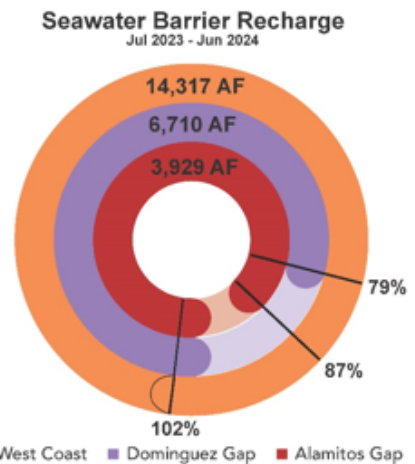
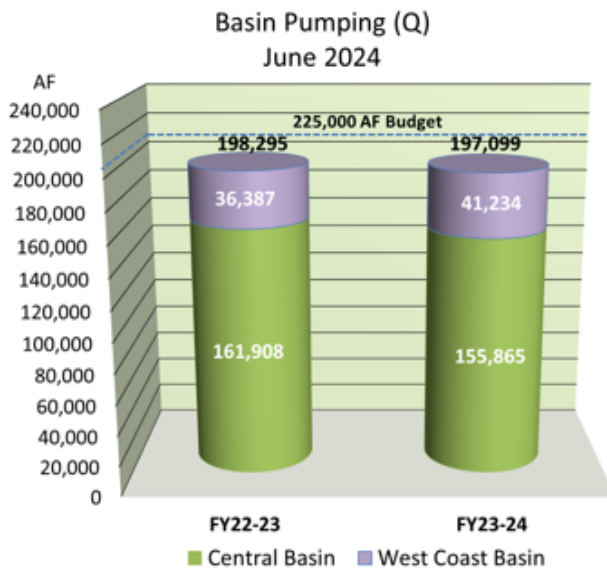
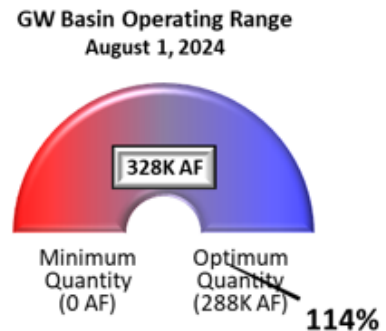
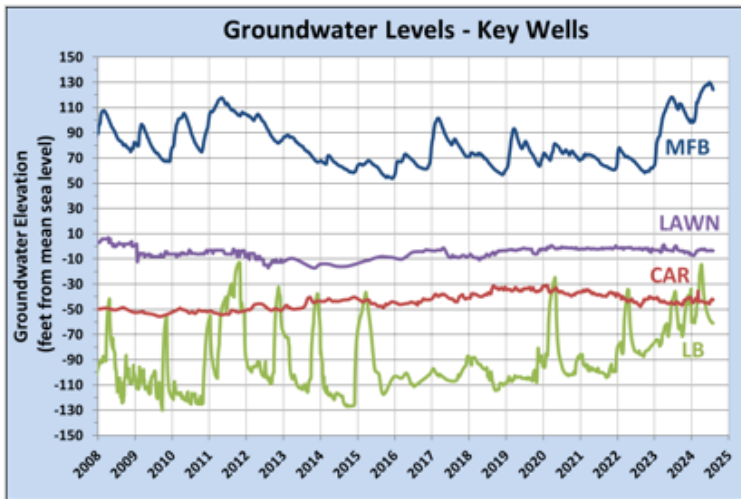
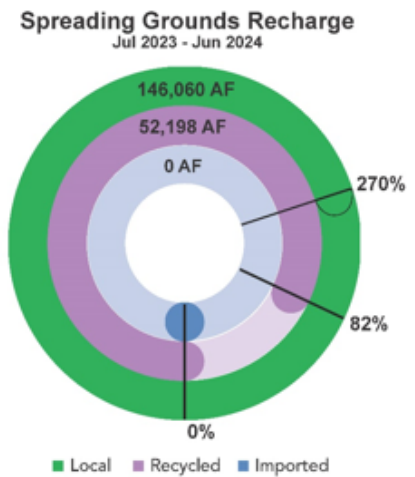
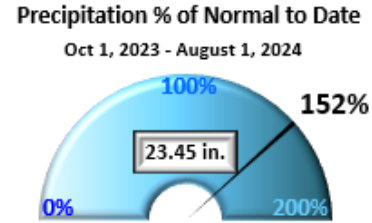
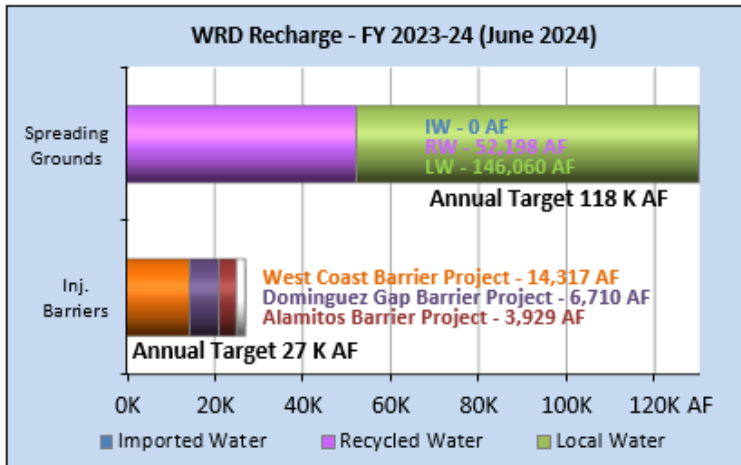


GROUNDWATER BASIN UPDATE FOR AUGUST 2024

GROUNDWATER BASINS AT A GLANCE*



* - Preliminary numbers, subject to change.

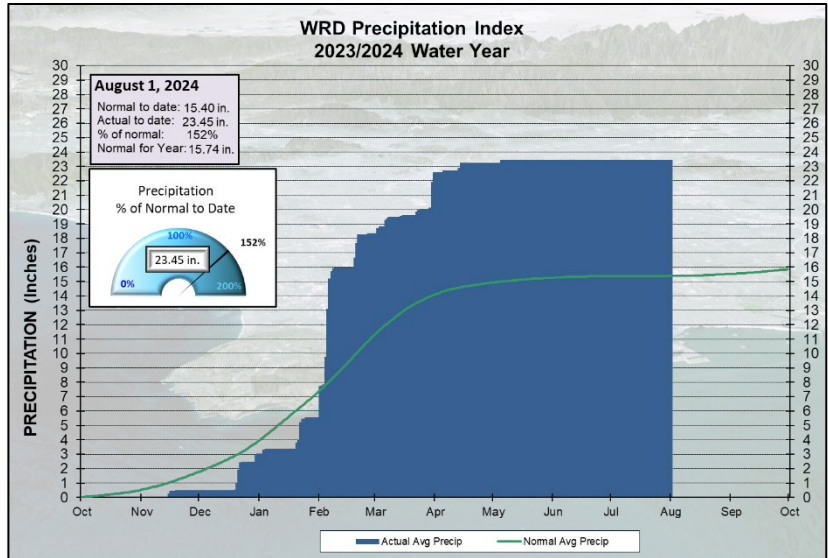
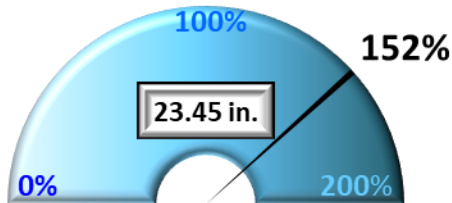
SUMMARY

