



Colorado River Workshop

Metropolitan Water District of Southern California

Item 6a/6b
August 9, 2022



Key Agreements

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Colorado River is Highly Regulated



Key Agreements

Colorado River Compact (1922)

Divides right to use Colorado River water between the Upper and Lower Basins in perpetuity

Apportions 7.5 million acre-feet (maf) of annual use to both the Lower Basin and Upper Basin

Recognizes the Lower Basin's right to develop an additional 1 maf annually

Anticipated the treaty with Mexico (1944)

Key Agreements

Upper Colorado River Basin Compact (1948)

Upper Basin Differences

- The Secretary of the Interior is not the water master in the Upper Basin
- The Upper Basin's allocation is divided among the Upper Division States on the basis of percentage of native flow instead of a volumetric limit
- Hydrologic shortages are common in the Upper Basin because water users mostly take water out of the river and tributaries rather than out of reservoir storage

Key Agreements

Colorado River Compact (1922)

Art. III (d) Non-Depletion Obligation

- The Upper Division States will not cause the flow of river at Lee Ferry to be depleted below an aggregate of 75 MAF for any ten-year period
- The meaning of this provision is unsettled
- However, since the adoption of the Long-Range Operating Criteria in 1970, the Upper Division States' obligation has been met and demonstrated through annual releases from Lake Powell to the Lower Basin

Key Agreements

Water Rights Shielded from Compact Administration

“Prior Perfected” and “Present Perfected” Water Rights

- Excludes water rights perfected prior to November 24, 1922 from curtailment to meet non-depletion obligation
- Provides that present perfected rights to beneficial uses existing at the time of the Compact are “unimpaired”. (Art VIII Colorado River Compact)
- Lower Basin Present Perfected Rights were adjudicated and settled by the U.S. Supreme Court in *AZ v. CA*

Key Agreements

Colorado River Compact (1922)

Mexico Treaty Delivery Provisions

- Surplus water first
- If surplus water is unavailable then, equally from Upper Basin and the Lower Basin
 - *Whenever necessary the Upper Division States deliver water to supply one-half of the deficiency*

