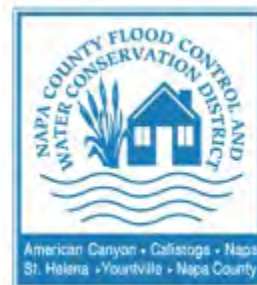


2021 Napa County Water Supply Outlook



Christopher Silke, P.E.
Engineering Manager-Water Resources



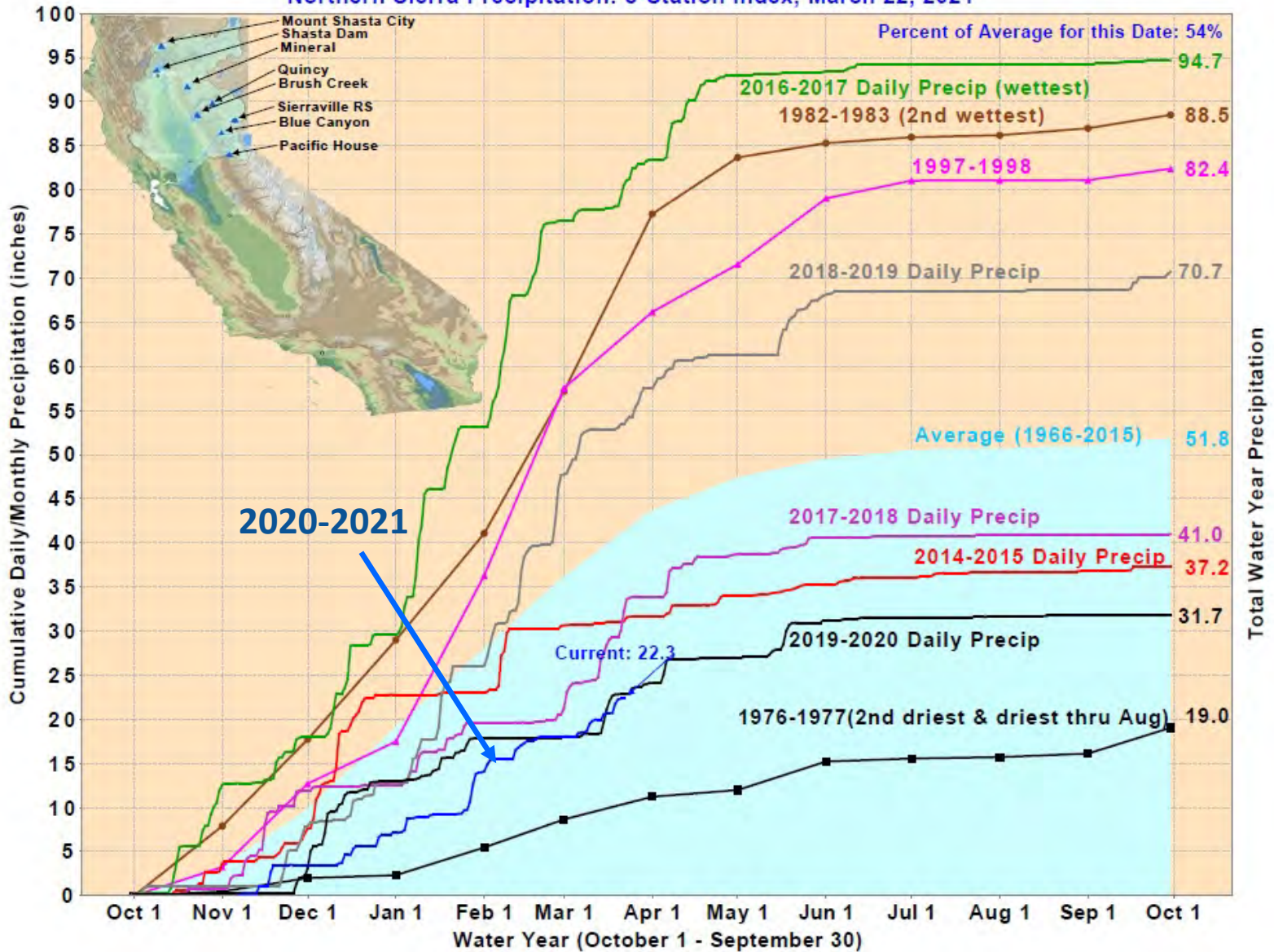
**It's A Dry Year.
Let's Work Together To
Save Our Water.**



