



Memorandum

DATE: January 15, 2020
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.

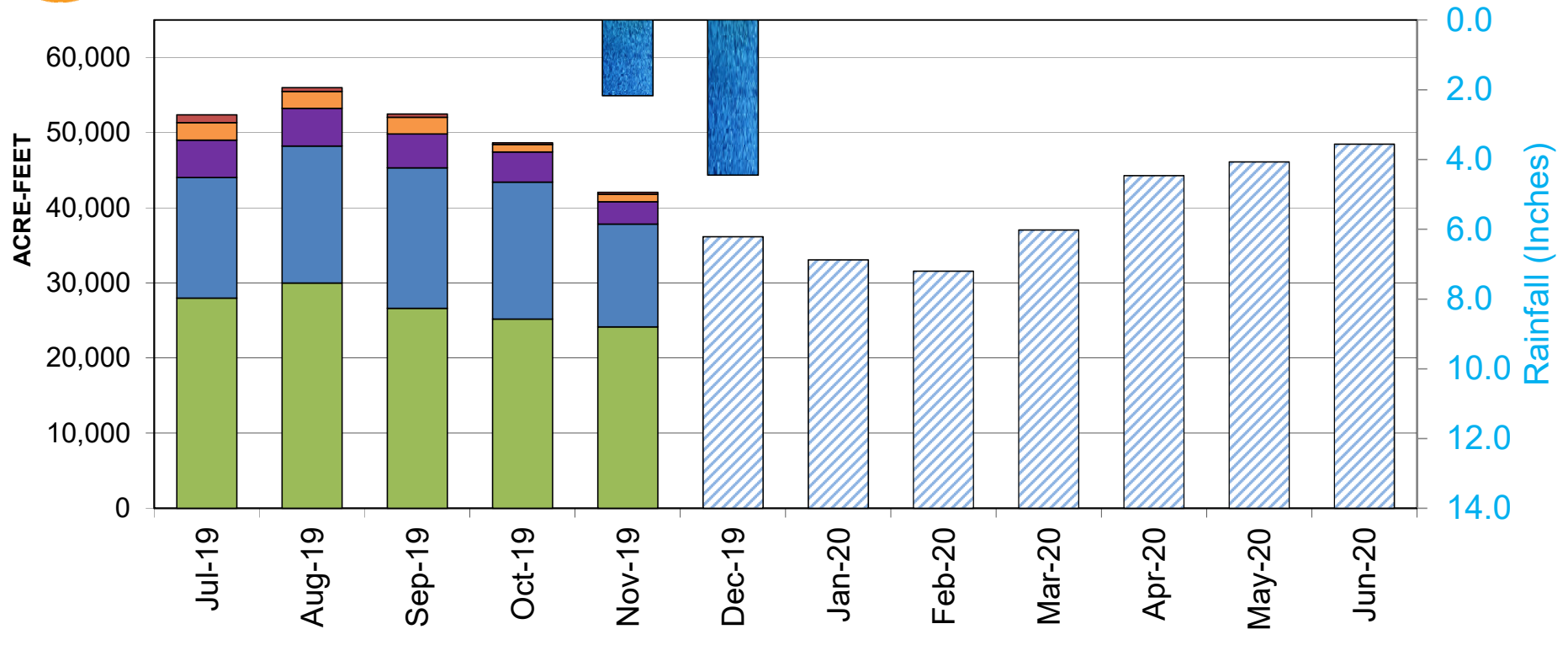
- OC Water Usage, Monthly by Supply **OCWD Groundwater was the main supply in November.**
- OC Water Usage, Monthly, Comparison to Previous Years Water usage in **November 2019 was slightly above average compared to the last 5 years.** We are projecting a slight increase in overall water usage compared to FY 2018-19. It has been 33 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 AF in FY 2019-20** (this includes ~15 TAF 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 2019-20 for Orange County at 144 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 precipitation through **late December** was above average for this period. Water year to date rainfall in Orange County is **6.62 inches**, which is **179% of normal**.
- Northern California accumulated precipitation through **late December** was **72% of normal for this period**. Water Year 2019 was 137% of normal while water year 2018 was 82% of normal. The **Northern California snowpack** was **82% of normal** as of December 31st. **As of late December, 0.00%** of California is experiencing **moderate drought conditions** while 3.57% of the state is experiencing abnormally dry conditions. The State Water Project Contractors Table A Allocation was initially set at 10% in December 2019.
- Colorado River Basin accumulated precipitation through **late December** was **92% of normal** for this period. The **Upper Colorado Basin snowpack** was **120% of normal** as of December 30th. **Lake Mead and Lake Powell** combined have about **66% of their average storage volume** for this time of year and are at **46.8% 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 December, Lake Mead levels were **15.28' above the "trigger" limit**. The USBR predicts that the start of 2020 will not hit the "trigger" level but there is **a 4% chance that the trigger level will be hit in 2021 and a 24% chance in 2022**.



