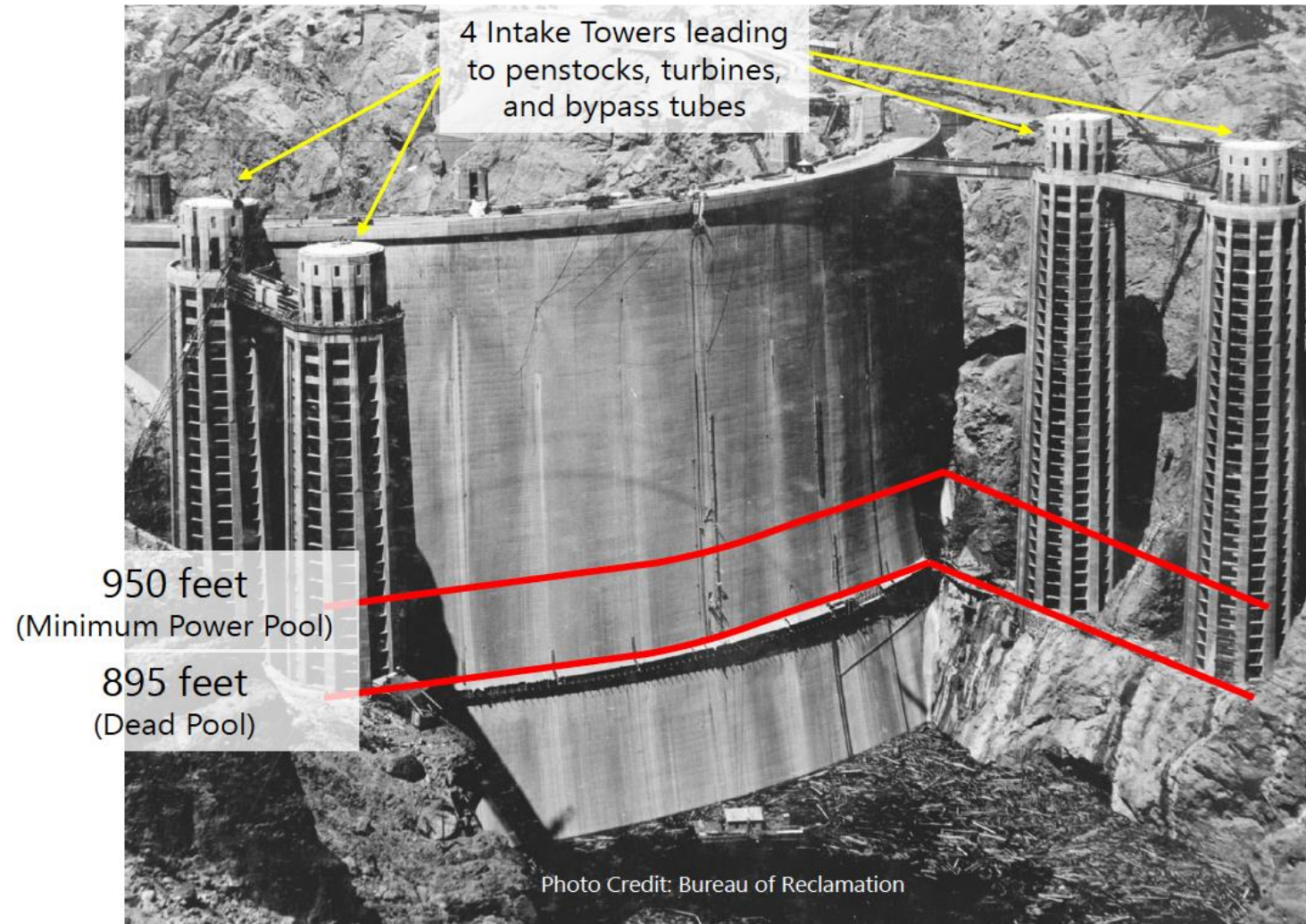


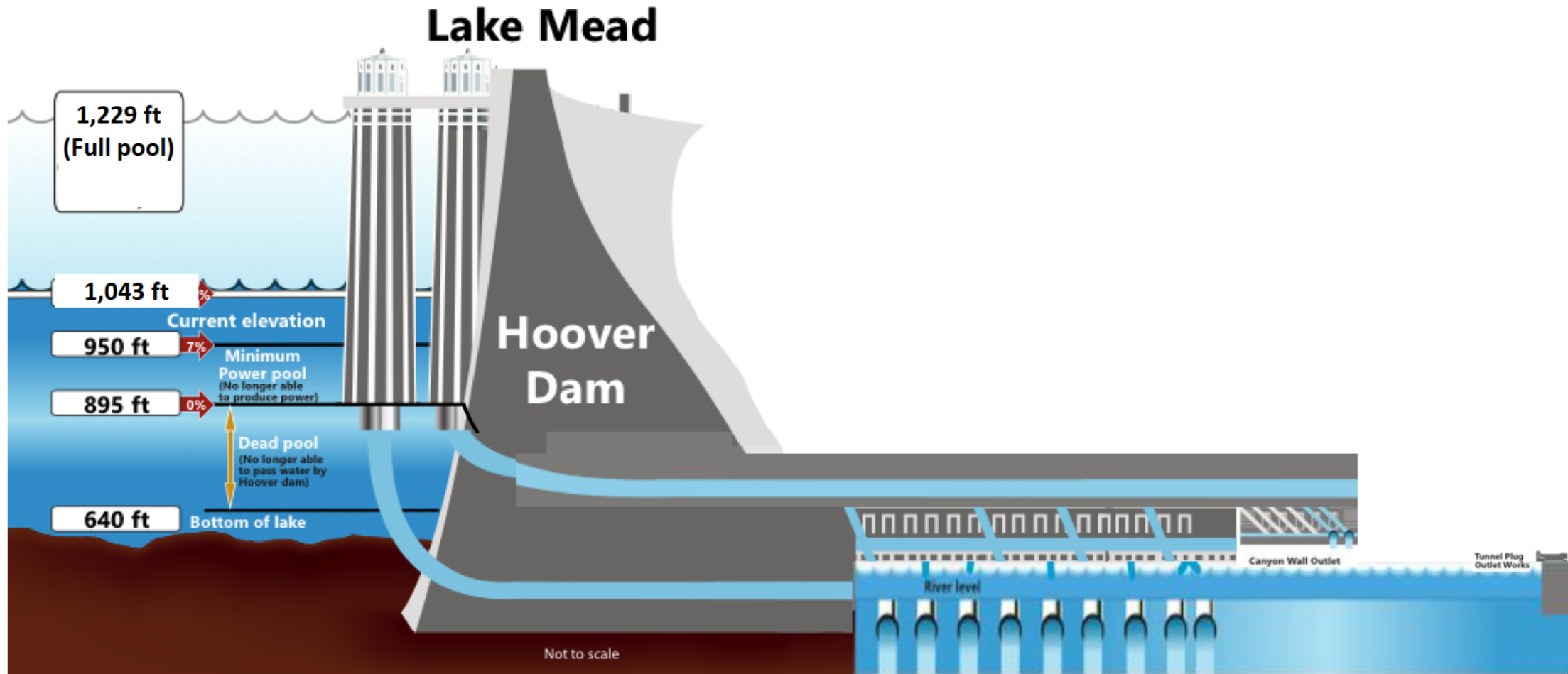
Colorado River

February 22, 2023

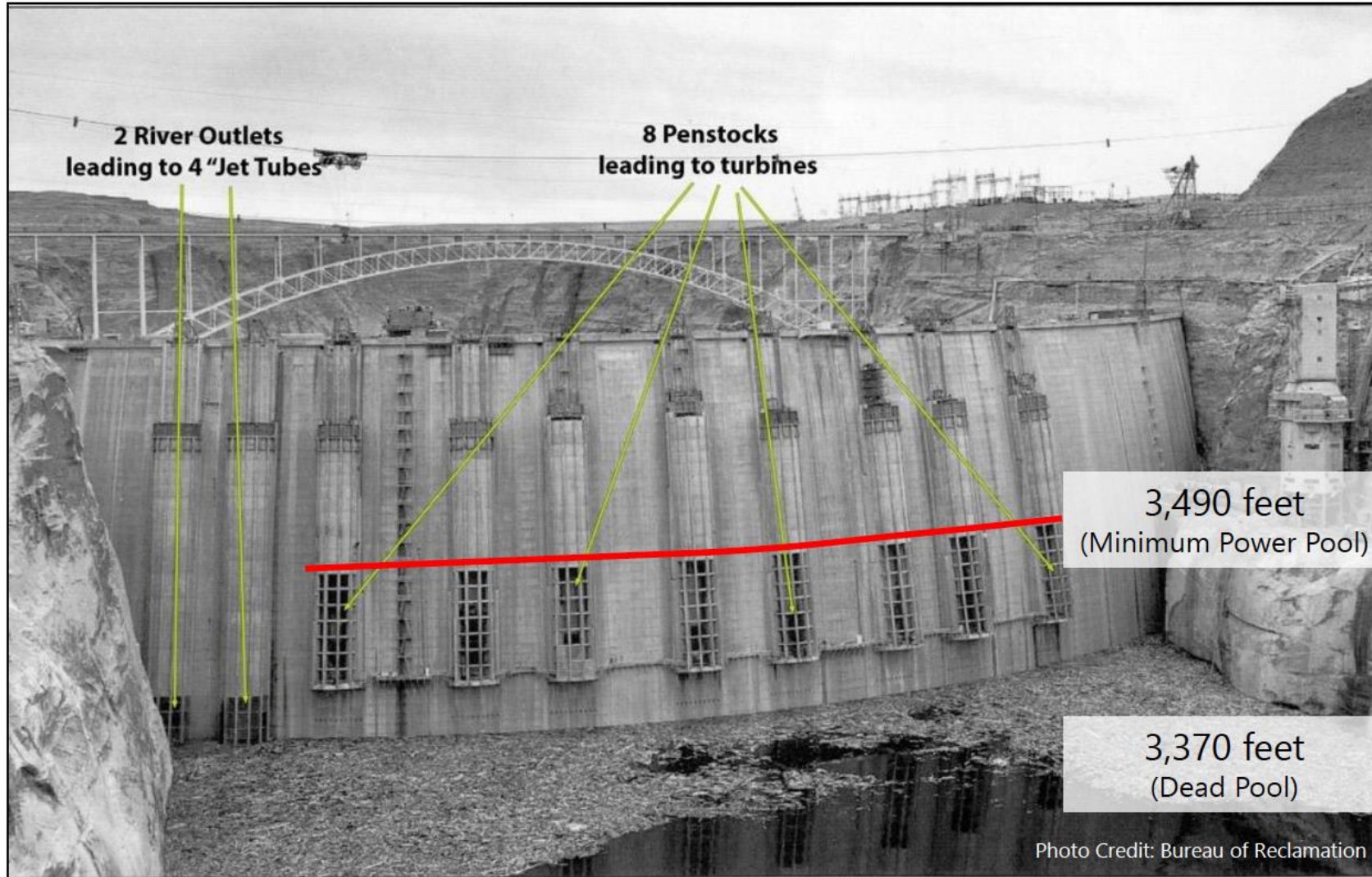
Hoover Dam – May 27, 1935



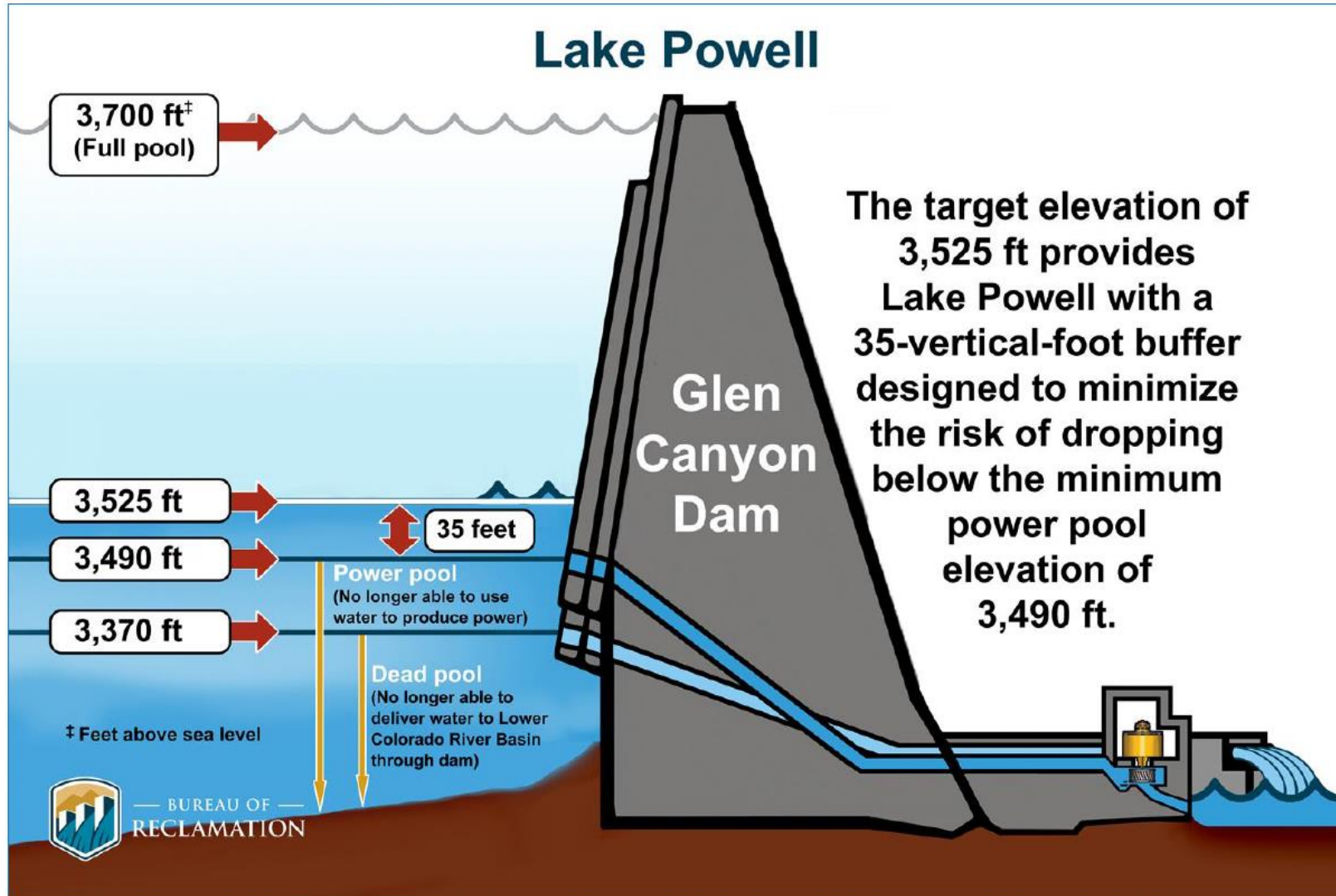
Lake Mead Key Elevations

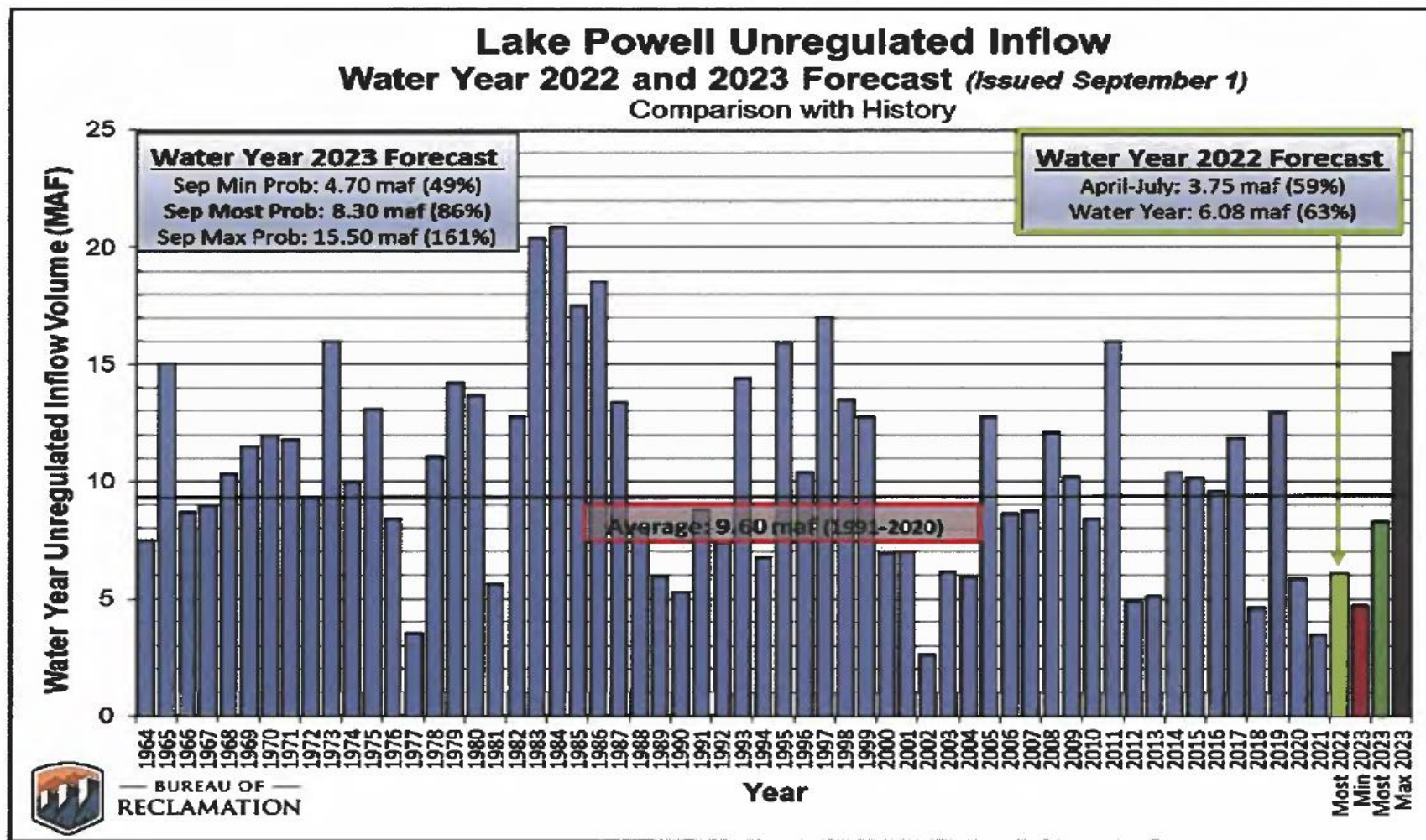


Glen Canyon Dam - November 21, 1963



Lake Powell Key Elevations





The Law of the River

OVERVIEW OF THE LAW OF THE COLORADO RIVER
by: Bill Swan

A. Historical Background

