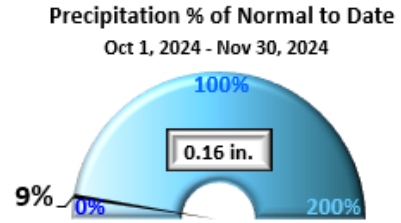
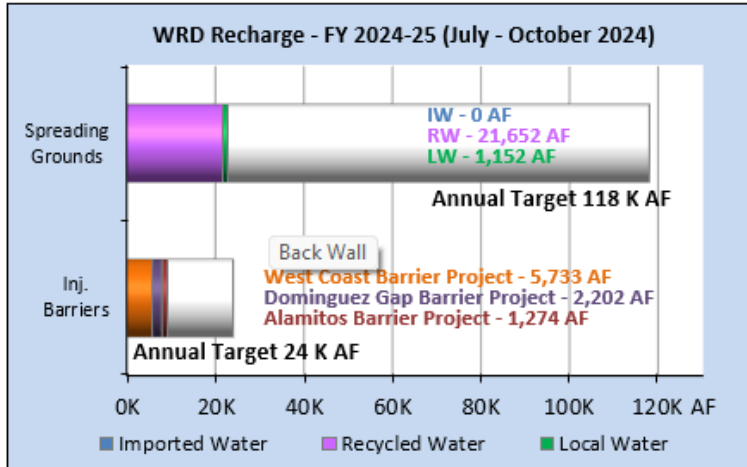


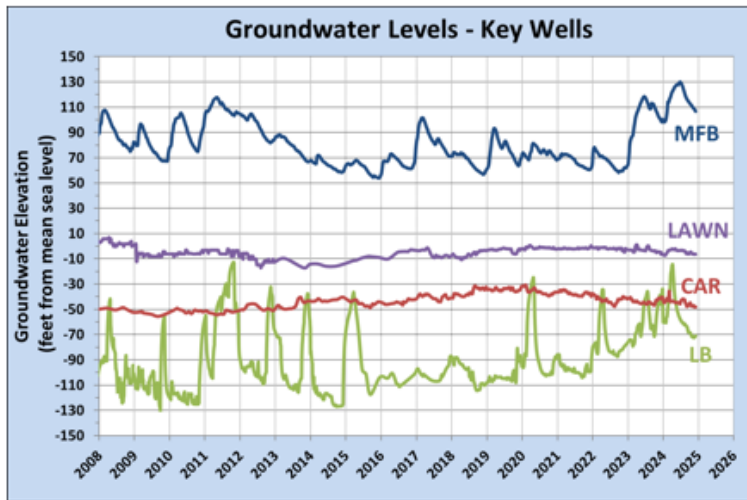
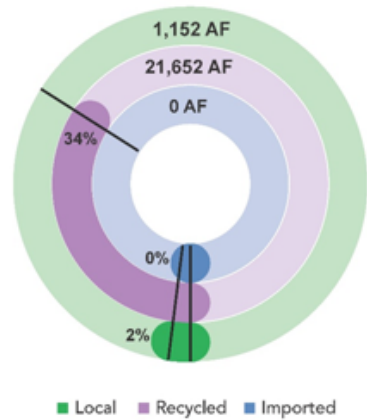
GROUNDWATER BASIN UPDATE FOR DECEMBER 2024

GROUNDWATER BASINS AT A GLANCE*



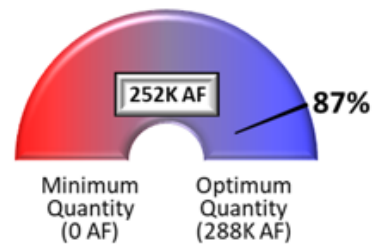
Spreading Grounds Recharge

Jul - Oct 2024



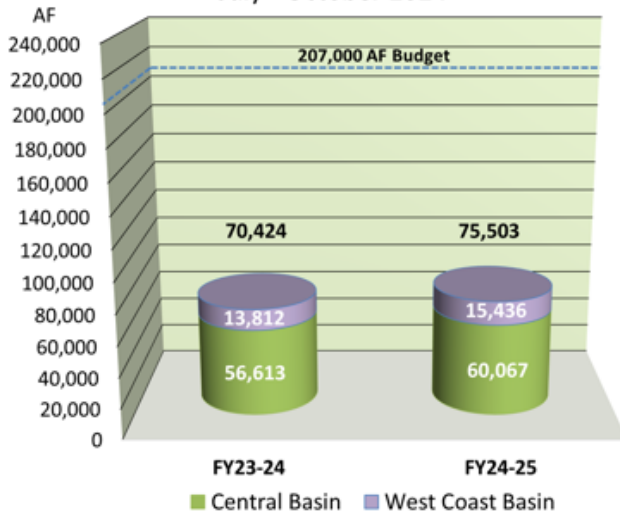
GW Basin Operating Range

December 5, 2024



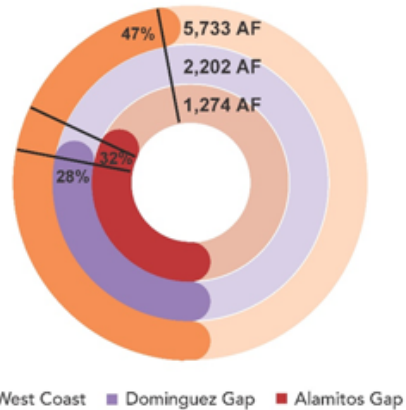
Basin Pumping (Q)

July - October 2024



Seawater Barrier Recharge

Jul - Oct 2024



* - Preliminary numbers, subject to change.

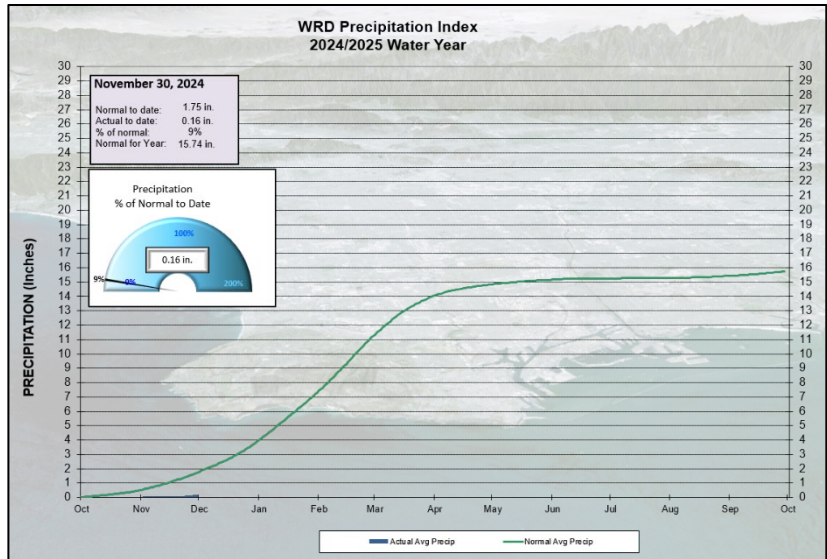
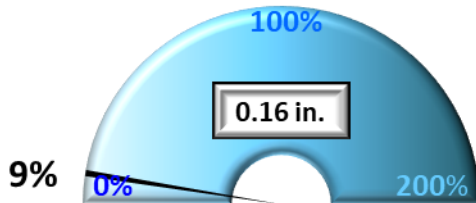
SUMMARY

