COLORADO RIVER WATER
CONSERVATION DISTRICT

Protecting Western Colorado Water Since 1937

April 30, 2007

Jayne Harkins, Regional Director
Lower Colorado Region, Bureau of Reclamation
Attention: BCOO-1000
P.O. Box 61470
Boulder City, NV 89906-1470

Re: Comments on the Draft EIS for Colorado Interim Guidelines for Lower Basin Shortage and Coordinated Operations for Lake Powell and Lake Mead

Dear Director Harkins:

The Colorado River Water Conservation District (Colorado River District) is pleased to submit comments on the Draft EIS for Colorado River Interim Guidelines for Lower Basin Shortage and Coordinated Operations for Lake Powell and Lake Mead (Shortage Criteria DEIS).

The Colorado River District is one of four water conservation districts chartered by the Colorado General Assembly. The Colorado River District covers all of the Colorado River Basin within Colorado north of the San Juan Mountains.

The Colorado River District through a coalition with other Colorado River water agencies within Colorado has participated with Colorado state officials in the discussions and negotiations among the seven Colorado River Basin States. Therefore, the Colorado River District generally endorses and supports the comments of the Colorado Water Conservation Board (CWCB), dated April 30, 2007 and the collective comments of the seven Basin States, dated April 30, 2007.

The Colorado River District believes that it its important that the Secretary of the Interior select a preferred alternative and ultimately sign a record of decision that implements the major elements of the seven states proposal. We do not believe the seven states proposal is a take-it-or-leave-it proposal. Therefore, it would be appropriate for the Secretary to incorporate elements of the other action alternatives into the preferred alternative, as needed.

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Recognizing that the primary purpose of the Draft EIS is to disclose the environmental impacts of the proposed action and reasonable alternatives to the action, to the general public and decision making agencies, the Colorado River District has the following comments and suggestions that we believe could make the final EIS a more effective "disclosure" document:

1. The Draft EIS is very comprehensive with lengthy chapters and a number of appendices. Therefore, the Executive Summary is a critical document. Where possible, the DEIS Executive Summary could be made more user friendly. For example, on page ES-6, the "No Action Alternative" paragraph discusses the limitations and uncertainties of defining the no-action alternative, but the paragraph never really gives the reader an understandable description of no-action.

   The treatment of hydrology primarily uses probabilities. The following statement appears on page ES-7: "Due to the uncertainty with regard to future inflows into the system, multiple simulations were performed in order to quantify the uncertainties of future conditions and as such, the modeling results are typically expressed in probabilistic terms." Yet, the ES provides no assistance or guidance to the reader in how to utilize the results that are expressed with probabilities.

2. For the primary treatment of hydrology as displayed in the Executive Summary, chapter 3, "Existing Conditions" and chapter 4, "Environmental Consequences," the various graphs and conclusions are based on the 1906-2004 period. Reclamation needs to make it very clear to the reader that the fundamental assumption is that the key statistics that describe the hydrology, mean, standard deviation and skew will continue into the future (no change from the 1906-2004 period).

   Appendix N, "Analysis of Hydrologic Variability Sensitivity" is an excellent approach to introduce alternative methods for hydrology reviews. Reclamation is to be commended for taking this step. However, in the Executive Summary, there is no reference to Appendix N. Without getting into the complications, Reclamation, as a minimum, could describe for the reader, the information provided in Appendix N and why it might be relevant to the basin states, NGOs, federal agencies and the Secretary of the Interior in the decision making process.

   For example, the results of the Direct Paleo analysis in Appendix N suggest that based on a longer or different period of record than 1906-2004, the probability of shortages and the magnitude of shortages may be slightly higher than what is suggested in the Draft EIS (chapter 4).

Because Appendix N is a rich source of information for decisions makers, the Executive Summary should contain a few paragraphs on its implications for future decisions.

