



— BUREAU OF —
RECLAMATION

Reclamation Updates on the Colorado River Basin

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February 17, 2022

Overview of the Colorado River Basin

- Operation is governed by the “Law of the River”
- 16.5 million acre-feet of water use allocated annually
- 60 million acre-feet of storage capacity
- 4,200 Megawatts of installed hydropower capacity
- 70% of all use is for agriculture
- 40% the water is exported outside of the Basin
- Aside from the pulse flow event, the river hasn't made it to the delta in decades



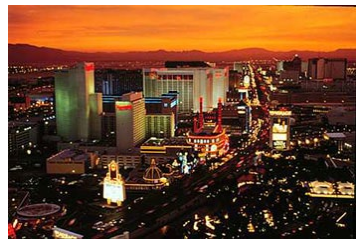
Lower Colorado “Water Master” Role & River Management Objectives

Mission of Boulder Canyon Operations Office:

- *Implement the Water Master role for the Secretary of the Interior*

River Management Objectives:

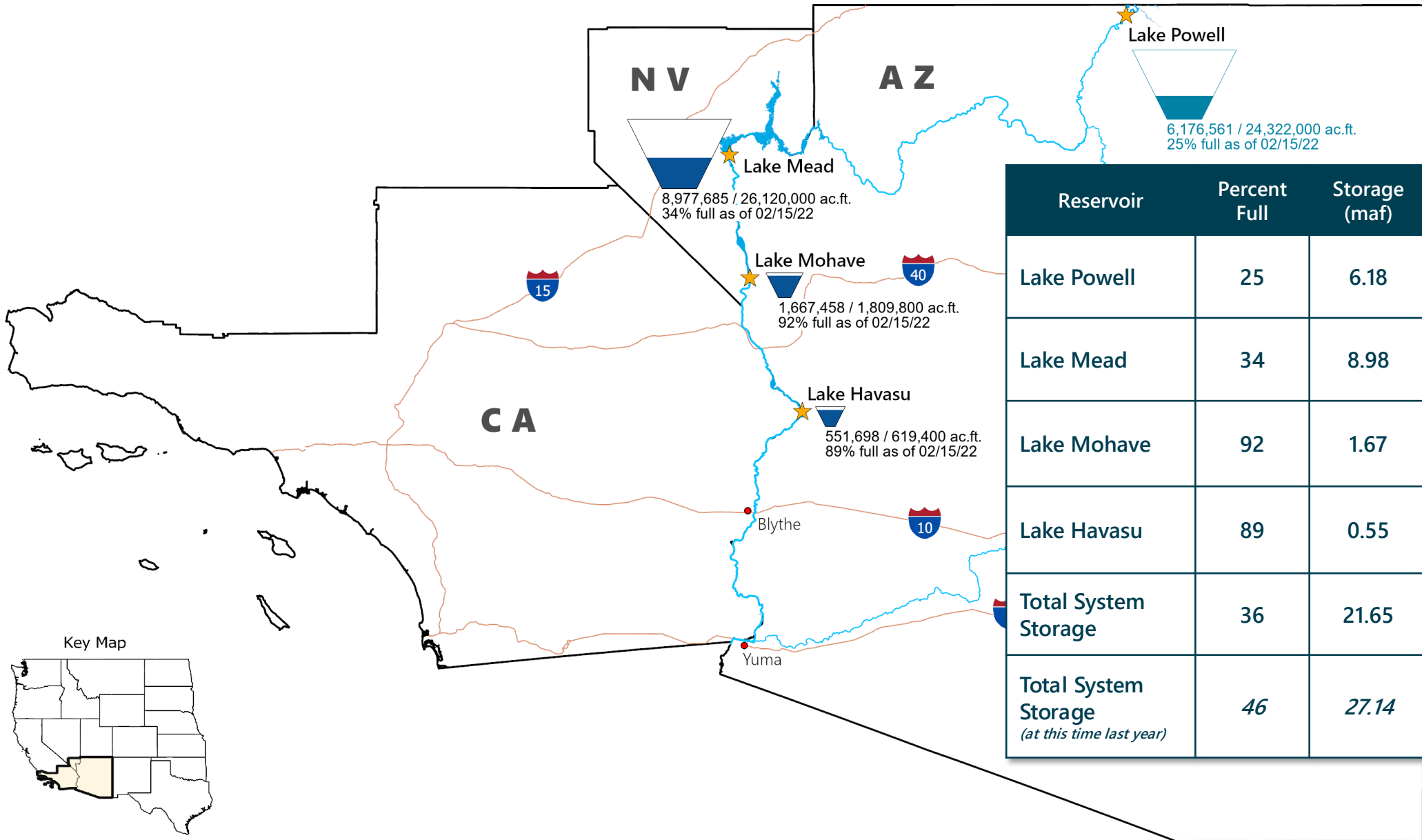
- *Provide flood control and river regulation while meeting U.S. water orders*
- *Generate hydropower*
- *Implement LCR Multi-Species Conservation Program*
- *Support recreational opportunities*



