



AGENDA NO. 6.B

PUBLIC INFORMATION AND EDUCATION COMMITTEE November 4, 2021

INFORMATION

Water Consumption and Per Capita Water Use Report

Summary

West Basin Municipal Water District (West Basin) is a leader in providing effective water efficiency, conservation, outreach, and education programs that serve to reduce water demand and increase water reliability in the region. As a water wholesaler, West Basin works with its retail agencies, the Metropolitan Water District of Southern California, and the Water Replenishment District to track and analyze historical water consumption and per capita water use data in order to better understand water use patterns that help inform individual and region-wide water resources planning efforts. This report provides a summary of water use trends in the West Basin service area between 2000-2020, and includes a breakdown of indoor and outdoor use, as well as per capita water use (GPCD) patterns for the last 20 years.

West Basin continues to track retail agency monthly water production data submitted to the State Water Resources Control Board (State Water Board), which uses the data to compare current levels of water use to pre-determined water consumption baselines as a means of gauging ongoing progress toward established voluntary water conservation goals introduced this year.

In utilizing the above data, West Basin will continue to evaluate what level of conservation effort is needed from its individual retail agencies to meet the statewide 15% voluntary conservation target through the related lenses of total water consumption and per capita water use.

Background

West Basin is a wholesale water agency that serves nearly one million residents in coastal Los Angeles County. West Basin provides drinking water supplies to eight customer agencies that includes four cities, three investor-owned utilities, and a county waterworks district. West Basin also provides drinking water to the Water Replenishment District for injection into the West Coast and Dominguez Gap seawater barriers. The West Basin mission is to provide a safe and reliable supply of high-quality water to the communities it serves. The District carries out this mission by protecting its existing supplies, investing in local supply resources such as recycled water, promoting region-wide water efficiency and conservation, and innovating to prepare for the future.

The State of California is experiencing a second straight year of severe drought, with recent drought outlooks projecting continued dry conditions and a potential third year of drought in 2022. On July 8, Governor Newsom issued an Executive Order calling on all Californians to voluntarily reduce water use by 15% from 2020 levels. Under the order, California residents and businesses are being asked to use less water and eliminate wasteful water practices.

In 2015, the state of California began requiring urban retail water suppliers to submit monthly water consumption data as a means of monitoring progress toward meeting mandatory water use reduction targets that were established by former Governor Jerry Brown. The monthly data was summarized and published in the media as a way to inform the public about conservation mandates and to encourage ongoing water use reduction efforts. Following the previous drought, public interest in monthly water use decreased, although urban water suppliers have continued to submit monthly reports to the state on a voluntary basis since November 2017. More than two years later, in April 2020, the State Water Board started requiring the state's largest 400 water suppliers to submit monthly water consumption reports.

In July 2021, due to ongoing drought and the Governor's renewed calls for Californians to use less water, the state resumed publishing statewide, regional, and individual water use data. To date, two months of water use and conservation data has been released by the state, July 2021 compared to July 2020 and August 2021 compared to August 2020. The primary purpose of the data is to track 2021 water use compared to a pre-determined water consumption baseline. Until earlier this year, the state utilized a 2013 baseline. However, in July 2021, Governor Newsom modified it to be based on 2020 water use levels. For the two-month period of July-August 2021, water use in the West Basin service area is approximately 3% less than the same period in 2020. This compares to a 2% reduction for Southern California and a 5% reduction statewide.

While conservation efforts have just begun in many areas, the state's conservation goal of 15% is currently not being met. The state has already made initial indications that depending on continued drought conditions and ongoing statewide conservation efforts, mandatory water use reductions could be under consideration in the future. No specific timeline or methodology for determining conservation targets has been made publicly available as of yet.

Water Use Efficiency Data Study

In 2019, West Basin completed its third Water Use Efficiency (WUE) Data Study. The Data Study was developed to provide guiding principles and strategies for West Basin's WUE programs and to facilitate innovation and adaptability given California's continuously evolving climate and available water resources.

The Data Study analyzed West Basin's current programs, changing demographics, new drivers for water efficiency and surveyed the local water retail water agencies to evaluate their needs to comply with new WUE regulations. The results of the Data Study provided West Basin staff with valuable information to develop strategic and targeted programs in coordination with local cities, investor-owned utilities, and other stakeholders.

