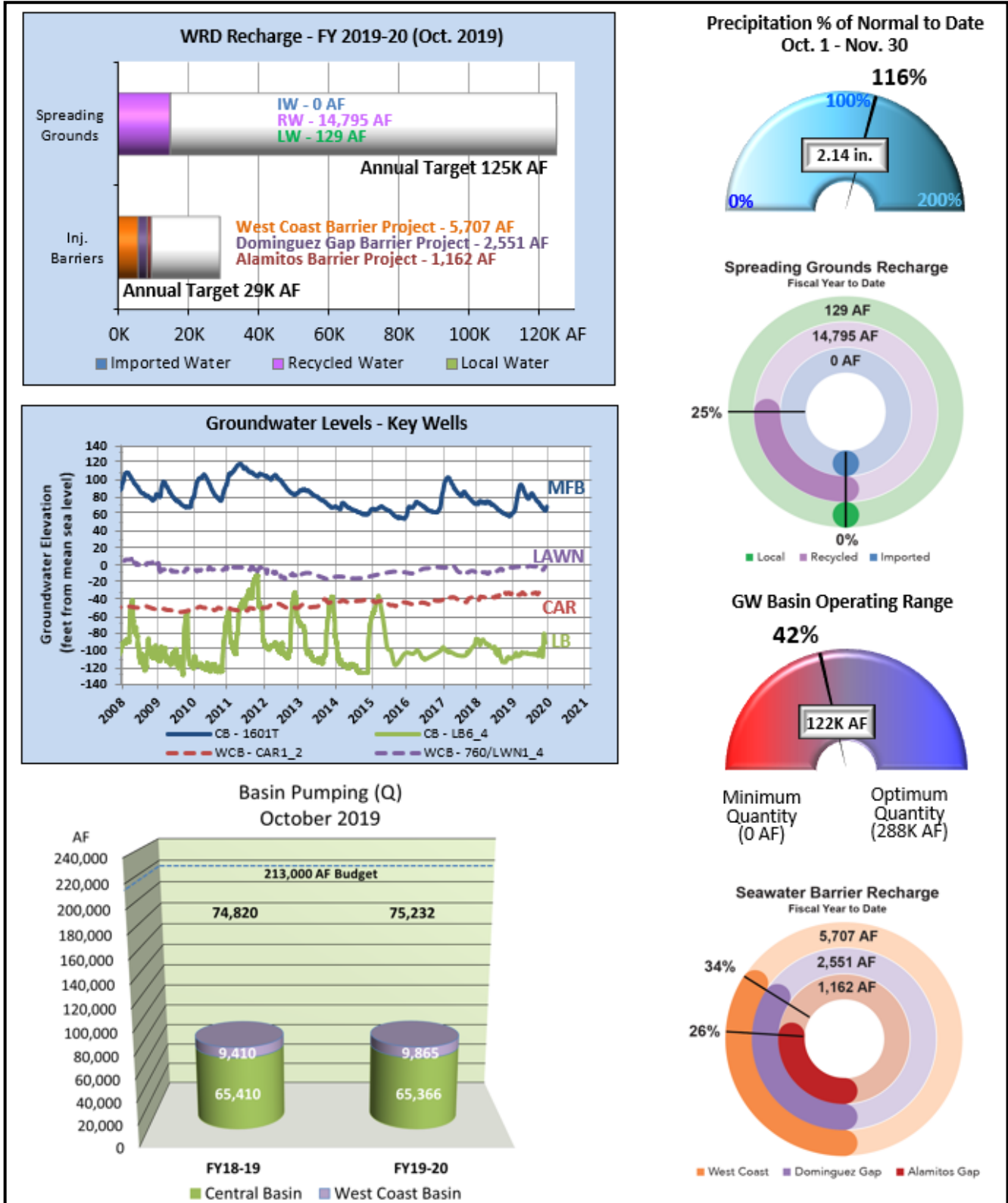


GROUNDWATER BASIN UPDATE FOR DECEMBER 2019

GROUNDWATER BASINS AT A GLANCE*



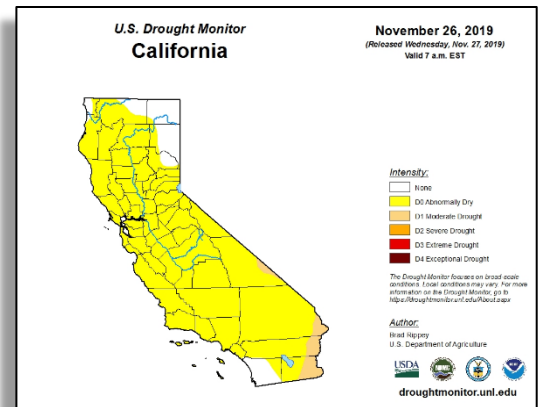
* - Preliminary numbers, subject to change.

