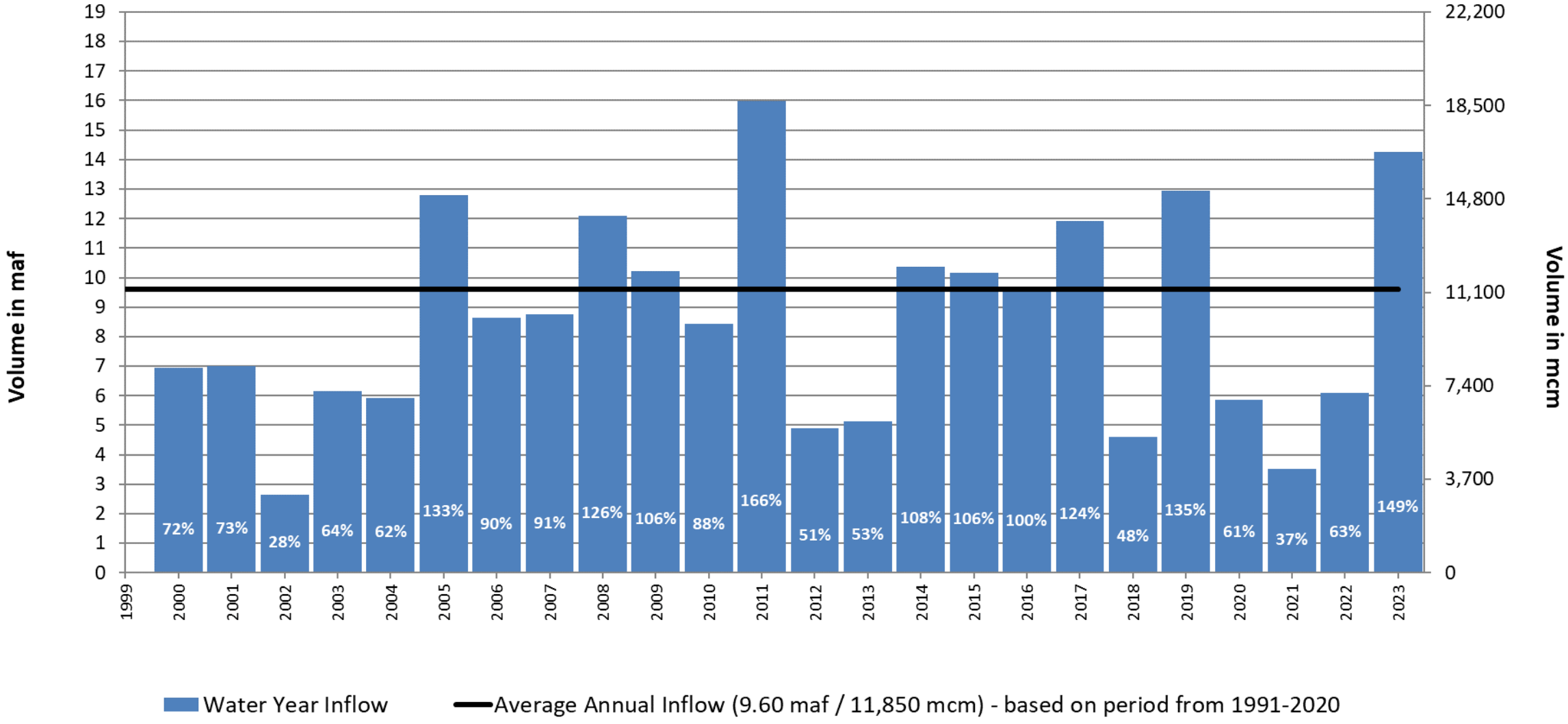


Lake Mead near Hoover Dam

- Driest 23-year period on record (2000-2022)
- Flows in 2020-2022 were 37% to 63% of average
- Lake Powell and Lake Mead are near historically low water levels

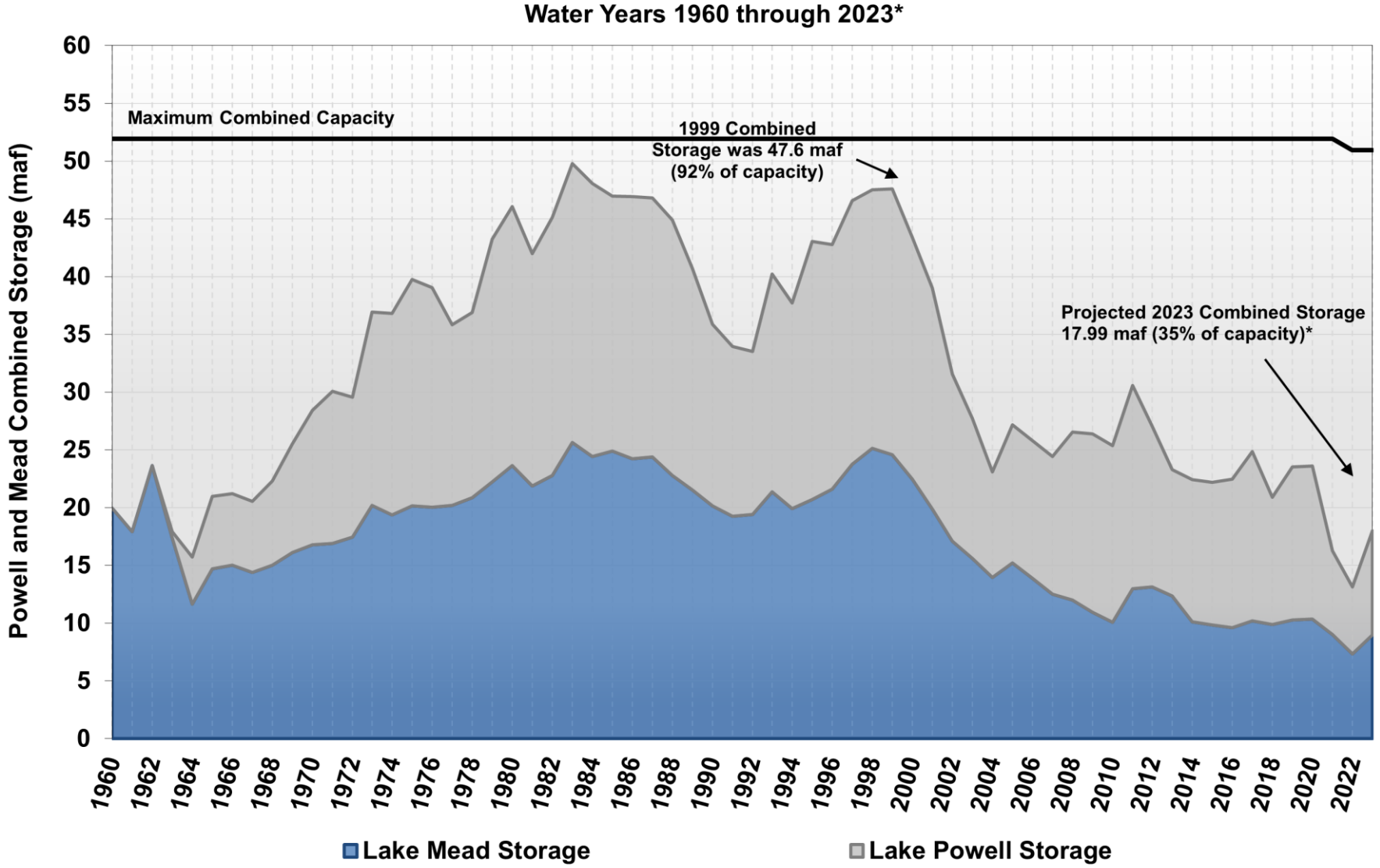
Lake Powell Unregulated Inflow

Water Years 2000 through 2023[1]



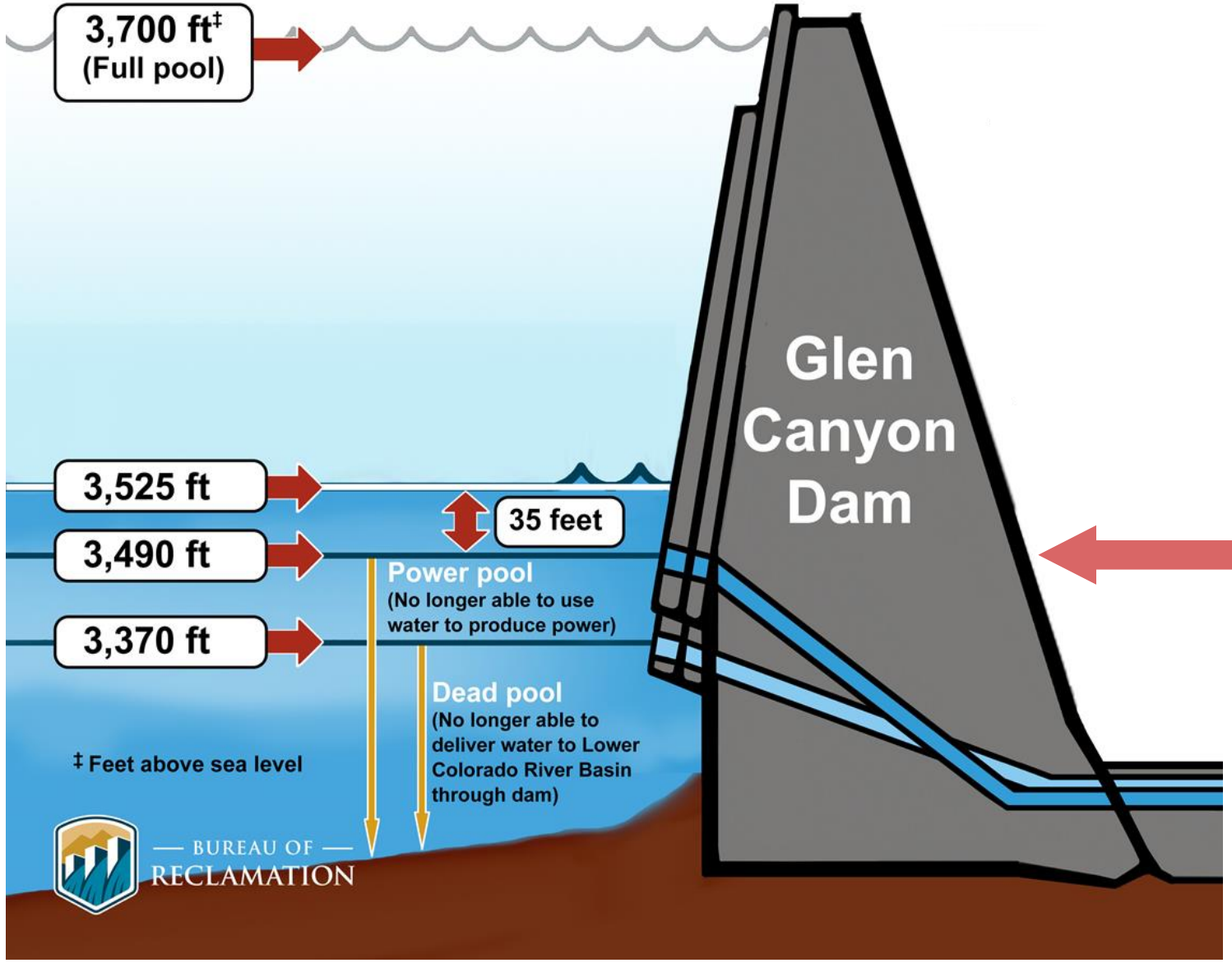
[1] Water Year 2023 is based on the CBRFC most probable inflow forecast dated April 20, 2023.

