



Development of Drought Contingency Plans for the Colorado River

November 7, 2018

MWDOC Joint Board Workshop

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Imperial Valley Farmer, ca. 1900



Imperial Valley, 1906

New River Cutting its Channel, Calexico 1906.

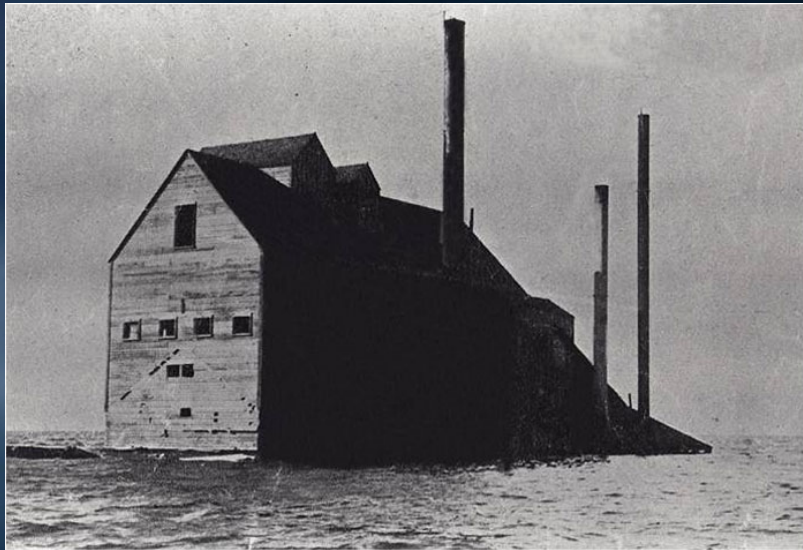


Imperial Valley, 1906

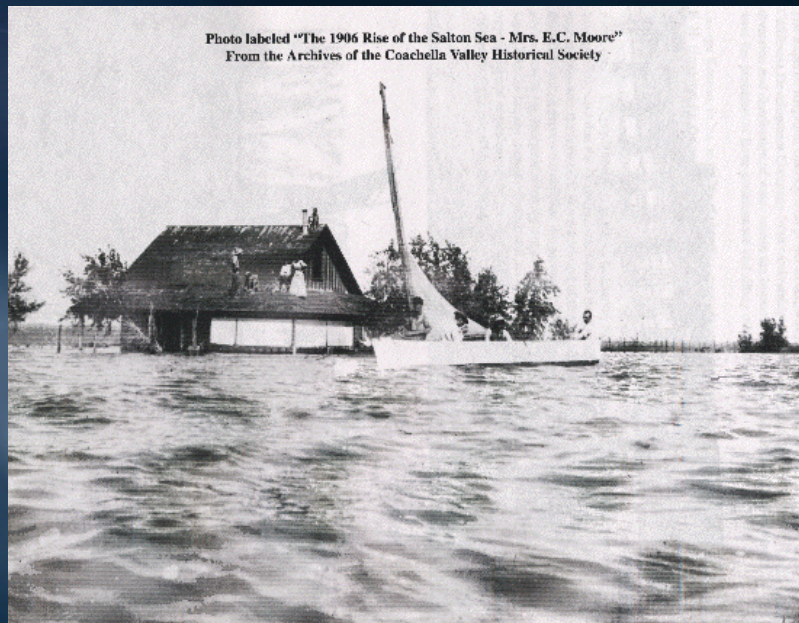


New River,
Calexico, Cal.

