



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, ZONE 7

100 NORTH CANYONS PARKWAY, LIVERMORE, CA 94551 • PHONE (925) 454-5000 • FAX (925) 454-5723

ORIGINATING SECTION: Integrated Planning

CONTACT: Sal Segura/Amparo Flores

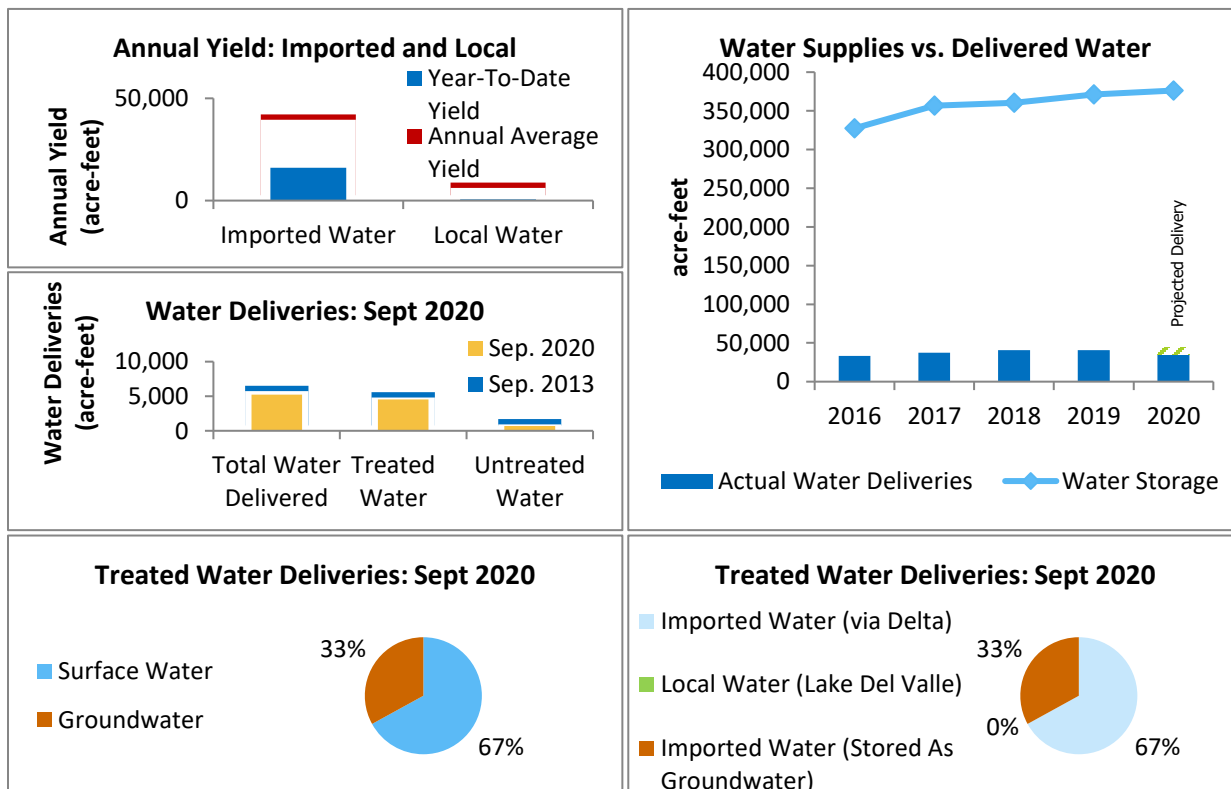
AGENDA DATE: October 21, 2020

SUBJECT: Monthly Water Inventory and Water Budget Update

SUMMARY:

To support Zone 7’s mission to “deliver safe, reliable, efficient, and sustainable water... services,” for Strategic Plan Goal A – “Reliable Water Supply and Infrastructure;” this report summarizes water supply, usage and storage conditions as of the end of September 2020, which marks the end of the 2019/2020 Water Year. An overall analysis of the annual water supply takes place in April of each year with the Annual Review of Sustainable Water Supply. Long-term water supply planning is summarized in the Urban Water Management Plan, which is updated every five years and assesses water supply reliability for a 20-year period. The report considers the various sources of supply and storage available to Zone 7 locally and in State Water Project facilities, as well as in remote groundwater storage banks.

Figure ES 1: At-a-Glance Summaries of Water Supplies, Deliveries, and Available Water



SEPTEMBER 2020
Zone 7 Water Inventory and Water Budget

Supply and Demand

(See Table 1, Table 2, Figure 1, Figure 2,

Figure 3, and Figure 4)

- September totals: 4,540 AF delivered to customers (3,840 AF treated, 700 AF untreated)
- The total treated water production in September decreased by 14% compared to August; declines during this time of year are typical as the season transitions to fall.
- The City of Pleasanton modified their groundwater pumping operation earlier due to PFAS and well outage impacts but, starting in August, has resumed normal pumping operations, which contributed to a decrease in Zone 7 demands over the past two months. Treated water sources in September were 67% surface water and 33% groundwater.
 - Combined treatment plant production was 27.7 MGD.
 - Wellfield production was 13.9 MGD.

Comparison of Demands: 2020 vs 2013 (Pre-Drought Conditions)

(See Table 1)

- There was a 5% decrease in Zone 7 demands in September 2020 relative to September 2013; treated production was 10% lower, and untreated delivery was 25% higher.

