



Memorandum

DATE: November 18, 2019
TO: Member Agencies – MWD OC Divisions Two & Three
FROM: Larry Dick, Director – Division Two
Bob McVicker, Director – Division Three
SUBJECT: Monthly Water Usage Data, Tier 2 Projection & Water Supply Information

The attached figures show the recent trend of water consumption in Orange County (OC), an estimate of Imported Water Sales for MWD OC, and selected water supply information.

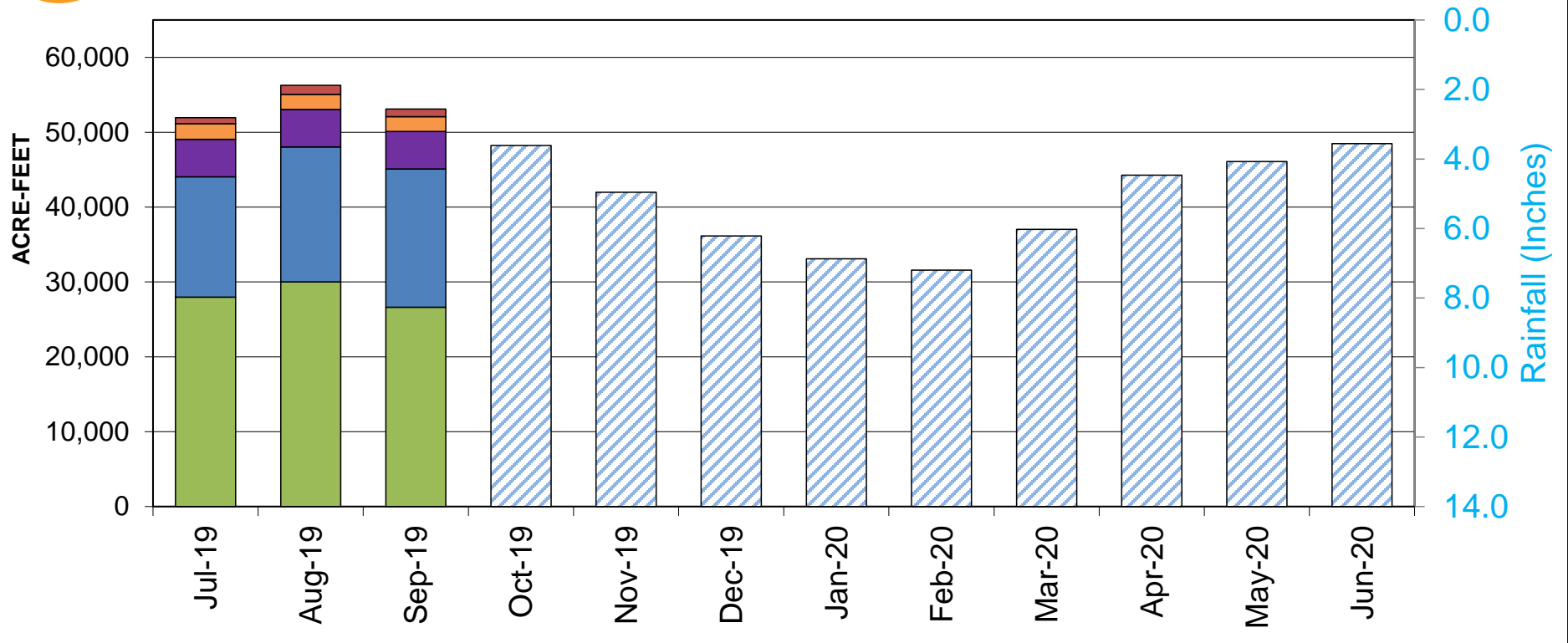
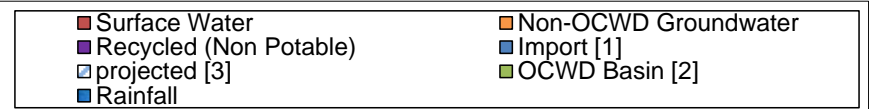
- OC Water Usage, Monthly by Supply **OCWD Groundwater was the main supply in September.**
- OC Water Usage, Monthly, Comparison to Previous Years Water usage in **September 2019 was above average compared to the last 5 years.** A slight increase in overall water usage is projected compared to Fiscal Year (FY) 2018-19. It has been 31 months since all mandatory water restrictions were lifted by the California State Water Resources Control Board.
- Historical OC Water Consumption Orange County M & I water consumption is estimated to be **528,000 acre-feet (AF) in FY 2019-20** (this includes ~15 thousand acre-feet of agricultural usage and non-retail water agency usage). This is about **12,000 AF more than FY 2018-19** and is about **12,000 AF less than FY 2017-18.** Water usage per person is projected to be slightly higher in **FY 2018-19 for Orange County at 142 gallons per day** (This includes recycled water). Although OC population has increased 20% over the past two decades, water usage has not increased, on average. A long-term decrease in per-capita water usage is attributed mostly to Water Use Efficiency (water conservation) efforts. **O.C. Water Usage for the last four Fiscal Years is the lowest since the 1982-83 Fiscal Year** (FY 1982-83 was the third wettest year on record).

Water Supply Information Includes data on Rainfall in OC; the OCWD Basin overdraft; Northern California and Colorado River Basin hydrologic data; the State Water Project (SWP) Allocation, and regional storage volumes. The data have implications for the magnitude of supplies from the three watersheds that are the principal sources of water for OC. Note that a hydrologic year is Oct. 1st through Sept. 30th.