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

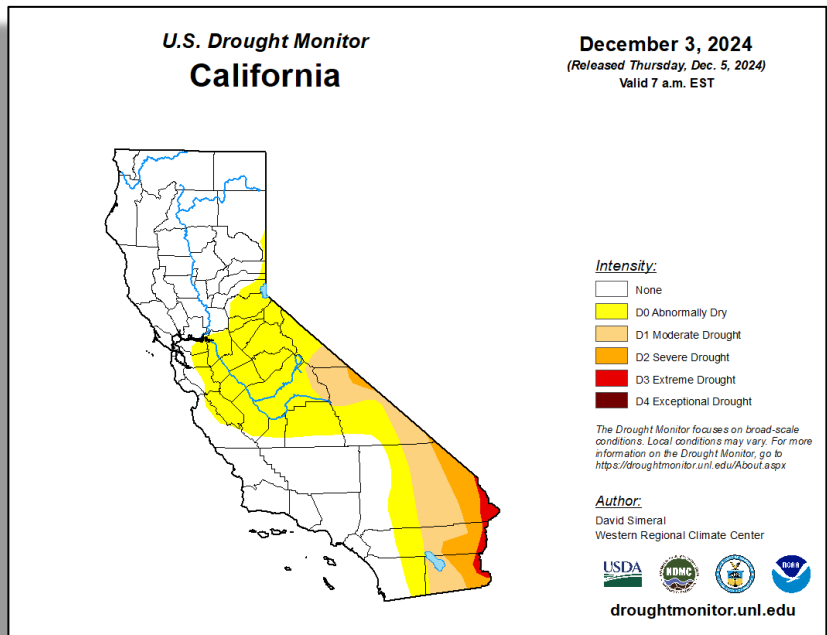
Precipitation (November 2024)

The WRD precipitation index reports that for the 2024-25 Water Year, there has been below average rainfall (0.16 inches) through November 30, 2024. The normal rainfall for this time period is 1.75 inches, so the District is 9% of normal.

Precipitation % of Normal to Date
Oct 1, 2024 - Nov 30, 2024

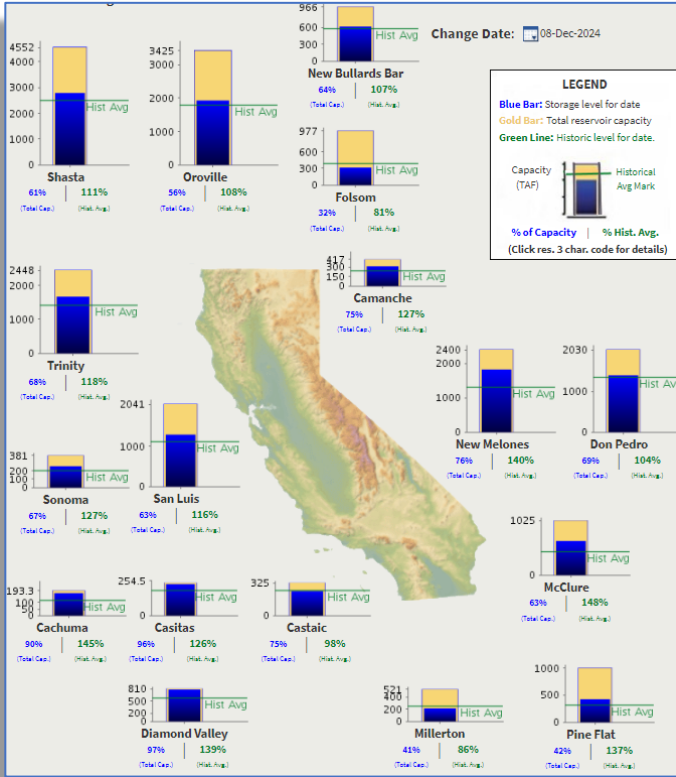


As of December 3, 2024, the U.S. Drought Monitor is reporting 43% of the State is abnormally dry (down 31%), 17% under moderate (up 5%), 6% under severe (up 2 %), 1% under extreme (same), and 0% exceptional (up 1%) drought conditions. According to the U.S. Drought Monitor, Los Angeles County is currently not in a drought.



Reservoirs (as of December 8, 2024)

For the 21 reservoirs reported monthly to the committee, water levels have increased in 10 of 21 reservoirs. The largest increase occurred at Lake Oroville Reservoir (0.25 million acre feet, MAF). The smallest increase occurred at Lakes Perris and Diamond Valley (<0.01 MAF). The largest decrease (-0.10 MAF) occurred at Lake Powell. The smallest decrease (<-0.01 MAF) occurred at Lakes Millerton, Cachuma, Casitas, and Silverwood.



MWD Reservoirs (SWP)
Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Trinity Lake (CLE)	2.45	1.66	68%	0.06
Lake Shasta (SHA)	4.55	2.78	61%	0.24
Lake Oroville (ORO)	3.54	1.93	56%	0.25
New Bullards Bar (BUL)	0.97	0.61	64%	0.03
Folsom Lake (FOL)	0.98	0.32	33%	-0.05
Camanche Lake (CMN)	0.42	0.31	75%	-0.01
New Melones L. (NML)	2.40	1.82	76%	0.02
Don Pedro Res (DNP)	2.03	1.40	69%	-0.01
Lake McClure (EXC)	1.02	0.64	63%	-0.01
Lake Sonoma (WRS)	0.38	0.25	67%	0.03
San Luis Res (SNL)	2.04	1.27	62%	0.22
Millerton Lake (MIL)	0.52	0.21	40%	0.00
Pine Flat Res. (PNF)	1.00	0.42	42%	0.02
Cachuma Lake (CCH)	0.19	0.17	90%	0.00
Castaic Lake (CAS)	0.33	0.24	75%	-0.02
Casitas Lake (CSI)	0.25	0.23	96%	0.00
Perris Lake (PRR)	0.13	0.11	80%	0.00
L. Silverwood (SLW)	0.08	0.07	86%	0.00

