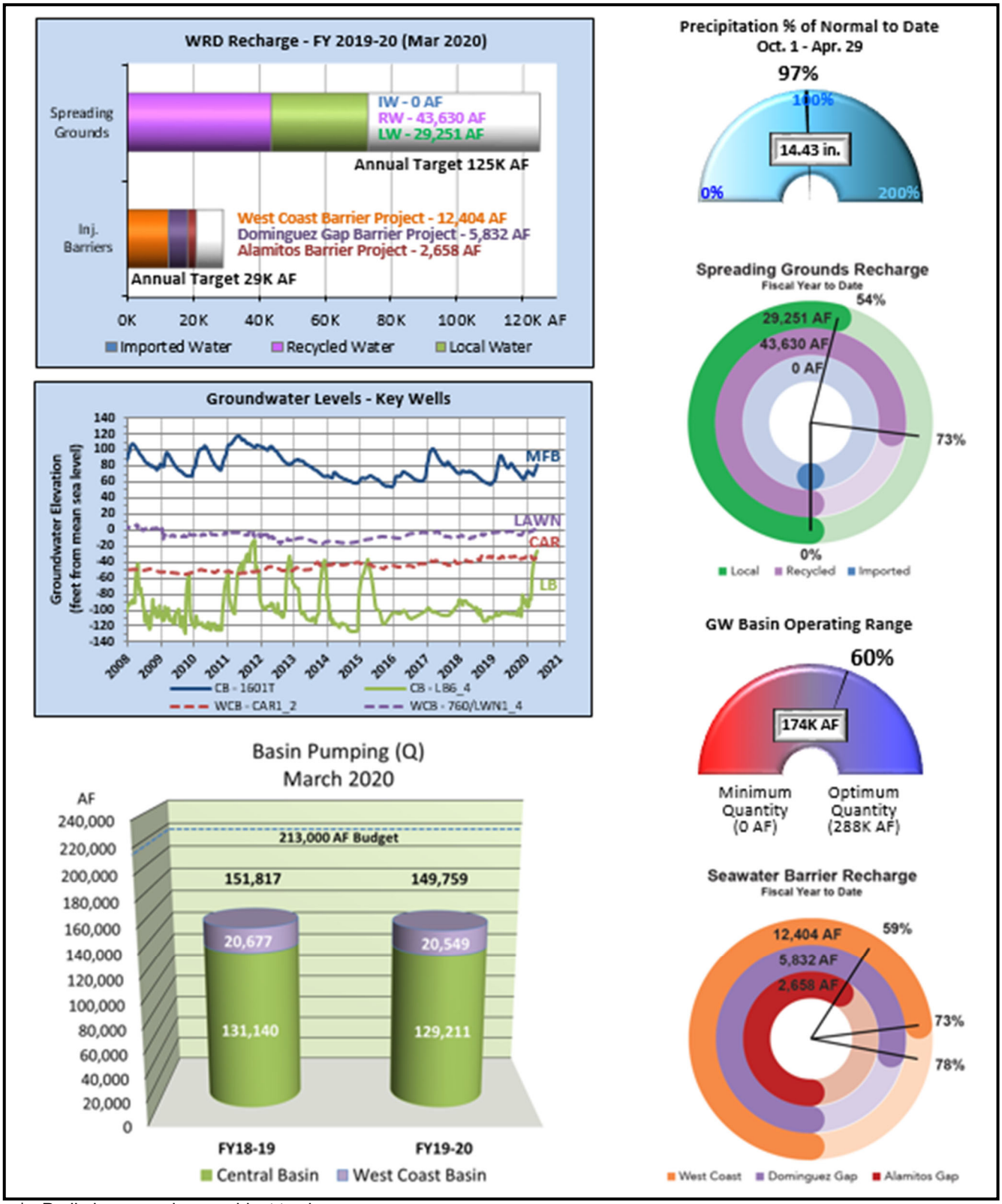
GROUNDWATER BASIN UPDATE
FOR MAY 2020

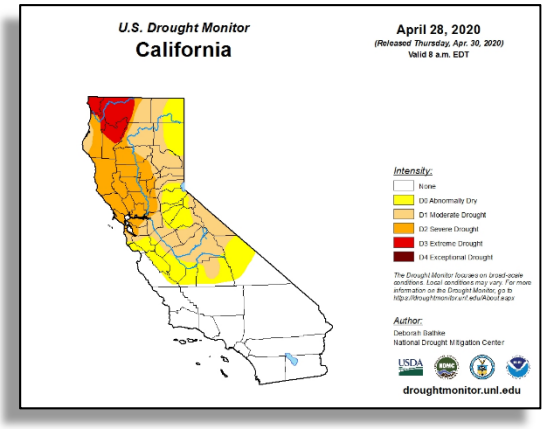
GROUNDWATER BASINS *AT A GLANCE**



* - Preliminary numbers, subject to change.

SUMMARY

Staff monitors groundwater conditions in its service area throughout the year. A summary of the latest information is presented below.



Precipitation (Oct. 1, 2019 – Apr. 29, 2020)

The WRD precipitation index reports that for the 2019-20 Water Year, there has been 14.43 inches of rainfall. The normal rainfall for this time period is 14.91 inches, so the District is 97% of normal. As of April 28, 2020, the U.S. Drought Monitor is reporting 58% of the State is abnormally dry, 42% under moderate drought, 20% under severe, and 5% under extreme drought conditions.

Snowpack (Snow Water Content [SWE] as of April 30, 2020)

In 1929, the State established the California Cooperative Snow Surveys Program with the California Department of Water Resources as the coordinator. Today, over 50 state, national, and private agencies collaborate in collecting snow data from over 300 snow courses with more than 60 of the courses being the original courses established in the early 1900's. The average snow course is 1,000 feet long and consist of about 10 sample points. Anywhere from two to six courses are measured per day depending on weather and access method.