SUMMARY

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

Precipitation (Oct 1st – Dec. 2nd)

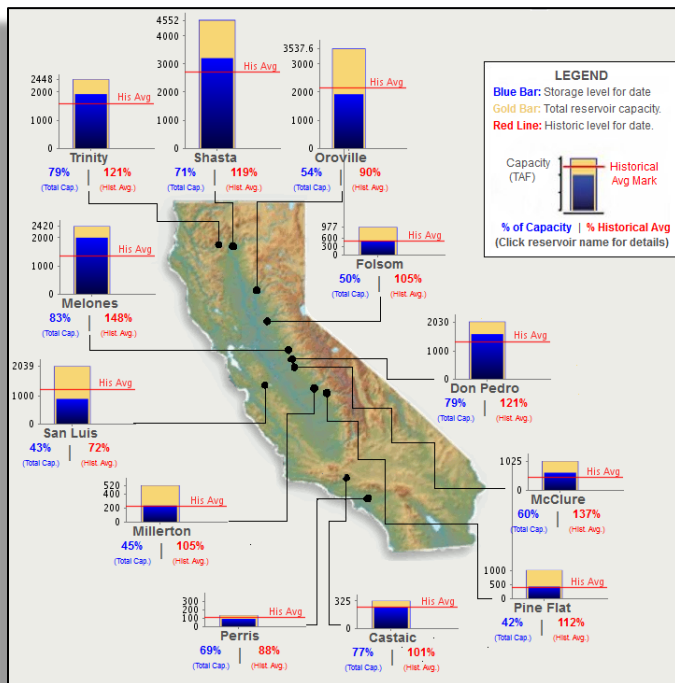
The WRD precipitation index reports that for the 2019-20 Water Year, there has been 2.14 inches of rainfall. The normal rainfall for this time period is 1.85 inches, so the District is 116% of normal. As of November 26, 2019, the U.S. Drought Monitor is reporting 91% of the State is abnormally dry, 3% is under moderate drought conditions.



Reservoirs (as of December 1, 2019)

For all 16 reservoirs reported monthly to the committee, water levels have increased in 4 reservoirs compared to levels recorded in the previous month. The largest increase (0.07 million acre feet) occurred at Lake Mead. The smallest increase (<0.00 million acre feet) occurred at Lake Perris and Diamond Valley Lake. The largest decrease (-0.13 million acre feet) occurred at Lake Powell. The smallest decrease (<0.00 million acre feet) occurred at Lake McClure and Pine Flat Lake.

These 16 reservoirs are at 52% capacity (37.68 million acre feet) which is down from the prior month (-0.39 million acre feet State Water Project [SWP] and -0.05 million acre feet Colorado River Aqueduct [CRA]).



MWD Reservoirs (SWP) Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Trinity Lake	2.45	1.93	79%	-0.04
Lake Shasta	4.55	3.21	71%	-0.04
Lake Oroville	3.54	1.93	54%	-0.10
Folsom Lake	0.98	0.49	50%	-0.09
New Melones	2.40	2.00	83%	0.01
Don Pedro	2.03	1.60	79%	-0.01
Lake McClure	1.02	0.62	61%	0.00
San Luis	2.04	0.89	43%	-0.04
Millerton Lake	0.52	0.23	45%	-0.03
Pine Flat	1.00	0.42	42%	0.00
Castaic Lake	0.33	0.25	77%	-0.03
Lake Perris	0.13	0.09	69%	0.00
Silverwood	0.08	0.06	79%	-0.01

