

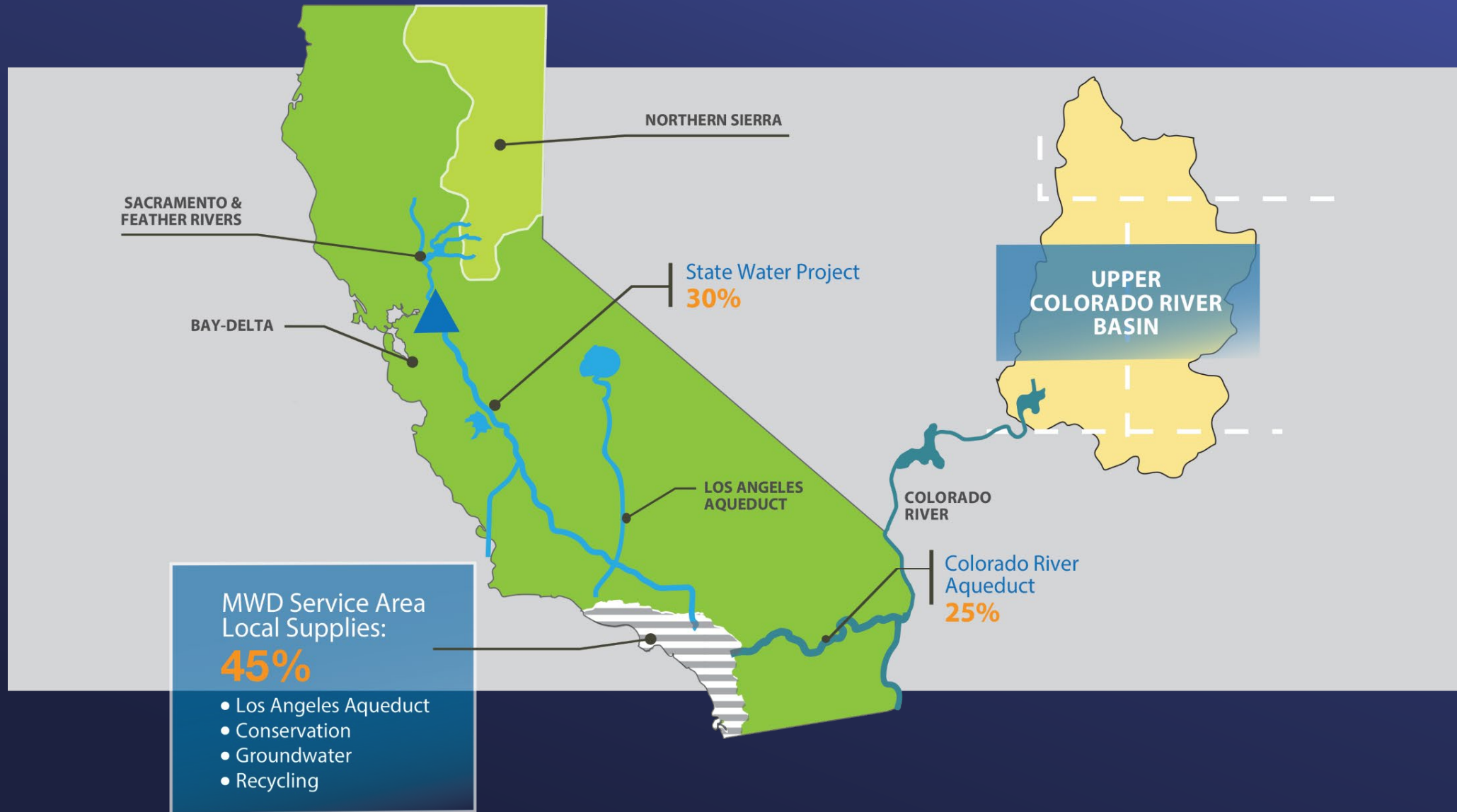


Crisis, Conflict and Collaboration on the Colorado River



Southern CA Water Dialogue
September 28, 2022

History Of Reaching Far For Water



Historic Low Reservoir Levels

Challenges to imported water supplies due to drought and climate change



- Lake Oroville hit record low levels this year
- 2000, 2002 are driest three years on record



- Lake Mead and Lake Powell at historically low elevations
- Colorado River is in long-term drought

The Colorado River is the Back-Bone of MWD's Supplies

- 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



Colorado River Supplies for Southern CA

California Priority System (1931)

3.85 MAF

1. Palo Verde
2. Yuma Project
3. (a) Imperial & Coachella
4. (b) Palo Verde

550 TAF

Metropolitan

Total Basic Apportionment
4.4 MAF



Colorado River – Current Conditions

(as of August 23, 2022)



