Prohibition of Activities, and Mandatory Conservation Actions, in Response to Declared Drought Emergency – Informative Digest (Gov. Code, § 11346.5, subd. (a)(3))

FINDING OF EMERGENCY

The State Water Resources Control Board (State Water Board or Board) finds that an emergency exists due to drought conditions and that adoption of the proposed emergency regulation is necessary to address the emergency. On October 19, 2021, Governor Newsom proclaimed states of emergency that continue today and exist across all the counties of California due to drought conditions. On March 24, 2023, in Executive Order N-5-23, the Governor affirmed that the multi-year nature of the current drought continues to have significant, immediate impacts on communities across California. Immediate action is needed to ensure Californians are taking sufficient actions to conserve water.

Authority for Emergency Regulations

Water Code section 1058.5 grants the State Water Board the authority to adopt emergency regulations in years when the Governor has issued a proclamation of emergency based upon drought conditions or when in response to drought conditions that exist, or are threatened, in a critically dry year immediately preceded by two or more consecutive below normal, dry, or critically dry years. The Board may adopt regulations under such circumstances to "prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, of water, to promote water recycling or water conservation, to require curtailment of diversions when water is not available under the diverter's priority of right, or in furtherance of any of the foregoing, to require reporting of diversion or use or the preparation of monitoring reports."

Emergency regulations adopted under Water Code section 1058.5 may remain in effect for up to one year, unless rescinded earlier or extended by the State Water Board. Per Water Code section 1058.5, subdivision (b), any findings of emergency the Board makes in connection with the adoption of an emergency regulation under the section are not subject to review by the Office of Administrative Law.

The information contained within this informative digest provides, along with the Notice of Proposed Rulemaking, the information necessary to support the State Water Board's emergency rulemaking under Water Code section 1058.5 and meets the emergency regulation criteria of Government Code section 11346.1 and the applicable requirements of section 11346.5.

EVIDENCE OF EMERGENCY

For the past two decades, the southwestern United States has been desiccated by one of

the most severe long-term droughts or “megadroughts” of the last 1,200 years (NOAA 2021). The U.S. Drought Monitor figure below depicts the years of drought conditions throughout the state, including the most recent December 2020 to February 2023 period when 99 to 100 percent of the state of California was experiencing abnormally dry to exceptional drought conditions (NOAA 2023).

