



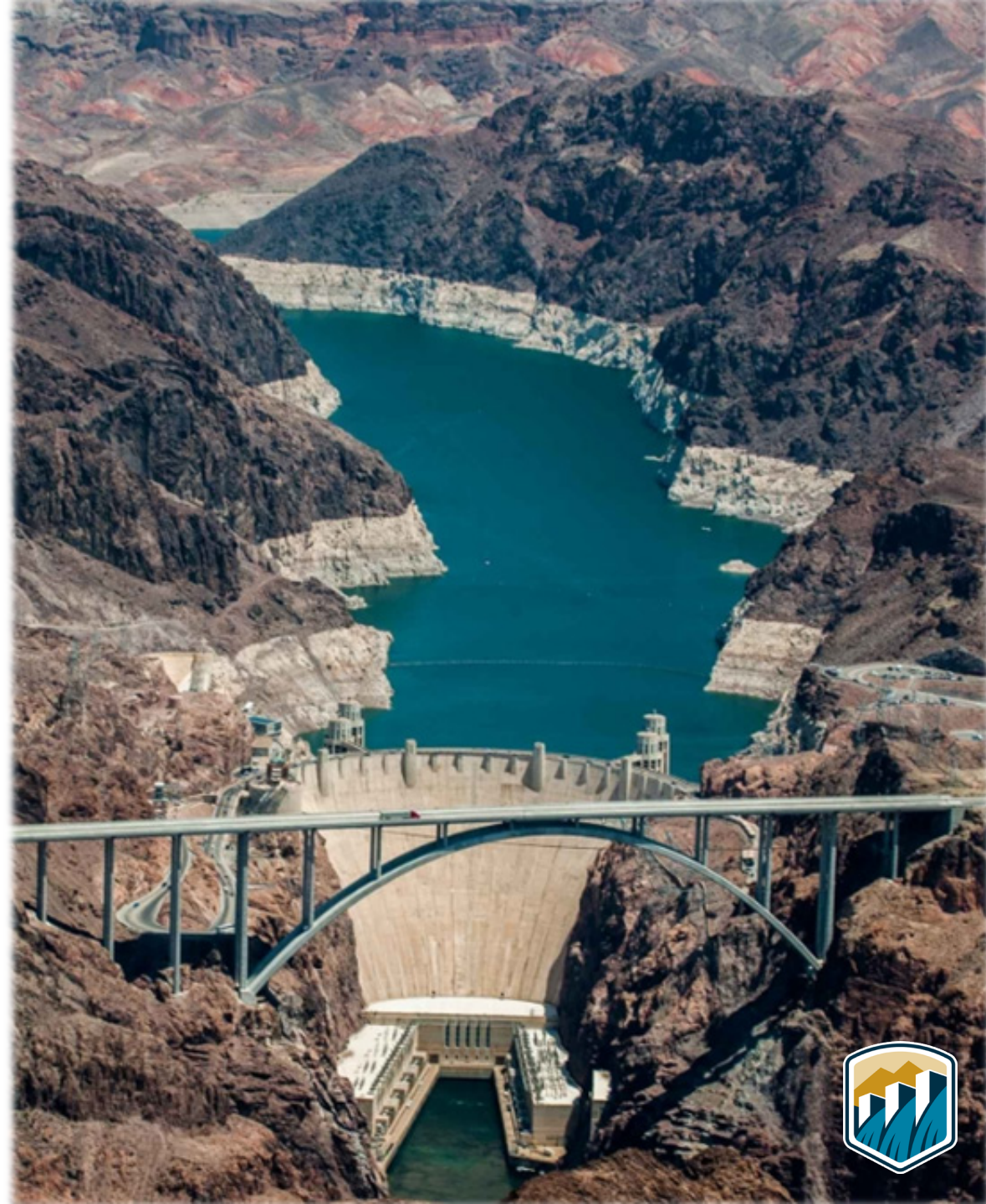
— BUREAU OF —
RECLAMATION

Colorado River Basin Lake Powell & Lake Mead Operations Post-2026 Update

Carly Jerla, Post-2026 Program Manager
CRWUA 2024 - December 5, 2024

Presentation Overview

- Post-2026 Process Update
- Alternatives Development Approach
- Comparison of Alternatives
- Range of Alternatives
- Summary