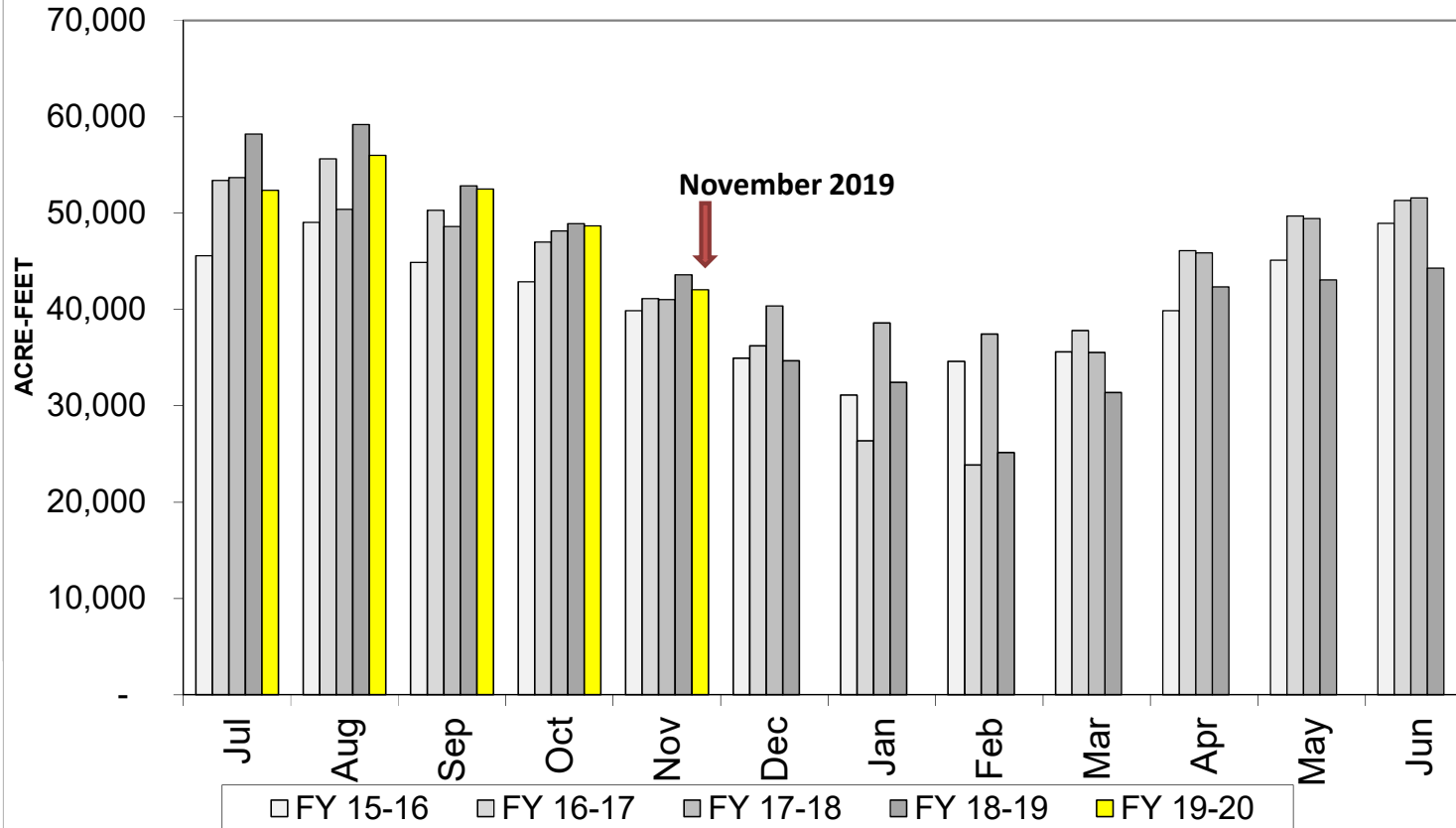
Fig. 1 OC Water Usage, Monthly by Supply with projection to end of fiscal year



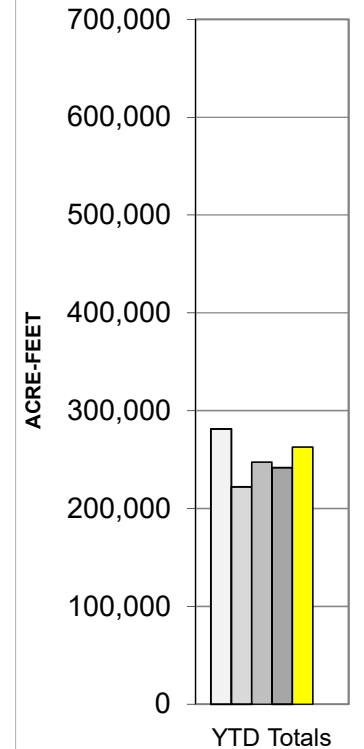
- [1] Imported water for consumptive use. Includes "In-Lieu" deliveries and CUP water extraction. Excludes "Direct Replenishment" deliveries of spreading water and deliveries into Irvine Lake.
- [2] GW for consumptive use only. Excludes In-Lieu water deliveries and CUP water extraction that are counted with Import. BPP in FY '19-20 is 77%.
- [3] MWD OC'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

