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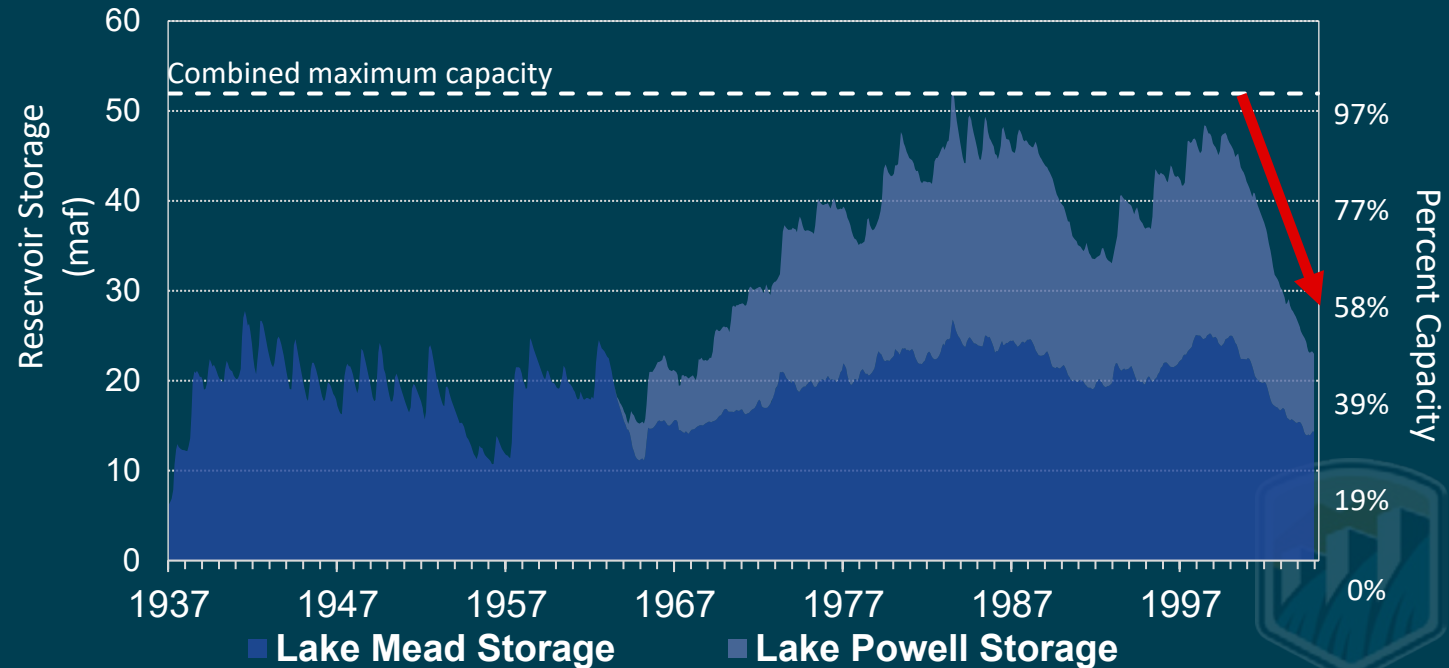
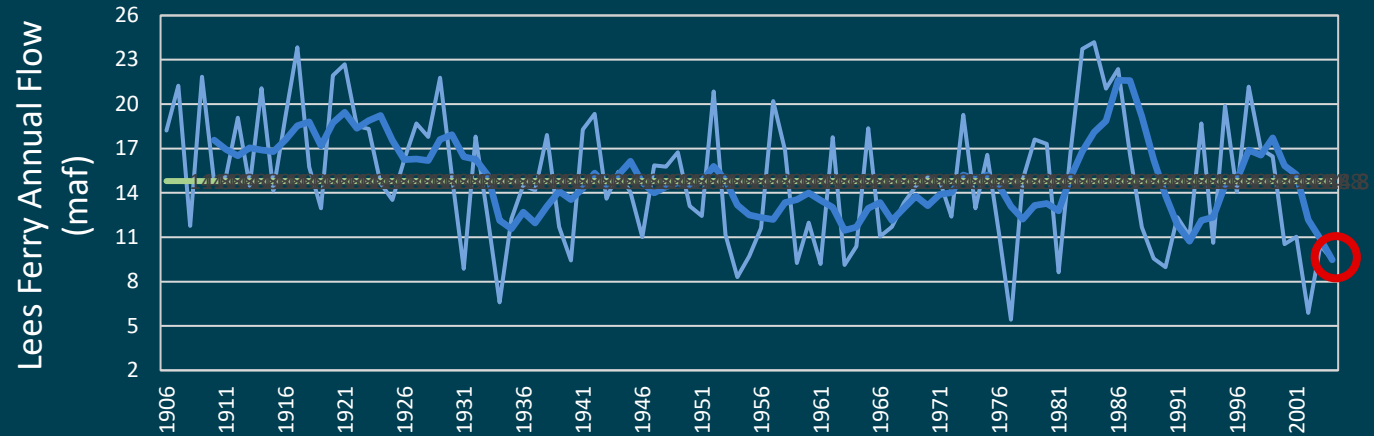
Review of the Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead (7.D. Review)