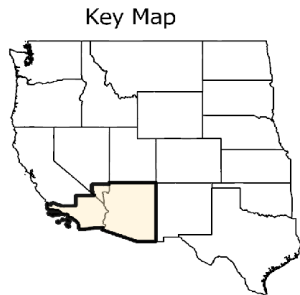
Basin Hydrology



Lower Colorado Basin System Conditions (as of February 15, 2022)



Reservoir	Percent Full	Storage (maf)	Elevation (feet)
Lake Powell	25	6.18	3,529.02
Lake Mead	34	8.98	1,067.19
Lake Mohave	92	1.67	641.85
Lake Havasu	89	0.55	446.49
Total System Storage	36	21.65	-
Total System Storage (at this time last year)	46	27.14	-



Water Year Precipitation and Snowpack^{1,2} as of February 16, 2022

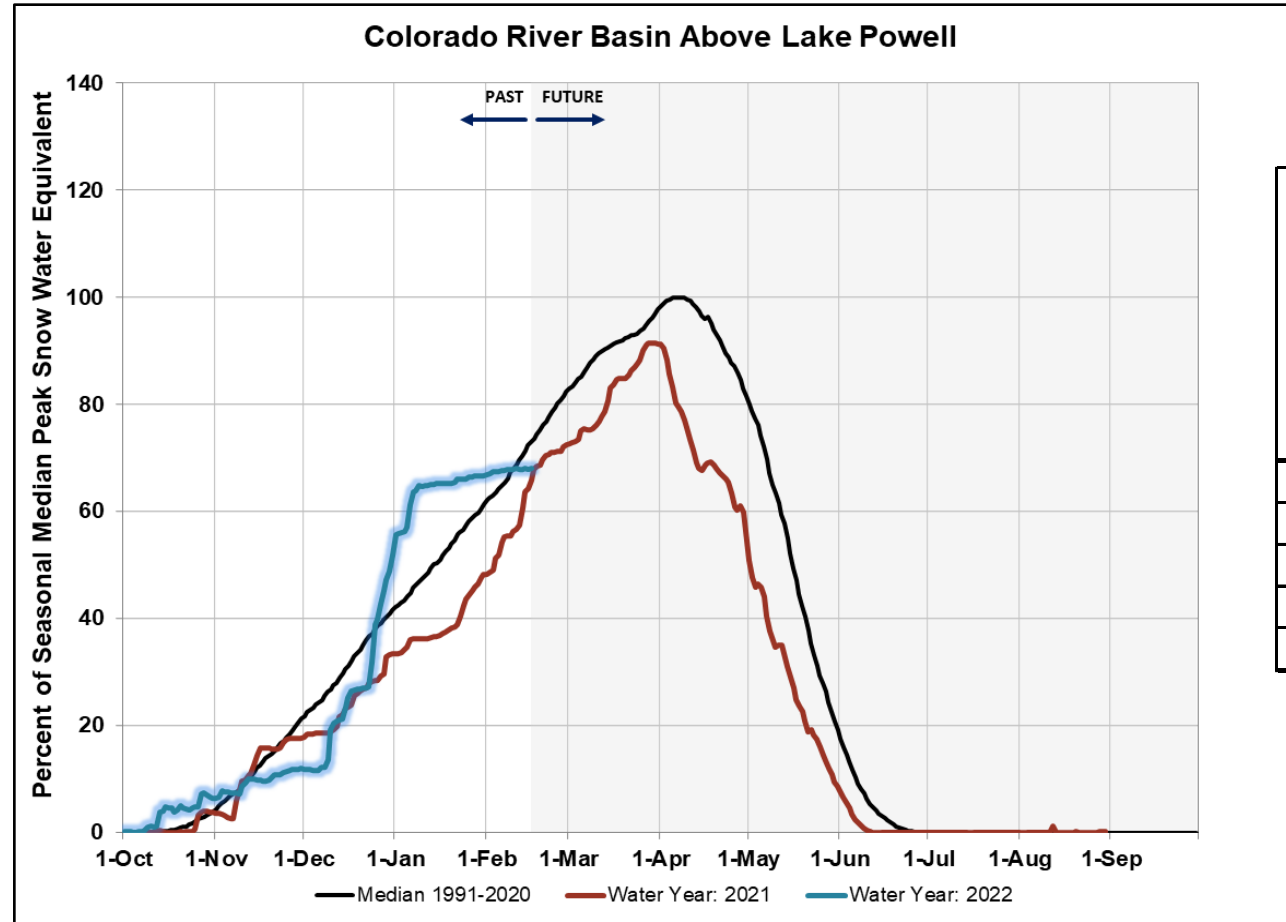
Colorado River Basin above Lake Powell

Water Year 2022
Precipitation
(year-to-date)