As West Basin continues to pursue innovative WUE programs that build upon the region's successful conservation efforts, the 2019 WUE Data Study will help strategically guide those efforts in order meet and exceed the state's ongoing and future water use efficiency requirements.

Historical Water Consumption

West Basin maintains historical monthly water use data for all of its retail agencies, including groundwater, desalted water, imported water, recycled water, and deliveries to the barriers. In the past 20 years, cumulative water consumption by West Basin retail agencies has decreased by approximately 30%. In that same period of time, service-area wide population has increased

by approximately 42,000 people. The changes in water consumption and population has led to an approximate reduction in per capita water use of 33% from 2000 to 2020. Additional key water use comparisons are as follows:

Combined retail agency water use between 2013 and 2020	15% Reduction
Per capita water use between 2013 and 2020	16% Reduction
Residential GPCD between 2014 and 2021	16% Reduction
GPCD between 2009 and 2020 (SB X7-7)	19% Reduction

In addition to tracking overall water consumption and GPCD, West Basin estimates the percentage of water use that occurs indoors and outdoors for each of its retail agencies. This provides an additional layer of detail which can be utilized to evaluate proposed indoor and outdoor water efficiency measures. In many parts of the service area, the indoor to outdoor ratio is approximately 70:30; however, for retail agencies with customers that have larger lots and higher levels of irrigable landscape, the ratio moves closer to 50:50.

Meeting the Governor's Call for Water Use Reductions

Based on 2020 data, in order to meet the state's voluntary 15% reduction target, West Basin will need to continue working with its retail agencies to reduce potable water use by approximately 18,000 acre-feet. From a GPCD perspective, residents in the West Basin service area will need to reduce per capita water use by approximately 18 gallons per day, on average. Areas with higher baseline GPCDs will need to reduce more, while those with lower baselines can be expected to reduce less.

Benefit to West Basin:

The information provided in the Water Consumption and Per Capita Water Use Report will inform West Basin's Board of Directors, retail agencies, and other stakeholders about key water use trends in the service area. The report provides a progress update on retail agency monthly water consumption data that is reported to the State Water Board for the purposes of comparing 2020 and 2021 water use statistics in light of the state's request for a 15% voluntary water use reduction from all Californians. With this data and analysis, the Board of Directors will have an additional set of data with which to make decisions about the District's ongoing demand management programs, Water Shortage Contingency Plan, and any related drought outreach efforts.

Strategic Business Plan Implementation:

Goal 1: Water Reliability – West Basin is committed to innovative planning and investments to provide water supply reliability and drought protection.

Goal 2: Water Quality – West Basin is committed to providing safe, high quality water by meeting current and anticipated water quality requirements.

Goal 3: Customer Service – West Basin is committed to providing value by understanding and meeting the needs of our customers and the communities we serve.

Goal 4: Sound Financial & Resources Management – West Basin is committed to efficient business operations, financial planning and asset management.

Goal 5: Environmental Stewardship – West Basin is committed to sustainable and environmentally-friendly business practices.

Fiscal Impact:

Not applicable.

Environmental Compliance:

Not applicable.

Committee History:

This item will be reviewed by the Public Information and Education Committee on Thursday, November 4, 2021.

Recommendation:

This item is for information only.

List of Attachments

NOVEMBER 2021 PIE COMMITTEE_WATER USE

Prepared by: Matthew Veeh, Senior Water Policy and Resources Analyst
Submitted by: E.J. Caldwell, Interim General Manager
Reviewed by: E.J. Caldwell, Interim General Manager