- Orange County's accumulated rainfall through **October** was below average for this period. Water year to date rainfall in Orange County is **0.03 inches**, which is **4% of normal**.
- Northern California accumulated precipitation through **October** was **10% of normal for this period**. Water Year 2018 was 28% of normal while water year 2017 was 434% of normal. The **Northern California snowpack** was **172% of normal** as of April 1st. **Through October, 2.06%** of California is experiencing **moderate drought conditions** while 17.74% of the state is experiencing abnormally dry conditions. The State Water Project Contractors Table A Allocation was increased to 75% in June 2019.
- Colorado River Basin accumulated precipitation through **late October was 59% of normal** for this period. The **Upper Colorado Basin snowpack was 128% of normal** as of April 15th. **Lake Mead and Lake Powell** combined have about **65% of their average storage volume** for this time of year and are at **46.5% of their total capacity**. If Lake Mead's **level falls below a "trigger" limit 1,075 ft. at the end of a calendar year**, then a shortage will be declared by the US Bureau of Reclamation (USBR), impacting Colorado River water deliveries to the Lower Basin states. As of late August, Lake Mead levels were **8.00' above the "trigger" limit**. The USBR predicts that the start of 2019 will not hit the "trigger" level but there is **a 0% chance that the trigger level will be hit in 2020 and a 4% chance in 2021**.



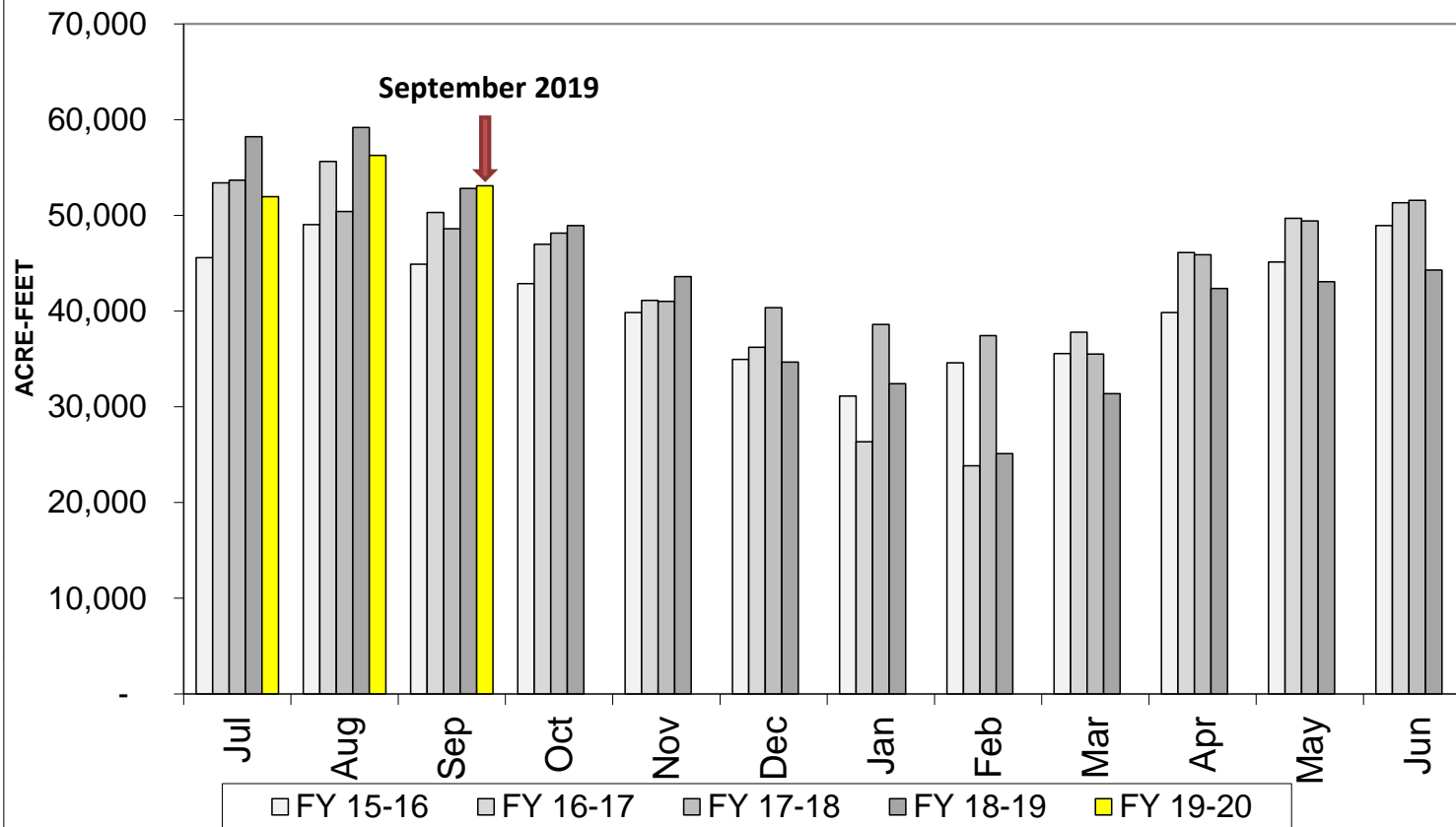
Fig. 1 OC Water Usage, Monthly by Supply with projection to end of fiscal year