100% of average

Current Snowpack

92% of median



Month	WY2022 Most Probable Unregulated Inflow Forecast (maf)	Difference in Forecast from Previous Month (maf)	Percent of Average ('91-'20)
Oct-21	7.4		77
Nov-21	7.8	0.4	81
Dec-21	6.27	-1.53	65
Jan-22	8.77	2.5	91
Feb-22	7.26	-1.51	76

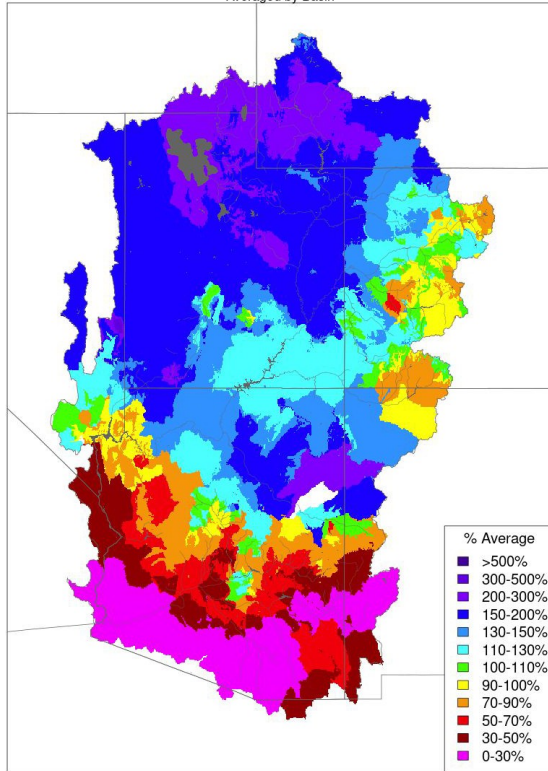
¹Percent of normal precipitation is based on an arithmetic mean, or average; percent of normal snowpack is based on the median value for a given date.

²Statistics are based on the 30-year period of record from 1991-2020.



Water Year 2022 (October - January) Monthly Precipitation Summary

Monthly Precipitation - October 2021
Averaged by Basin

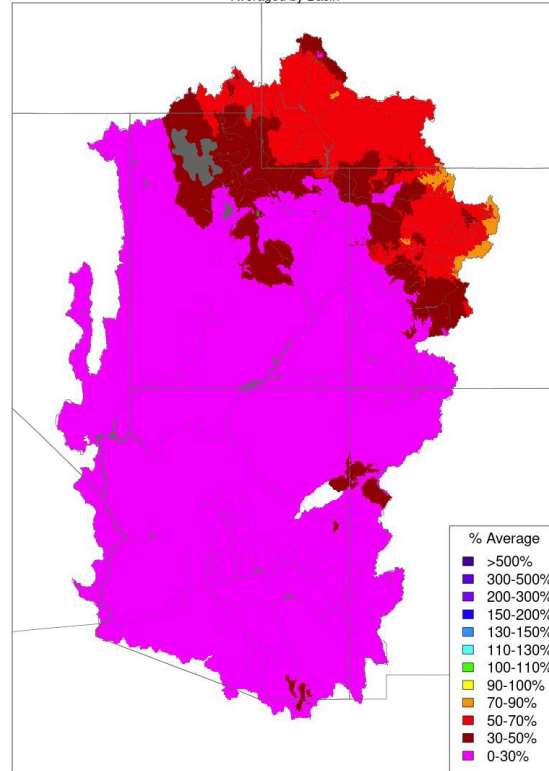


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

October precipitation was well above average across much of the region including southwest Wyoming, most of Utah, and northern Arizona.

Western Colorado had near average October precipitation while southern Arizona had below average precipitation during the month.