Table 1: September 2020 water demand and conservation

	Treated Production	Untreated Delivery	Total
September 2020 (AF)	3,840	700	4,540
September 2013 (AF)	4,250	560	4,800

Imported Water

(See Table 2)

- Table A allocation is 20% or about 16,100 AF; approximately 11,300 AF currently remain.
- Zone 7 began the year with 10,800 AF of State Water Project Carryover water. All carryover was used as of August.
- Non-local groundwater bank storage remains at 117,130 AF.
- Remaining incoming supplies and total operational water storage are approximately 248,190 AF; if emergency groundwater storage below the historical low is included, then the total amount of remaining supplies and storage is estimated at 376,190 AF.

Groundwater

(See Table 2 and Figure 5)

- Wellfield pumping in September made up 1,280 AF of treated supply delivered to retailers. Groundwater made up 33% of treated water deliveries.
- Artificial Recharge via the arroyos to the Groundwater Basin was suspended in July due to the groundwater basin being full.
- Groundwater basin overflow on the west side of the basin in September was estimated at 0 AF.
- The Main Groundwater Basin is at approximately 97% of total capacity (246,000 AF out of 254,000 AF).

- 118,000 AF are operational storage (i.e. above historical groundwater lows).
- The remaining 128,000 AF are emergency storage.

Local Surface Water

(See Table 2 and Figure 6)

- Zone 7 used no Lake Del Valle water in September as there is no remaining stored Zone 7 local water in Lake Del Valle.
 - Zone 7 began 2020 with 8,100 AF of available water which has been fully utilized; about 600 AF has been captured and used in 2020.

Stream Outflow

(See Table 2)

- Surface runoff did not exceed 10 cfs baseflow at the Arroyo de la Laguna at Verona stream gauge in September, so no runoff was recorded.
- Note: some surface flows out of the Tri-Valley are mandated for other downstream purposes.

Sierra Precipitation

(See Figure 7)

- 0.0 inch of precipitation was recorded in the North Sierra in September.
- Cumulative precipitation was at 31.7 inches or 61% of average conditions as of September 30 for the water year (October 1-September 30).

Lake Oroville

(See Figure 8)

- Lake Oroville was at 46% of capacity (75% of average) as of September 30.
 - Total storage: 1,631,548 AF
 - Storage decreased by 2% of total capacity since last month (73,867 AF decrease).

San Luis Reservoir

(See Figure 9)

- San Luis Reservoir was at 48% capacity (102% of average) as of September 30.
 - Total storage: 973,856 AF
 - Storage decreased by less than 1% of total capacity since last month (397 AF decrease).

NOTE: Numbers presented are estimates only and subject to adjustment over the course of the year.

Table 2: Quarterly water inventory

Note: Values are rounded. All units in AF unless noted otherwise. Subject to adjustment over the year.

	2019 <i>Jan-Dec</i>	2020 - Q1 <i>Jan-Mar</i>	2020 - Q2 <i>Apr-Jun</i>	2020 - Q3 <i>Jul-Sept</i>	2020 - YTD <i>Jan-Dec</i>
Supply					
Surface Water Sources Used					
SWP Table A	49,900	0	0	4,780	4,780
SWP Carryover	2,640	3,780	3,950	3,070	10,800
Local Surface Water (Lake Del Valle)	1,000	0	8,000	580	8,580
Yuba Accord and Other Transfers	0	0	0	5,150	5,150
Subtotal	53,540	3,780	11,950	13,580	29,310
Withdrawals from Groundwater Storage					
Zone 7 Groundwater Basin	9,710	3,530	1,500	2,610	7,640
Non-Local Groundwater Banks	0	0	0	0	0
Subtotal	9,710	3,530	1,500	2,610	7,640
Total Supply	63,250	7,310	13,450	16,190	36,950
Demand / Water Use					
Delivered to Customers					
Municipal Water ¹	36,160	6,770	10,800	12,970	30,540
Untreated Water	4,530	390	2,000	2,600	4,990
Subtotal	40,690	7,160	12,800	15,570	35,530
Recharging Groundwater Storage					
Zone 7 Groundwater Basin	3,640	150	650	620	1,420
Non-Local Groundwater Banks	18,920	0	0	0	0
Subtotal	22,560	150	650	620	1,420
Total Demand	63,250	7,310	13,450	16,190	36,950
Available Water Supplies					
	1/1/20 Bal.	End-of-Quarter Balances			
Available from Incoming Supplies in 2020					
2020 Table A Allocation (%)	10%	15%	20%	20%	
2020 Table A Allocation Remaining (AF)	8,100	12,100	16,100	11,320	
Yuba Accord and Other Transfers	0	0	1,890	1,740	
Subtotal	8,100	12,100	17,990	13,060	
Available from Storage in 2020					
SWP Carryover Balance ²	10,800	7,020	3,070	0	
Lake Del Valle	8,100	8,300	600	0	
Local GW Basin (Above Historical Low) ³	122,000	121,000	122,000	118,000	
Non-Local Groundwater Banks	117,130	117,130	117,130	117,130	
Subtotal	258,030	253,450	242,800	235,130	
Total Available Water	266,130	265,550	260,790	248,190	
Watershed Conditions					
	End-of-2019				
Precipitation at Livermore Station (in)	17.4	4.0	2.0	0.0	6.0
Lake Del Valle Net Yield	8,100	200	-7,700	-600	-8,100
Groundwater Net Recharge (est.)	7,000	2,000	1,000	-3,000	0
Surface Water Outflow ⁴	47,490	3,160	3,000	0	6,160

¹ Includes a small amount of unaccounted-for water² SWP Carryover balance includes Article 56 water in San Luis Reservoir.³ Groundwater estimate based on most recent groundwater level data. Additional emergency storage is 128,000 AF.⁴ Surface Water Outflow is estimated based on flow at USGS gage Arroyo De La Laguna at Verona.