Lake Powell and Lake Mead End of Water Year Storage



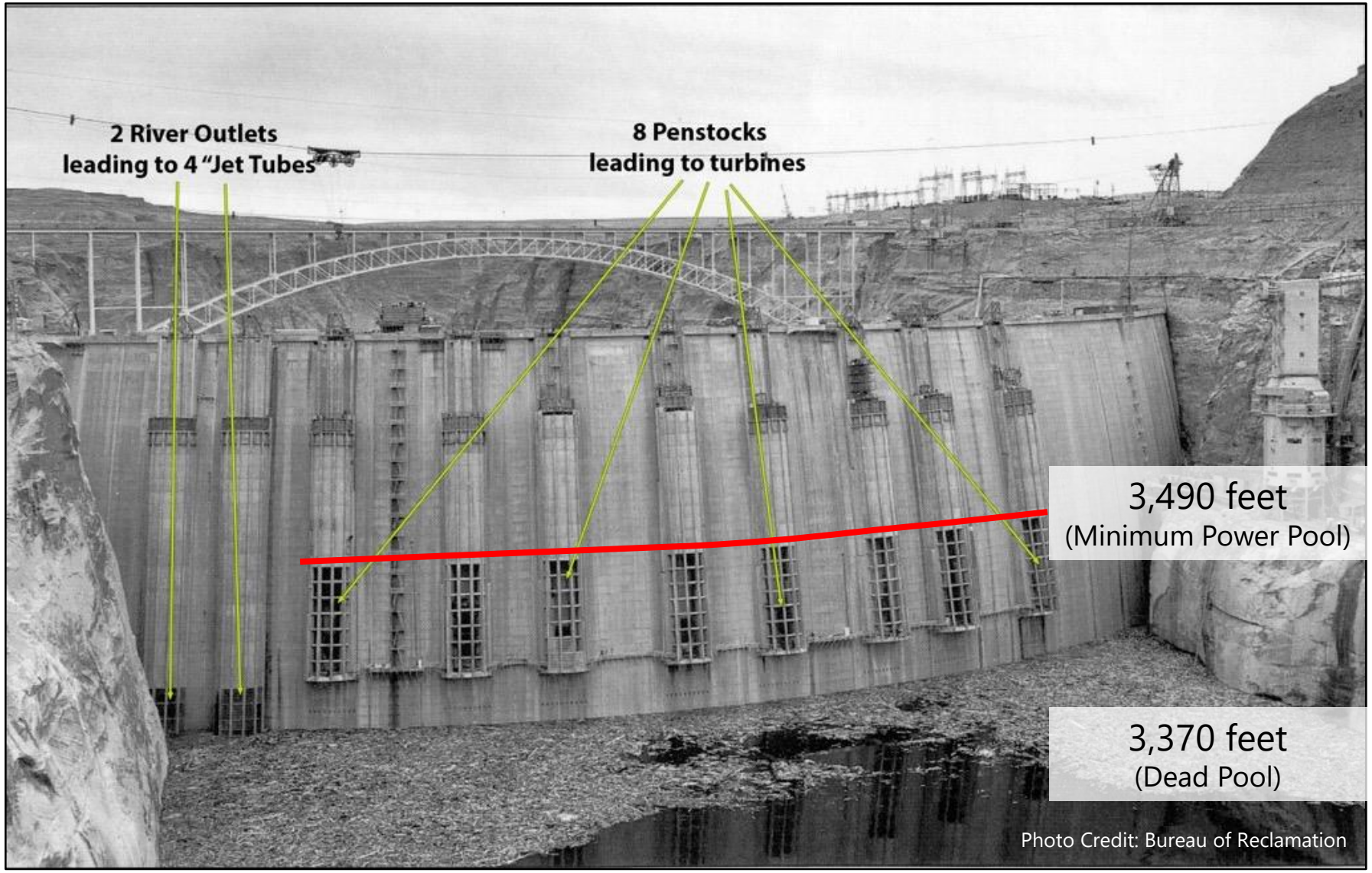
*Storage value for the end of WY 2023 is based on the April 2023 24-Month Study projection.