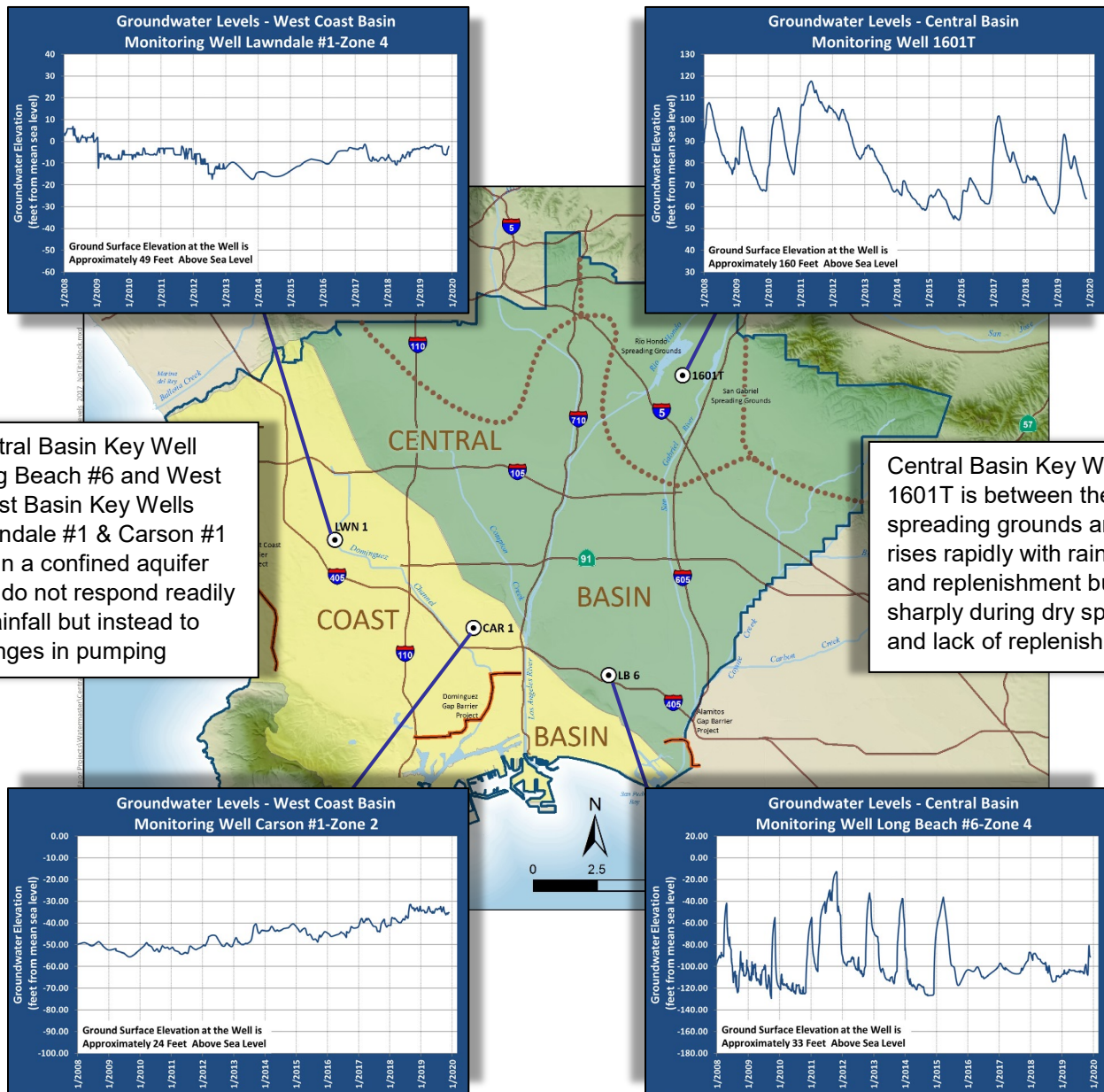
MWD Reservoirs (CRA) Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Powell	24.32	12.89	53%	-0.13
Mead	26.12	10.31	39%	0.07
DVL	0.81	0.76	93%	0.00

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

Groundwater Levels (through November 30, 2019)

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	Decreased 2.5 feet	Increased 6.9 feet
Central Basin Key Well Long Beach #6 4	Increased 16.6 feet	Increased 18.1 feet
West Coast Basin Key Well Lawndale #1 4	Increased 3.8 feet	Increased 1.1 feet
West Coast Basin Key Well Carson #1 2	Decreased 0.5 foot	Decreased 1.0 foot

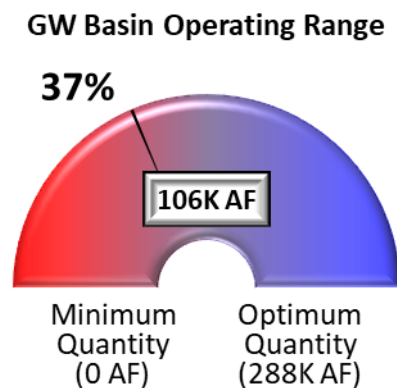
Bold indicates a change in direction (decreasing or increasing) since the last report.

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.