Imperial Valley, 1906



Imperial Valley, 1906



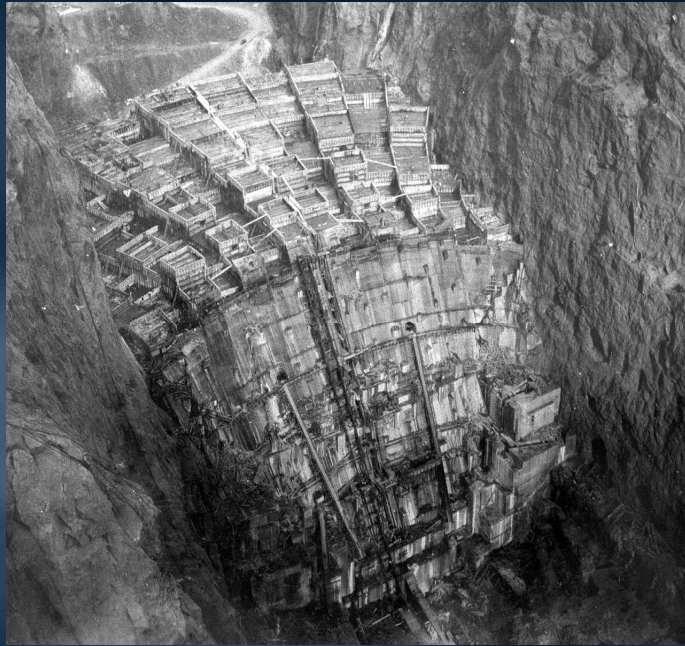
The New Salton Sea, 1906



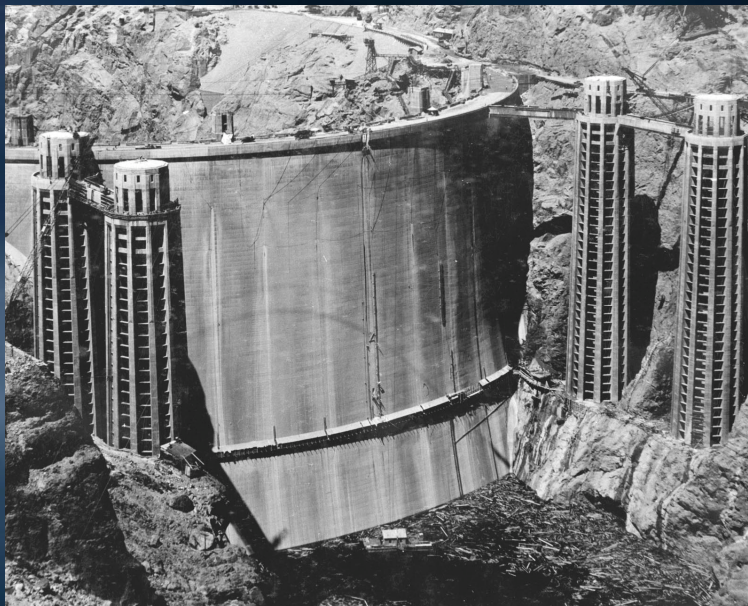
Black Canyon, Colorado River

1922 Compact and 1944 Treaty Allocations

Upper Basin	7.5 mafy
Lower Basin	7.5 mafy + 1.0 mafy
Mexico	1.5 mafy
Total	17.5 mafy