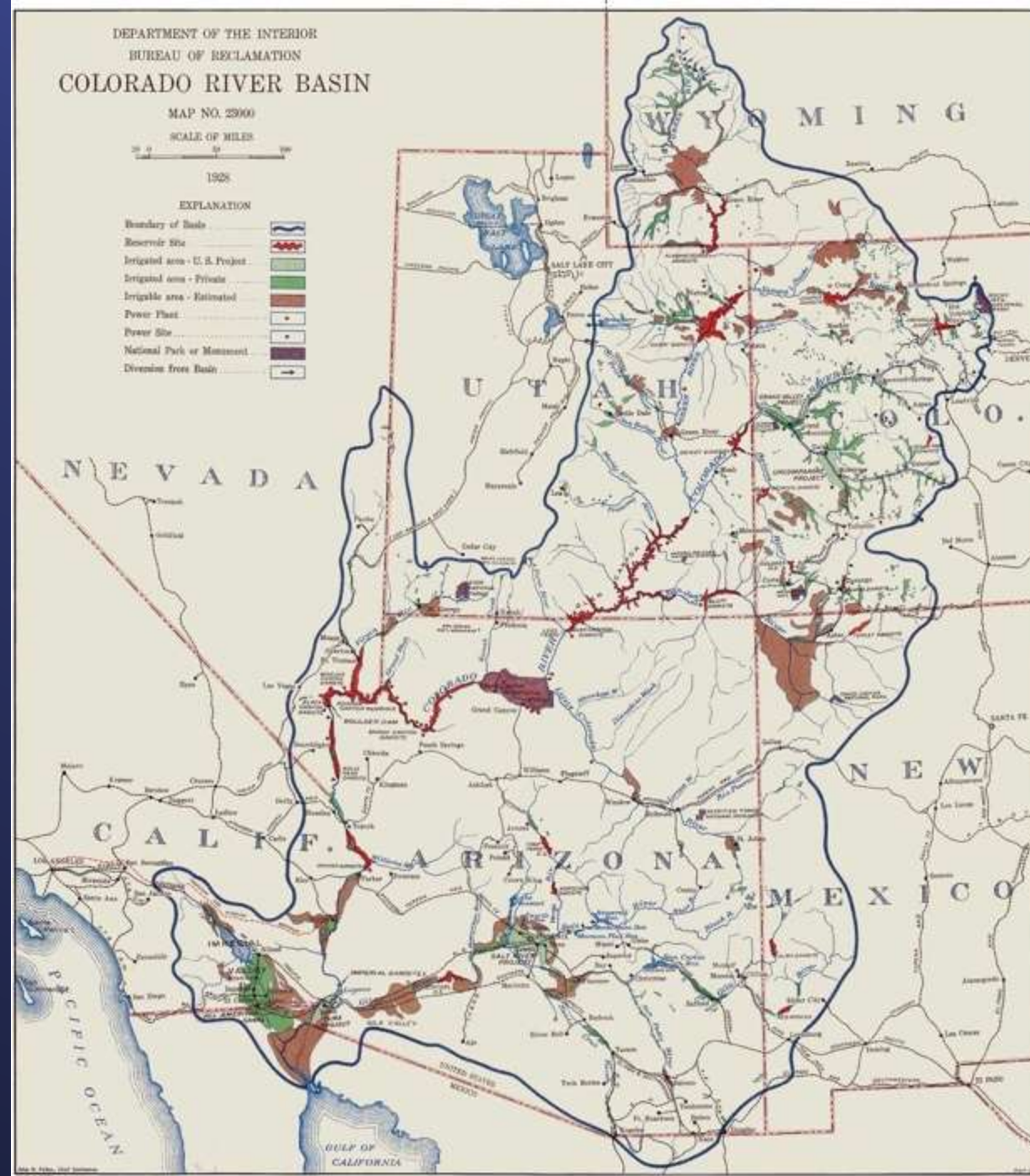


Morelos Dam

1944 Water Treaty with Mexico and Related Minutes

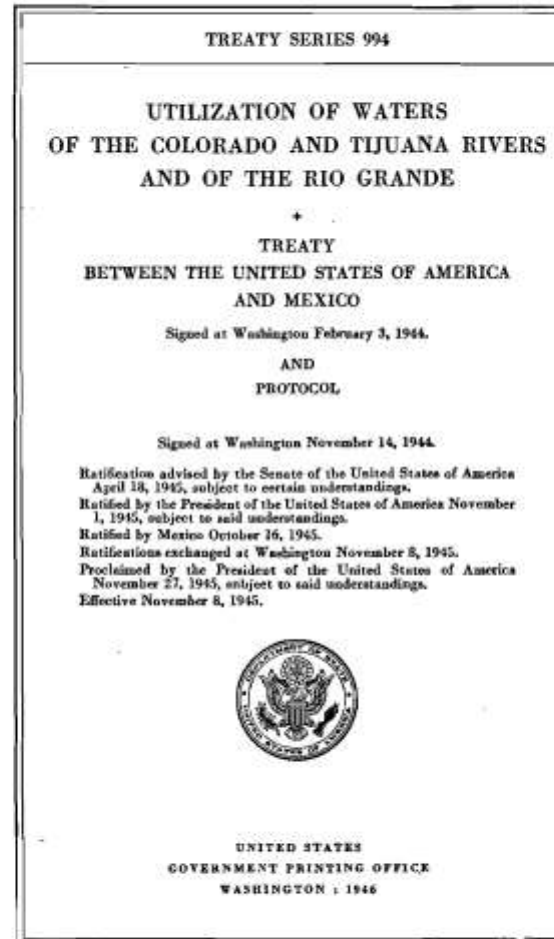
Treaty with Mexico and
Related Minutes

The Colorado River is a Binational River



Treaty with Mexico and
Related Minutes

The Mexico Treaty of 1944



Treaty with Mexico and
Related Minutes

A Decade of Cooperation with Mexico

Minute 317 – Binational Cooperation

Minute 318 – Emergency Response to Earthquake

Minute 319 – Surplus and Shortage Sharing

Minute 323 – Extended and Expanded 319

Treaty with Mexico and
Related Minutes

Highlights

Binational Water Scarcity Contingency Plan

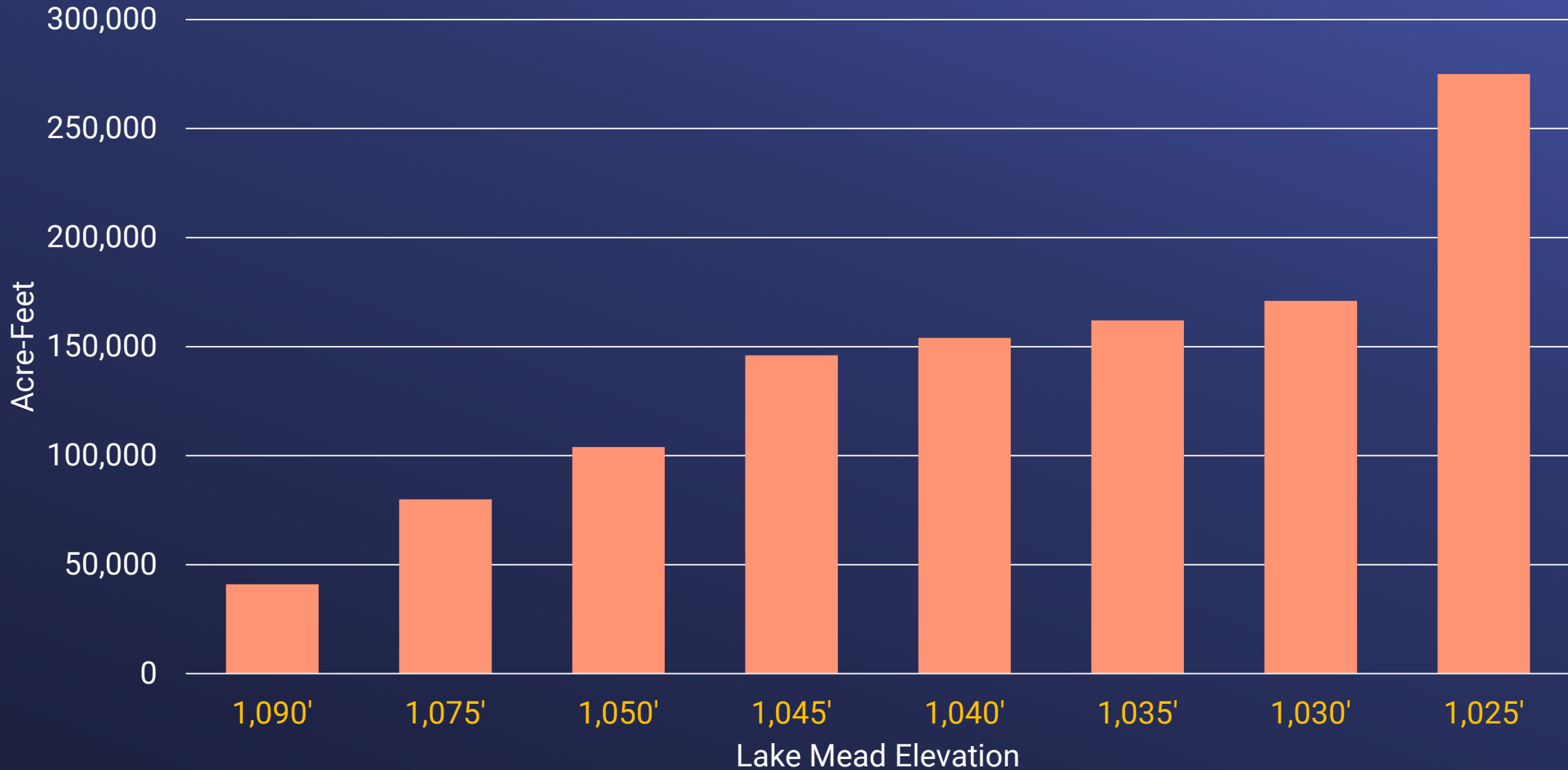
Intentionally Created Mexican Allocation