Figure 1: Monthly treated water production in acre-feet (AF)

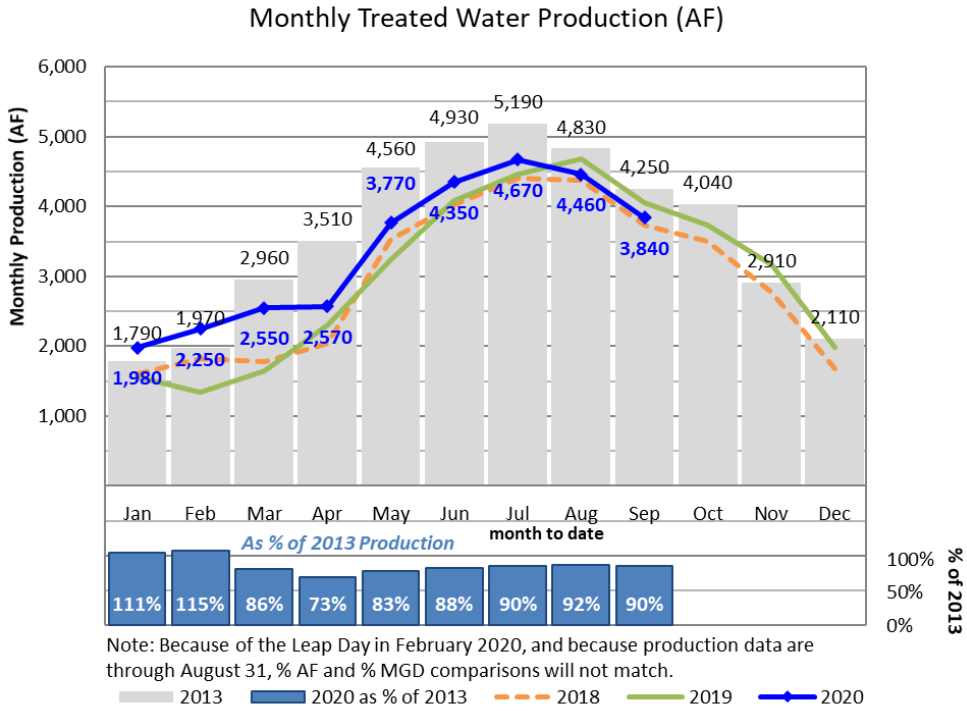


Figure 2: Monthly treated water production in average million gallons per day (MGD)