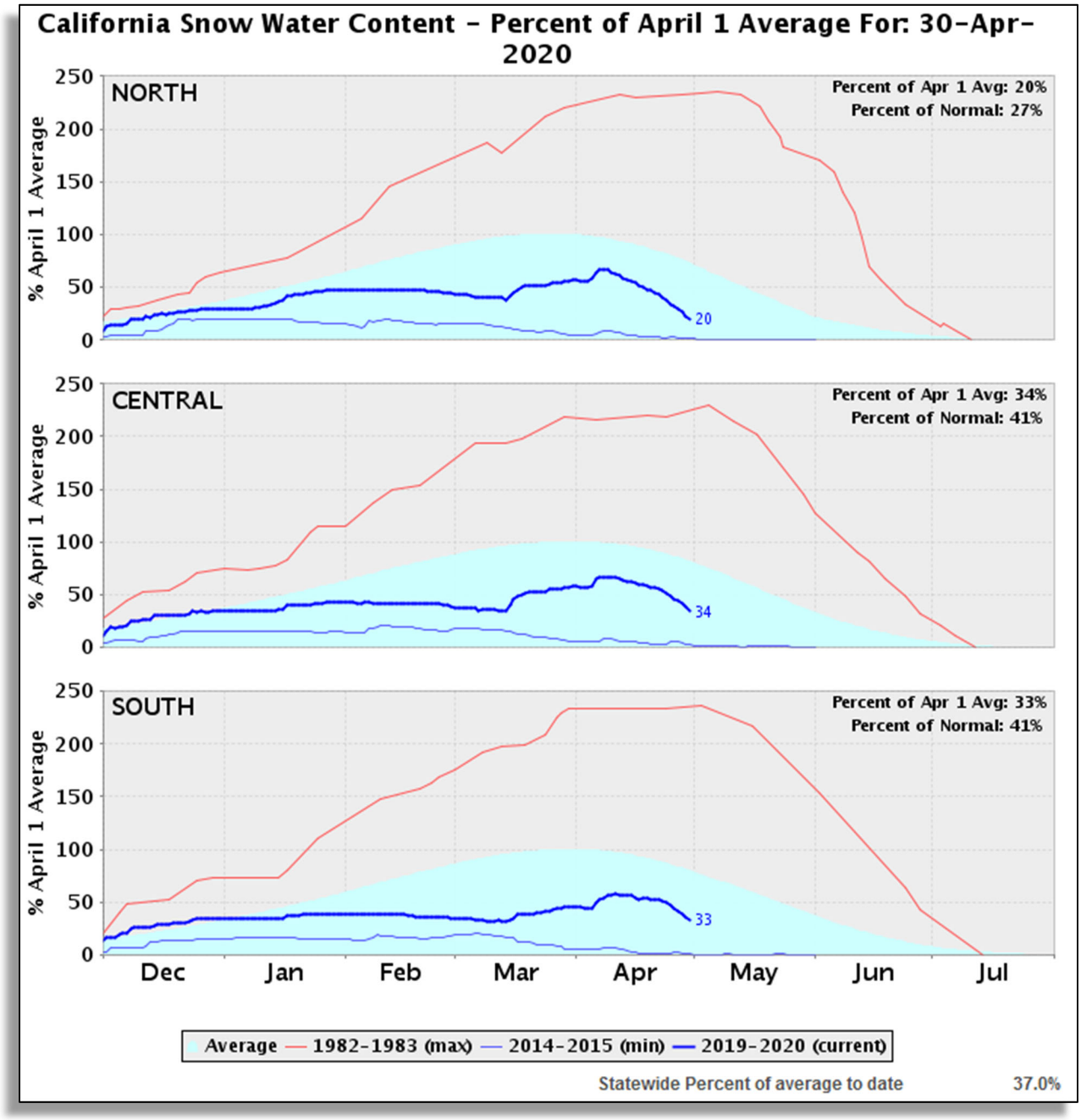
The snow survey is completed using a snow sampling tube equipped with a cutter on the end that is driven through the snow measuring the depth and obtaining a snow core. The snow core is then weighed and the snow water content (or snow water equivalent) calculated. The surveys are completed throughout the winter by returning to the same sample points throughout the season to observe the changing conditions. From February through May the data is used by the State to forecast snow melt runoff. Many snow courses are only measured on or around April 1st, and since it is presumed that the snow accumulates up to April 1st and melts thereafter, April 1st is the benchmark for historic data comparisons.

NORTH	
Data For: 30-Apr-2020	
Number of Stations Reporting	29
Average snow water equivalent	5.8"
Percent of April 1 Average	20%
Percent of normal for this date	27%

CENTRAL	
Data For: 30-Apr-2020	
Number of Stations Reporting	43
Average snow water equivalent	10.1"
Percent of April 1 Average	34%
Percent of normal for this date	41%

SOUTH	
Data For: 30-Apr-2020	
Number of Stations Reporting	28
Average snow water equivalent	8.5"
Percent of April 1 Average	33%
Percent of normal for this date	41%

STATEWIDE SUMMARY	
Data For: 30-Apr-2020	
Number of Stations Reporting	100
Average snow water equivalent	8.4"
Percent of April 1 Average	29%
Percent of normal for this date	37%