WEST BASIN

Municipal Water District

Water Use and GPCD

PIE Committee

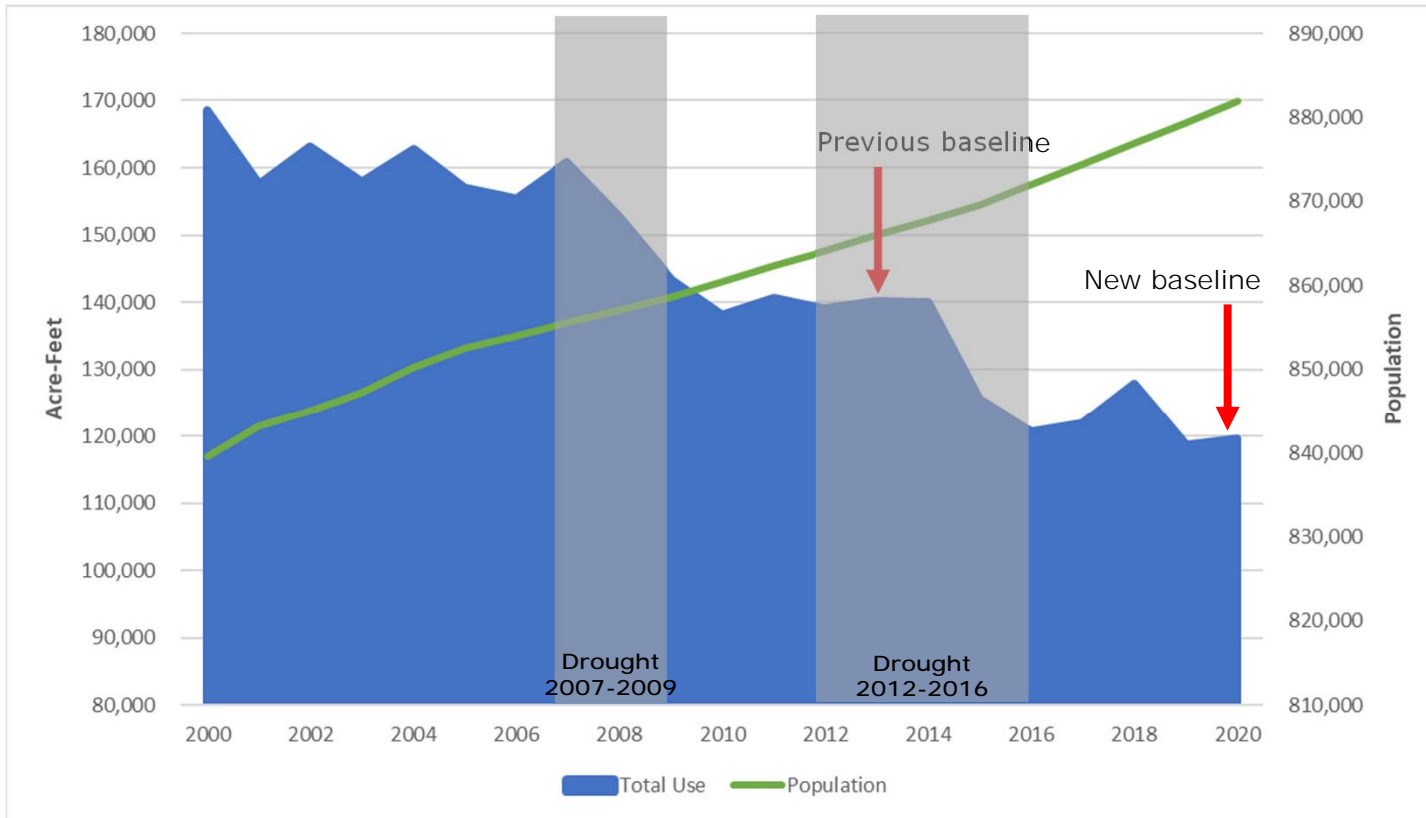
November 4, 2021

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Attachment: November 2021 PIE Committee_Water Use (Water Use and GPCD)