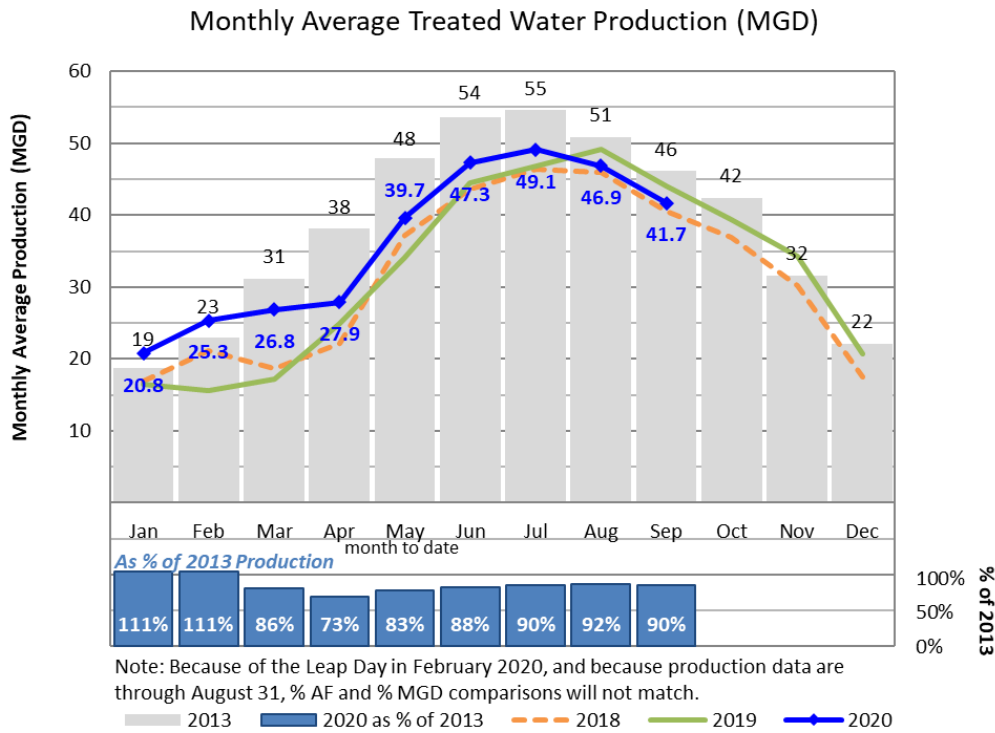


Figure 3: Pleasanton Estimated In-Lieu Demand

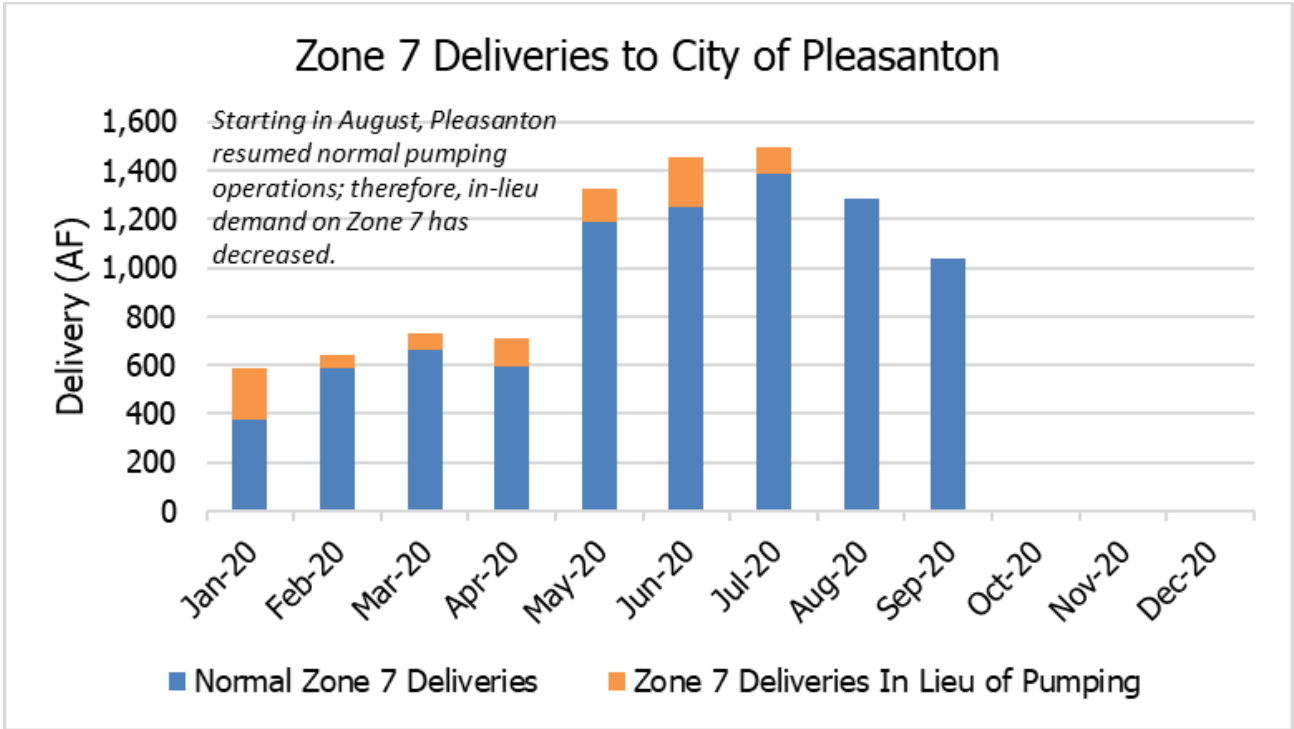