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

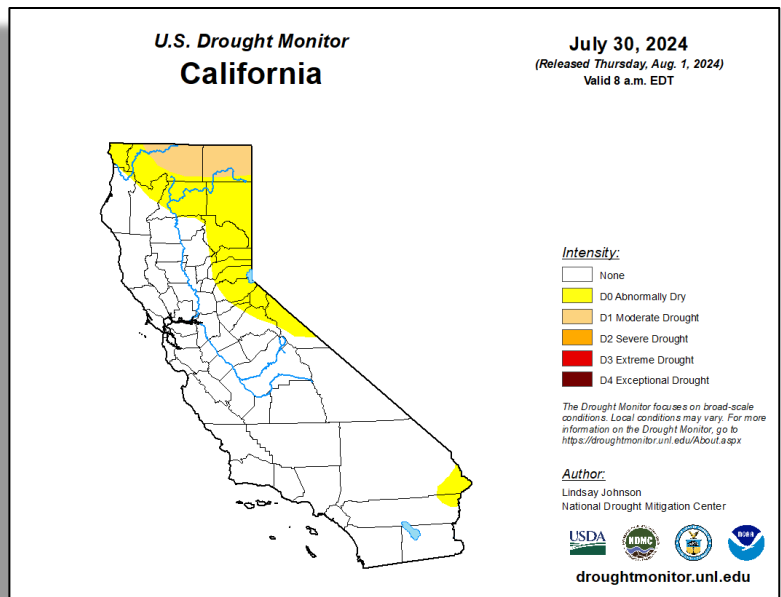
Precipitation (October 1, 2023 – August 1, 2024)

The WRD precipitation index reports that for the 2023-24 Water Year, there has been above average rainfall (23.45 inches) through August 1, 2024. The normal rainfall for this time period is 15.40 inches, so the District is 152% of normal.

Precipitation % of Normal to Date
Oct 1, 2023 - August 1, 2024

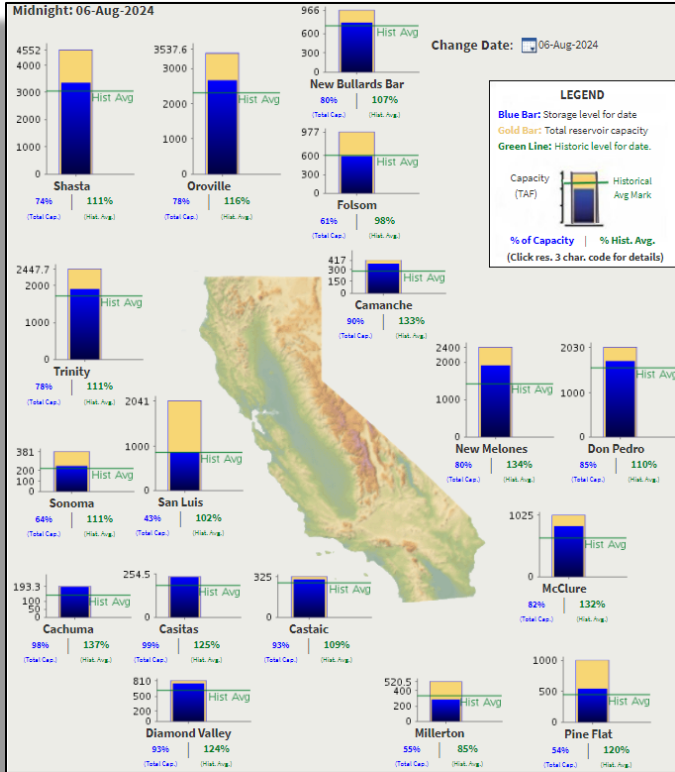


As of July 30, 2024, the U.S. Drought Monitor is reporting 21% of the State is abnormally dry (up 17%), 4% under moderate (up 4%), 0% under severe (same), 0% under extreme (same), and 0% exceptional (same) drought conditions. According to the U.S. Drought Monitor, Los Angeles County is currently not in a drought.



Reservoirs (as of August 6, 2024)

For the 21 reservoirs reported monthly to the committee, water levels have increased in 2 of 21 reservoirs. The largest increase occurred at Diamond Valley Lake (0.01 million acre feet, MAF). The smallest increase occurred at Castaic Lake (<0.01 MAF). The largest decrease (-0.63 MAF) occurred at Lake Shasta. The smallest decrease (<-0.01 MAF) occurred at Lakes Casitas, and Perris.



MWD Reservoirs (SWP) Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Trinity Lake (CLE)	2.45	1.91	78%	-0.13
Lake Shasta (SHA)	4.55	3.35	74%	-0.63
Lake Oroville (ORO)	3.54	2.66	75%	-0.58
New Bullards Bar (BUL)	0.97	0.78	80%	-0.12
Folsom Lake (FOL)	0.98	0.59	61%	-0.26
Camanche Lake (CMN)	0.42	0.37	90%	-0.01
New Melones L. (NML)	2.40	1.92	80%	-0.08
Don Pedro Res (DNP)	2.03	1.72	85%	-0.18
Lake McClure (EXC)	1.02	0.85	82%	-0.12
Lake Sonoma (WRS)	0.38	0.24	64%	-0.01
San Luis Res (SNL)	2.04	0.87	43%	-0.12
Millerton Lake (MIL)	0.52	0.29	55%	-0.16
Pine Flat Res. (PNF)	1.00	0.54	54%	-0.34
Cachuma Lake (CCH)	0.19	0.19	98%	-0.01
Castaic Lake (CAS)	0.33	0.30	93%	0.00
Casitas Lake (CSI)	0.25	0.24	99%	0.00
Perris Lake (PRR)	0.13	0.10	76%	0.00
L. Silverwood (SLW)	0.08	0.06	82%	-0.01

MWD Reservoirs (CRA) Storage in Million Acre Feet

Reservoir	Capacity	Storage	% Full	Change
Lake Powell	23.31	9.61	41%	-0.14
Lake Mead	26.12	8.53	33%	-0.09
Diamond Valley L (DVL)	0.81	0.75	93%	0.01