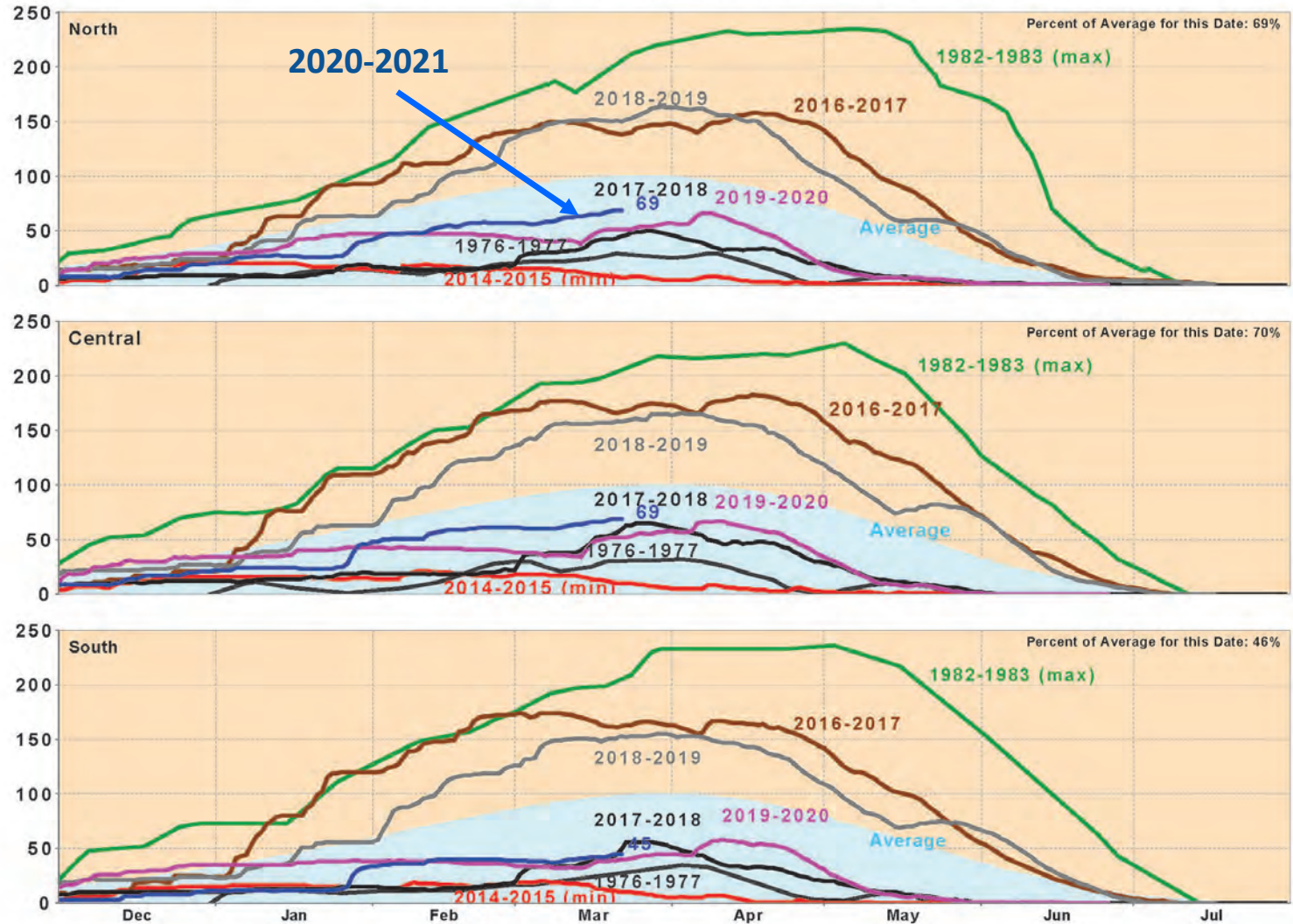
Presentation Topics

- Climate & Hydrology Statistics
- State Water Project Update
- Dry Year Water Supply Rebalance
- Countywide Reservoir Levels & Storage