Post-2026 Process Update

- June 2022: “Pre-Scoping” Federal Register Notice
- June 2023: Notice of Intent to prepare an EIS formally initiates the Post-2026 process
- October 2023: Proposed Federal Action and Purpose & Need identified in Federal Register Notice
- November 2023: Operations Explorations Web Tool released
- March 2024: First proposed NEPA Alternatives submitted
- November 2024: NEPA Alternatives identified (brief narrative descriptions published)
- December 2024 (anticipated): Publication of NEPA Alternatives Report
- Goal: Adopt Record of Decision by August 2026



Alternatives Approach

- Goal: develop a broad range of reasonable – and broad – range of alternatives through collaboration with our key partners
- Throughout 2024, worked extensively with Basin partners to explore and model proposed alternatives/concepts
 - March-October: held 60+ meetings with States, Tribes, and other partners to review and refine their proposals
 - 300+ strategies developed in Web Tool
 - October: held public webinar to share preliminary performance of proposed alternatives/concepts
- We believe NEPA Alternatives identified provide a sufficiently broad range and provide opportunities for a consensus path forward



Proposed Federal Action

(from October 2023 Federal Register Notice)

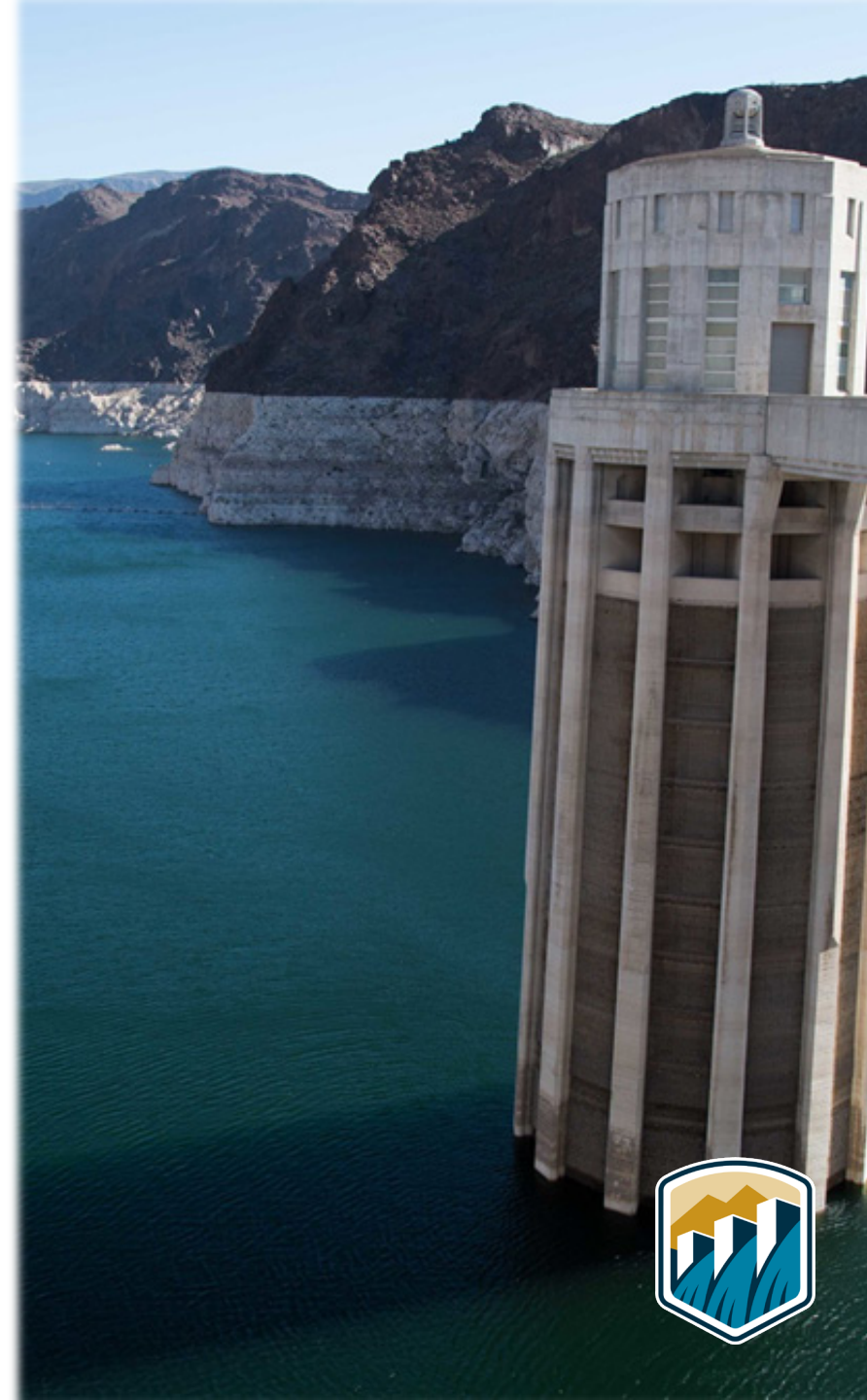
- Based on public input, the Department anticipates the guidelines would include the following elements:
 - **Lower Basin Shortage (and Surplus) Guidelines:** Identification of circumstances under which the Secretary would allocate, reduce, or increase the annual amount of water available for consumptive use from Lake Mead to the Lower Division states at, below, or above 7.5 MAF, pursuant to the Supreme Court Decree in Arizona v. California.
 - **Coordinated Operations of Lake Powell and Lake Mead**, particularly under low reservoir conditions.
 - **Storage and Delivery of Conserved water in Lake Mead and/or Lake Powell** to increase the flexibility to meet water use needs from both reservoirs
- The proposed federal action does not preclude upstream or downstream actions needed to protect critical reservoir elevations at Lake Powell and Lake Mead such as–
 - Approaches that include opportunities for conservation or other water management strategies
 - Temporary emergency response operations at upstream Colorado River reservoirs to protect critical infrastructure at Glen Canyon Dam, so long as those operations are within the respective RODs