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

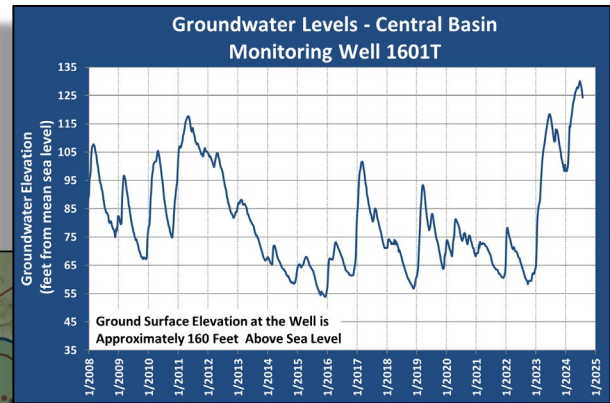
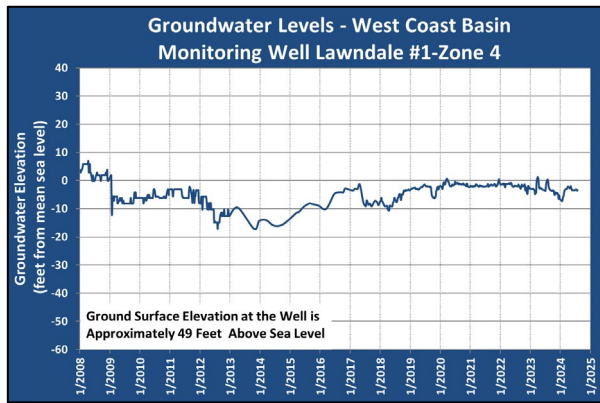
These 21 reservoirs are at 49% capacity (35.88 MAF) which is down 2.98 MAF (-4.1%) from the prior month (-2.76 MAF State Water Project [SWP] and -0.22 MAF Colorado River Aqueduct [CRA]).



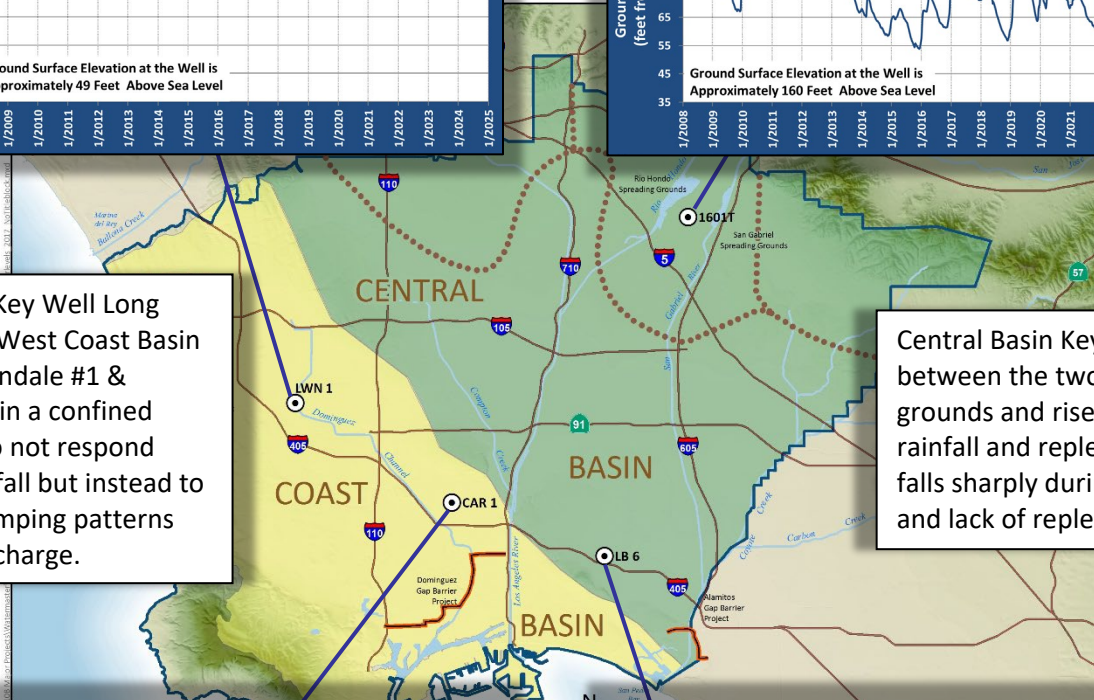
Did you know?
There are different types of water depending on where it located.

Groundwater Levels (through August 1, 2024)

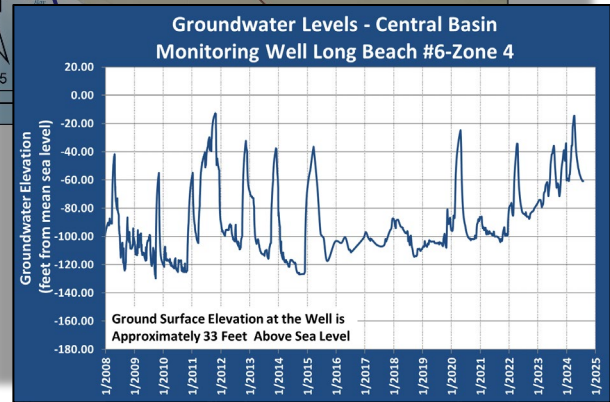
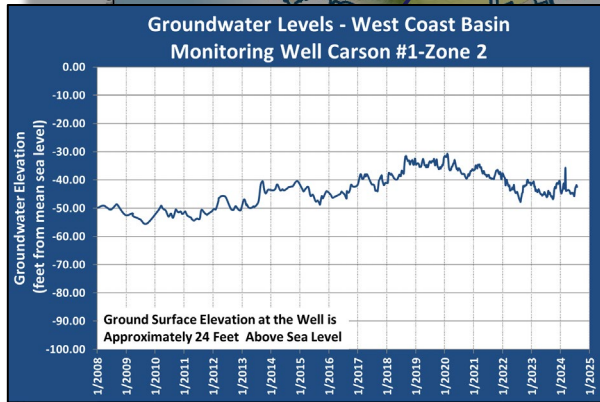
Groundwater levels in key monitoring wells are shown in the hydrographs below.



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 5.3 feet	Increased 12.2 feet
Central Basin Key Well Long Beach #6 4	Decreased 2.2 feet	Decreased 19.0 feet
West Coast Basin Key Well Lawndale #1 4	Decreased 0.1 foot	Decreased 3.8 feet
West Coast Basin Key Well Carson #1 2	Increased 1.8 feet	Increased 1.4 feet

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

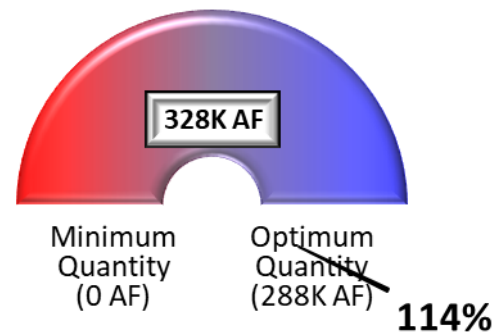
Optimum and Minimum Groundwater Quantity (August 1, 2024)

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 August 1, 2024, has been estimated at 571,868 acre feet (subject to change), which is 328,132 acre feet above the Minimum Quantity and 40,132 acre feet above Optimum Quantity. The Basin is at 114% of Optimum Quantity which is 7% lower than what was reported last month (~20,000 AF lower).

