



— BUREAU OF —
RECLAMATION

Review of the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead

Kickoff Webinar

March 24 and 31, 2020

Welcome & Introductions

- Purpose of this webinar is to present proposed scope, approach, process and schedule for the Review of the 2007 Interim Guidelines.
- To facilitate scheduling, two webinars are being offered (with identical content presented on each):
 - March 24 at 1:00 PM PDT
 - March 31 at 1:00 PM PDT
- There will be other opportunities to provide input throughout the Review process
- Thank you for your participation and we look forward to working with you during this Review



Presentation Overview

- Welcome & Introductions
- Overview of the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead (2007 Interim Guidelines)
- 2007 Interim Guidelines Review (7.D. Review) Scope & Approach
- 7.D. Review Process & Schedule
- Q&A



Glen Canyon Dam, forms Lake Powell



Hoover Dam, forms Lake Mead

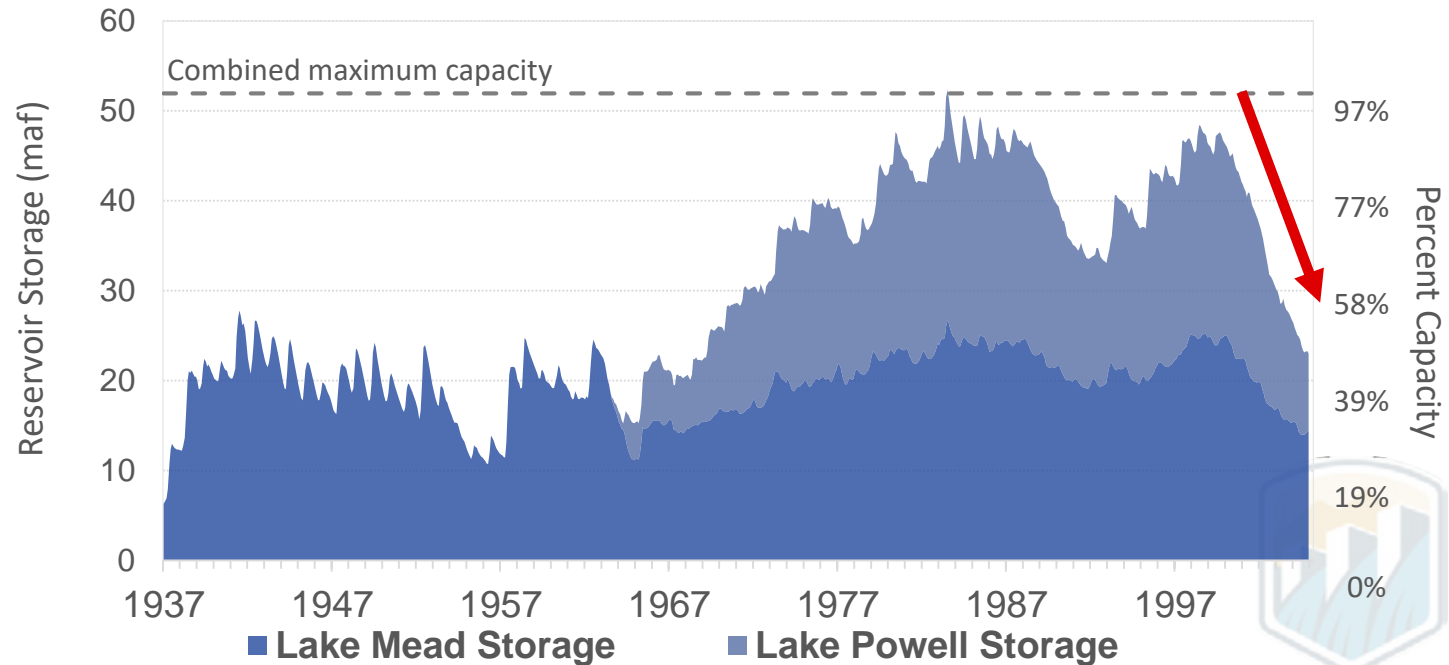
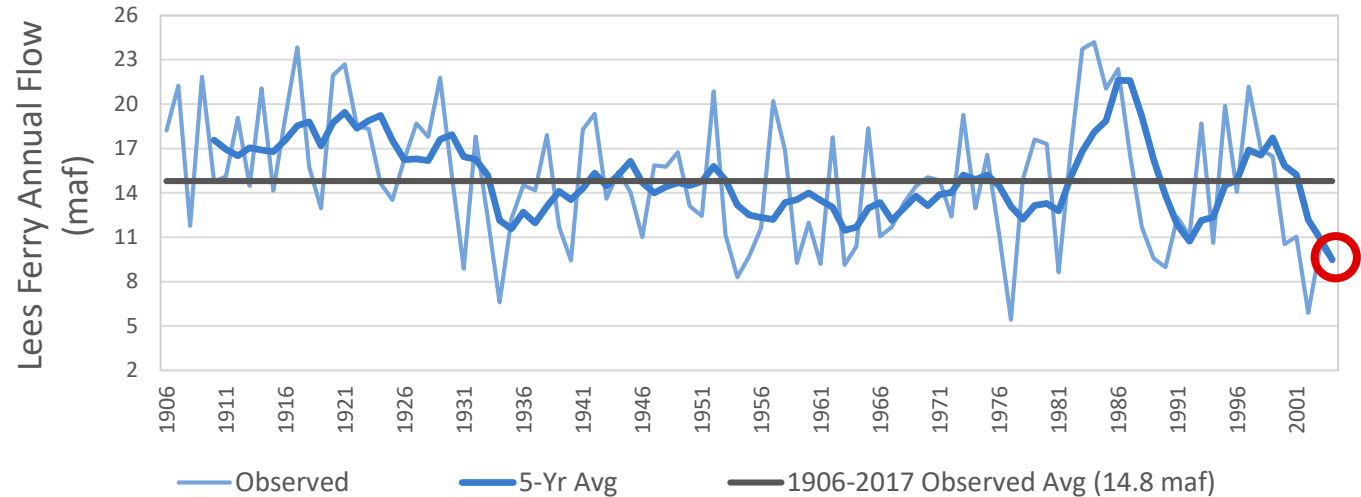