Hoover Dam Construction, 1928

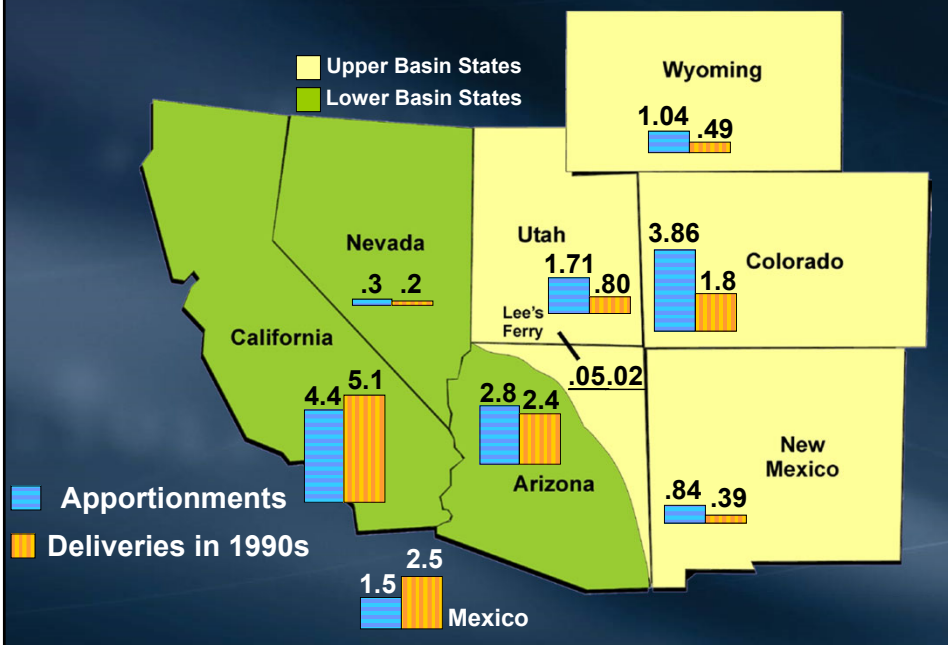


Hoover Dam Completed



Lake Mead Spilling, 1983

Colorado River Apportionments (Million acre-feet)





California Priority System (1931)

- | | |
|--|----------------|
| 1. Palo Verde | |
| 2. Yuma Project | |
| 3. (a) Imperial & Coachella | 3.85 MAF |
| (b) Palo Verde | |
| 4. Metropolitan | <u>550 TAF</u> |
| Total Basic Apportionment 4.4 MAF | |

- | | |
|------------------------------------|---------|
| 5. Metropolitan | 662 TAF |
| 6. Imperial, Coachella, Palo Verde | 300 TAF |

Quantification Settlement Agreement Quantified Water Budgets

	<u>maf</u>
PVID	
Yuma Project	0.42 (Average)
IID	3.10
CVWD	0.33
MWD *	0.55
Total	4.40

* Amount fluctuates based on PVID/Yuma Project use, unused IID and CVWD water

California 4.4 Plan

Agricultural Conservation Measures with IID

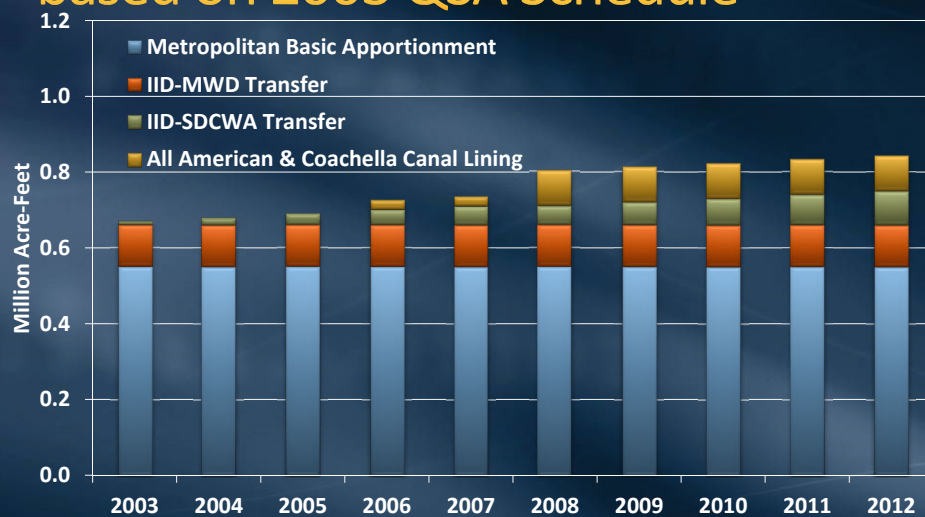


California 4.4 Plan

Line the All-American, Coachella Canals



Colorado River Aqueduct Supply based on 2003 QSA Schedule



MWD-PVID Crop Rotation Program

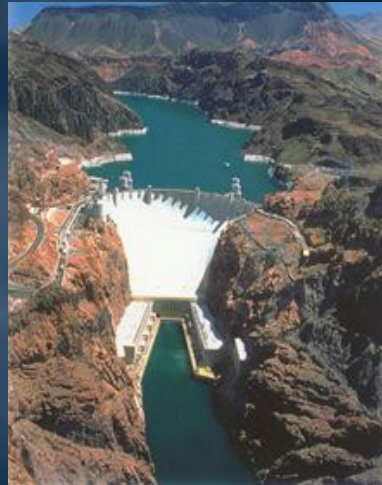
Incentivize PVID Farmers to Not Grow Crops