Figure 4: California Water Service Estimated In-Lieu Demand

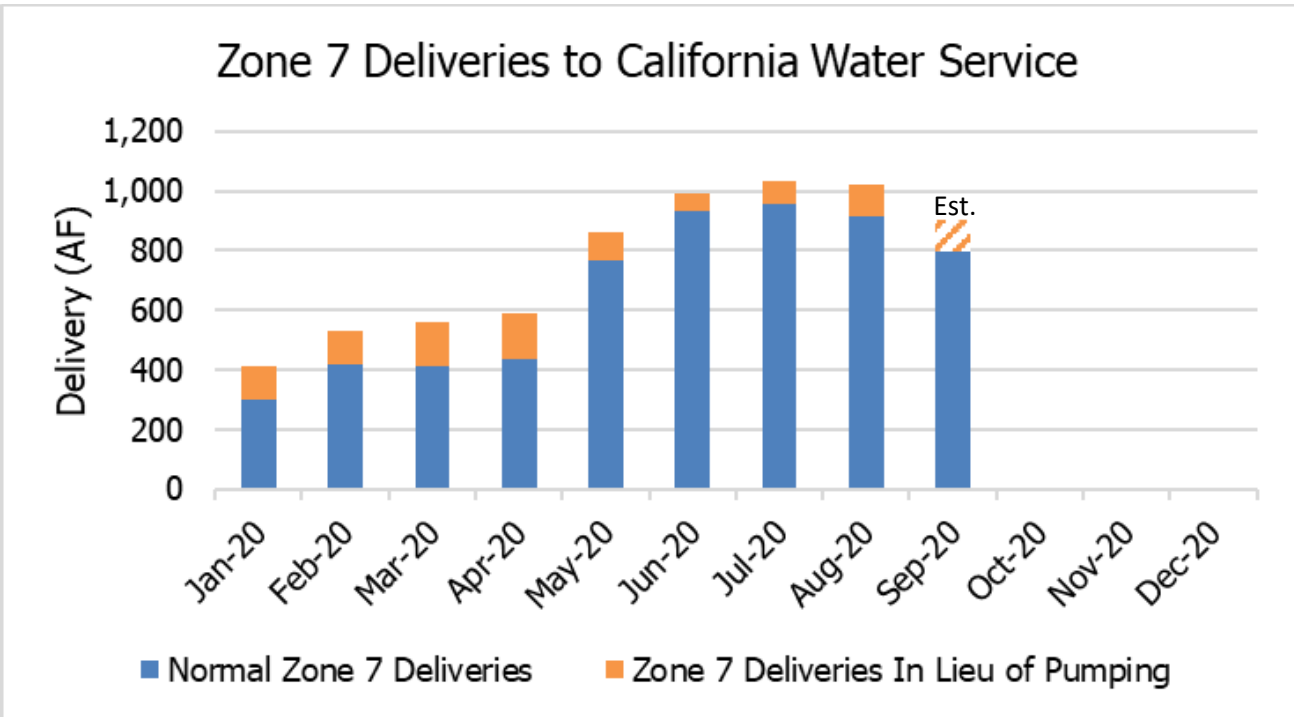