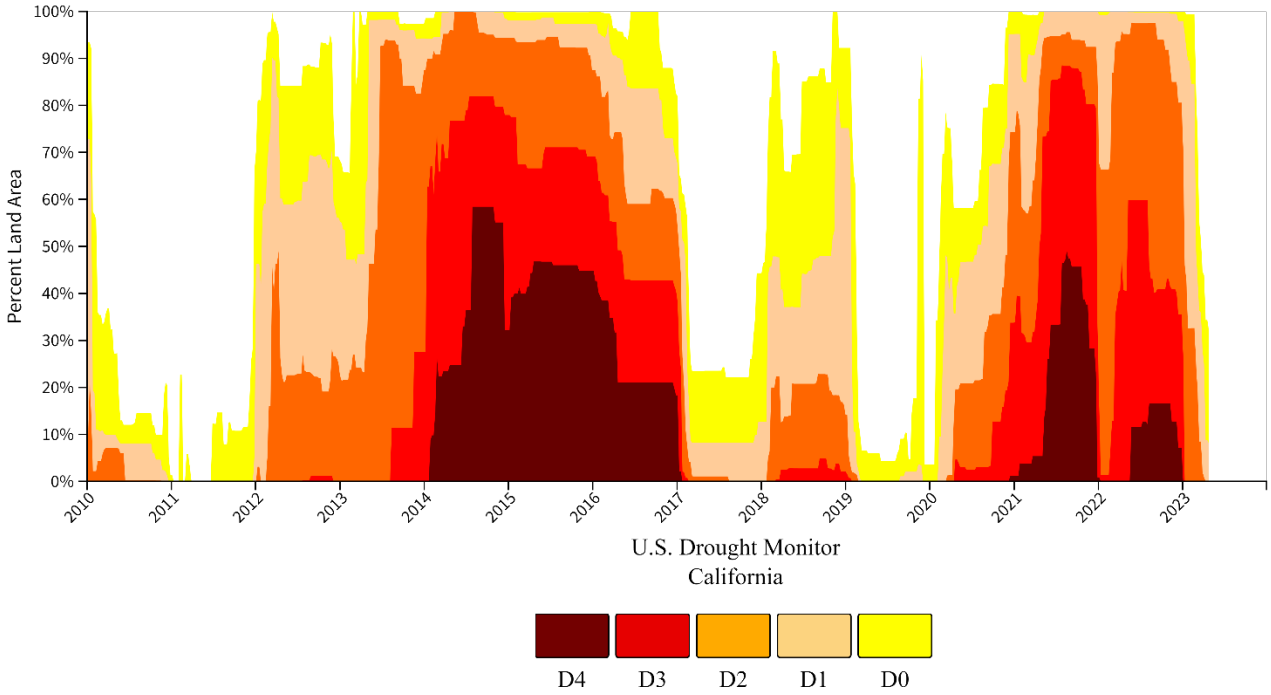

Figure: January 2010 to April 2023 percent of California land in drought conditions, using a five-category system from Abnormally Dry (D0) to Exceptional Drought (D4) conditions (NOAA 2022a)

Historically, California receives about half of its precipitation in the months of December, January, and February, with much of that precipitation falling as snow in the Sierra. A handful of large winter storms can make the difference between a wet year and a dry one. In the past, the snowpack stores water during the winter months and releases it through melting in the spring and summer to replenish rivers and reservoirs and recharge aquifers. However, relatively dry weather conditions in 2021 reduced the amount of snowpack in California’s mountains and the start of 2022 was the driest January-to-March period in California recorded history.

Conditions changed dramatically in many parts of the state from late December 2022 when winter storms helped the snowpack and reservoirs; however, some reservoirs remain a challenge. These include the North Coast, North Lahontan, South Lahontan areas where supplies remain lower than average, and especially for the Colorado River which is below half of average as of March 31, 2023 (see Table 1 below).

Table 1: Summary of Storage in Major Reservoirs

Storage as of March 31, 2023; Report generated: April 19, 2023

Area	Number of Reservoirs	Total Capacity 1000 AF	Hist Ave 1000 AF	2022 1000 AF	2023 1000 AF	% Ave	% Cap
			INTRASTATE				
NORTH COAST	6	3096.2	2228.7	1070.5	1372.8	62	44
SAN FRANCISCO BAY	17	710.7	524.9	450.9	605.3	115	85
CENTRAL COAST	6	982.1	636.7	281.0	798.3	125	81
SOUTH COAST	29	2122.6	1433.2	1082.1	1547.4	108	73
SACRAMENTO	43	16150.8	12012.4	8458.0	12853.2	107	80
SAN JOAQUIN	34	11483.2	7639.4	5704.9	8430.8	110	73
TULARE LAKE	6	2087.5	884.4	640.1	1305.9	148	63
NORTH LAHONTAN	5	1073.3	504.9	289.8	450.4	89	42
SOUTH LAHONTAN	8	411.6	264.3	236.2	157.0	59	38
SUBTOTAL	154	38118.0	26128.9	18213.4	27521.2	105	72
			INTERSTATE				
NORTH COAST	3	1137.1	685.7	419.5	544.1	79	48
COLORADO RIVER (1)	4	52939.0	32801.6	16621.3	15090.9	46	29
SUBTOTAL	7	54076.1	33487.3	17040.8	15635.0	47	29
TOTAL	161	92194.2	59616.1	35254.2	43156.2	72	47

Explanation of notes: 1 - Includes Lake Powell and Lake Mead
Source: DWR 2023a

Groundwater basins also remain a challenge. As of April 30, 2023, 54% of monitoring wells are below normal level. As seen in the figure below, most of these wells are in the Central Valley.