Lake Powell Key Elevations

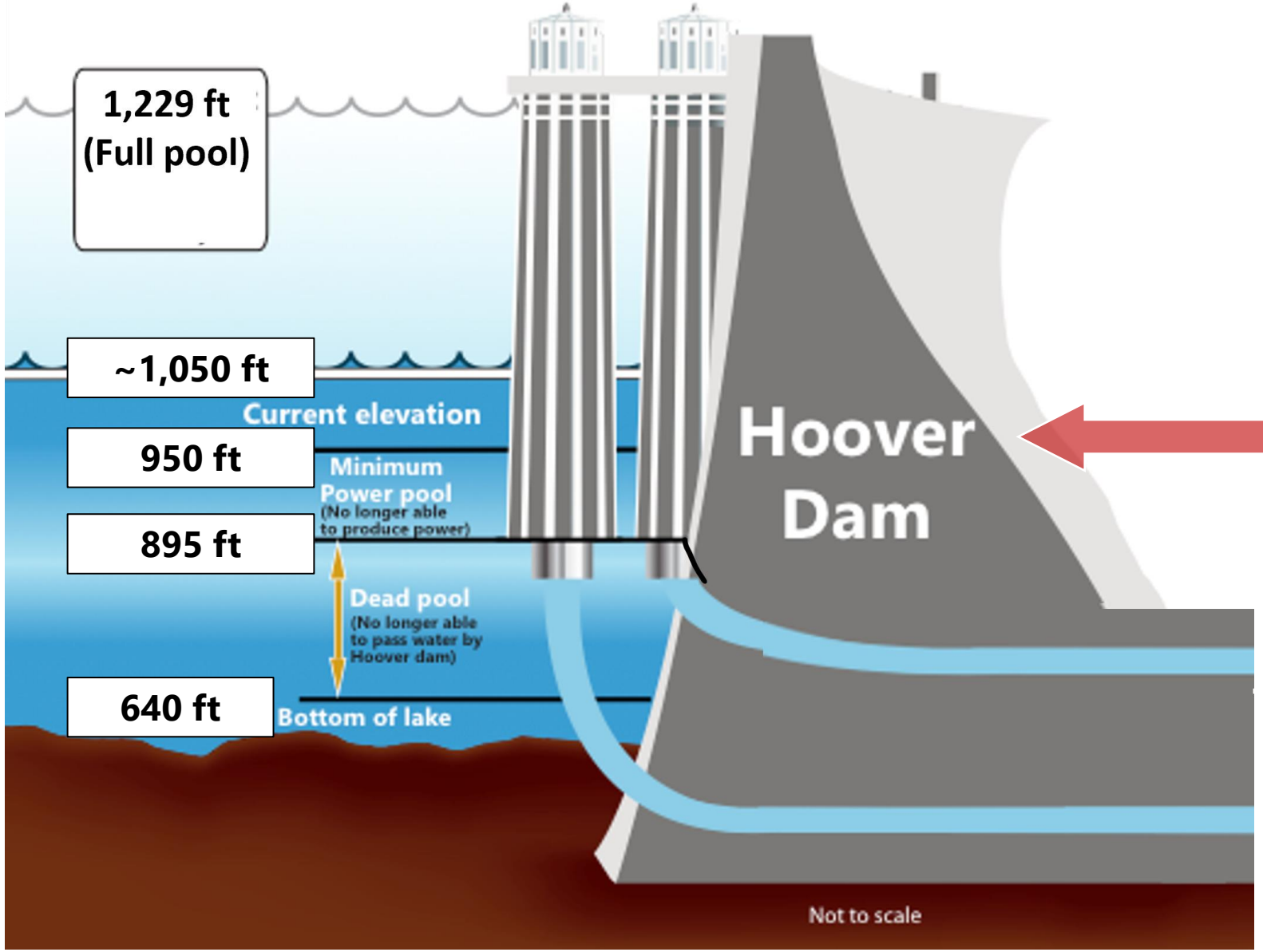


Could drop below elevation 3,490 ft before 2026 under current rules

Glen Canyon Dam - November 21, 1963

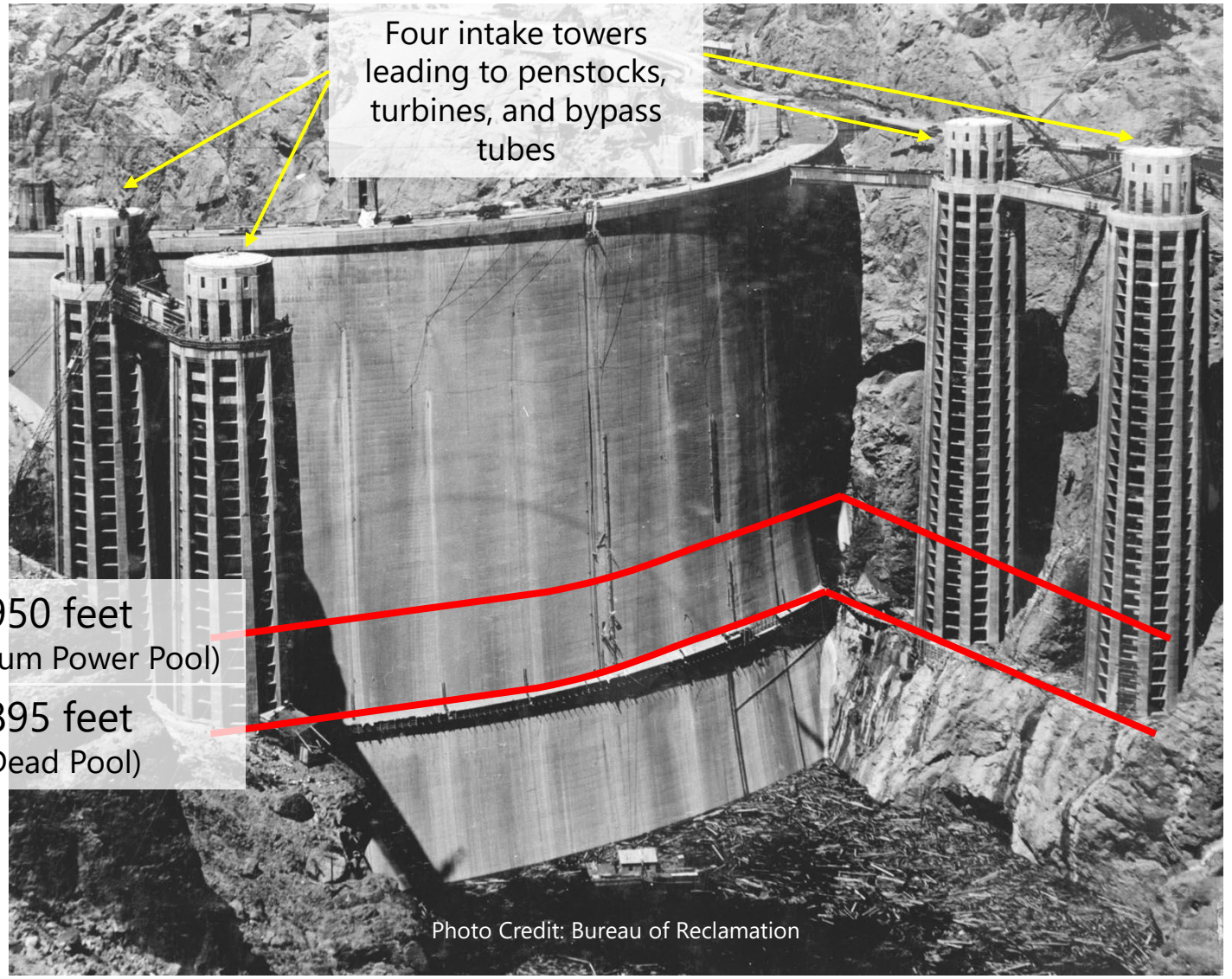


Lake Mead Key Elevations



Could drop below elevation 950 ft before 2026 under current rules

Hoover Dam – May 27, 1935

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Project Overview

Supplemental EIS and Why it is Important

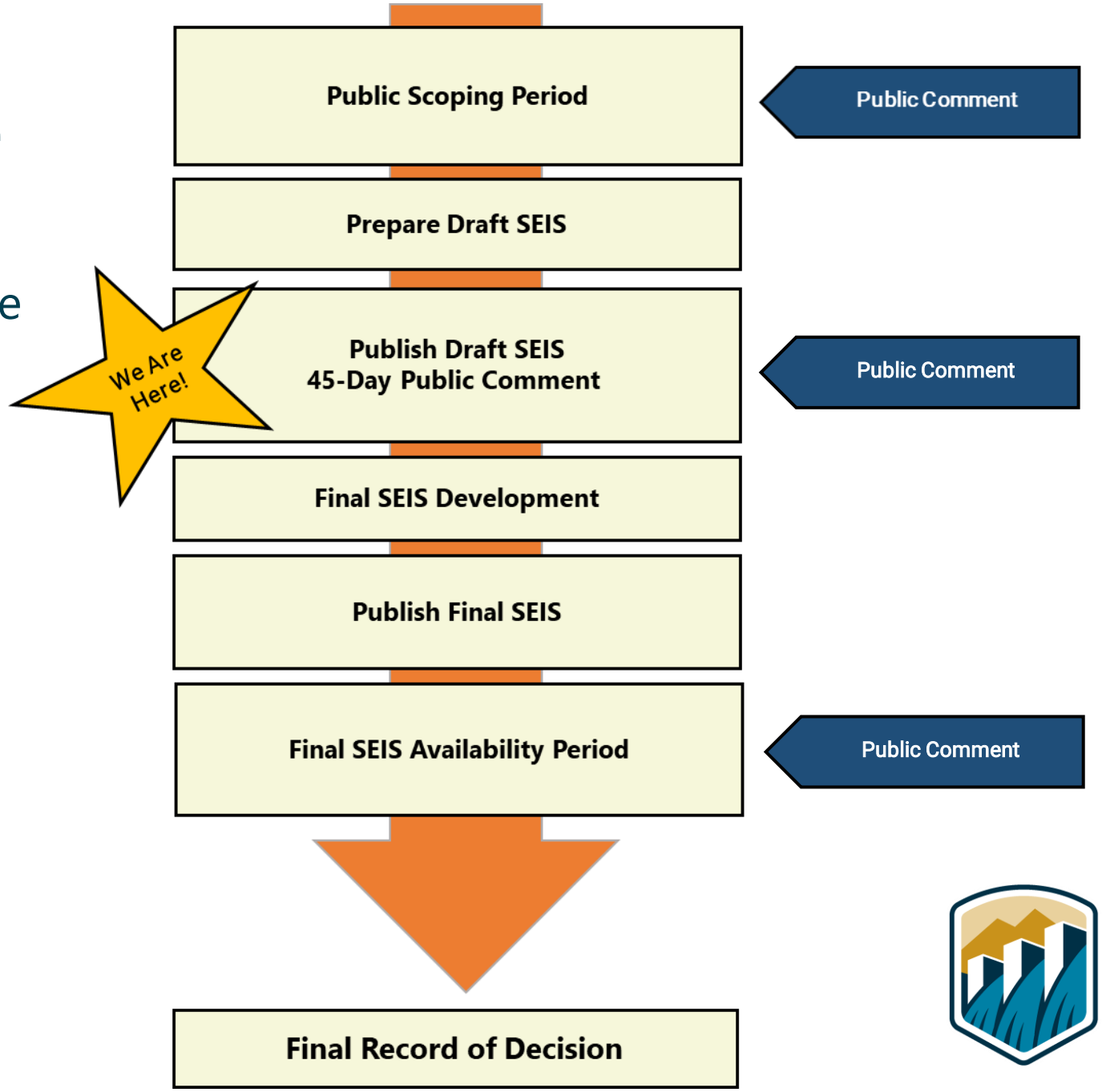
- In 2022, the Department of the Interior proposed development of a Supplemental Environmental Impact Statement (SEIS) to:
  - Supplement the 2007 EIS and Interim Guidelines
  - Respond to the potential for worsening drought conditions
  - Modify operating guidelines to inform operations in Water Years 2024-2026
- The SEIS does not replace, supplant, or supersede the post-2026 guidelines development process

Supplemental EIS and Why it is Important cont.

- Focuses on addressing potential low-runoff and low-reservoir elevations
- Analyzes scenarios to react to low-level conditions, but doesn't predict actual operations
- Focuses on 2024-2026
- Doesn't change other operational agreements or contractual distribution of water within Reclamation projects
- Focuses on Lake Powell, downstream along the Colorado River floodplain, to international boundary with Mexico

SEIS NEPA Schedule

- November 17, 2022 - Notice of Intent (NOI) to develop a SEIS published in the *Federal Register*
- November 17-December 20, 2022 - Public Scoping Period
- April 14, 2023 – EPA's Notice of Availability (NOA) of the Draft SEIS published in the *Federal Register*
- April 14-May 30, 2023 – Public Comment Period for Draft SEIS
- Summer 2023 – Finalize SEIS
- Final Record of Decision



Draft Supplemental EIS Comment Period

- We are seeking public feedback on:
  - Draft alternatives
  - Missing alternatives
  - Methodologies to distribute available Colorado River water
  - Draft impacts/missing impacts
  - Other issues within scope of the document

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Alternatives Analyzed

Overview of Alternatives

- Action alternatives are designed to manage reservoirs at lower elevations due to low-runoff conditions
- There is no preferred alternative at this time
- Reclamation is proposing modifications to the following sections of the 2007 Interim Guidelines:
  - Determination of Lake Mead Operation / Shortage Conditions (Section 2.D)
  - Coordinated Reservoir Operations / Mid-Elevation Release Tier and Lower Elevation Balancing Tier (Section 6.C and 6.D)
  - Implementation Guidelines / Mid-Year Review (Section 7.C)

No Action Alternative

- Current operations do not change
- Continued implementation through 2026:
  - 2007 Interim Guidelines for Operation of Lake Powell and Lake Mead
  - Minute 323 to the 1944 Water Treaty with Mexico including the Binational Water Scarcity Plan
  - 2019 Drought Contingency Plan Contributions for Lower Basin States (AZ, CA, NV)
  - 2019 Drought Contingency Plan for the Upper Basin

No Action Alternative

- Models operational changes for both Glen Canyon and Hoover Dams:
  - Shortages
    - Total Lower Division States' shortages and DCP contributions according to priority of 200,000 af below 1,090 feet up to 1.1 maf below 1,025 feet
  - Coordinated Reservoir Operations
    - Below 3,575 feet and at or above 3,525 feet at Lake Powell, initial release of 7.48 maf and adjust as high as 8.23 maf
    - Below 3,525 feet, release 7.0 maf to 9.5 maf to balance Lake Powell and Lake Mead storage
  - Implementation Guidelines
    - Mid-year review may adjust Lake Powell operations up or down or reduce shortages from Lake Mead (allow additional deliveries to Lower Basin water users)

Action Alternative 1

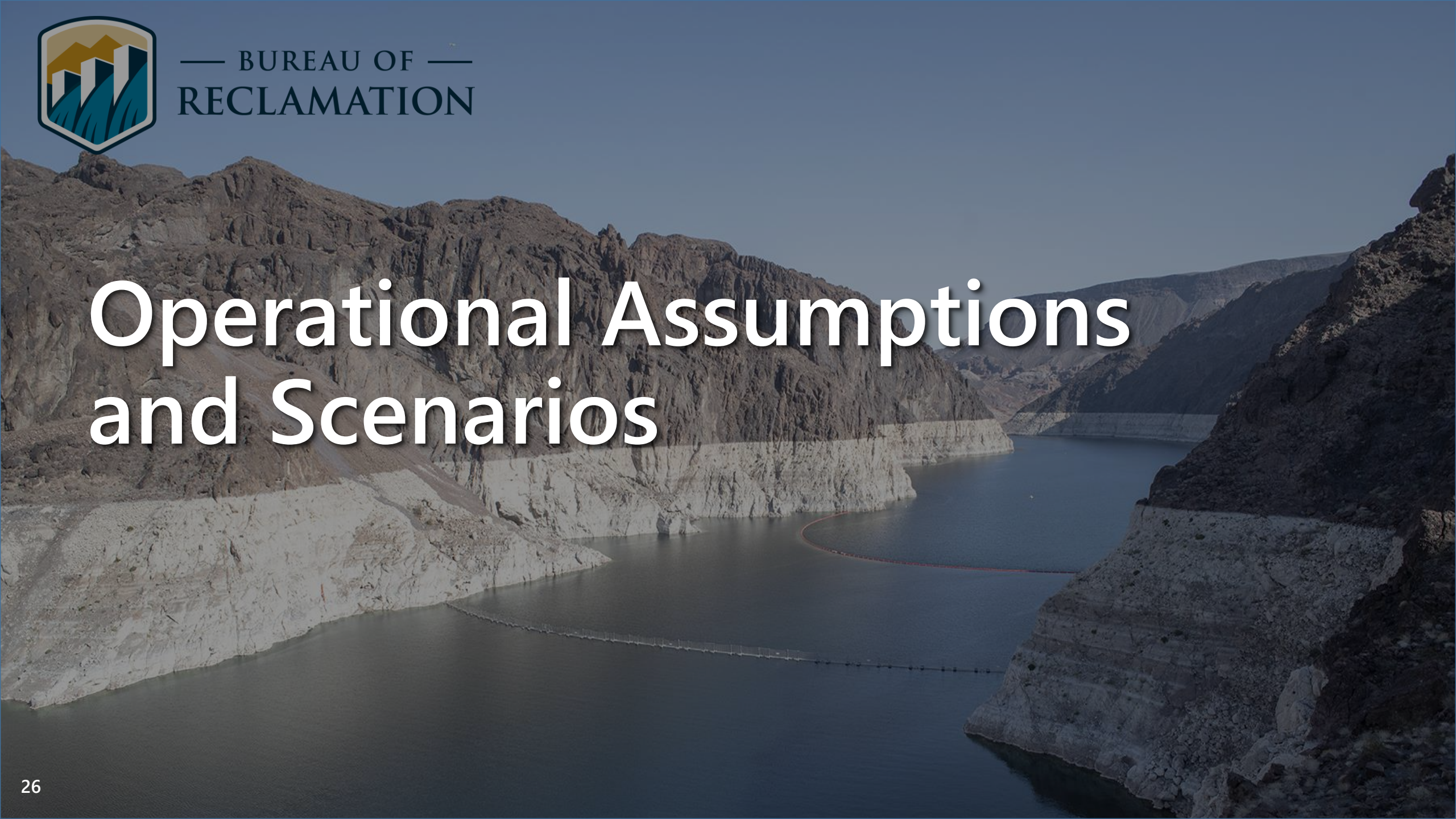
Models operational changes for Glen Canyon and Hoover Dams as follows:

- Shortages
  - Models total Lower Division States' shortages and DCP contributions up to 2.083 maf, with additional shortages distributed according to concept of priority
  - Also models shortages up to 4.0 maf, if needed
- Coordinated Reservoir Operations
  - Below 3,575 feet at Lake Powell, initial release of 6.0 maf and adjust as high as 8.23 maf
  - Below 3,500 feet, reduce releases so Lake Powell ends water year at 3,500 feet
- Implementation Guidelines
  - Mid-year review may adjust Lake Powell operations up or down or reduce/increase shortages from Lake Mead (allow additional or reduced deliveries to Lower Basin water users)

Action Alternative 2

Models operational changes for both Glen Canyon and Hoover Dams

- Shortages
  - Same as Action Alternative 1, except Lower Division States' additional shortages distributed in the same percentage across all water users
- Coordinated Reservoir Operations
  - Same as Action Alternative 1
- Implementation Guidelines
  - Same as Action Alternative 1



Operational Assumptions and Scenarios

Hydrologic Modeling Assumptions

Assumptions Common to all Alternatives

- Modeling compares alternatives and impacts using a wide range of low-flow hydrologies, including conditions drier than those observed in the last 30 years (1991-2020)

- Reductions and savings will continue to be implemented in Mexico per Minute 323

- Modeling performed in the Colorado River Mid-term Modeling System (CRMMS) - September 2022

Hydrologic Modeling Assumptions cont.

Assumptions for Action Alternatives

- Operational changes for Glen Canyon Dam include revised tiering in Lake Powell and reduced releases
- Operational changes for Hoover Dam include additional shortages (up to 2.083 maf) that increase as Lake Mead's elevation declines and potentially larger additional shortages in future years (up to 4.0 maf)
- Action Alternative 1 - Additional shortages to Lower Division States are distributed based on the concept of priority
- Action Alternative 2 - Additional shortages to Lower Division States are distributed in the same percentage across all Lower Division States water users
    - *For example, if the additional hypothetical shortage amount is 1 maf, the percentage of additional shortage volume is calculated by dividing 1 maf by 7.5 maf which equals 13%. Then a 13% additional reduction is modeled for each Lower Division State water user based on water use in 2021.*
- Action Alternative 2 - Additional inflow to Lake Powell representing potential DROA contributions

Analysis of Impacts

Resources Analyzed in Detail

- Hydrologic Resources
- Water Deliveries
- Biological Resources
- Cultural Resources
- Indian Trust Assets
- Recreation
- Socioeconomics
- Air Quality
- Electrical Power Resources
- Environmental Justice
- Paleontological Resources
- Visual Resources
- Water Quality

For more details on resource impacts, see Draft SEIS Chapter 3

Anticipated Impacts of No Action

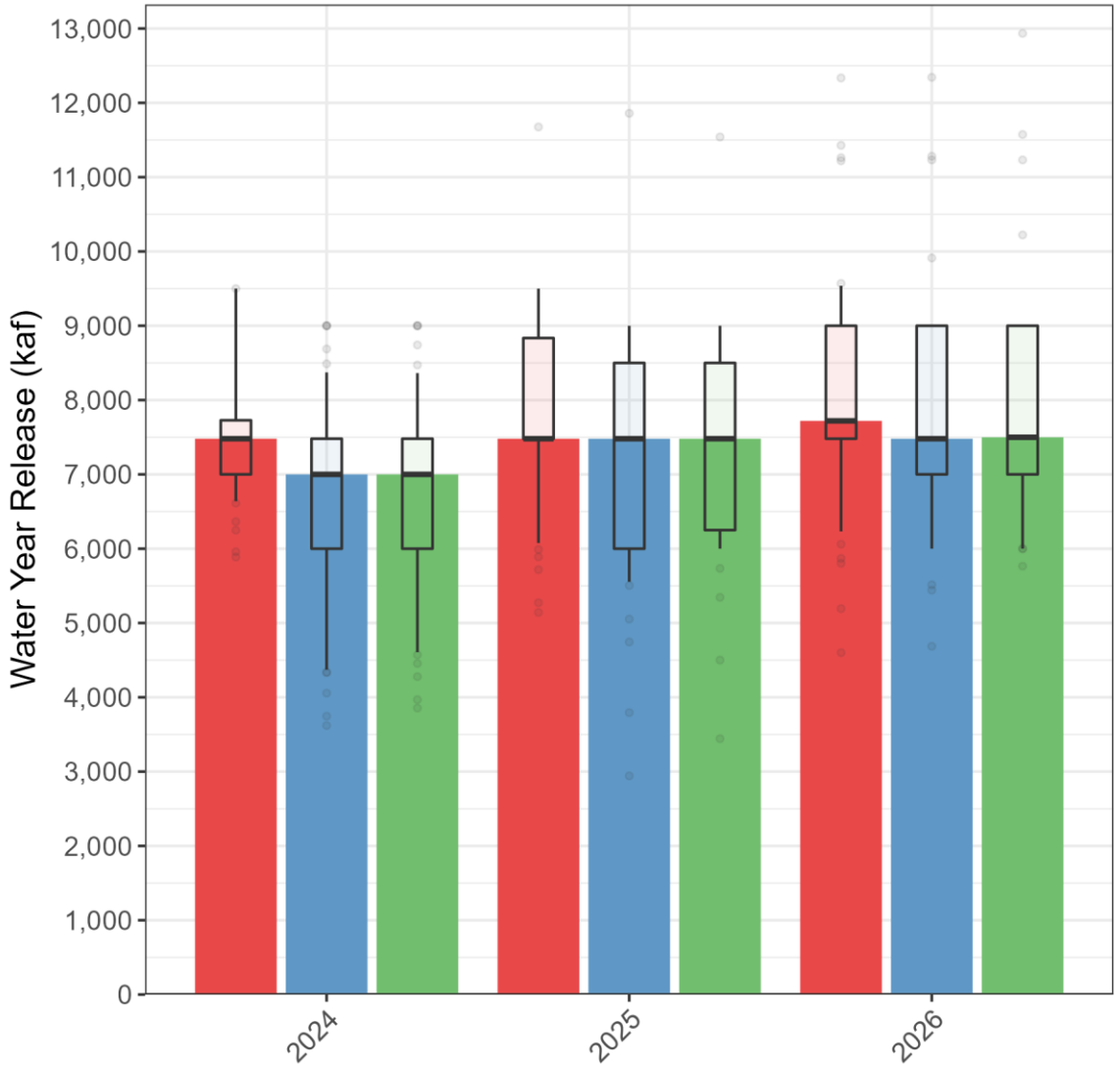
- Critically low elevations at Lake Powell and Lake Mead
- Water delivery and operations limitations
- Loss of hydropower production
- Flow limitations in the Grand Canyon
- Limited flows for ecological programs
- Reduced water availability to water users basin-wide
- U.S.-Mexico Water Treaty obligation

Hydrologic Resources

- Reservoir Releases and Elevations

For more details on resource impacts, see Draft SEIS Chapter 3

Glen Canyon Dam Water Year Releases

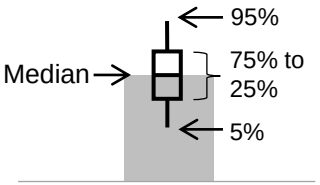


No Action Alt.