Monthly Precipitation - November 2021
Averaged by Basin

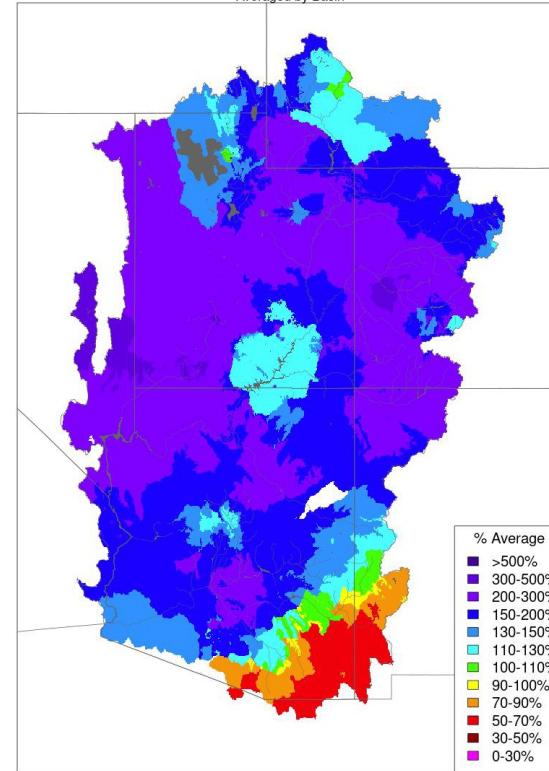


Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

November's weather pattern was mostly very warm and dry with much below average monthly precipitation across most of the region.

November precipitation fell in the bottom five at numerous SNOTEL stations across Utah, southwest Colorado, and central Arizona.

Monthly Precipitation - December 2021
Averaged by Basin

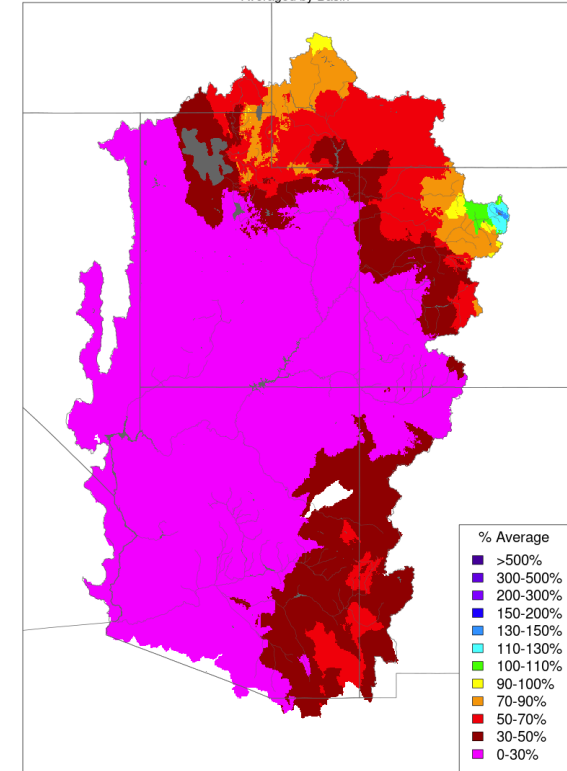


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The weather pattern shifted during the second week of December towards colder and wetter conditions and featured multiple storm systems that brought widespread precipitation to most of the region during the last three weeks of the month.

The majority of SNOTEL sites across Utah and western Colorado and a few sites across central Arizona reported December precipitation values that ranked in the wettest five on record.

Monthly Precipitation - January 2022
Averaged by Basin



Prepared by NOAA, Colorado Basin River Forecast Center
Salt Lake City, Utah, www.cbrfc.noaa.gov