U.S. Funds for Conservation Projects in Mexico

Support for Environmental Projects

Future Binational Projects

Mexico's Water Scarcity Contingency Plan Contributions



Treaty with Mexico and Related
Minutes

A Future Minute is Necessary

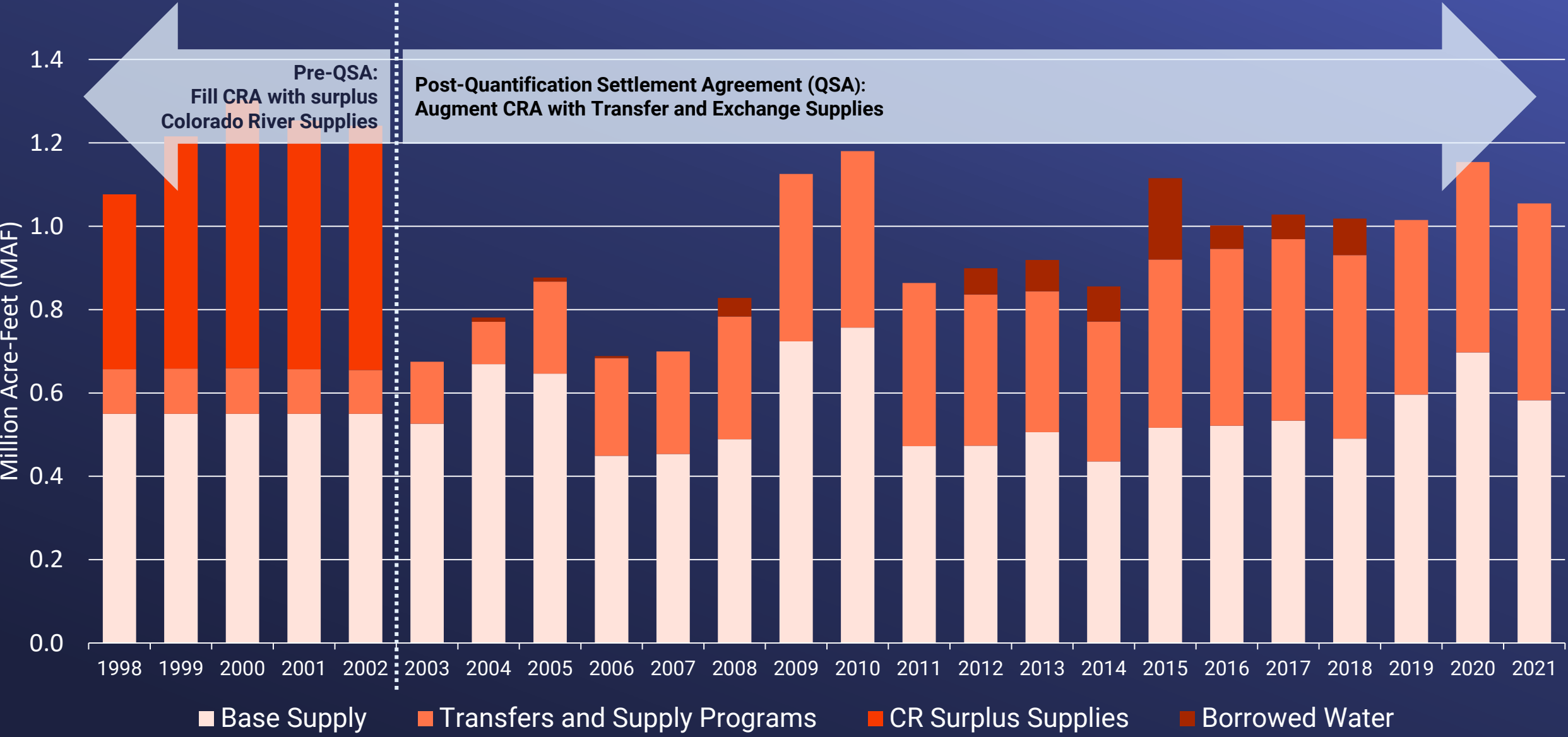
Binational Cooperation is Essential to Protect the Colorado River System