MWD Reservoirs (CRA)
Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Lake Powell	23.31	8.91	38%	-0.10
Lake Mead	26.12	8.49	33%	-0.02
Diamond Valley L (DVL)	0.81	0.79	97%	0.00

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

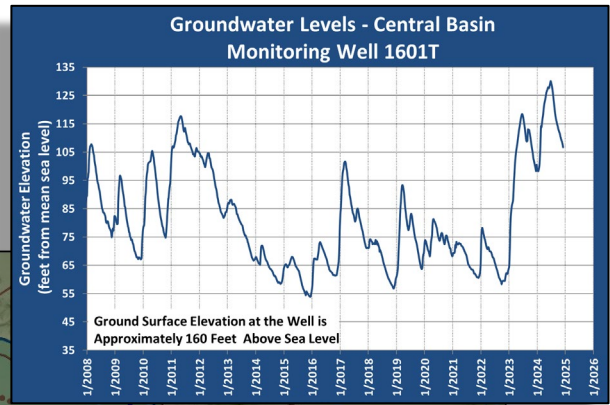
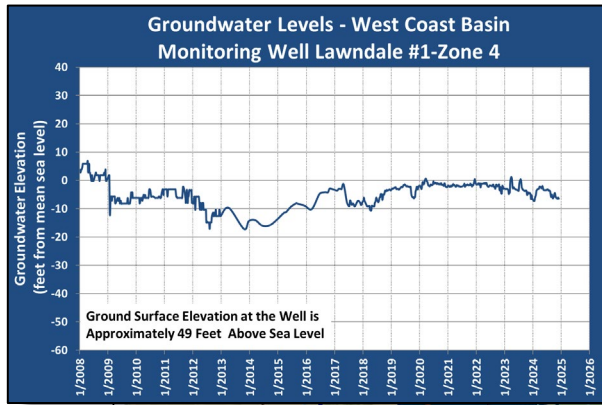
These 21 reservoirs are at 45% capacity (32.66 MAF) which is up 0.67 MAF (0.9%) from the prior month (0.79 MAF State Water Project [SWP] and -0.11 MAF Colorado River Aqueduct [CRA]).



Did you know?
Groundwater is helping to feed the world. Irrigation is the biggest user of groundwater in the U.S., with about 53 billion gallons used daily.

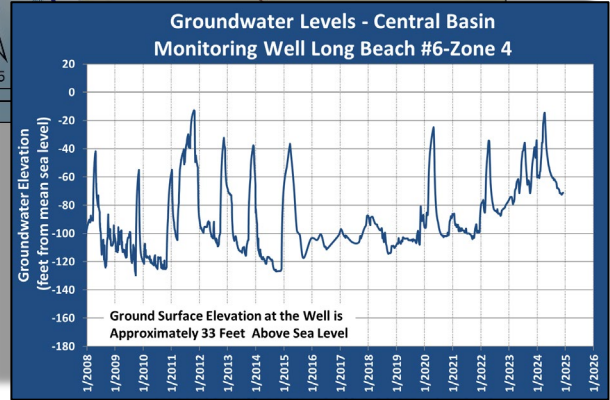
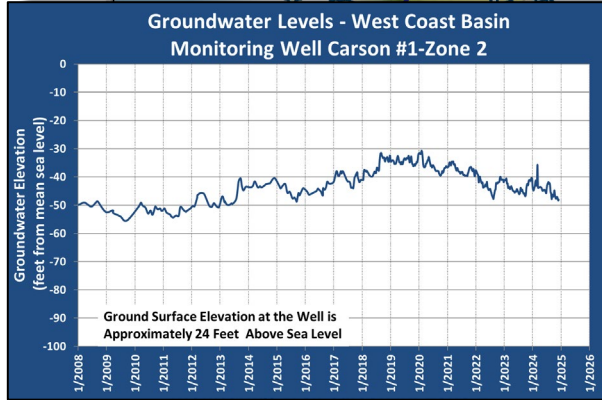
Groundwater Levels (through December 5, 2024)

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 patterns and barrier recharge.

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 3.2 feet	Increased 6.6 feet
Central Basin Key Well Long Beach #6 4	Increased 0.8 foot	Decreased 30.7 feet
West Coast Basin Key Well Lawndale #1 4	Decreased 0.4 foot	Decreased 1.6 feet
West Coast Basin Key Well Carson #1 2	Decreased 0.8 foot	Decreased 6.6 feet

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

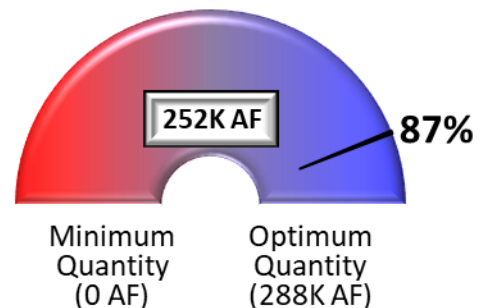
Optimum and Minimum Groundwater Quantity (December 5, 2024)

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 December 5, 2024, has been estimated at 648,313 acre feet (subject to change), which is 251,687 acre feet above the Minimum Quantity and 36,313 acre feet below Optimum Quantity. The Basin is at 87% of Optimum Quantity which is 5% lower than what was reported last month (~12,000 AF lower).