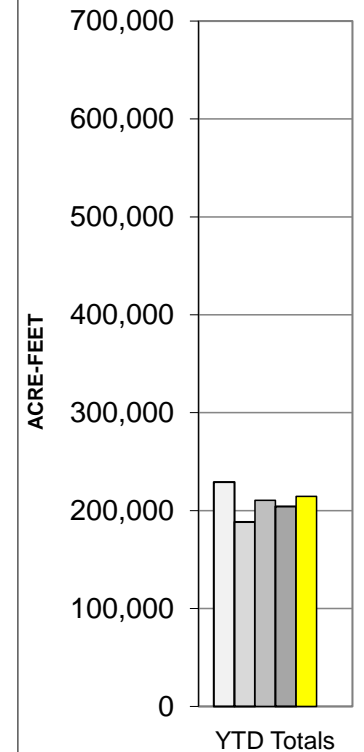
- [1] Imported water for consumptive use. Includes "In-Lieu" deliveries and CUP water extraction. Excludes "Direct Replenishment" deliveries of spreading water and deliveries into Irvine Lake.
- [2] GW for consumptive use only. Excludes In-Lieu water deliveries and CUP water extraction that are counted with Import. BPP in FY '19-20 is 77%.
- [3] MWDOC's estimate of monthly demand is based on the projected 5 Year historical retail water demand and historical monthly demand patterns.
- [4] Total water usage includes IRWD groundwater agricultural use and usage by non-retail water agencies.



Fig. 2 OC Monthly Water Usage [1]: Comparison to Last 4 Fiscal Years



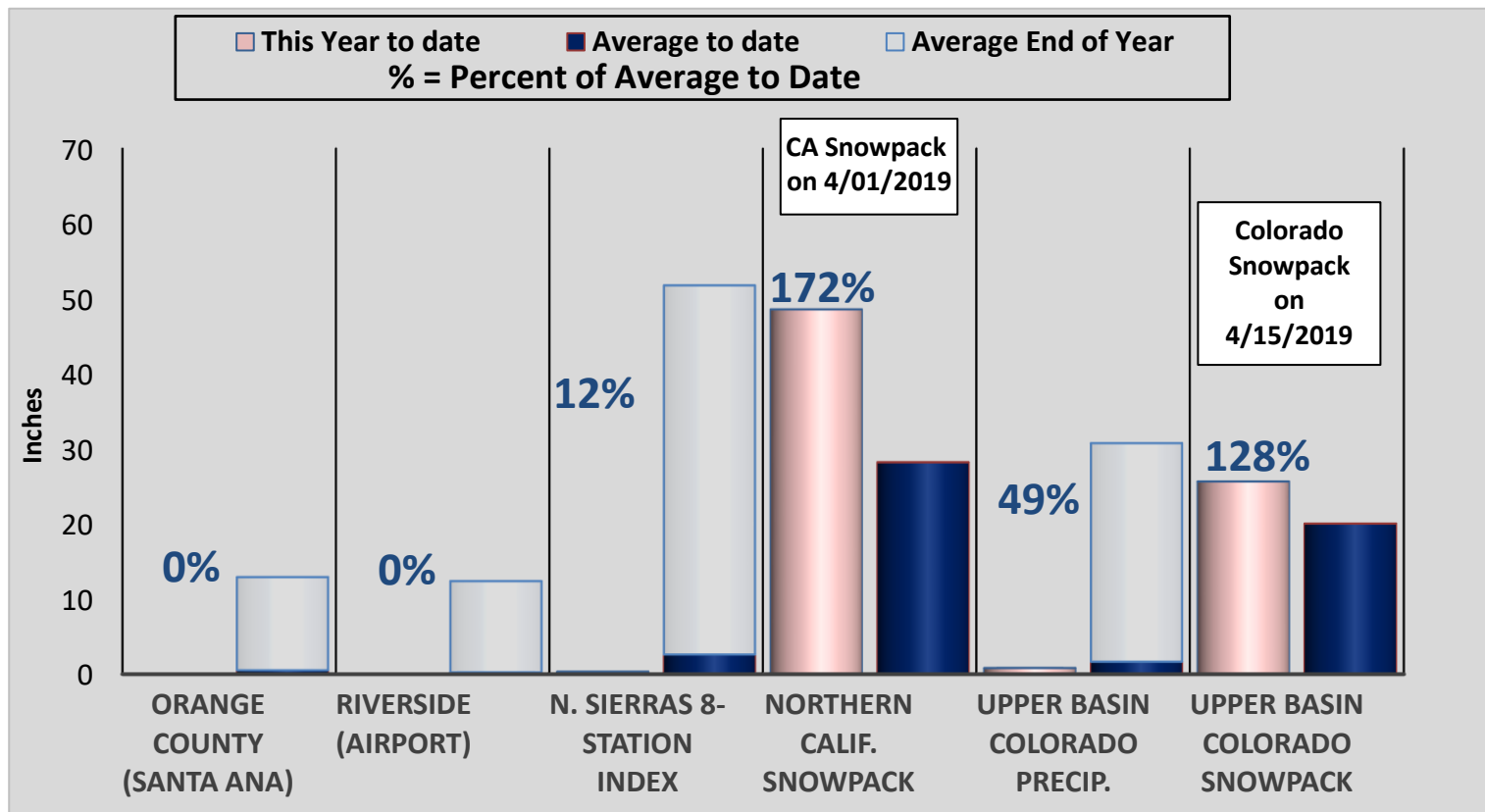
Partial Year Subtotals



[1] Sum of Imported water for consumptive use (includes "In-Lieu" deliveries; excludes "Direct Replenishment" and "Barrier Replenishment") and Local water for consumptive use (includes recycled and non-potable water and excludes GWRS production) Recent months numbers include some estimation.