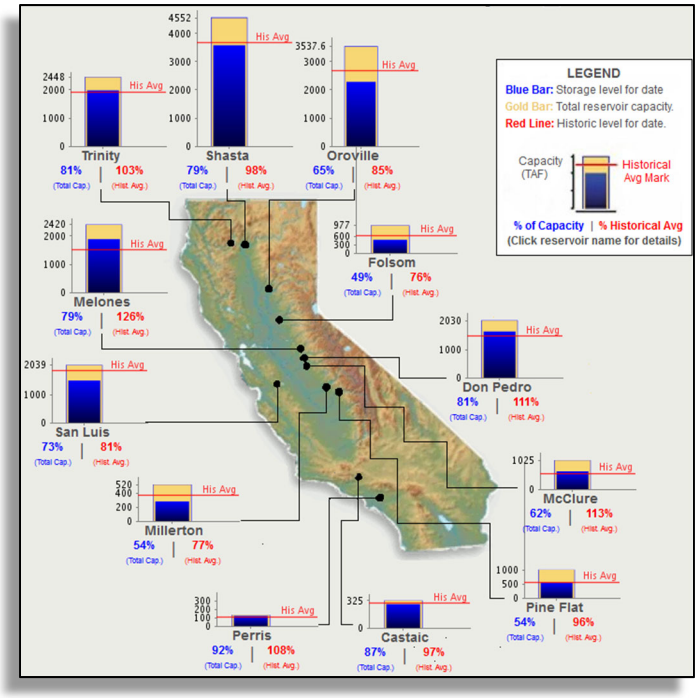
Northern Sierra Nevada – 5.8 in., 27% of normal to date and 20% of April 1st average
Central Sierra Nevada – 10.1 in., 41% of normal to date and 34% of April 1st average
Southern Sierra Nevada – 8.5 in., 41% of normal to date and 33% of April 1st average
Statewide Summary – *8.4 in., 39% of normal to date and 27% of April 1st average*

This is likely the last Department of Water Resources - Snow Pack Report for Water Year 2019-20.

Reservoirs (as of May 3, 2020)

For all 16 reservoirs reported monthly to the committee, water levels have increased in 11 reservoirs compared to levels recorded in the previous month and decreased in 5 reservoirs. The largest increase (0.24 million acre feet) occurred at Lake Folsom. The smallest increase (<0.00 million acre feet) occurred at Lake Perris, Lake Silverwood, and Lake Powell. The largest decrease (-0.16 million acre feet) occurred at Lake Mead. The smallest decrease (<0.00 million acre feet) occurred at San Luis Reservoir.

These 16 reservoirs are at 55% capacity (39.97 million acre feet) which is up 0.49 million acre feet from the prior month (0.67 million acre feet State Water Project [SWP] and -0.18 million acre feet Colorado River Aqueduct [CRA]).



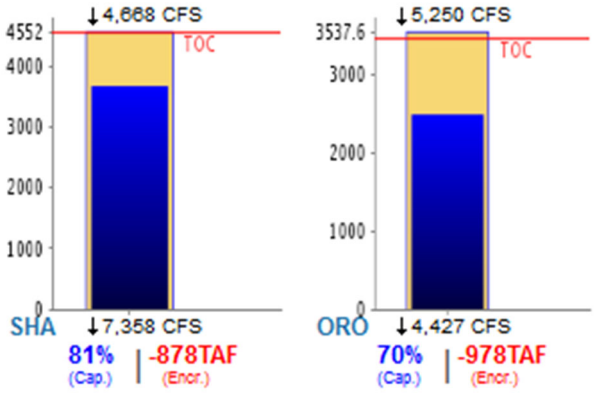
MWD Reservoirs (SWP)
Storage in Million Acre Feet

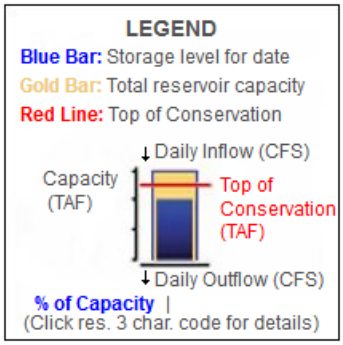
Reservoir	Capacity	Storage	% Full	Change
Trinity Lake	2.45	1.91	78%	-0.07
Lake Shasta	4.55	3.67	81%	0.08
Lake Oroville	3.54	2.48	70%	0.20
Folsom Lake	0.98	0.71	73%	0.24
New Melones	2.40	1.90	79%	0.01
Don Pedro	2.03	1.72	85%	0.07
Lake McClure	1.02	0.74	72%	0.11
San Luis	2.04	1.50	73%	0.00
Millerton Lake	0.52	0.15	29%	-0.13
Pine Flat	1.00	0.70	70%	0.16
Castaic Lake	0.33	0.29	90%	0.01
Lake Perris	0.13	0.12	93%	0.00
Silverwood	0.08	0.07	87%	0.00

MWD Reservoirs (CRA)
Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Powell	24.32	11.86	49%	0.00
Mead	26.12	11.39	44%	-0.16
DVL	0.81	0.76	94%	-0.01

Black Text - Decrease or no change in storage since the last report.
Green Text - Increase in storage since the last report.