Northern Sierra Precipitation: 8-Station Index, March 22, 2021

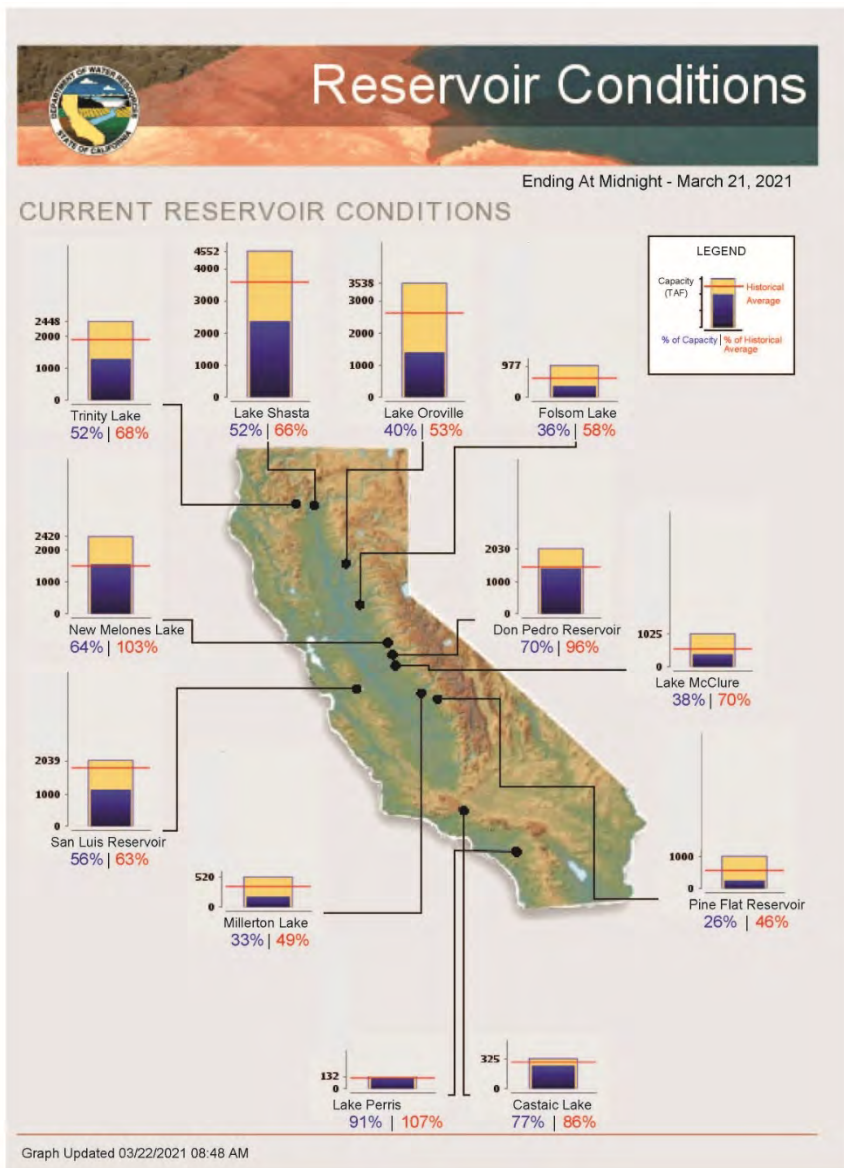


California Snow Water Content, March 22, 2021, Percent of April 1 Average



Statewide Percent of April 1: 63%

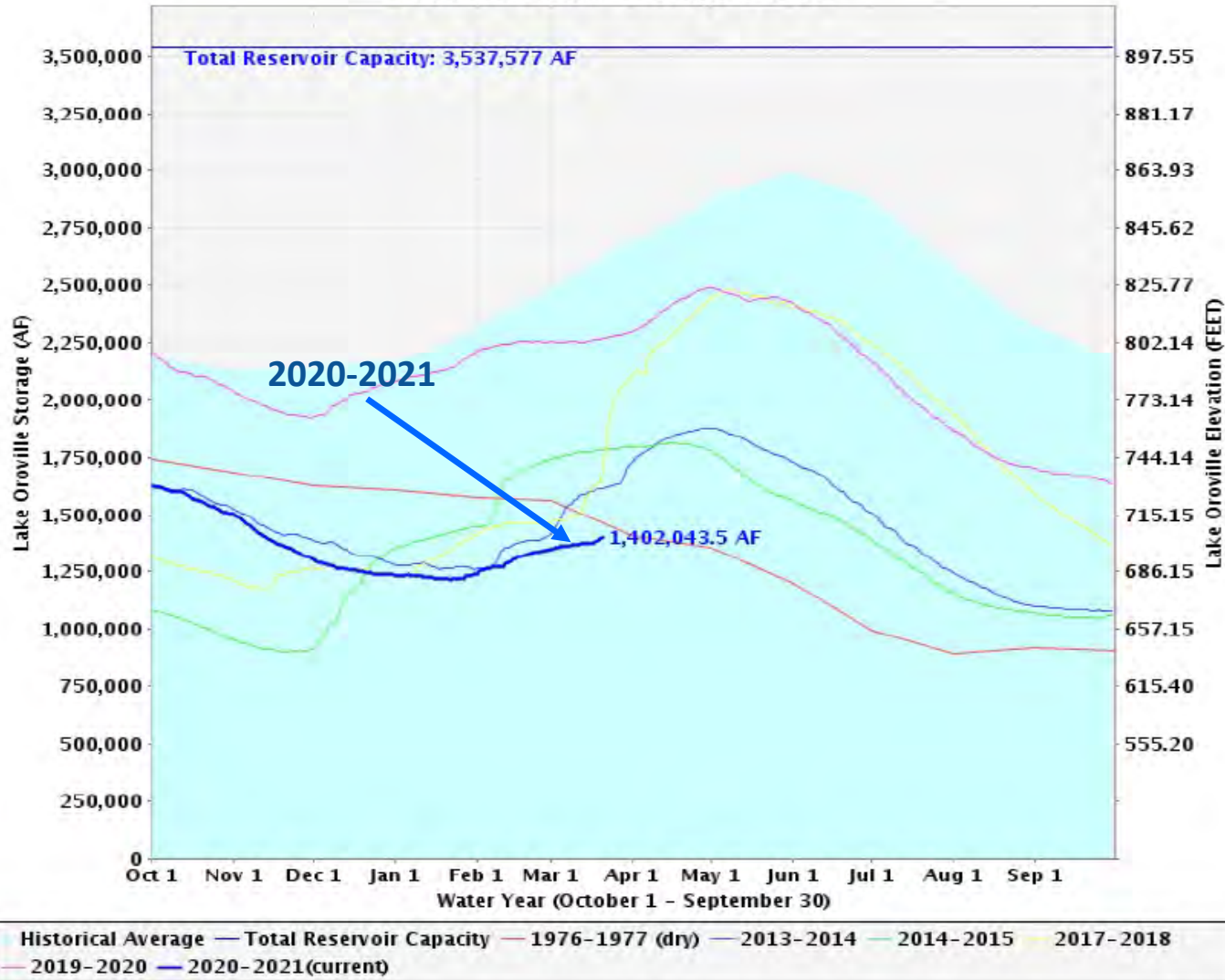
Statewide Percent of Average for Date: 64%



