

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 severe drought conditions and that adoption of the proposed emergency regulation is necessary to address the emergency. On April 12, 2021, May 10, 2021, July 8, 2021, and October 19, 2021, Governor Newsom proclaimed states of emergency that continue today and exist across all the counties of California due to extreme and expanding drought conditions. Early rains in October and December 2021 gave way to the driest January, February, and March in recorded history for the watersheds that provide much of California's water supply. On March 28, 2022, in Executive Order N-7-22, the Governor affirmed that the orders and provisions contained in the four Proclamations from 2021 remain in full force and effect, except as modified by those Proclamations, and called on all Californians to reduce water use, directing State agencies to take certain water conservation actions. Immediate action is needed to ensure water suppliers and all Californians are taking sufficient actions to conserve water and preserve the State's water supply.

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Emergency regulations adopted under Water Code section 1058.5 may remain in effect for up to one year, unless rescinded earlier or extended by the State Water Board.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). As of October 18, 2022, the U.S. Drought Monitor has classified 99 to 100 percent of the state of California as experiencing abnormally dry to exceptional drought conditions since December 2020 (NOAA 2022a).

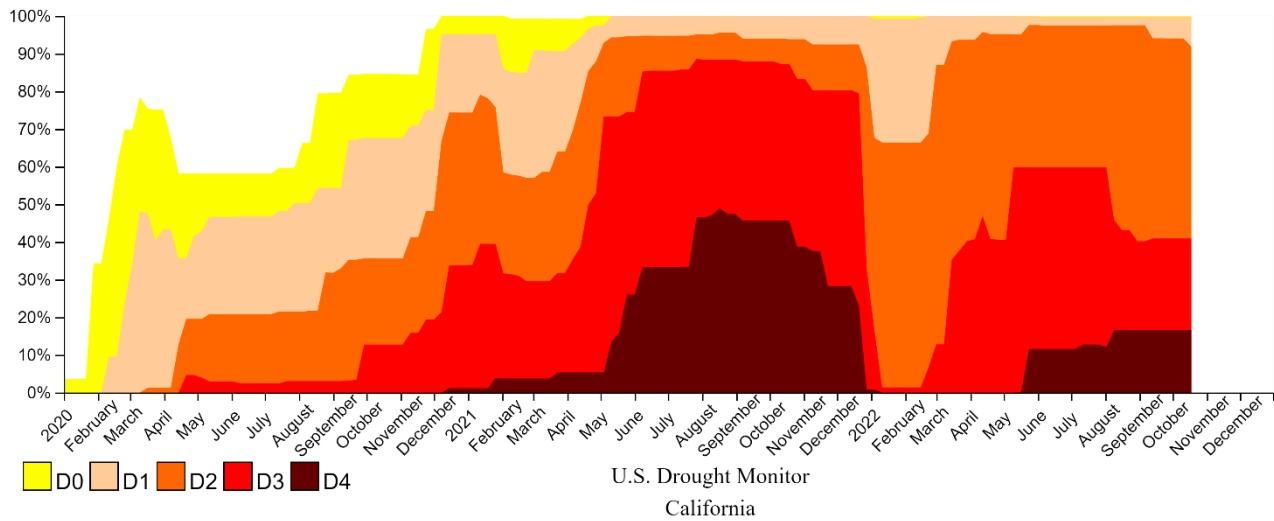


Figure: January 2020 to October 2022 percent of California land in drought conditions, using a five-category system from Abnormally Dry (D0) to Exceptional Drought (D4) conditions (NOAA 2022a)

In most years, 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 normal years, 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. Due to these drought conditions, storage in California’s reservoirs is below average levels, at 54 percent of historical average for the state at the end of September 2022 (DWR 2022).