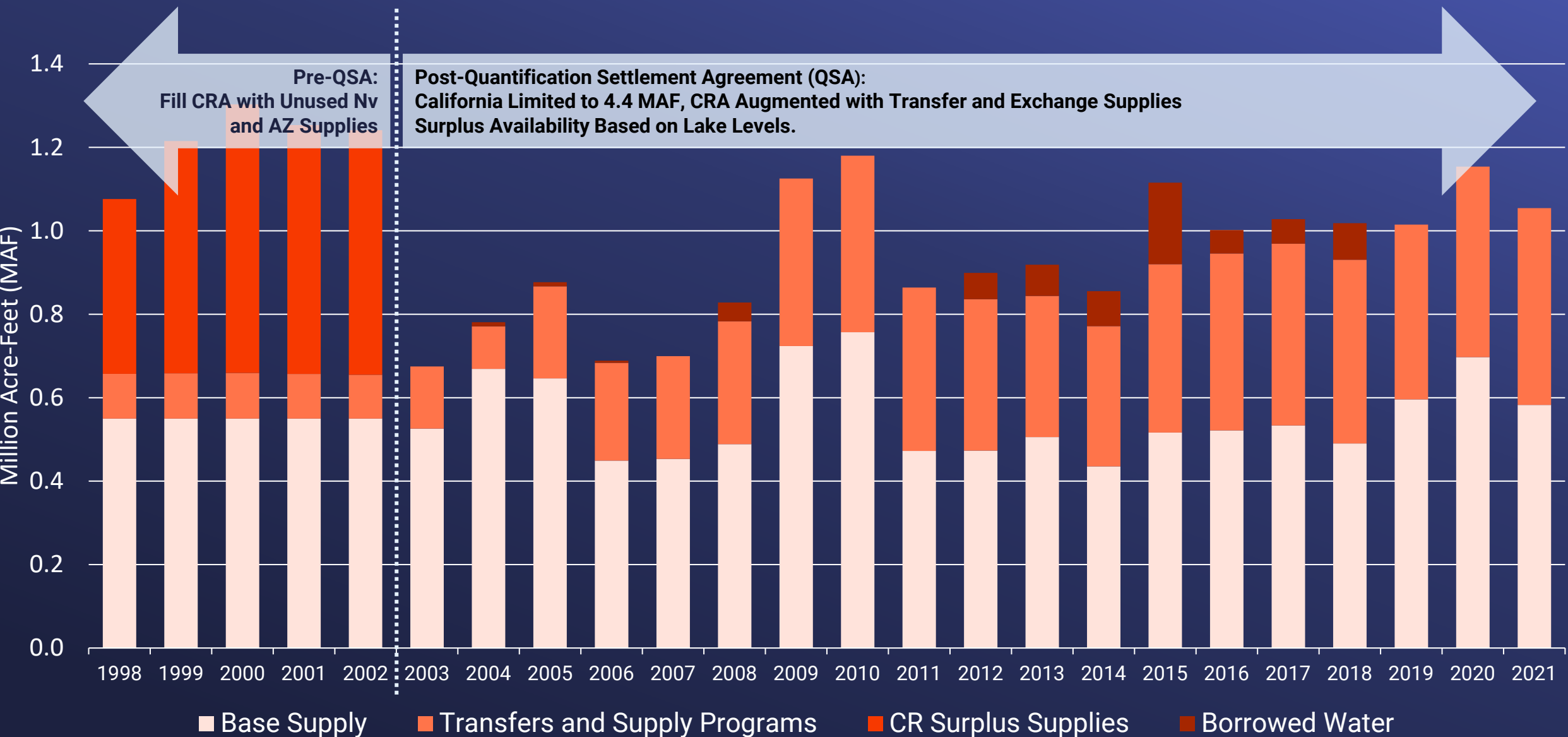
Lake Powell near Glen Canyon Dam



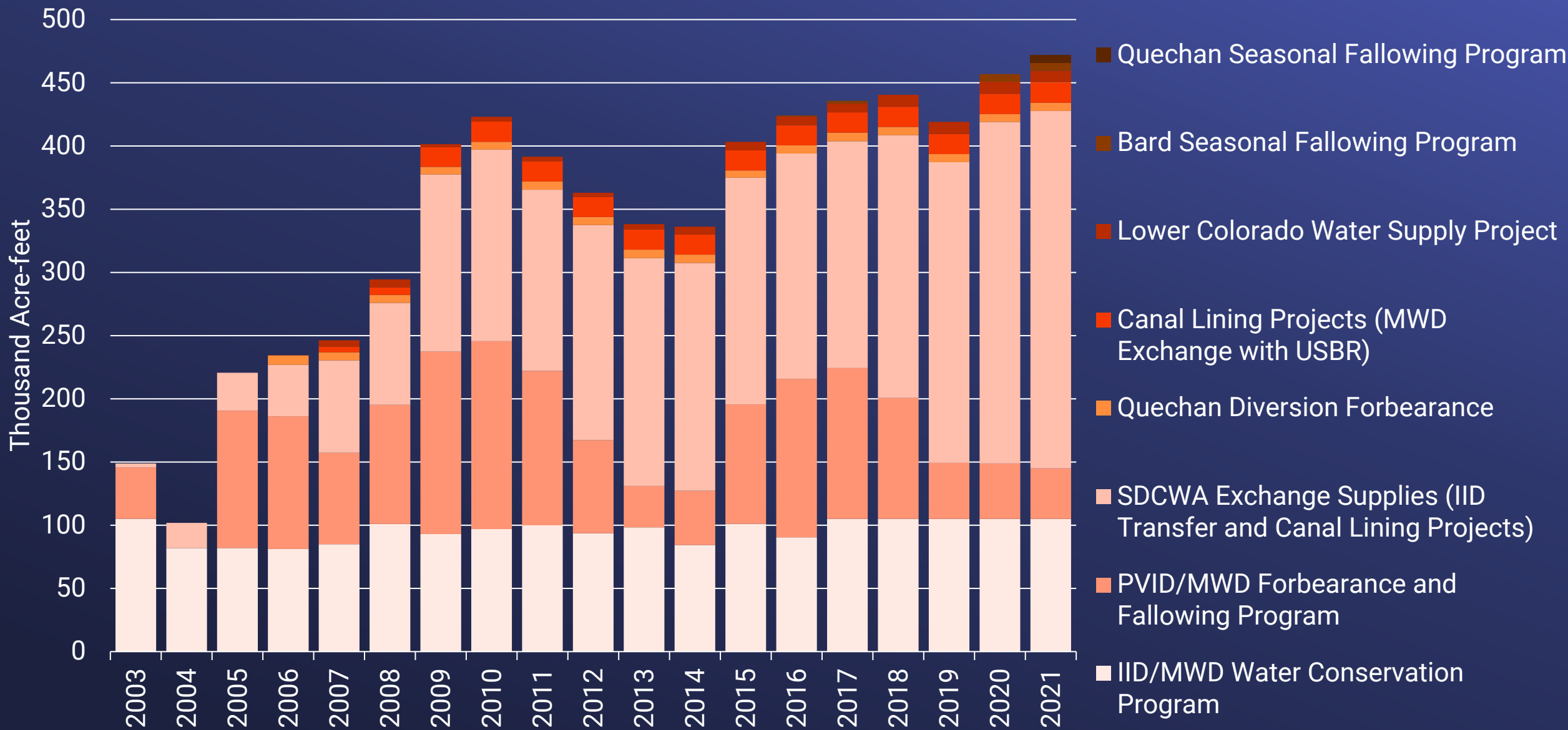
Lake Mead near Hoover Dam

- Driest 23-year period (2000-2022) on record
- Inflow 4 of the past 5 years were 60% of average or less
- Lake Powell and Lake Mead at historically low water levels
 - Lake Powell current elevation is 3,533 feet at 26% of capacity
 - Lake Mead current elevation is 1,043 feet at 27% of capacity