Figure 5: Main Groundwater Basin storage

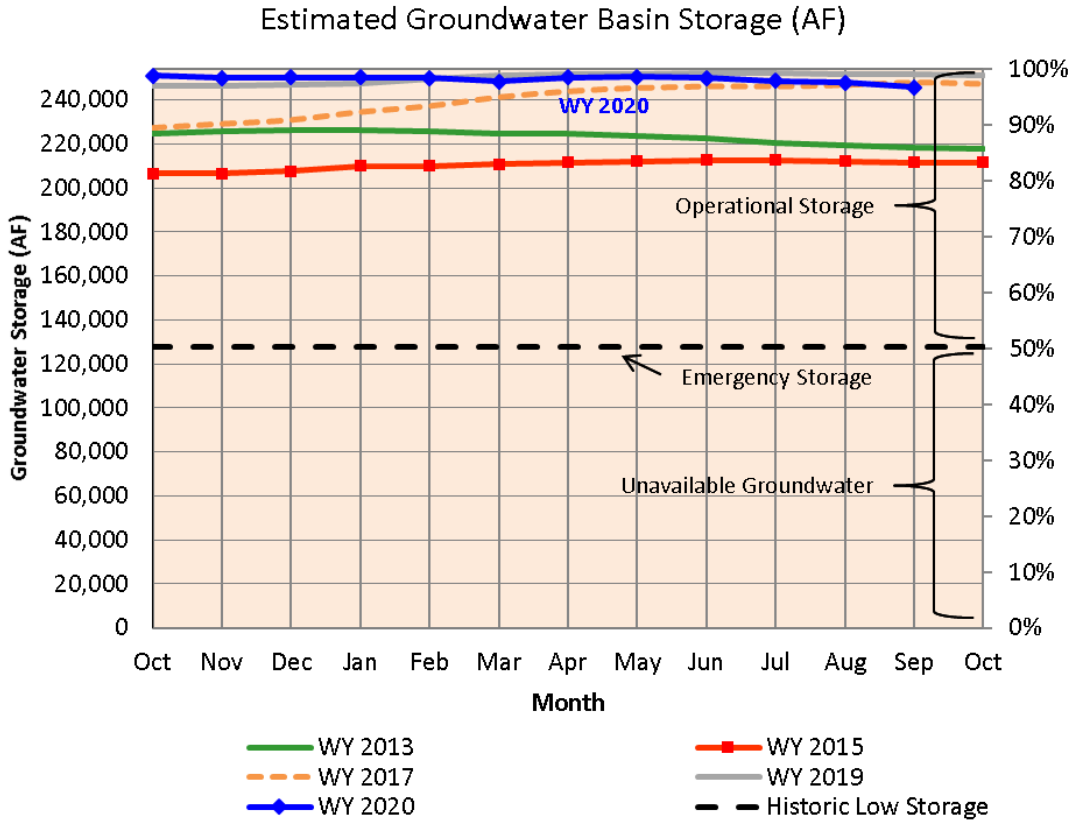
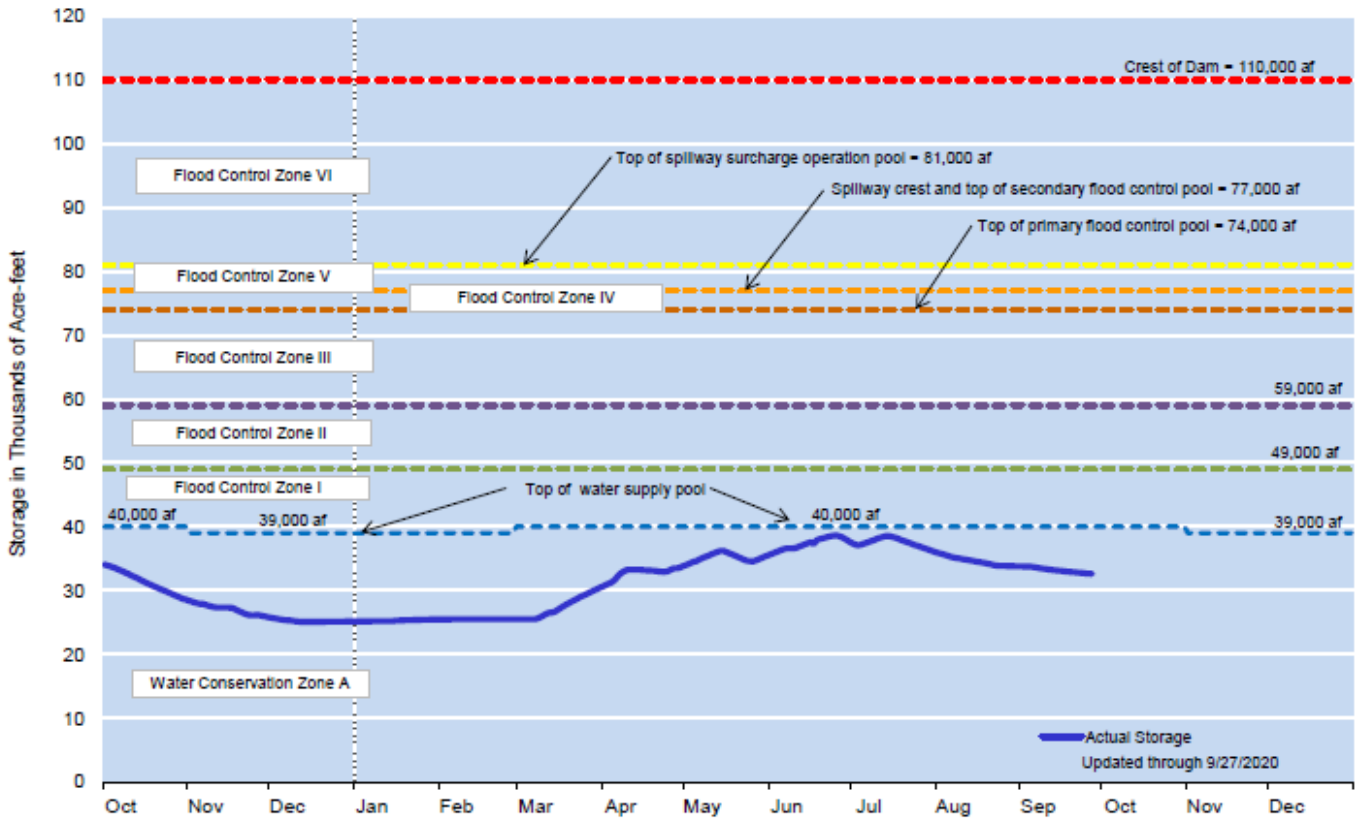