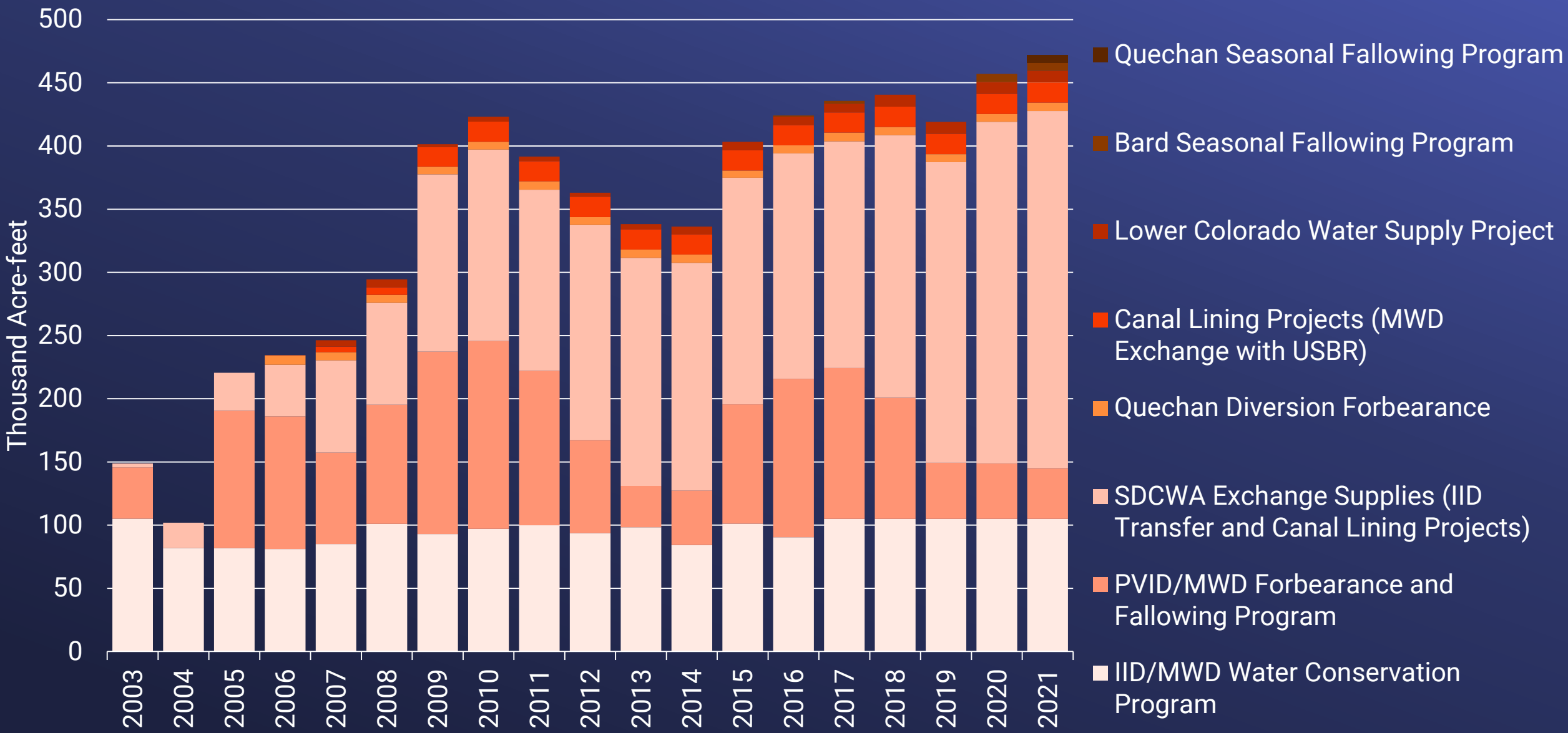


Metropolitan's CRA Supplies

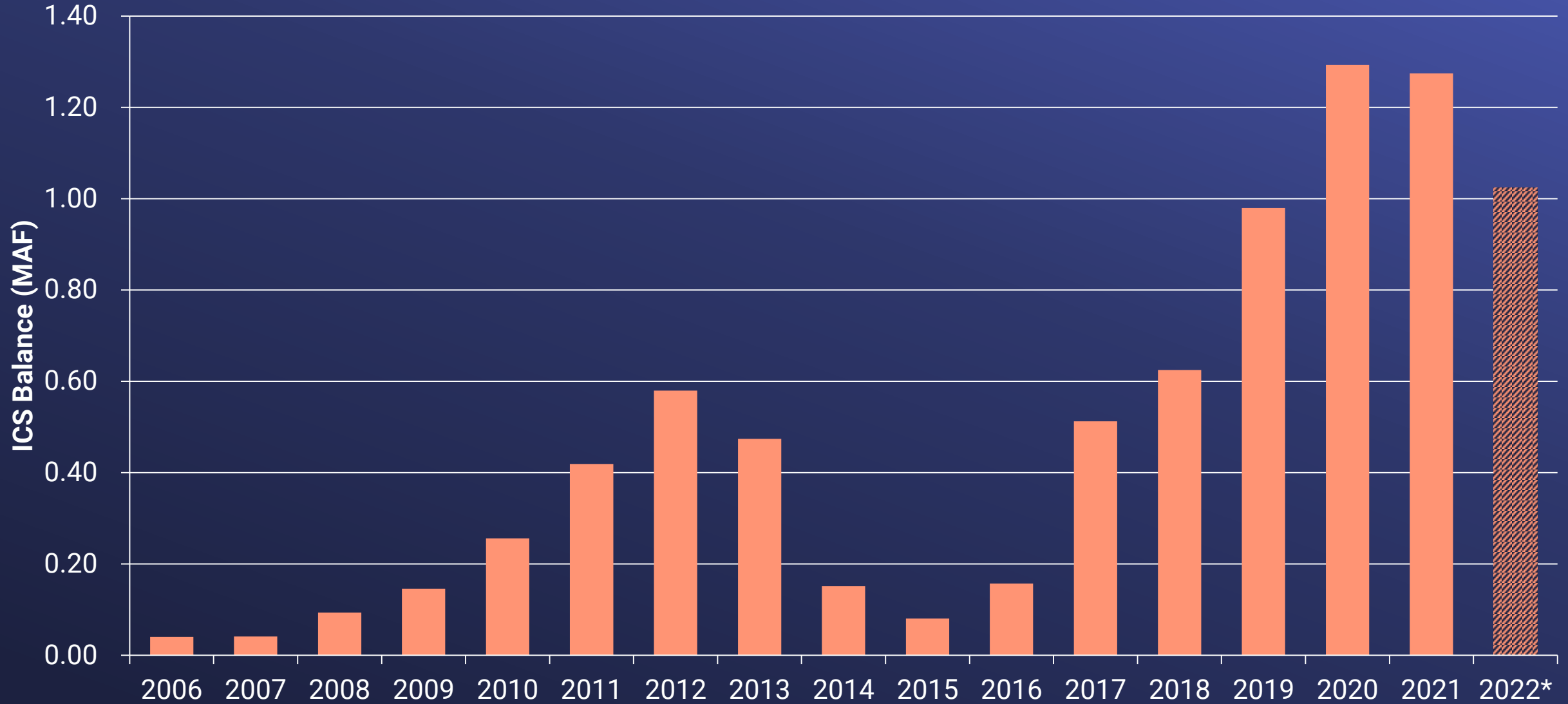
Metropolitan Colorado River Supply



California Transfer and Exchange Programs



Lake Mead End-of-Year Storage Balance