NorCal Reservoirs

- Below Historical Averages
- Oroville < 50% Capacity
- 900 kAF Fall Storage Goal
- BiOps & ITP Requirements

Lake Oroville Storage Levels



2021 STATE WATER PROJECT ALLOCATION
(ACRE-FEET)

SWP CONTRACTORS	TABLE A	INITIAL REQUEST	APPROVED ALLOCATION	PERCENT INITIAL REQUEST APPROVED
	(1)	(2)	(3)	(3)/(2) (4)
FEATHER RIVER				
County of Butte	27,500	27,500	3,000	11%
Plumas County FC&WCD	2,700	2,700	135	5%
City of Yuba City	9,600	9,600	480	5%
Subtotal	39,800	39,800	3,615	
NORTH BAY				
Napa County FC&WCD	29,025	29,025	1,451	5%
Solano County WA	47,756	47,756	2,388	5%
Subtotal	76,781	76,781	3,839	
SOUTH BAY				
Alameda County FC&WCD, Zone 7	80,619	80,619	4,031	5%
Alameda County WD	42,000	42,000	2,100	5%
Santa Clara Valley WD	100,000	100,000	5,000	5%
Subtotal	222,619	222,619	11,131	
SAN JOAQUIN VALLEY				
Oak Flat WD	5,700	5,700	285	5%
County of Kings	9,305	9,305	465	5%
Dudley Ridge WD	41,350	41,350	2,068	5%
Empire West Side ID	3,000	3,000	150	5%
Kern County WA	982,730	982,730	49,137	5%
Tulare Lake Basin WSD	87,471	87,471	4,374	5%
Subtotal	1,129,556	1,129,556	56,479	
CENTRAL COASTAL				
San Luis Obispo County FC&WCD	25,000	25,000	1,250	5%
Santa Barbara County FC&WCD	45,486	45,486	2,274	5%
Subtotal	70,486	70,486	3,524	
SOUTHERN CALIFORNIA				
Antelope Valley-East Kern WA	144,844	144,844	7,242	5%
Santa Clarita Valley WA	95,200	95,200	4,760	5%
Coachella Valley WD	138,350	138,350	6,918	5%
Crestline-Lake Arrowhead WA	5,800	5,800	290	5%
Desert WA	55,750	55,750	2,788	5%
Little Rock Creek ID	2,300	2,300	115	5%
Metropolitan WDSC	1,911,500	1,911,500	95,575	5%
Mojave WA	89,800	89,800	4,490	5%
Palm Dale WD	21,300	21,300	1,065	5%
San Bernardino Valley MWD	102,600	102,600	5,130	5%
San Gabriel Valley MWD	28,800	28,800	1,440	5%
San Geronimo Pass WA	17,300	17,300	865	5%
Ventura County WPD	20,000	20,000	1,000	5%
Subtotal	2,633,544	2,633,544	131,678	
TOTAL	4,172,786	4,172,786	210,266	

DWR Table A Allocation

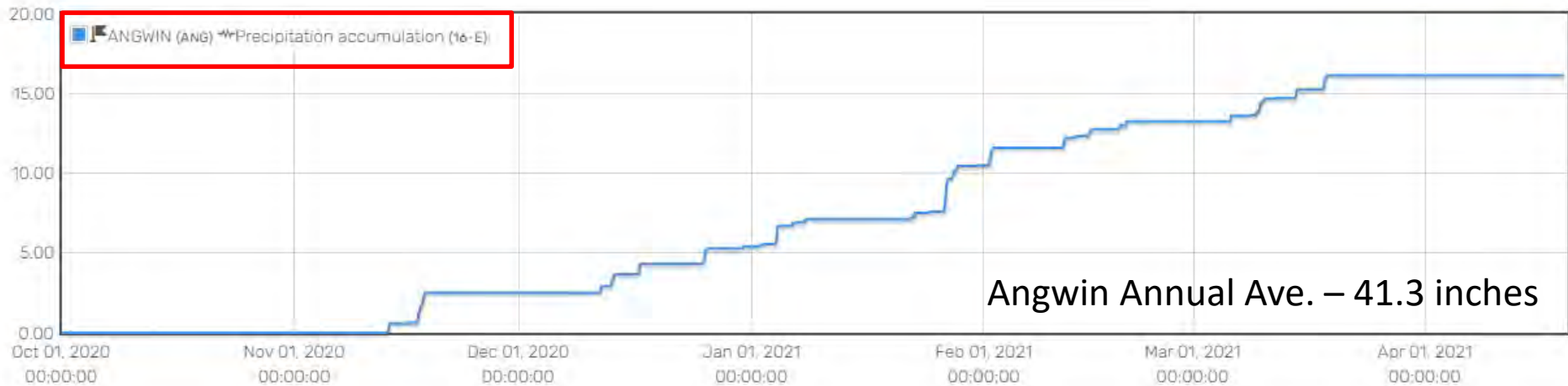
- Napa County FCD – 5%
- NOD Increment – 0%
- NBA Delivery – 12 kAF/yr
- Water Usage >> Allocation