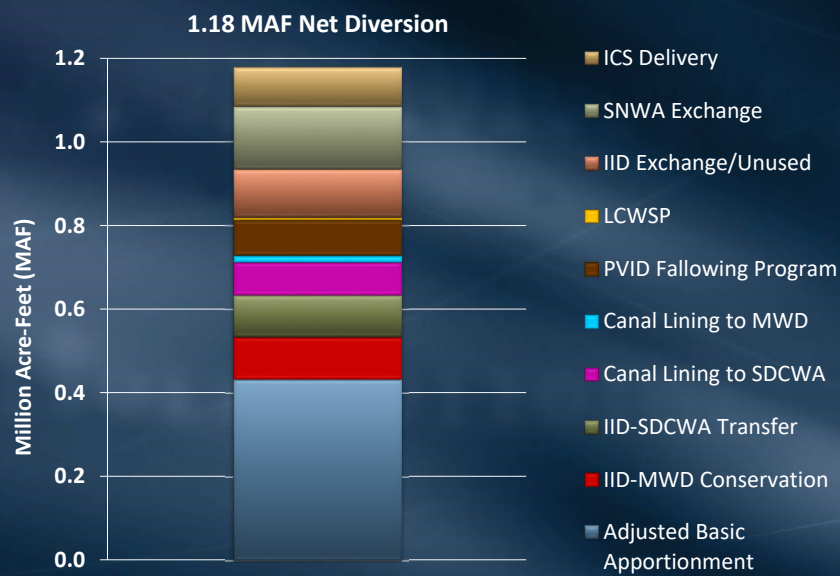
Water Sharing Agreement with Nevada



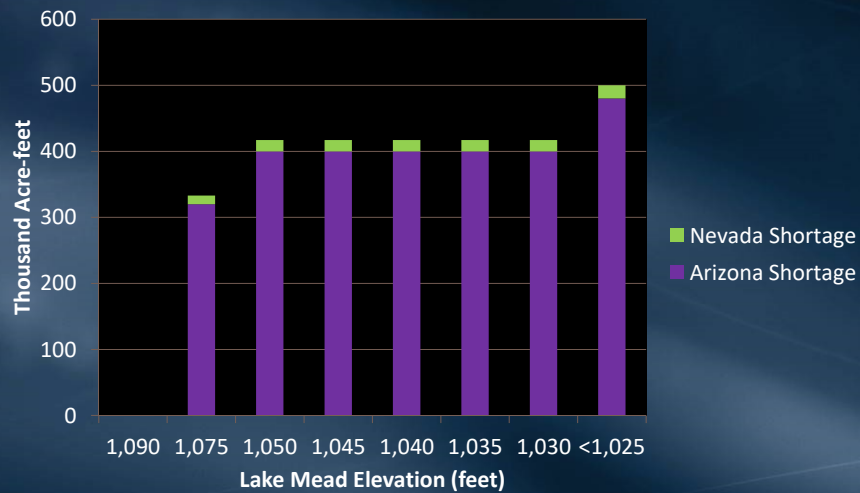
2007 Interim Guidelines Authorized Storage Program in Lake Mead (ICS)