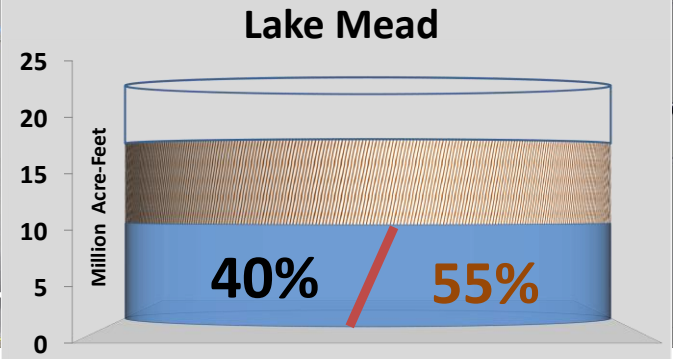
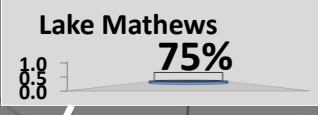
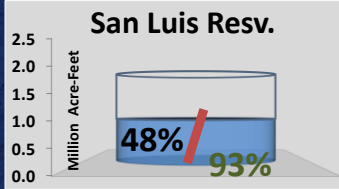
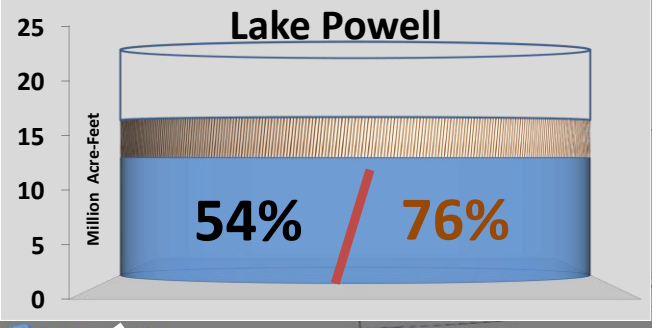
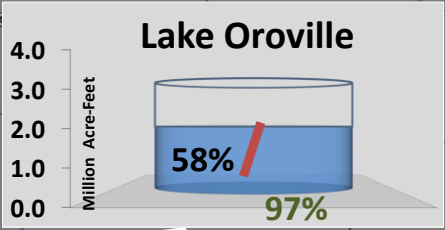
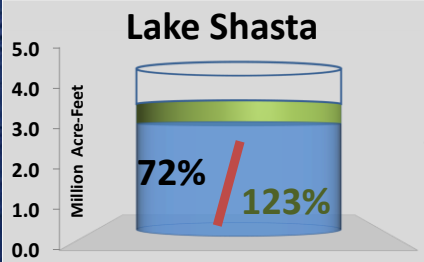
Accumulated Precipitation

for the Oct.-Sep. water year, through Late October 2019

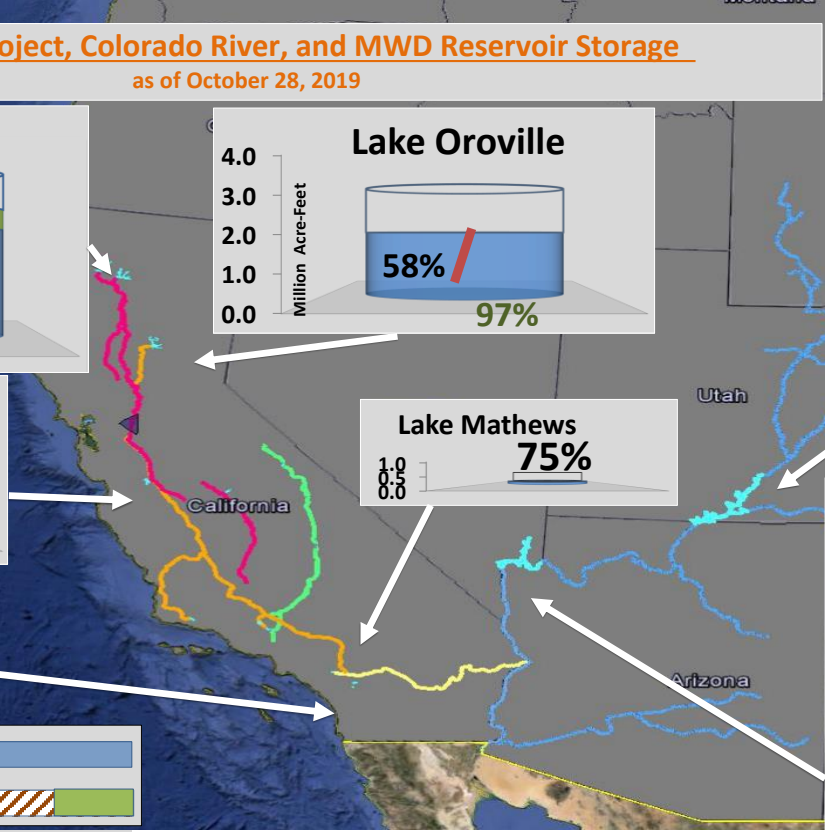


* The date of maximum snowpack accumulation (April 1st in Northern Calif. , April 15th in the Upper Colorado Basin) is used for year to year comparison.