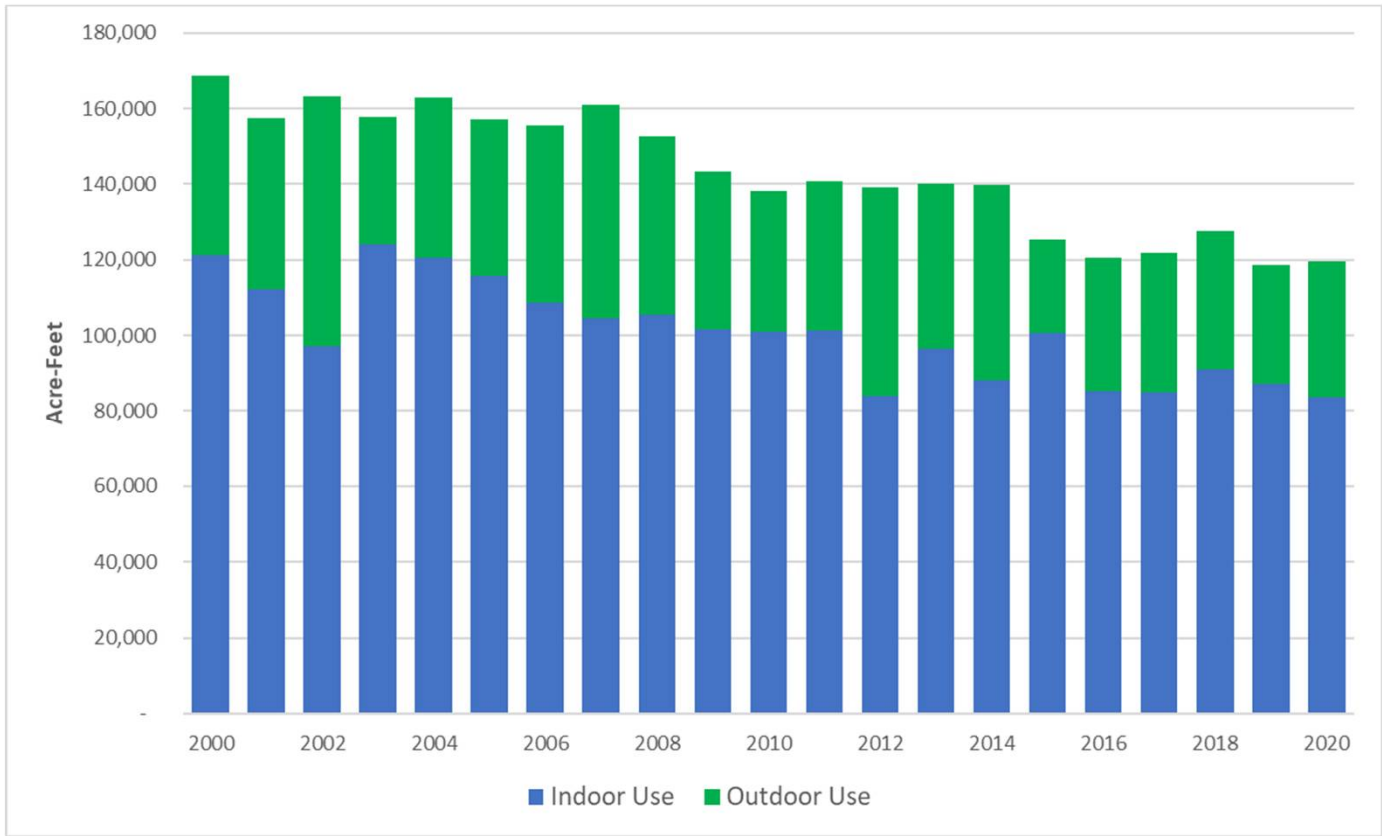
Retail Agency Potable Water Use (2000-2020)



From 2000 to 2020:

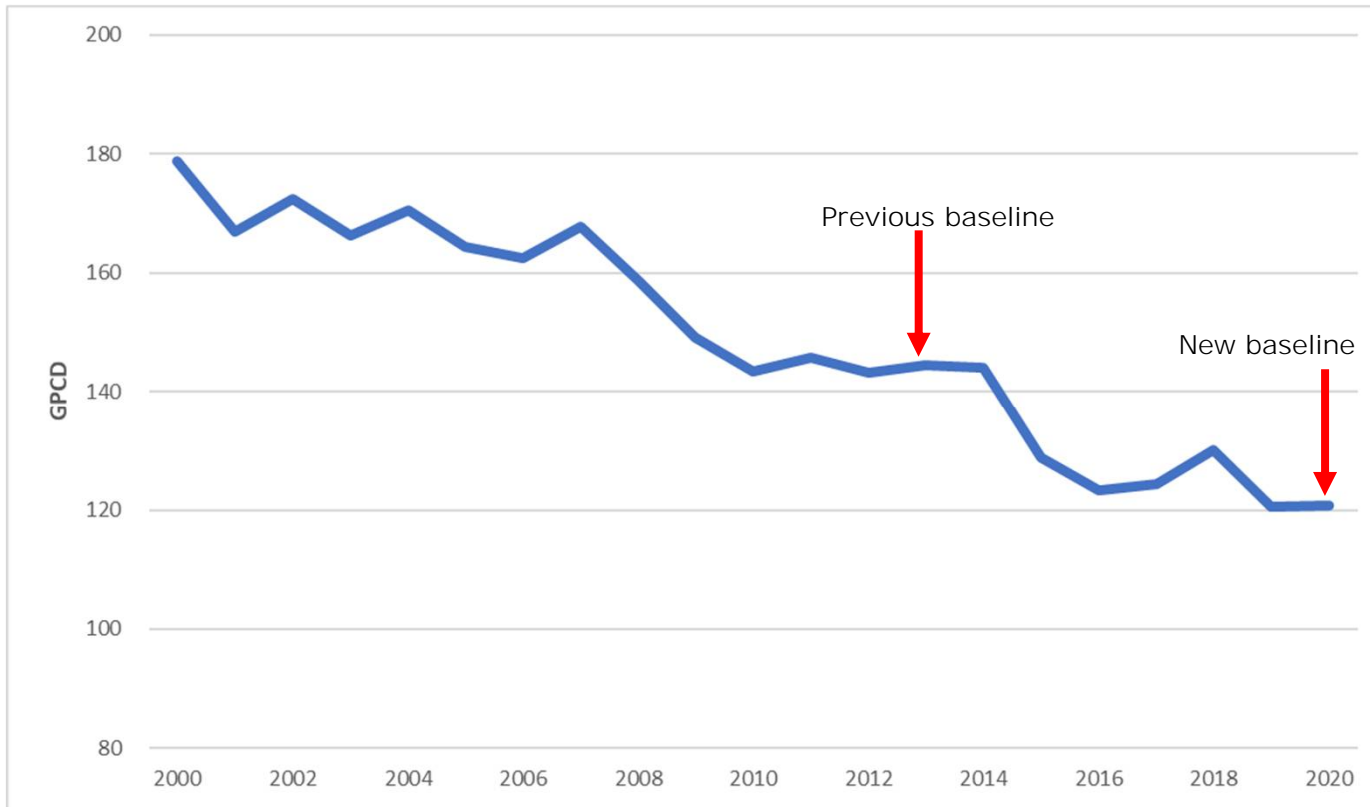
- Water use decreased by 50,000 Acre-Feet
- Decrease of ~30%
- Population increased by 42,000 residents

Indoor and Outdoor Water Use



- Between 2000 and 2020, water use ratio estimated at 70% indoor and 30% outdoor
- Retail Agencies with customers that have larger lots closer to 50:50 indoor to outdoor split

Retail Agency Per Capita Water Use (2000-2020)



- GPCD fell from 179 in 2000 to 120 in 2020
- Represents a 33% reduction in GPCD between 2000 & 2020