3. The probabilistic treatment of the hydrology data fails the decision maker in one potentially important, if not critical factor. The numerous graphs throughout the Draft EIS generally show the probability of an event occurring versus time (under the different alternatives). For example, figure 4.3-25 "Lake Mead End-of-December Elevations" is a relatively important graph with considerable information of importance to decision makers. This graph compares Lake Mead levels under the different alternatives at the 10%, 50% and 90% levels. What is missing is the "temporal" factor. The hydrologic record for the Colorado River in both the 1906-2004 period and the longer paleo record shows that there are 10-40 year periods of above normal flows followed by 10-40 year periods of below normal flows. During the wet periods, reservoir levels are generally full and shortages rare (or nonexistent) for extended periods of time. In contrast, during the drier periods, except for occasional bump years, mainstem reservoir levels remain low and shortages are routine. This temporal data is best displayed by using example single traces. We have attached an example of this approach. Based on information Reclamation has provided, the attached graphs show Lake Mead and Lake Powell levels, release values, and calculated shortages for two sample traces, 37 and 43. For a decision maker, the consequences of shortages occurring randomly with a 1 in 3 probability over a 60 year period is very different than having a 20 year period with consecutive shortages within that 60 year period (with no shortages in the other 40 years!).

4. Within the Draft EIS there is no real discussion of the potential impacts of climate change. As Reclamation is aware, the National Research Council of the National Academies of Science recently published a report on Colorado River Basin water management. This report concludes that "the preponderance of the evidence" that suggest conditions in the Colorado River Basin will be characterized by higher temperatures and lower stream flows.

The Colorado River District recognizes that there are no readily available (and generally accepted) data sets for future flows that could be used to generate alternative hydrology runs. However, the Executive Summary should certainly include a qualitative discussion of the available climate science (and its limitations) and what it MAY mean for future operations of Lake Mead and Lake Powell. It is also be suggested that Reclamation obtain inflows from a source such as the Lettenmaier 2006 study and include it within Appendix N of the final EIS.

Sincerely,

Eric Kuhn
General Manager

REK/ldp
Attachments
c: (w/ attachments)
James Lochhead, Esq.
Scott Balcomb, Esq.
Randy Seaholm
Don Ostler

Lower Basin Shortage (AZ, CAP, SNWP, MWD, Mexico) - Run37
Basin States Alternative

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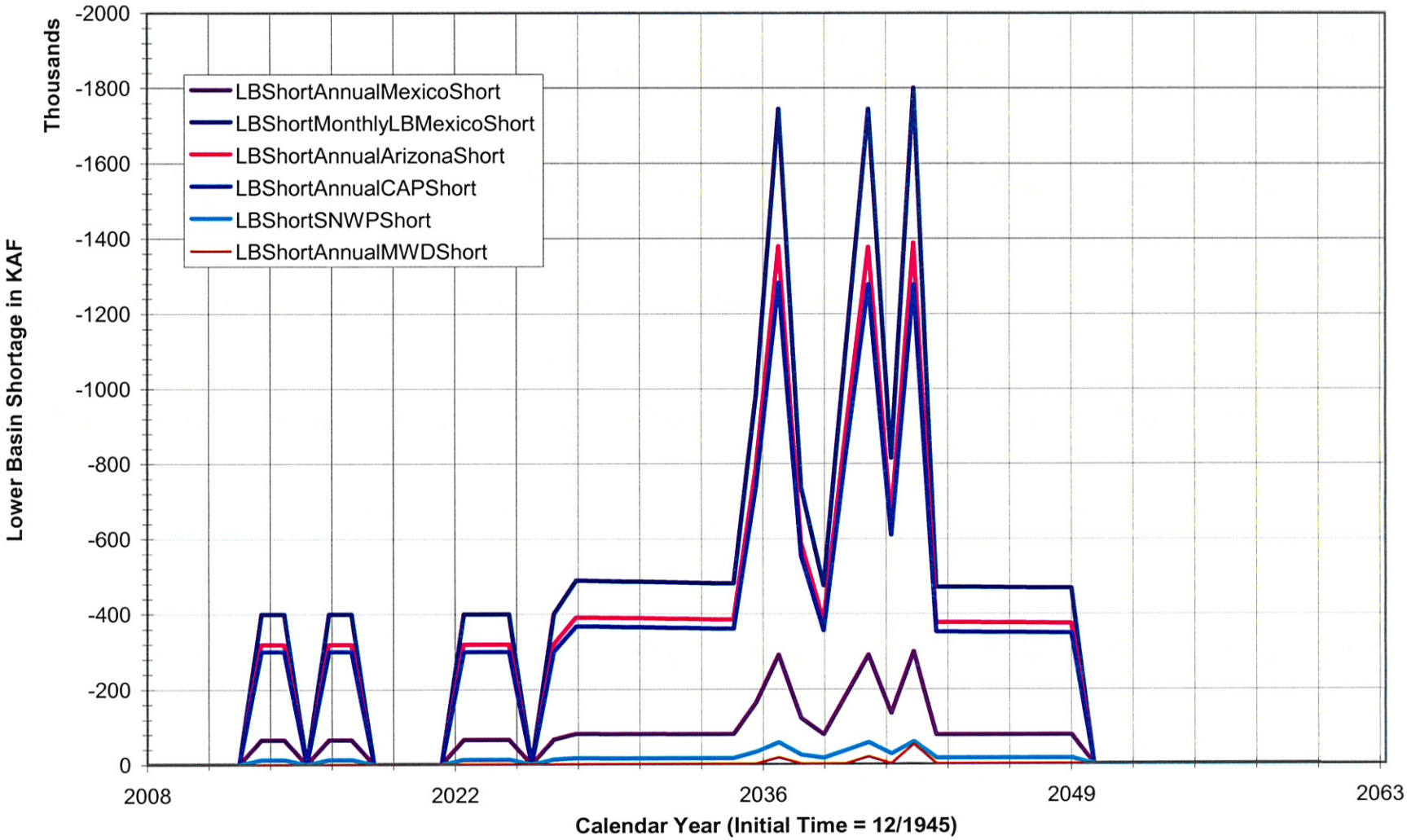