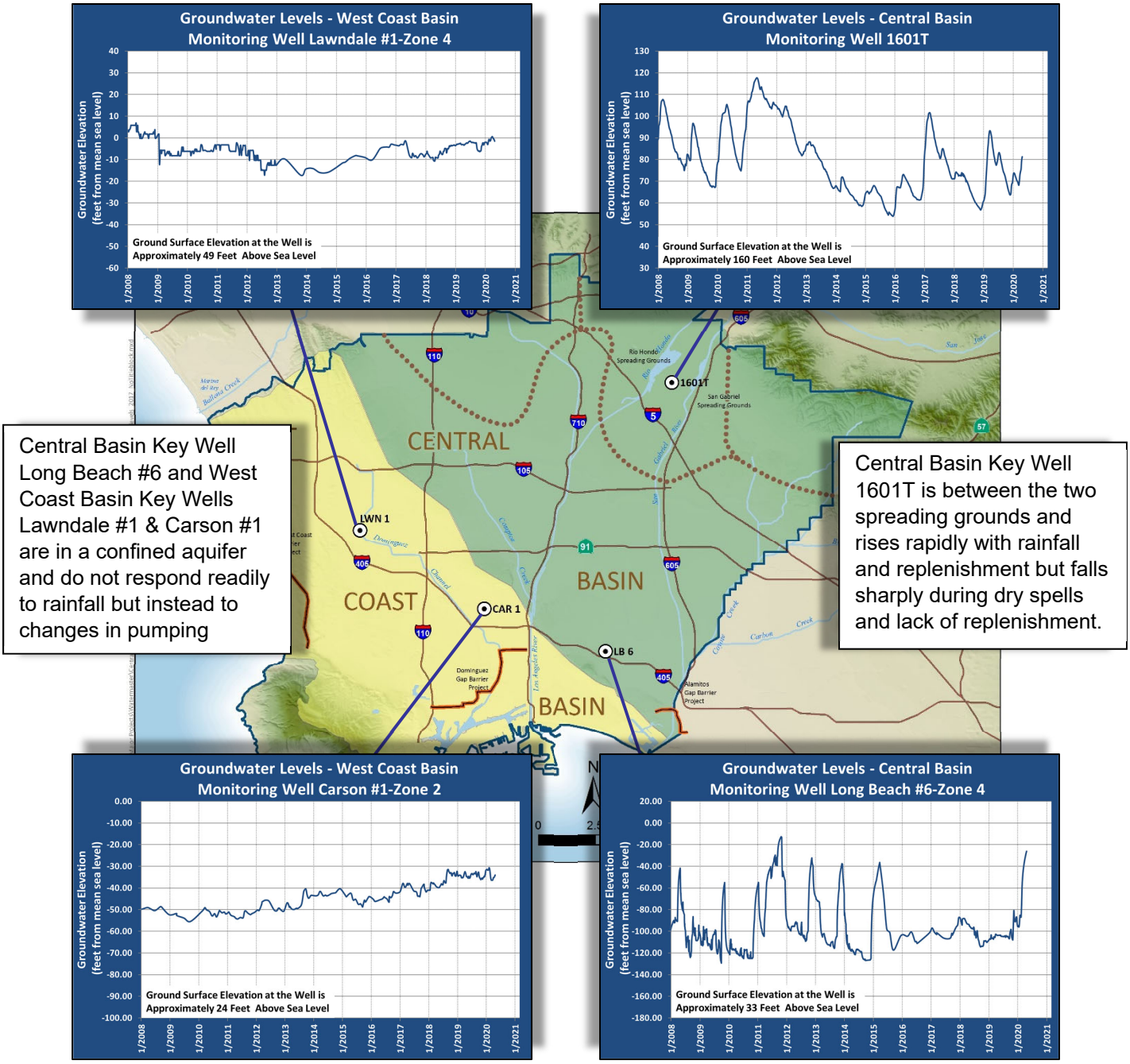




Charts illustrating Lake Shasta (SHA) is currently draining and Lake Oroville (ORO) is currently filling.

Groundwater Levels (through April 24, 2020)

Groundwater levels in key monitoring wells are shown in the hydrographs below.



Groundwater Level Changes in Key Wells

Well Name	Since Last Report	Since Same Time the Previous Year
Central Basin Key Well 1601T	Increased 8.4 feet	Decreased 4.2 feet
Central Basin Key Well Long Beach #6_4	Increased 10.3 feet	Increased 77.7 feet
West Coast Basin Key Well Lawndale #1_4	**Decreased 2.1 feet**	Increased 1.4 feet
West Coast Basin Key Well Carson #1_2	**Increased 2.1 foot**	**Increased 0.7 feet**

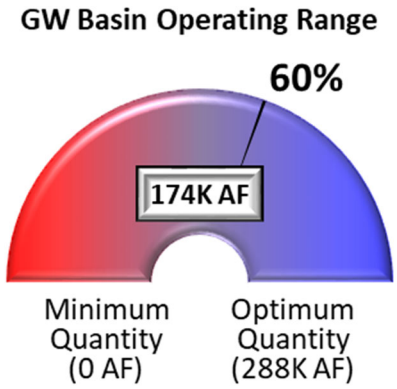
Bold indicates a change in direction (decreasing or increasing) since the last report.

Optimum and Minimum Groundwater Quantity

In response to a 2002 State audit of the District's activities, the Board of Directors adopted an Optimum and Minimum Quantity for groundwater in the District to define an appropriate operating range that would sustain adjudicated pumping rights, leave room for future storage projects, and identify a lower limit. The amounts are based on the accumulated overdraft concept, which the District tracks year by year based on changes in groundwater storage.