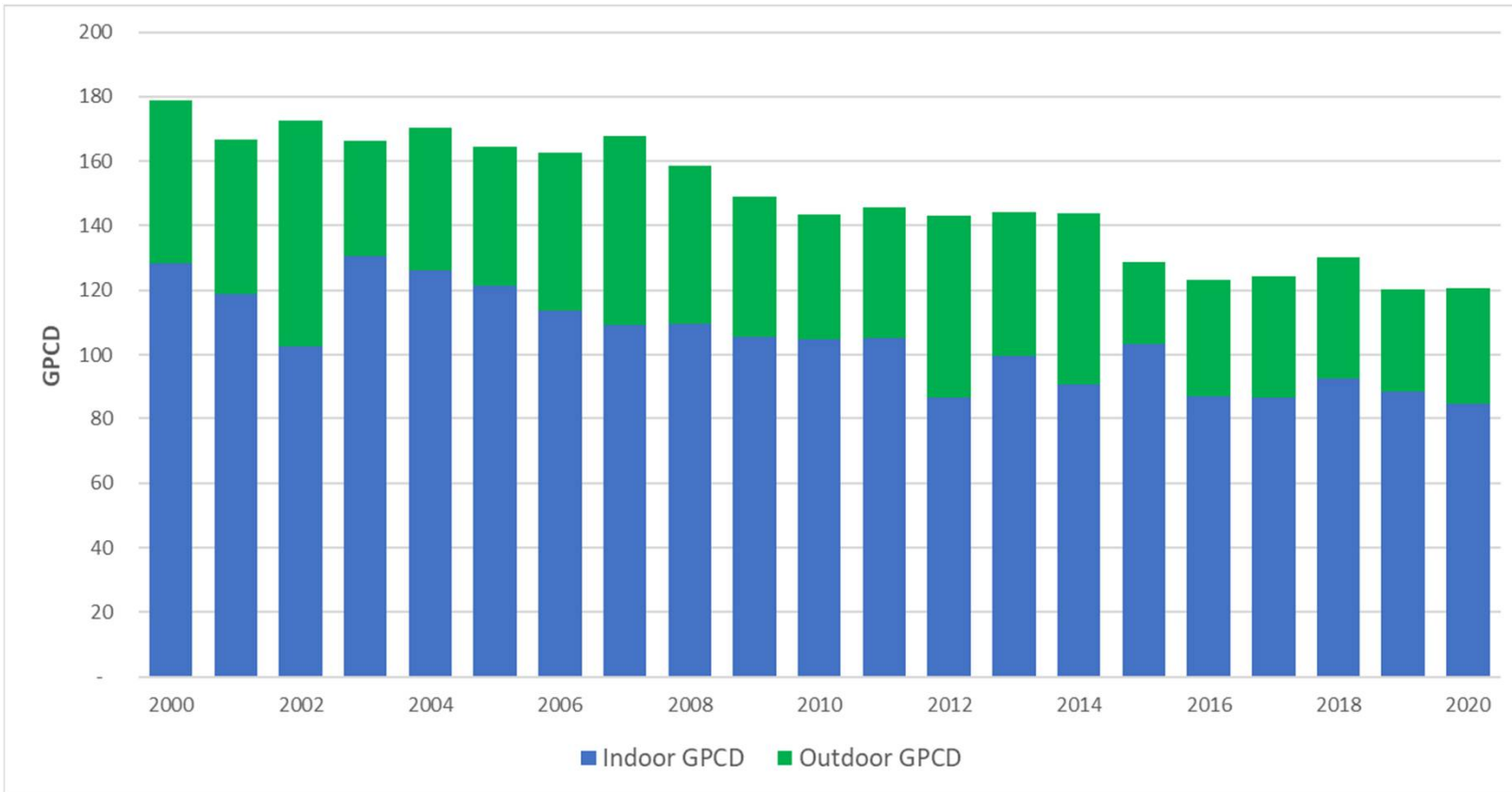
SB 7X-7 (2009)

- Reduce urban per capita water use 20% by 2020
 - Average GPCD in 2009: 149
 - Average GPCD in 2020: 120
- } Approximate Reduction: 19.1%