Metropolitan Colorado River Supply

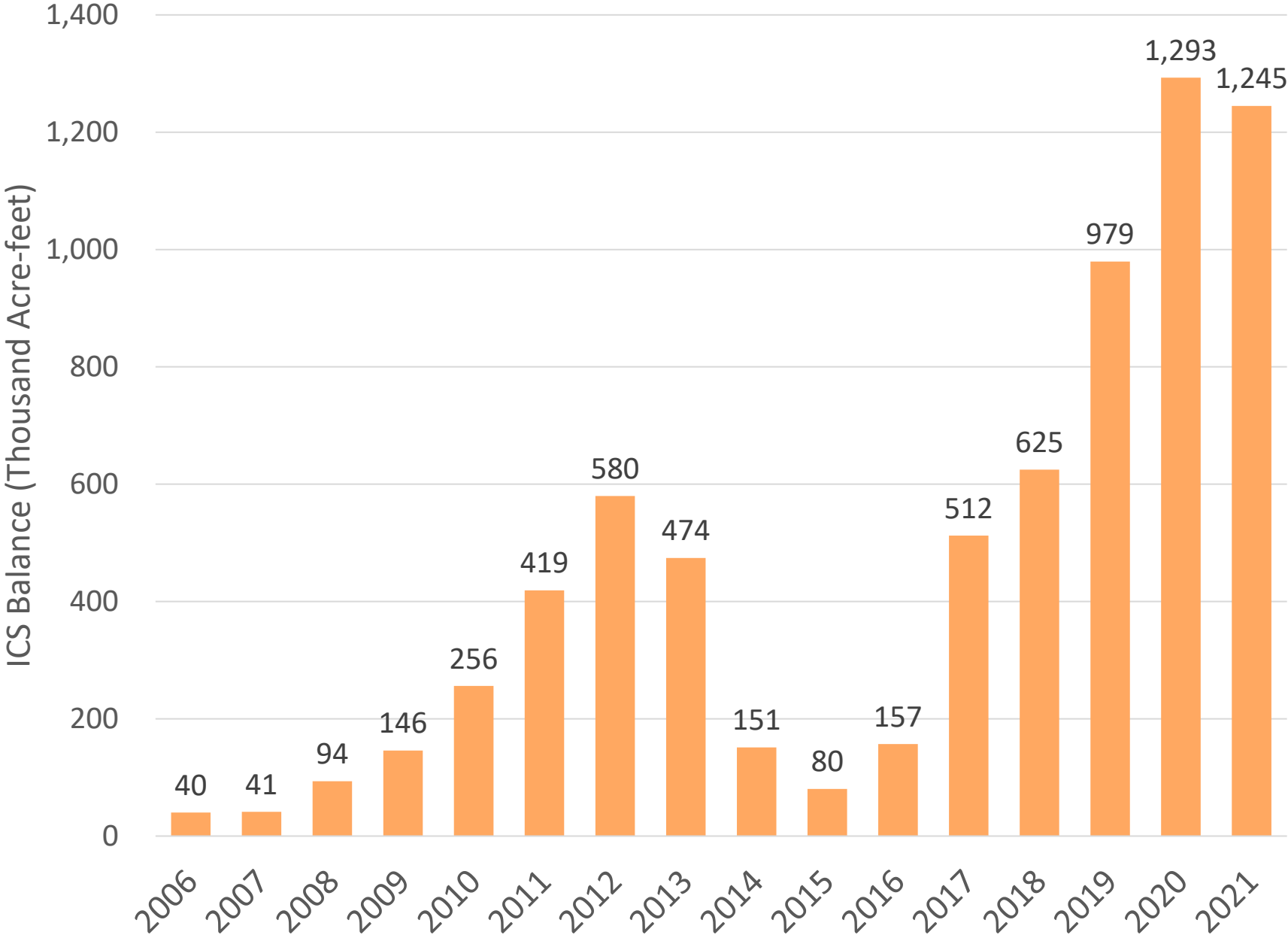


California Transfer and Exchange Programs



Metropolitan's ICS Balance

- Store large volumes in wet years
- Withdraw in dry years
- Expected 100,000 AF withdrawal in 2022 under current USBR Forecast