Action Alt. 1

Action Alt. 2

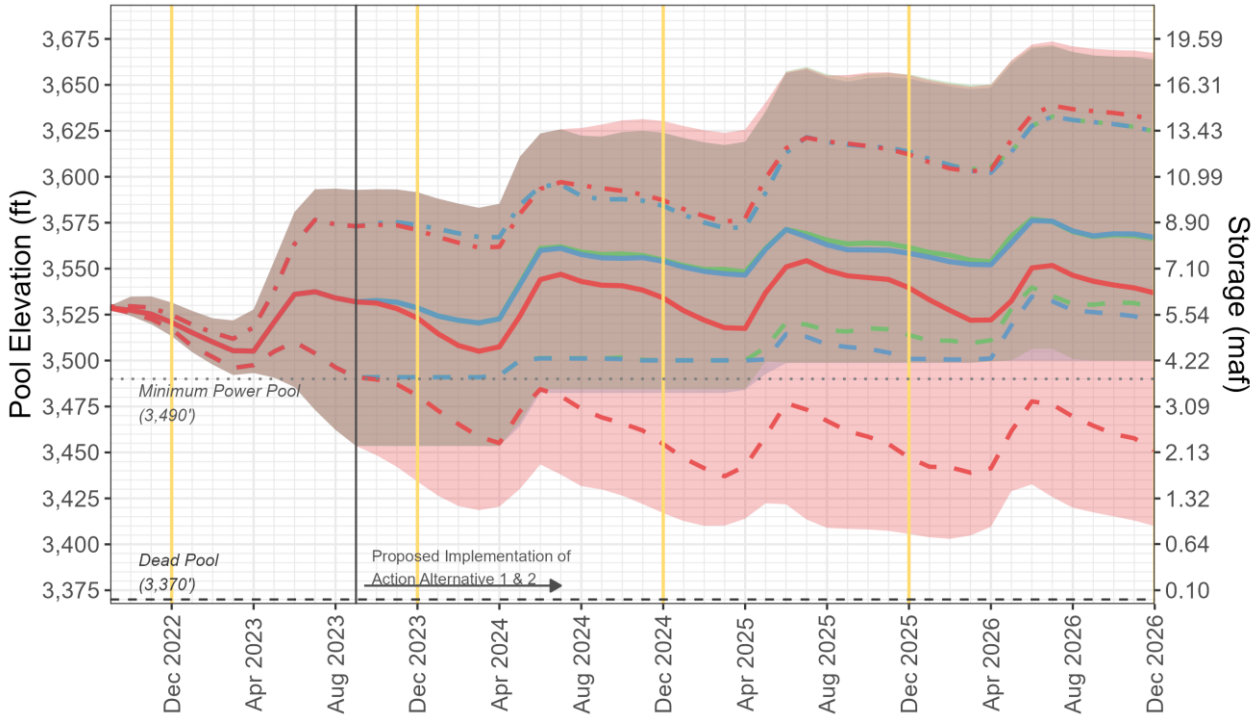
Legend



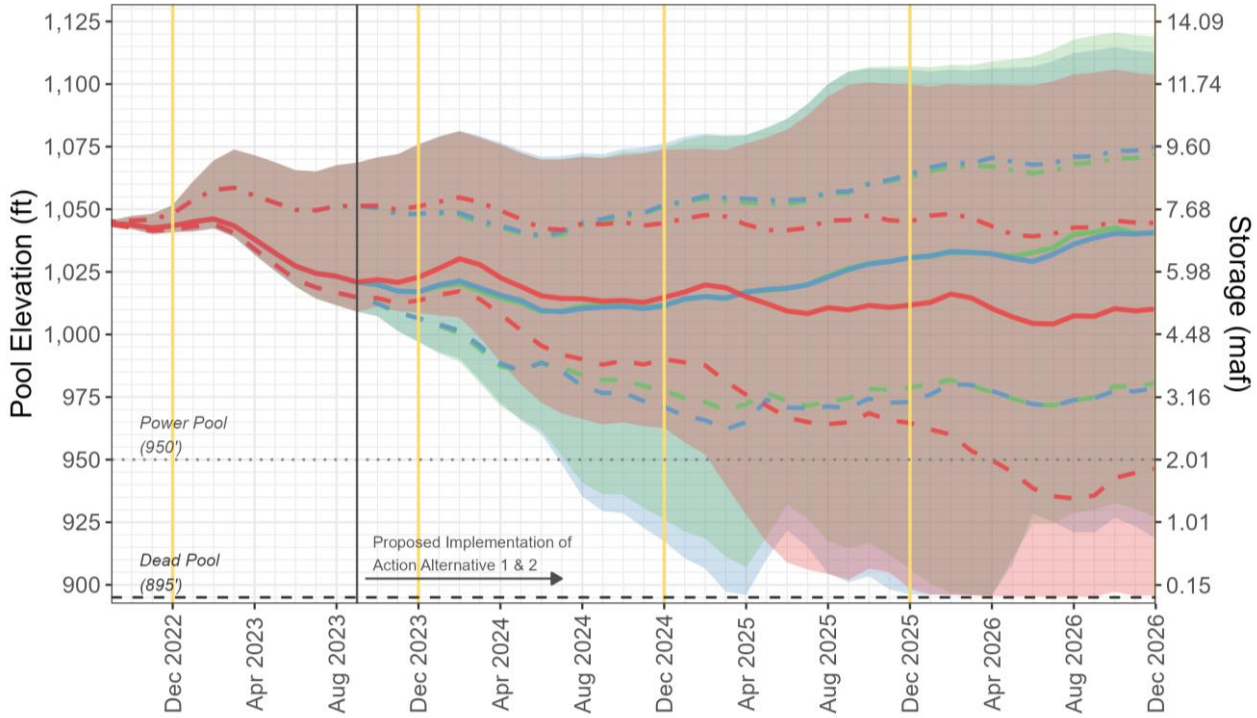
For more details on resource impacts, see Draft SEIS Chapter 3

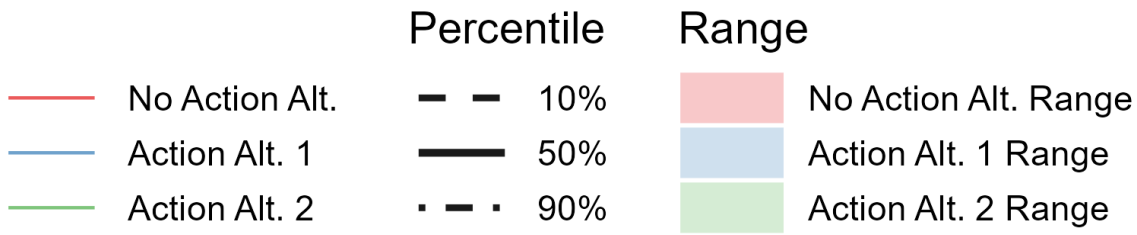
Hydrologic Resources - Reservoir Elevations

Lake Powell End-of-Month Pool Elevations



Lake Mead End-of-Month Pool Elevations





*All statistics calculated are reflective of the hydrology scenarios and other assumptions used in modeling and they are not intended to be predictive. However, it is meaningful to compare statistics across alternatives to differentiate performance.

Example Streamflow Trace Analysis – 80% ESP of 2011-2014

- To illustrate the continued need, despite the good hydrology in 2023, Reclamation modeled plausible hydrological scenarios (an Ensemble Streamflow Prediction or ESP trace), using climate (temperature and precipitation) data from 2011 to 2014.
- 2011 was a very wet year (166% of average) followed by 3 dry years.
- Reclamation modeled 80% of the 2011-2014 streamflow trace to provide a more conservative analysis.

Lake Powell Water Year (WY) Unregulated Inflow

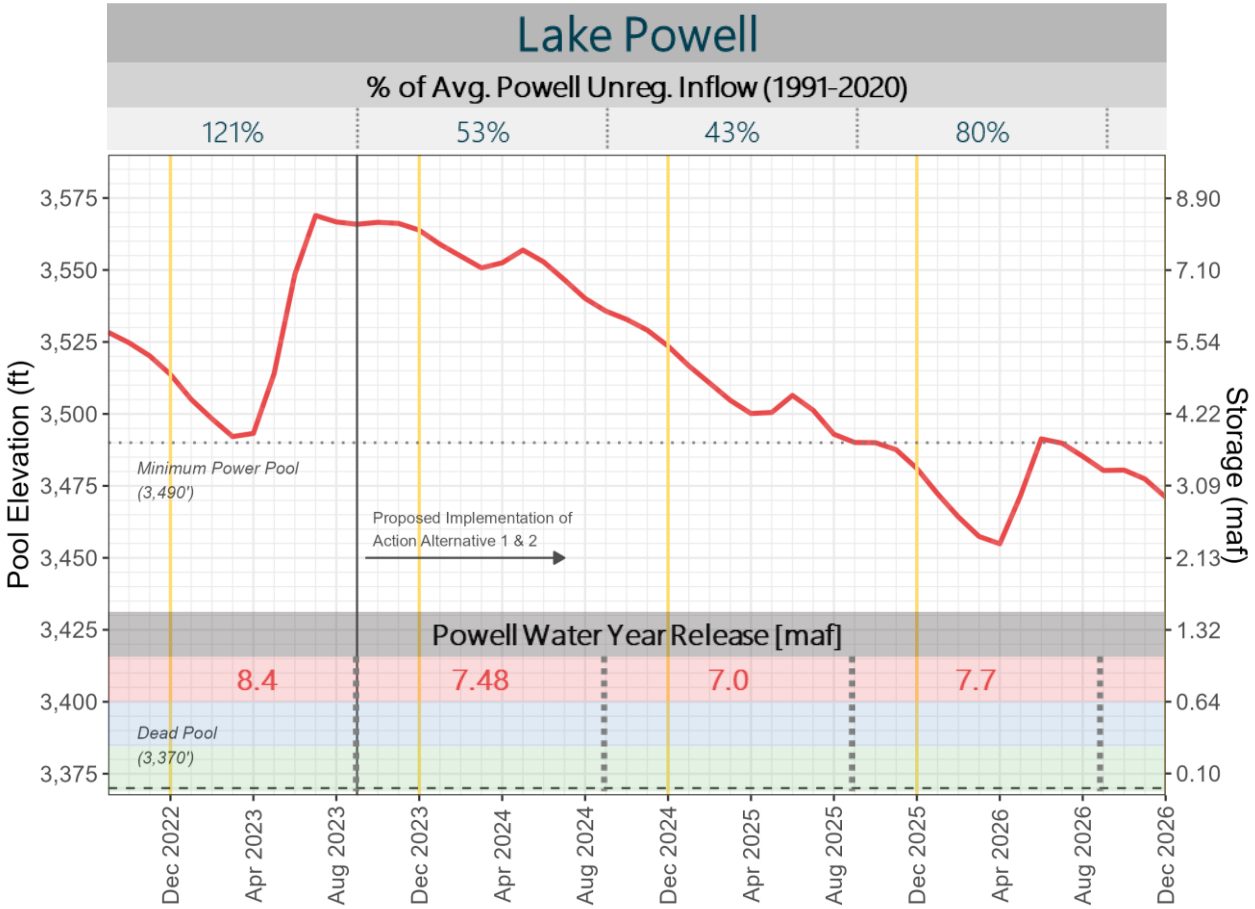
	2023	2024	2025	2026
% of Avg. (1991-2020)	121%	53%	43%	80%
WY Volume (kaf)	11,620	5,090	4,130	7,680