Comparison of Alternatives

- No Action
- Federal Authorities
- Federal Authorities Hybrid
- Cooperative Conservation
- Basin Hybrid

A Preferred Alternative has not been identified at this time.



Concepts Common to All Alternatives

(published November 2024)

- All alternatives will undergo a detailed analysis of impacts on the natural and human environment as necessary to develop a Draft EIS. The analysis will also compare the performance of alternatives over a common set of key hydrologic metrics including reservoir elevations, water use and reductions, and deviations from Glen Canyon objective releases, pursuant to the Long-Range Operating Criteria (LROC).
- Releases from Lake Powell may be less than the specified release below elevation 3,490 ft due to Glen Canyon Dam infrastructure limitations.
- Additional Lower Basin shortages (and potential additional reductions in water deliveries to Mexico) may be necessary under future hydrologic scenarios where Lake Mead reaches dead pool.
- As in the 2001 and 2007 Guidelines, the Secretary retains all applicable authority to respond to exigent and emergency conditions.
- The determination of deliveries to Mexico is not a part of the proposed federal action. Any such determination would be made in accordance with the 1944 Treaty. Nevertheless, modeling assumptions with respect to the distribution of shortages for the Lower Division States include operationally aligned water delivery reductions to Mexico in order to analyze potential impacts to hydrologic and other environmental resources. Shortage amounts described are amounts of total shortage, including Mexico. Modeling assumptions that identify water deliveries to Mexico pursuant to the 1944 Treaty with Mexico would be developed after all necessary and appropriate discussions have been completed with the United States International Boundary and Water Commission in consultation with the Department of State.



Shortage Guidelines to Reduce Deliveries from Lake Mead



	No Action	Federal Authorities	Federal Authorities Hybrid	Cooperative Conservation	Basin Hybrid
Trigger	Mead Elevation	Powell & Mead Storage	Powell & Mead Storage	Total System Storage	Total System Storage
Start of Shortage	1,075 ft	70%	60%	80%	80%
When Shortages Equal 1.5 maf	Dead Pool	48.7%	60%	50%	38% - 68%
Max Shortage	0.6 maf	3.5 maf	3.5 maf	4 maf	2.1 maf
Distribution of Shortages	Priority	Priority	Pro-rata	Priority with state-specific distribution up to 1.5 maf	Priority and Pro-rata with state-specific distribution up to 1.5 maf (will also be analyzed without Tribal shortages)
Adjustment	None	None	None	Recent Hydrology	None
Curve					

Coordinated Reservoir Operations (Powell & Mead)