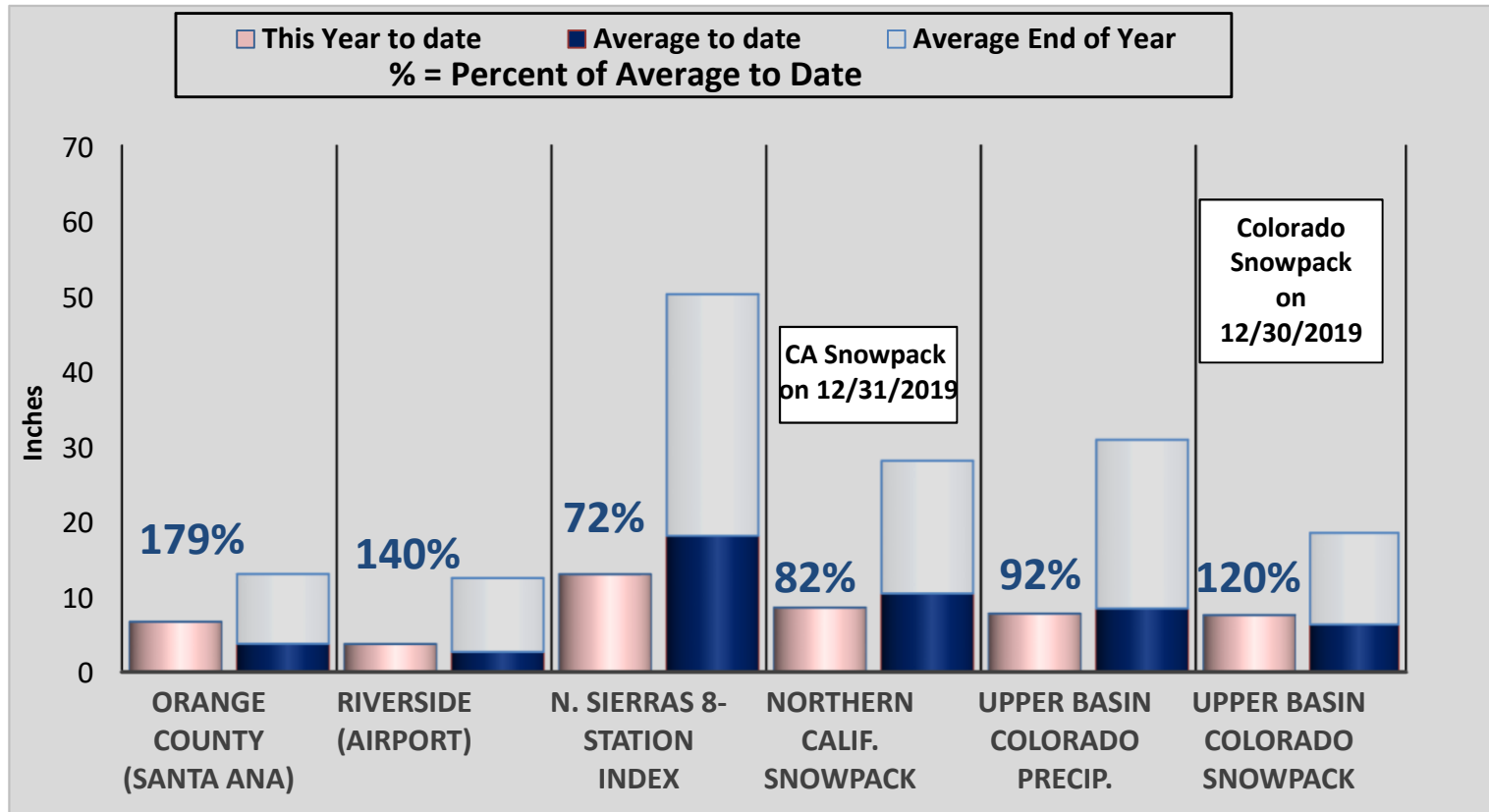


Partial Year Subtotals



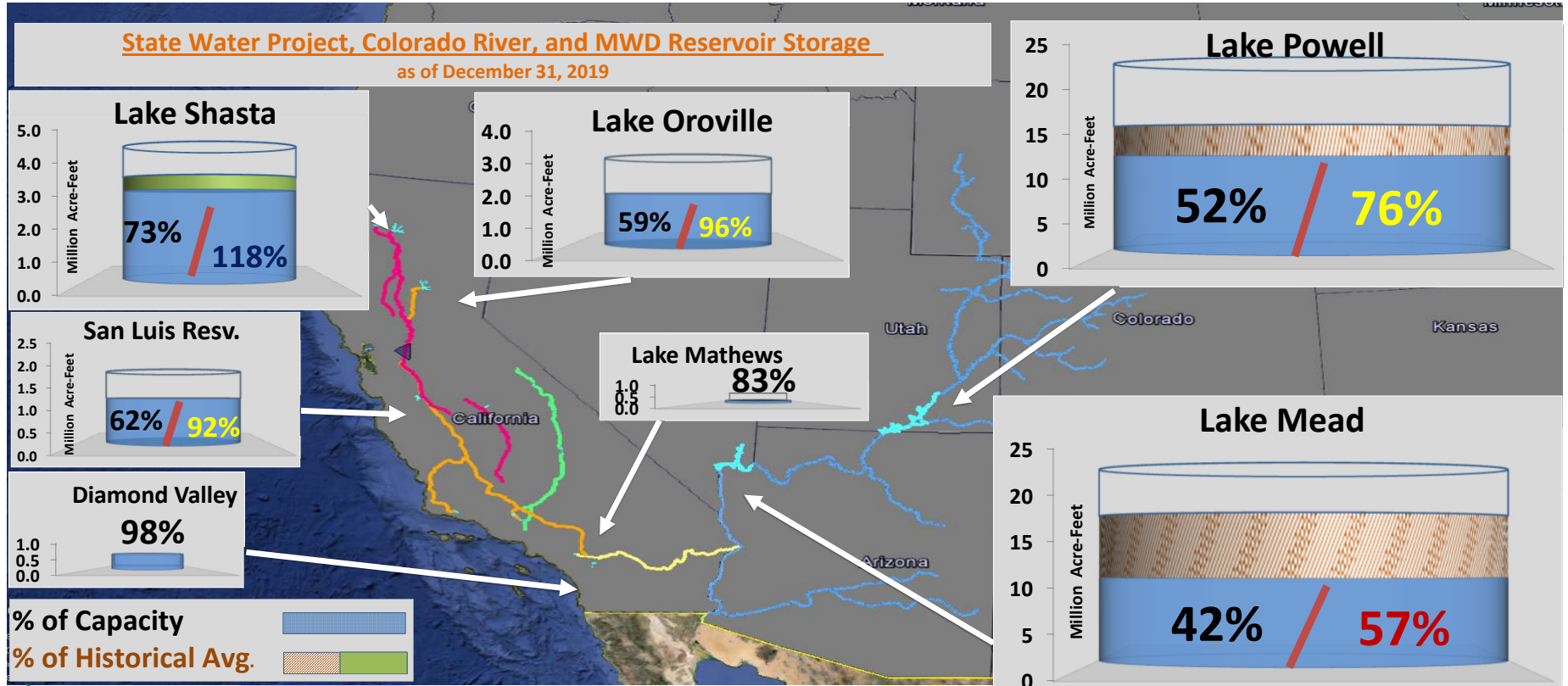
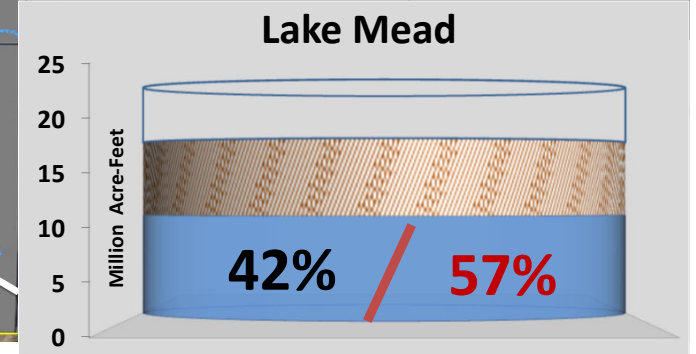
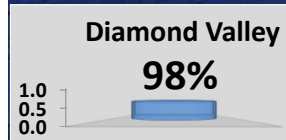
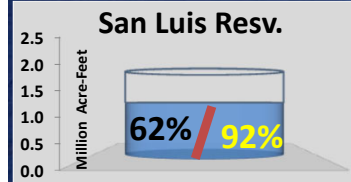
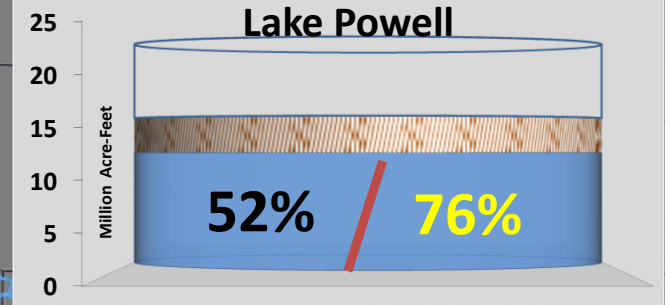
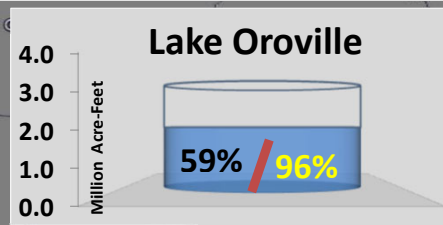
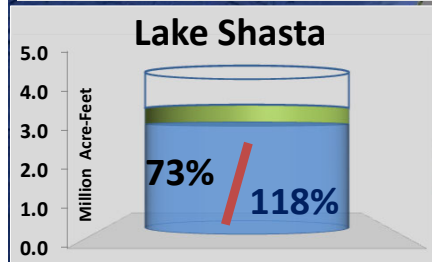
[1] Sum of Imported water for consumptive use (includes "In-Lieu" deliveries; excludes "Direct Replenishment" and "Barrier Replenishment") and Local water for consumptive use (includes recycled and non-potable water and excludes GWRS production) Recent months numbers include some estimation.