Diversification

Southern California's long-range plan to maintain reliability

LOCAL RESOURCES



INNOVATION



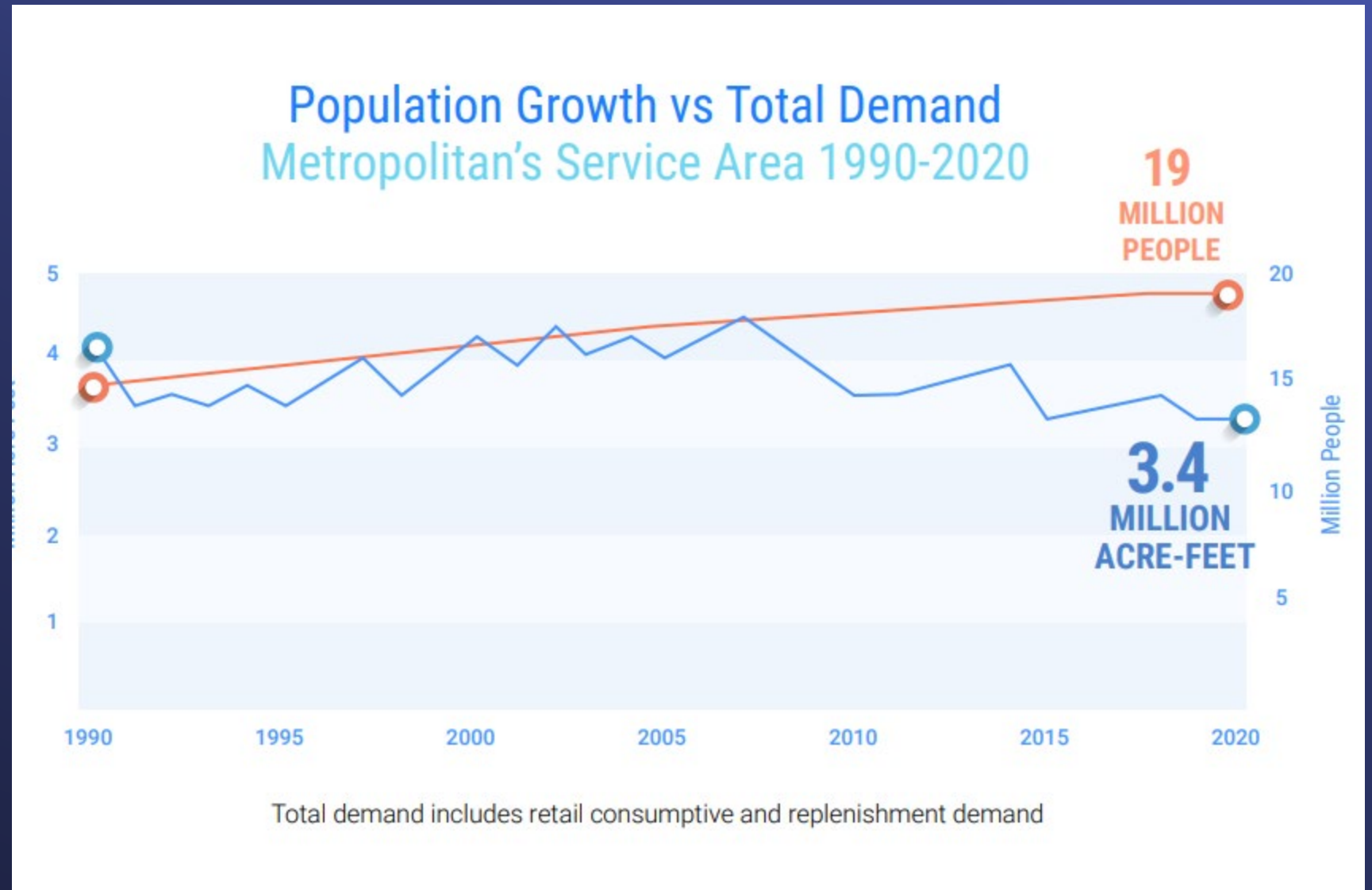
INFRASTRUCTURE INVESTMENTS



CONSERVING WITH CALIFORNIA FRIENDLY™ GARDENS

Demands in Metropolitan's Service Area

Since 1990, overall water use has declined in Metropolitan's service area even though the population has grown by more than four million



Metropolitan's Investment in Conservation

Metropolitan's Cumulative Investment

Millions Invested

Acre-feet

Conservation	\$840	3,482,000
Recycled Water	\$528	3,029,000
Groundwater Recovery	\$181	1,099,000
	\$1.5b	7,610,000

Investments in Local Projects

Member Agencies
invested \$\$ Billions

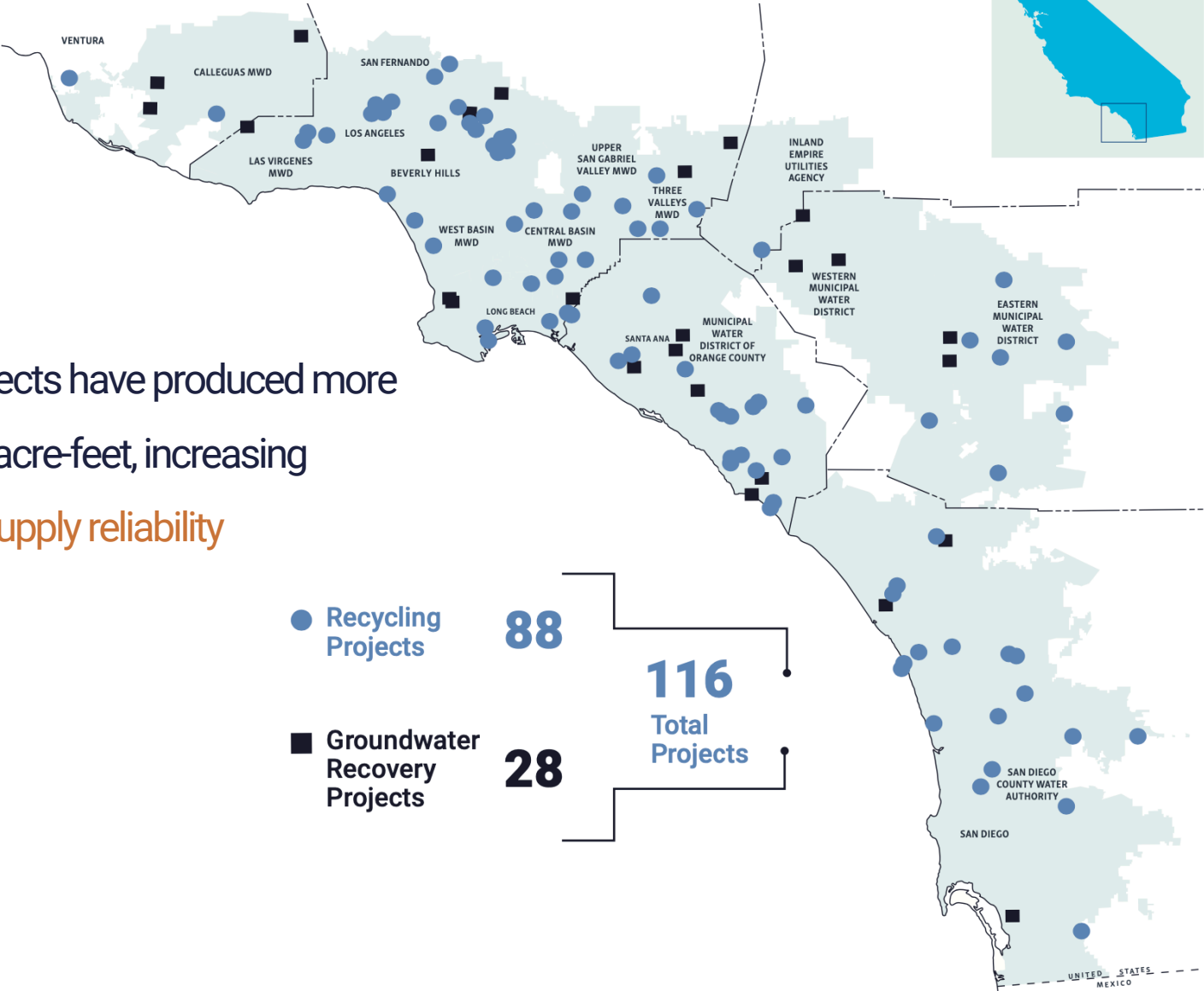
Metropolitan invested
\$1.2 billion

in today's dollars through fiscal
year 2020/21
on more than 100 projects by its
member agencies