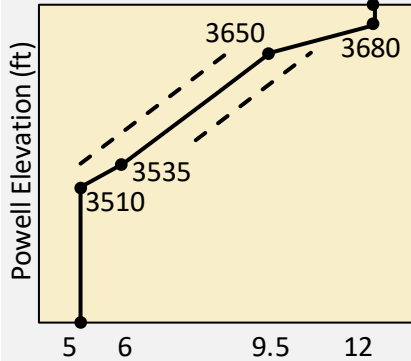
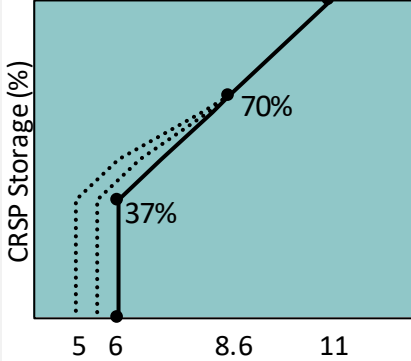
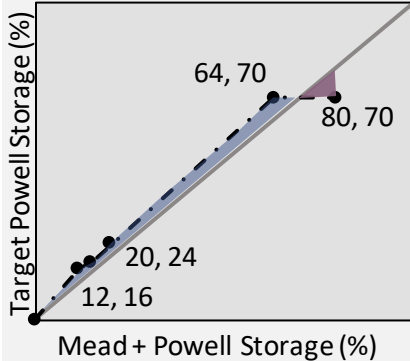
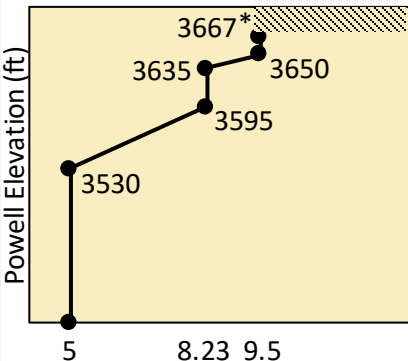
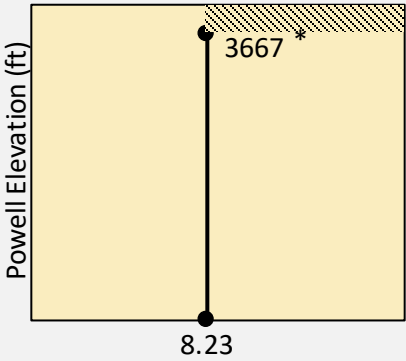


	No Action	Federal Authorities	Federal Authorities Hybrid	Cooperative Conservation	Basin Hybrid
Release Factors	Powell & Mead Elevations	Powell & Mead Elevations	Powell & Mead Elevations, Hydrology, LB Deliveries	CRSP Storage, Recent Hydrology	Powell Elevation, Powell & Mead Storage
Range of Releases	8.23 maf or Equalization	5 to 9.5 maf or Equalization	4.7 to 12 maf	5 to 11 maf	5 to 12 maf
Degree of Coordination	Limited: Equalization	Limited: Equalization	Maximum: Based on prescribed Powell & Mead guide curve	Maximum: Based on current conditions and use of Conservation Reserve	Moderate: Based on Mead & Powell storage difference (> 2 maf)
Presence & Duration of 8.23 maf Release	3,490 to 3,667 ft	3,595 to 3,635 ft	None	65%	3,608 ft
Absolute Protection of 3,490 ft	Not Modeled	Yes	Yes	Yes	No

Curve

- Primary Release Curve
- Release Guide Curve
- Release Adjusted for Hydrology
- Release Adjusted Based on Mead + Powell Storage Distribution
- Equalization/ Balancing Release [*Starts at 3667 ft]

Note: all Powell releases below 3490ft are subject to infrastructure constraints (not shown)