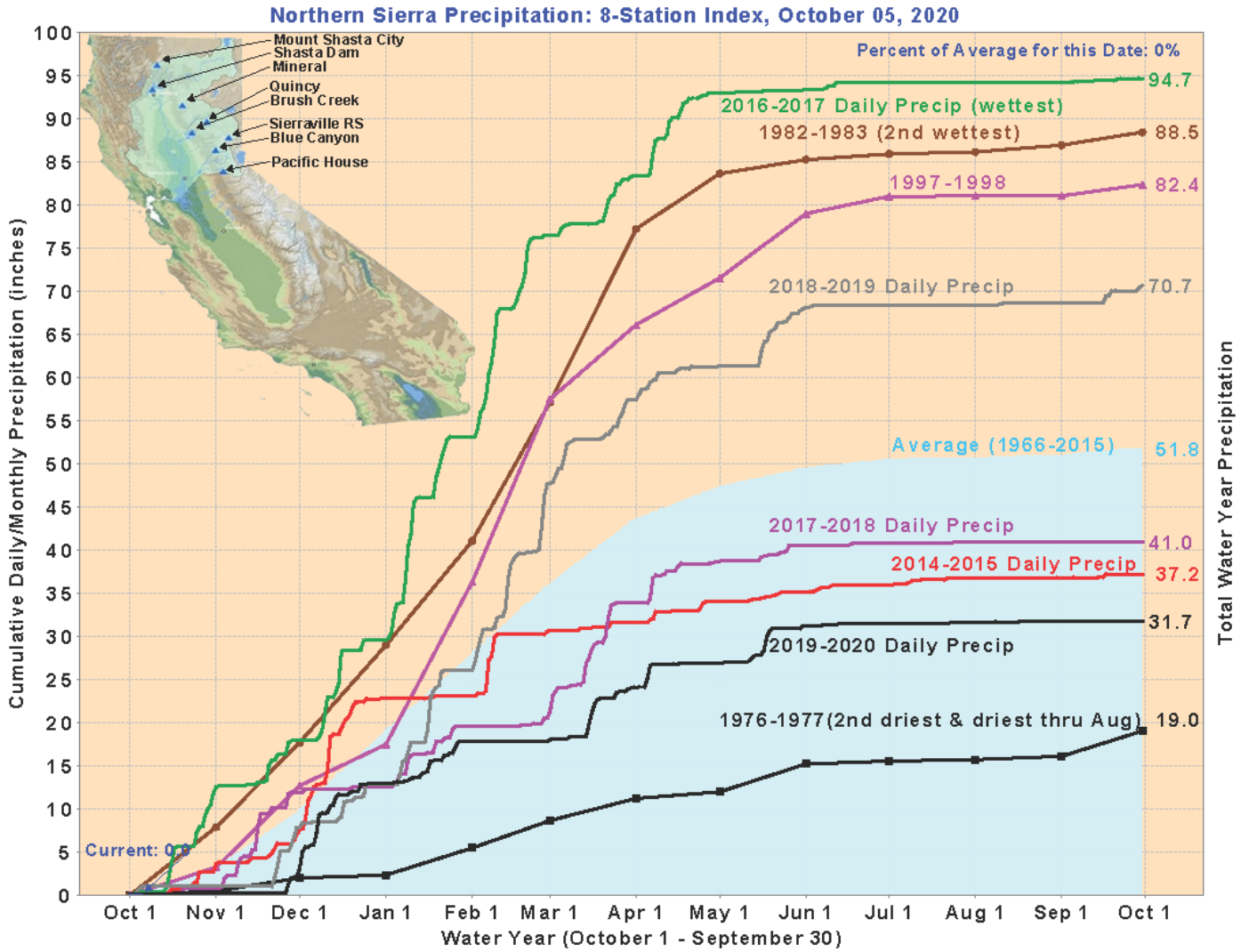
Figure 6: Lake Del Valle storage



(Source: <http://cdec.water.ca.gov/dynamicapp/QueryDaily?s=DLV>)

Figure 7: Cumulative precipitation in the North Sierra

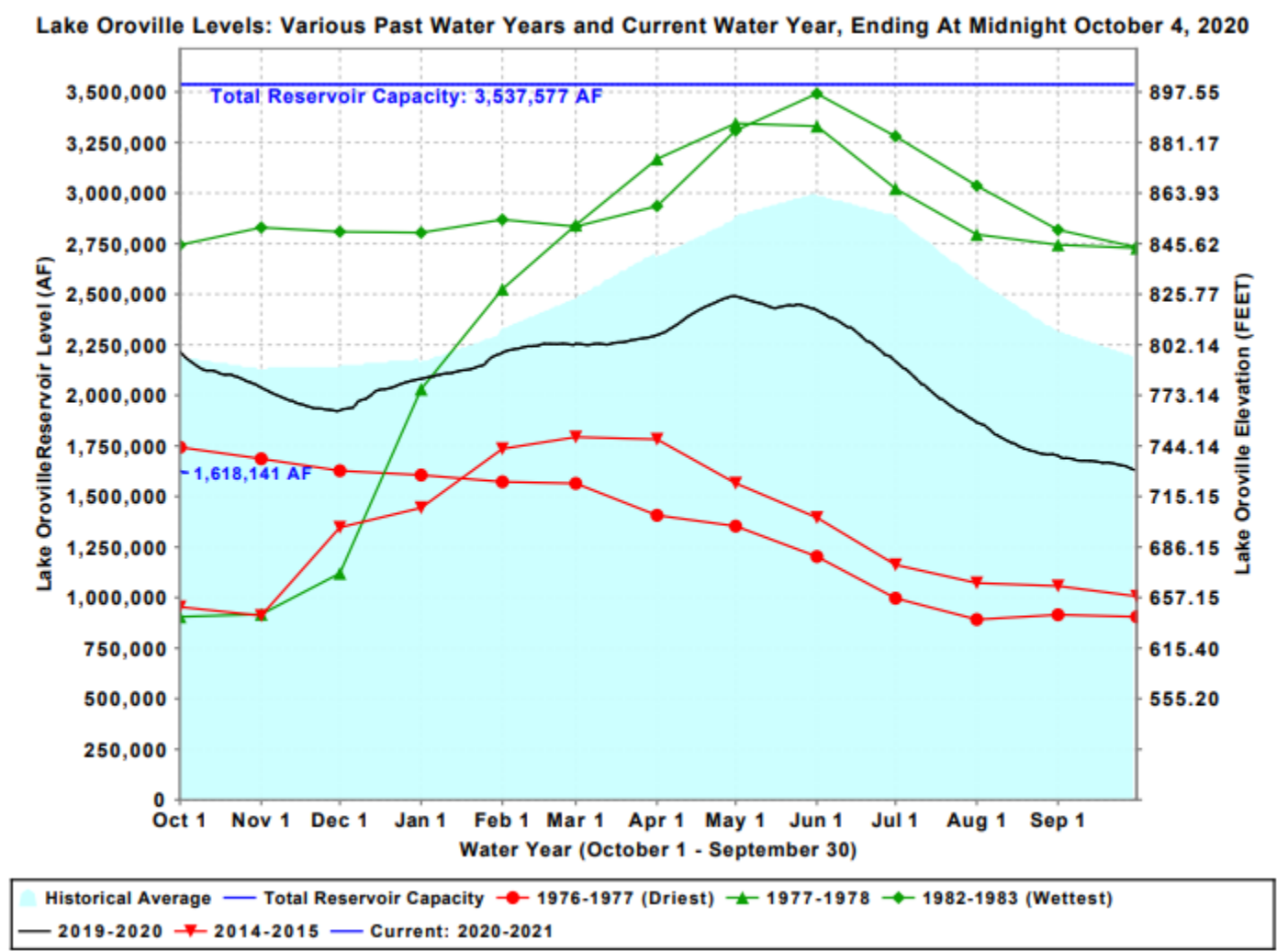
Note: Cumulative precipitation in the Northern Sierra was at 61% of average for Water Year 2019/2020 (October 1, 2019-September 30, 2020).