Dry Year Water Supply Rebalance 12,013 AF

- Table A Allocation – 1,451 AF
- Prior Year Carryover – 4,853 AF
- Groundwater Subs (DYTP) – 190 AF
- Yuba Accord Components 1 to 3 – 519 AF
- Advanced Table A – up to 5,000 AF

Regional Climate Data Snapshot



Site	Sensor	Group	15 Min	30 Min	1 Hour	3 Hour	6 Hour	12 Hour	24 Hour	7 Days	30 Days
ANGWIN	Precipitation increment (16-E)	All	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
City of Napa Corp Yard	Precipitation increment (2271)	All	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hopper Creek at Hwy 29	Precipitation increment (0)	All	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Lake Hennessey	Precipitation increment (2334)	All	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Lake Berryessa Elevation

Lake Berryessa - Water Surface Elevation - 90 Day
Lake Spills @ 440 ft. (1002.502)

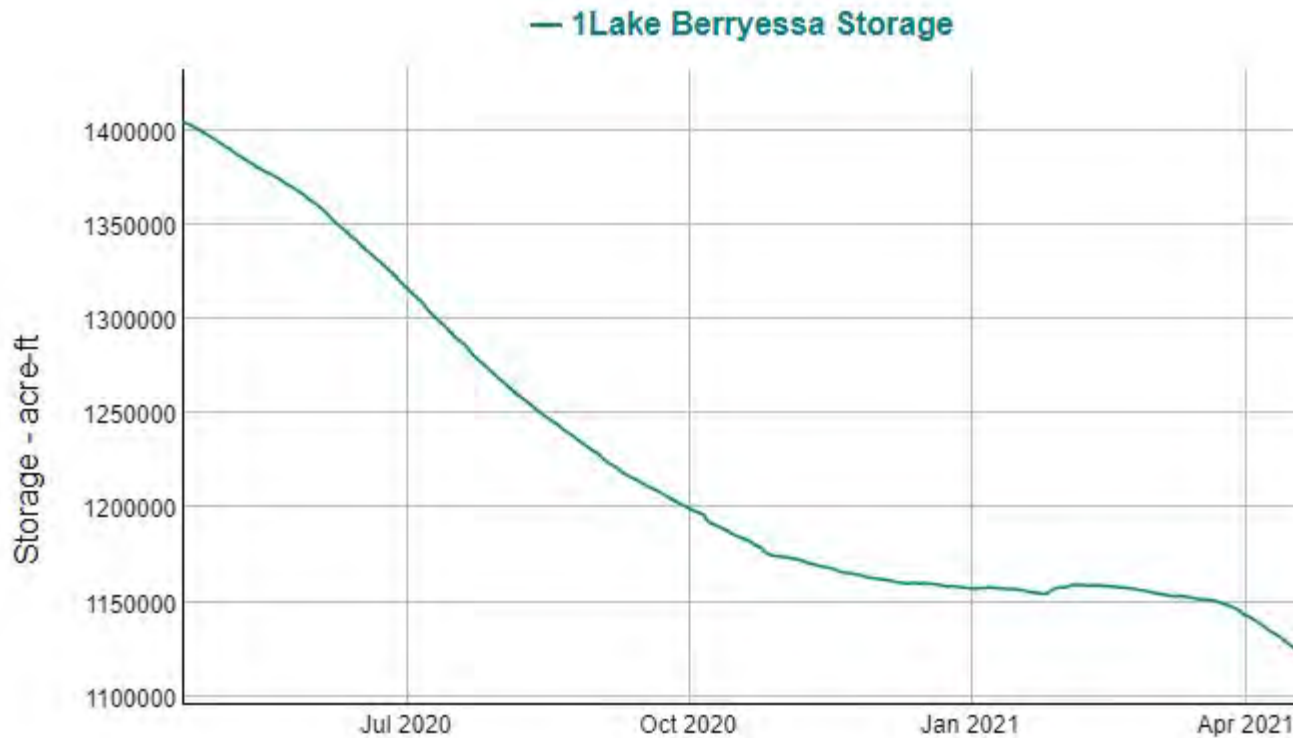
2021/04/19 01:00: 1Lake Berryessa WSE: 415.8



