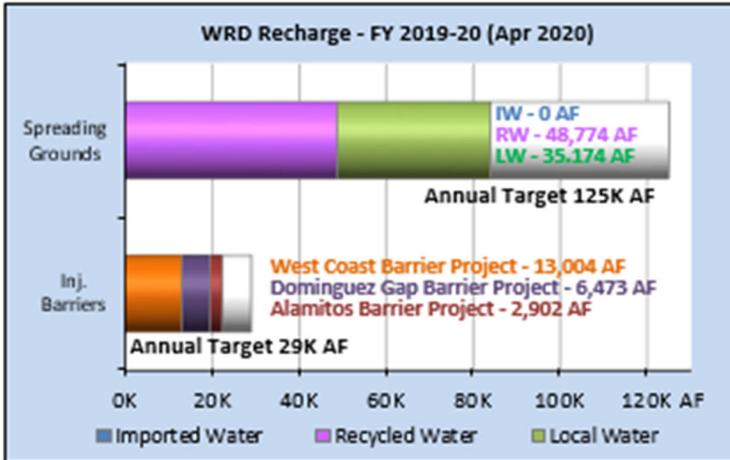
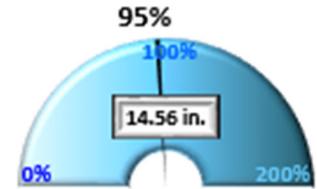


# GROUNDWATER BASIN UPDATE FOR JUNE 2020

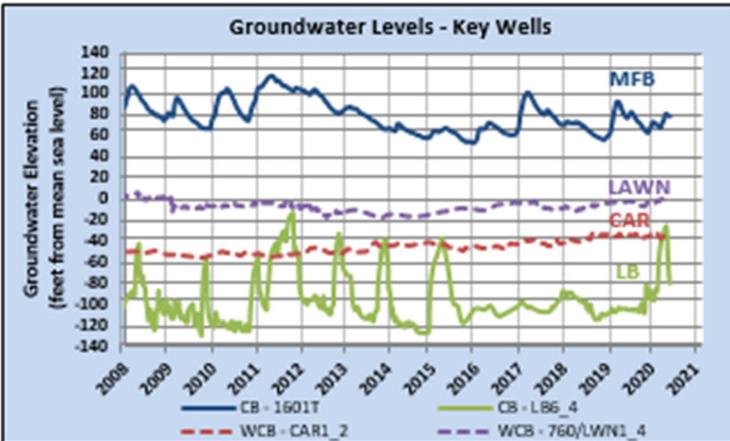
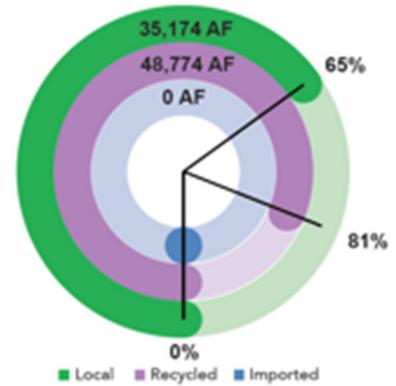
## GROUNDWATER BASINS AT A GLANCE\*



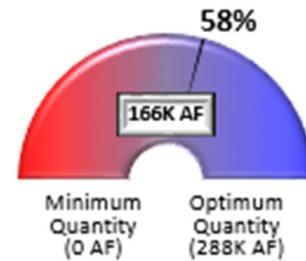
Precipitation % of Normal to Date  
Oct. 1 - Jun. 1



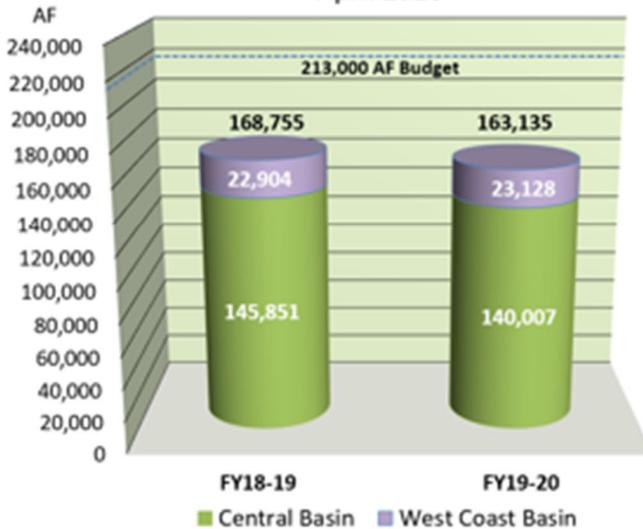
Spreading Grounds Recharge  
Fiscal Year to Date