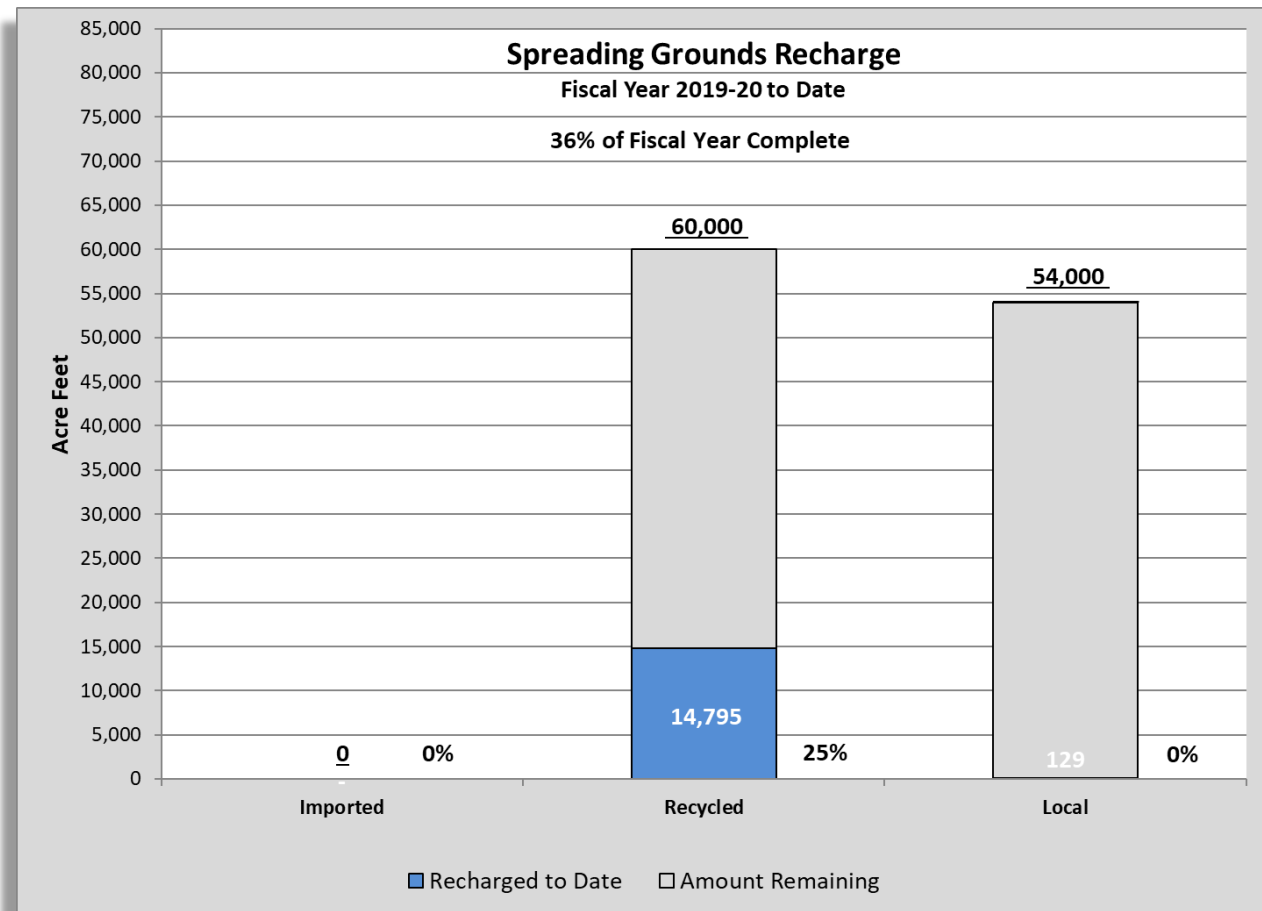
After an extensive review of over 70 years of water level fluctuations and discussions with the Board and pumping community, Water Year 1999/2000 was recognized as a representative year for the Optimum Quantity, which equated to an accumulated overdraft of approximately 612,000 acre feet. The Minimum 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 November 30, 2019, has been estimated at 793,744 acre feet (subject to change), which is 106,256 acre feet above the Minimum Groundwater Quantity and 181,744 acre feet below the Optimum Quantity. The Basin is at 37% of Optimum Quantity which is up 4% from last month.



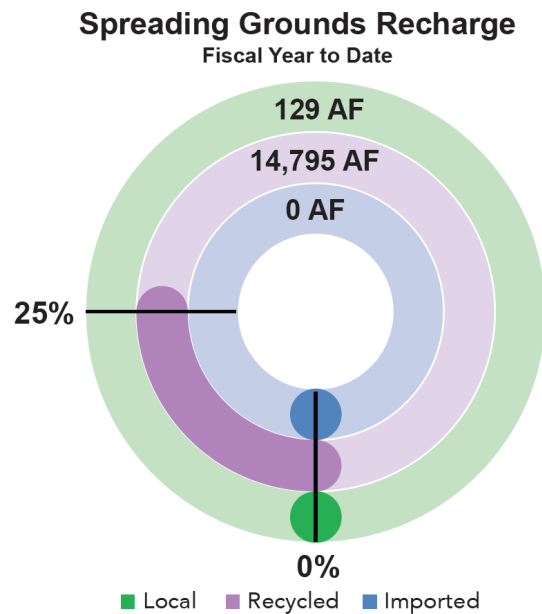
Montebello Forebay Spreading Grounds (July 2019 - October 2019)

The following Chart shows the preliminary spreading grounds replenishment water:



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

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 four months of the 2019-20 Fiscal Year, approximately 129 acre feet of local water capture has been reported by the LACDPW.