GW Basin Operating Range
August 1, 2024



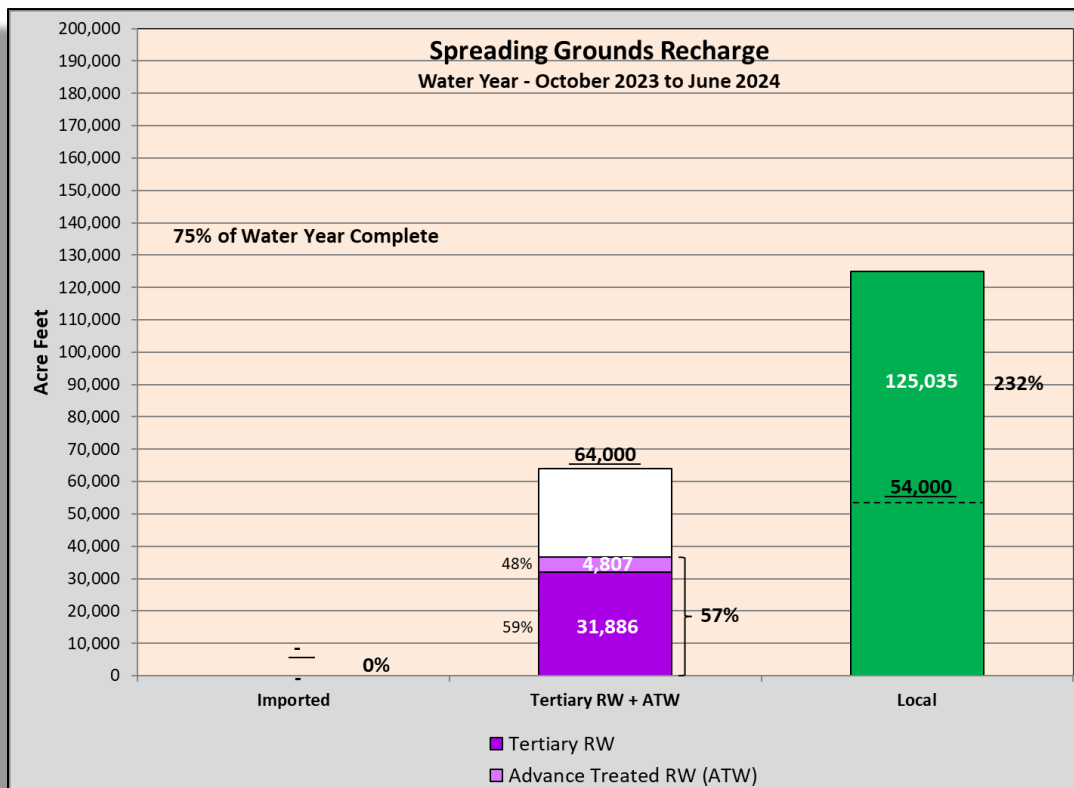
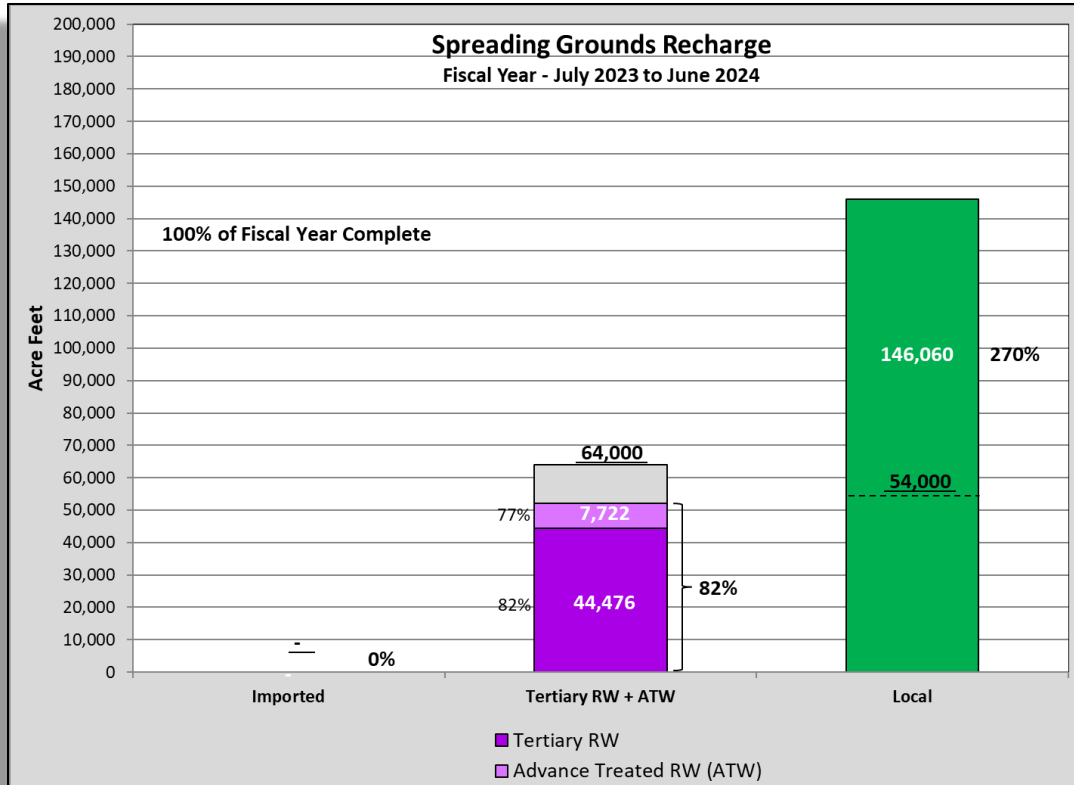
FACT:

Rain and snow are called Meteoric Water; Surface Water is what makes up oceans, lakes, and rivers; groundwater is the Subsurface Water; Connate Water is the water trapped in sedimentary rocks and doesn't flow like groundwater does; and Juvenile Water (also known as Magmatic Water) is the water dissolved in magma deep in the earth's crust and is released during volcanic eruptions.



Montebello Forebay Spreading Grounds (July 2023 – June 2024)

The following Charts shows the preliminary spreading grounds replenishment water for the current Fiscal Year (2023-24; 12 months) and Water Year (2023-24; 9 months):



No imported water purchases were planned for Fiscal Year 2023-24.