Overview of 2007 Interim Guidelines



2007 Interim Guidelines: Background

- Onset of drought: 2000-2004
 - Lowest 5-year average hydrology on record
 - Lost over 50% of storage in Lake Powell and Lake Mead
- Secretary Norton challenged Basin States to develop a drought mitigation plan in 2004
- NEPA process initiated in 2005
- Record of Decision signed in December 2007



2007 Interim Guidelines: Consensus around Common Themes

- “encourage conservation,
- plan for shortages,
- implement closer coordination of operations of Lake Powell and Lake Mead,
- preserve flexibility to deal with further challenges such as climate change and deepening drought,
- implement operational rules for a long – *but not permanent* – period in order to gain valuable operating experience, and
- continue to have the federal government facilitate – *but not dictate* – informed decision-making in the Basin.”
- “address future controversies on the Colorado River through consultation and negotiation ... before resorting to litigation.”



2007 Interim Guidelines: Three Purposes

- “improve Reclamation’s management of the Colorado River by considering trade-offs between the frequency and magnitude of reductions of water deliveries, and considering the effects on water storage in Lake Powell and Lake Mead, and on water supply, power production, recreation, and other environmental resources;
- provide mainstream United States users of Colorado River water, particularly those in the Lower Division states, a greater degree of predictability with respect to the amount of annual water deliveries in future years, particularly under drought and low reservoir conditions; and
- provide additional mechanisms for the storage and delivery of water supplies in Lake Mead to increase the flexibility of meeting water use needs from Lake Mead, particularly under drought and low reservoir conditions.”



2007 Interim Guidelines: Four Operational Elements

- “determine those circumstances under which the Secretary would reduce the annual amount of water available for consumptive use from Lake Mead to the Colorado River Lower Division states below 7.5 maf (a “Shortage”) pursuant to Article II(B)(3) of the Consolidated Decree;

(Prescribed volumes of Lower Basin shortages at specific Lake Mead elevations)

- define the coordinated operation of Lake Powell and Lake Mead to provide improved operation of these two reservoirs, particularly under low reservoir conditions;

(Guidelines for coordinated operations between Lake Powell and Lake Mead)

- allow for the storage and delivery, pursuant to applicable federal law, of conserved Colorado River system and non-system water in Lake Mead to increase the flexibility of meeting water use needs from Lake Mead, particularly under drought and low reservoir conditions; and

(Mechanism for storage and delivery of conserved water in Lake Mead)

- determine those conditions under which the Secretary may declare the availability of surplus water for use within the Lower Division states. The proposed federal action would modify the substance of the existing ISG and the term of the ISG from 2016 through 2026.”