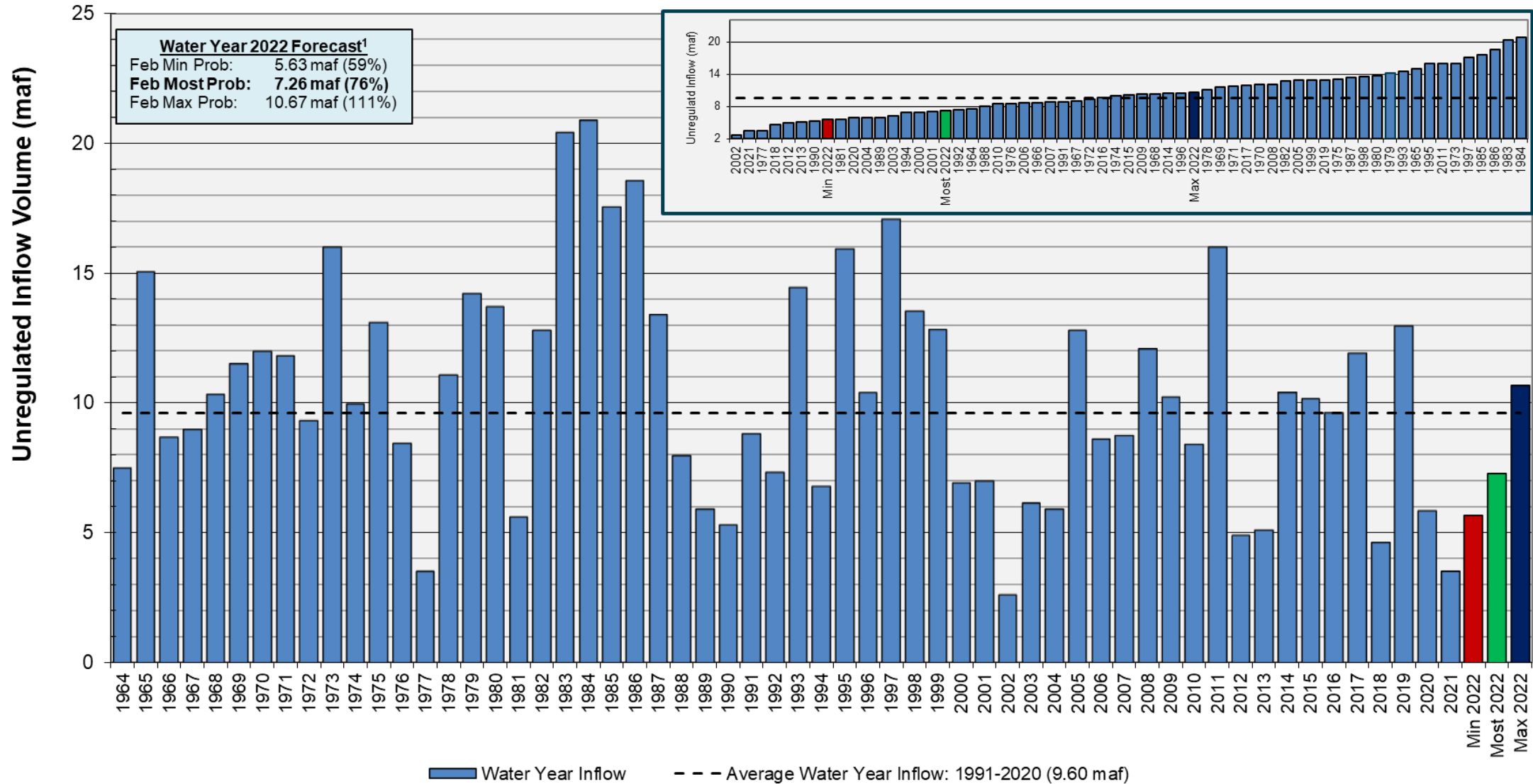
January's weather pattern was mostly cold and dry with much below average monthly precipitation across most of the region.

A ridge of high pressure settled over the region during the second week of January and persisted through the end of the month bringing very dry weather and a decrease in the spring water supply outlook.

Lake Powell Water Year Unregulated Inflow¹

Forecast as of February 2, 2022

Comparison with History



¹Water Year 2022 statistics are based on the 30-year period of record from 1991-2020.

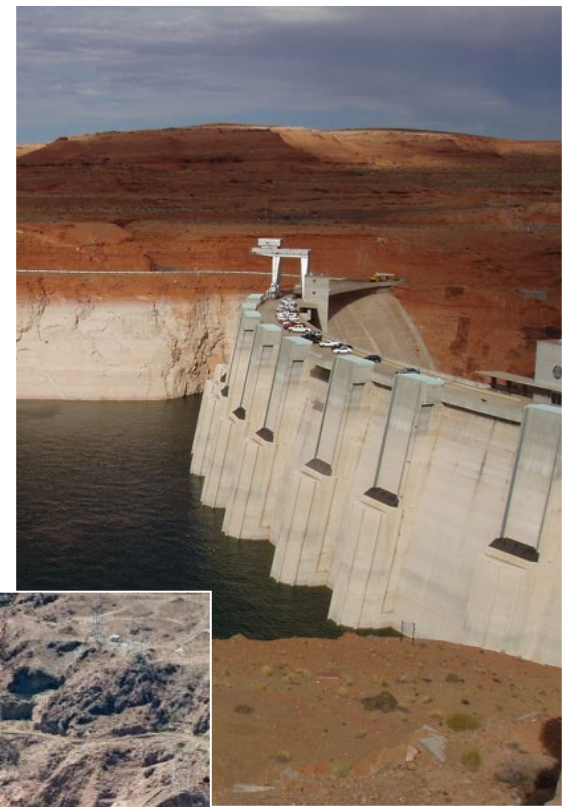


Drought Response Efforts



Collaborative Solutions

- 2007 Interim Guidelines
- Colorado River Drought Contingency Plans
- International Boundary Water Commission Minute 323
 - Water Scarcity Contingency Plan