2015 Colorado River Aqueduct Supplies

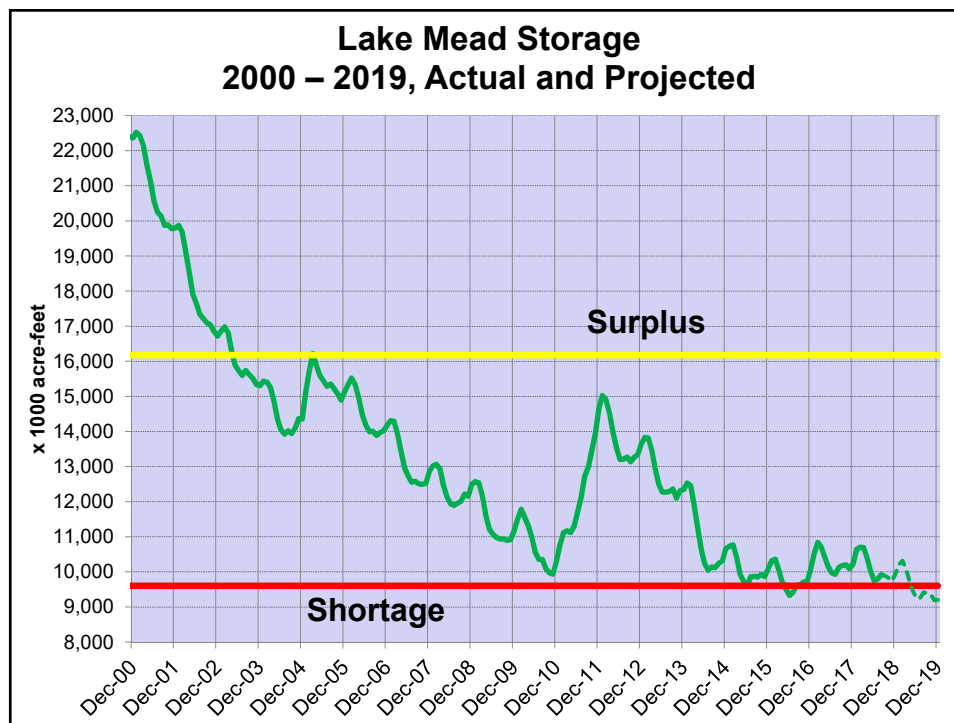
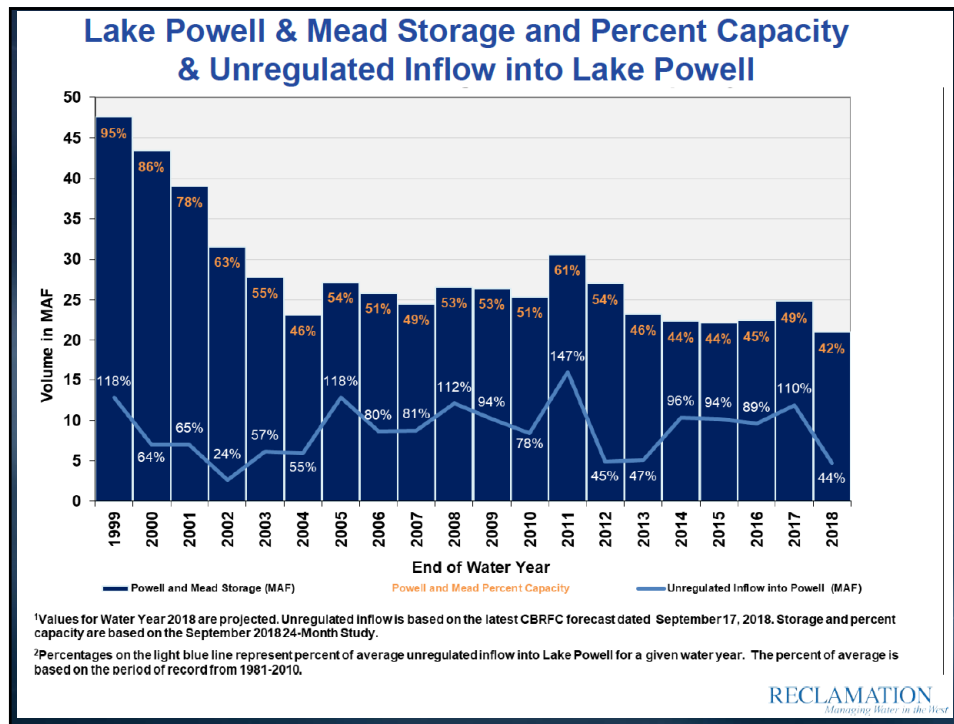


2007 Agreement for Shortages



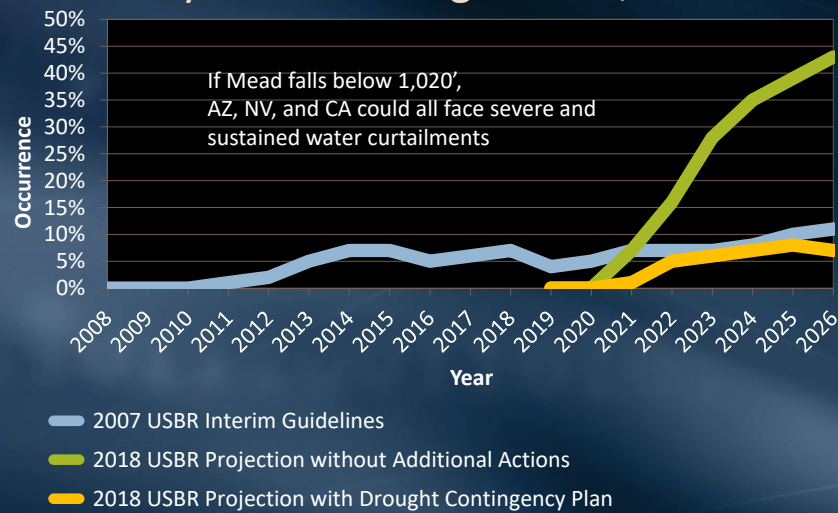
Basin States Developing Drought Contingency Plans