Accumulated Precipitation for the Oct.-Sep. water year, late December 2019



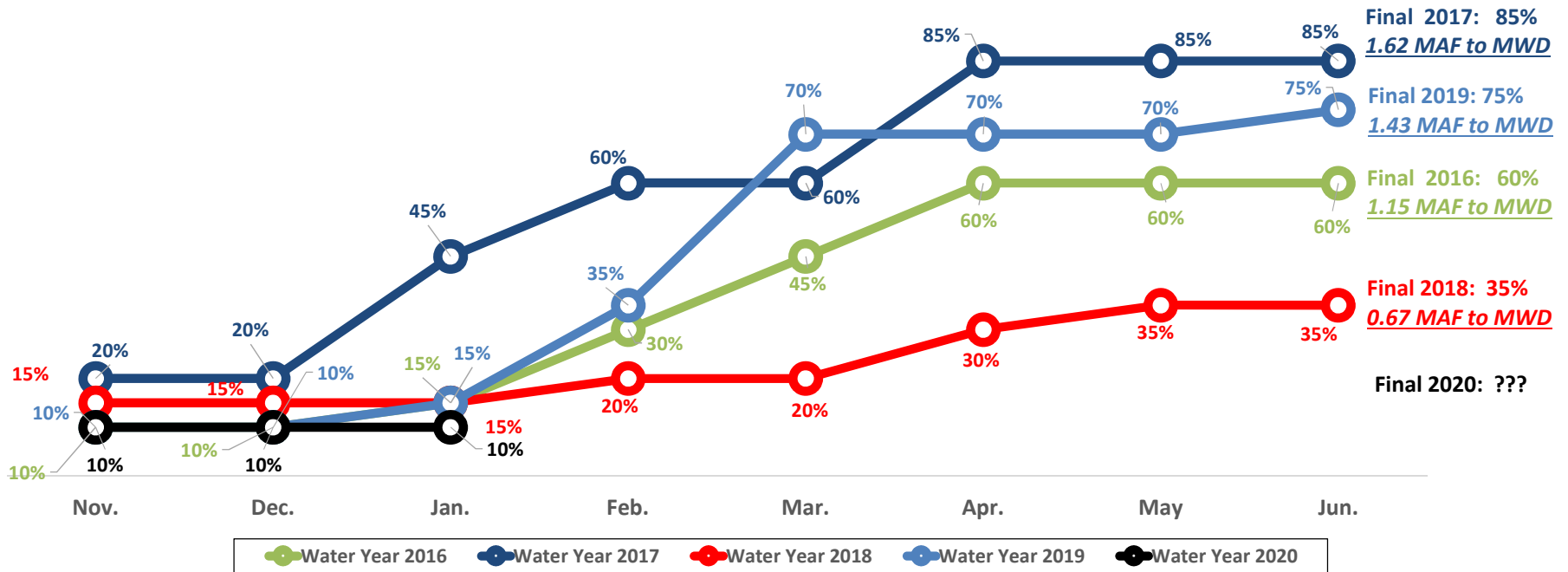
* The date of maximum snowpack accumulation (April 1st in Northern Calif. , April 15th in the Upper Colorado Basin) is used for year to year comparison.

State Water Project, Colorado River, and MWD Reservoir Storage
as of December 31, 2019