**GW Basin Operating Range
December 5, 2024**



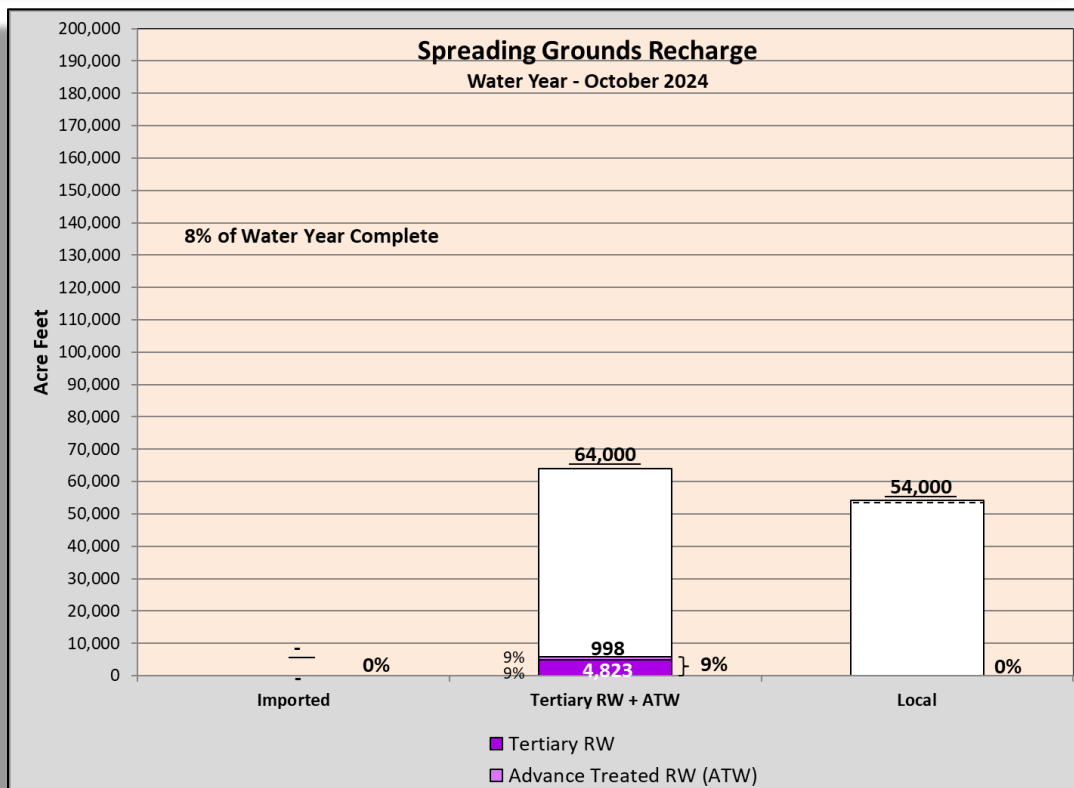
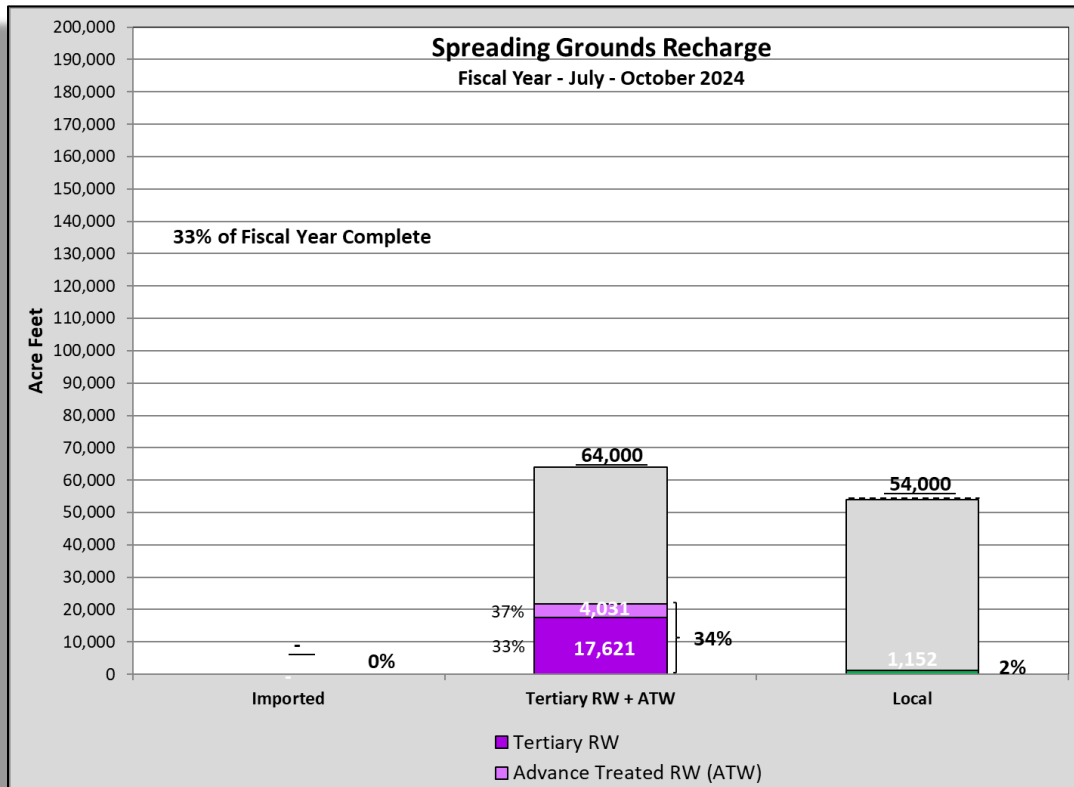
FACT:

When water freezes the molecules align themselves in a highly organized spacing and forms ice. As a result, ice occupies a larger physical space than the same amount of water (i.e. expands). This extra spacing allows ice to have a lower density than water, hence ice floats.



Montebello Forebay Spreading Grounds (July - October 2024)

The following Charts show the preliminary spreading grounds replenishment water for the current Fiscal Year (2024-25; 4 months) and Water Year (2024-25; 1 month):



No imported water purchases were planned for Fiscal Year 2024-25.

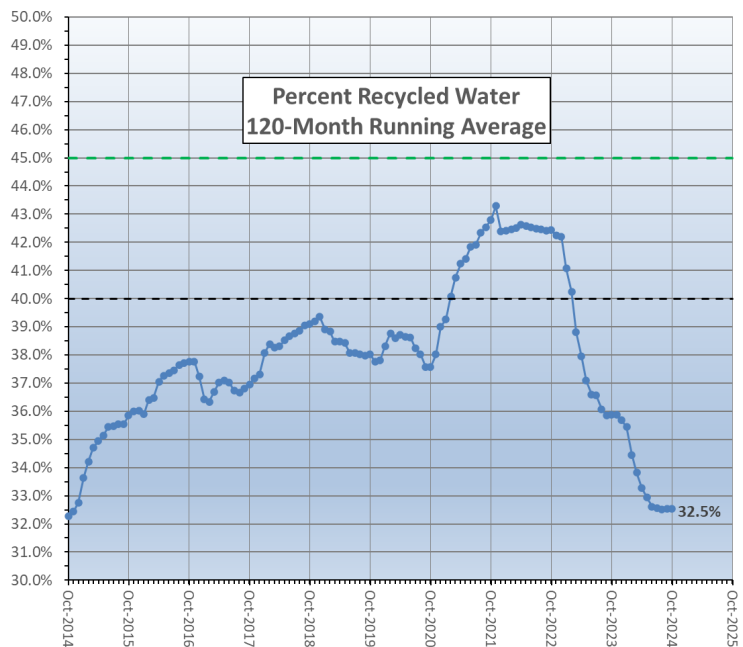
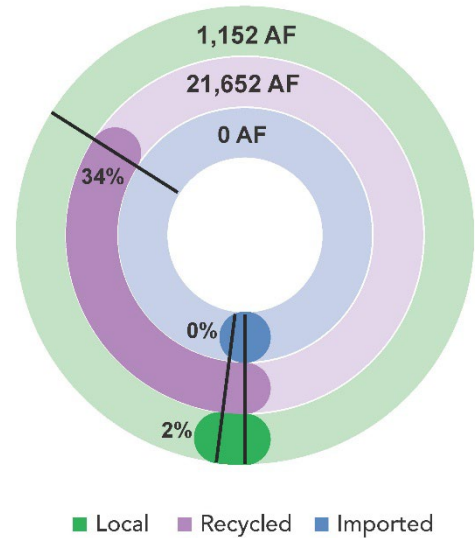
Local water (stormwater plus dry weather urban runoff) is captured by the Los Angeles County Department of Public Works (LACPW) at the spreading grounds for recharge. Local water amounts are determined as the sum of the total water conserved at the spreading grounds less the imported and recycled water deliveries. For the 2024-25 Fiscal Year, 1,152 acre feet of local water capture have been reported by the LACPW.