~75% of dollars spent are on
Recycled Water

Local Resources Program Projects

These local projects have produced more
than 4.1 million acre-feet, increasing
regional **water supply reliability**



Pure Water Southern California Program

How it works



①

Used water (wastewater) from homes, businesses, and industries in LA County



②

Cleaned at Sanitation Districts' Joint Water Pollution Control Plant



③

Purified at Metropolitan's advanced water purification facility



④

Conveyed through over 60 miles of pipeline to groundwater basins, industries, or Metropolitan's drinking water plants

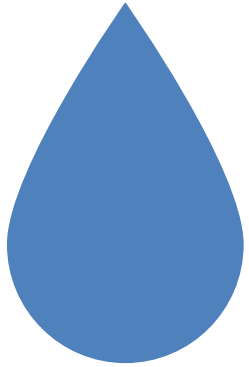


⑤

A new drought-resilient source of water for Southern California

Pure Water Southern California

In numbers



Up to 150 million
gallons per day



Enough water
for over
1.5 million
people



One of the
largest programs
of its kind in
world

Metropolitan is Extensively Pursuing Stormwater



Conservation Devices

- Rain barrels
- Cisterns



Facilitation and Leadership

- SCWC Stormwater Taskforce
- IRWMs



Stormwater Pilot Studies

- \$12.5 million for direct use and recharge pilots
- Evaluate water supply benefit of stormwater



Future Supply Actions Funding Program

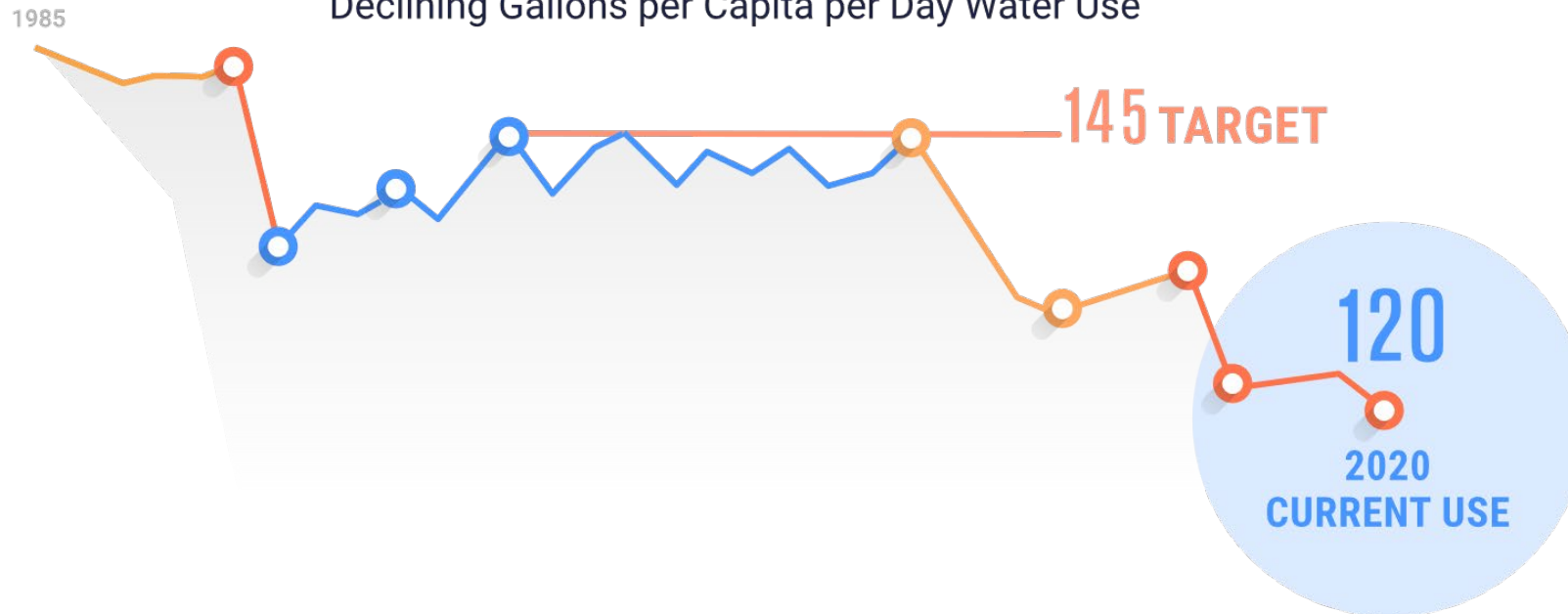
- Accelerates the development of future supplies

Conservation is a Way of Life

- Southern Californians have made conservation a way of life – **and now we need to do more**

Exceeding Our 20% Target Reduction for 2020

Declining Gallons per Capita per Day Water Use

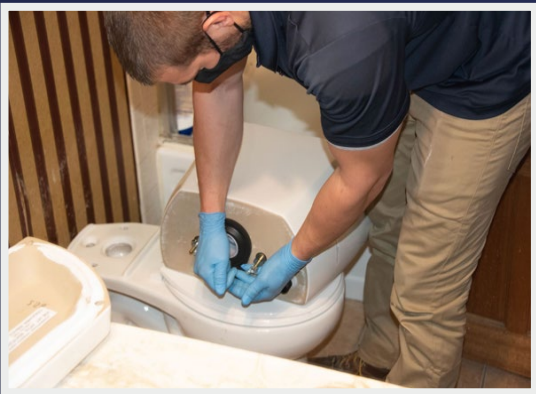


Recent Board Direction to Expand Conservation Activities

November 9,
2021

**Board approval of new
and modified
programs**

Program
launch dates:



August 9 XX 2022

**Expanded So
Cal Gas
Direct Install
Program**

November 22,
2021



**Municipal
Leak
Program &
MAAP Public
Agency**

January 6,
2022

**Expanded
Multi-Family
Property
Toilet
Replacement
Program**

January 18,
2022



Slides for Info

**Public Agency
Turf
Replacement
Program**

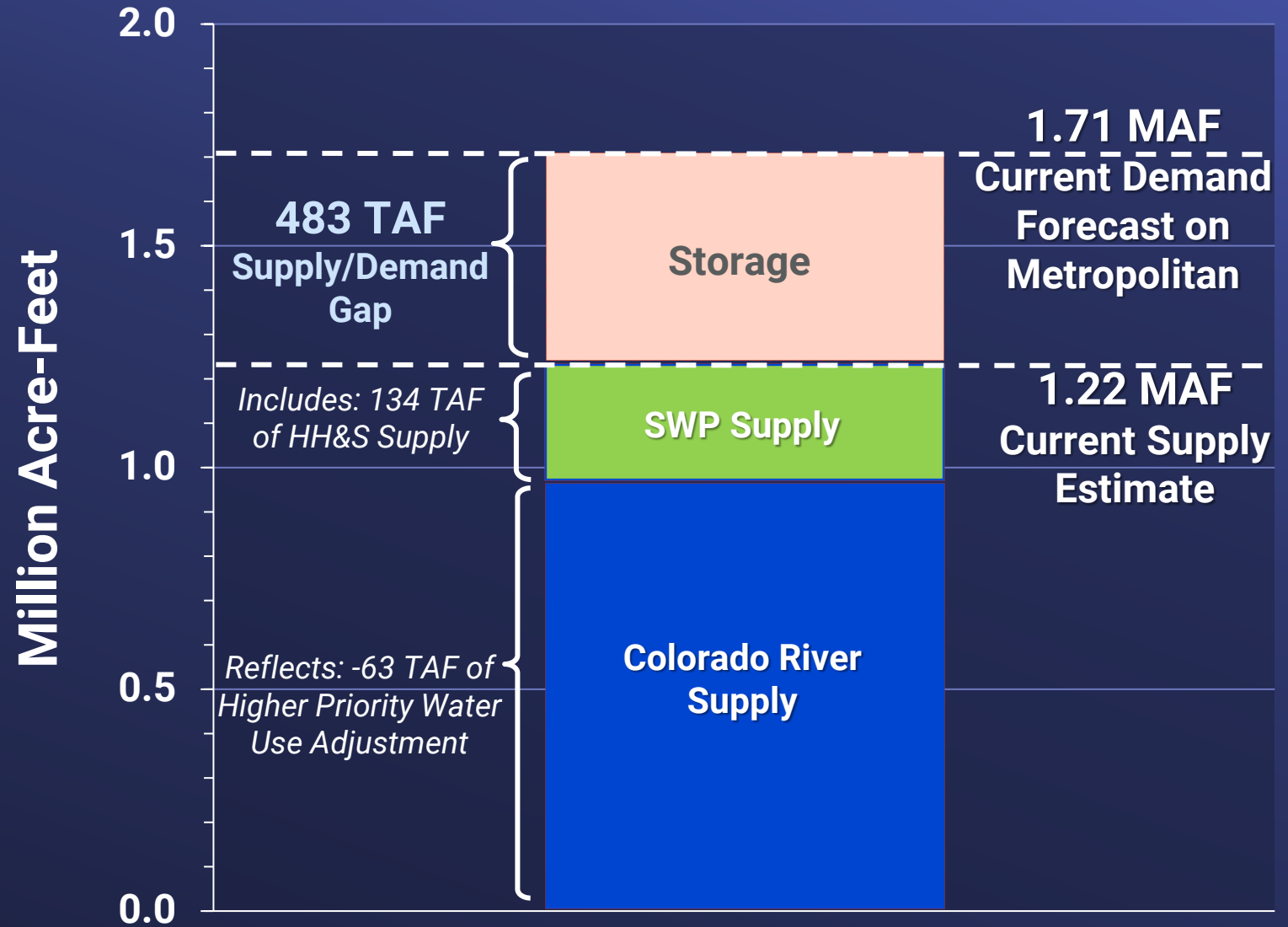
February 20,
2022



Slide 18

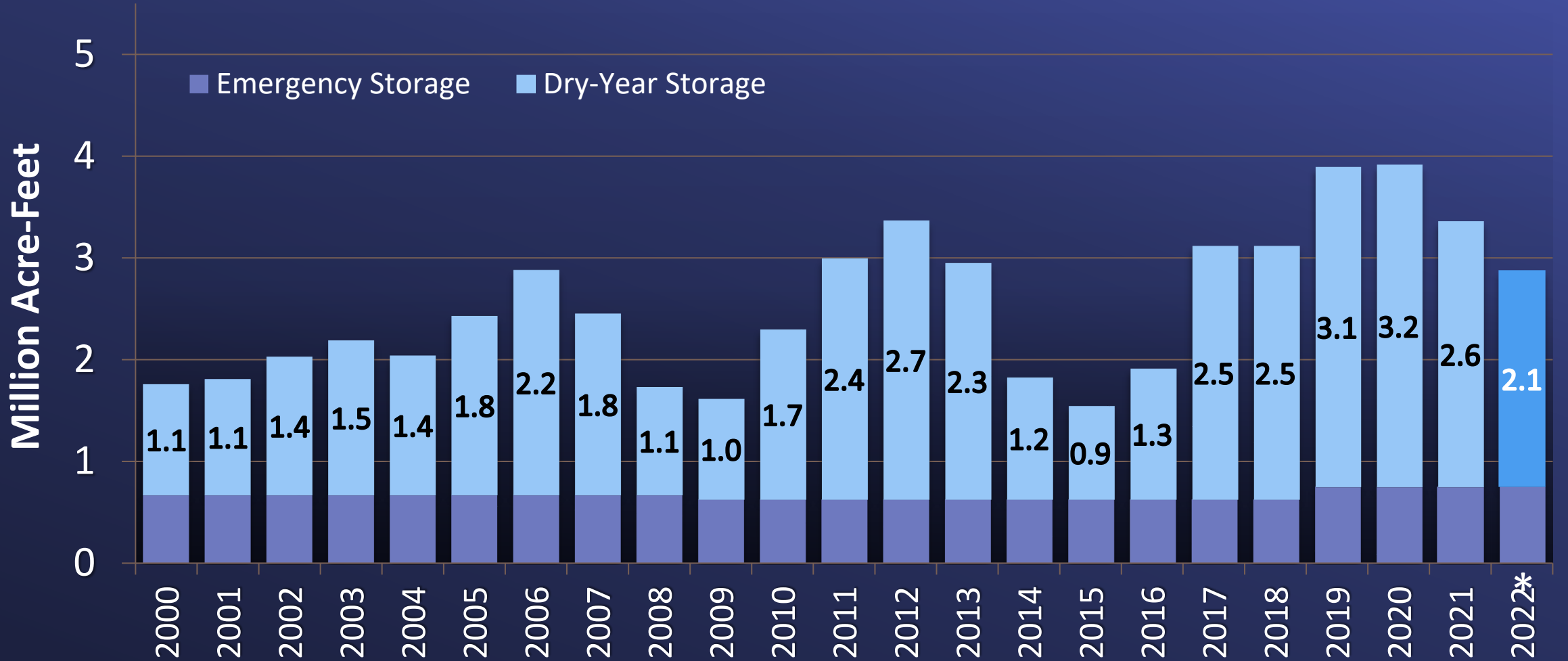
WSDM Supply Demand Balance

Regional View



2022 Storage Projected to be 2.1 MAF

End of Year Balances

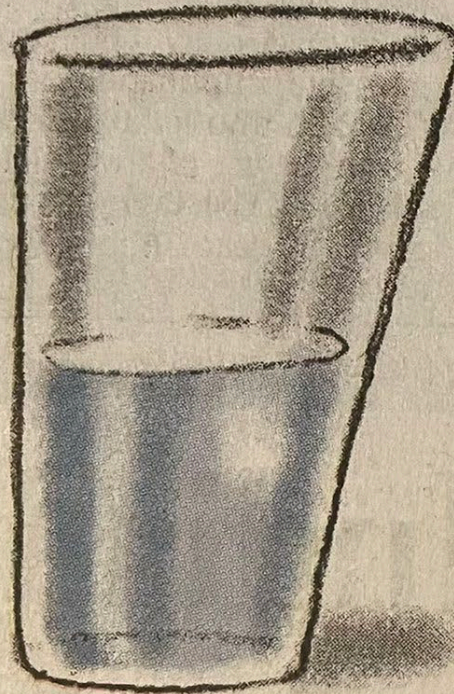


* Estimate – May change based on supply/demand conditions

The Lower Basin
States are
working hard to
meet the
Commissioner's
Call for 2-4 MAF
of water
restrictions

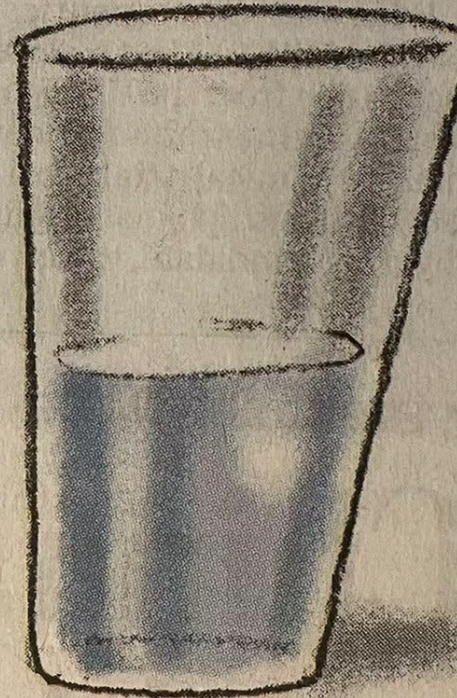