State Water Project, Colorado River, and MWD Reservoir Storage
as of October 28, 2019

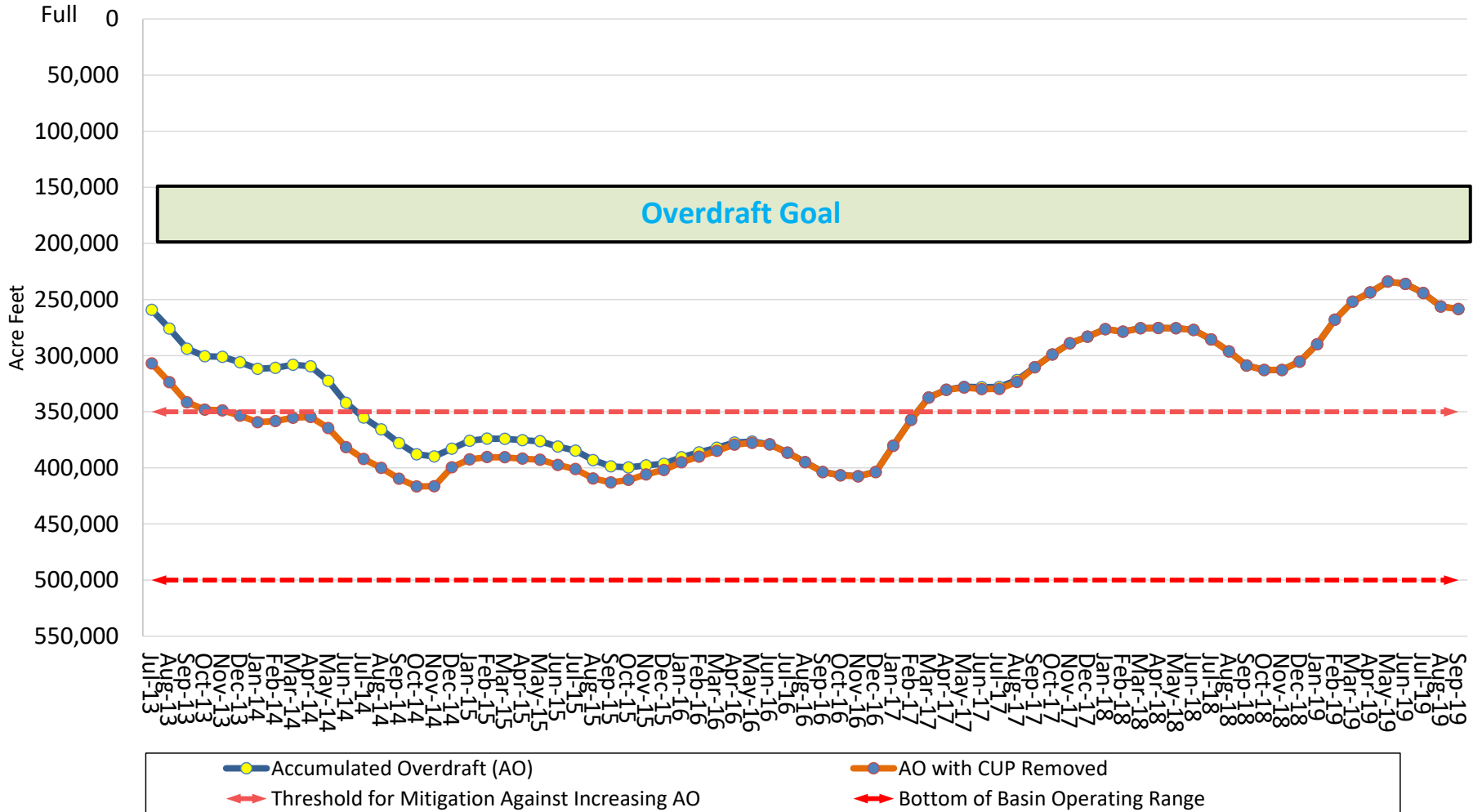


% of Capacity 
% of Historical Avg. 



prepared by the Municipal Water District of Orange County
*Numbers are Subject to Change