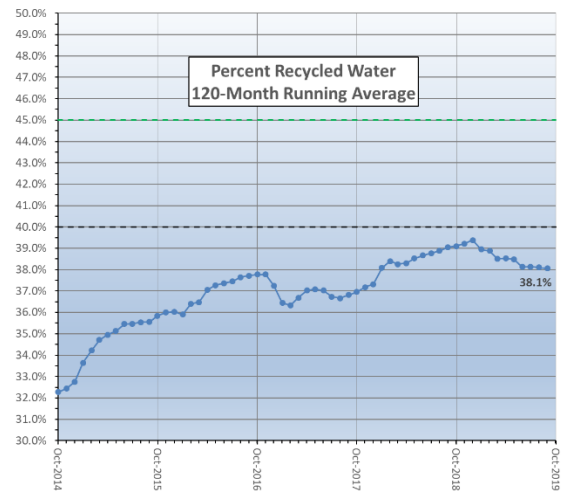


Preliminary numbers for the first four months of the 2019-20 Fiscal Year show that approximately 14,795.4 acre feet of recycled water has been recharged. The 120-month running average of recycled water contribution in the Montebello Forebay is 38.1% and the regulatory maximum is 45%, with additional studies and monitoring being required once 40% is reached.

Tertiary Recycle Water Permit Update

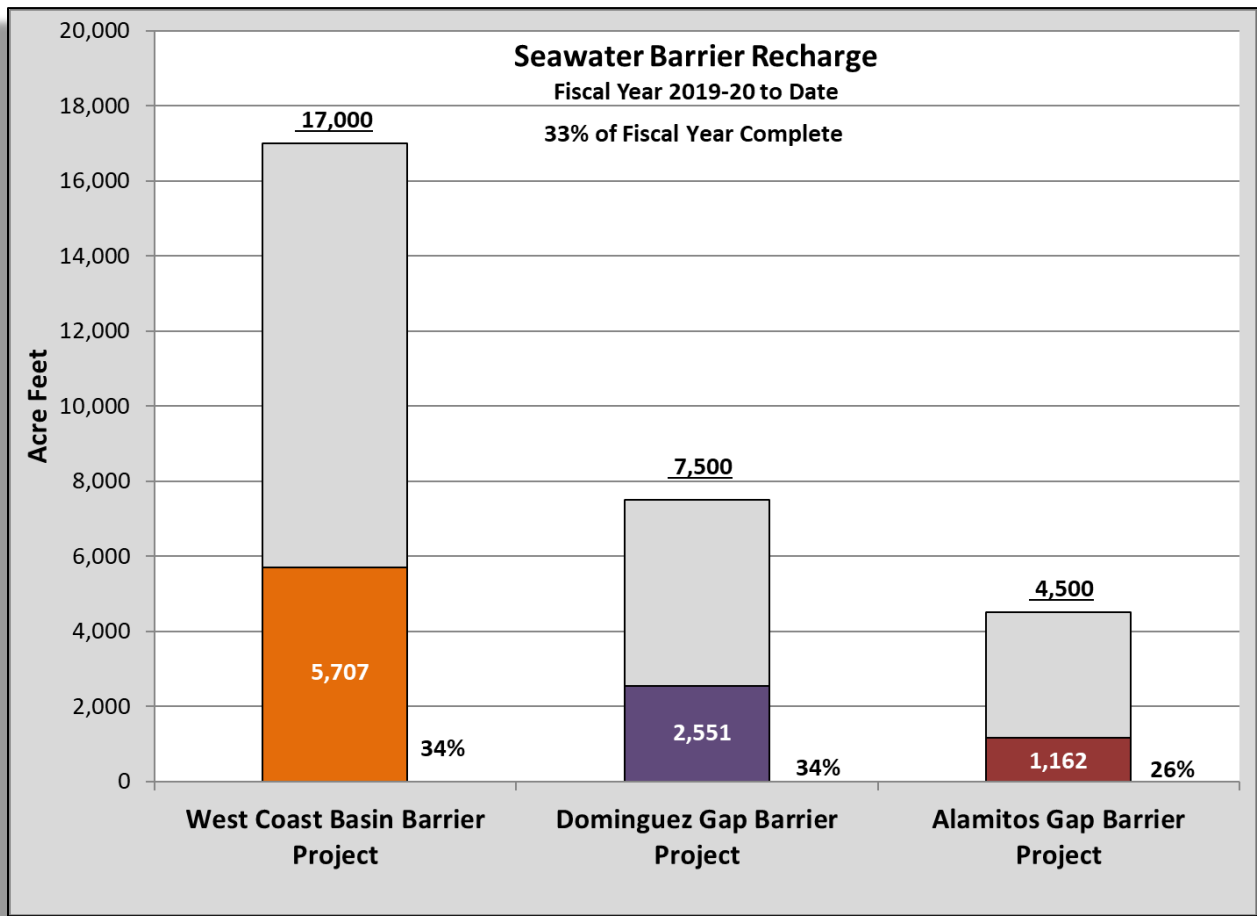
Following extensive collaboration between the District and CSDLA, the workplan required by the SWRCB - Division of Drinking Water and LARWQCB regarding the use of tertiary treated recycled water at the Montebello Forebay Spreading Grounds was submitted on November 18, 2019. As previously discussed, the agencies were notified by the RWQCB that a Workplan needs to be submitted by November 18th in preparation of the new Title 22 Engineering Report in conformance with the 2014 Groundwater Replenishment Using Recycled Water Regulations (GRRRs).