(Guidelines to identify Surplus Conditions)



2007 Interim Guidelines: Operational Provisions

- Section XI.G.2. Lake Mead Operations
 - Tiers determine water deliveries to Lower Basin contractors
- Section XI.G.3. Intentionally Created Surplus (ICS)
 - Annual creation, delivery, and total accumulation limits by state
 - Delivery possible when Lake Mead is in ICS Surplus condition
- Section XI.G.6. Coordinated Operations
 - Lake Powell tiers determine ranges of releases to Lake Mead
- Section XI.G.7.A.-C. Implementation
 - Use Annual Operating Plan (AOP) process defined in the Long-Range Operating Criteria (LROC)
 - Circumstances warranting consultation
 - Conduct mid-year review if requested

| Lake Powell | | |
|-------------------------|--|---------------------------------|
| Elevation (feet) | Operation According to the Interim Guidelines | Live Storage (maf) ¹ |
| 3,700 | Equalization Tier Equalize, avoid spills, or release 8.23 maf | 24.3 |
| 3,636-3,666 (2008-2026) | Upper Elevation Balancing Tier³ Release 8.23 maf; if Lake Mead < 1,075 feet, balance contents with a min/max release of 7.0 and 9.0 maf | 15.5-19.3 (2008-2026) |
| 3,575 | | 9.5 |
| 3,525 | Mid-Elevation Release Tier Release 7.48 maf; if Lake Mead < 1,025 feet, release 8.23 maf | 5.9 |
| 3,490 | Lower Elevation Balancing Tier Balance contents with a min/max release of 7.0 and 9.5 maf | 4.0 |
| 3,370 | | 0 |

| Lake Mead | | |
|------------------------------|--|---------------------------------|
| Elevation (feet) | Operation According to the Interim Guidelines | Live Storage (maf) ¹ |
| 1,220 | Flood Control Surplus or Quantified Surplus Condition Deliver > 7.5 maf | 25.9 |
| 1,200 (approx.) ² | Domestic Surplus or ICS Surplus Condition Deliver > 7.5 maf | 22.9 (approx.) ² |
| 1,145 | Normal or ICS Surplus Condition Deliver ≥ 7.5 maf | 15.9 |
| 1,075 | | 9.4 |
| 1,050 | Shortage Condition Deliver 7.167 ⁴ maf | 7.5 |
| 1,025 | Shortage Condition Deliver 7.083 ⁵ maf | 5.8 |
| 1,000 | Shortage Condition Deliver 7.0 ⁶ maf Further measures may be undertaken ⁷ | 4.3 |
| 895 | | 0 |

Diagram not to scale;¹ Acronym for million acre-feet; ² This elevation is shown as approximate as it is determined each year by considering several factors including Lake Powell and Lake Mead storage, projected Upper Basin demands, and an assumed inflow; ³ Subject to April adjustments which may result in a release according to the Equalization Tier; ⁴ Of which 2.48 maf is apportioned to Arizona, 4.4 maf to California, and 0.287 maf to Nevada; ⁵ Of which 2.40 maf is apportioned to Arizona, 4.4 maf to California, and 0.283 maf to Nevada; ⁶ Of which 2.32 maf is apportioned to Arizona, 4.4 maf to California, and 0.280 maf to Nevada; ⁷ Whenever Lake Mead is below elevation 1,025 feet, the Secretary shall consider whether hydrologic conditions together with anticipated deliveries to the Lower Division States and Mexico are likely to cause the elevation at Lake Mead to fall below 1,000 feet. Such consideration, in consultation with the Basin States, may result in the undertaking of further measures, consistent with applicable Federal law.

2007 Interim Guidelines: Section XI.G.7.D. (7.D.)

Section 7.D. “Operations During Interim Period” states:

“Beginning no later than December 31, 2020, the Secretary shall initiate a formal review for purposes of evaluating the effectiveness of these Guidelines. The Secretary shall consult with the Basin States in initiating this review.”