Accumulated Overdraft of the OCWD Groundwater Basin as of September 2019

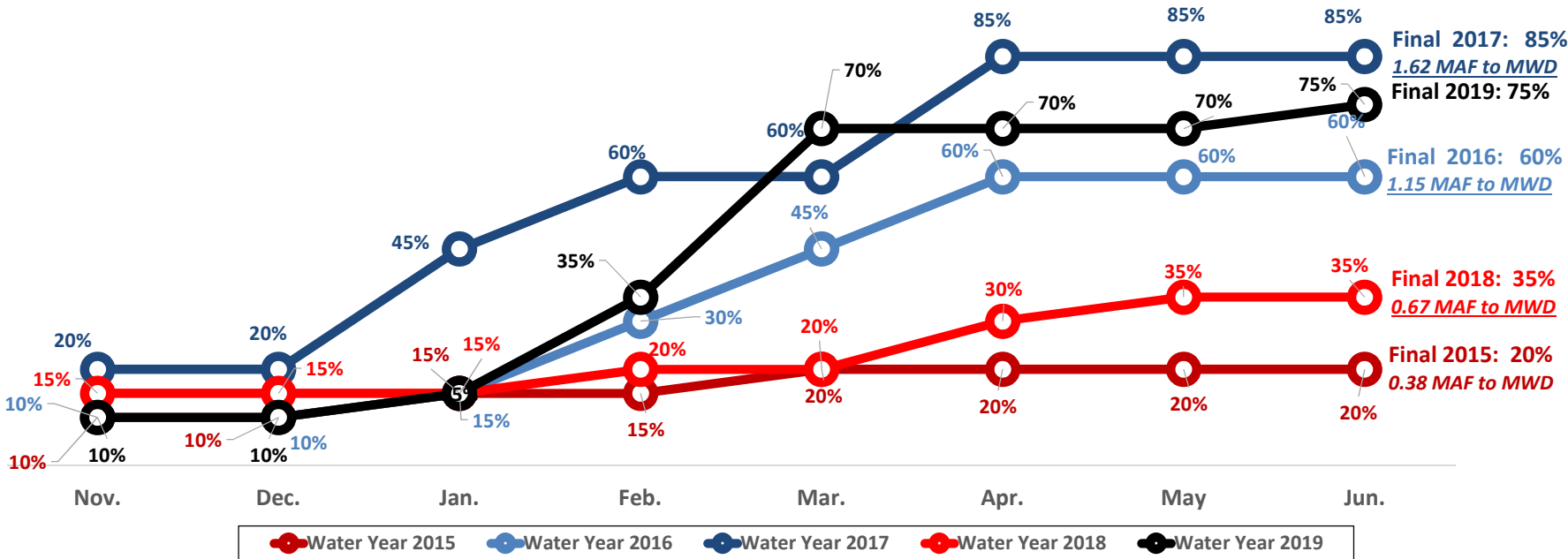


	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
AO (AF)	285,494	296,106	308,748	312,758	312,782	305,367	289,860	267,879	251,876	243,604	234,048	236,005
AO w/CUP removed (AF)	285,494	296,106	308,748	312,758	312,782	305,367	289,860	267,879	251,876	243,604	234,048	236,005
	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20
AO (AF)	244,057	256,239	258,445									
AO w/CUP removed (AF)	244,057	256,239	258,445									