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Indoor and Outdoor GPCD

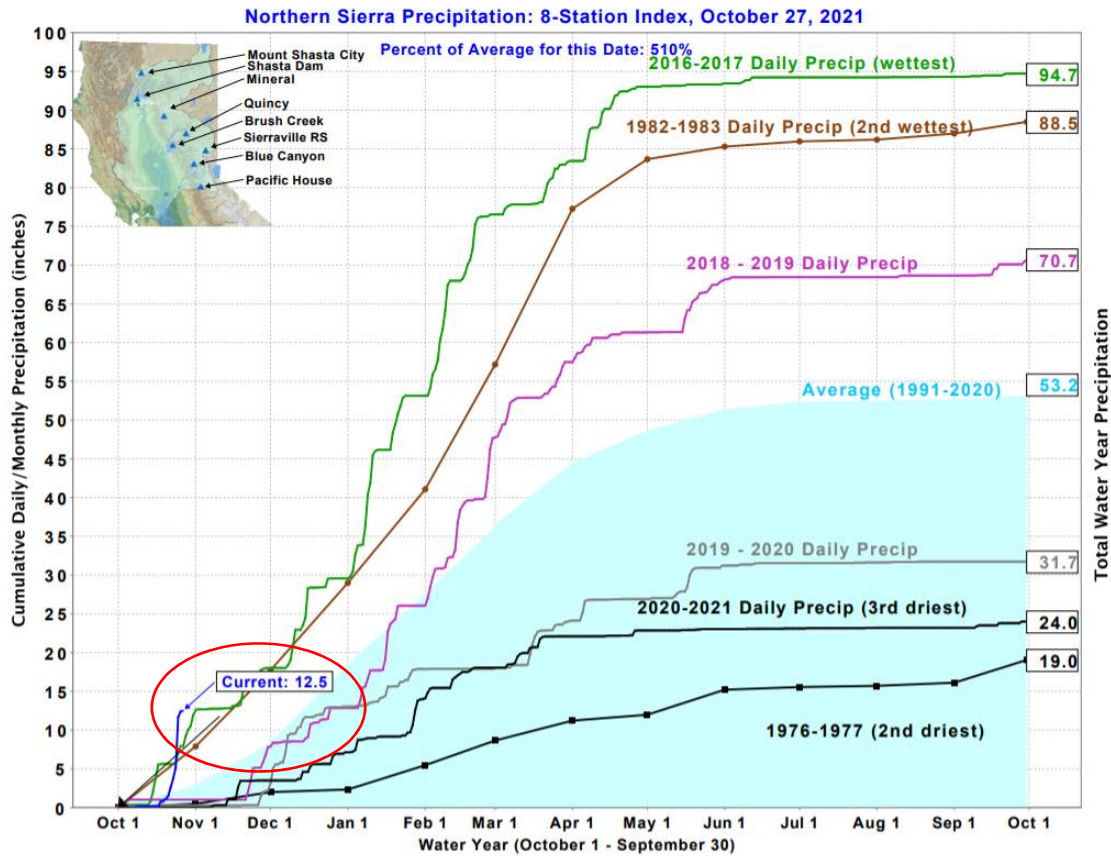


Voluntary Water Use Reductions

- In July, Governor Newsom asked all Californians to reduce water use by 15%
- Mandatory actions under consideration while wet months unfold
- How will sustained conservation successes be treated by State Water Board?



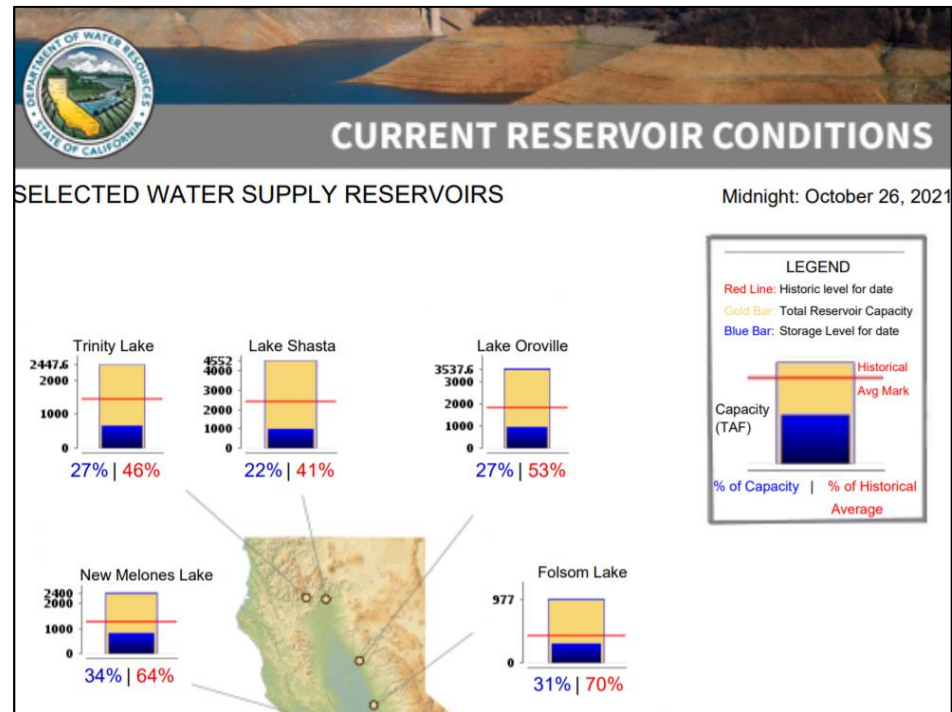
Early Storms Hit Northern California



- “24 hours of rain”
- Most rainfall (5.44”) in 24-hour period in Sacramento since 1880
- 510% of average
- This storm provided half of what was received for the entire 2020-2021 water year