Record of Decision for 2007 Interim Guidelines p.56

Secretary Bernhardt’s remarks at CRWUA in December 2019:

“This provision provides an opportunity to take an objective look at where we’ve been and where we are with our operational rules. Evaluating the effectiveness of the operational rules is consistent with the “interim” nature of the Guidelines. It makes sense to review how well something has worked before determining its replacement. Therefore, today I am announcing that I have tasked Reclamation to initiate this work in early 2020 to meet this requirement of the Guidelines.”



2007 Interim Guidelines: Section XI.G.7.D. (7.D.)

Secretary Bernhardt's remarks at CRWUA in December 2019 *(with respect to approach and process)*:

- "The report will be a Reclamation product but it will rely on important input from the Basin States, Tribes, NGOs, and the public, as the report is developed. Reclamation will, of course, work closely with our experts across Interior—from the Fish and Wildlife Service and the Park Service—to ensure that their expertise is factored into the Report."
- "Reclamation will also welcome your input on what we intend to be a succinct and useful technical report."
- "We want to wrap up this effort, culminating in the "Section 7.D. Report," around this time next year."

These points will frame the approach and process of the 7.D. Review



7.D. Review Proposed Scope & Approach



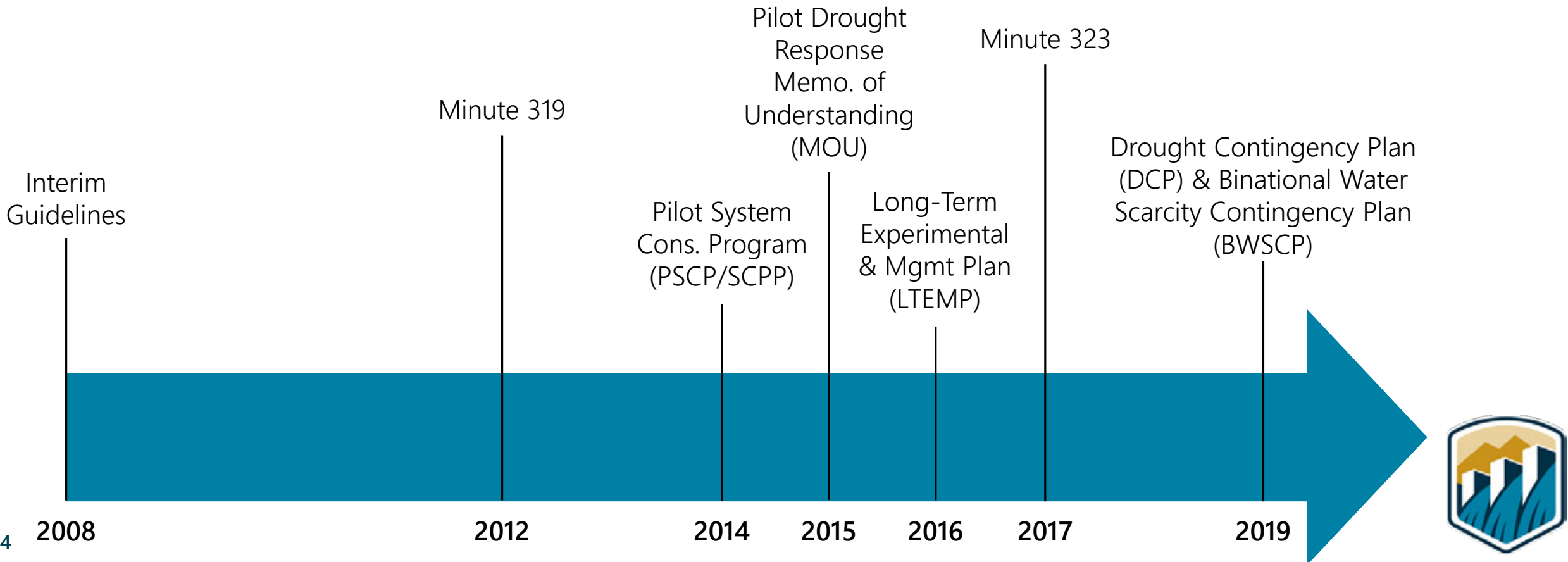
7.D. Review: Proposed Scope

- Goals of the Review
 - Evaluate the effectiveness of the 2007 Interim Guidelines
 - Document our operational experience
- Retrospective review of past operations and actions under the 2007 Interim Guidelines, *not* a consideration of future activities
- Effectiveness
 - Adherence to common themes in the 2007 Interim Guidelines
 - Effectiveness with respect to three stated purposes of the 2007 Interim Guidelines
 - Does not imply correctness of any particular operational provision
 - Evaluating four operational elements, not specific provisions
- Operational documentation
 - Objective documentation of annual operations since 2008