Preliminary numbers for the 2024-25 Fiscal Year show that approximately 21,652 acre feet of recycled water has been recharged with 4,031 acre feet consisting of advanced treated water from the ARC AWTF and 17,621 acre feet of tertiary recycled water. Presuming the advanced treated water as “Null Water”, the 120-month running average of the recycled water contribution in the Montebello Forebay is 32.5% and the regulatory maximum is 45%, with additional monitoring being required once 40% is reached.

Tertiary Recycle Water Permit Update

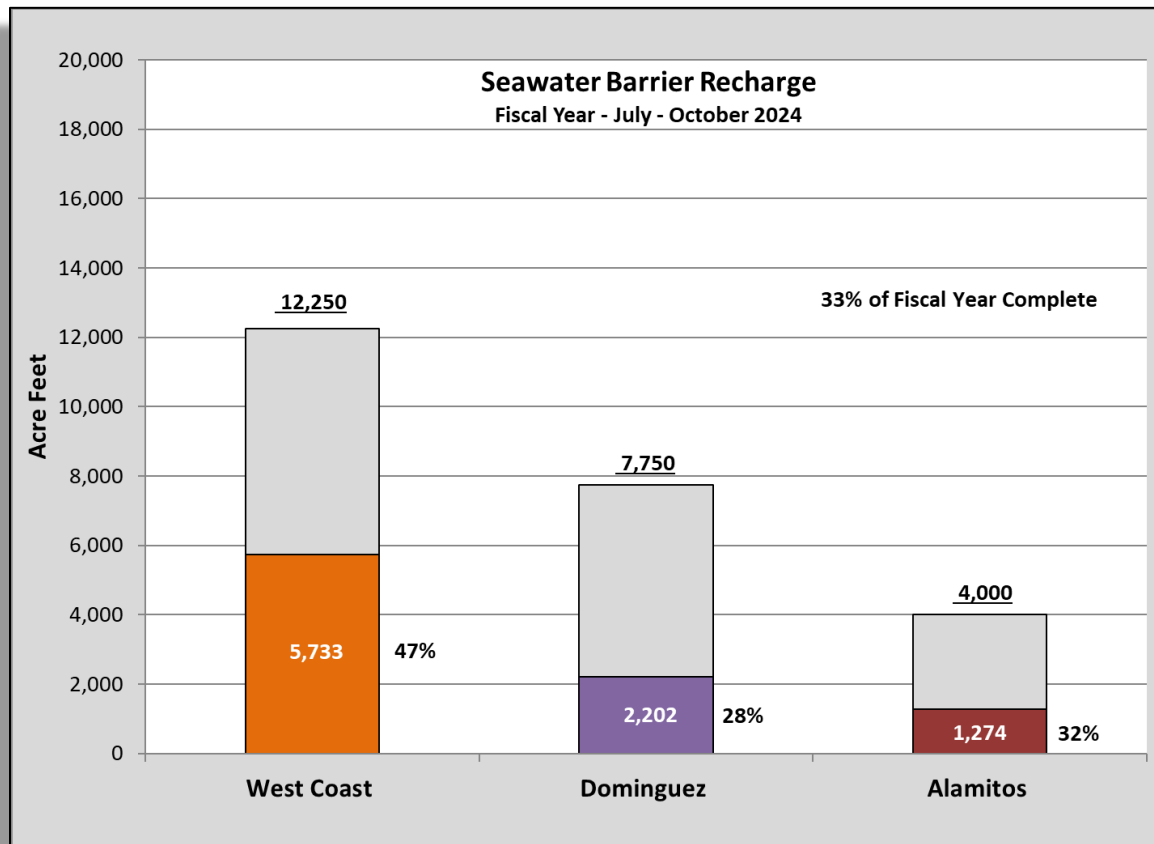
The permit is continuing to progress with LACSD and WRD staff working to update pertinent sections of the new Title 22 Engineering Report. Due to the persistent drought conditions over the past few decades and associated emergency drought proclamation by Governor Newsom, LACSD and WRD submitted a request to modify the recycled water contribution percentage to 50% and the advanced treated water classification to diluent in a letter to the LARWQCB and CA-DDW dated July 8, 2022. LACSD and WRD staff are targeting 2025 to have the new Title 22 Engineering Report submitted, including the requests to increase the recycled water contribution percentage to 50% and reclassify the advanced treated water as diluent.

Spreading Grounds Recharge
Jul - Oct 2024

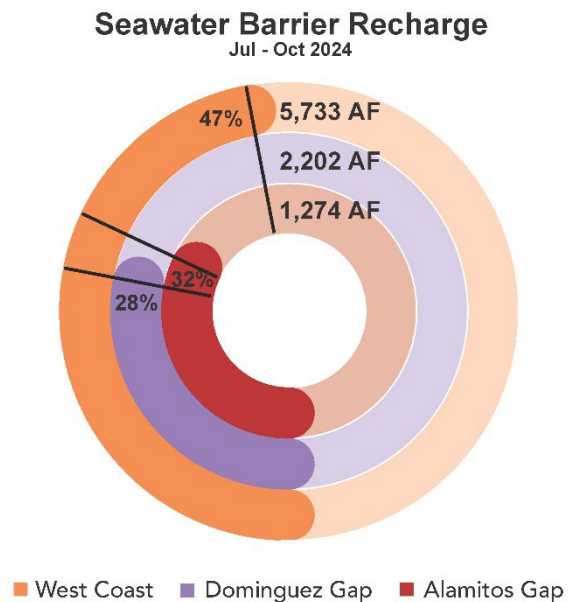


Seawater Barrier Well Injection and Replenishment (July - October 2024)

The following Chart shows the barrier water injection:

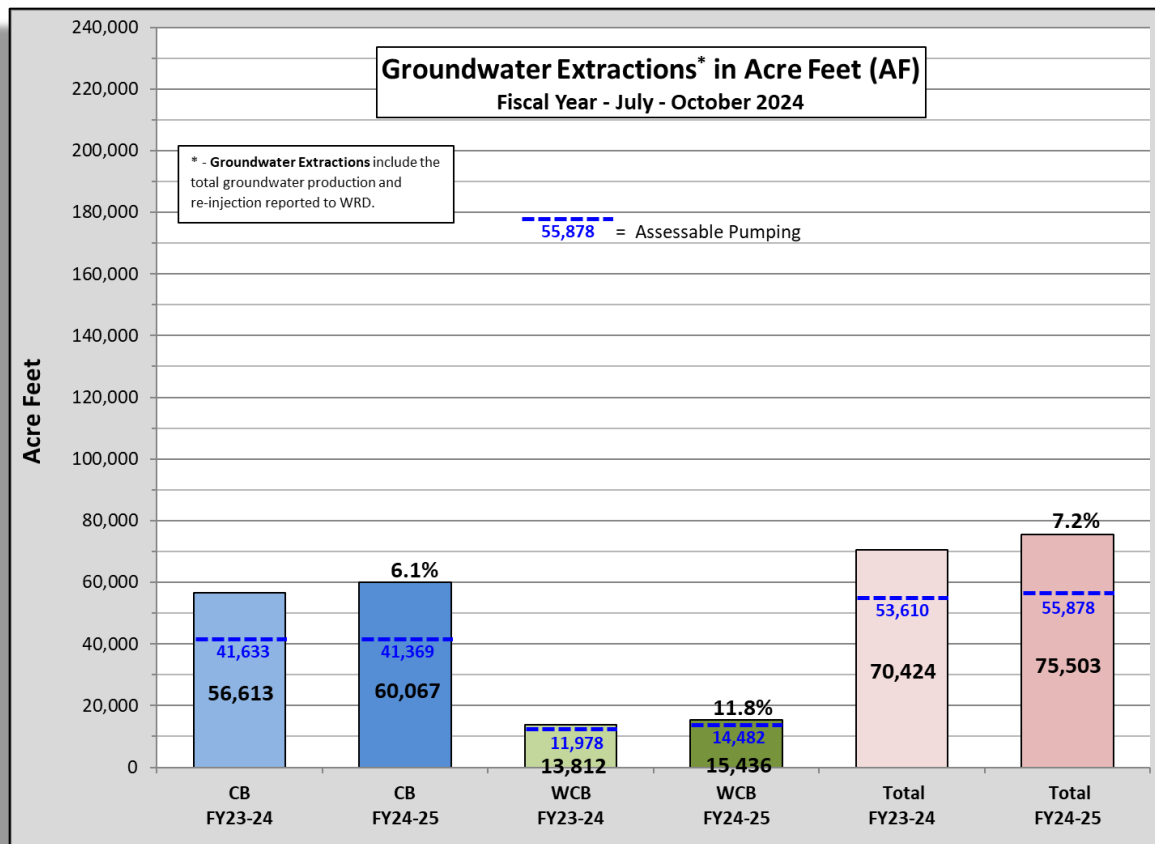


Preliminary numbers for the 2024-25 Fiscal Year show that the West Coast Barrier has used 5,733 acre feet of the total 12,250 acre feet planned for injection, 47% of total for the Fiscal Year. The Dominguez Gap Barrier used 2,202 acre feet of the total 7,750 acre feet planned for injection, 28% of the total for the Fiscal Year. The Alamitos Gap Barrier, on the WRD side, used 1,274 acre feet of the total 4,000 acre feet planned for injection, 32% of the total for the Fiscal Year. Advanced Treated Recycled Water (ATW) usage at the three barriers for the Fiscal Year to date is 55% at the West Coast Barrier (+4%), 73% at the Dominguez Gap Barrier (-6%), and 76% Alamitos Gap Barrier (-3%). The combined ATW usage at all three barriers is 62% (-1%).



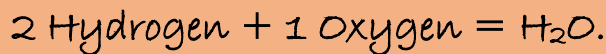
Total Pumping (Fiscal Year 2024-25, July - October 2024)

Preliminary numbers for groundwater production in the District for the Fiscal Year 2024-25 (July-October) indicate total pumping in the Central Basin was up 3,455 acre feet from the same time of the previous fiscal year (+6.1%) and the West Coast Basin total pumping was 1,624 acre feet higher than the previous fiscal year (+11.8%). The total pumping is 75,503 acre feet compared to 70,424 acre feet during the same time the previous year for an increase of 5,079 acre feet, or +7.2%. The current pumping data does not include twelve (9) Central Basin pumpers and two (3) West Coast Basin pumpers, who have not yet reported, for an estimated 3 additional acre feet.