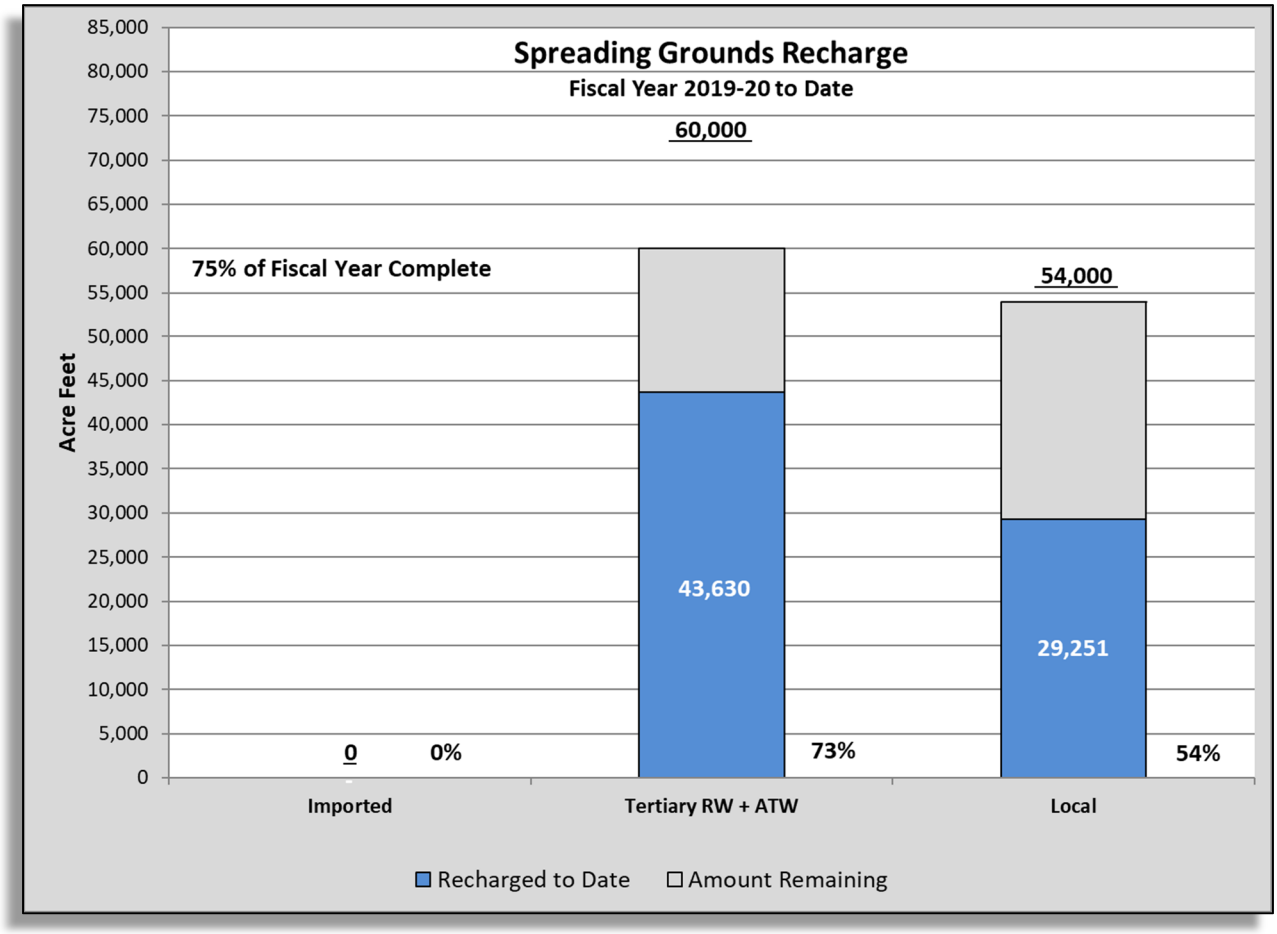
After an extensive review of over 70 years of water level fluctuations and discussions with the Board and pumping community, Water Year 1999/2000 was recognized as a representative year for the Optimum Quantity, which equated to an accumulated overdraft of approximately 612,000 acre feet. The Minimum Quantity was defined as an accumulated overdraft of 900,000 acre feet, which allowed an operating range from 0 acre feet (minimum) to 288,000 acre feet (optimum). The Board also adopted a policy to make-up the groundwater deficit should the accumulated overdraft fall too far below the Optimum Quantity.

The Accumulated Overdraft as of April 29, 2020, has been estimated at 725,895 acre feet (subject to change), which is 174,105 acre feet above the Minimum Groundwater Quantity and 113,895 acre feet below the Optimum Quantity. The Basin is at 60% of Optimum Quantity which is up 11% from last month.



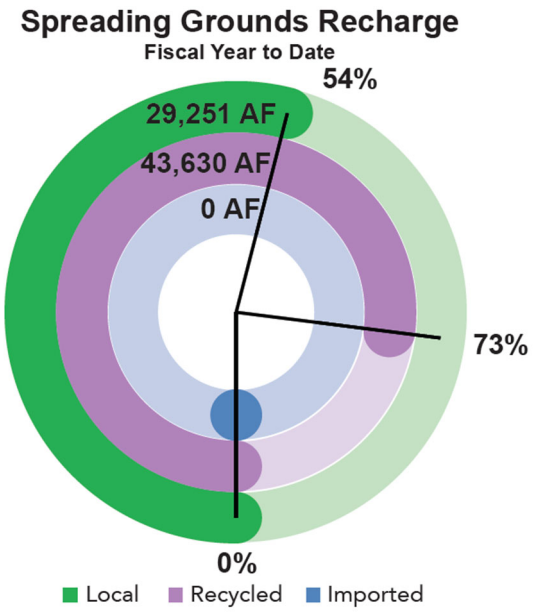
Montebello Forebay Spreading Grounds (July 2019 - March 2020)

The following Chart shows the preliminary spreading grounds replenishment water:

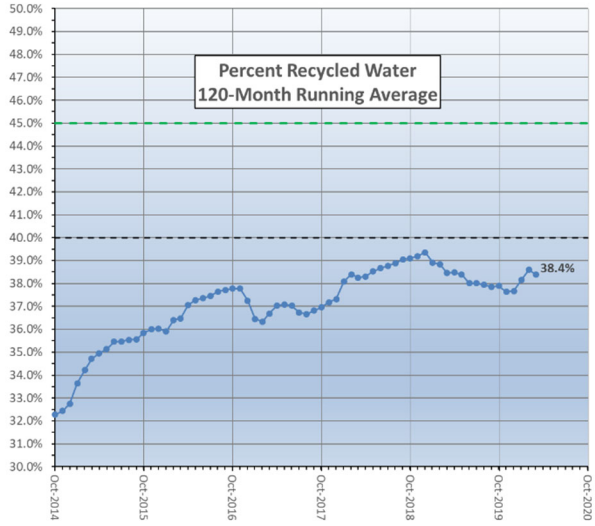


For the Fiscal Year 2019-20, no imported water purchases are anticipated.