Cartoonist's take

OPTIMIST



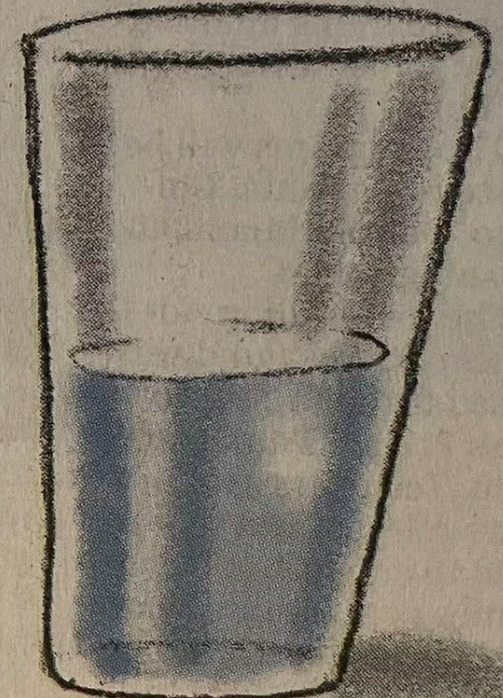
HALF FULL

PESSIMIST



HALF EMPTY

1922
COLORADO RIVER
COMPACT



FULL

caglecartoons.com THE SATURDAY TRIBUNE

AGLEY

June 14, 2022: Commissioner Touton Calls for 2 – 4 MAF of Water Reductions in 2023



U.S. Bureau of Reclamation's August 24 Month Study Results

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	<i>Lower Basin States + Mexico</i>	AZ	NV	CA	Mexico	AZ Total	NV Total	CA Total	<i>Lower Basin States Total</i>	<i>Mexico Total</i>	<i>Lower Basin States + Mexico</i>
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

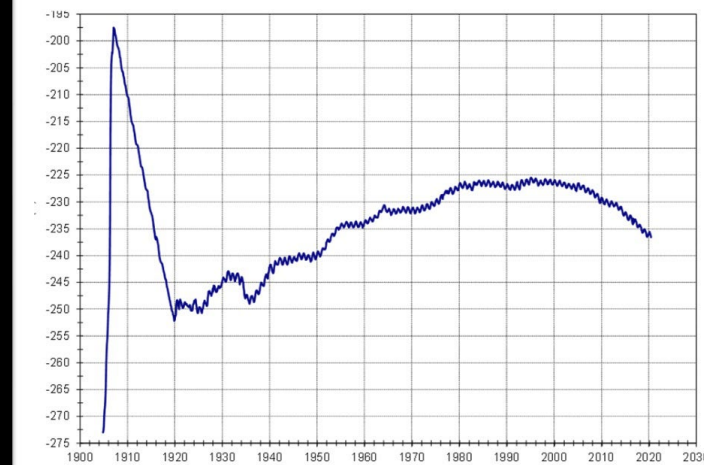
2022 Reductions +
Contributions

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.



