

Emergency Regulations Digest (Gov. Code, § 11346.1, subd. (b))

Prohibition of Activities, and Mandatory Conservation Actions, In Response to Declared Drought Emergency – Informative Digest (Emergency Regulation Digest (Gov. Code, § 11346.1, subd. (b)))

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Emergency regulations adopted under Water Code section 1058.5 may remain in effect for up to one year, unless rescinded earlier or extended by the State Water Board.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.

Government Code section 11346.1, subdivision (a)(2) requires that, at least five working days prior to submission of the proposed emergency action to the Office of Administrative Law, the adopting agency provide a notice of the proposed emergency action to every

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person who has filed a request for notice of regulatory action with the agency. After submission of the proposed emergency regulations to the Office of Administrative Law, the Office of Administrative Law shall allow interested persons five calendar days to submit comments on the proposed emergency regulations as set forth in Government Code Section 11349.6.

The information contained within this finding of emergency provides 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 May 5, 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 2022).

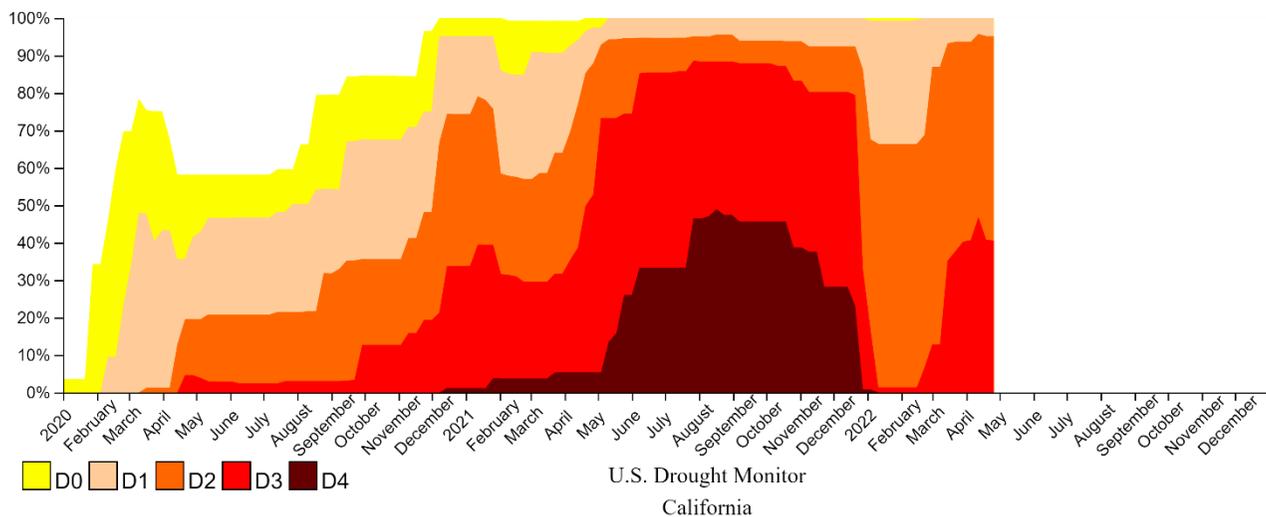


Figure: January 2020 to April 2022 percent of California land in drought conditions, using a five-category system from Abnormally Dry (D0) to Exceptional Drought (D4) conditions (NOAA 2022)

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

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January-to-March period in California recorded history. Due to these drought conditions, storage in California’s reservoirs is below average levels, at 59 percent of historical average for the state at the end of March 2022 (DWR 2022).

Table 1: California Storage as of March 31, 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
<i>Intrastate</i>							
North Coast	6	3096.2	2228.7	1549.5	1070.5	48	35
San Francisco Bay	17	714.5	524.9	393.8	450.9	86	63
Central Coast	6	982.1	636.7	388.2	281.0	44	29
South Coast	29	2122.6	1433.2	1242.8	1082.1	75	51
Sacramento	43	16150.8	12012.4	8332.7	8458.0	70	52
San Joaquin	34	11483.2	7639.4	6377.8	5704.9	75	50
Tulare Lake	6	2087.5	884.4	490.4	640.1	72	31
North Lahontan	5	1073.3	504.9	418.9	289.8	57	27
South Lahontan	8	411.6	264.3	264.7	236.2	89	57
Subtotal	154	38121.9	26128.9	19458.7	18213.4	70	48
<i>Interstate</i>							
North Coast	3	1137.1	685.7	487.3	419.5	61	37
Colorado River*	4	52939.0	32801.6	21481.9	16621.3	51	31
Subtotal	7	54076.1	33487.3	21969.2	17040.8	51	32
Total	161	92198.0	59616.1	41427.9	35254.2	59	38

*Includes Lake Powell and Lake Mead
Source: DWR 2022

Need for the Regulation

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, drought conditions have 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 this summer. 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

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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 2022.

Description and Effect of Proposed Regulation

The proposed regulation requires urban water suppliers to submit preliminary supply and demand assessments to the Department of Water Resources by June 1, 2022 and to implement Level 2 demand reduction actions, with limited exceptions, or similar model actions for those suppliers that have not adopted water shortage contingency plans, by June 10, 2022; it also bans the irrigation of non-functional turf with potable water in commercial, industrial, and institutional (CII) sectors.