Local water (stormwater plus dry weather urban runoff) is captured by the Los Angeles County Department of Public Works (LACDPW) at the spreading grounds for recharge. Local water amounts are determined as the sum of the total waters conserved at the spreading grounds less the imported and recycled water deliveries. For the first nine months of the 2019-20 Fiscal Year, approximately 29,251 acre feet of local water capture has been reported by the LACDPW.



Preliminary numbers for the first nine months of the 2019-20 Fiscal Year show that approximately 43,630 acre feet of recycled water has been recharged with 5,905 AF consisting of advanced treat water from the ARC AWTF. Presuming the advanced treated water as "Null Water" the 120-month running average of recycled water contribution in the Montebello Forebay is 38.4% and the regulatory maximum is 45%, with additional studies and monitoring being required once 40% is reached.



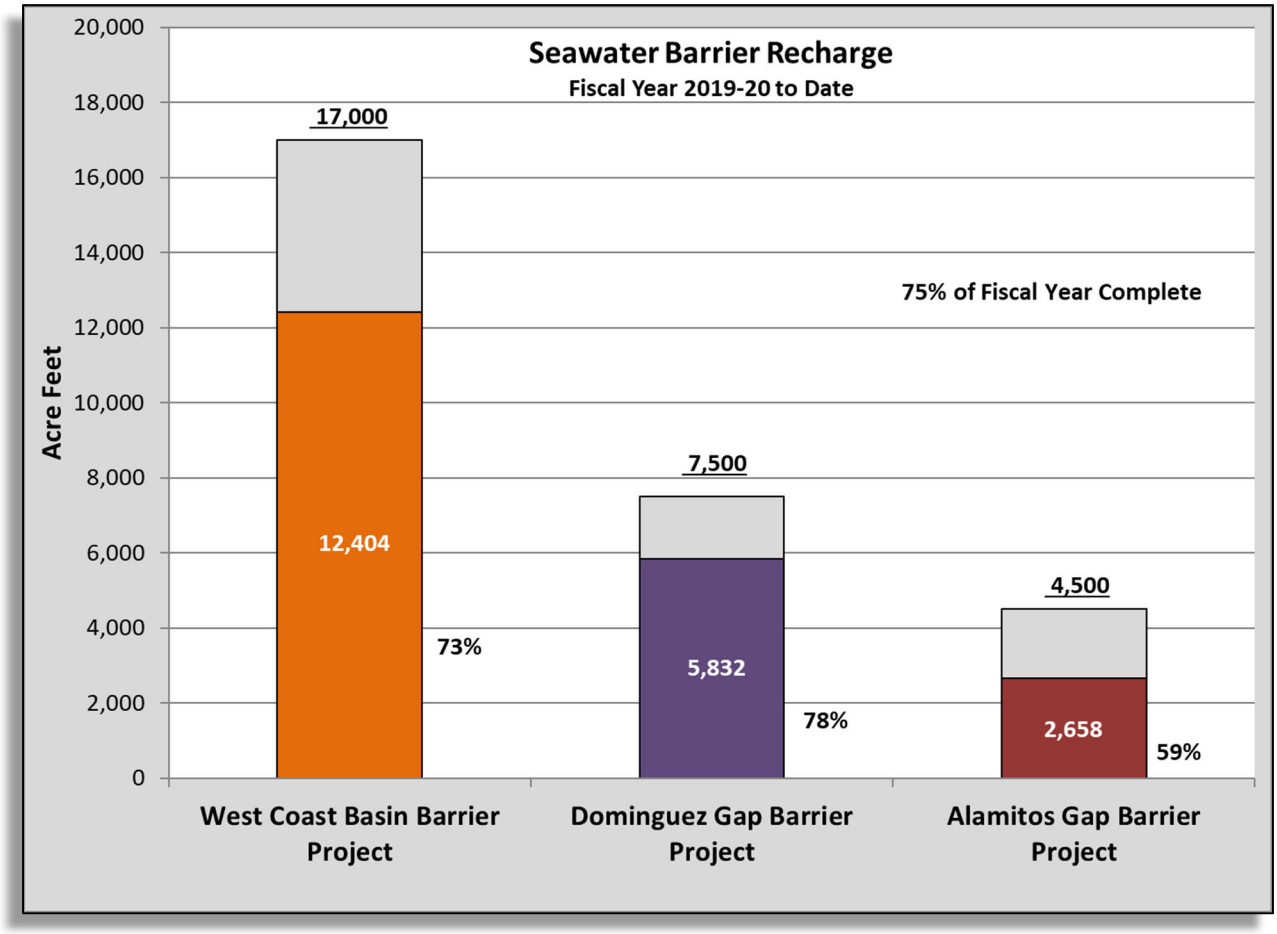
Tertiary Recycle Water Permit Update

Following extensive collaboration between the District and LACSD, the Workplan required by the SWRCB - Division of Drinking Water and LARWQCB regarding the use of tertiary treated recycled water at the Montebello Forebay Spreading Grounds was submitted on November 18, 2019.

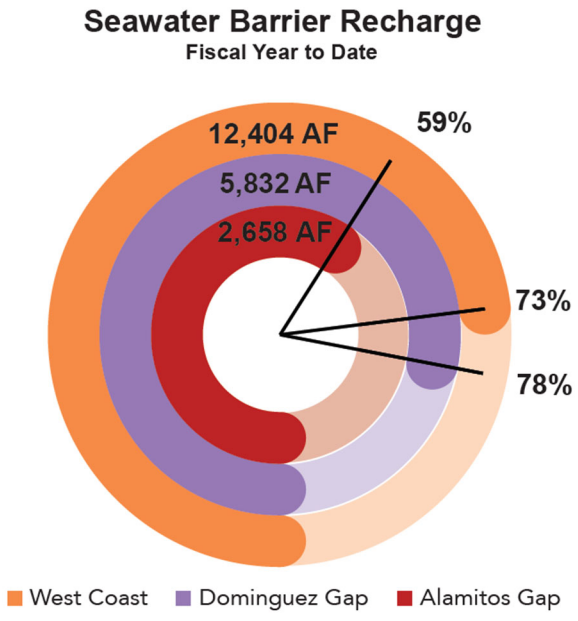
Upon receipt of comments on the Workplan from the State of California, the District and LACSD will proceed with finalizing the preparation and submittal of the new Title 22 Engineering Report. In anticipation of receiving comments in late spring 2020, staff is continuing to work with the LACSD on developing the known components of the new Title 22 Engineering Report. A preliminary scoping meeting and a follow-up strategy meeting were held on November 26, 2019, and January 27, 2020, respectively. Staff is working collaboratively with the LACSD preparing draft sections of the engineering report.