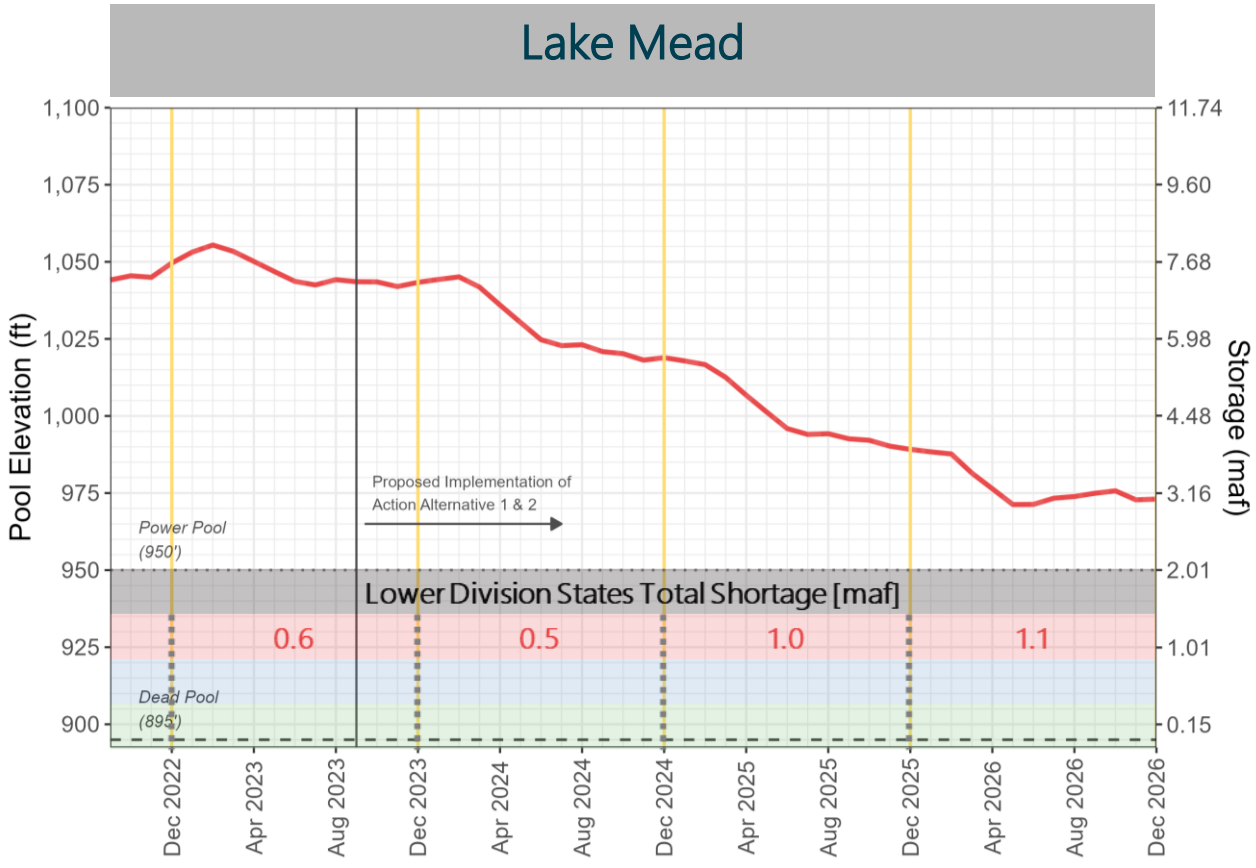
2024 and **2026** are similar to:
2020 (5,850 kaf) &
2022 (6,370 kaf)

2025 is similar to:
2021 (3,500 kaf)

Example Streamflow Trace Analysis – 80% ESP of 2011-2014

End-of-Month Pool Elevation





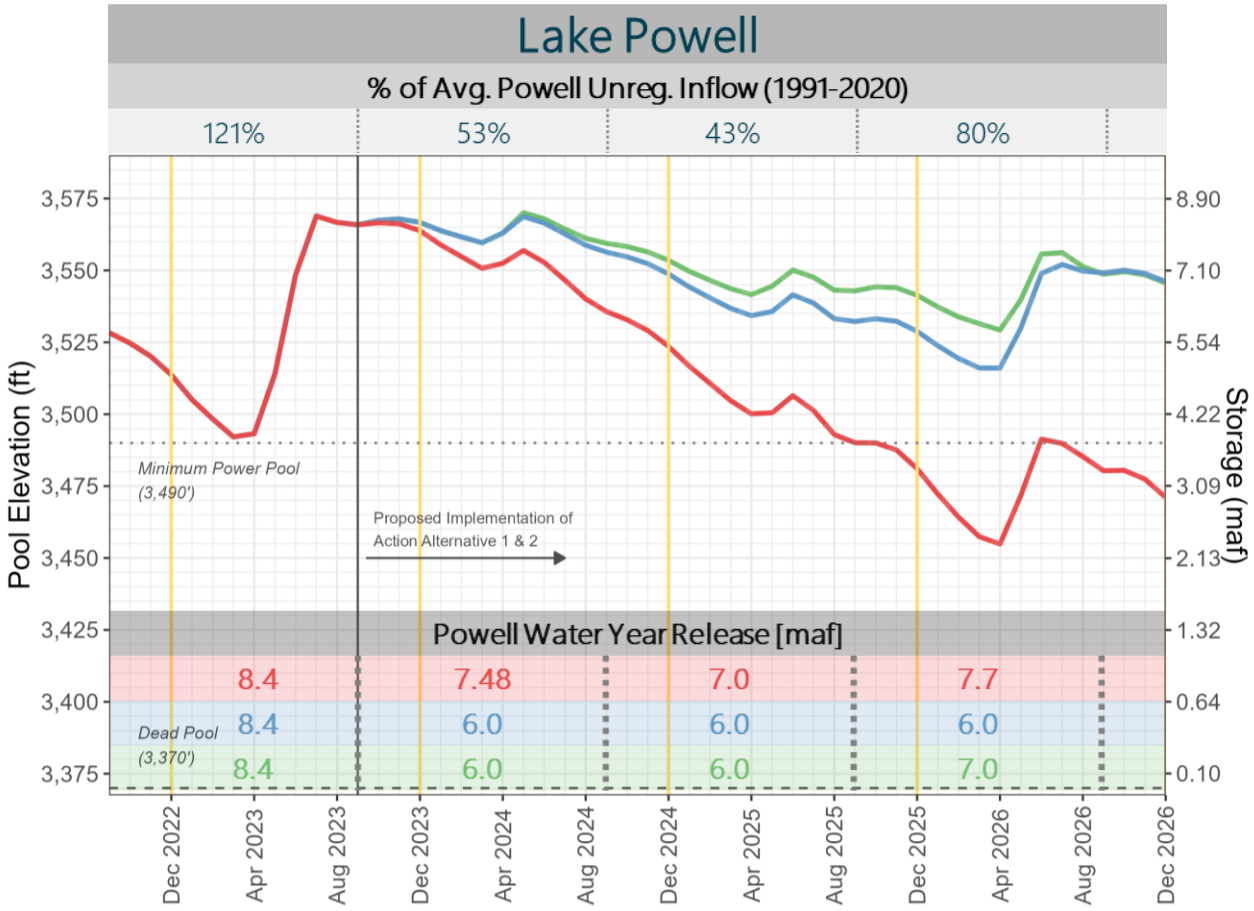
No Action Alt.

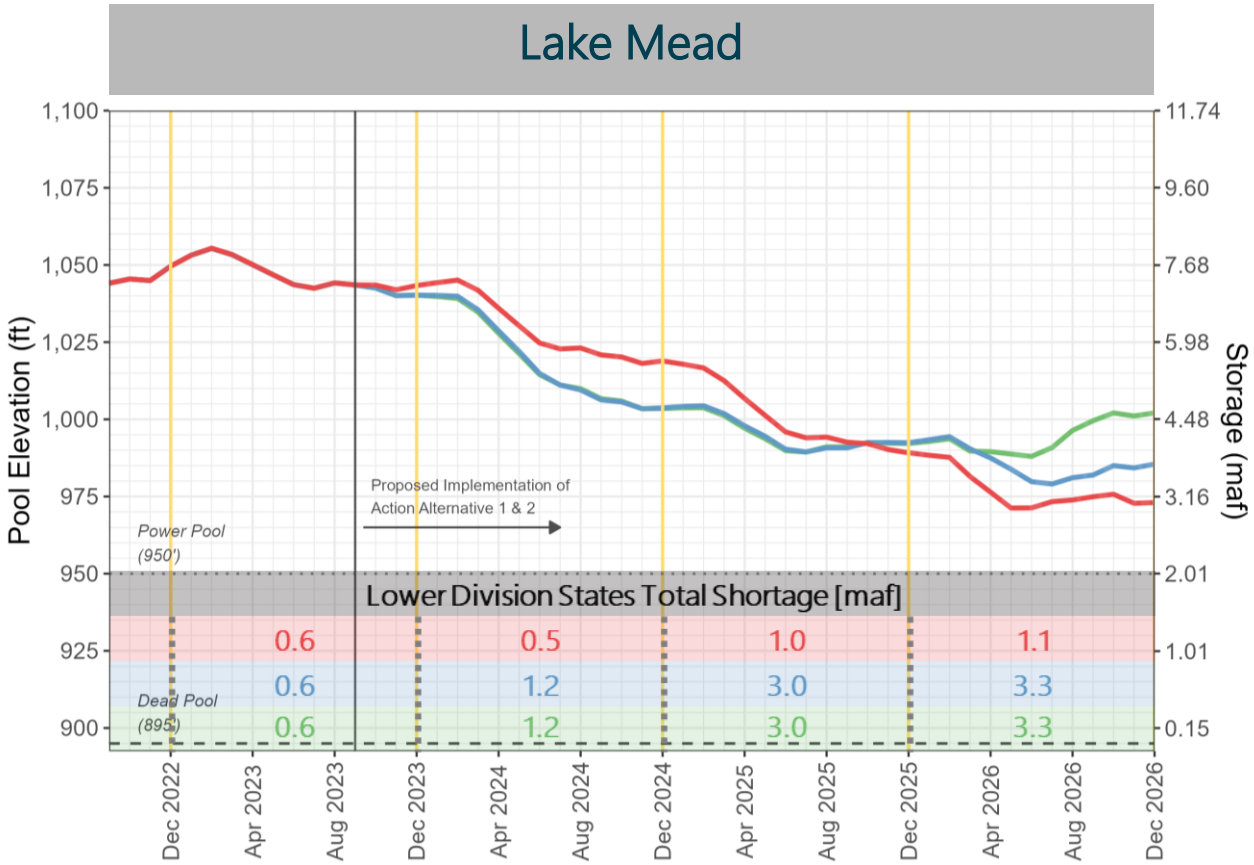
Action Alt. 1

Action Alt. 2

Example Streamflow Trace Analysis – 80% ESP of 2011-2014 cont.

End-of-Month Pool Elevation





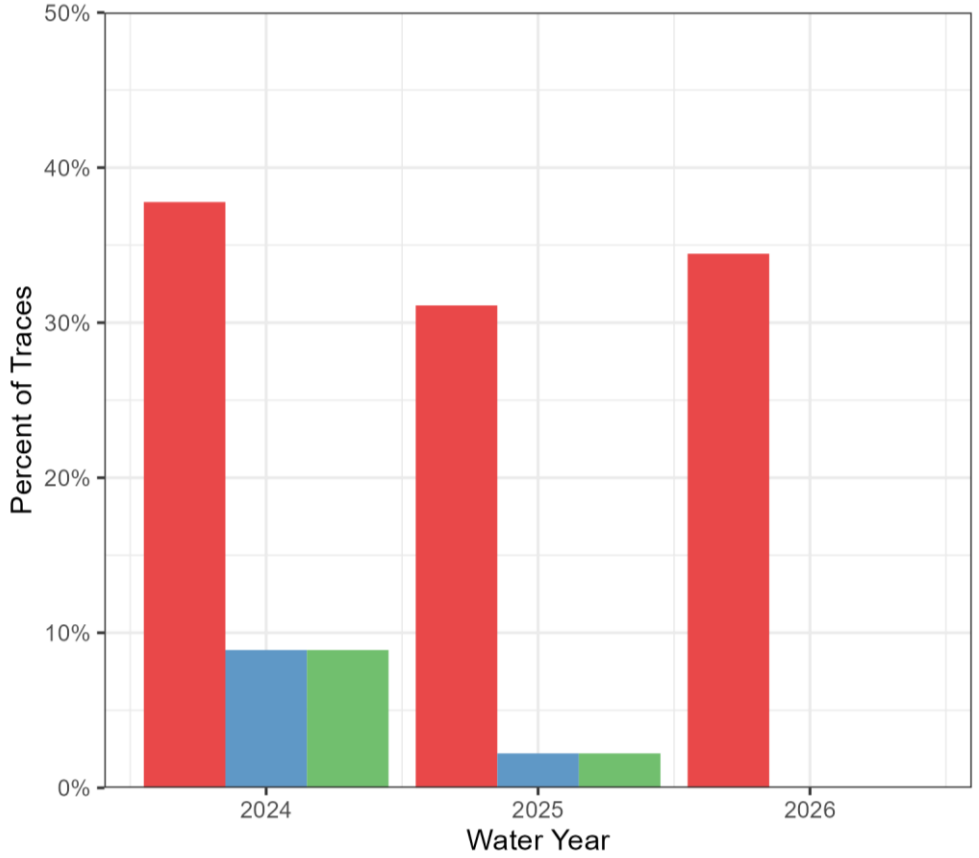
No Action Alt.