The complexity of the report was beyond what was anticipated, which is reflected in the final product (a workplan totaling 1309 pages). Upon receipt of comments on the Workplan from the State of California, the District and CSDLA will proceed with the preparation and submittal of the new Title 22 Engineering Report in 2020. In anticipation of receiving comments in late spring, staff is continuing to work with the CSDLA on developing the outline and the known components of the new Title 22 Engineering Report. A preliminary scoping meeting was held on November 26, 2019, and a follow-up strategy meeting has been set for after the holidays (January 27, 2020).

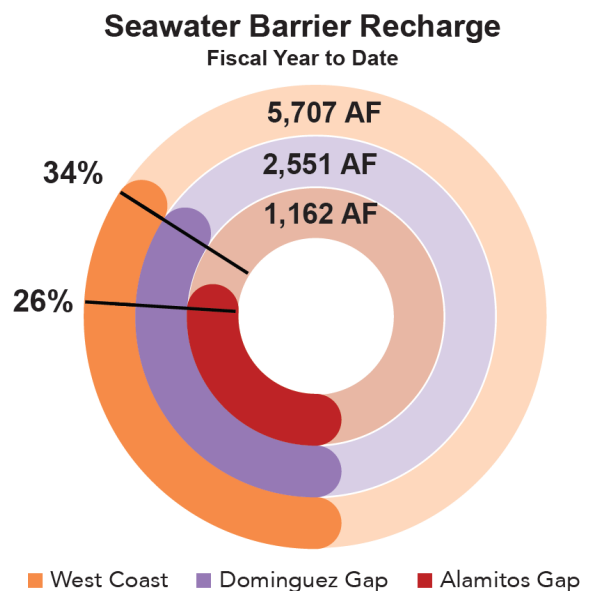


Seawater Barrier Well Injection and Replenishment (July 2019 - October 2019)

The following Chart shows the barrier water injection:

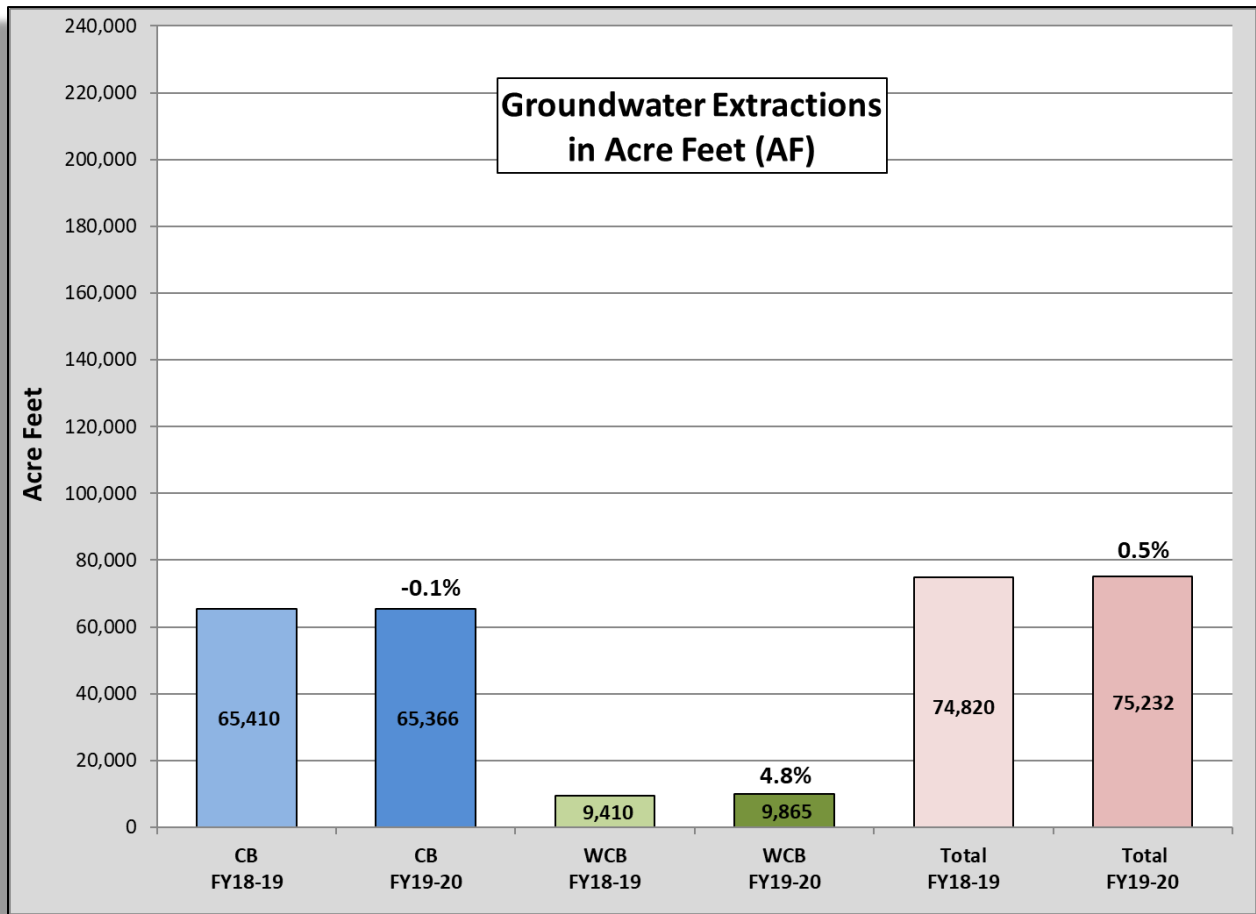


Preliminary numbers for the first four months of the 2019-20 Fiscal Year show that the West Coast Barrier has used 5,707 acre feet of the total 17,000 acre feet planned for injection, 34% of total for the Fiscal Year. The Dominguez Gap Barrier used 2,551 acre feet of the total 7,500 acre feet planned for injection, 34% of the total for the Fiscal Year. The Alamitos Barrier, on the WRD side, used 1,162 acre feet of the total 4,500 acre feet planned for injection, 26% of the total for the Fiscal Year.