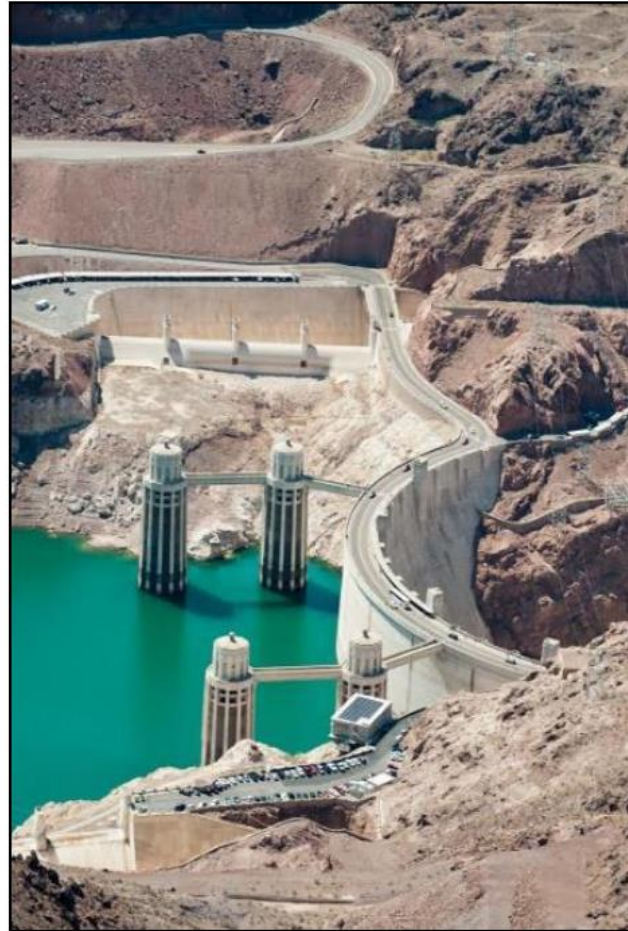
1. In the middle 1800's the entire basin was largely undeveloped. In 1865 Congress established the Colorado River Indian Reservation on the border between Arizona and California, and in the 1860's Congress started appropriating funds for the development of an reservation irrigation project to use Colorado River water.
2. Late 1800's - major irrigation developments in the Imperial, Palo Verde, and Yuma Valleys (Imperial Canal followed the gravity path from the Yuma area through Mexico).