2014 / 2015 Dry Years Low Elevation – 395.8 ft

Lake Berryessa Storage

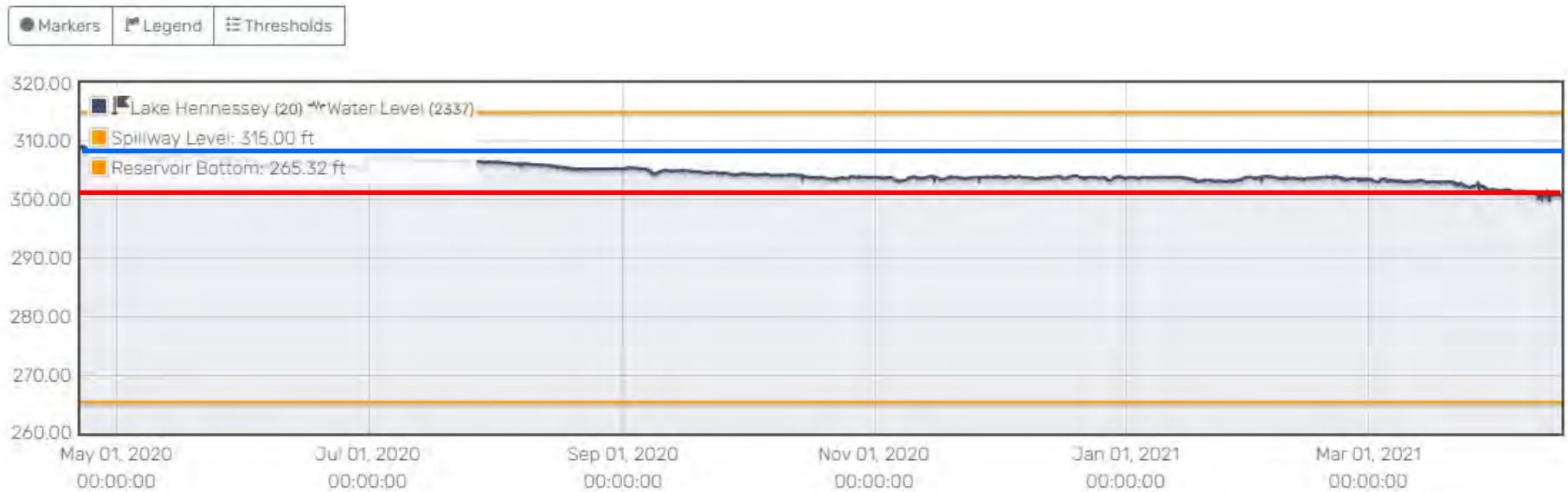
Lake Berryessa - Storage - 1/2 Year
(1002.504)



Full Pond Volume – 1,602,000 AF

70% Capacity April 20, 2021

Lake Hennessey Elevation



Full Pond Volume – 31,000 AF

November 2014 Dry Year Elevation Low – 301 ft

October 2015 Dry Year Elevation Low – 308 ft

Milliken Reservoir

Milliken Reservoir Storage Volume in Acre-Feet (AF) by Elevation (feet)