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 <i>US: (2007 Interim Guidelines Shortages + DCP Contributions)</i> <i>Mexico: (Minute 323 Delivery Reductions + Binational Water Scarcity Contingency Plan Savings)</i>					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 - 1050	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

➔
2022 Reductions + Contributions

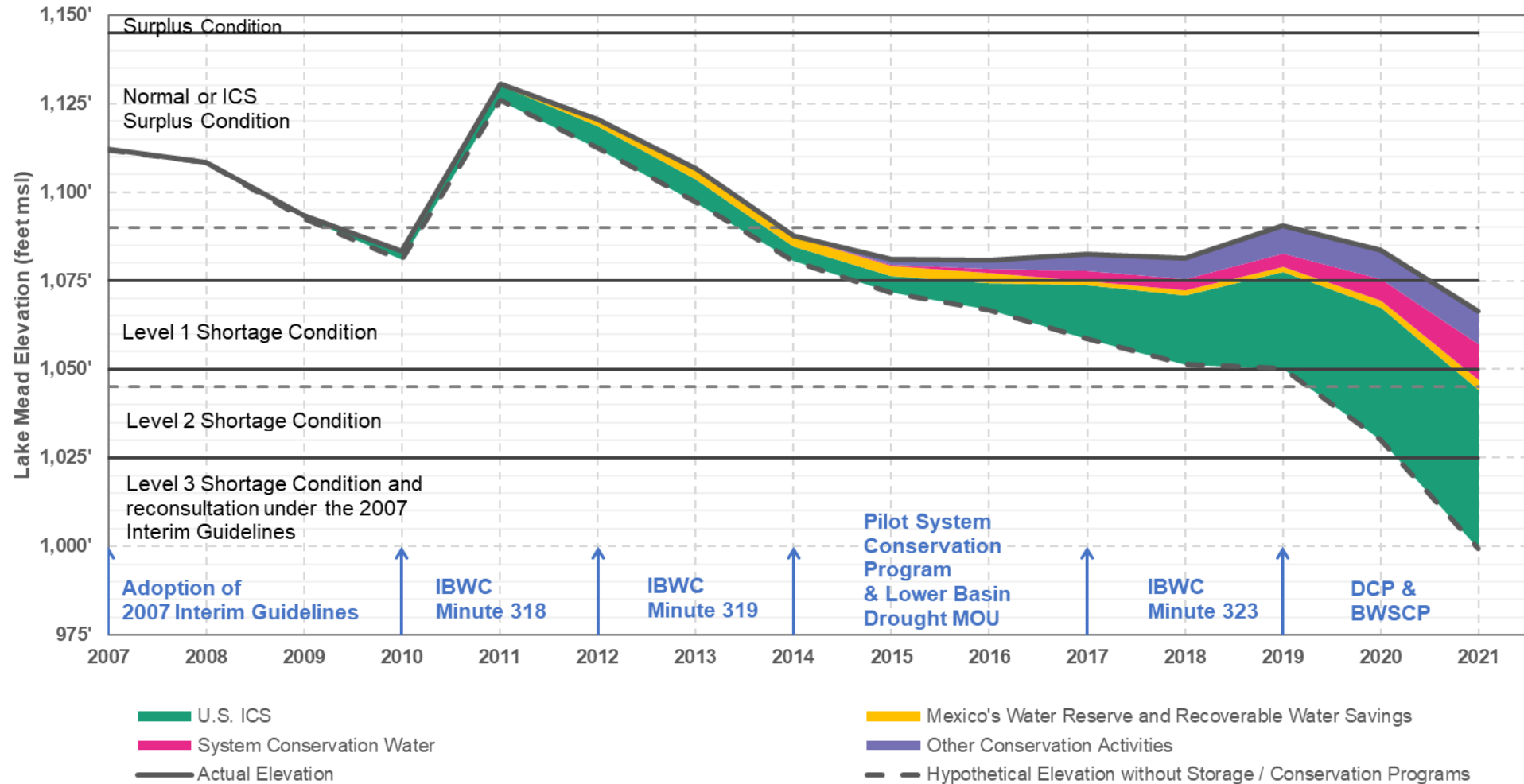
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2022 Reductions + Contributions

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.