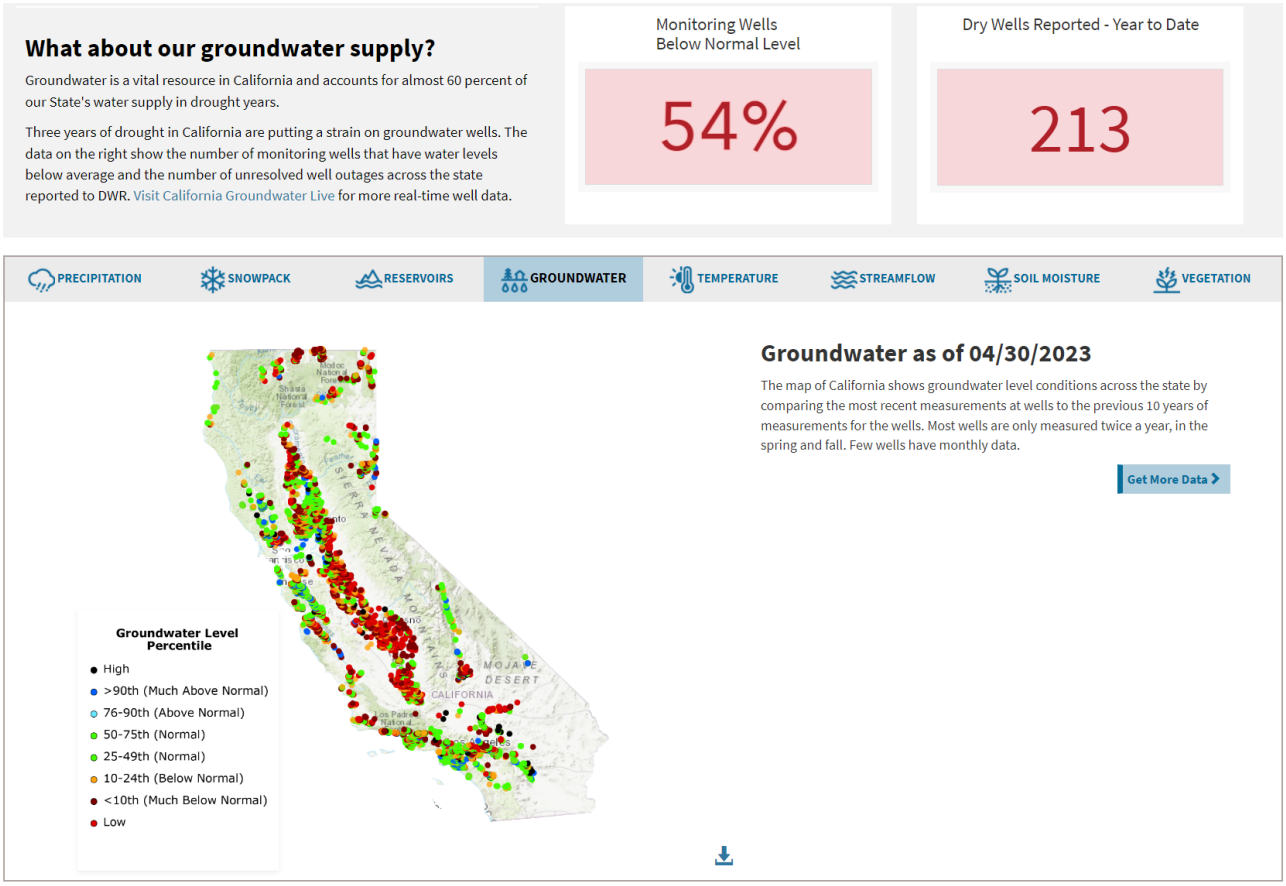

Figure: Groundwater conditions as of 04/30/2023 (California Water Watch screenshot, DWR 2023b)