Lake Mead is at Increased Risk

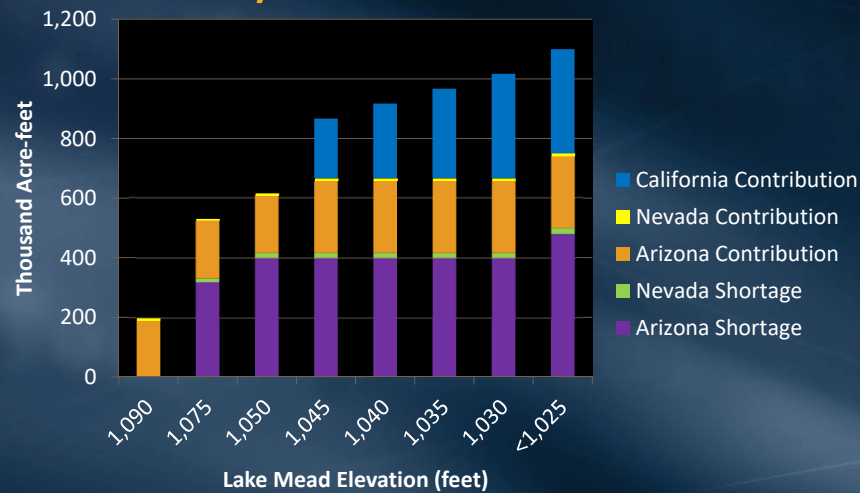
Probability of Mead falling below 1,020'