*Metropolitan's Estimated End-of-Year Storage in Lake Mead

August 9, 2022

Special Board Meeting

Item 6a/6b Slide 19

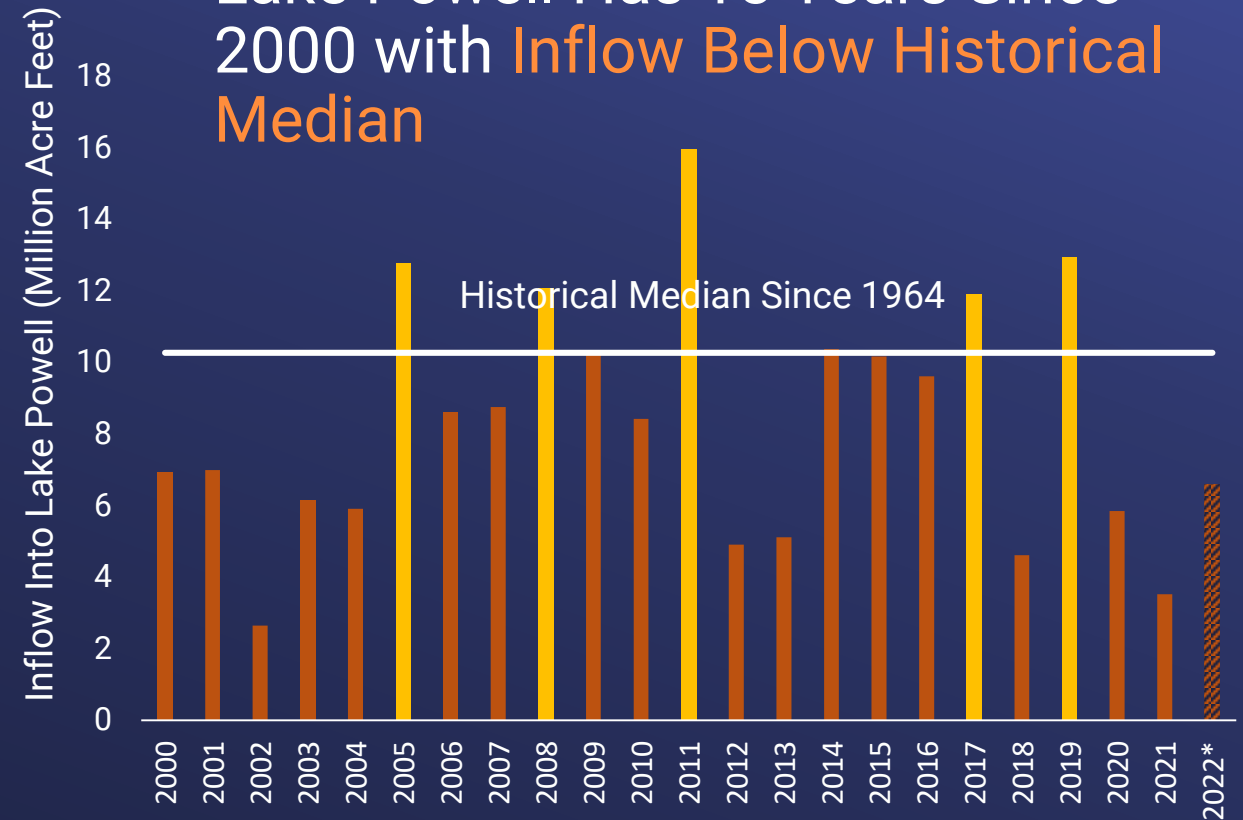


Recent Drought Severity

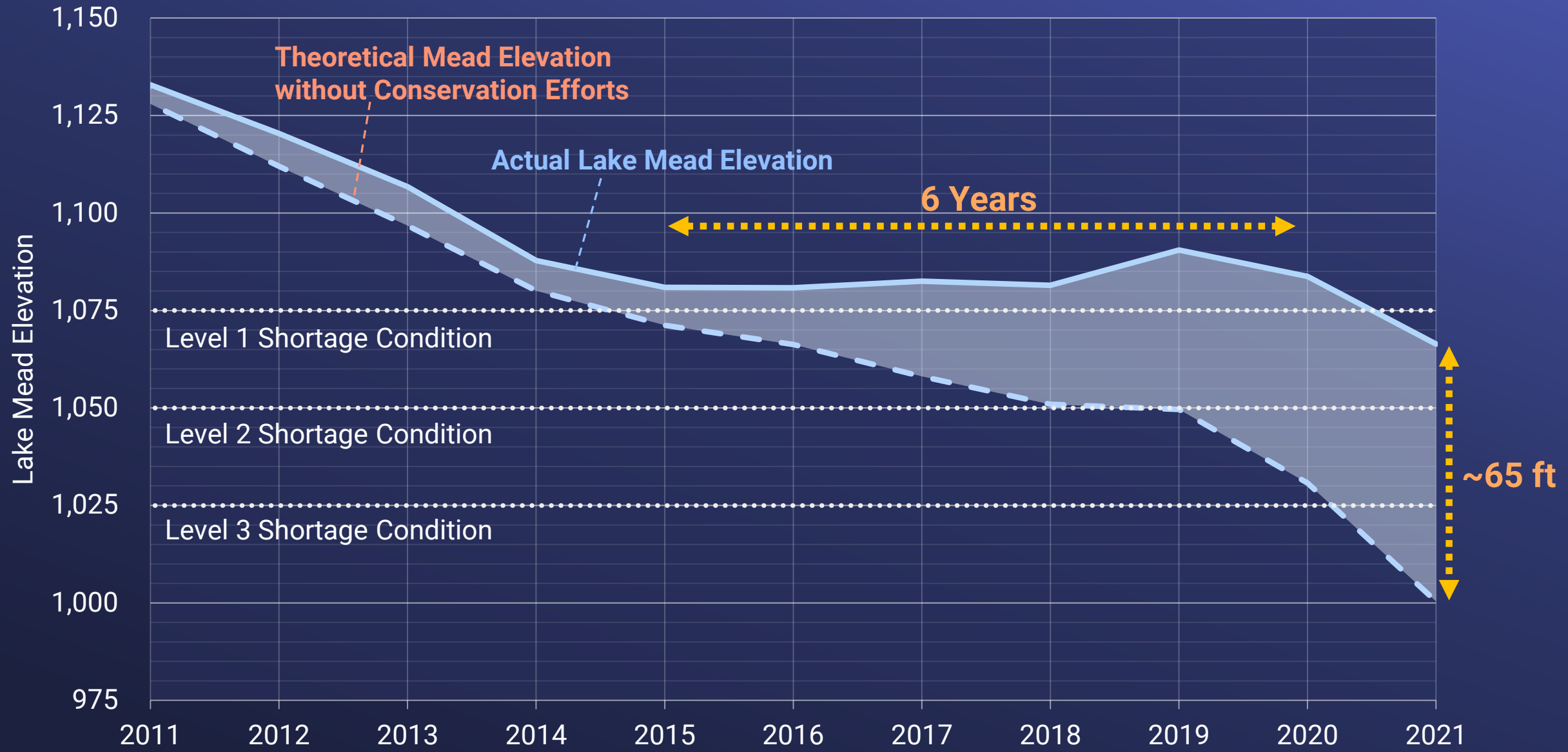
Large Storage Volumes in Lakes Powell