Lower Basin Shortage (AZ, CAP, SNWP, MWD, Mexico) - Run43
Basin States Alternative

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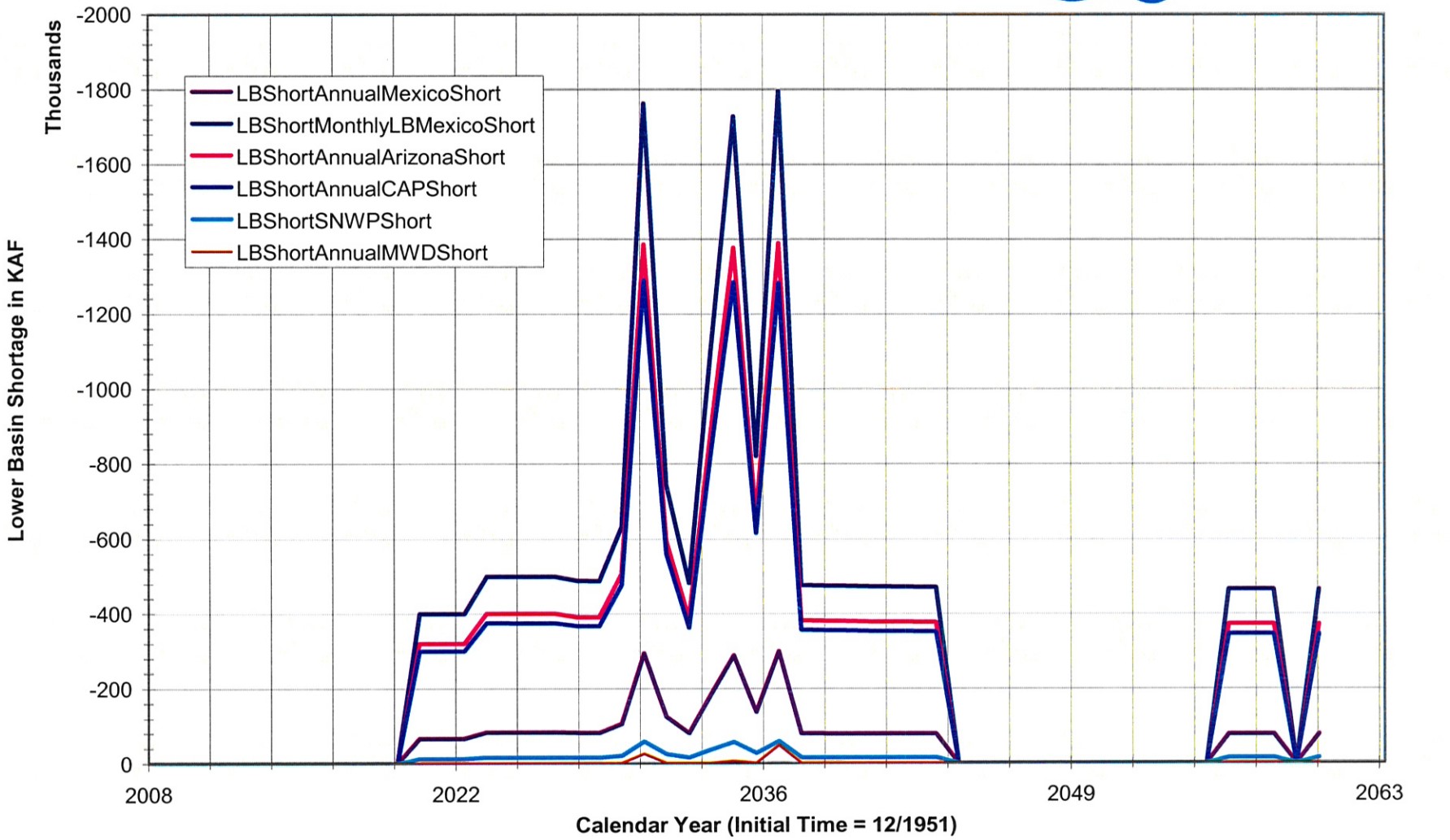