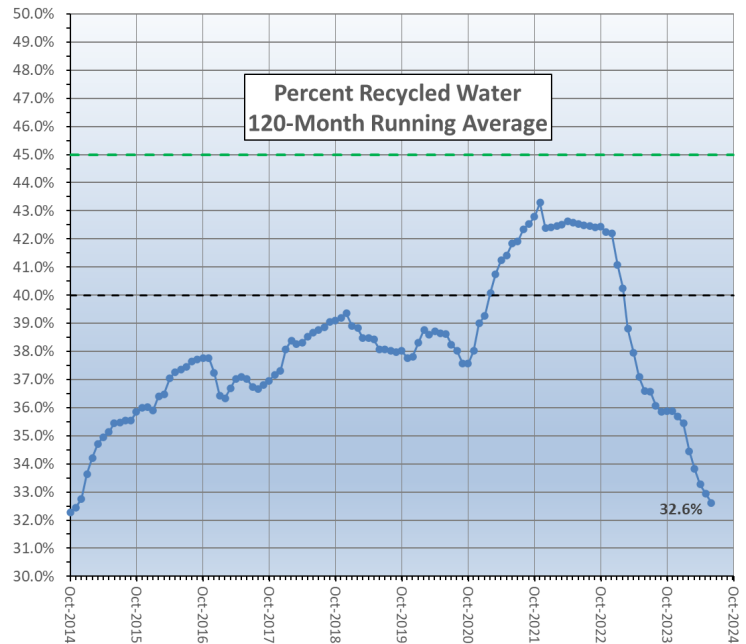
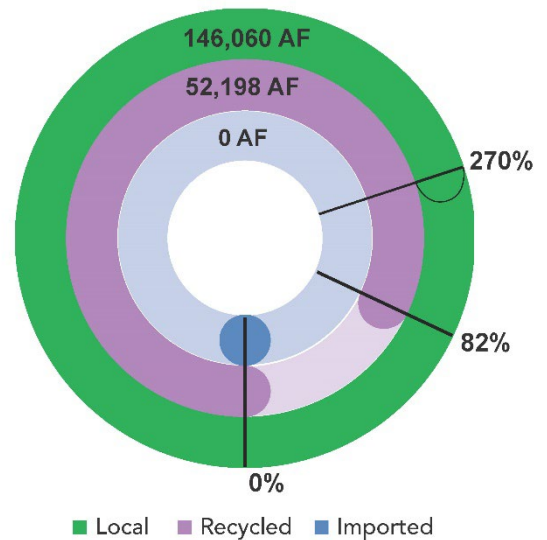
Local water (stormwater plus dry weather urban runoff) is captured by the Los Angeles County Department of Public Works (LACPW) at the spreading grounds for recharge. Local water amounts are determined as the sum of the total water conserved at the spreading grounds less the imported and recycled water deliveries. For the 2023-24 Fiscal Year, 146,060 acre feet of local water capture have been reported by the LACPW.

Preliminary numbers for the 2023-24 Fiscal Year show that approximately 52,198 acre feet of recycled water has been recharged with 7,722 acre feet consisting of advanced treat water from the ARC AWTF and 44,476 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 32.6% and the regulatory maximum is 45%, with additional monitoring being required once 40% is reached.

Tertiary Recycle Water Permit Update

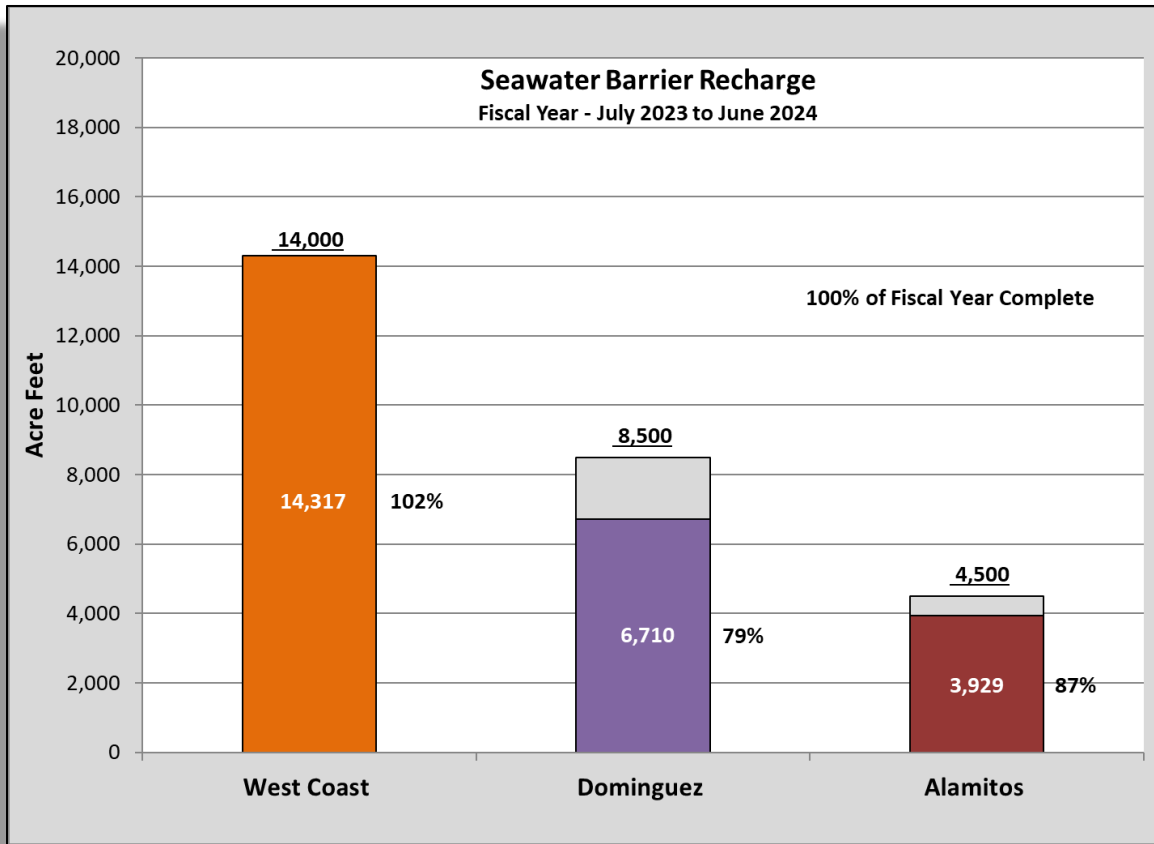
The permit is continuing to progress with LACSD and WRD staff working to update pertinent sections of the new Title 22 Engineering Report. Due to the persistent drought conditions over the past few decades and associated emergency drought proclamation by Governor Newsom, LACSD and WRD submitted a request 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 2024 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 2023 - Jun 2024