Seawater Barrier Well Injection and Replenishment (July 2019 - March 2020)

The following Chart shows the barrier water injection:

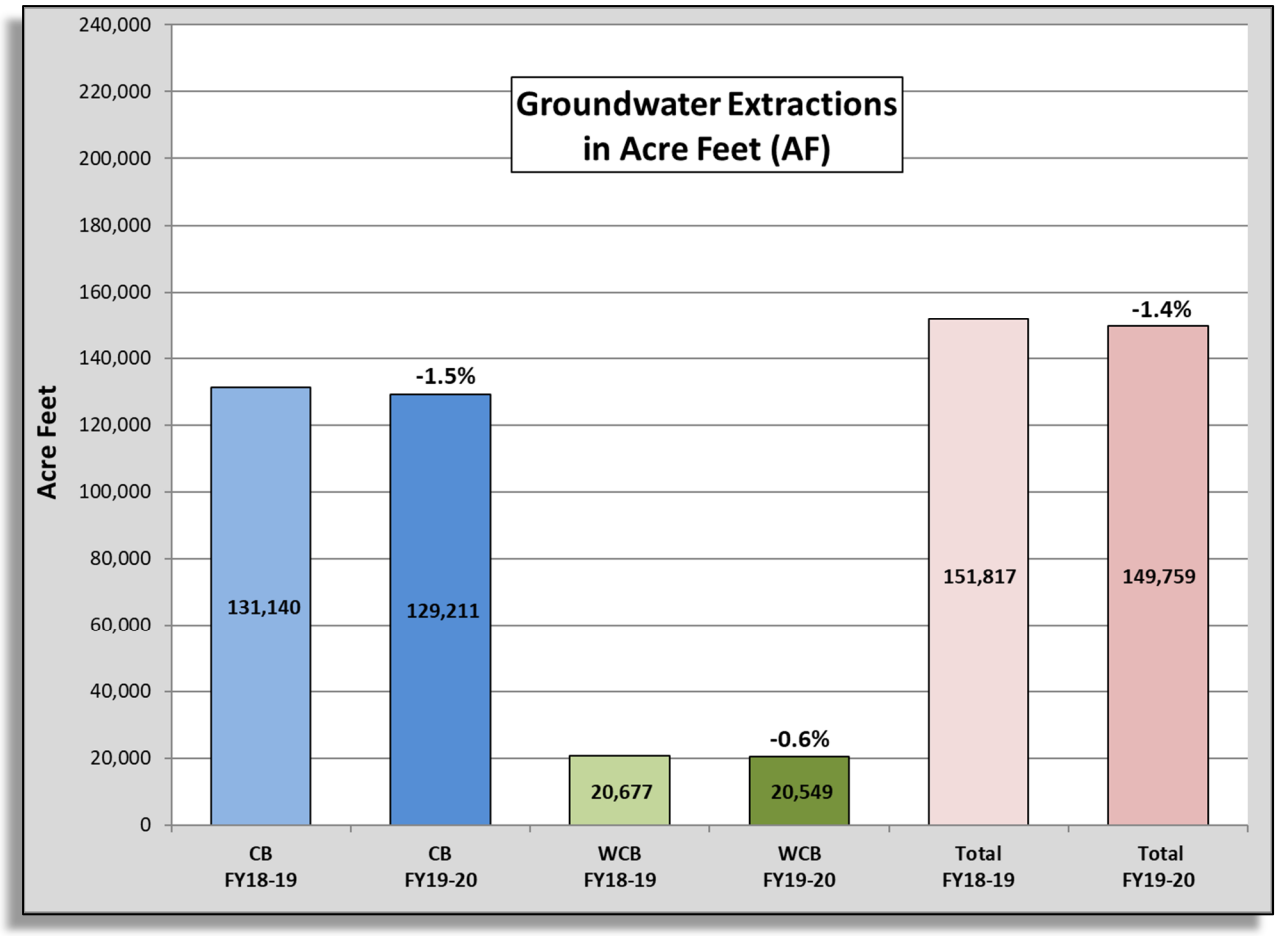


Preliminary numbers for the first nine months of the 2019-20 Fiscal Year show that the West Coast Barrier has used 12,404 acre feet of the total 17,000 acre feet planned for injection, 73% of total for the Fiscal Year. The Dominguez Gap Barrier used 5,832 acre feet of the total 7,500 acre feet planned for injection, 78% of the total for the Fiscal Year. The Alamitos Barrier, on the WRD side, used 2,658 acre feet of the total 4,500 acre feet planned for injection, 59% of the total for the Fiscal Year.