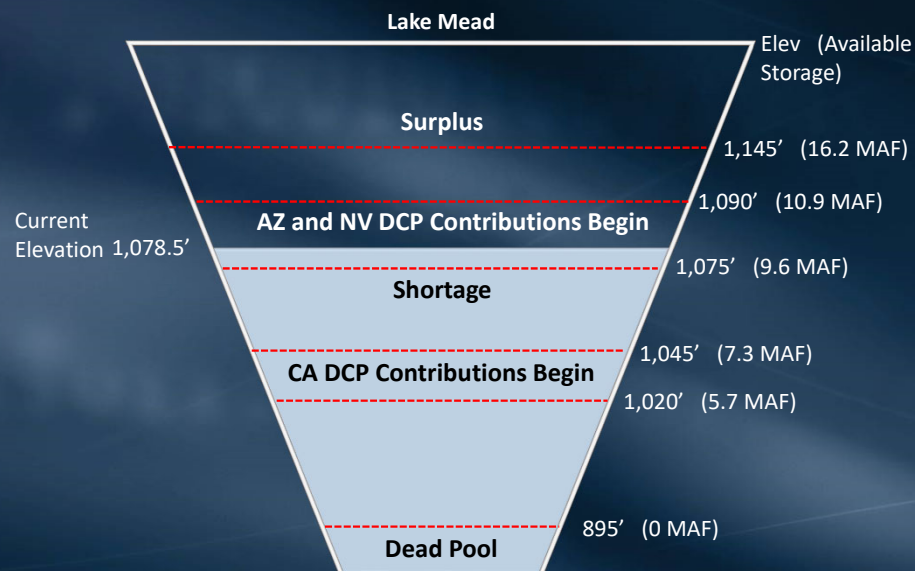
California DCP Documents and Agreements

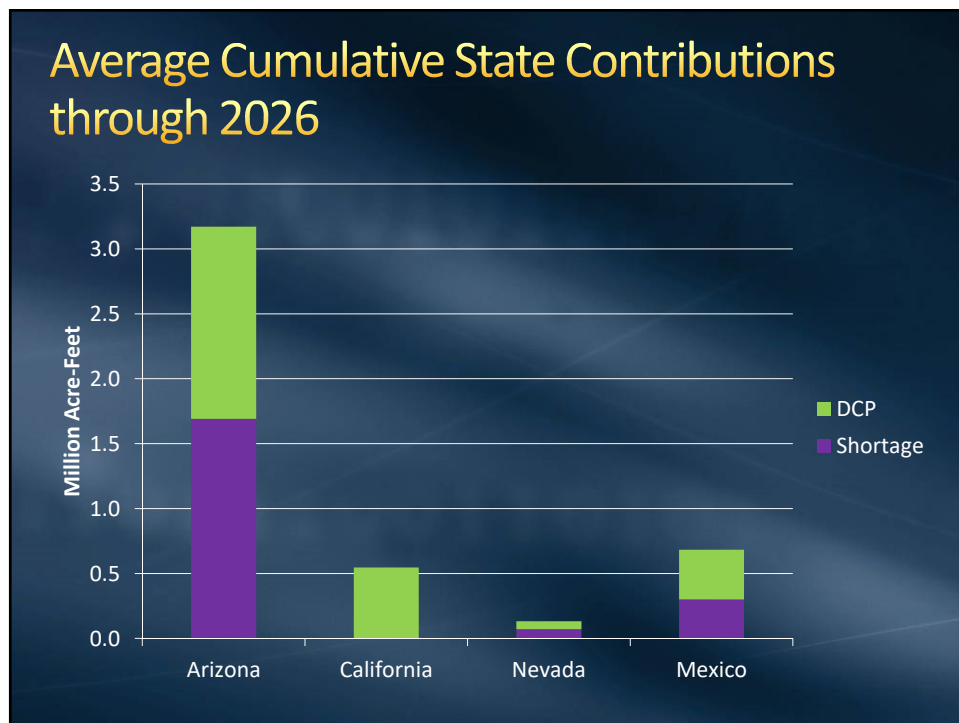
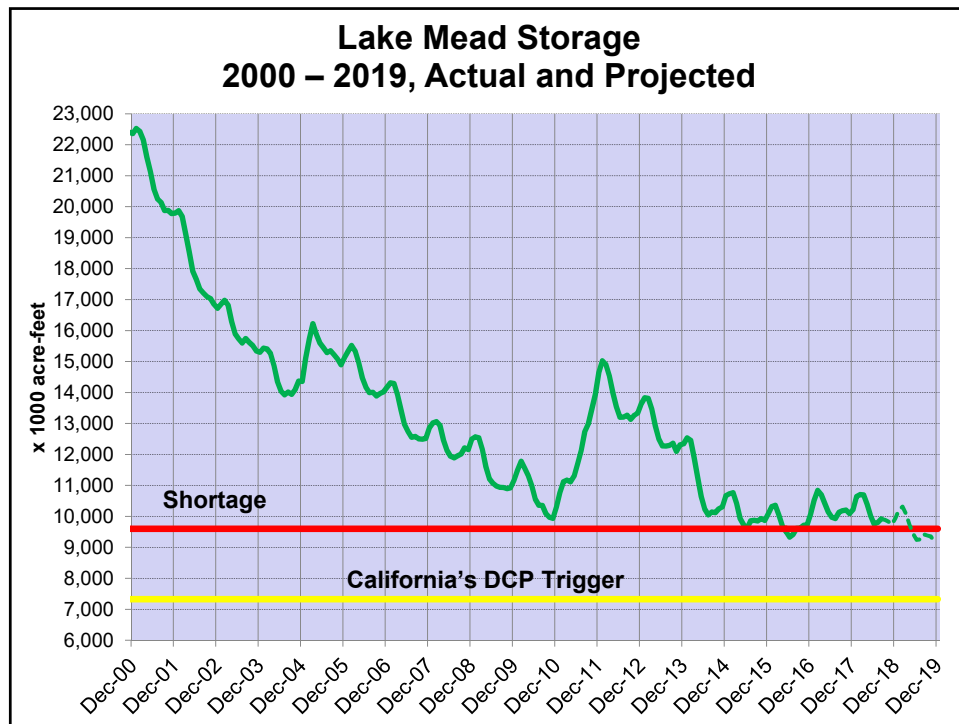