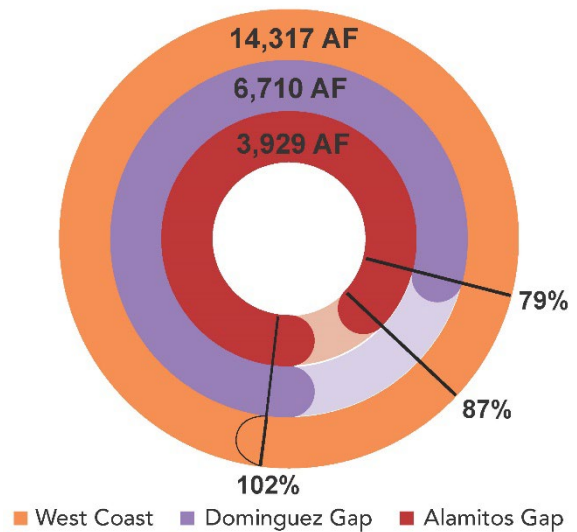
Seawater Barrier Well Injection and Replenishment (July 2023 – June 2024)

The following Chart shows the barrier water injection:



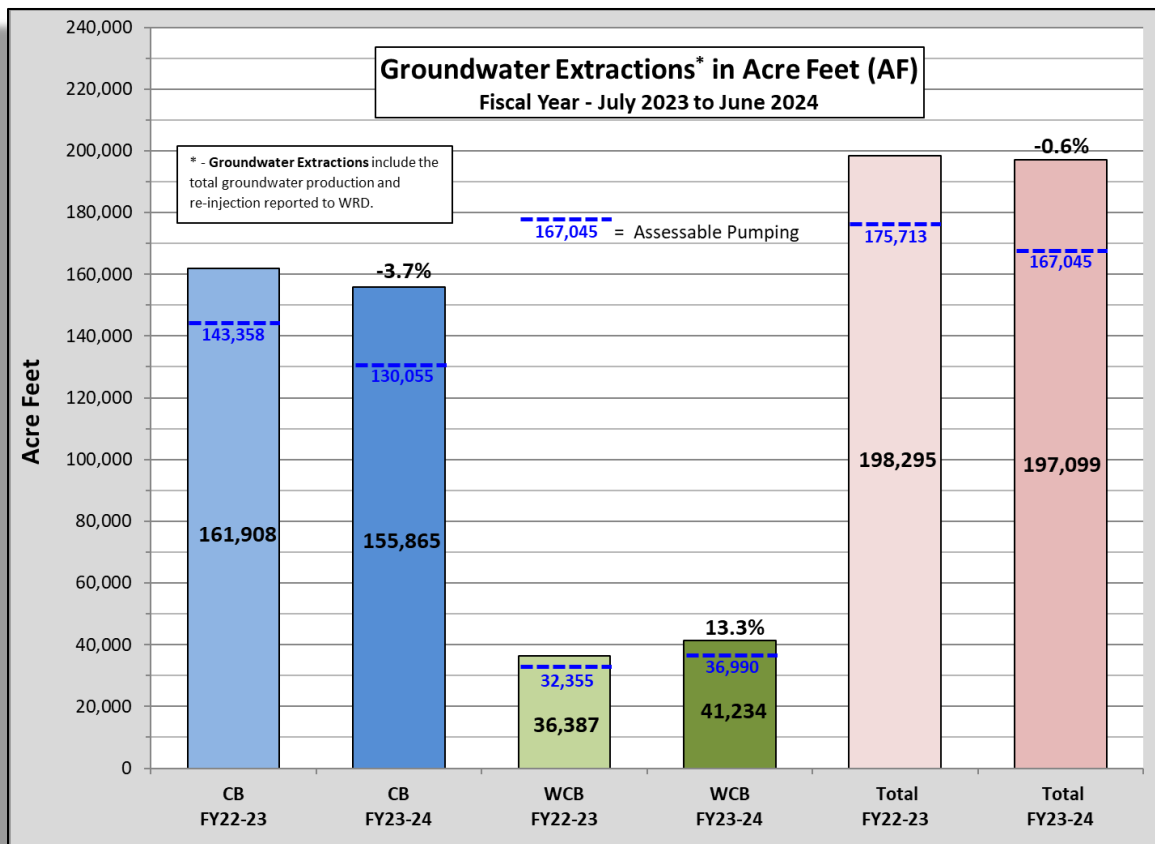
Preliminary numbers for the 2023-24 Fiscal Year show that the West Coast Barrier has used 14,317 acre feet of the total 14,000 acre feet planned for injection, 102% of total for the Fiscal Year. The Dominguez Gap Barrier used 6,710 acre feet of the total 8,500 acre feet planned for injection, 79% of the total for the Fiscal Year. The Alamitos Gap Barrier, on the WRD side, used 3,929 acre feet of the total 4,500 acre feet planned for injection, 87% of the total for the Fiscal Year. Advanced Treated Recycled Water (ATW) usage at the three barriers for the Fiscal Year is 43% at the West Coast Barrier (-2%), 70% at the Dominguez Gap Barrier (+1%), and 70% Alamitos Gap Barrier (+1%). The combined ATW usage at all three barriers is 55% (same).