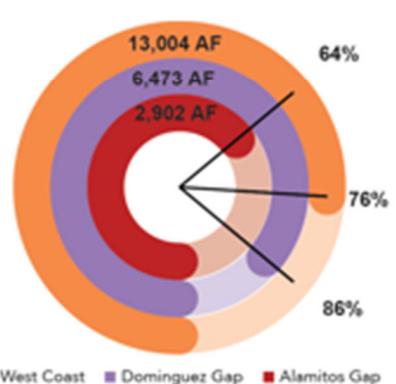
GW Basin Operating Range



Basin Pumping (Q)  
April 2020



Seawater Barrier Recharge  
Fiscal Year to Date



\* - 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.

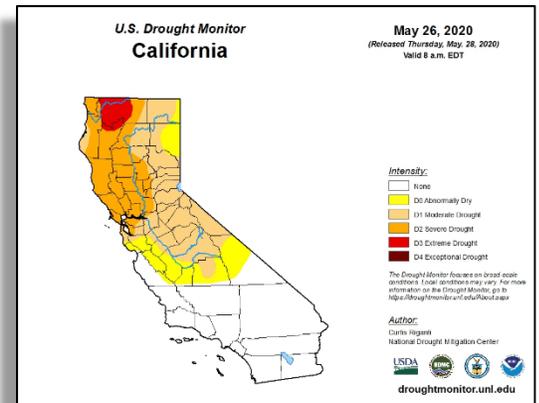
### Precipitation (Oct. 1, 2019 – Jun. 1, 2020)

The WRD precipitation index reports that for the 2019-20 Water Year, there has been 14.56 inches of rainfall. The normal rainfall for this time period is 15.26 inches, so the District is 95% of normal. As of May 26, 2020, the U.S. Drought Monitor is reporting 58% of the State is abnormally dry, 47% under moderate drought, 21% under severe, and 3% 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 1<sup>st</sup>, and since it is presumed that the snow accumulates up to April 1<sup>st</sup> and melts thereafter, April 1<sup>st</sup> is the benchmark for historic data comparisons.



#### **NORTH**

Data For: 01-Jun-2020

Number of Stations Reporting	29
Average snow water equivalent	0.5"
Percent of April 1 Average	2%
Percent of normal for this date	9%

#### **CENTRAL**

Data For: 01-Jun-2020

Number of Stations Reporting	44
Average snow water equivalent	0.2"
Percent of April 1 Average	1%
Percent of normal for this date	3%