and Mead Has Historically **Buffered Flow Variability**



Lake Powell Has 15 Years Since 2000 with **Inflow Below Historical Median**

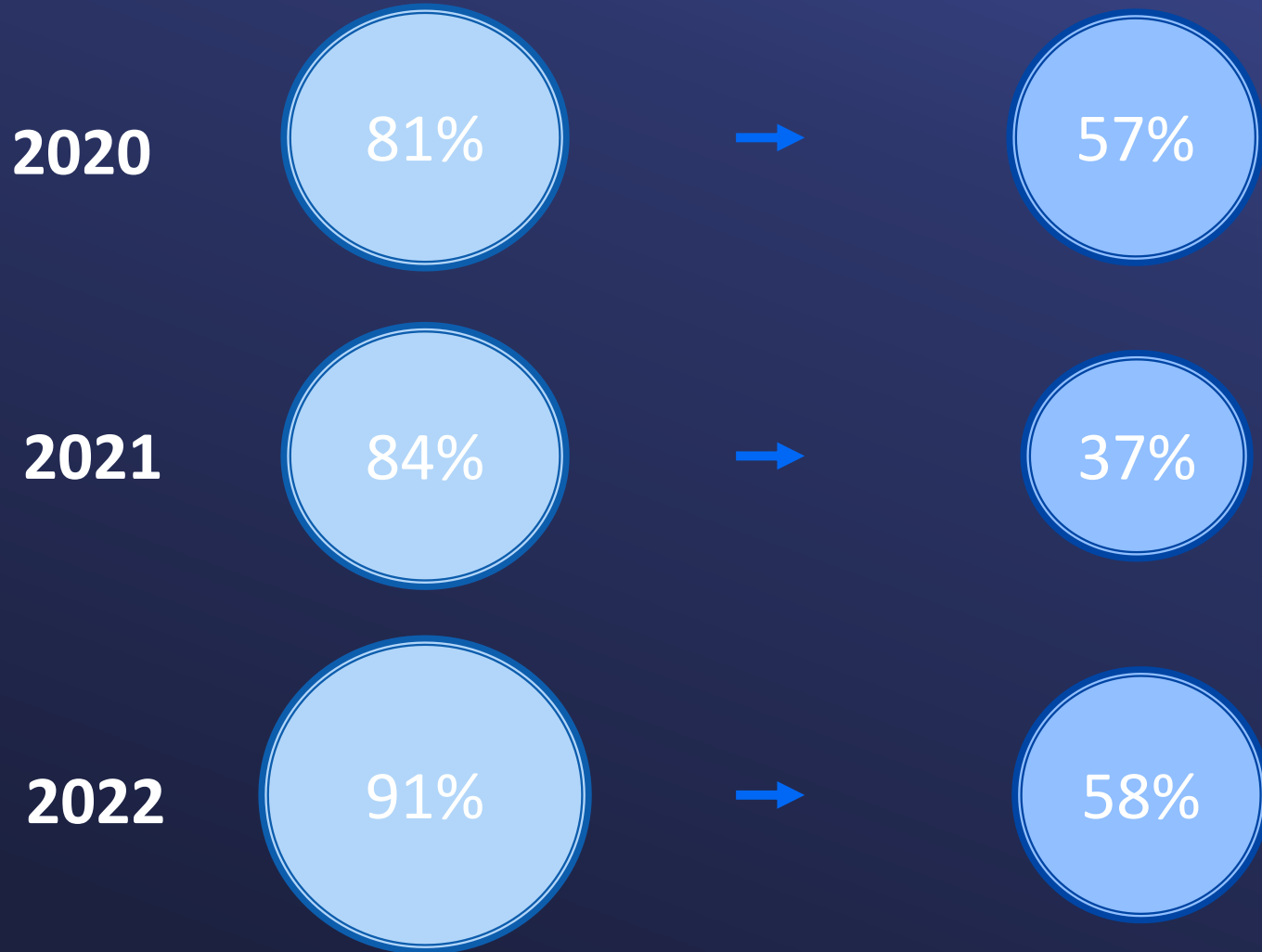


Past Cooperative Efforts to Protect Lake Mead



Precipitation
(% Average)