1 AF = 325,851 Gallons

Elevation (feet)	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.00	Elevation (feet)	Percent of Storage Capacity at each 1.0 feet
923.00										1,986	923.00	142.88%
922.00	1,982	1,978	1,974	1,970	1,966	1,961	1,957	1,953	1,949	1,945	922.00	139.93%
921.00	1,941	1,937	1,933	1,929	1,925	1,920	1,916	1,912	1,908	1,904	921.00	136.98%
920.00	1,900	1,896	1,892	1,888	1,884	1,879	1,875	1,871	1,867	1,863	920.00	134.03%
919.00	1,860	1,856	1,852	1,848	1,844	1,840	1,836	1,833	1,829	1,825	919.00	131.29%
918.00	1,821	1,818	1,814	1,810	1,806	1,802	1,798	1,795	1,791	1,787	918.00	128.56%
917.00	1,783	1,779	1,776	1,772	1,768	1,764	1,760	1,757	1,753	1,749	917.00	125.83%
916.00	1,745	1,741	1,738	1,734	1,730	1,726	1,722	1,719	1,715	1,711	916.00	123.09%
915.00	1,707	1,703	1,700	1,696	1,692	1,688	1,684	1,681	1,677	1,673	915.00	120.36%
914.00	1,670	1,666	1,663	1,659	1,655	1,652	1,648	1,644	1,641	1,637	914.00	117.77%
913.00	1,633	1,629	1,626	1,622	1,618	1,615	1,611	1,607	1,604	1,600	913.00	115.11%
912.00	1,597	1,593	1,589	1,586	1,582	1,578	1,575	1,571	1,568	1,564	912.00	112.52%
911.00	1,560	1,556	1,553	1,549	1,545	1,542	1,538	1,534	1,531	1,527	911.00	109.86%
910.00	1,524	1,520	1,516	1,513	1,509	1,505	1,502	1,498	1,495	1,491	910.00	107.27%
909.00	1,488	1,485	1,481	1,478	1,474	1,471	1,467	1,464	1,460	1,457	909.00	104.82%
908.00	1,454	1,450	1,447	1,443	1,440	1,437	1,433	1,430	1,426	1,423	908.00	102.37%
907.00	1,420	1,417	1,413	1,410	1,407	1,403	1,400	1,397	1,393	1,390	907.00	100.00%
906.00	1,367	1,363	1,360	1,357	1,354	1,350	1,347	1,344	1,340	1,337	906.00	97.63%
905.00	1,353	1,350	1,347	1,343	1,340	1,337	1,333	1,330	1,326	1,323	905.00	95.18%
904.00	1,321	1,317	1,314	1,311	1,308	1,305	1,301	1,298	1,295	1,292	904.00	92.95%
903.00	1,269	1,265	1,262	1,259	1,256	1,253	1,250	1,246	1,243	1,240	903.00	90.65%
902.00	1,257	1,254	1,251	1,248	1,245	1,241	1,238	1,235	1,232	1,229	902.00	88.42%
901.00	1,226	1,222	1,219	1,216	1,213	1,210	1,207	1,203	1,200	1,197	901.00	86.12%
900.00	1,194	1,191	1,188	1,185	1,182	1,178	1,175	1,172	1,169	1,166	900.00	83.88%
899.00	1,164	1,161	1,158	1,155	1,152	1,149	1,146	1,143	1,140	1,137	899.00	81.80%
898.00	1,134	1,131	1,128	1,125	1,123	1,120	1,117	1,114	1,111	1,108	898.00	79.71%
897.00	1,106	1,103	1,100	1,097	1,094	1,091	1,088	1,086	1,083	1,080	897.00	77.70%
896.00	1,077	1,074	1,071	1,068	1,065	1,063	1,060	1,057	1,054	1,051	896.00	75.61%
895.00	1,048	1,045	1,042	1,039	1,036	1,034	1,031	1,028	1,025	1,022	895.00	73.53%
894.00	1,020	1,017	1,014	1,011	1,009	1,006	1,003	1,000	998	995	894.00	71.58%
893.00	992	990	987	984	982	979	976	973	971	968	893.00	69.64%
892.00	965	963	960	957	955	952	949	946	944	941	892.00	67.70%
891.00	938	936	933	930	928	925	922	919	917	914	891.00	65.76%
890.00	911	909	906	903	901	898	895	892	890	887	890.00	63.81%
889.00	885	882	880	877	875	872	870	867	865	862	889.00	62.01%
888.00	860	857	855	852	850	847	845	842	840	837	888.00	60.22%
887.00	834	832	829	826	824	821	819	816	814	811	887.00	58.35%
886.00	809	806	804	801	799	796	794	791	789	786	886.00	56.55%
885.00	784	781	779	776	774	771	769	766	764	761	885.00	54.75%
884.00	759	757	754	752	750	747	745	743	740	738	884.00	53.09%
883.00	735	733	731	728	726	724	721	719	716	714	883.00	51.37%

Feb 2021
→

Full Pond Volume – 1,400 AF

Bell Canyon Reservoir

April 2020

Date	Elevation	Storage (acre-feet)	Computed Inflow (cfs)	7 Day Average Inflow (cfs)	Actual Release (cfs)
4/1/2020	411.17	1608.006	0.692	0.625	0.84
4/2/2020	411.13	1605.398	0.705	0.661	0.83
4/3/2020	411.11	1604.094	0.802	0.658	0.81
4/4/2020	411.10	1603.442	0.569	0.626	0.81
4/5/2020	411.14	1606.050	0.336	0.569	0.86
4/6/2020	411.14	1606.050	0.666	0.621	1.60
4/7/2020	411.14	1606.050	1.134	0.701	1.53
4/8/2020	411.11	1604.094	1.028	0.749	1.02
4/9/2020	411.09	1602.790	0.761	0.757	0.97
4/10/2020	411.08	1602.138	0.799	0.756	0.91
4/11/2020	411.07	1601.486	0.864	0.798	0.89
4/12/2020	411.06	1600.834	0.744	0.857	0.80
4/13/2020	411.04	1599.530	0.621	0.850	0.86
4/14/2020	411.02	1598.226	0.760	0.797	0.88
4/15/2020	410.98	1595.618	0.820	0.767	0.84
4/16/2020	410.95	1593.662	0.920	0.790	0.91
4/17/2020	410.93	1592.358	0.587	0.759	0.84
4/18/2020	410.91	1591.054	0.517	0.710	0.82
4/19/2020	410.89	1589.750	0.512	0.677	0.83
4/20/2020	410.87	1588.446	0.503	0.660	0.83
4/21/2020	410.85	1587.142	0.568	0.632	0.83
4/22/2020	410.83	1585.838	0.615	0.603	0.84
4/23/2020	410.81	1584.534	0.720	0.575	0.84
4/24/2020	410.76	1581.274	0.597	0.576	0.84
4/25/2020	410.72	1578.666	0.865	0.626	0.84
4/26/2020	410.68	1576.058	0.844	0.673	0.86
4/27/2020	410.64	1573.449	0.843	0.722	0.81