Seawater Barrier Recharge
Jul 2023 - Jun 2024



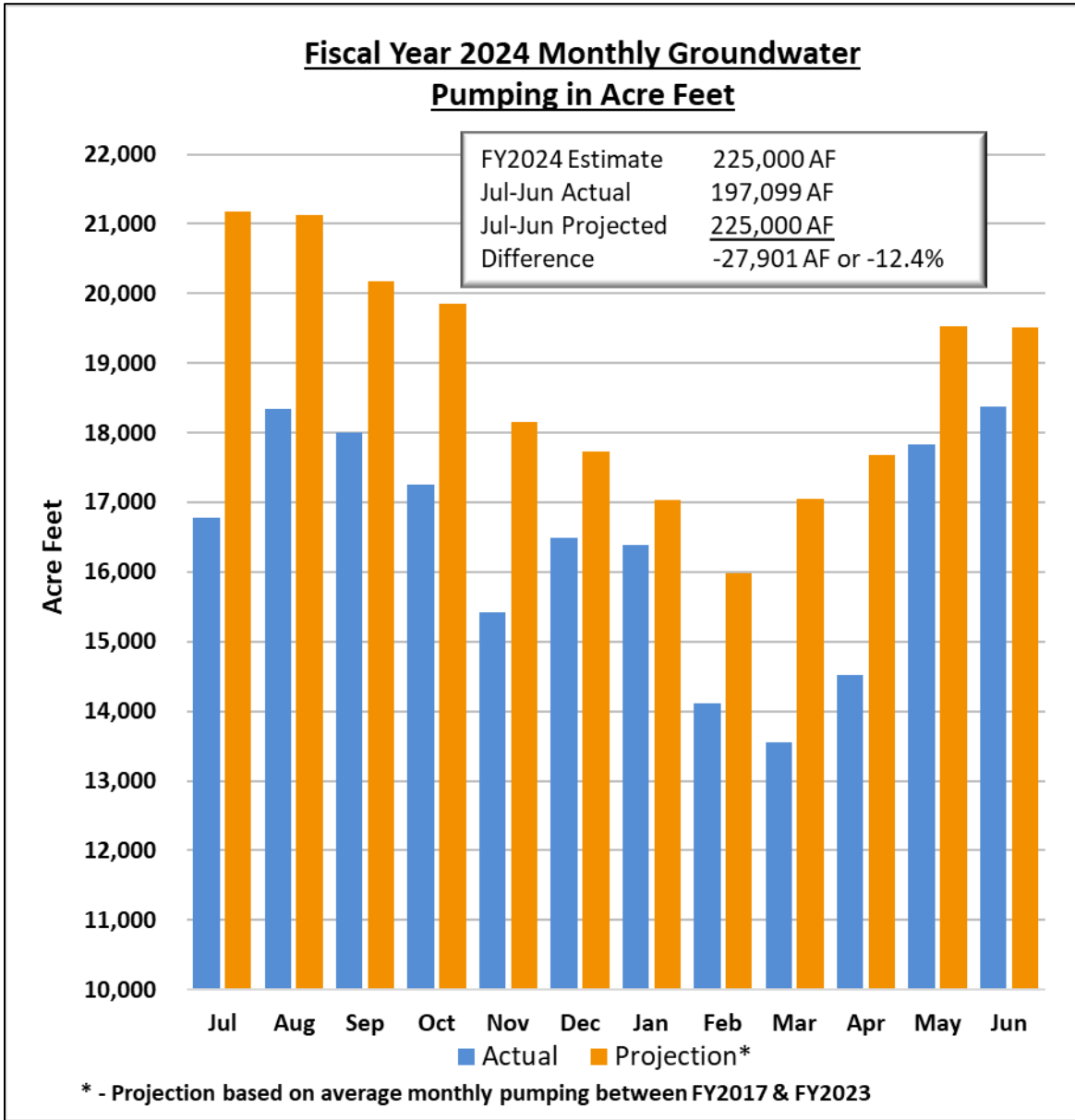
Total Pumping (Fiscal Year 2023-24, July 2023 – June 2024)

Preliminary numbers for groundwater production in the District for the Fiscal Year 2023-24 (July - June) indicate total pumping in the Central Basin was down 6,043 acre feet from the same time of the previous fiscal year (-3.7%) and the West Coast Basin total pumping was 4,847 acre feet higher than the previous fiscal year (+13.3%). The total pumping is 197,099 acre feet compared to 198,295 acre feet during the same time the previous year for a decrease of 1,196 acre feet, or -0.6%. The current pumping data does not include six (6) Central Basin pumpers and one (1) West Coast Basin pumper, who have not yet reported, for an estimated 0.1 additional acre foot.



Interesting...
 About a quarter of all U.S. rainfall becomes groundwater.

Preliminary numbers indicate 197,099 acre feet have been pumped this fiscal year and is 12.4% below the projected fiscal year to date goal of 225,000 acre feet (or -27,901 acre feet). Monthly actual production versus the 7-year average monthly production projections (FY 2017 through 2023) are included in the chart below.



“There’s plenty of water in the universe without life, but nowhere is there life without water” - *Sylvia A. Earle*



For the Fiscal Year 2023-24 (July 2023 – June 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 2023 - June 2024	Jul 2023 - June 2024	Difference	% Change
Whittier, City	5,188.01	6,408.57	1220.56	19.05
Suburban Water Systems	1,118.24	2,252.62	1134.38	50.36
Commerce, City	517.30	1,604.54	1087.24	67.76
Cal. Water Service Co. (East LA)	10,713.45	11,528.47	815.02	7.07
Signal Hill, City	722.60	1,362.86	640.26	46.98
Bottom 5 Producing <u>by Volume</u> (AF)	Jul 2023 - June 2024	Jul 2023 - June 2024	Difference	% Change
Long Beach, City - CB	27,666.78	21,732.47	-5934.31	-27.31
Los Angeles, City - CB	3,298.35	17.10	-3281.25	-19,188.6
Vernon, City	5,475.42	4,719.09	-756.33	-16.03
Golden State Water Co. - CB	17,916.34	17,311.63	-604.71	-3.49
Santa Fe Springs, City	1,520.18	939.05	-581.13	-61.88

Production Trends – West Coast Basin				
Top 5 Producing <u>by Volume</u> (AF)	Jul 2023 - June 2024	Jul 2023 - June 2024	Difference	% Change
Golden State Water Co. - WB	6,274.55	9,231.32	2956.77	32.03
Cal. Water Service Co. Dominguez - WB	3,975.66	6,494.85	2519.19	38.79
Torrance, City	961.16	1,931.48	970.32	50.24
Eco Services Operations	342.74	670.21	327.47	48.86
Cal. Water Service Co./Hawthorne Lease	347.69	599.76	252.07	42.03
Bottom 5 Producing <u>by Volume</u> (AF)	Jul 2023 - June 2024	Jul 2023 - June 2024	Difference	% Change
Tesoro Refining	10,624.99	8,817.08	-1807.91	-20.50
Phillips 66 Co. - Alpha 7093	4,965.49	4,451.77	-513.72	-11.54
Manhattan Beach, City	489.56	139.53	-350.03	-250.86
Inglewood, City	1,851.26	1,669.81	-181.45	-10.87
Roman Catholic Archbishop - WB	177.32	103.69	-73.63	-71.01

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 2022 - June 2023	July 2023 - June 2024	Difference	%Change
ABC USD	16.59	11.85	-4.74	-40.00
American Text. M.	57.44	60.61	3.17	5.23
Artesia, City	7.98	2.04	-5.94	-291.18
Atlas Iron and Metal Co.	0.36	0.37	.01	2.70
Bell Gardens, City	0.00	0.00	.00	0.00
Bellflower Home Garden	0.00	0.00	.00	0.00
Bellflower, City	231.98	0.00	-231.98	-100.00
Bellflower-Somerset MWC	4,667.90	4,697.57	29.67	0.63
Boeing Co.	53.15	128.89	75.74	58.76
Boeing, Compton Site	50.09	72.81	22.72	31.20
Cal. American Water Co. Alpha 0679	1,590.33	1,949.71	359.38	18.43
Cal. Water Service Co. (East LA)	10,713.45	11,528.47	815.02	7.07
Cal. Water Service Co. Dominguez - CB	795.63	1,075.32	279.69	26.01
Caltrans	4.72	11.95	7.23	60.50
Central Basin MWD	0.00	0.00	.00	0.00
Cerritos, City	7,103.49	6,946.05	-157.44	-2.27
Coast Packing Co.	142.06	133.30	-8.76	-6.57
Commerce, City	517.30	1,604.54	1087.24	67.76
Compton, City	6,754.06	6,538.99	-215.07	-3.29
Darling-Delaware Co.	0.00	0.00	.00	0.00
Defense Logistic Agency	3.77	4.17	.40	9.59
Demunno Kerdoon	1.73	2.78	1.05	37.77
Downey, City	13,228.39	13,222.39	-6.00	-0.05
El Rancho Unified School District	0.00	0.00	.00	0.00
Furr, Nancy J.	0.04	0.00	-.04	-100.00