3. Early 1900's - North Gila Valley and Yuma Projects.
4. 1901 - Davis and Lippincott Report - recommended studies for two projects: Boulder Canyon Dam and diversion dam and canal to Imperial Valley.
5. 1902 - federal Reclamation Act enacted (Yuma Reclamation Project authorized in 1907).
6. 1905 - Gila/Colorado flood and Salton Sea was created (205,000 cfs at Phoenix).
7. Floods motivated talk of a regulatory dam, and studies followed:
 - 1918 - All American Canal Board - recommended legislation to control the river.
 - 1920 - Kincaid Act - authorized Secretary to study diversion and use of Colorado River water within the whole watershed.
 - 1922 - Fall-Davis Report - recommended the All American Canal and a storage reservoir in the lower basin as opposed to the upper basin.
 - 1924 - Weymouth Report - spelled out the details of the Boulder Canyon Project Act.

Colorado River – Current Conditions

(as of December 7, 2022)



Lake Powell near Glen Canyon Dam



Lake Mead near Hoover Dam

- Driest 23-year period on record (2000-2022)
- Low inflows 4 of the past 5 years (37 to 63% of average)
- Lake Powell and Lake Mead at historically low water levels
 - Lake Powell current elevation is 3,528 feet at 24% of capacity
 - Lake Mead current elevation is 1,043 feet at 28% of capacity



SEIS Preliminary Alternatives

- No Action
 - Continued implementation of existing agreements that control operations of Glen Canyon and Hoover Dams
- Framework Agreement Alternative
 - Additional consensus-based actions that build on commitments and obligations developed by the Basin States, Tribes and non-governmental organizations as part of the 2019 DCPs
- Reservoir Operations Modification Alternative
 - A set of actions adopted pursuant to Secretarial authority under applicable federal law; could complement a consensus-based alternative that may not sufficiently mitigate current and projected risks to Colorado River System reservoirs