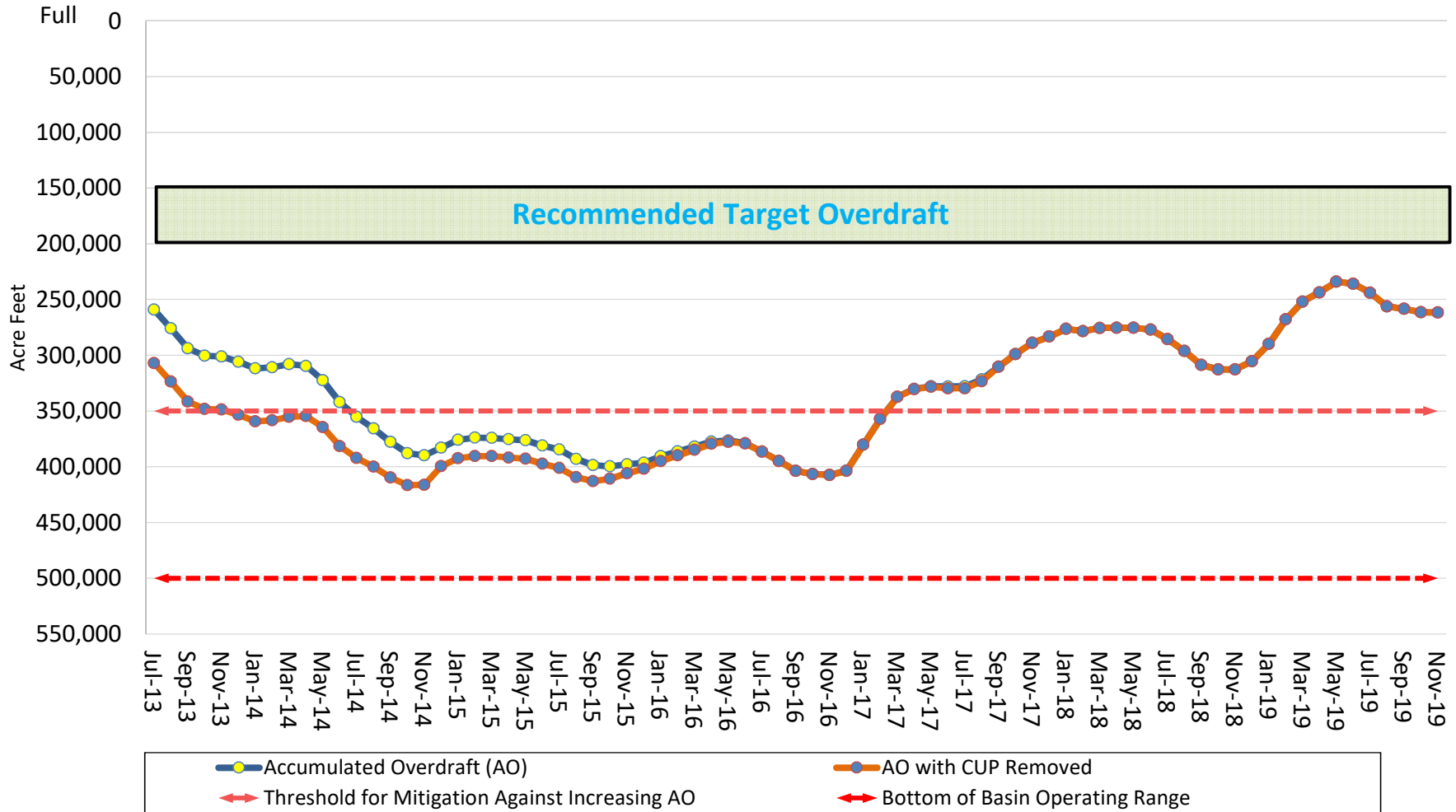


SWP TABLE A ALLOCATION

FOR STATE WATER PROJECT CONTRACTORS



Accumulated Overdraft of the OCWD Groundwater Basin as of November 2019

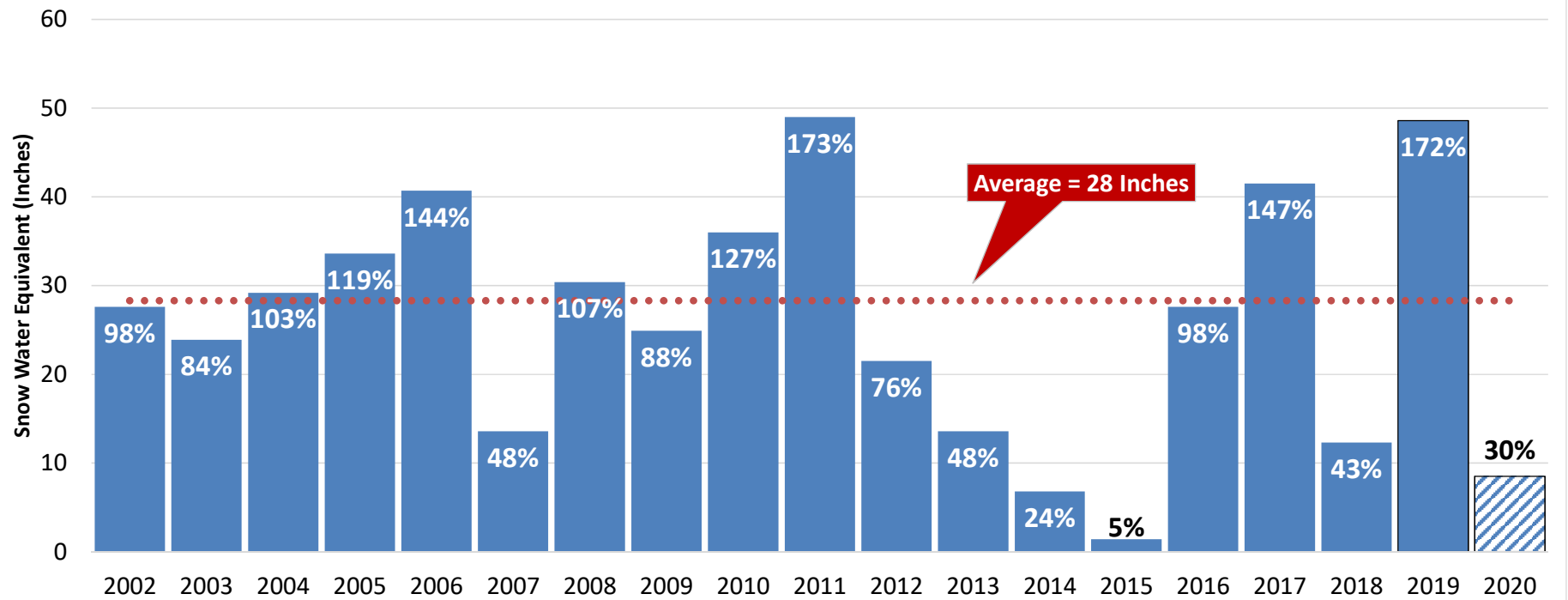


	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19
AO (AF)	285,494	296,106	308,748	312,758	312,782	305,367	289,860	267,879	251,876	243,604	234,048	236,005
AO w/CUP removed (AF)	285,494	296,106	308,748	312,758	312,782	305,367	289,860	267,879	251,876	243,604	234,048	236,005
	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	261,464	261,645							
AO w/CUP removed (AF)	244,057	256,239	258,446	261,464	261,645							