Central Basin	July 2022 - June 2023	July 2023 - June 2024	Difference	%Change
Golden State Water Co. - CB	17,916.34	17,311.63	-604.71	-3.49
Huntington Park, City - Alpha 2378	2,630.23	2,652.12	21.89	0.83
L.A. County Department of Parks	0.00	0.00	.00	0.00
LA County Rancho Los Amigos	183.99	213.06	29.07	13.64
La Habra Heights County WD	2,193.59	2,083.36	-110.23	-5.29
Lakewood - City	6,348.17	6,387.12	38.95	0.61
Liberty Utilities - CB	4,477.04	4,240.12	-236.92	-5.59
Lincoln Memorial Park	6.62	0.00	-6.62	-100.00
Little Lake Cemetery District	1.36	0.00	-1.36	-100.00
Long Beach, City - CB	27,666.78	21,732.47	-5934.31	-27.31
Los Angeles, City - CB	3,298.35	17.10	-3281.25	-19,188.60
Lunday-Thagard	0.00	0.00	.00	0.00
Lynwood Park Mutual Water Co.	59.46	26.38	-33.08	-125.40
Lynwood, City	4,412.09	4,570.78	158.69	3.47
Maywood Mutual No. 1	587.08	632.52	45.44	7.18
Maywood Mutual No. 2	886.86	920.86	34.00	3.69
Maywood Mutual No. 3	1,384.35	1,339.27	-45.08	-3.37
Montebello Land and Water Co.	2,806.08	2,838.44	32.36	1.14
Montebello, City	0.00	0.00	.00	0.00
Newark Group, Inc.	156.06	156.72	.66	0.42
Northrop Grumman	2.72	0.00	-2.72	-100.00
Norwalk, City	468.28	339.27	-129.01	-38.03
Omega OU1/OU3 LLC	0.99	7.02	6.03	85.90
Orchard Dale Water District	1,701.45	1,713.05	11.60	0.68
PABCO Building Products	0.00	0.00	.00	0.00
Paradise Memorial Park	6.50	8.49	1.99	23.44
Paramount USD	3.10	1.46	-1.64	-112.33
Paramount, City	2,712.15	2,811.01	98.86	3.52

Central Basin	July 2022 - June 2023	July 2023 - June 2024	Difference	%Change
Pico Rivera, City	3,916.36	3,800.74	-115.62	-3.04
Pico Water District	2,517.47	2,469.38	-48.09	-1.95
Rockview Dairies	63.10	64.90	1.80	2.77
Roman Catholic Archbishop - CB	164.69	220.87	56.18	25.44
Rowland Water District	0.00	0.00	.00	0.00
San Gabriel Valley Water Co.	2,429.91	2,933.94	504.03	17.18
Santa Fe Springs, City	1,520.18	939.05	-581.13	-61.88
Sativa Water District	1.50	0.00	-1.50	-100.00
Scantlebury, Robert P.	0.50	0.32	-.18	-56.25
SFPP L.P.	0.00	0.00	.00	0.00
Signal Hill, City	722.60	1,362.86	640.26	46.98
South Gate, City	8,097.24	7,823.99	-273.25	-3.49
South Montebello Irrigation Dist	1,618.42	1,606.23	-12.19	-0.76
Southern California Edison Co. - CB	2.74	0.53	-2.21	-416.98
St. John Bosco School	21.64	7.34	-14.30	-194.82
Suburban Water Systems	1,118.24	2,252.62	1134.38	50.36
Tract 180 Water Co.	1,204.70	1,212.20	7.50	0.62
Tract 349 Mutual Water Co.	609.08	625.45	16.37	2.62
Tucker, William M.	0.37	0.02	-.35	-1,750.00
Vernon, City	5,475.42	4,719.09	-756.33	-16.03
Virginia Country Club	316.79	279.16	-37.63	-13.48
Walnut Park Mutual	1,007.68	1,034.23	26.55	2.57
Whittier Union HSD	22.98	22.92	-.06	-0.26
Whittier, City	5,188.01	6,408.57	1220.56	19.05
WRD	38.19	86.11	47.92	55.65
Yamamoto, Alice	0.07	0.00	-.07	-100.00

West Coast Basin Production Trends

West Basin	July 2022 - June 2023	July 2023 - June 2024	Difference	%Change
ABC Nursery	11.00	12.00	1.00	8.33
Cal. Water Service Co. Alpha 7050	889.54	1,020.86	131.32	12.86
Cal. Water Service Co. Dominguez - WB	3,975.66	6,494.85	2519.19	38.79
Cal. Water Service Co./Hawthorne Lease	347.69	599.76	252.07	42.03
Eco Services Operations	342.74	670.21	327.47	48.86
Golden State Water Co. - WB	6,274.55	9,231.32	2956.77	32.03
Hillside Memorial Park	116.35	102.33	-14.02	-13.70
Honeywell International	0.00	0.00	.00	0.00
Inglewood, City	1,851.26	1,669.81	-181.45	-10.87
Kinder Morgan Liquids Terminals	38.34	36.71	-1.63	-4.44
L.A. County Department of Parks	207.78	191.36	-16.42	-8.58
L.A. County Sanitation Districts-JWPCP	0.00	0.00	.00	0.00
Lomita, City	0.00	0.00	.00	0.00
Long Beach, City - WB	20.50	56.29	35.79	63.58
Manhattan Beach, City	489.56	139.53	-350.03	-250.86
Montrose Chemical Corp.	-1.37	29.22	30.59	104.69
Myron Z. Chalavin	0.00	0.00	.00	0.00
Pacific Crest Cemetery Co.	35.83	0.00	-35.83	-100.00
Phillips 66 Co. - Alpha 7093	4,965.49	4,451.77	-513.72	-11.54
Rolling Hills Country Club	199.00	275.00	76.00	27.64
Roman Catholic Archbishop - WB	177.32	103.69	-73.63	-71.01
SCI Funeral Services	0.00	30.77	30.77	100.00
Shell Oil Co NCWUP	103.58	71.19	-32.39	-45.50
Southern California Edison Co. - WB	17.81	19.60	1.79	9.13
Tesoro Refining	10,624.99	8,817.08	-1807.91	-20.50

West Basin	July 2022 - June 2023	July 2023 - June 2024	Difference	%Change
Torrance Refining	954.97	1,042.86	87.89	8.43
Torrance, City	961.16	1,931.48	970.32	50.24
West Basin Brewer Desalter	0.00	0.00	.00	0.00