No Action Alternative

- Continued Full Implementation through 2026 of:
 - 2007 Interim Guidelines for operation of Lake Powell & Lake Mead
 - 2017 Minute 323 with Republic of Mexico
 - 2019 Drought Contingency Plan Contributions for Lower Basin States (AZ, CA, NV)
 - 2019 Drought Contingency Plan for the Upper Basin
 - 2019 Binational Water Scarcity Plan with Republic of Mexico



Anticipated Impacts of No Action

- Critically low elevations at Lakes Powell and 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



Framework Agreement Alternative overview

- An additional consensus-based set of actions that would build on existing commitments and obligations developed by the Basin States, Tribes, and non-governmental organizations as part of the 2019 DCP
- Reclamation would analyze any Framework Agreement Alternative in light of drier hydrology and extreme low flow scenarios
- Reclamation is analyzing scoping comments to help develop a framework agreement alternative and will continue to work with stakeholders



Framework Agreement Alternative components

- Could include issues, that respond to extreme low-flow conditions, such as:
 - What elevations might be protected in Lake Powell and Lake Mead
 - How much water might be released from Lake Powell
 - How much water might be released from Lake Mead
 - How shortages might be defined for Lower Basin States



Components of Reservoir Operations Modification Alternative

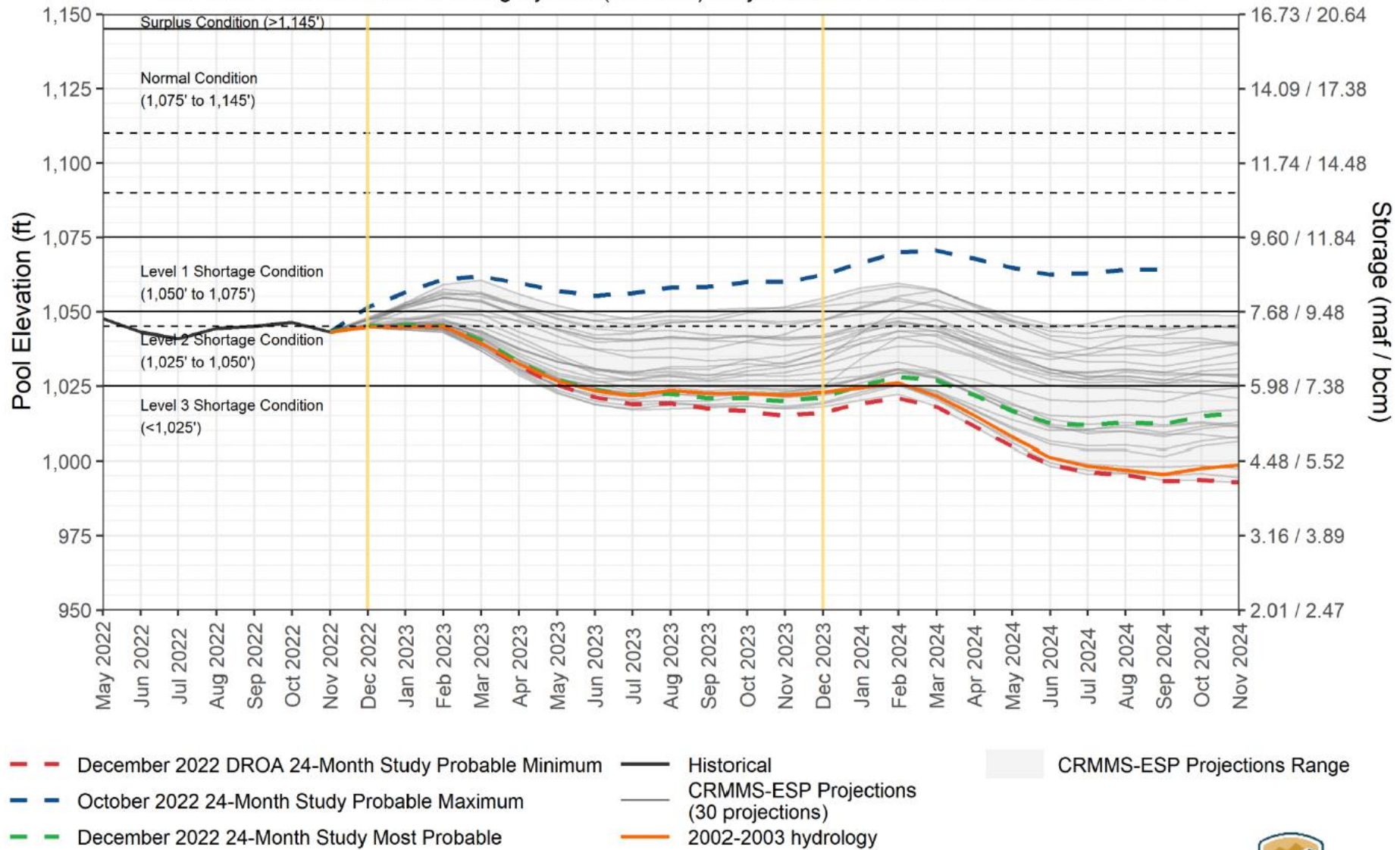
Considering protecting critical infrastructure and the range of potential poor hydrology, Reclamation could, for example, propose to:

- Protect elevation 3,500' at Lake Powell & elevation 1,000' at Lake Mead
 - Section 2D. Raise operating determination elevations and/or increase shortage reduction amounts in Lower Basin by as much as 2 maf (or more)
 - Section 6C. Release less than 7.0 million acre-feet (maf) of water from Lake Powell - initial estimates are to analyze releases reduce by 2 to 3 maf (or more)
 - Section 7C. Provide for potential mid-year reductions in the Lower Basin



Lake Mead End-of-Month Elevations¹

Colorado River Mid-term Modeling System (CRMMS) Projections from October and December 2022



¹ Projected Lake Mead end-of-month physical elevations from the latest CRMMS-ESP and 24-Month Study inflow scenarios.



2007 Interim Guidelines, Minute 323, Lower Basin Drought Contingency Plan, and Binational Water Scarcity Contingency Plan

Total Volumes (kaf)

Lake Mead Elevation (feet msl)	2007 Interim Guidelines Shortages		Minute 323 Delivery Reductions	Total Combined Reductions	DCP Water Savings Contributions			Binational Water Scarcity Contingency Plan Savings	Combined Volumes by Country US: (2007 Interim Guidelines Shortages + DCP Contributions) Mexico: (Minute 323 Delivery Reductions + Binational Water Scarcity Contingency Plan Savings)					Total Combined Volumes
	AZ	NV	Mexico	Lower Basin States + Mexico	AZ	NV	CA	Mexico	AZ Total	NV Total	CA Total	Lower Basin States Total	Mexico Total	Lower Basin States + Mexico
1,090 - 1,075	0	0	0	0	192	8	0	41	192	8	0	200	41	241
1,075 - 1,050	320	13	50	383	192	8	0	30	512	21	0	533	80	613
1,050 - 1,045	400	17	70	487	192	8	0	34	592	25	0	617	104	721
1,045 - 1,040	400	17	70	487	240	10	200	76	640	27	200	867	146	1,013
1,040 - 1,035	400	17	70	487	240	10	250	84	640	27	250	917	154	1,071
1,035 - 1,030	400	17	70	487	240	10	300	92	640	27	300	967	162	1,129
1,030 - 1,025	400	17	70	487	240	10	350	101	640	27	350	1,017	171	1,188
<1,025	480	20	125	625	240	10	350	150	720	30	350	1,100	275	1,375

The Secretary of the Interior will take affirmative actions to implement programs designed to create or conserve 100,000 acre-ft per annum or more of Colorado River System water to contribute to conservation of water supplies in Lake Mead and other Colorado River reservoirs in the lower basin. All actions taken by the United States shall be subject to applicable law, including availability of appropriations.



On-Farm Efficiency Conservation Program