Table 1: California Storage as of September 30, 2022

Drainage Area	Number of reservoirs	Total capacity 1000 ac-ft	Historical average 1000 ac-ft	2021 1000 ac-ft	2022 1000 ac-ft	Percent of average	Percent of capacity
Intrastate							
North Coast	6	3096.2	1817.7	872.8	755.0	42	24
San Francisco Bay	17	714.5	441.6	355.4	421.7	95	59
Central Coast	6	982.1	482.9	197.6	168.9	35	17
South Coast	29	2122.6	1310.0	981.9	714.0	55	34
Sacramento	43	16150.8	9403.7	5434.0	6908.4	73	43
San Joaquin	34	11483.2	6433.4	4234.0	4654.4	72	41
Tulare Lake	6	2087.5	610.0	366.0	322.9	53	15
North Lahontan	5	1073.3	467.0	144.9	179.4	38	17
South Lahontan	8	411.6	263.0	210.5	75.8	29	18
Subtotal	154	38121.9	21229.3	12797.1	14200.5	67	37
North Coast	3	1137.1	329.4	230.7	218.1	66	19
Colorado River*	4	52939.0	33220.9	18455.1	15317.1	46	29
Subtotal	7	54076.1	33550.3	18685.8	15535.2	46	29
Total	161	92198.0	54779.6	31482.9	29735.7	54	32

*Includes Lake Powell and Lake Mead

Source: DWR 2022

According to the National Oceanic and Atmospheric Administration (NOAA) California-Nevada Drought Status Update on October 18, 2022 (NOAA 2022b):

- Water Year 2022 started wet with a strong atmospheric river and ended in continued drought due to almost no precipitation during January through March.
- The past 3 Water Years have been the driest in the California record. Both California and Nevada remain in almost 100% moderate-to-exceptional drought.
- Both evaporative demand and lack of precipitation are drivers of the current drought since it began in October of 2019. Water Year 2022 had much lower evaporative demand than Water Year 2021, which limited the drying of the landscapes and helped mitigate fire risk.
- Drought impacts (e.g., pasture conditions, ecosystem health, water supply, recreation, fire potential) have intensified and expanded given back-to-back dry years. Drought preparedness is key.
- A ‘three-peat’ La Niña winter is forecasted for Water Year 2023, suggesting continued dry conditions in southern regions of California and Nevada. Extended range forecasts indicate the first atmospheric river of the Water Year will hit the west coast in the next 7 days.

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

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likelihood of prolonged droughts. In addition, drought conditions have forced the State Water Board to curtail surface water diversions, and many groundwater basins around the State are in overdraft conditions that will likely worsen due to groundwater pumping. Many water supply systems face a present or threatened risk of inadequate supply. As drought conditions persist through this and possibly the following year, more 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 risks to health and safety and reduce negative impacts to the State's economy.

Immediate action is needed to effectively increase water conservation so that remaining supplies are maintained to address the ongoing drought emergency. Current voluntary conservation goals established by many urban water suppliers will not provide for timely and effective attainment of the State's conservation needs, which include the maintenance of remaining supplies. Without adequate reserves, water suppliers will be at risk of greater and potentially avoidable impacts. 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 last beyond this year.

DESCRIPTION AND EFFECT OF PROPOSED REGULATION

The proposed emergency adoption of California Code of Regulations, title 23, section 995 directs individuals statewide to refrain from engaging in certain wasteful activities in order to promote conservation to meet the drought emergency and prohibits homeowners' associations, cities, and counties from imposing penalties against homeowners for their actions in response to a declared drought emergency.

These requirements are intended to preserve urban 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. California has been subject to multi-year droughts in the past and there is no guarantee that precipitation this winter will lift the State out of the current drought conditions. Moreover, climate change science indicates that the Southwestern United States are becoming drier, increasing the likelihood of prolonged droughts. In addition, drought conditions have already forced the State Water Board to curtail surface water diversions, and many groundwater basins around the state are already in overdraft conditions that will likely worsen due to groundwater pumping. Many water supply systems face a present or threatened risk of inadequate supply. Should drought conditions persist into 2023, more water supply systems will be at risk of depleting supplies, presenting a great risk to the health and safety of the people supplied

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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.

Each of the specific prohibitions 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 or wasteful manner. These prohibitions affect practices that use excessive amounts of water or where more efficient and less wasteful alternatives are available. These practices are particularly unreasonable during a drought due to the need to conserve limited 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, however.