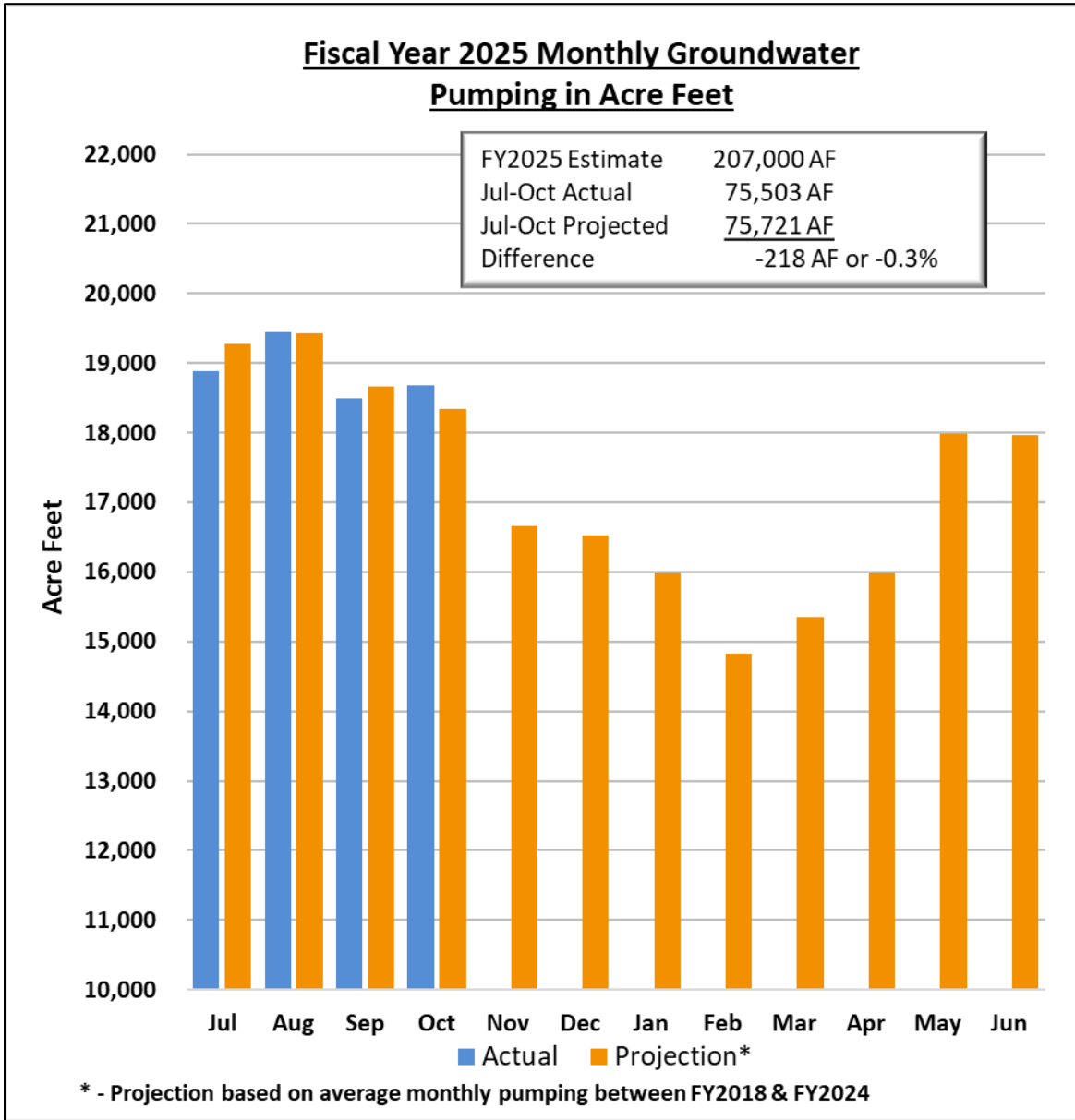


Interesting...

Water is composed of two elements, Hydrogen and Oxygen.



Preliminary numbers indicate 75,503 acre feet of groundwater have been pumped this fiscal year and is 0.3% below the projected fiscal year to date goal of 75,721 acre feet (or -218 acre feet). Monthly actual production versus the 7-year average monthly production projections (FY 2018 through 2024) are included in the chart below.



"We forget that the water cycle and the life cycle are one." - Jacques Yves Cousteau



For the Fiscal Year 2024-25 (July-October 2024), 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 data for all the pumpers can be found in the attached Exhibit A (Central Basin) and Exhibit B (West Coast Basin).

Production Trends - Central Basin				
Top 5 Producing <u>by Volume</u> (AF)	Jul-Oct 2023	Jul-Oct 2024	Difference	% Change
Long Beach, City - CB	8,360.38	11,243.22	2882.84	25.64
Santa Fe Springs, City	157.80	711.27	553.47	77.81
Suburban Water Systems	449.99	969.69	519.70	53.59
Cerritos, City	2,671.91	2,823.36	151.45	5.36
South Gate, City	2,789.20	2,926.46	137.26	4.69
Bottom 5 Producing <u>by Volume</u> (AF)	Jul-Oct 2023	Jul-Oct 2024	Difference	% Change
Whittier, City	2,347.61	1,903.73	-443.88	-23.32
Lynwood, City	1,676.91	1,274.08	-402.83	-31.62
Bellflower-Somerset MWC	1,703.09	1,336.85	-366.24	-27.40
Signal Hill, City	383.83	258.59	-125.24	-48.43
Lakewood - City	2,569.67	2,494.83	-74.84	-3.00

Production Trends – West Coast Basin				
Top 5 Producing <u>by Volume</u> (AF)	Jul-Oct 2023	Jul-Oct 2024	Difference	% Change
Torrance, City	88.85	1,464.24	1375.39	93.93
Golden State Water Co. - WB	2,925.94	4,066.69	1140.75	28.05
Phillips 66 Co. - Alpha 7093	1,610.28	2,026.72	416.44	20.55
L.A. County Department of Parks	46.02	157.61	111.59	70.80
Rolling Hills Country Club	119.00	207.00	88.00	42.51
Bottom 5 Producing <u>by Volume</u> (AF)	Jul-Oct 2023	Jul-Oct 2024	Difference	% Change
Tesoro Refining	3,253.65	3,011.21	-242.44	-8.05
Cal. Water Service Co./Hawthorne Lease	249.04	72.78	-176.26	-242.18
Eco Services Operations	159.54	47.24	-112.30	-237.72
Cal. Water Service Co. Dominguez - WB	2,039.38	1,929.89	-109.49	-5.67
Inglewood, City	600.73	533.17	-67.56	-12.67

Water Replenishment District (WRD) publishes the Groundwater Basin Update (GWBU) monthly. All information contained herein is preliminary and is meant to be a snapshot the status of the basins at the time of publication and should not constitute an official WRD report. All the information presented in the GWBU utilizes the best available data at the time of publication. Data provided herein is a compilation of WRD data and publicly available information from several of our partners including, by not limited to, the Los Angeles County Department of Public Works - Stormwater Engineering Division, Metropolitan Water District of Southern California, California Department of Water Resources, US Bureau of Reclamation, University of Nebraska - Lincoln, and the US Department of Agriculture - Natural Resources Conservation Service. The GWBU is prepared by Senior Hydrogeologist, Everett Ferguson, who can be contacted directly with questions at eferguson@wrd.org.

Central Basin Production Trends

Central Basin	July 2023 - October 2023	July 2024 - October 2024	Difference	%Change
ABC USD	8.71	3.90	-4.81	-123.33
American Text. M.	21.01	23.69	2.68	11.31
Artesia, City	0.95	0.97	.02	2.06
Atlas Iron and Metal Co.	0.09	0.10	.01	10.00
Bell Gardens, City	0.00	0.00	.00	0.00
Bellflower Home Garden	0.00	0.00	.00	0.00
Bellflower-Somerset MWC	1,703.09	1,336.85	-366.24	-27.40
Boeing Co.	25.93	21.26	-4.67	-21.97
Boeing, Compton Site	17.34	13.40	-3.94	-29.40
Cal. American Water Co. Alpha 0679	676.34	634.92	-41.42	-6.52
Cal. Water Service Co. (East LA)	3,598.44	3,623.17	24.73	0.68
Cal. Water Service Co. Dominguez - CB	331.98	447.86	115.88	25.87
Caltrans	7.37	1.86	-5.51	-296.24
Central Basin MWD	0.00	0.00	.00	0.00
Cerritos, City	2,671.91	2,823.36	151.45	5.36
Coast Packing Co.	44.96	48.65	3.69	7.58
Commerce, City	564.42	584.70	20.28	3.47
Compton, City	2,420.48	2,468.02	47.54	1.93
Darling-Delaware Co.	0.00	0.00	.00	0.00
Defense Logistic Agency	1.01	0.61	-.40	-65.57
Demunno Kerdoon	0.60	0.61	.01	1.64
Downey, City	5,031.38	5,133.12	101.74	1.98
El Rancho Unified School District	0.00	0.00	.00	0.00
Golden State Water Co. - CB	6,269.79	6,307.23	37.44	0.59
HMB Bandini, LLC	0.00	0.09	.09	100.00