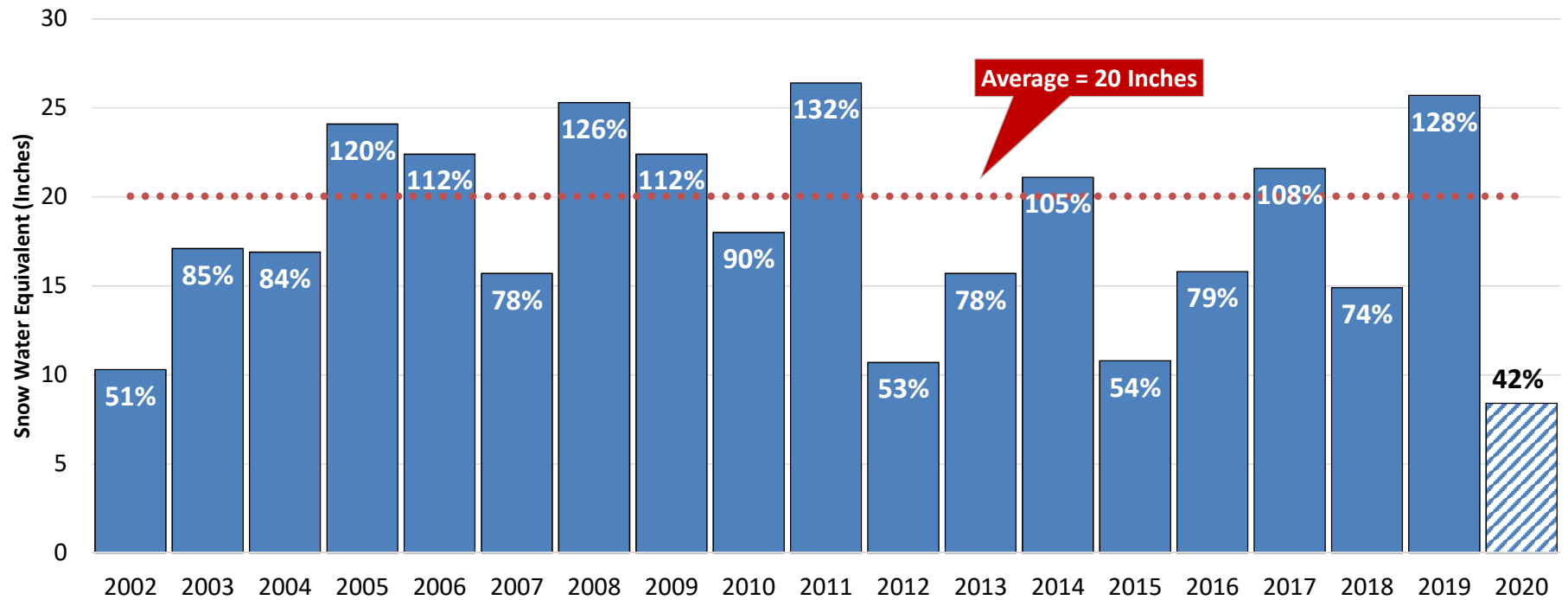
* Source ~ OCWD Monthly Board of Directors Packet