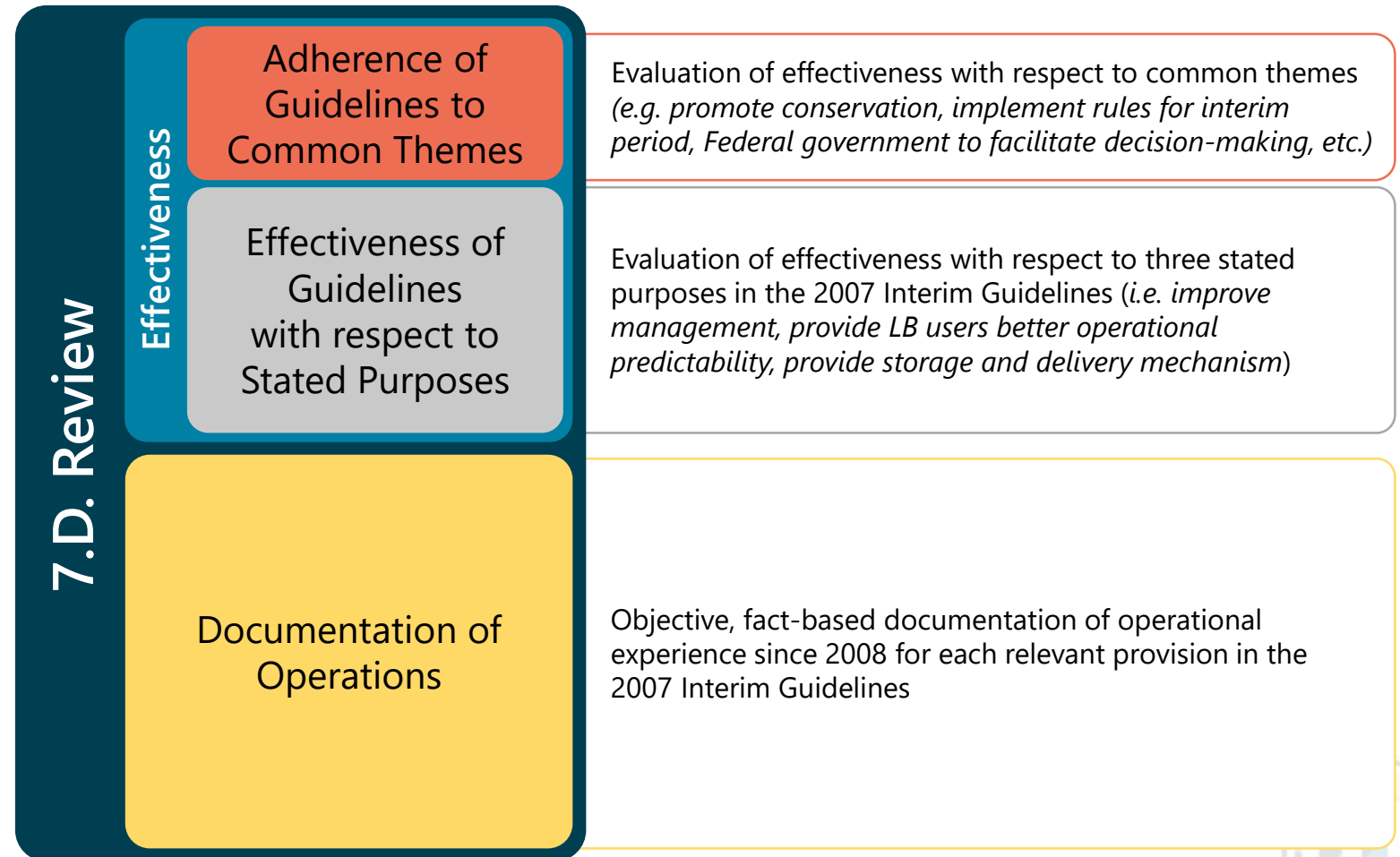
7.D. Review: Proposed Scope

- Actions since 2008 will be acknowledged but undergo limited review
 - Greater focus on actions with operational relevance (PSCP/SCPP, DCP, Minutes)