Glen Canyon Adaptive Management Work Group
Meeting

February 11, 2021

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



2007 Interim Guidelines Purpose

- “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 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.”
- “Encourage parties to address future controversies on the Colorado River through consultation and negotiation ... before resorting to litigation.”



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.”

2007 Interim Guidelines Record of Decision 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.”



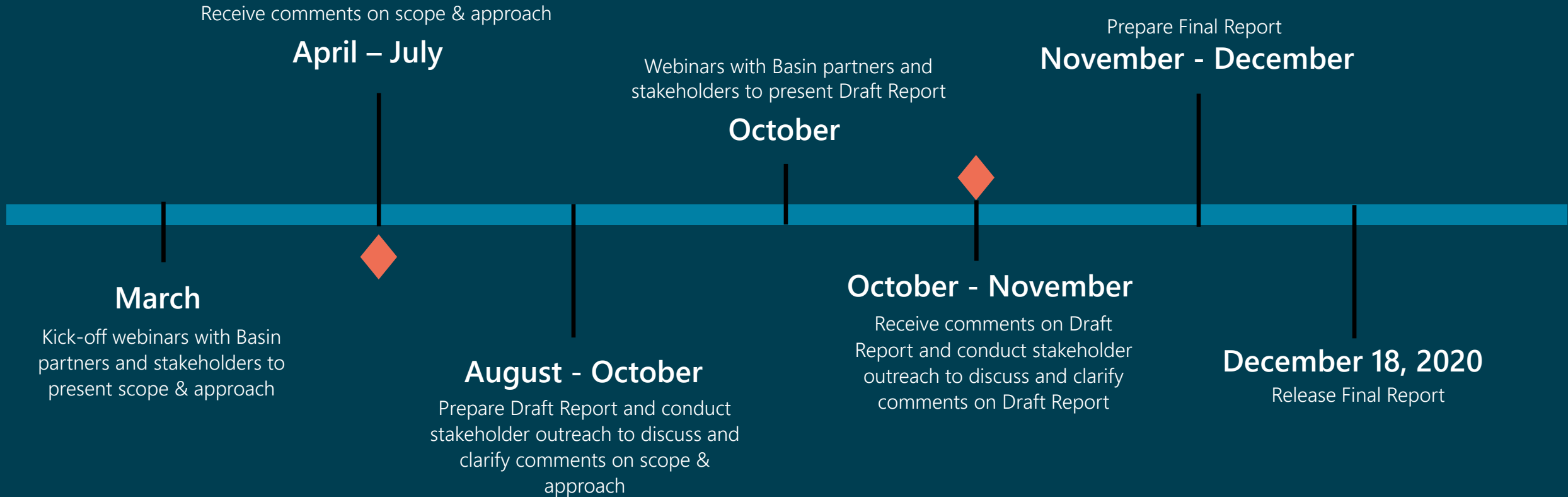
7.D. Review: Approach


- Reclamation technical report that incorporates input from Basin partners and stakeholders
- Retrospective
- Quantitative and qualitative elements
- Effectiveness:
 - Achievement of stated purpose
 - Adherence to common themes
- Operational documentation: objective record of annual operations from 2008 to 2019