Storage & Delivery of Conserved & Non-System Water



	No Action	Federal Authorities	Federal Authorities Hybrid	Cooperative Conservation	Basin Hybrid
Location	Only delivery of existing ICS in accordance with existing agreements	Only delivery of existing ICS in accordance with existing agreements	Powell & Mead	Powell & Mead	Powell & Mead
Purpose			<ul style="list-style-type: none"> - Offsetting/managing reductions - Infrastructure protection - Mitigating resource impacts - Enhanced Tribal participation 	<ul style="list-style-type: none"> - Offsetting/managing reductions - Infrastructure protection - Mitigating resource impacts 	<ul style="list-style-type: none"> - Offsetting/managing reductions - Infrastructure protection
Size			Powell: 2 maf Mead: 5 maf	Total: 8 maf (either reservoir)	Powell: 3 maf Mead: 8 maf
Flexibilities			Enhanced: transactions within each basin, including interstate and creation of Federal pools	Maximum: transactions within and across basins, including interstate and inter-basin	Expanded: transactions within each basin
Operational Neutrality			Limited: Powell only for determination of Lower Basin shortages	Yes	Yes
Tribal Access		Explicit accounting of unused Tribal water	<ul style="list-style-type: none"> - Equal treatment of all Tribal and non-Tribal entities - Explicit accounting of unused Tribal water 	Equal treatment of all Tribal and non-Tribal entities	<ul style="list-style-type: none"> - Equal treatment to all Tribal and non-Tribal entities - Explicit accounting of unused Tribal water

Additional Activities above Lake Powell



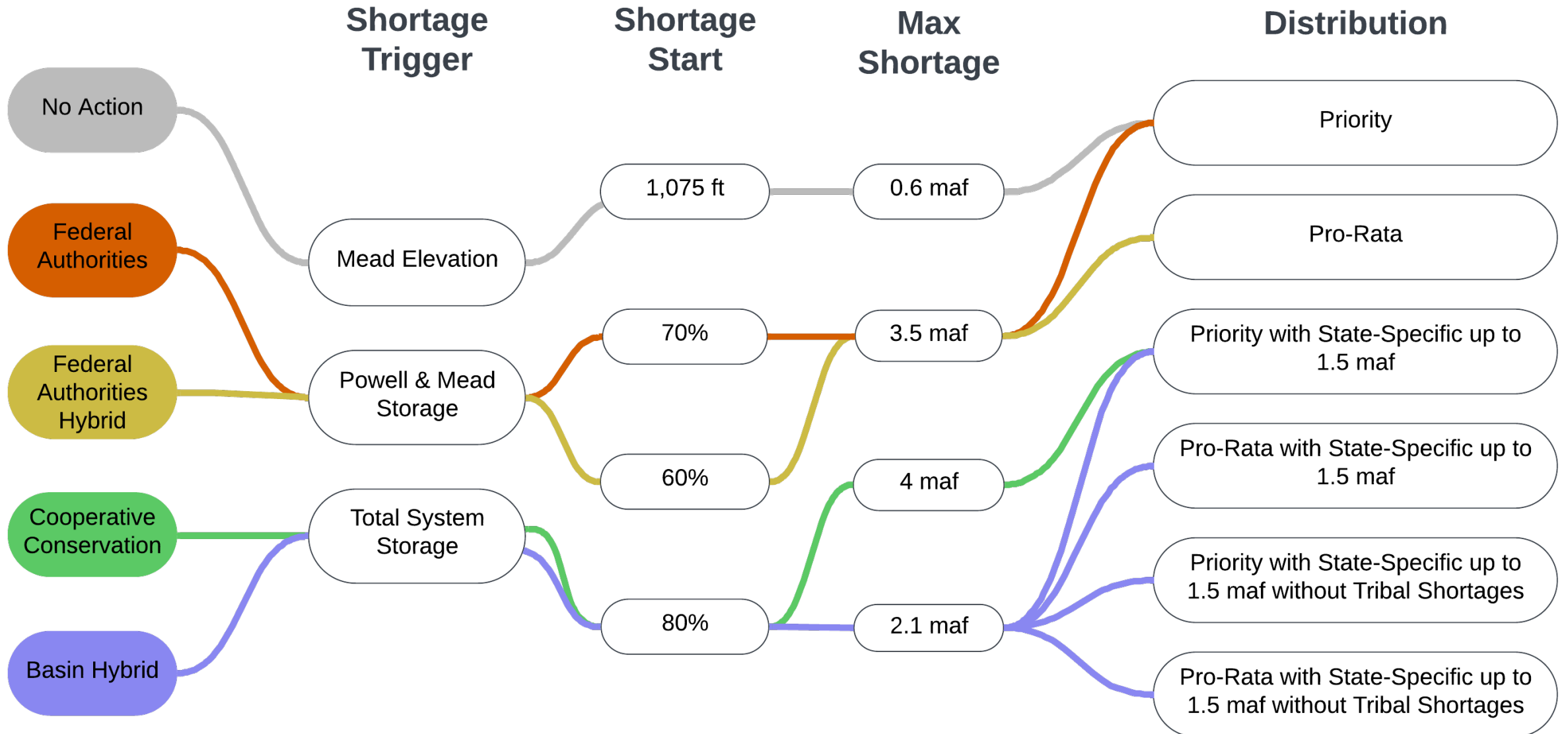
	No Action	Federal Authorities	Federal Authorities Hybrid	Cooperative Conservation	Basin Hybrid
Releases from CRSP Initial Units (within RODS) to Protect Infrastructure at Glen Canyon Dam	No specific activities modeled above Lake Powell	Yes	Yes	No	Yes
Upper Basin Conservation	None	None	Yes	Yes	Yes
Magnitude	-	-	Up to 200 kaf/year, subject to hydrology	Avg of 200 kaf/year, subject to hydrology	Up to 100 kaf/year, subject to hydrology
Location Stored	-	-	Powell storage mechanism	Powell or Mead storage mechanism	Powell storage mechanism
Conversion of Conserved Water to System Water	-	-	Convert portion if Lower Basin Shortages > 2.0 maf	Convert when Lower Basin Shortages > 2.0 maf to offset shortages down to 2.0 maf	Maximum of 300 kaf converted when Lower Basin Shortages reach 2.1 maf, subject to Upper Basin hydrologic shortages
Other Activities	Not Included	Not Included	May be pursued through parallel processes	Not Included	Not Included