CRSS Results (Shortage DEIS) Comparison of STORAGE
Lakes Powell and Mead - Trace 37 - Basin States Alternative

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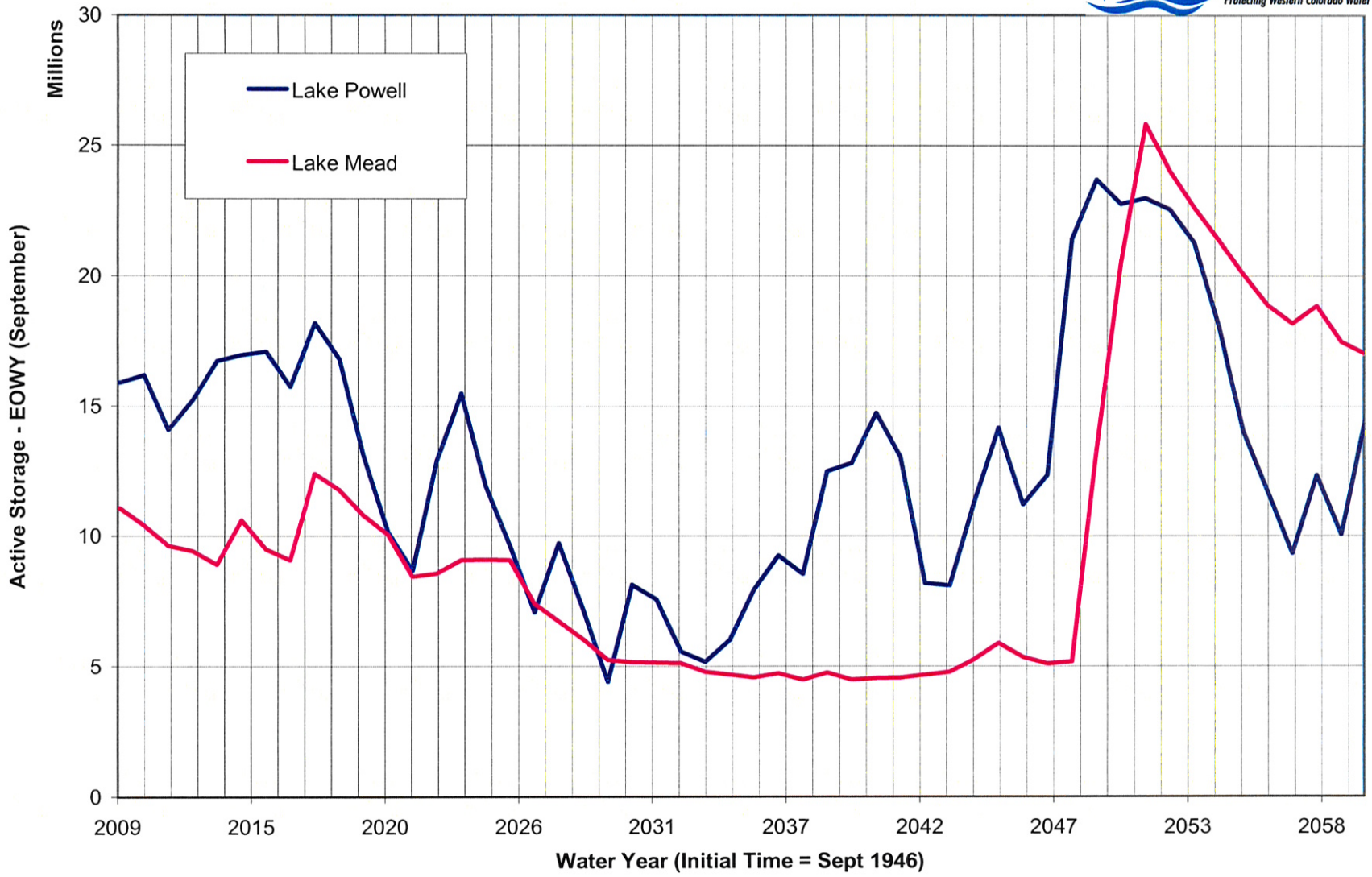