7.D. Review

Effectiveness	Effectiveness of Guidelines with respect to Purpose	Evaluation of effectiveness with respect to purpose in the ROD (<i>i.e. improve management, provide LB users better operational predictability, provide storage and delivery mechanism</i>)
	Adherence of Guidelines to Common Themes	Evaluation of effectiveness with respect to common themes in the ROD (<i>e.g. enhance conservation, plan for shortages, preserve flexibility, negotiation before litigation, etc.</i>)
	Documentation of Operations	Objective, fact-based documentation of operational experience 2008-2019 for each relevant provision in the 2007 Interim Guidelines

7.D. Review: Schedule & Process



 Comment periods for partner and stakeholder input



Comments Received on the Scope, Approach & Draft Report

- Comments received from a range of partners (tribes, NGOs, federal agencies, academics, states/water districts)
- Comments received on a wide range of topics, most significant with respect to the processes used to develop the 2007 Interim Guidelines
 - Modeling Approach
 - Resource Analysis
 - Stakeholder Engagement
- Met with partners throughout the Review to discuss their comments
- Final Report incorporates comments to the extent possible, recognizing that some are beyond the scope of the Review



7.D. Review Final Report

1. Introduction
 2. Background
 3. Purpose and Common Themes
 4. Complementary Activities
 5. Approach
 6. Significant Considerations Based on Comments on the Scope & Approach and the Draft Report
 7. Implementation of the Guidelines
 8. Effectiveness of the Guidelines
 9. Summary
- Appendix A – Operational Documentation



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

Upper and Lower Colorado Basin Regions



U.S. Department of the Interior

December 2020

Available at:

<https://www.usbr.gov/ColoradoRiverBasin/>

Appendix A – Operational Documentation

- Chronological review of operations 2008-2019
- For each year, provides key operating variables
 - Hydrology
 - Reservoir elevations
 - Lower Basin water use
- Compares each variable to 24-Month Study projections in that year
- Discusses any distinct operational events during that year
- Analyzes accuracy of 24-Month Study projections of Lake Powell and Lake Mead elevation