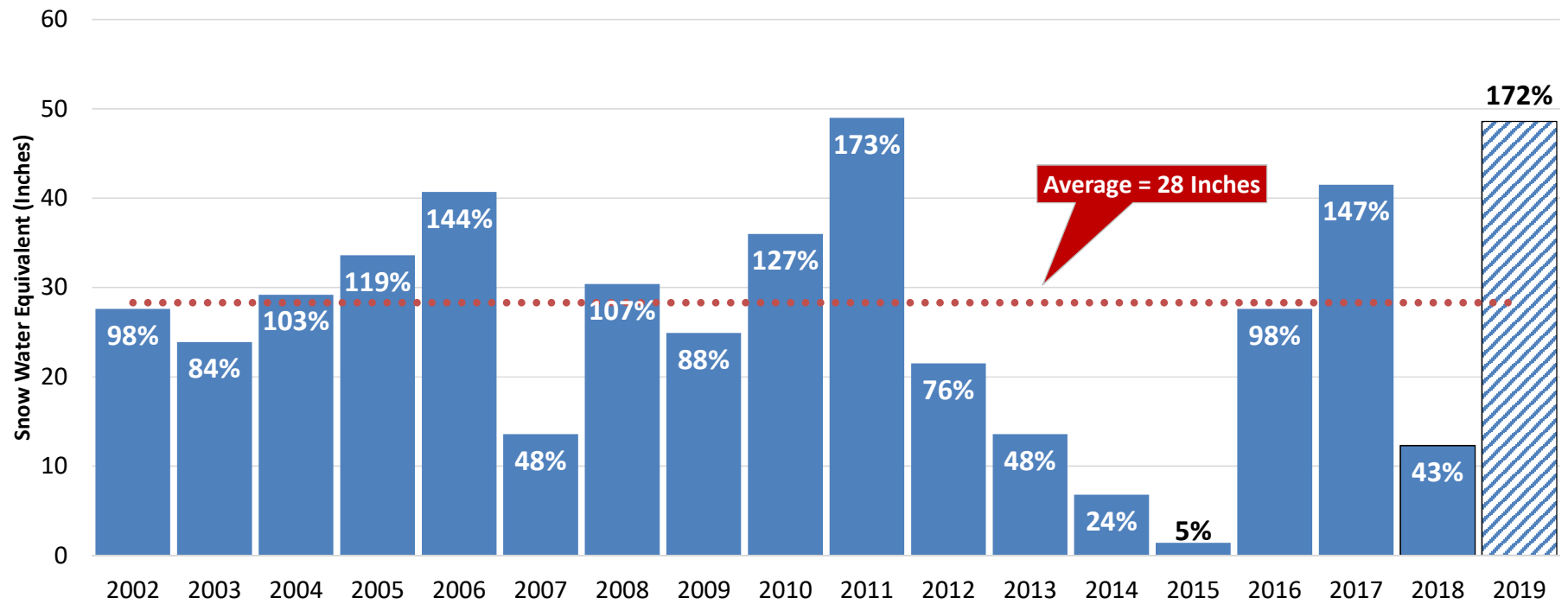


SWP TABLE A ALLOCATION

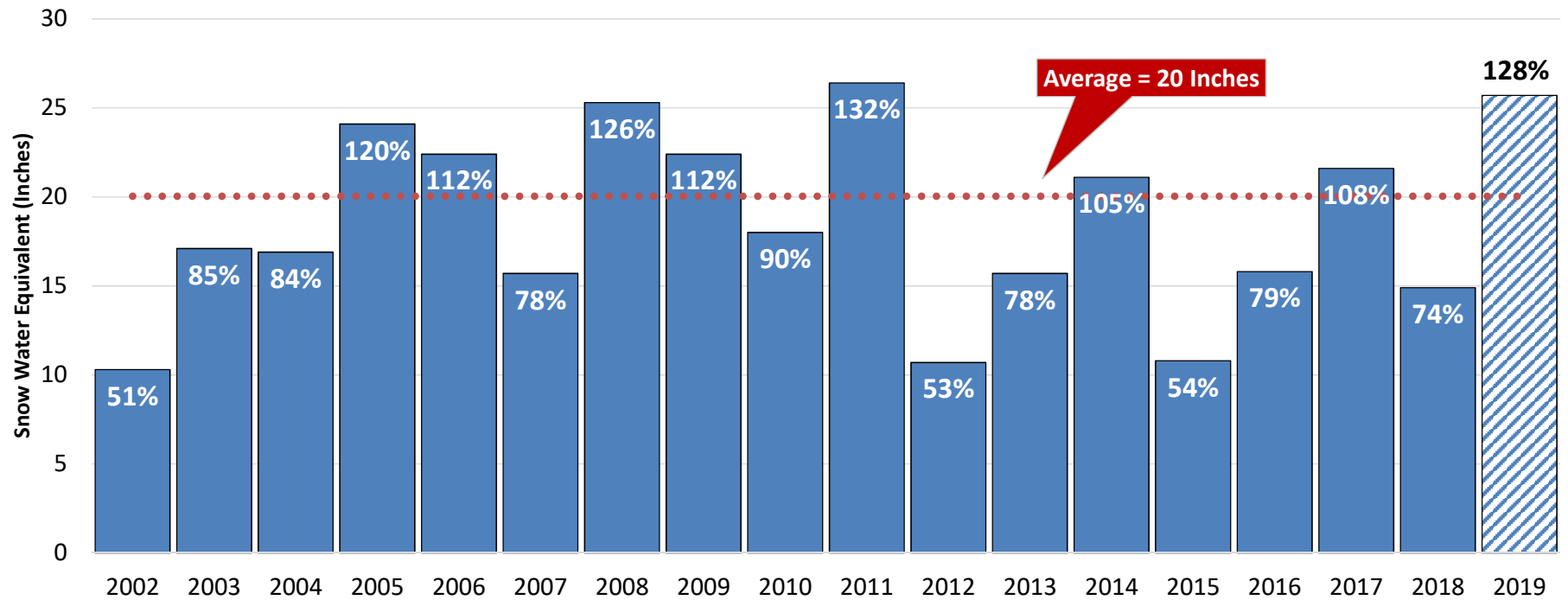
FOR STATE WATER PROJECT CONTRACTORS



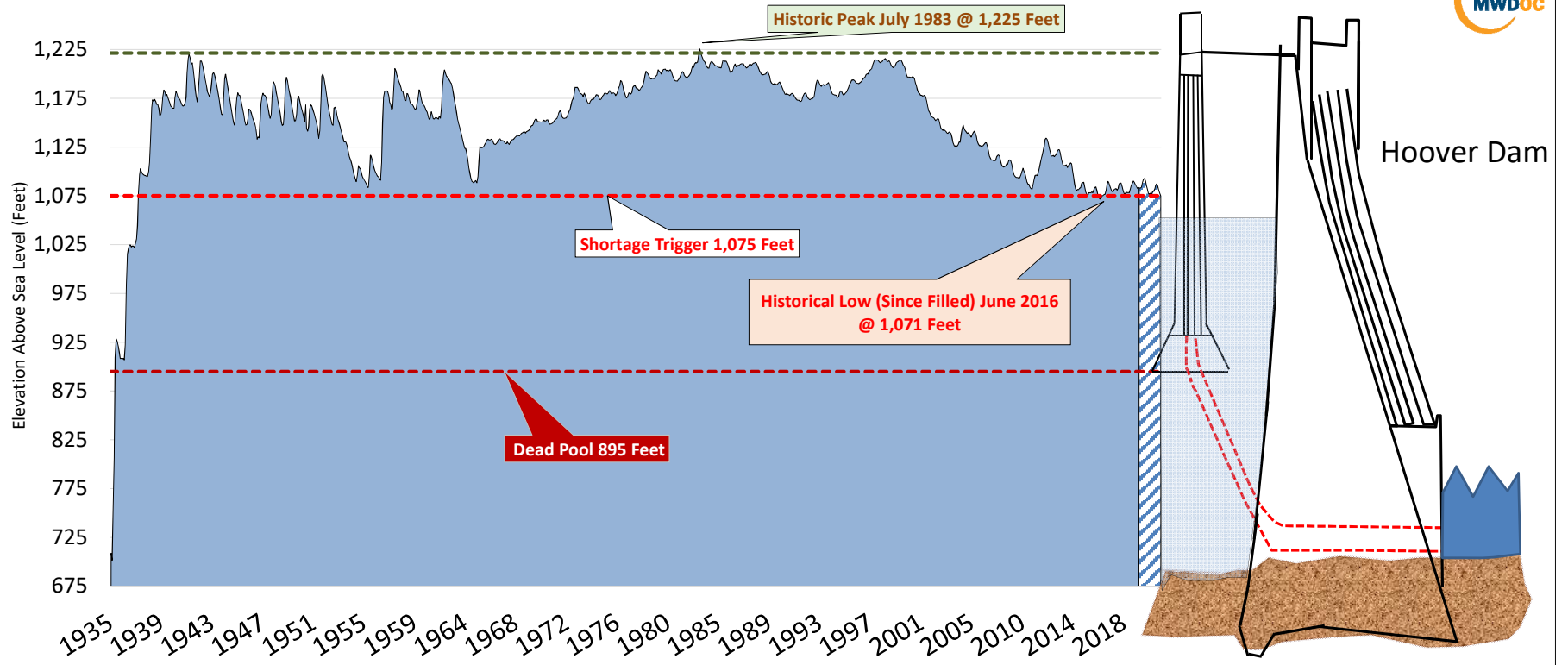
Historical Northern California April 1st Peak Snow Water Equivalent