Total Lower Basin Contributions with DCP by Elevation

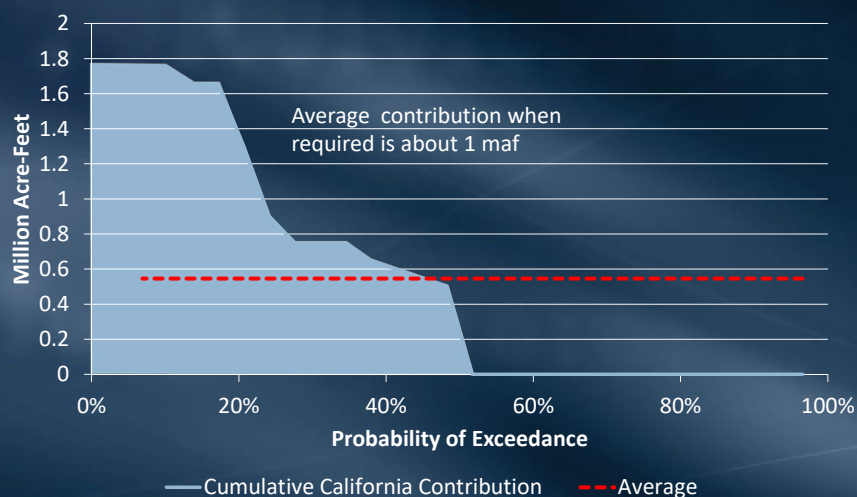


Key Lake Mead Elevations with DCP





Cumulative California Contribution Exceedance Curve

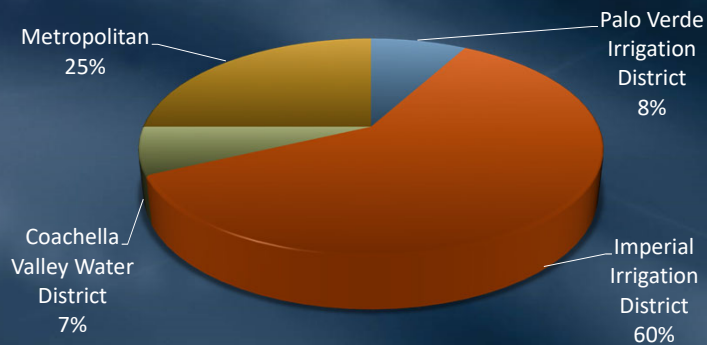


DCP Contributions and Consumptive Use Under QSA

- How California's DCP Contribution is shared:
 - IID: 60%, up to the first 250,000 AF
 - MWD: 25% and IID's share above 250,000 AF
 - CVWD: 7%
 - PVID: 8%*

* PVID's contributions to be made through existing fallowing program

Proportion of Diversions of Colorado River Water within CA (on average)



California Priority System (1931)

1. Palo Verde	
2. Yuma Project	
3. (a) Imperial & Coachella	3.85 MAF
(b) Palo Verde	
4. Metropolitan	<u>550 TAF</u>
Total Basic Apportionment 4.4 MAF	

5. Metropolitan	662 TAF
6. Imperial, Coachella, Palo Verde	300 TAF

Sources for Possible 1 million acre foot CA DCP Contribution

- Under California DCP Implementing Agreements
 - IID 250,000 AF
 - CVWD 70,000 AF
 - PVID 80,000 AF
 - MWD ICS 350,000 AF
- Potential Options
 - Interstate Banking 300,000 AF
- Total: 1,050,000 AF

Benefits of Implementing DCP

- Stabilizes Colorado River Supplies
 - AZ, NV, & CA contribute to storage, significantly reducing risk of reaching critical storage levels
- Provides flexibility to meet dry year needs
 - Provides for recovery of water at lower storage levels to meet local drought needs
- Protects power resources
 - Prevents Lake Mead from reaching low levels that preclude the ability to generate power

Next Steps

- Finalize agreements within California and Lower Basin
- Potential action item for approval by the end of the year
- Congressional authorization for implementation of DCP