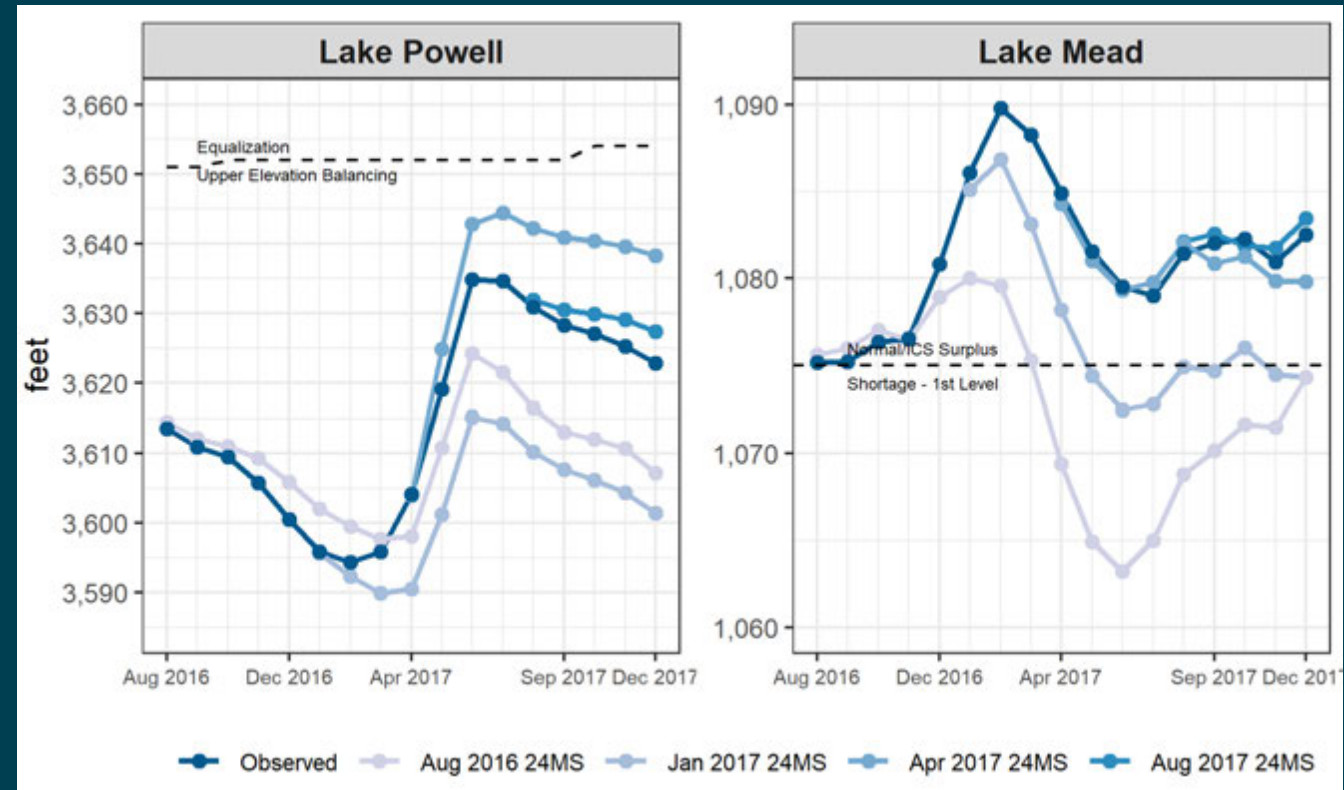


Figure A-13. 24-Month Study projections and actual elevations at Lake Powell and Lake Mead for Aug 2016 – Dec 2017



7.D. Review: Effectiveness of the Guidelines

Effectiveness

Effectiveness of Guidelines with respect to Purpose

- **Improve Reclamation's mgmt.:** Having objective operational criteria for the full range of reservoir elevations improved Reclamation's management of the Colorado River, but drought necessitated DCPs and additional voluntary actions.
- **Provide predictability:** Structuring deliveries around specific Lake Mead elevations improved predictability for Lower Division states and provided a common framework for appreciation of future risk
- **Provide flexibility for meeting water use needs:**
 - The Guidelines provided a framework on which to build additional flexibilities and conservation opportunities through the Upper and Lower Basin DCPs
 - The ICS mechanism provided Lower Division states flexibility in meeting water use needs, played a critical role in avoiding low Lake Mead levels (nearly 3.2 maf saved), and provided a foundation for the concept of DCP contributions
 - Adding additional parties/exhibits proved challenging and may have limited ICS participation.

Adherence of Guidelines to Common Themes

- **Encourage conservation:** robust conservation through the ICS mechanism (the foundation of a similar mechanism for Mexico) and facilitation of other conservation activities; aspects of the ICS mechanism were limiting
- **Plan for shortages:** clearly defined shortage criteria provided the ability to plan for shortages and additional mitigation activities as risk of reaching critically low reservoir elevations increased
- **Closer coordination:** through close coordination of Lake Powell and Mead, several experiences stand out:
 - Predominance of balancing and equalization releases, highlight the increased link between Upper and Lower Basin activities
 - Severe, prolonged drought undermined two objectives: minimizing shortages in the Lower Basin and avoiding risk of curtailment in the Upper Basin; the DCPs were necessary to address increasing risk of reservoirs reaching critically low elevations
- **Preserve flexibility:** the Guidelines provided flexibility and stability to support subsequent operational decisions
- **Long but not permanent period:** in effect through 2026, providing 19 years of operational experience
- **Feds facilitate, not dictate:** Basin States agreed to mandatory consultation and negotiation before litigation; collaboration activated by Guidelines underpinned complementary activities and supports long-term stable management

7.D. Review Conclusions

- Applying the approach to evaluate effectiveness, Reclamation concludes that the Guidelines were largely effective as measured against both their purpose and common themes.
- Increasing severity of the drought necessitated additional action to reduce the risk of reaching critically low elevations in Lakes Powell and Mead.
- Experience over the past 12 years provides important considerations:
 - 1) enhanced flexibilities and transparency for water users;
 - 2) expanded participation in conservation and Basin-wide programs;
 - 3) increased consideration of the linkage that occurs through coordinated reservoir operations, particularly with respect to the inherent uncertainties in model projections used to set operating conditions; and,
 - 4) demonstrated need for more robust measures to protect reservoir levels.



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7.D. Review Website:

<https://www.usbr.gov/ColoradoRiverBasin/>



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