Historical Colorado Basin April 15th Peak Snow Water Equivalent

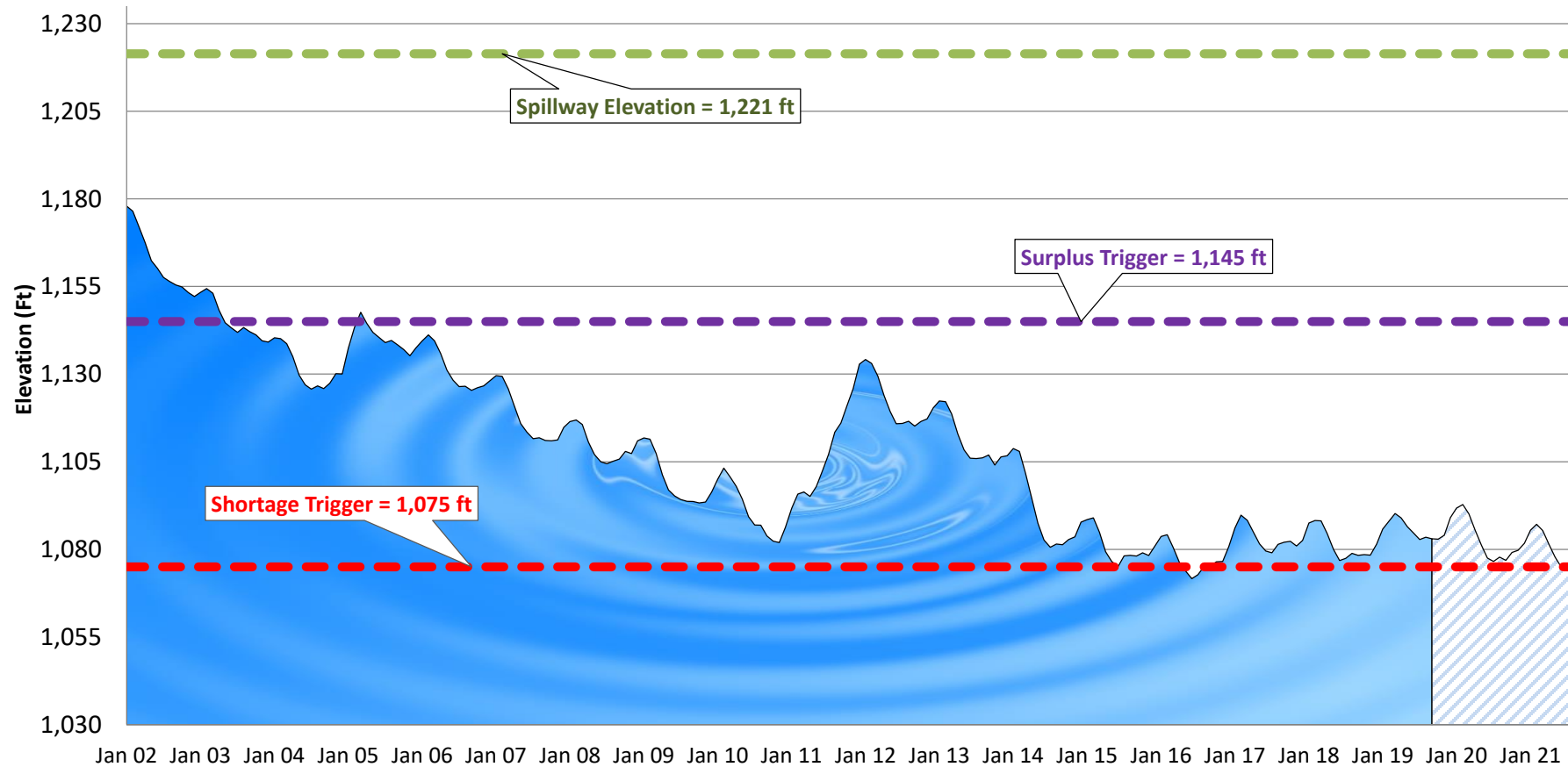


Lake Mead Historical Water Elevation Level



Lake Mead Levels: Historical and Projected projection per USBR 24-Month Study

■ Historical □ Projected



Lake Powell Levels: Historical and Projected projection per USBR 24-Month Study

■ Historical □ Projected