Lake Mead Storage and Conservation¹

Lake Powell WY Release (maf)														
8.23	8.98	8.24	8.23	12.5	9.47	8.23	7.48	9.00	9.00	9.00	9.00	9.00	8.23	8.23

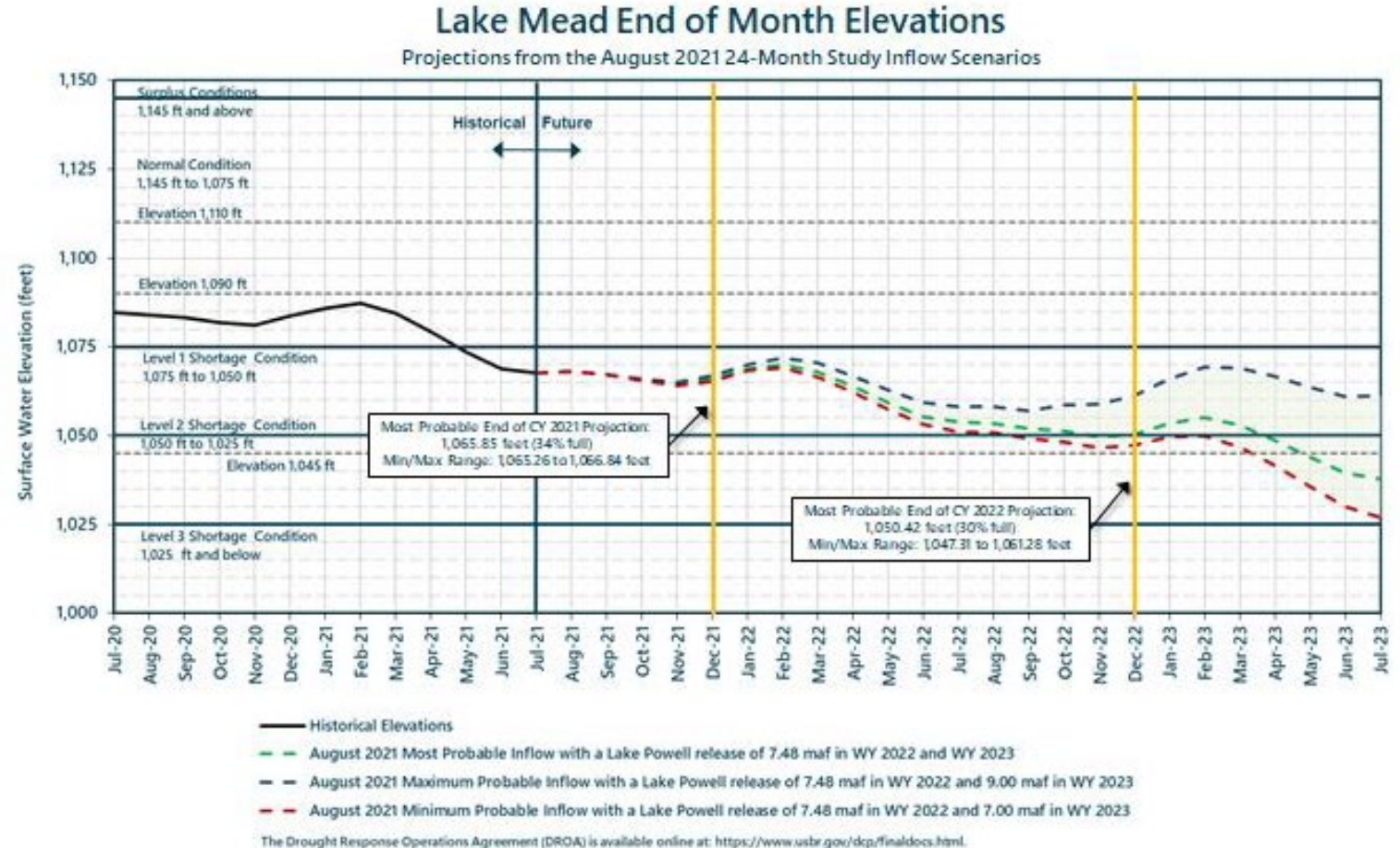


¹End of calendar year 2021 balances of U.S. ICS and Mexico's Water Reserve, system conservation water, and other voluntary contributions to Lake Mead are provisional and are subject to change.



Lower Basin DCP – Additional Actions

- The Lower Basin DCP provided that if any 24-Month Study using the minimum probable inflows projects that Lake Mead will be below 1,030 feet over the next 2 years, the Secretary and Lower Division States shall consult to determine additional actions to protect against the potential for Lake Mead to decline below 1,020 feet.
- The August 2021 24-Month Study using the minimum probable inflow projected Lake Mead to fall below 1,030 feet in July 2023, triggering this provision.