Action Alt. 1

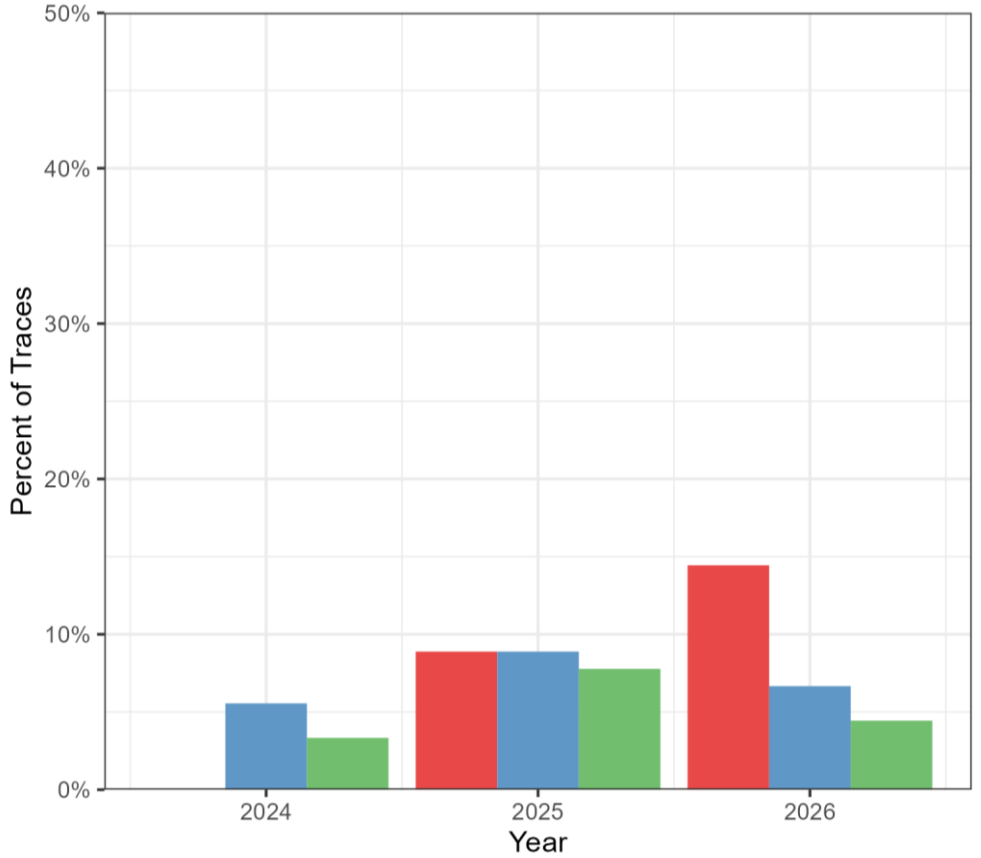
Action Alt. 2

Hydrologic Resources – Reservoir Elevations

Lake Powell Minimum Water Year Elevation
Percent of Traces Less than Elevation 3,490 feet



Lake Mead Minimum Annual Elevation
Percent of Traces Less than Elevation 950 feet



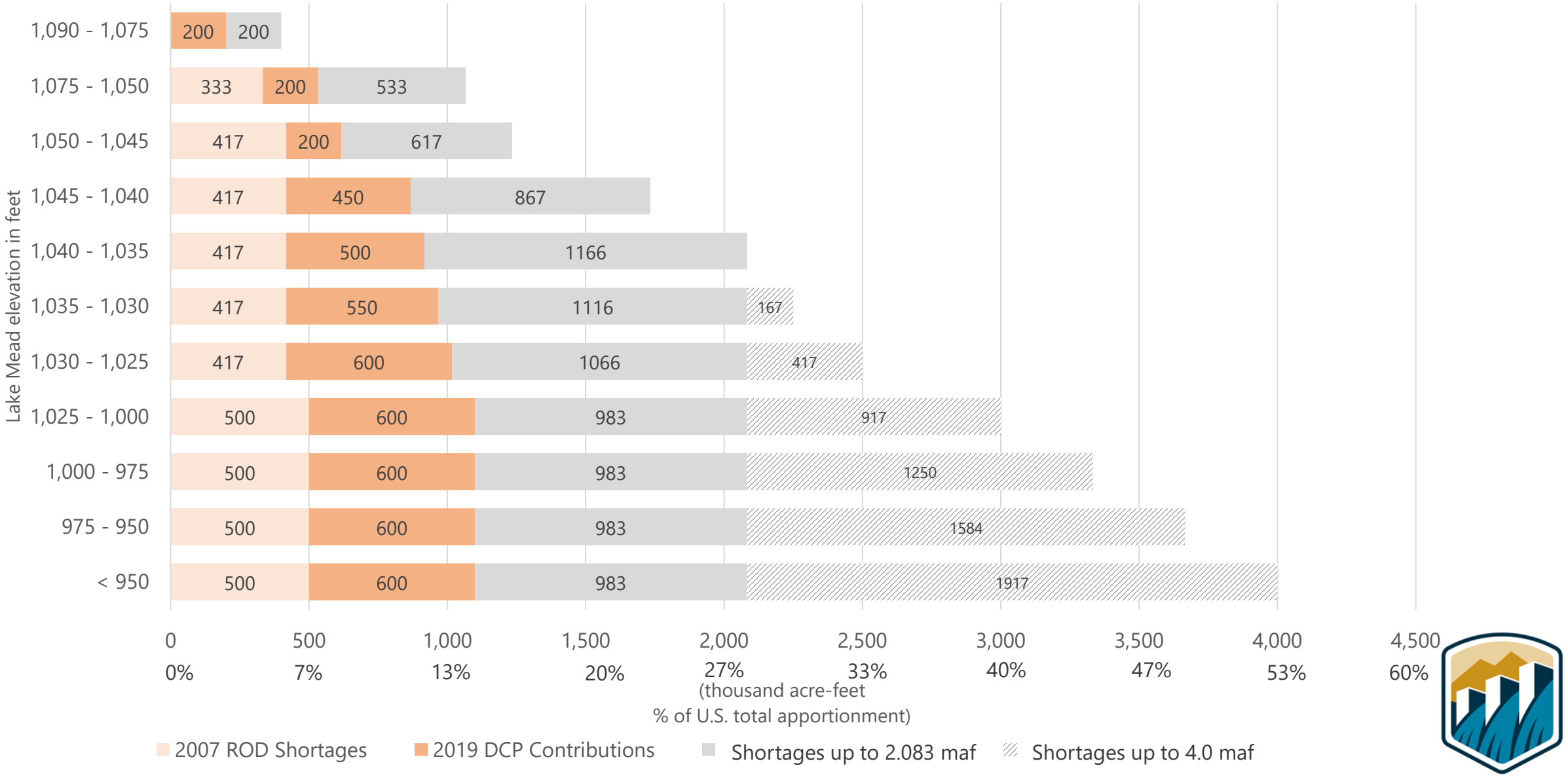
*All statistics calculated are reflective of the hydrology scenarios and other assumptions used in modeling and they are not intended to be predictive. However, it is meaningful to compare statistics across alternatives to differentiate performance.

Water Deliveries

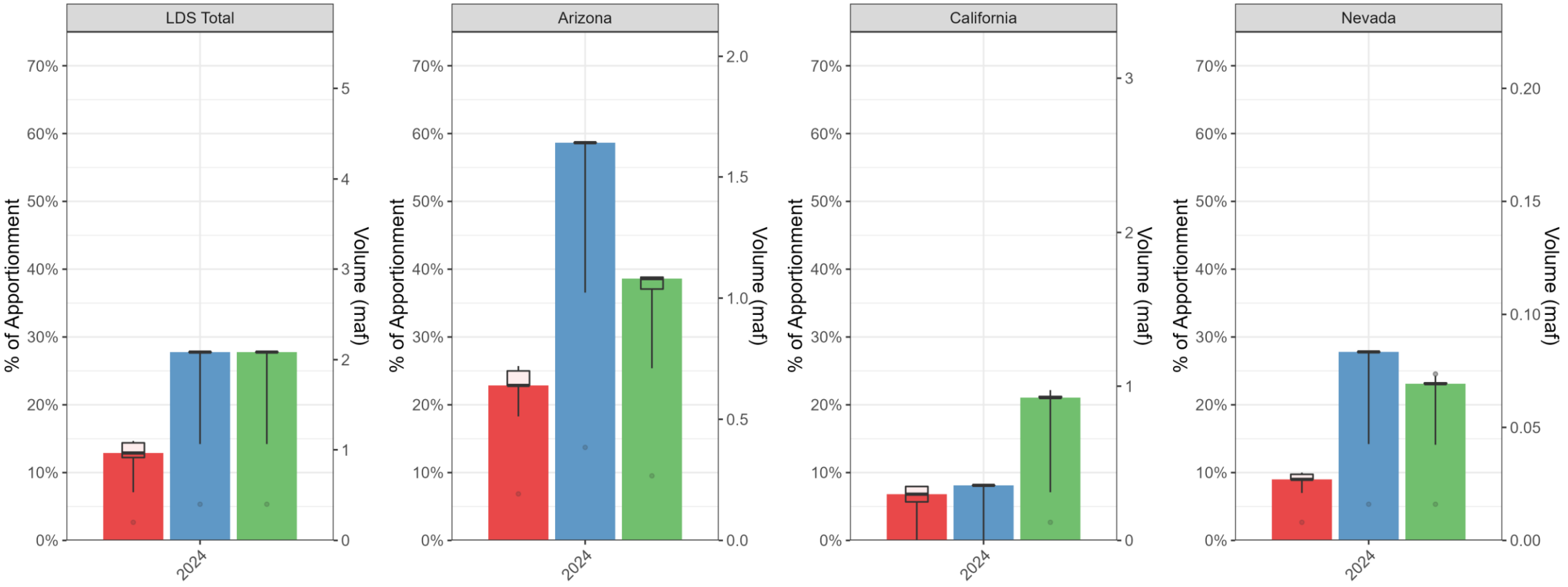
- Total Water Deliveries to Lower Division States
- Deliveries to Mexico

For more details on resource impacts, see Draft SEIS Chapter 3

Modeled Lower Division States Shortages and DCP Contributions
No Action (orange) and Action Alternatives 1 and 2 (gray)



Modeled Reductions up to 2.083 maf: Distribution of Lower Division States Shortages and DCP Contributions



Deliveries to Mexico

- This SEIS does not consider additional actions for Mexico.
- There would be no change to specified reductions and recoverable savings to Mexico.
- Impacts to modeled reductions and recoverable savings to Mexico are possible as Lake Mead elevations decline and if dead pool is reached.
- Under the two Action Alternatives, initially, there would be greater impacts to modeled deliveries, then decreased impacts as Lake Mead elevations stabilize and increase.