7.D. Review: Proposed Approach

- Reclamation technical report that incorporates input from partners and stakeholders
- Discuss operations and effectiveness on three levels
- Quantitative and qualitative elements



7.D. Review: Preliminary Outline

- I. Introduction
- II. Background
- III. Effectiveness with respect to adherence to common themes
- IV. Effectiveness with respect to 2007 Interim Guidelines purposes
- V. Operational documentation
 - Chronological review of each year since 2008
 - Synthesis of findings for each Operational Topic
- VI. Conclusion

Operational Topics

1. Allocation of Unused Basin Apportionment Water Under Article II(B)(6)
2. Determination of Lake Mead Operation During the Interim Period
3. Implementation of ICS
4. Implementation of Developed Shortage Supply
5. California's Colorado River Water Use Plan Implementation Progress
6. Coordinated Operation of Lake Powell and Lake Mead During the Interim Period
7. Implementation of the Guidelines
8. Interim Period and Termination
9. Authority



Summary of Powell and Mead Coordinated Operations 2008-2020

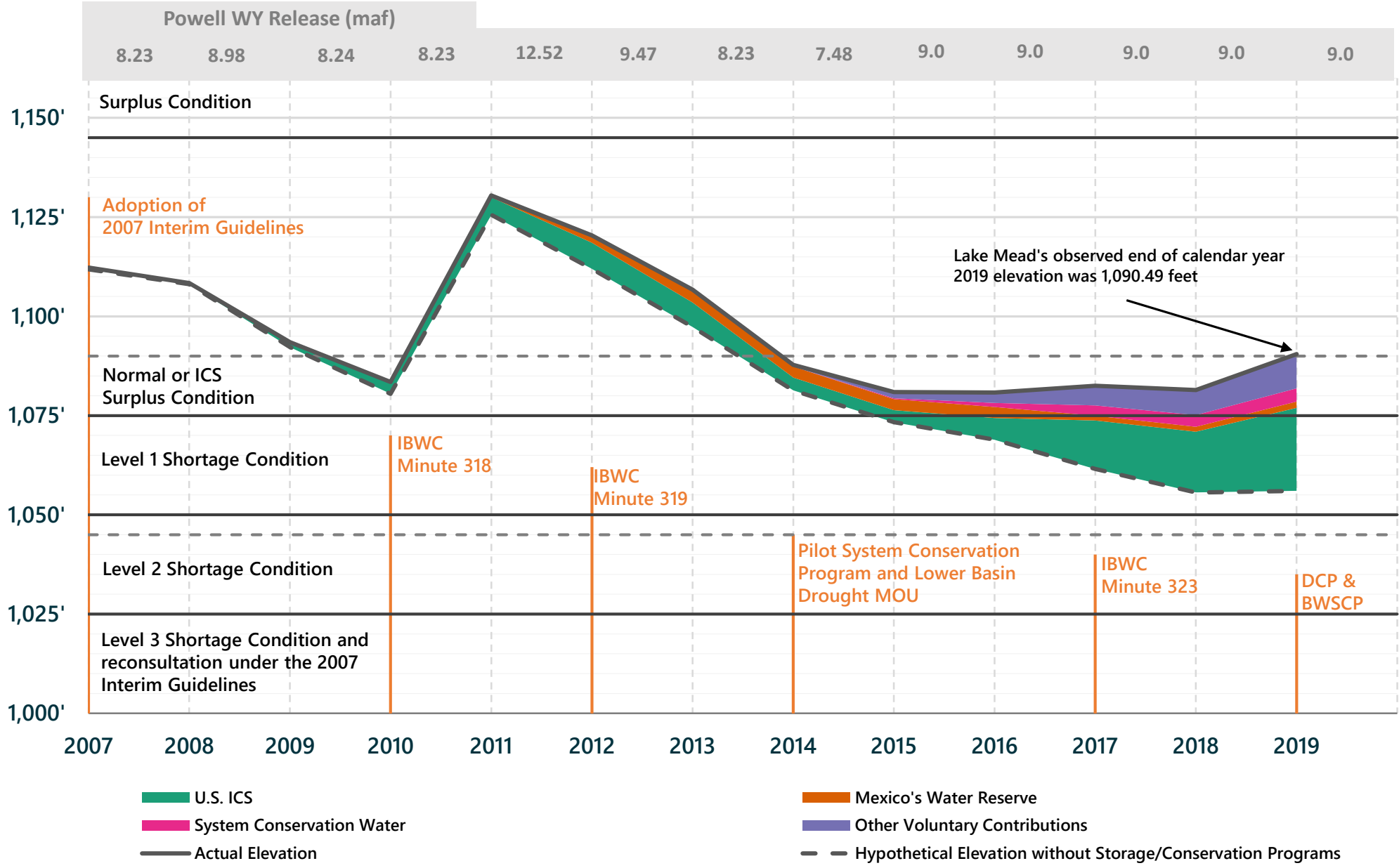
| Year | Lake Powell Operations (Water Year) | | | Lake Mead Operations (Calendar Year) | |
|------|--|---------------------|---------------------------------|---|----------------------|
| | Operating Tier | Mid-year Adjustment | Release Volume | Equalization Volume | Operating Condition |
| 2008 | Upper Elevation Balancing | Equalization | 8.98 maf | 0.75 maf | Normal / ICS Surplus |
| 2009 | Upper Elevation Balancing | -- | 8.24 maf | -- | Normal / ICS Surplus |
| 2010 | Upper Elevation Balancing | -- | 8.23 maf | -- | Normal / ICS Surplus |
| 2011 | Upper Elevation Balancing | Equalization | 12.52 maf | 4.29 maf ¹ | Normal / ICS Surplus |
| 2012 | Equalization | -- | 9.47 maf | 1.24 maf ² | Normal / ICS Surplus |
| 2013 | Upper Elevation Balancing | -- | 8.23 maf | -- | Normal / ICS Surplus |
| 2014 | Mid-Elevation Release | -- | 7.48 maf | -- | Normal / ICS Surplus |
| 2015 | Upper Elevation Balancing | Balancing | 9.00 maf | -- | Normal / ICS Surplus |
| 2016 | Upper Elevation Balancing | Balancing | 9.00 maf | -- | Normal / ICS Surplus |
| 2017 | Upper Elevation Balancing | Balancing | 9.00 maf | -- | Normal / ICS Surplus |
| 2018 | Upper Elevation Balancing | Balancing | 9.00 maf | -- | Normal / ICS Surplus |
| 2019 | Upper Elevation Balancing | Balancing | 9.00 maf | -- | Normal / ICS Surplus |
| 2020 | Upper Elevation Balancing | -- | <i>8.23 maf (projected)</i> | -- | Normal / ICS Surplus |