Runoff
(% Median)

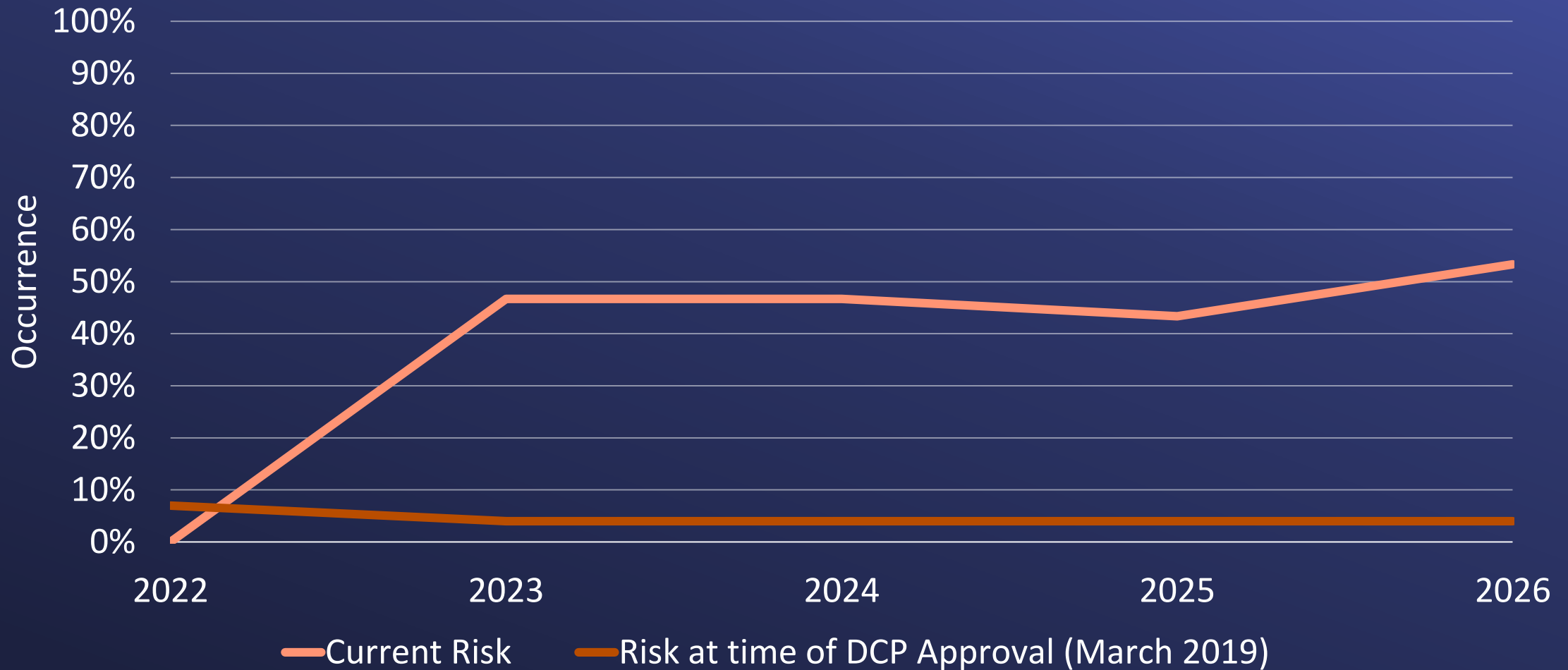


Recent Drought Severity

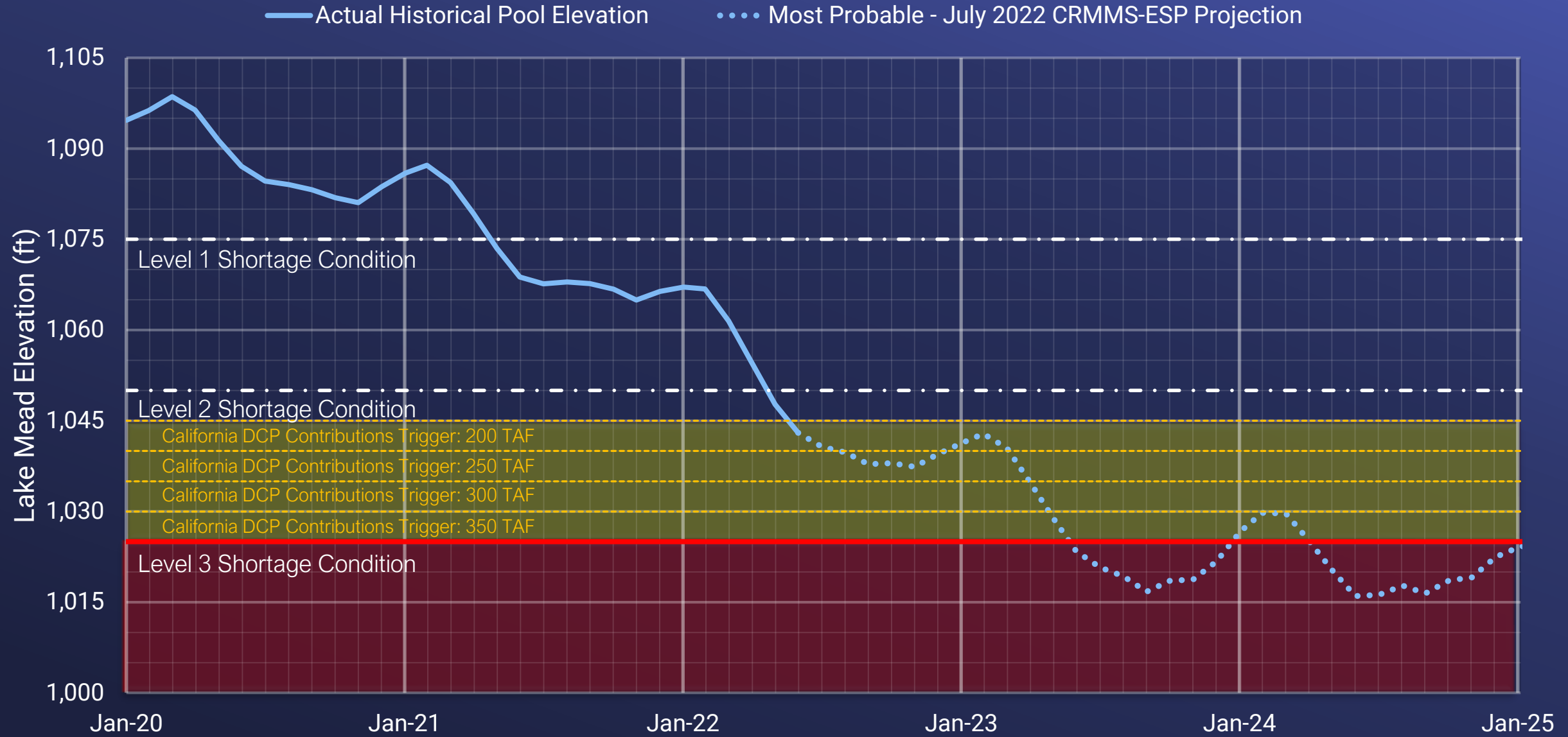
Decreased
Runoff
Efficiency
Since the
Drought
Contingency
Plan