(Source: http://cdec.water.ca.gov/cgi-progs/products/PLOT_ESI.pdf)

Figure 8: Lake Oroville storage compared with past water years*

Note: The reservoir was at 46% of its total capacity, and 75% of its historical average for Water Year 2019/2020 (October 1, 2019-September 30, 2020).

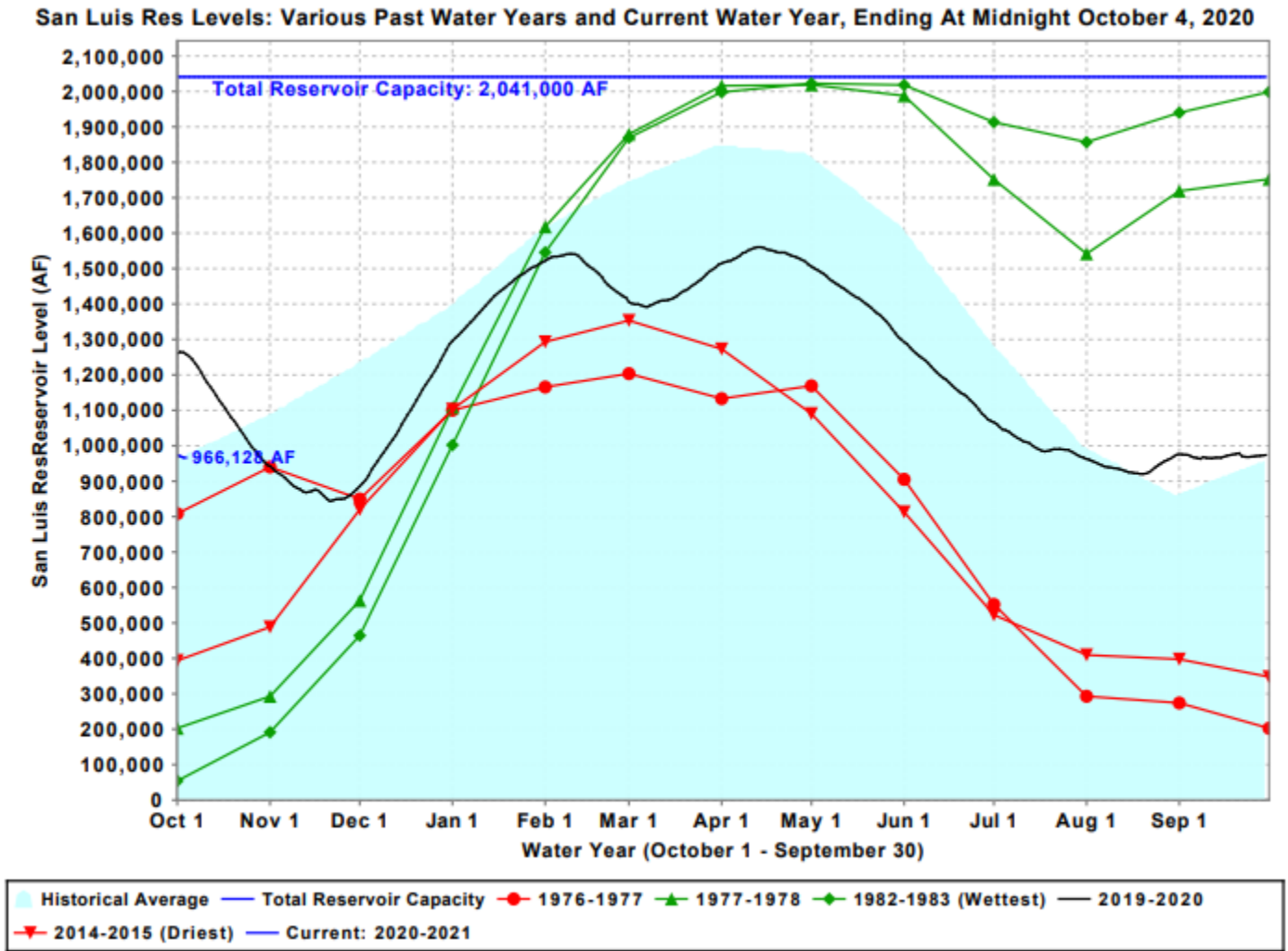


*storage balance displays differently due to change in water year

(Source: <https://cdec.water.ca.gov/resapp/ResDetail.action?resid=ORO>)

Figure 9: San Luis Reservoir storage compared with past water years*

Note: The reservoir was at 48% of its total capacity, and 102% of its historical average for Water Year 2019/2020 (October 1, 2019-September 30, 2020).



*storage balance displays differently due to change in water year

(Source: <https://cdec.water.ca.gov/resapp/ResDetail.action?resid=SNL>)