¹ The total 2011 equalization volume was 5.52 maf, with 4.29 maf released in water year 2011. The remaining equalization volume was released as soon as practicable and fully by December 31, 2011.

² Although Lake Powell operated in the Equalization Tier in 2011, 8.23 maf was released in WY 2012 due to dry conditions; the additional 1.24 maf was WY 2011 equalization water carried over to WY 2012.

Summary of Lake Mead Storage and Conservation 2007-2019



End of calendar year 2019 balances of U.S. ICS and Mexico's Water Reserve, system conservation water, and other voluntary contributions to Lake Mead are provisional and subject to change.



7.D. Review Process & Schedule



7.D. Review: Process

- Input from the Basin States, Native American tribes and communities, water districts, key conservation and environmental organizations, other Federal agencies, and others will be factored into the Review.
- There are 2 key opportunities to provide input (although input may be provided at any time) and webinars will be provided at each step:
 - On the Scope and Approach (today's webinar)
 - On the Preliminary Draft Report (anticipated to be late summer)
- Although we will accept input in a variety of ways, our preference is for written comments to be submitted to 7DReview@usbr.gov
- Reclamation will next begin drafting the 7.D Report. In order to best incorporate your input, we request written comments on the scope and approach by May 1.





7.D. Review: Process - continued

- Entities may request meetings in addition to the webinars.
- Comments received within the scope will be considered as appropriate.
- Comments received outside of the scope, such as comments regarding activities in the next set of operating guidelines, will be available for future consideration.
- This presentation and the Preliminary Draft Report will be posted to the project website at:
www.usbr.gov/lc/region/programs/strategies.html



7.D. Review: Schedule



-  Comments due by May 1 on Report scope and approach
-  Comments due by September 1 on Preliminary Draft Report



QUESTIONS?

For additional information visit:

www.usbr.gov/lc/region/programs/strategies.html

www.usbr.gov/lc/riverops.html

Send questions or comments to 7DReview@usbr.gov



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