Probability of Lake Mead Elevation

Less than 1,020' in any month



Lake Mead Elevation Forecast Shows CA DCP Contributions





Recent Drought Responses

Recent Drought Responses

Drought Contingency Plan (2019)

Efforts to Keep Reservoirs Above Critical Elevations

- Lower Division States AZ, CA and NV agreed to store water in Lake Mead at specific reservoir elevations – DCP Contributions
- Upper Division States CO, WY, NM and UT entered agreement for releases of water from reservoirs upstream of Lake Powell – DROA releases

Recent Drought Responses

Actions to Protect Lake Powell & Lake Mead (2022)

- The Lower Division States and Reclamation entered into an MOU to add or retain 500,000 acre-feet of water in Lake Mead in both 2022 and 2023 in an effort known as the “500+ Plan”
 - Metropolitan entered into the 500+ Plan for California
- **Lake Powell Protection:**
 - 500,000 acre-feet will be released from Flaming Gorge to Lake Powell;
 - Combined with a reduction in Glen Canyon Dam’s annual release volume from 7.48 maf to 7.0 maf in WY2022
 - These changes are “operationally neutral” for 2023 Tier Determination

Recent Drought Responses

Critical Reservoir Elevations (2023)

Protection Volumes

- The Bureau of Reclamation Commissioner identified the need for Colorado River Basin water users to reduce their use by 2-4 maf of water per year
- The Commissioner stated that the Department of Interior (DOI) has the authority to act unilaterally and will protect the system if consensus cannot be reached
- DOI is working with States, Tribes, and others to reach a consensus about how to protect critical reservoir elevations





Shortages and DCP Contribution Table

(in thousand-acre-feet)

Projected January 1 Lake Mead Elevation (feet msl)	2007 Interim Guidelines Shortages		DCP Water Savings Contributions			Combined Volumes (2007 Interim Guidelines Shortages & DCP Contributions)			
	AZ	NV	AZ	NV	CA	AZ Total	NV Total	CA Total	Lower Basin States Total
At or below 1,090 and above 1,075	0	0	192	8	0	192	8	0	200
At or below 1,075 and at or above 1,050	320	13	192	8	0	512	21	0	533
Below 1,050 and above 1,045	400	17	192	8	0	592	25	0	617
At or below 1,045 and above 1,040	400	17	240	10	200	640	27	200	867
At or below 1,040 and above 1,035	400	17	240	10	250	640	27	AZ	917
At or below 1,035 and above 1,030	400	17	240	10	300	640	27	300	967
At or below 1,030 and at or above 1,025	400	17	240	10	350	640	27	350	1,017
Below 1,025	480	20	240	10	350	720	30	350	1,100

Lake Mead Reaches Critical Elevations Within the Next Few Years *Without Additional Actions*

% of Average Inflow to Lake Powell	2023	2024	2025	2026
Greater than 95%				
95%-80%				
79% - 64%	Average Annual Conservation 1.3 MAF			
63% - 50%	Average Annual Conservation 2.7 MAF			
Less than 50%	Average Annual Conservation 3.5 MAF			

-  Lake Mead > 1,020
-  1,020 > Lake Mead > 1,000
-  1,000 > Lake Mead > Dead Pool
-  Lake Mead Reaches Dead Pool

Recent Drought Responses

2023 Drought Responses

Negotiations to Reduce Use of Colorado River Water

- Metropolitan is in difficult negotiations with other Colorado River users in California and across the Lower Basin on how to reduce water uses to meet the Commissioner's call for 2-4 maf of reductions
- Every type of water user could be affected, including urban and agricultural uses
- The Secretary of the Dept of Interior could use authority to unilaterally reduce water use as early as next year

Recent Drought Responses

2023 Drought Responses

Impacts on Metropolitan's Colorado River Supply

- Metropolitan staff are working hard to protect our Colorado River supply in negotiations with other water users
- However, due to reservoir conditions Metropolitan may have to take action to reduce use of Colorado River water as early as next year
- If the water users don't reach agreement to reduce uses, the Bureau of Reclamation may take action to reduce uses in 2023

Recent Drought Responses

Board Updates and Input

Next Steps

- Seek input from the Board later in this workshop
- Keep the Board updated on developments
- If a tentative agreement is reached, bring to the Board for input and approval
- Reach final agreement with Basin State partners



Closed
Session