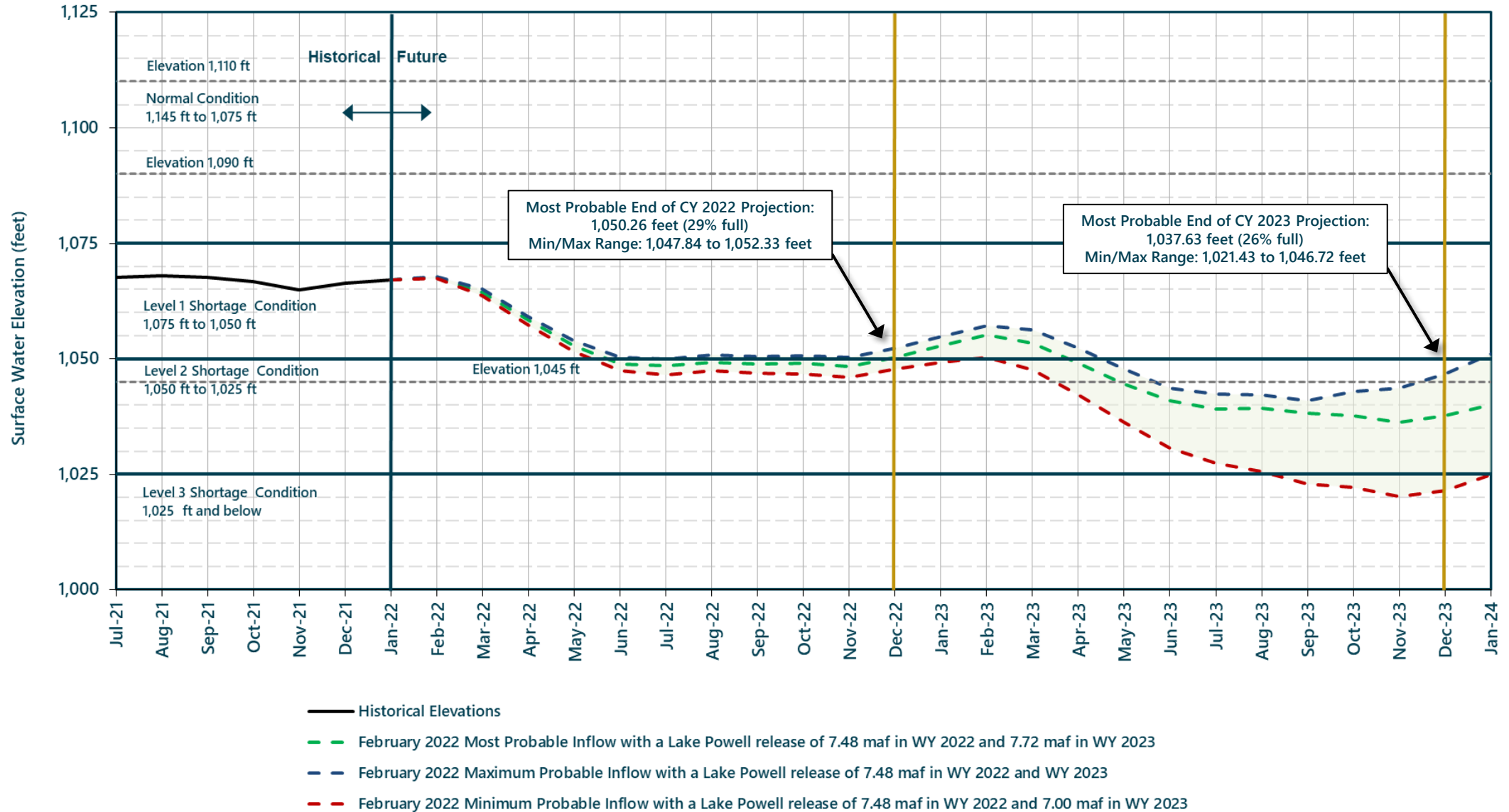
Lower Basin “500 Plus” Plan

- Memorandum of Understanding among the ADWR, CAWCD, MWD, CRCNV, SNWA, and Reclamation (signed December 15, 2021)
- Targets an additional 1 million acre-feet of conservation in 2022 and 2023, in addition to the requirements in the 2007 Interim Guidelines and Lower Basin DCP
- Plan is designed to avoid and protect against the elevation of Lake Mead declining to levels below 1,020 feet as contemplated in the Lower Basin DCP
- Sources of additional water conservation
 - Creation of ICS
 - Creation of system water
 - Decreasing ICS releases assumed in June 2021, 24-Month Study Most Probable projection
- Implementation details are being developed



Lake Mead End of Month Elevations

Projections from the February 2022 24-Month Study Inflow Scenarios



The Drought Response Operations Agreement (DROA) is available online at: <https://www.usbr.gov/dcp/finaldocs.html>.



Conclusion/Summary



Questions?



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