#### **SOUTH**

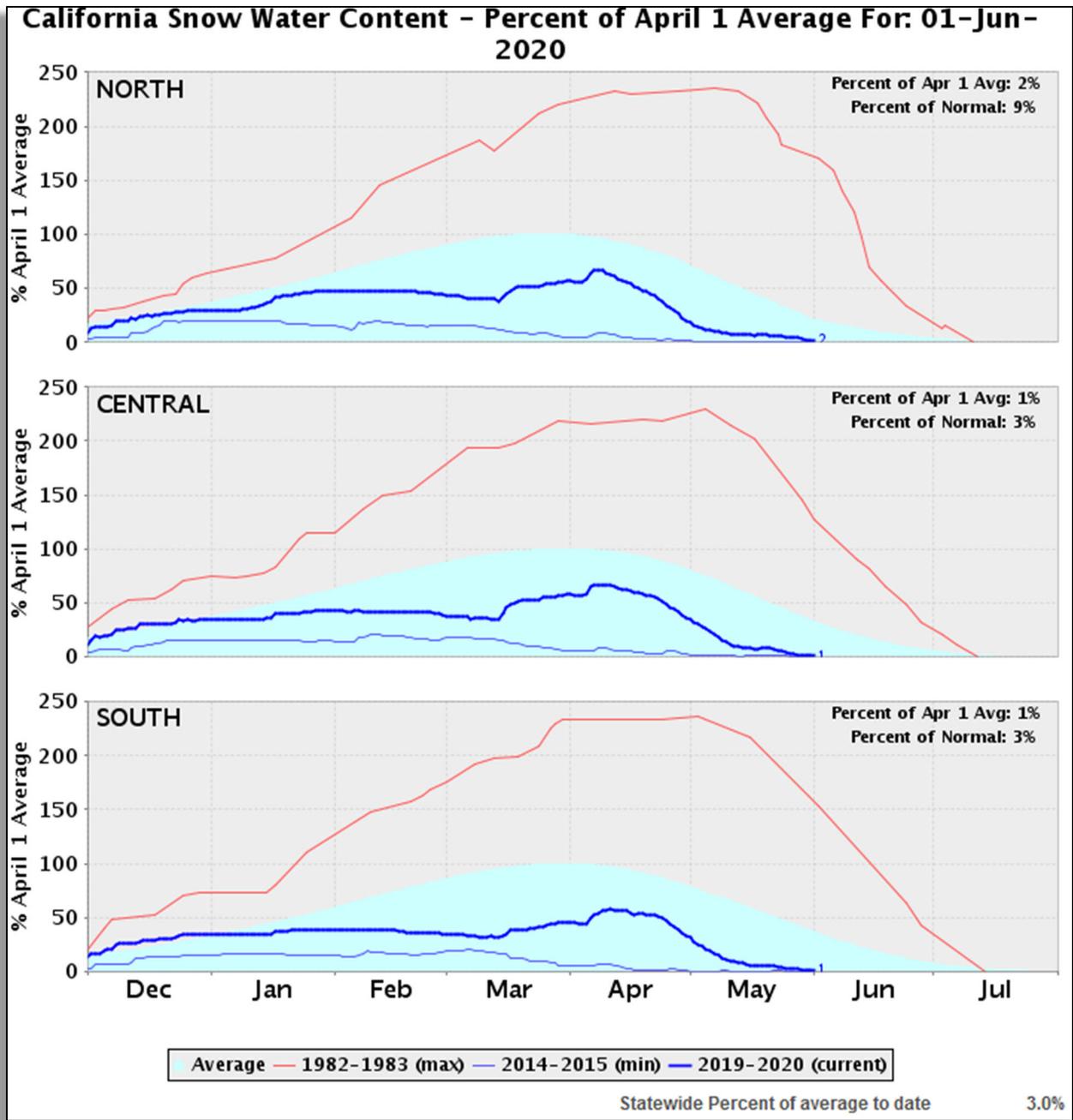
Data For: 01-Jun-2020

Number of Stations Reporting	28
Average snow water equivalent	0.2"
Percent of April 1 Average	1%
Percent of normal for this date	3%

#### **STATEWIDE SUMMARY**

Data For: 01-Jun-2020

Number of Stations Reporting	101
Average snow water equivalent	0.3"
Percent of April 1 Average	1%
Percent of normal for this date	3%



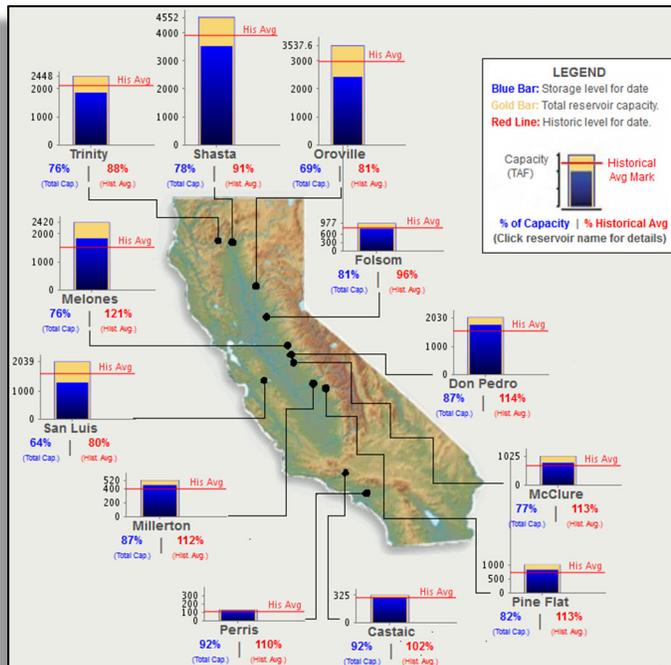
**Northern Sierra Nevada** – 0.5 in., 9% of normal to date and 2% of April 1<sup>st</sup> average  
**Central Sierra Nevada** – 0.2 in., 3% of normal to date and 1% of April 1<sup>st</sup> average  
**Southern Sierra Nevada** – 0.2 in., 3% of normal to date and 1% of April 1<sup>st</sup> average  
**Statewide Summary** – 0.3 in., 3% of normal to date and 1% of April 1<sup>st</sup> average

This will be the last Department of Water Resources - Snow Pack Report presented for Water Year 2019-20.