Proposed Emergency Regulation Section 995, Subdivision (b)

Proposed section 995, subdivision (b) prohibits several activities to promote conservation, except where necessary to address an immediate health and safety need. The section prohibits the application of water to outdoor landscapes in a manner that causes visible runoff, the use of a hose to wash an automobile except where the hose is equipped with a shut-off nozzle, the application of water to hardscapes, the use of potable water in non-recirculating ornamental fountains, the application of water to irrigate turf and ornamental landscapes during and within 48 hours after measurable rainfall of at least one fourth of one inch of rain, and the use of potable water for irrigation of turf on public street medians or publicly owned or maintained landscaped areas between the street and sidewalk.

A prohibition on runoff of outdoor irrigation water is necessary to promote water conservation to address the drought emergency. Irrigating residential, commercial, industrial, and recreational landscapes to the point of visible runoff is an excessive use of water and more efficient alternatives are available. This practice depletes water supplies, whose maintenance is critical during a drought for health, safety, and, in some cases, operational flexibility. Runoff enters the storm drain system or evaporates, and does not provide for domestic use, sanitation, or fire protection, which are the primary needs that public water supply distributors must meet during drought periods. (Wat. Code, § 354.)

A prohibition on vehicle washing with a running hose (a hose that is not equipped with a shut-off nozzle) promotes water conservation to address the drought emergency through the use of more efficient and effective washing techniques and options. Washing cars at commercial car wash establishments—which are widely distributed throughout the state—or manual washing with a small amount of water in a bucket or with a hose equipped with a shut-off nozzle are efficient and reasonable techniques for those with a need to wash vehicles.

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A prohibition on washing hardscapes, such as driveways, sidewalks, and asphalt, with potable water promotes water conservation to address the drought emergency by encouraging the use of more efficient and effective cleaning methods for hardscapes. For example, many hardscapes can be cleaned with a broom, thus conserving water for other uses during a time of extreme scarcity.

A prohibition on the use of potable water without recirculation pumps for fountains and other decorative water fixtures promotes water conservation to address the drought emergency through saving water that would evaporate, leak, or not be reused. In addition, ornamental water fixtures do not provide for domestic use, sanitation, or fire protection, and therefore do not promote a use of paramount importance during the drought emergency.

Proposed Emergency Regulation Section 995, Subdivision (c)

Proposed section 995, subdivision (c) prohibits homeowners' associations, community service organizations, and similar entities from imposing or threatening to impose penalties for reducing watering of lawns or from requiring owners to reverse or remove landscaping measures in response to a declared drought emergency.

Proposed Emergency Regulation Section 995, Subdivision (d)

Proposed section 995, subdivision (d) prohibits any city, county, or city and county, from imposing a fine under any local maintenance ordinance or other relevant ordinance as prohibited by section 8627.7 of the Government Code.

Proposed Emergency Regulation Section 995, Subdivision (e)

Proposed section 995, subdivision (e) specifies the potential penalties for violations of subdivisions (b), (c) and (d).

Proposed Emergency Regulation Section 995, Subdivision (f)

Proposed section 995, subdivision (f) 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 2019

Outdoor irrigation represents approximately 40 percent of the total urban water use (1.9 MAF for residential exterior and 0.7 MAF for large landscapes, adding to 2.6 MAF of total urban outdoor irrigation). The proposed regulation prohibiting visible runoff affects the 40 percent of statewide urban use dedicated to outdoor irrigation.

Many California urban water suppliers are already implementing water conservation measures commensurate with those required by the proposed regulations and therefore conservation savings attained by their customers are not attributable to the proposed regulations.

The State Water Board August 2022 Urban Water Supplier Monthly Report data indicate that at least 294 water suppliers have already implemented a combination of at least three water use restrictions, including those on excessive irrigation of outdoor landscapes, washing motor vehicles with a hose not fitted with a shut-off nozzle, application of potable water directly to driveways or sidewalks, use of potable water in decorative water features, and application of water to irrigate turf and ornamental landscapes during and within 48 hours after rainfall (SWRCB 2022). Therefore, these 294 urban water suppliers are already implementing conservation measures that are commensurate with the requirements of the proposed emergency regulation. These 294 urban water suppliers represent approximately 32 million retail customers, which accounts for approximately 94 percent of the survey response by retail population. Based upon these assumptions, 6 percent of urban water use would be affected by adoption of the proposed regulations.