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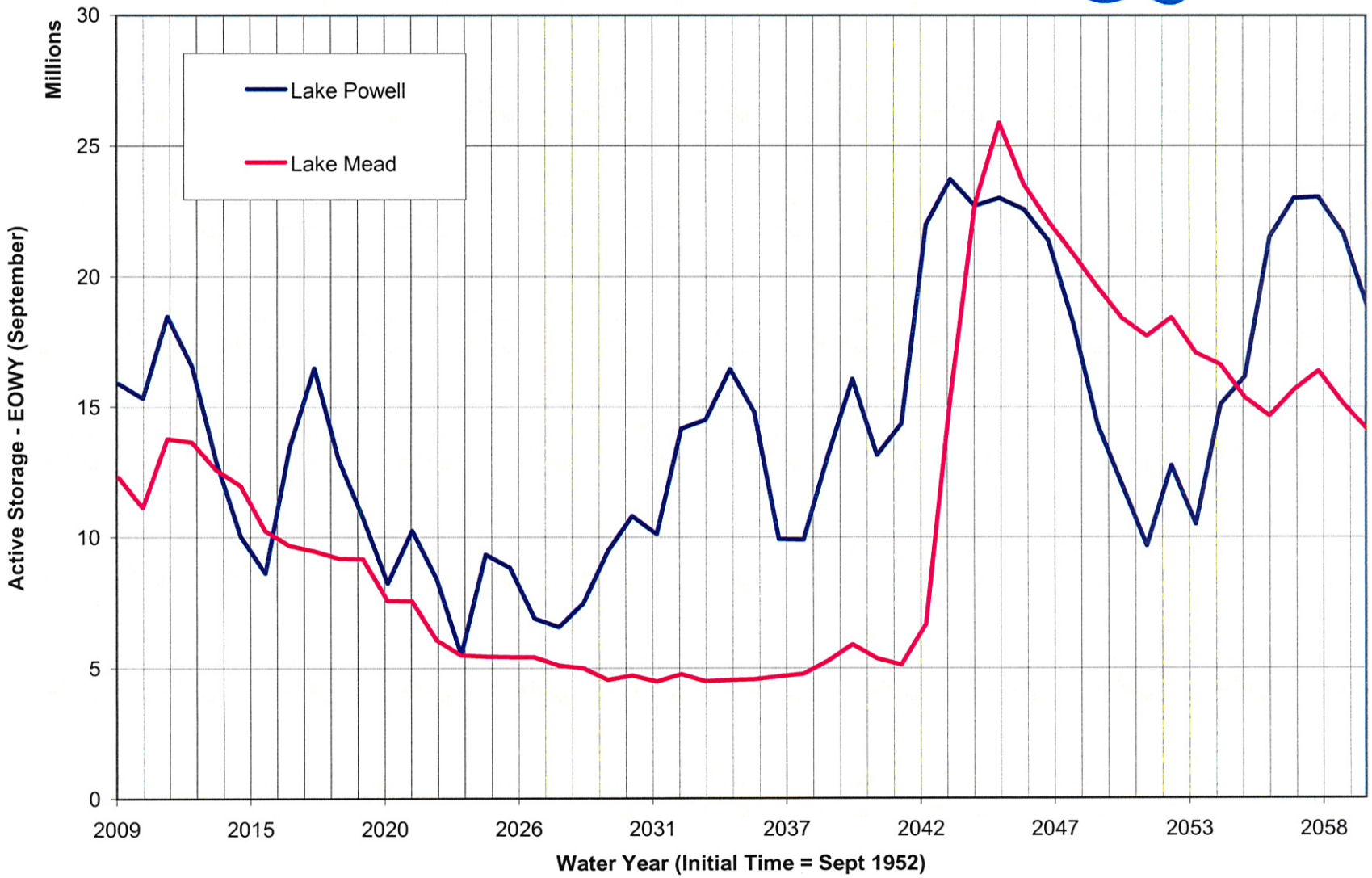