## Reservoirs (as of May 31, 2020)

For all 16 reservoirs reported monthly to the committee, water levels have increased in 8 reservoirs compared to levels recorded in the previous month and decreased in 8 reservoirs. The largest increase (0.37 million acre feet) occurred at Lake Powell. The smallest increase (<0.00 million acre feet) occurred at Lake Silverwood. The largest decrease (-0.42 million acre feet) occurred at Lake Mead. The smallest decrease (<0.00 million acre feet) occurred at Lake Perris.

These 16 reservoirs are at 55% capacity (40.01 million acre feet) which is up 0.04 million acre feet from the prior month (0.11 million acre feet State Water Project [SWP] and -0.08 million acre feet Colorado River Aqueduct [CRA]).



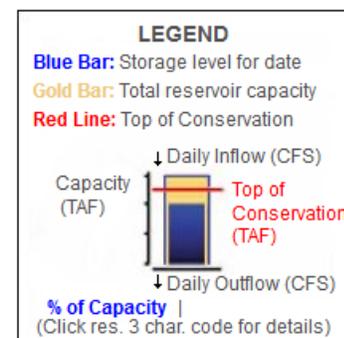
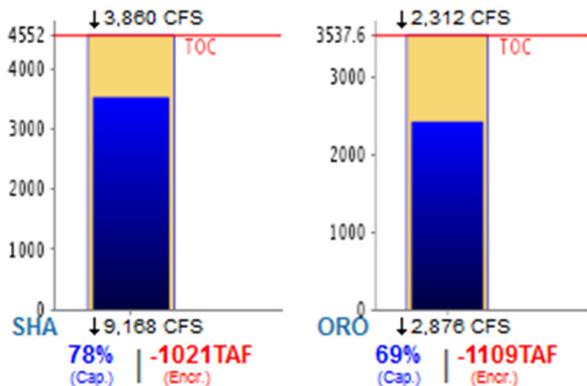
### MWD Reservoirs (SWP) Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Trinity Lake	2.45	1.87	76%	-0.05
Lake Shasta	4.55	3.53	78%	-0.14
Lake Oroville	3.54	2.43	69%	-0.05
Folsom Lake	0.98	0.79	81%	0.08
New Melones	2.40	1.84	76%	-0.07
Don Pedro	2.03	1.77	87%	0.05
Lake McClure	1.02	0.79	77%	0.05
San Luis	2.04	1.30	64%	-0.20
Millerton Lake	0.52	0.45	87%	0.30
Pine Flat	1.00	0.82	82%	0.12
Castaic Lake	0.33	0.30	92%	0.01
Lake Perris	0.13	0.12	92%	0.00
Silverwood	0.08	0.07	88%	0.00

### MWD Reservoirs (CRA) Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Powell	24.32	12.23	50%	0.37
Mead	26.12	10.97	42%	-0.42
DVL	0.81	0.74	91%	-0.03

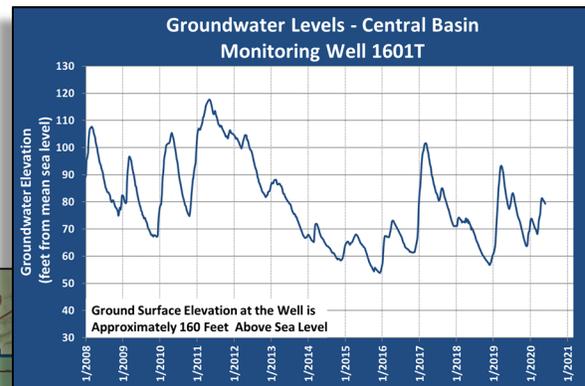
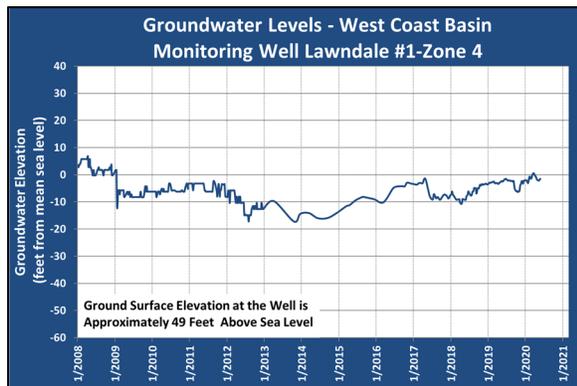
Black Text - Decrease or no change in storage since the last report.  
Green Text - Increase in storage since the last report.