The Salton Sea – “Drainage Reservoir” and Environmental Resource



- 360 square miles, up to 52' deep
- Congressionally designated agricultural sump for IID/CVWD
- Volume of 7.5 MAF with annual inflow of up to 1.3 MAF, no outflow
- Nearly 50% saltier than the ocean
- Repository for agricultural drainage
- Heavily used by migratory waterfowl including endangered species
- >10' elevation decline since 2003; despite the replacement of conserved water reductions through the delivery of salinity mitigation water
- Without transfers, Sea was estimated to turn hypersaline between 2010 and 2025
- With transfers, Sea is estimated to turn hypersaline 1-9 years earlier

“We” are the Colorado River

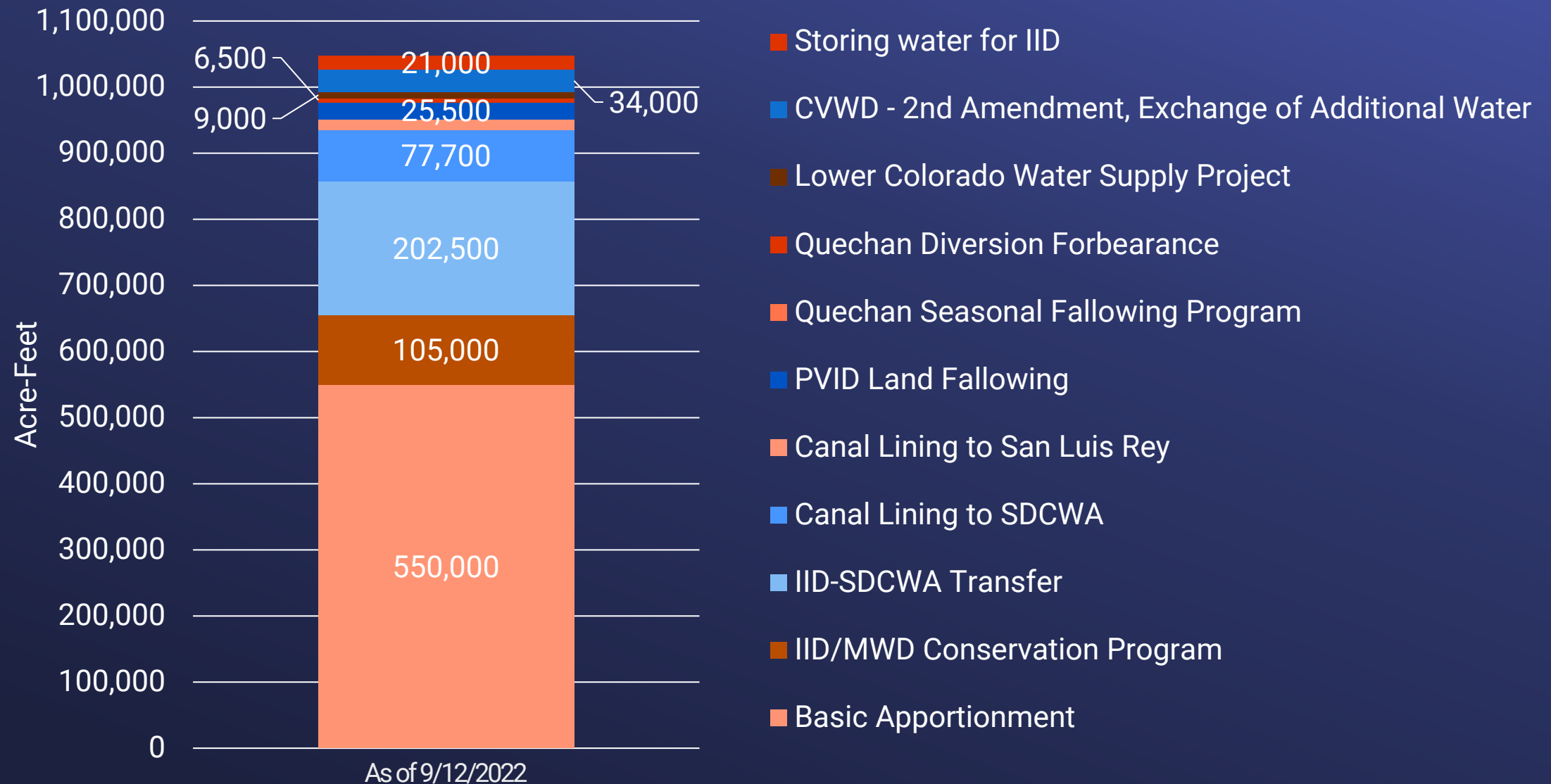




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Colorado River
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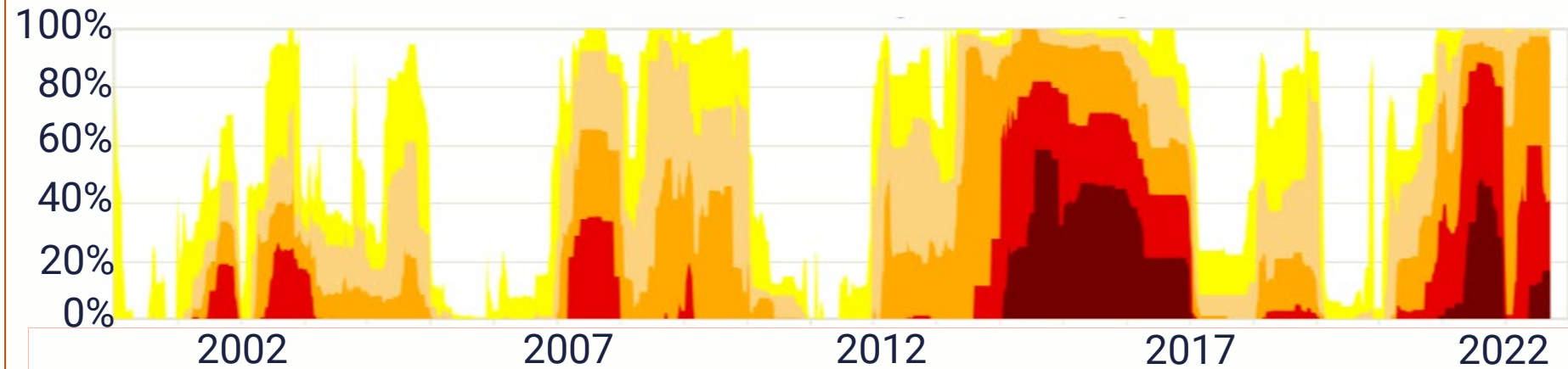


Metropolitan's 2022 Colorado River Supply Estimate



California Multi-Year Droughts

Record precipitation in
October and December
2021 reduced the
drought intensity.



Percentage indicates percentage of area under a certain drought intensity

Drought Intensity