Central Basin	July 2023 - October 2023	July 2024 - October 2024	Difference	%Change
Huntington Park, City - Alpha 2378	939.07	971.79	32.72	3.37
L.A. County Department of Parks	0.00	0.00	.00	0.00
LA County Rancho Los Amigos	79.58	93.99	14.41	15.33
La Habra Heights County WD	950.73	1,066.12	115.39	10.82
Lakewood - City	2,569.67	2,494.83	-74.84	-3.00
Liberty Utilities - CB	1,533.75	1,480.50	-53.25	-3.60
Little Lake Cemetery District	0.00	0.00	.00	0.00
Long Beach, City - CB	8,360.38	11,243.22	2882.84	25.64
Los Angeles, City - CB	5.55	6.09	.54	8.87
Lunday-Thagard	0.00	0.00	.00	0.00
Lynwood Park Mutual Water Co.	8.71	12.91	4.20	32.53
Lynwood, City	1,676.91	1,274.08	-402.83	-31.62
Maywood Mutual No. 1	223.64	226.05	2.41	1.07
Maywood Mutual No. 2	324.21	321.42	-2.79	-0.87
Maywood Mutual No. 3	506.75	501.66	-5.09	-1.01
Montebello Land and Water Co.	1,048.33	1,081.09	32.76	3.03
Newark Group, Inc.	51.40	47.36	-4.04	-8.53
Norwalk, City	135.44	106.27	-29.17	-27.45
Omega OU1/OU3 LLC	1.35	1.82	.47	25.82
Orchard Dale Water District	666.89	722.55	55.66	7.70
PABCO Building Products	0.00	0.00	.00	0.00
Paradise Memorial Park	5.23	4.39	-.84	-19.13
Paramount USD	0.49	0.16	-.33	-206.25
Paramount, City	944.74	941.46	-3.28	-0.35
Pico Rivera, City	1,407.10	1,479.86	72.76	4.92
Pico Water District	956.59	961.83	5.24	0.54
Rockview Dairies	0.00	57.80	57.80	100.00
Roman Catholic Archbishop - CB	126.68	151.60	24.92	16.44

Central Basin	July 2023 - October 2023	July 2024 - October 2024	Difference	%Change
Rowland Water District	0.00	0.00	.00	0.00
San Gabriel Valley Water Co.	1,090.04	1,136.83	46.79	4.12
Santa Fe Springs, City	157.80	711.27	553.47	77.81
Scantlebury, Robert P.	0.12	0.12	.00	0.00
SFPP L.P.	0.00	0.00	.00	0.00
Signal Hill, City	383.83	258.59	-125.24	-48.43
South Gate, City	2,789.20	2,926.46	137.26	4.69
South Montebello Irrigation Dist	584.89	612.35	27.46	4.48
Southern California Edison Co. - CB	0.53	0.00	-.53	-100.00
St. John Bosco School	1.09	4.10	3.01	73.41
Suburban Water Systems	449.99	969.69	519.70	53.59
Tract 180 Water Co.	429.66	433.96	4.30	0.99
Tract 349 Mutual Water Co.	217.50	226.91	9.41	4.15
Tucker, William M.	0.02	0.00	-.02	-100.00
Vernon, City	1,677.79	1,607.25	-70.54	-4.39
Virginia Country Club	152.63	139.07	-13.56	-9.75
Walnut Park Mutual	375.43	379.00	3.57	0.94
Whittier Union HSD	9.62	9.90	.28	2.83
Whittier, City	2,347.61	1,903.73	-443.88	-23.32
WRD	25.81	24.59	-1.22	-4.96
Yamamoto, Alice	0.00	0.00	.00	0.00

West Coast Basin Production Trends

West Basin	July 2023 - October 2023	July 2024 - October 2024	Difference	%Change
	0.00	0.00	.00	0.00
ABC Nursery	4.00	0.00	-4.00	-100.00
Cal. Water Service Co. Alpha 7050	350.33	356.22	5.89	1.65
Cal. Water Service Co. Dominguez - WB	2,039.38	1,929.89	-109.49	-5.67
Cal. Water Service Co./Hawthorne Lease	249.04	72.78	-176.26	-242.18
Eco Services Operations	159.54	47.24	-112.30	-237.72
Golden State Water Co. - WB	2,925.94	4,066.69	1140.75	28.05
Hillside Memorial Park	46.56	59.40	12.84	21.62
Honeywell International	0.00	0.00	.00	0.00
Inglewood, City	600.73	533.17	-67.56	-12.67
Kinder Morgan Liquids Terminals	14.54	10.37	-4.17	-40.21
L.A. County Department of Parks	46.02	157.61	111.59	70.80
L.A. County Sanitation Districts-JWPCP	0.00	0.00	.00	0.00
Lockheed Martin Corp.	0.00	0.00	.00	0.00
Lomita, City	0.00	0.00	.00	0.00
Long Beach, City - WB	0.41	0.00	-.41	-100.00
Manhattan Beach, City	53.16	38.69	-14.47	-37.40
Montrose Chemical Corp.	-0.08	0.05	.13	260.00
Myron Z. Chalavin	0.00	0.00	.00	0.00
Phillips 66 Co. - Alpha 7093	1,610.28	2,026.72	416.44	20.55
Rolling Hills Country Club	119.00	207.00	88.00	42.51
Roman Catholic Archbishop - WB	67.07	122.40	55.33	45.20
SCI Funeral Services	18.55	20.45	1.90	9.29
Shell Oil Co NCWUP	19.28	19.86	.58	2.92
Southern California Edison Co. - WB	10.39	7.07	-3.32	-46.96

West Basin	July 2023 - October 2023	July 2024 - October 2024	Difference	%Change
Tesoro Refining	3,253.65	3,011.21	-242.44	-8.05
Torrance Refining	402.18	362.02	-40.16	-11.09
Torrance, City	88.85	1,464.24	1375.39	93.93
West Basin Brewer Desalter	0.00	0.00	.00	0.00