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

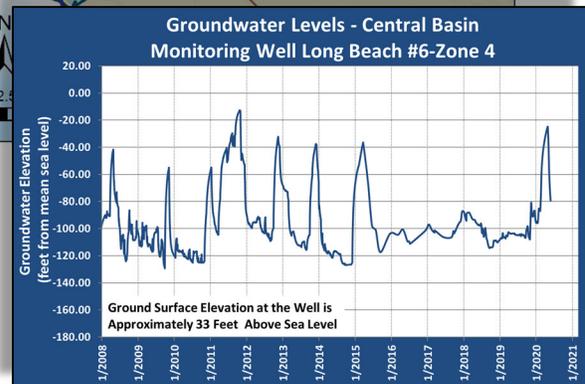
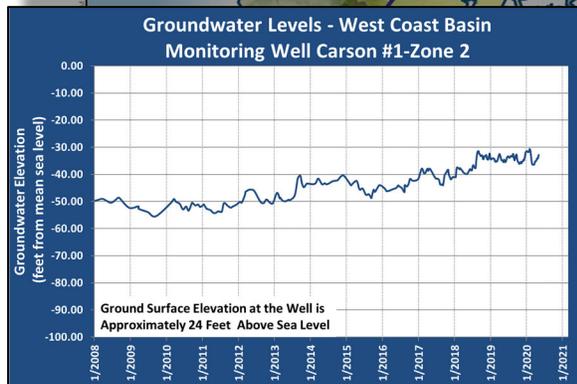
## Groundwater Levels (through May 29, 2020)

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



Central Basin Key Well Long Beach #6 and West Coast Basin Key Wells Lawndale #1 & Carson #1 are in a confined aquifer and do not respond readily to rainfall but instead to changes in pumping

Central Basin Key Well 1601T is between the two spreading grounds and rises rapidly with rainfall and replenishment but falls sharply during dry spells and lack of replenishment.



### Groundwater Level Changes in Key Wells

Well Name	Since Last Report	Since Same Time the Previous Year
Central Basin Key Well 1601T	<b>Decreased 2.0 feet</b>	<b>Increased 0.9 feet</b>
Central Basin Key Well Long Beach #6 4	<b>Decreased 53.4 feet</b>	Increased 24.1 feet
West Coast Basin Key Well Lawndale #1 4	<b>Increased 0.1 feet</b>	Increased 1.0 feet
West Coast Basin Key Well Carson #1 2	Increased 1.18 foot	Increased 2.31 feet

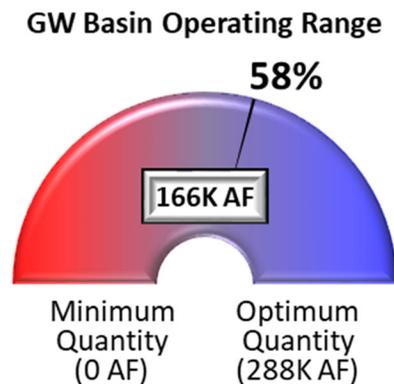
**Bold** indicates a change in direction (decreasing or increasing) since the last report.

## 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 May 29, 2020, has been estimated at 733,605 acre feet (subject to change), which is 166,395 acre feet above the Minimum Groundwater Quantity and 121,605 acre feet below the Optimum Quantity. The Basin is at 58% of Optimum Quantity which is down 2% from last month.



Montebello Forebay Spreading Grounds (July 2019 - April 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 ten months of the 2019-20 Fiscal Year, approximately 35,174 acre feet of local water capture has been reported by the LACDPW.