Reservoirs Remain at All-Time Lows

- Dry ground conditions
- Resulted in less runoff into key reservoirs
- More storms will be needed to continue chipping away at historic drought conditions



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State Water Use Reporting

JULY 2021 WATER USE		
Retail Agency	Change from July 2013	Change from July 2020
Cal American	-16%	1%
CWS Dominguez	-24%	-2%
CWS Hermosa Redondo	-13%	-5%
CWS Palos Verdes	-13%	-2%
El Segundo	-16%	20%
GSW Culver City	-16%	2%
GSW Southwest	-14%	-2%
Hawthorne	-14%	-1%
Inglewood	-19%	-10%
LACWWD 29	-10%	4%
Lomita	-17%	-4%
Manhattan Beach	-14%	-2%
Grand Total	-16%	-1%

AUGUST 2021 WATER USE		
Retail Agency	Change from Aug. 2013	Change from Aug. 2020
Cal American	-18%	-6%
CWS Dominguez	-33%	-20%
CWS Hermosa Redondo	-11%	-1%
CWS Palos Verdes	-17%	-4%
El Segundo	32%	72%
GSW Culver City	-18%	0%
GSW Southwest	-15%	-6%
Hawthorne	-16%	-5%
Inglewood	-17%	-2%
LACWWD 29	-11%	1%
Lomita	-20%	-6%
Manhattan Beach	-15%	-2%
Grand Total	-17%	-4%

JULY-AUG. 2021 COMBINED WATER USE		
Retail Agency	Change from 2013	Change from 2020
Cal American	-16%	-3%
CWS Dominguez	-27%	-12%
CWS Hermosa Redondo	-12%	-3%
CWS Palos Verdes	-15%	-4%
El Segundo	13%	55%
GSW Culver City	-17%	1%
GSW Southwest	-14%	-4%
Hawthorne	-16%	-3%
Inglewood	-17%	-7%
LACWWD 29	-11%	3%
Lomita	-17%	-5%
Manhattan Beach	-14%	-2%
Grand Total	-16%	-3%

- Excluding El Segundo numbers results in cumulative reduction of 5% in 2021 vs 2020
- Southern CA cumulative reduction of 2% for July & August 2021

R-GPCD

Retail Agencies	2014	2015	2016	2017	2018	2019	2020	2021
CWS Dominguez	77	67	68	67	69	64	73	76
CWS Hermosa	90	76	73	75	77	75	79	80
CWS PV	225	176	166	182	181	169	190	191
Cal Am	137	118	116	122	130	124	136	134
El Segundo	92	77	77	76	80	75	79	78
GSW Culver City	78	67	67	68	69	65	64	71
GSW Southwest	65	61	59	60	61	58	59	63
Hawthorne	81	67	63	63	65	62	63	60
Inglewood	63	62	65	69	70	64	67	66
Lomita	92	80	79	79	80	76	80	79
LACWWD 29	289	236	236	235	201	180	202	206
Manhattan Beach	95	81	81	83	85	82	85	85
Cumulative West Basin	115	97	96	98	97	91	98	99
South Coast	111	93	102	104	106	101	107	102
Statewide	123	101	113	117	115	114	121	113

- 2021 R-GPCD down 14% compared to previous drought
- West Basin service area retailers consistently lower than Southern CA and Statewide

Savings Needed to Meet Voluntary Water Use Reductions

- 15% SAVINGS TARGET
- Based on combined retail agency water use...about 18,000 Acre-Feet
 - Greater than the combined annual water use of Inglewood, El Segundo, and Lomita
 - Equates to approximately 12,000 AF indoor water use and 6,000 AF outdoor water use
 - May be easier to achieve greater outdoor water use savings
- Based on GPCD (and R-GPCD)...an average of 18 gallons per person per day
 - Some communities a little more, some a little less

On the Horizon

- Water Use Objectives (AB 1668/SB 606)
- Indoor Water Use Standards
 - Proposed legislation to go even further than current standards
- Demand Hardening
- Drought Fatigue
- Simple Actions Can Make the Difference