April 19, 2021 Elevation – 402 ft
43% Capacity – 1,011 AF

April 2014

Date	Elevation	Storage (acre-feet)	Computed Inflow (cfs)	7 Day Average Inflow (cfs)	Actual Release (cfs)
3/24/2014	415.10	1874.787	0.737	1.037	0.93
3/25/2014	415.06	1871.957	0.764	0.993	0.91
3/26/2014	415.10	1874.787	1.018	0.904	1.03
3/27/2014	415.09	1874.079	0.808	0.912	1.02
3/28/2014	415.07	1872.664	1.003	0.932	1.06
3/29/2014	415.16	1879.032	1.552	0.997	1.02
3/30/2014	415.91	1932.092	27.825	4.815	1.01
3/31/2014	416.08	1944.292	8.327	5.900	1.05
4/1/2014	416.71	1990.224	22.108	8.949	1.04
4/2/2014	418.78	2141.924	75.128	19.536	1.04
4/3/2014	419.44	2190.702	26.560	23.215	1.03
4/4/2014	419.75	2213.613	12.621	24.875	1.02
4/5/2014	420.11	2240.428	14.848	26.774	1.06
4/6/2014	420.30	2254.830	9.564	24.165	1.05
4/7/2014	420.40	2262.410	6.234	23.866	1.01
4/8/2014	420.45	2266.200	4.165	21.303	1.01
4/9/2014	420.49	2269.232	3.967	11.137	1.01
4/10/2014	420.49	2269.232	2.376	7.682	1.04
4/11/2014	420.49	2269.232	2.308	6.209	1.01
4/12/2014	420.49	2269.232	1.421	4.291	1.02
4/13/2014	420.49	2269.232	1.537	3.144	1.05
4/14/2014	420.48	2268.474	1.266	2.434	1.04
4/15/2014	420.45	2266.200	1.059	1.991	1.12
4/16/2014	420.41	2263.168	0.885	1.550	1.15
4/17/2014	420.37	2260.136	1.011	1.355	1.19
4/18/2014	420.33	2257.104	1.049	1.175	1.15
4/19/2014	420.28	2253.314	0.871	1.097	1.17
4/20/2014	420.23	2249.524	0.757	0.985	1.12
4/21/2014	420.18	2245.734	0.880	0.930	1.11
4/22/2014	420.14	2242.702	0.984	0.920	1.03
4/23/2014	420.09	2238.911	0.643	0.885	0.91

Full Pond Volume – 2,350 AF

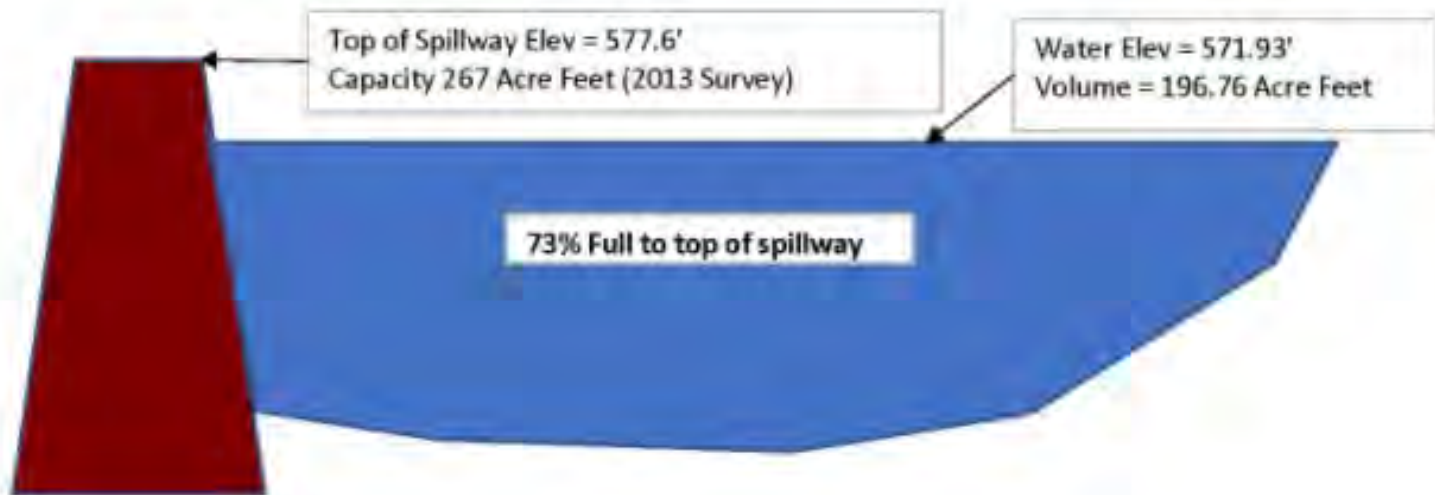
Kimball Reservoir

Kimball Reservoir Supply Status

Last Update: 4/12/2021

Seasonal Rainfall Total = 16.32"

Average Rainfall Total = 38"



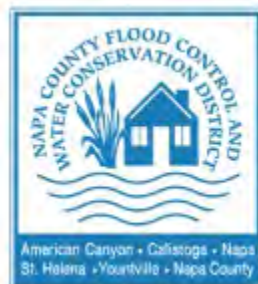
Full Pond Volume – 275 AF

Rector Reservoir



Full Pond Volume – 4,535 AF

Questions / Comments



**It's A Dry Year.
Let's Work Together To
Save Our Water.**