Range of Alternatives



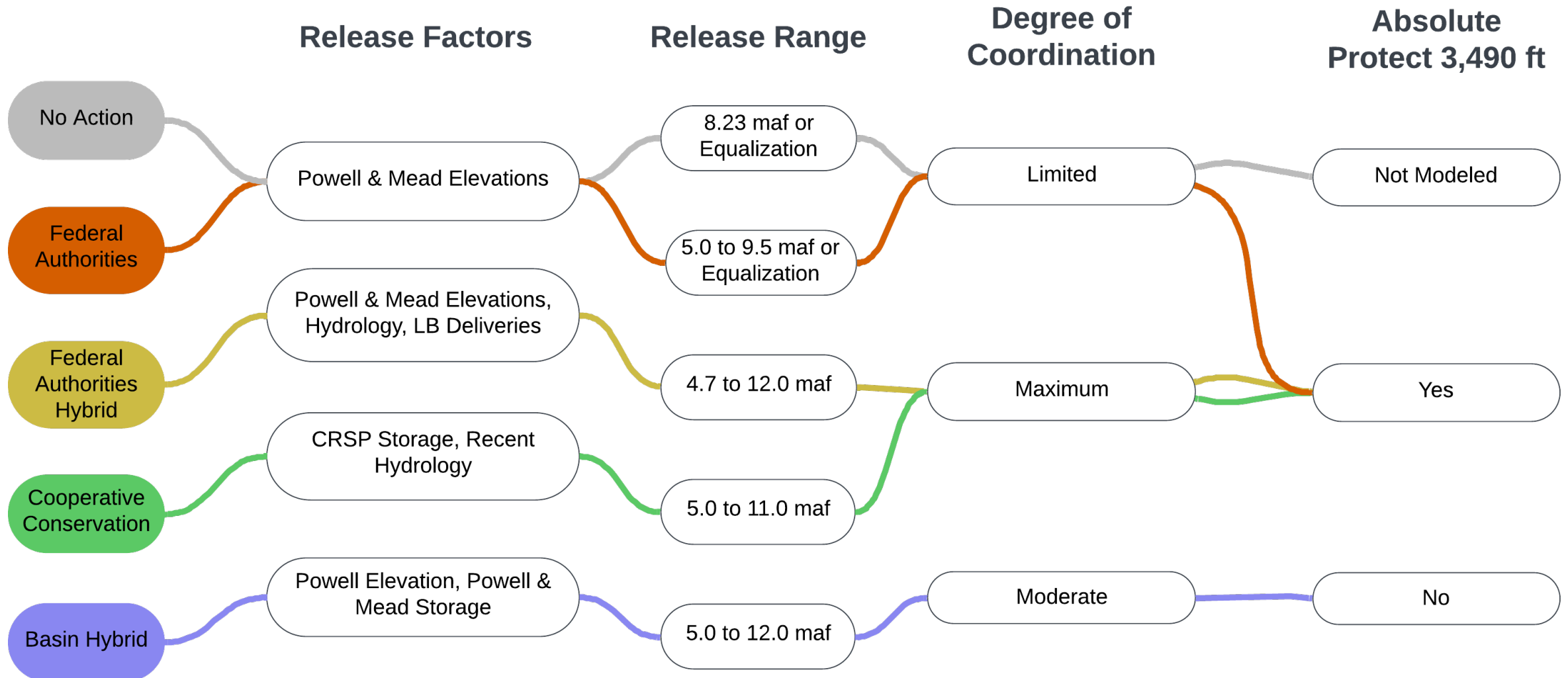


Lower Basin Shortage Guidelines





Coordinated Operations of Powell & Mead





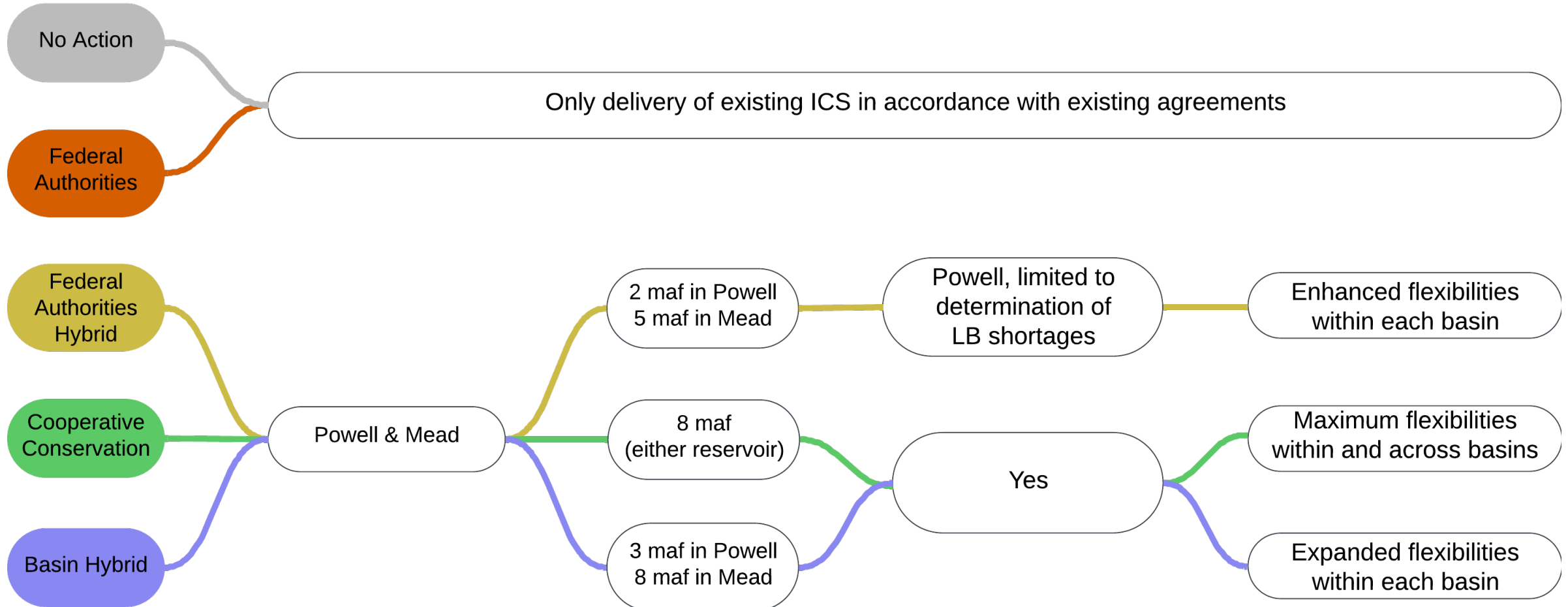
Storage & Delivery of Conserved Water

Location

Size

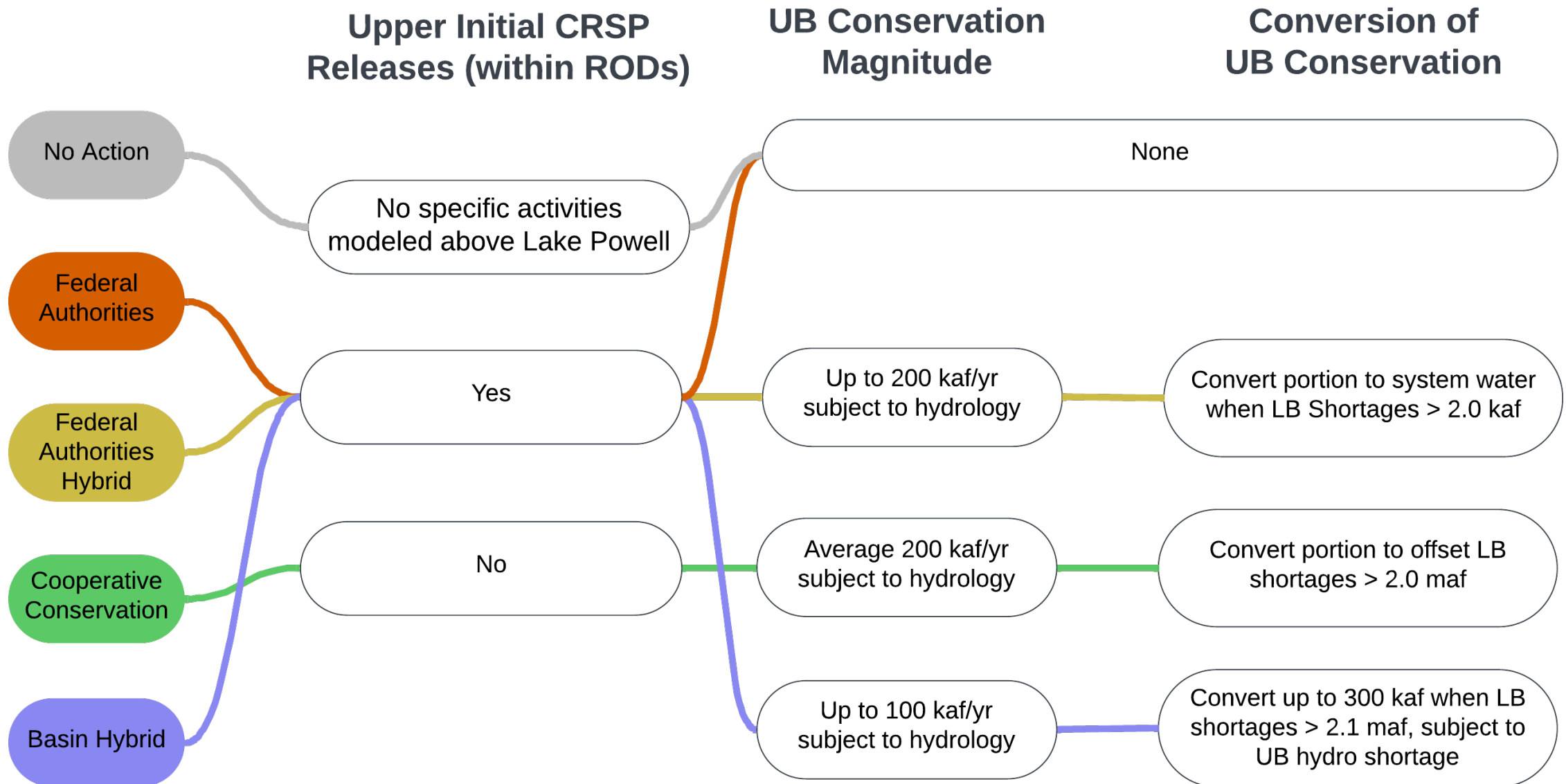
Operational
Neutrality

Flexibilities





Additional Activities above Lake Powell



Summary

- Identified alternatives provide a sufficient range for analysis and were designed to enable States, Tribes and other Basin interests to continue to work towards a consensus agreement
- NEPA Alternatives Report anticipated for publication in December 2024, will provide:
 - More detailed explanation of alternatives
 - Rationale to include elements of submitted proposals rather than carrying forward as submitted
 - Summary of anticipated analysis process for the DEIS
- Publishing the alternatives in advance of the DEIS is a voluntary step to provide greater transparency and opportunities for collaboration
- Detailed resource impact analysis will begin in early 2025