NEED FOR THE EMERGENCY REGULATION
(Gov. Code, § 11346.5, subd. (a)(1)(C))

It is both reasonable and prudent to preserve water supplies to the maximum extent feasible to provide local agencies with the necessary flexibility to meet the health and safety needs of Californians during the drought emergency. Climate change science indicates that the Southwestern United States are becoming drier, increasing the likelihood of prolonged droughts. In addition, many groundwater basins around the State are in overdraft conditions that will likely worsen due to groundwater pumping. Groundwater basins depleted by years of overpumping, particularly during droughts – will take time to recover. Communities that rely on groundwater continue to need assistance through hauled and bottled water, along with focused state efforts to facilitate the recharge of groundwater aquifers. Maintaining urban water supplies through enhanced conservation will reduce risks to health and safety and reduce negative impacts to the State's economy.

Immediate action is needed to continue water conservation practices that address the ongoing drought emergency. The emergency regulation improves the State Water Board's and local agencies' abilities to quickly and effectively implement and enforce mandatory water conservation measures during the current drought emergency to help

preserve the State's supplies throughout a drought that could worsen over the year.

DESCRIPTION AND EFFECT OF PROPOSED REGULATION

The proposed emergency adoption of California Code of Regulations, title 23, section 996 bans the irrigation of non-functional turf with potable water in commercial, industrial, and institutional (CII) sectors.

This requirement is intended to preserve water supplies. It is both reasonable and prudent to preserve urban water supplies to the maximum extent feasible to provide local agencies with the necessary flexibility to meet the health and safety needs of Californians during the drought emergency. Climate change science indicates that the Southwestern United States are becoming drier, increasing the likelihood of prolonged droughts. In addition, many groundwater basins around the state are already in overdraft conditions that will likely worsen due to groundwater pumping. Should drought conditions worsen, water supply systems will be at risk of depleting supplies, presenting a great risk to the health and safety of the people supplied by those systems. Maintaining urban water supplies through enhanced conservation will reduce the risks to health and safety and reduce negative impacts to the State's economy.

Irrigation of non-functional turf is one of the most discretionary water uses. This ban is necessary to promote water conservation to maintain an adequate supply during the drought emergency, which cannot be done if water is being used in an excessive manner. This ban affects a practice that uses excessive amounts of water or where more efficient and less wasteful alternatives are available.This practice is particularly unreasonable during a drought due to the need to conserve water supplies to meet health and safety needs. Exceptions to meet immediate health and safety concerns or to comply with state or federal permit requirements are available.

Proposed Emergency Regulation Section 996, Subdivision (b)

Proposed section 996, subdivision (b) prohibits the use of potable water for the irrigation of non-functional turf at commercial, industrial, and institutional sites except to the extent necessary to ensure the health of trees and other perennial non-turf plantings or to the extent necessary to address an immediate health and safety need. This section provides a local approval process for exempting low water using turf under certain conditions.

Proposed Emergency Regulation Section 996, Subdivision (c)

Proposed section 996, subdivision (c) specifies the potential penalties for violations of subdivision (b).

Proposed Emergency Regulation Section 996, Subdivision (d)

Proposed section 996, subdivision (d) specifies process for someone issued an order or

decision under this section to seek reconsideration of that order or decision.

Estimation of Water Savings from Proposed Regulation

According to the Department of Water Resource's Water Plan Update 2018, total urban water use between 2011 and 2015 ranged from 7.0 to 8.3 million acre-feet (MAF) per water year. The breakdown of 2015 water year urban use by customer class is provided in Table 2.