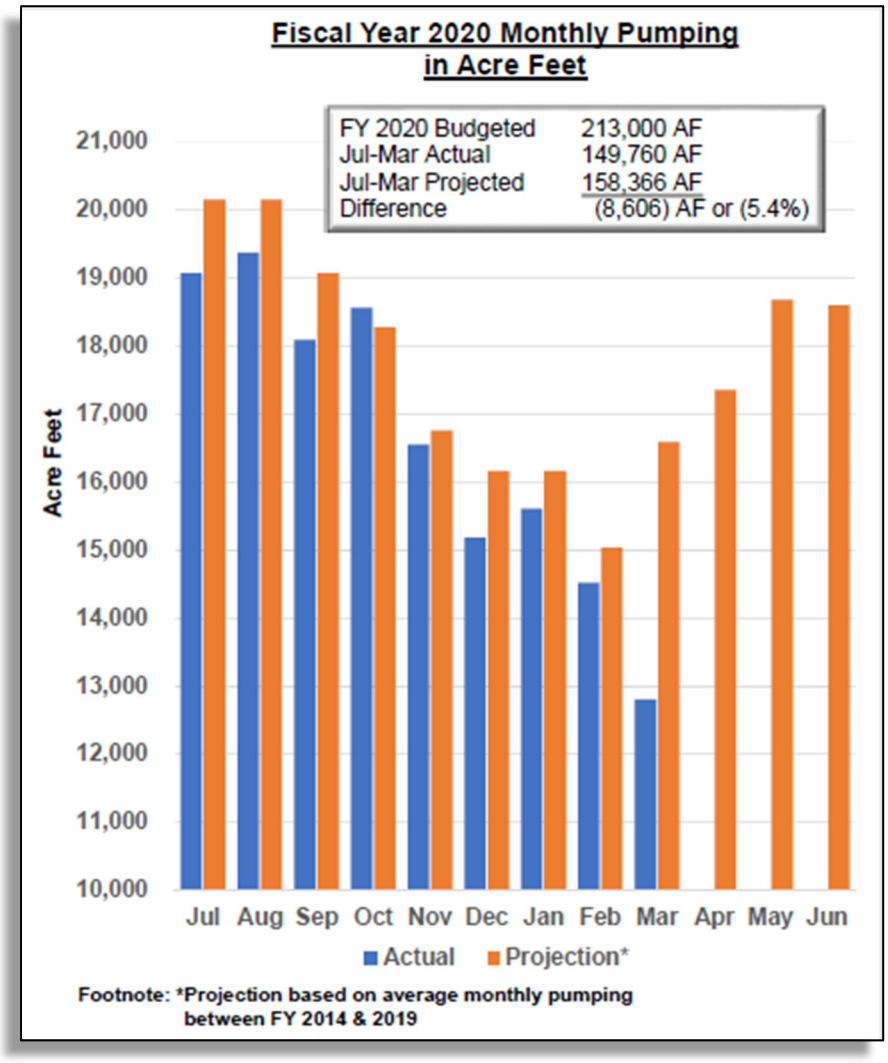


Assessible Pumping (Fiscal Year July 2019 – March 2020)

Preliminary numbers for groundwater production in the District for the Fiscal Year 2019-20 (July 2019 – March 2020) indicate pumping in the Central Basin was down 1,929 acre feet from the same time of the previous fiscal year (-1.5%) and the West Coast Basin pumping was 128 acre feet lower than the previous fiscal year (-0.6%). The total pumping is 149,759 acre feet compared to 151,817 acre feet during the same time the previous year for a decrease of 2,057 acre feet, or -1.4%. The current pumping data do not include eight Central Basin pumpers and two West Coast Basin pumpers who have not yet reported.



Preliminary numbers indicate 149,760 acre feet have been pumped this fiscal year and is 5.4% below the projected goal of 158,366 acre feet (or -8,606 acre feet). Monthly actual production versus 6-year average monthly production projections (FY 2014 through 2019) are included in the chart below.



For the Fiscal Year 2019-20 (July 2019 – March 2020), staff has tracked the production trends of the top five (5) producing pumpers and the bottom five (5) producing pumpers in each basin. These pumpers are identified in the following tables and are based on the change in volume (in acre feet) compared to the same time period for the previous Fiscal Year.

Production Trends - Central Basin				
Top 5 Producing by Volume (AF)	July 2018 - March 2019	July 2019 - March 2020	Difference	% Change
Whittier, City of	3,101.67	4,220.52	1,118.85	36.07%
Cerritos, City of	5,907.68	6,444.67	536.99	9.09%
Paramount, City of	3,683.45	4,209.14	525.69	14.27%
California Water Service Company (East LA)	6,695.50	7,136.59	441.09	6.59%
Lynwood, City of	3,627.36	3,902.39	275.03	7.58%
Bottom 5 Producing by Volume (AF)	July 2018 - March 2019	July 2019 - March 2020	Difference	% Change
Lakewood, City of Water Department	7,188.03	4,978.40	-2,209.63	-30.74%
Golden State Water Company	15,979.24	14,960.92	-1,018.32	-6.37%
Long Beach, City of	20,090.81	19,134.37	-956.44	-4.76%
San Gabriel Valley Water Company	1,266.37	695.07	-571.30	-45.11%
Bell Gardens, City of	769.00	362.56	-406.44	-52.85%

Production Trends – West Coast Basin				
Top 5 Producing by Volume (AF)	July 2018 - March 2019	July 2019 - March 2020	Difference	% Change
Inglewood, City of	910.52	2,650.33	1,739.81	191.08%
Phillips 66 Company	3,312.93	3,949.76	636.83	19.22%
Tesoro Refining & Marketing Co., LLC	2,843.65	3,467.99	624.34	21.96%
Rolling Hills Country Club	65.00	249.00	184.00	283.08%
Roman Catholic Archbishop of Los Angeles	182.76	210.44	27.68	15.15%
Bottom 5 Producing by Volume (AF)	July 2018 - March 2019	July 2019 - March 2020	Difference	% Change
Golden State Water Company	3,803.94	2,270.84	-1,533.10	-40.30%
Lomita, City of	403.41	1.80	-401.61	-99.55%
Torrance, City of	3,202.42	2,857.77	-344.65	-10.76%
West Basin Brewer Desalter	389.30	91.64	-297.66	-76.46%
Torrance Refining & Marketing Company	818.09	616.39	-201.70	-24.65%