Historical Northern California April 1st Peak Snow Water Equivalent

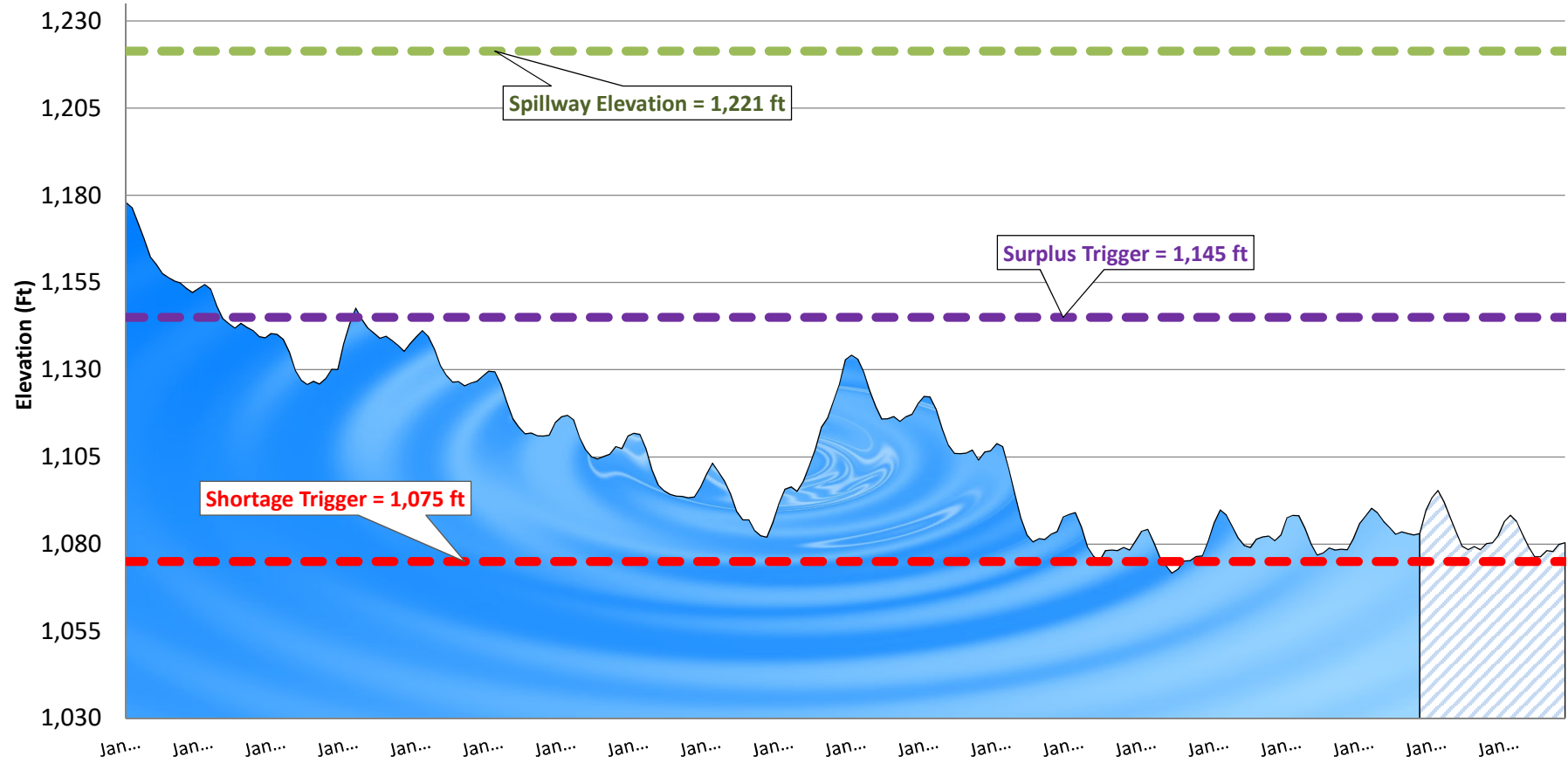


Historical Colorado Basin April 15th Peak Snow Water Equivalent



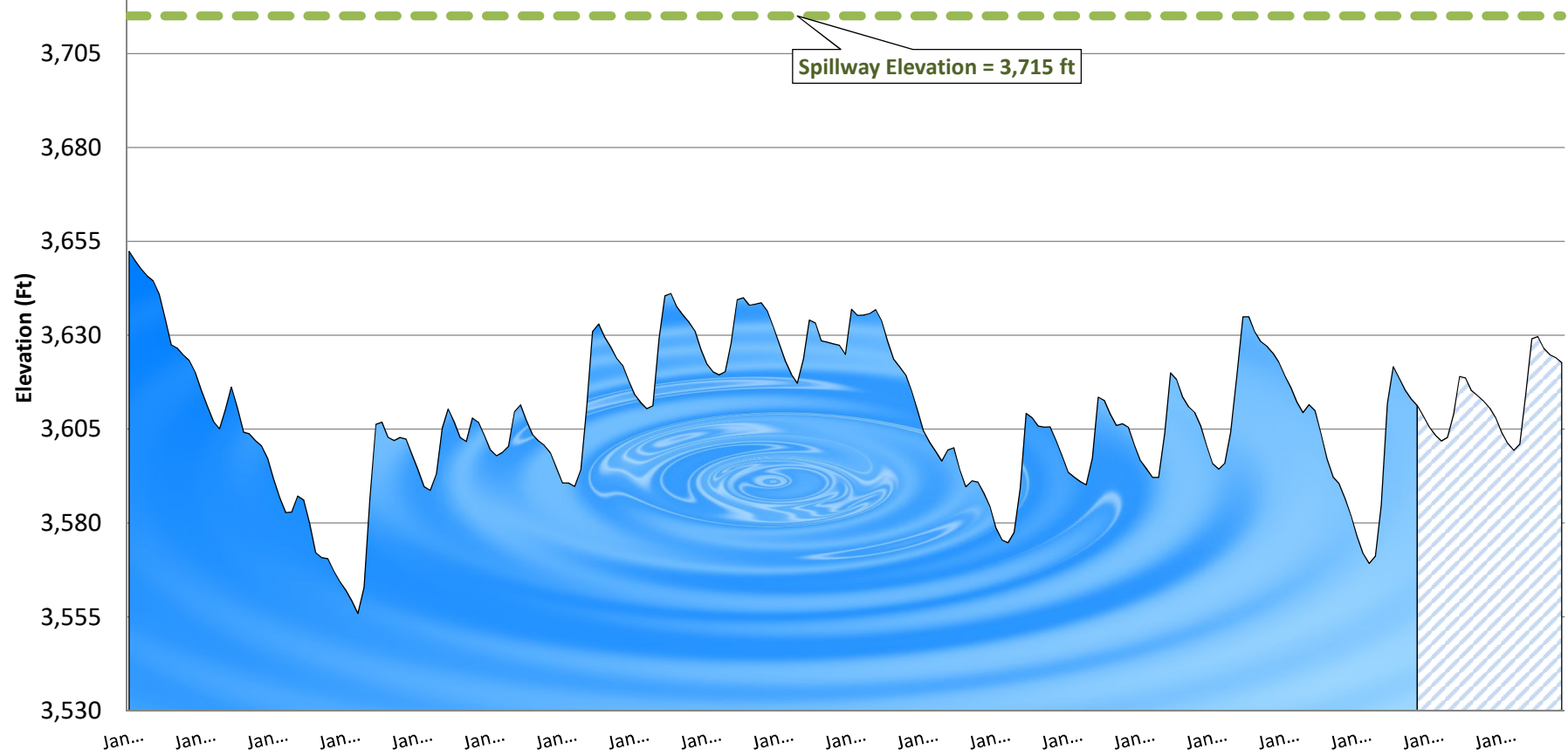
Lake Mead Levels: Historical and Projected projection per USBR 24-Month Study

■ Historical □ Projected



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

■ Historical □ Projected



Lake Mead Historical Water Elevation Level



Intake Tower

Hoover Dam