Table 2: 2015 Water Year Urban Water Use by Customer Class in Million Acre-Feet (MAF)

Sector	Volume in million acre-feet (MAF)
Large Landscape	1.9
Residential - Exterior	2.4
Residential - Interior	1.3
Commercial and Industrial	0.6
Other	1.9
Total	7.0 (estimated)

Data adapted from DWR 2019a

The non-functional turf irrigation ban in commercial, industrial, and institutional (CII) sectors will contribute to statewide water savings. To estimate statewide CII sector water use for non-functional turf irrigation, the following assumptions can be made. In Table 2, large landscape refers to the amount of water used to irrigate recreational and large landscape areas, such as golf courses, parks, play fields, highway medians, and cemeteries (DWR 2019b). Some large landscape water use can be excluded from the estimation since it includes play fields and other turf areas used for recreation and serving community needs, which are not considered non-functional. Large landscape water use also includes highway medians, which can be excluded from the water savings estimation since California Code of Regulations, title 23, section 995 already applies to irrigation of those areas. Though it includes some outdoor water use for landscape irrigation, a significant amount of CII sector water use is indoor (e.g., process water, cooling towers, etc.). However, many CII properties, such as warehouses, office parks, and government buildings include turf as part of their landscaping, and some of that turf is non-functional. Overall, a conservative estimate is that approximately 20 percent of CII sector water use is for non-functional turf. Therefore, CII non-functional turf irrigation water use can be estimated as below.

$$\text{CII non-functional turf irrigation} = \text{CII total} \times 20\% = 0.12 \text{ MAF}$$

Additional Benefits of the Proposed Regulations

The estimations above do not include various direct and indirect benefits. Staff has determined that additional benefits will be realized should the Board adopt the proposed regulation:

- Reduced water bills for customers that reduce water use (some of these savings will generate additional economic activity, such as investments in drought-tolerant landscaping);
- Increased drought awareness and shared sense of responsibility among urban water users; and
- Reduced potential for severe economic disruption if drought conditions worsen.

These benefits will offset some of the fiscal impacts to water suppliers when benefits and costs are viewed from a statewide perspective. Therefore, these benefits provide additional justification for adopting the proposed regulation.

SUMMARY OF EXISTING LAWS AND REGULATIONS

(Gov. Code, § 11346.5, subd. (a)(1)(A), (B), (D))

Existing law requires urban water suppliers to execute drought pricing or excessive use ordinances during a drought emergency (Wat. Code §§ 365-367). The State Water Board is collecting data on urban water supplier compliance with the statutory requirements. Aside from drought emergency prohibitions adopted by the State Water Board there are currently no statewide prohibitions on individual activities to promote conservation. The proposed regulation is consistent and compatible with existing regulations on this subject. The proposed regulation neither differs from nor conflicts with an existing comparable federal statute or regulation. In June 2022, an emergency regulation (Cal. Code Regs., tit. 23, section 996) to ban watering decorative grass in commercial, industrial, and institutional sectors went into effect. In December 2022, the State Water Board readopted an emergency regulation (Cal. Code Regs., tit. 23, section 995) prohibiting certain water use practices that are particularly wasteful during drought conditions. The proposed revision and readoption of the June 2022 emergency regulation, which will expire in June 2023 without renewal by the Board, is consistent and compatible with existing regulations on this subject. The proposed regulation neither differs from nor conflicts with an existing comparable federal statute or regulation.

FISCAL IMPACT ESTIMATE

Fiscal Analysis Summary

Implementation of the proposed emergency regulation will result in additional workload for the State Water Board, however, this work will be accomplished through redirection of resources within existing budgets. Significant costs or savings for State agencies are

therefore not anticipated.

Water suppliers may be financially impacted through this proposed regulation in the near term. Increased urban water conservation will result in reduced water use by customers, which in turn may result in reduced water sales and lost revenue for urban water suppliers. This loss in revenue will be a function of the amount of water conserved (and therefore not sold) and the unit price for which water would have sold. We expect that suppliers will fully make up for any lost revenues by adjusting their rates to end-customers over time.