Various studies have analyzed the response of urban populations to mandatory use restrictions imposed during drought conditions. Multiple studies conclude that mandatory use restrictions are more effective than voluntary conservation measures because areas that have imposed mandatory use restrictions have achieved greater use reductions than areas that imposed only voluntary measures, controlling for other variables.

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The amount of conservation achievable through mandatory restrictions varies. For example, a study conducted on the effects of water demand management policies of eight California water agencies during the period from 1989-1996, which included 3 years of drought (1989-1991), found that rationing and use restrictions were correlated with use reductions of 19 percent and 29 percent, respectively. The study's authors concluded: "In general, relatively moderate (5-15%) reductions in aggregate demand can be achieved through modest price increases and 'voluntary' alternative [demand-side management] policy instruments, such as public information campaigns. However, to achieve larger reductions in demand (greater than 15%), policymakers will likely need to consider either relatively large price increases, more stringent mandatory policy instruments (such as use restrictions), or a package of policy instruments" (Dixon et al 1996).

A study from UCLA on use reductions in Los Angeles during the 2007-2009 drought reached similar conclusions: "Our results indicate that mandatory restrictions are most effective at reducing water consumption for [single-family residential] households. The greatest impact of measures resulted from the combination of mandatory watering restrictions and the price increase, which led to a water reduction of 23% in July/August 2009, while voluntary restrictions led to only a 6% reduction in water use" (Mini 2013). In addition, a study of Virginia's severe 2002 drought found that mandatory use restrictions coupled with an aggressive information and enforcement campaign led to a 22 percent reduction in use (Halich & Stephenson 2006).

During the 2014 California drought emergency, Californians reduced their water use by 25.5 percent six months after emergency regulations took effect (CNRA 2021). Many communities, however, have permanently banned some of the wasteful water uses the State Water Board prohibited under the emergency regulations. Years later, water use rates remain low, suggesting that some savings may have been locked in over the long-term (CNRA 2021). This also suggests that future savings of similar emergency regulations may be more modest.

On July 8, 2021, Governor Newsom signed Executive Order N-10-21 calling on Californians to voluntarily reduce water use by 15 percent compared to 2020 to protect water reserves and complement local conservation mandates. On October 19, 2021, Governor Newsom signed a Proclamation extending the drought emergency statewide and further urging Californians to step up their water conservation efforts. The proposed regulations supplement the voluntary reductions called for by the Governor. Given current water reductions attributable to the Governor's proclamations since July 2021, the Board anticipates modest reductions of up to 5 percent in outdoor water use as a result of the proposed regulations, totaling 0.01 million acre-feet (MAF), as calculated below.

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Total urban water use for outdoor irrigation: 2.6 MAF

Urban water use for outdoor irrigation affected by the proposed regulations:

$$2.6 \times 0.06 = 0.16 \text{ MAF}$$

Estimated conservation savings from adoption of the proposed regulations:

$$0.16 \times 0.05 = 0.01 \text{ MAF}$$

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 regulations:

- 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 in 2023 if it is another dry year.

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 January 2022, the State Water Board adopted an emergency regulation (section 995) prohibiting certain water use practices that are particularly wasteful during drought conditions. In May 2022, the State Water Board adopted an emergency regulation (section 996) that banned watering decorative grass in commercial, industrial, and institutional sectors and required urban water suppliers to implement Level 2 demand reduction actions. The proposed readoption of the January 2022 emergency regulation, which will expire in January 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 regulations will result in additional workload for the State Water Board, however, this work will be accomplished through redirection of resources within existing agency budgets. Significant costs or saving 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.

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 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. 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 organization is “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 has been estimated and shown in the section above titled Estimation of Water Savings from Proposed Regulation. Decreased sales revenue as a result of the proposed regulation is estimated below.

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Average statewide water rate:

\$518 to \$1,052 per acre-foot of water sold

Estimated water savings from proposed regulation minus IOUs:

0.01 MAF - (16% x 0.01 MAF) = 0.0084 MAF = 8,400 acre-feet

Total estimated revenue decrease:

Minimum of range: \$518 × 8,400 acre-feet = \$4.4 million

Maximum of range: \$1,052 × 8,400 acre-feet = \$8.8 million

Median of range: \$7 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 regulations.

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