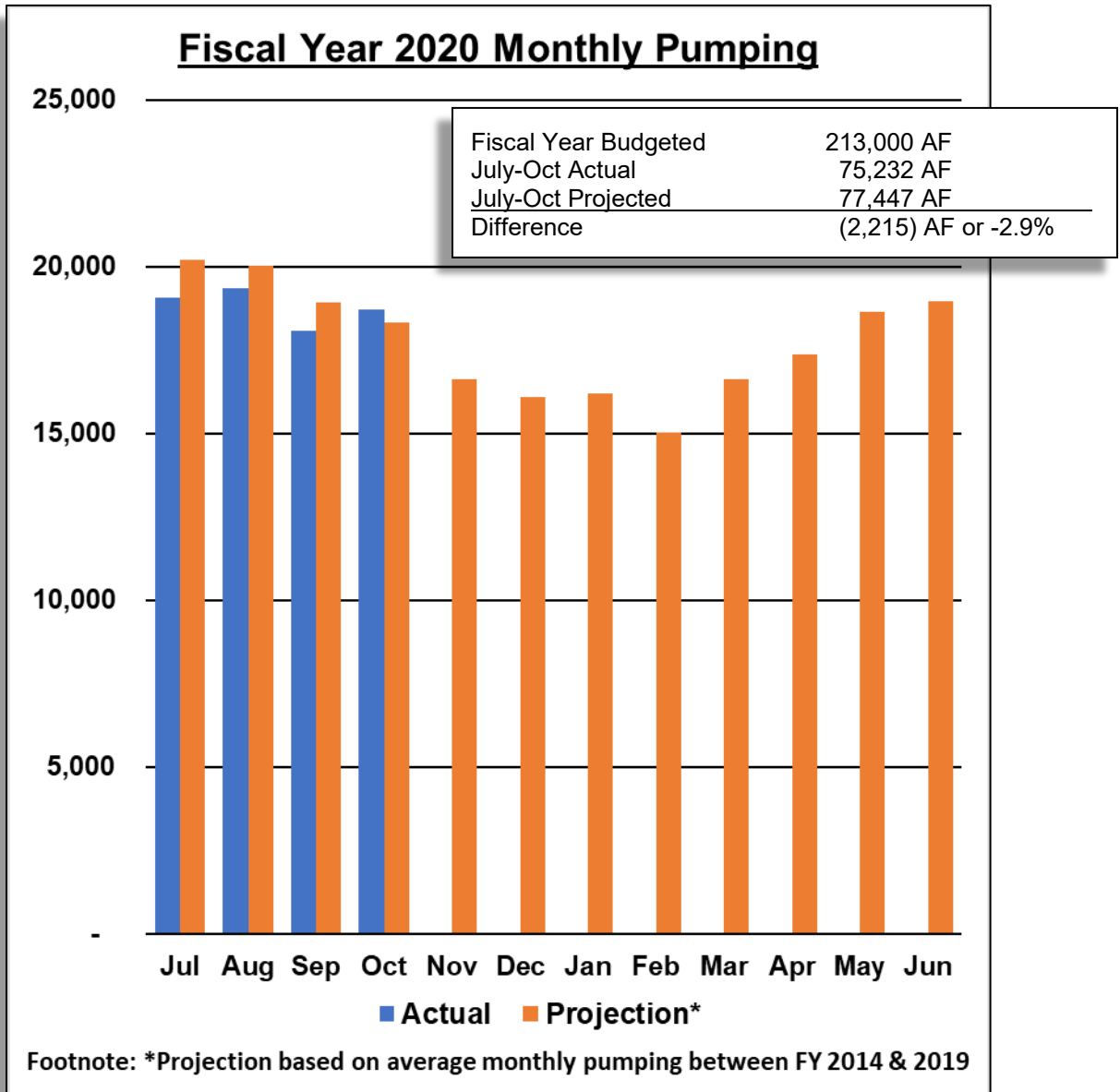


Assessible Pumping (Fiscal Year July 2019 – October 2019)

Preliminary numbers for groundwater production in the District for the Fiscal Year 2019-20 (July 2019 – October 2019) indicate pumping in the Central Basin was down 44 acre feet from the same time of the previous fiscal year (-0.1%) and the West Coast Basin pumping was 455 acre feet higher than the previous fiscal year (4.8%). The total pumping is 75,232 acre feet compared to 74,820 acre feet during the same time the previous year for an increase of 411 acre feet, or 0.5%. The current pumping data do not include four Central Basin pumpers and one West Coast Basin pumper who have not yet reported.



Preliminary numbers indicate 75,232 acre feet have been pumped this fiscal year and is 2.9% below the projected goal of 77,447 acre feet (or -2,215 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 – October 2019), 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 <u>by Volume</u> (AF)	July 2018 - October 2018	July 2019 - October 2019	Difference	% Change
Long Beach, City of	8,933.27	11,368.90	2,435.63	27.26%
Whittier, City of	1,177.90	1,979.09	801.19	68.02%
Liberty Utilities Corporation	2,690.51	3,192.86	502.35	18.67%
Paramount, City of	1,788.23	2,040.51	252.28	14.11%
Cerritos, City of	3,213.18	3,306.40	93.22	2.90%
Bottom 5 Producing <u>by Volume</u> (AF)	July 2018 - October 2018	July 2019 - October 2019	Difference	% Change
Golden State Water Company	8,206.85	7,262.66	-944.19	-11.50%
Lakewood, City of Water Department	3,599.88	2,830.90	-768.98	-21.36%
Vernon, City of	2,287.77	1,905.80	-381.97	-16.70%
Huntington Park, City of	1,372.68	996.88	-375.80	-27.38%
Bell Gardens, City of	389.67	84.63	-305.04	-78.28%

Production Trends – West Coast Basin				
Top 5 Producing <u>by Volume</u> (AF)	July 2018 - October 2018	July 2019 - October 2019	Difference	% Change
Inglewood, City of	427.72	1,228.00	800.28	187.10%
ConocoPhillips Company	1,191.34	1,815.92	624.58	52.43%
Tesoro Refining & Marketing Co., LLC	1,117.28	1,532.47	415.19	37.16%
Torrance, City of	1,238.63	1,397.60	158.97	12.83%
Rolling Hills Country Club	56.00	186.00	130.00	232.14%
Bottom 5 Producing <u>by Volume</u> (AF)	July 2018 - October 2018	July 2019 - October 2019	Difference	% Change
Golden State Water Company	2,120.29	1,185.83	-934.46	-44.07%
Lomita, City of	206.54	0.65	-205.89	-99.69%
West Basin Brewer Desalter	191.30	35.16	-156.14	-81.62%
Los Angeles County Depart. of Parks & Recreation	191.22	52.16	-139.06	-72.72%
California Water Service Company (Dominguez)	1,511.21	1,412.04	-99.17	-6.56%