Fiscal Impacts to Public Water Supply Agencies

Fiscal impacts to urban water agencies are assumed to result primarily from changes in water sale revenues. Decreased water sale revenues are calculated below by developing a statewide average marginal rate for water and multiplying it by the estimate of water sales reduction potentially resulting from the proposed regulation. Data were compiled from the State Water Board Electronic Annual Report of 2020, which includes information on water rates for over 300 urban water suppliers statewide (SWRCB 2020). The 2020 median rate (variable portion only) ranged from $1.04 per six hundred cubic feet to $2.10 per 24 hundred cubic feet which is equivalent to $518 to $1,052 per acre-foot of water sold.

Urban water suppliers in California are comprised of both governmental agencies and investor-owned utilities (IOUs) that are regulated by the California Public Utilities Commission (CPUC). Costs to IOUs need not be considered for the purposes of estimating the costs of the proposed regulations on local agencies. The CPUC indicates that the IOUs subject to its jurisdiction are “providing water service to about 16 percent of California’s residents” (CPUC 2021). The estimated volume of water used for outdoor irrigation can therefore be reduced by 16 percent for the purpose of determining revenue decrease from the proposed regulation.

The estimated decreased sales revenues are a function of the average marginal water rate and the amount of decreased sales volume due to water savings. Total water savings would be the total CII non-functional irrigation as calculated in the Estimation of Water Savings from Proposed Regulation section. Decreased sales revenue as a result of the proposed regulation is estimated below.

Average statewide water rate:
$518 to $1,052 per acre-foot of water sold
Estimated water savings from proposed regulation minus IOUs:
0.12 MAF - (16% × 0.12 MAF) = 0.1008 MAF = 100,800 acre-feet
Total estimated revenue decrease:
Minimum of range: $518 × 100,800 acre-feet = $52 million
Maximum of range: $1,052 × 100,800 acre-feet = $106 million
Median of range (using significant figures): $80 million

This methodology likely overstates the fiscal impact of decreased revenues for several reasons. First, it does not account for the savings in energy and chemical costs water suppliers will realize due to decreased water production. Second, it does not account for the present value of the longer-term avoided cost of supply augmentation that could be necessary if not for any long-term shifts in water use that could be generated by the proposed regulation.

REFERENCES

California Governor Newsom (2021) Proclamation of a State of Emergency dated October 19, 2022 https://www.gov.ca.gov/wp-content/uploads/2021/10/10.19.21-Drought-SOE-1.pdf

California Governor Newsom (2023) Executive Order N-5-23 dated March 24, 2023 https://www.gov.ca.gov/wp-content/uploads/2023/03/3.24.23-Drought-update-executive-order.pdf

CPUC (2021) Water Division, California Public Utilities Commission, accessed November 16, 2021 https://web.archive.org/web/20211116223945/https://www.cpuc.ca.gov/about-cpuc/divisions/water-division

DWR (2019a) California Water Plan Update 2018, California Department of Water Resources https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2018/Final/California-Water-Plan-Update-2018.pdf

DWR (2019b) California Water Plan Update 2018: Supporting Documentation for Water Portfolios (April 2019), California Department of Water Resources https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2018/Final/SupportingDocs/Water-Portfolios-and-Balances.pdf

DWR (2023a) Summary of Storage in Major Reservoirs, Storage as of March 31, 2023, California Department of Water Resources https://cdec.water.ca.gov/reportapp/javareports?name=STORSUM.202303

DWR (2023b) California Water Watch, California Department of Water Resources, accessed on March 4, 2023 https://cww.water.ca.gov

NOAA (2021) Study: Dry Future Likely Unavoidable for Southwest, But Reducing Greenhouse Gases Can Still Help, Climate Program Office News, National Oceanic and Atmospheric Administration https://cpo.noaa.gov/News/ArtMID/7875/ArticleID/2366/Study-Dry-future-likely-unavoidable-for-Southwest-but-reducing-greenhouse-gases-can-still-help

NOAA (2023) California Drought.gov, National Oceanic and Atmospheric Administration and National Integrated Drought Information System https://www.drought.gov/states/California

SWRCB (2022) Electronic Annual Report (EAR) Data from Public Drinking Water Systems https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/eardata.html