Summary of Hydrologic and Water Delivery Modeling

- In the No Action Alternative, there are high chances of falling to and remaining below critical elevations under low flow hydrology
- With the Action Alternatives, the chances of falling to critical elevations through 2026 are reduced up to 34% at Lake Powell and 7% at Lake Mead
- In order to achieve these reductions, a combination of modifications to Lake Powell operations and additional Lower Basin shortages are needed
- Action Alternatives 1 and 2 demonstrate ways in which additional shortages can be distributed in the Lower Basin

Biological Resources

- Vegetation
- Wildlife
- Special-Status Species

For more details on resource impacts, see Draft SEIS Chapter 3

Cultural Resources

- Archaeological sites around reservoirs
- Archaeological sites along the river
- Native American Traditional Cultural Properties (TCPs) and resources of concern

For more details on resource impacts, see Draft SEIS Chapter 3

Recreation

- Recreation at Lake Powell
- Recreation from Glen Canyon to Lake Mead (downstream of Lake Powell)
- Recreation at Lake Mead
- Recreation from Hoover Dam to Southern International Boundary (downstream of Lake Mead)

For more details on resource impacts, see Draft SEIS Chapter 3

Socioeconomics

- Agriculture
- Recreation
- Municipal and Industrial Uses

For more details on resource impacts, see Draft SEIS Chapter 3

Indian Trust Assets

- Water Rights and Allocations
- Cultural and Biological Resources

For more details on resource impacts, see Draft SEIS Chapter 3

More Information and Public Comment Opportunities

For more information

- Project Website: https://www.usbr.gov/ColoradoRiverBasin/SEIS.html
- Draft SEIS document is posted on the project website
  - Paper copies are located at the Lower Colorado Basin and Upper Colorado Basin Regional Offices
- Send questions to: CRInterimops@usbr.gov
- Call the project telephone line: (602) 609-6739

Ways to Comment

Comments should be submitted by May 30, 2023

- During public meetings
- Webform via the project website:

  https://www.usbr.gov/ColoradoRiverBasin/SEIS.html
- Send an email: CRinterimops@usbr.gov
- Telephone message: (602) 609-6739
- By mail to:

  Reclamation 2007 Interim Guidelines SEIS Project Manager
  Upper Colorado Basin Region
  125 South State Street, Suite 8100
  Salt Lake City, Utah 84138

Clarifying Questions for Presenters

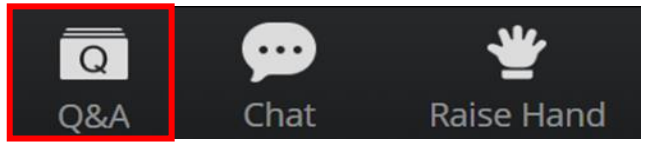
Q&A Guidelines

- This is a period to ask clarifying questions about the presentation. We will take formal public comments later in this meeting. Questions are not part of the official record.
- Please keep questions as focused and brief as possible so we have time to answer as many questions as we can.
- Please speak respectfully and remember that this virtual event is designed to be viewed in homes across the country in real time. Profanity is not acceptable.

Q&A

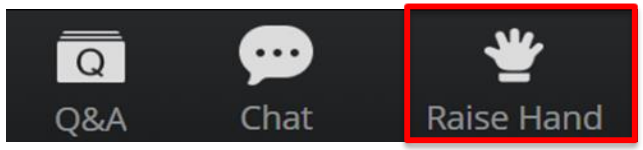
To ask a WRITTEN question

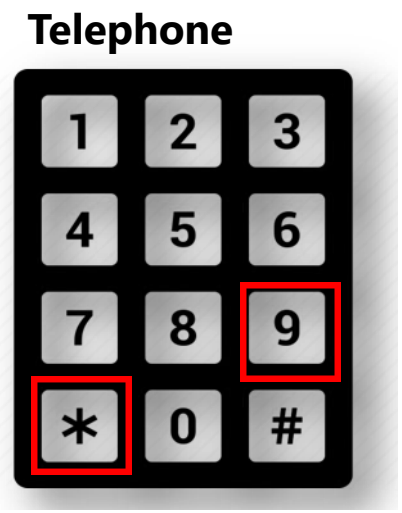
- Click the Q&A button
- A box will pop up
- Type your question
- Click send
- Question may be responded to live or in the Q&A box



To ask a VERBAL question

- Click the raise hand button
- Facilitator will call your name
- Click unmute to speak



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Break

Additional Questions?

Send questions to: CRInterimops@usbr.gov

Call the project telephone line: (602) 609-6739

Or attend future Public Meetings:

- Monday, May 8, 2023, at 9:30 a.m. – 12:00 p.m.
- Wednesday, May 10, 2023, at 5:30 – 8:00 p.m.
- Tuesday, May 16, 2023, at 12:00 p.m. – 2:30 p.m.

Meetings times are in Mountain Time


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Public Comments

Comment Guidelines

- Comments should be directed to the Bureau of Reclamation, not to other commenters.
- Comments will be limited to 3 minutes so we have time to hear from as many commenters as possible. Comments longer than 3 minutes can be submitted in writing.
- This virtual event is designed to be viewed in homes across the country in real-time. Profanity is not acceptable.

Comments should address

- Draft alternatives
- Missing alternatives
- Methodologies to distribute available Colorado River water to Lower Division States and mainstream entitlement holders during a shortage caused by extreme low-flow hydrology
- Draft impacts/missing impacts
- Other issues within scope of the document

To Comment

- Click the raise hand button
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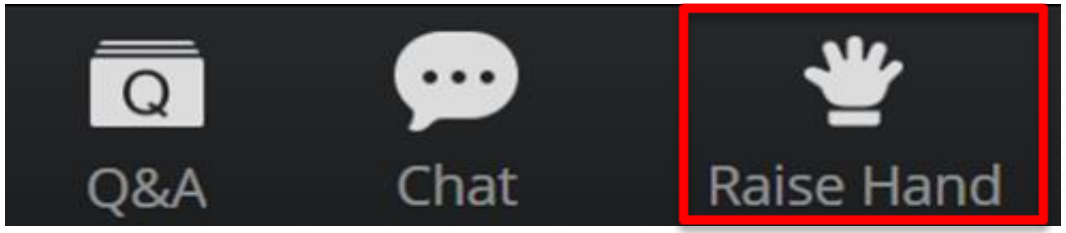
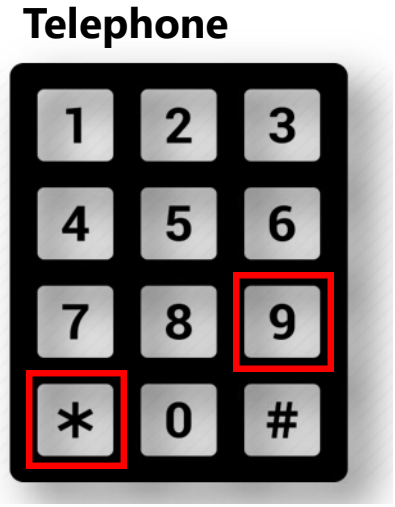
- Click unmute to speak
- Please state and spell your name when you begin
- Please limit comments to 3 minutes. Please submit comments longer than 3 minutes in writing

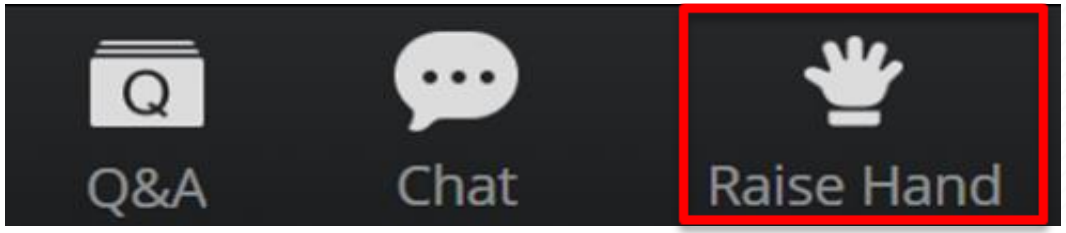


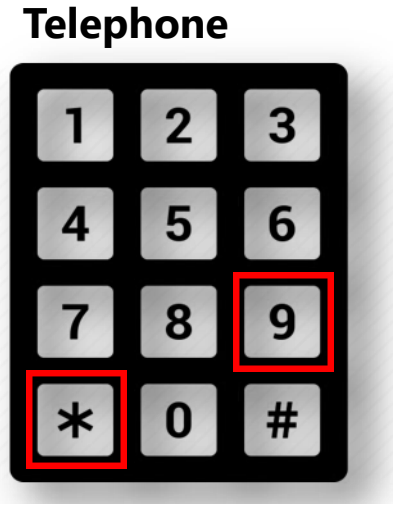


Comment Timer

To Comment cont.

- Click the raise hand button
- Facilitator will call your name
- Click unmute to speak
- Please state and spell your name when you begin
- Please limit comments to 3 minutes. Please submit comments longer than 3 minutes in writing





Comment Timer for Comments with Interpretation


BUREAU OF
RECLAMATION
Next Steps

Ways to Comment cont.

Comments should be submitted by May 30, 2023

- During public meetings
- Webform via the project Website:

  https://www.usbr.gov/ColoradoRiverBasin/SEIS.html
- Send an email: CRinterimops@usbr.gov
- Telephone message: 602-609-6739
- By mail to:

  Reclamation 2007 Interim Guidelines SEIS Project Manager
  Upper Colorado Basin Region
  125 South State Street, Suite 8100
  Salt Lake City, Utah 84138

Thank you for joining us

For more information visit: https://www.usbr.gov/ColoradoRiverBasin/SEIS.html

Submit comments by May 30, 2023 to: CRinterimops@usbr.gov