CRSS Results (Shortage DEIS) Comparison of RELEASES
Lakes Powell and Mead - Trace 37 - Basin States Alternative

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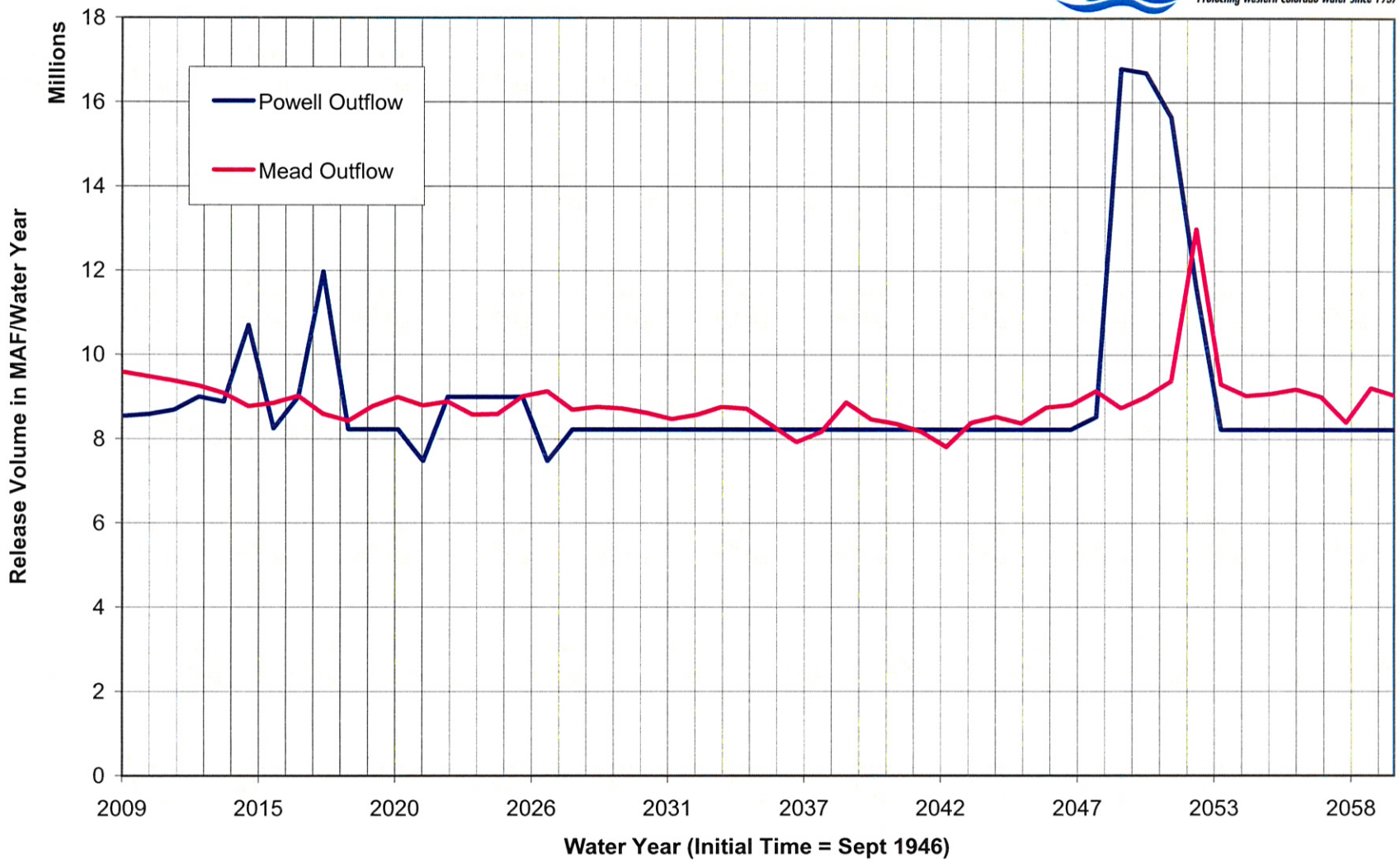

CRSS Results (Shortage DEIS) Comparison of RELEASES
Lakes Powell and Mead - Trace 43 - Basin States Alternative

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