Each of the proposed regulation’s requirements are necessary to promote water conservation in support of maintaining supplies during the drought emergency, which cannot be done if water is being used in an excessive or wasteful manner. These requirements generally affect the most discretionary water uses and water use practices. Exceptions to meet immediate health and safety concerns or to comply with state or federal permit requirements are, however, available.

In most cases, the requirements trigger actions identified by each water supplier for responding to drought conditions. The regulation leverages local water shortage planning efforts by requiring implementation of each water supplier’s own plans they have developed for their unique service areas.

Estimation of Water Savings from Proposed Regulation

According to the State Water Board’s Electronic Annual Report data, total urban water use between 2017 and 2019 ranged from 5.4 to 5.6 million acre-feet (MAF) per year. Three-year average volumes by water use category are provided in Table 2.

Table 2: 2017-2019 Average Annual Urban Water Use

Sector	Volume in million acre-feet (MAF)
Residential	3.4
Commercial, industrial, institutional (CII)	1.2
Large landscape	0.5
Water loss and other	0.4
Total	5.5

Data adapted from SWRCB 2022a

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The proposed emergency regulation's Level 2 demand reduction action implementation requirements are expected to save a portion of total urban water use. Water suppliers developed these actions in their Water Shortage Contingency Plans, if they submitted one to the Department of Water Resources. Over 200 water suppliers have not invoked Level 2 or higher, according to the State Water Board February 2022 Urban Water Supplier Monthly Report data. These suppliers represent approximately 18 million retail customers, which account for approximately half of the survey responses by retail population. Based on these assumptions and the types of actions contained in Level 2 of many water shortage contingency plans, the Board has assumed that up to 50 percent of urban water use could be affected.

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.

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

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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. Given historical response to mandatory use restrictions and the diversity of demand reduction actions across water suppliers, the Board anticipates a reduction of 15 percent in urban water use relative to use in the recent past (averaged in Table 2) as a result of the proposed regulation.

The non-functional turf irrigation ban in 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, 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.

$$\text{CII non-functional turf irrigation} = 20\% \times \text{CII} = 0.2 \text{ MAF}$$

$$\text{Total water use minus CII non-functional turf irrigation} = 5.5 - 0.2 = 5.3 \text{ MAF}$$

The ban on CII non-functional turf irrigation as a specific prohibition is expected to result in 100 percent response. Table 3 summarizes percent and volumes of water savings by the requirements of the proposed emergency regulation, considering the estimations and assumptions discussed above.

Table 3: Summary of estimated water savings

Proposed requirement	Water use category		Water use volume	Percent savings by population not in Level 2 or higher	Percent savings by expected response	Total water savings by volume
Level 2 demand reduction action implementation	Total water use minus CII non-functional turf irrigation		5.3 MAF	50%	15%	0.4 MAF
Non-functional turf irrigation ban in CII sectors	CII non-functional turf irrigation		0.2 MAF		100%	0.2 MAF
	Total					0.6 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 2022 and 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.

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INFORMATIVE DIGEST

Summary of Existing Laws and Regulations

Existing law requires urban water suppliers to execute drought pricing or excessive use ordinances during a drought emergency (Water Code 365-367), and pursuant to Water Code section 10632 every urban water supplier is required to prepare and adopt a water shortage contingency plan as part of its urban water management plan. The State Water Board is collecting data on urban water supplier compliance with the statutory requirements. In January 2022, the State Water Board adopted an emergency regulation prohibiting certain water use practices that are particularly wasteful during drought conditions, however, there currently are no other 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.

Description and Effect of Proposed Regulations

The proposed emergency adoption of California Code of Regulations, title 23, section 996 directs urban water suppliers to submit a preliminary annual water supply and demand assessment consistent with section 10632.1 and to all implement demand reduction actions, with limited exceptions, identified in Level 2 of their water shortage contingency plans. Additionally, section 996 identifies and requires model actions to be taken by urban water suppliers that have not yet adopted water shortage contingency plans (and those suppliers with existing low residential water use levels and currently strong local supply situations) and prohibits the use of potable water for the irrigation of non-functional turf at commercial, industrial, and institutional sites.

Proposed Emergency Regulation Section 996, Subdivision (b)

Proposed section 996, subdivision (b) requires that urban water suppliers submit a preliminary annual water supply and demand assessment consistent with section 10632.1, and then submit a final annual water supply and demand assessment to the Department of Water Resources no later than the deadline set by section 10632.1 of the Water Code.

Proposed Emergency Regulation Section 996, Subdivision (c)

Proposed section 996, subdivision (c) requires every urban water supplier that has a

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water shortage contingency plan in place to implement at a minimum all demand reduction actions identified in their water shortage contingency plan for a shortage level of ten to twenty percent (Level 2), except that suppliers are not required to implement new residential connection moratoria pursuant to this regulation. A supplier may choose to implement the model demand reduction actions identified in subdivision (d) if: its annual water supply and demand assessment demonstrates an ability to maintain a reliable supply through September 30, 2023; the supplier does not rely on, for any part of its supply, the Colorado River, State Water Project, or Central Valley Project, and no more than ten percent of its supply comes from critically overdrafted groundwater basins; and the supplier's average number of gallons of water used per person per day by residential customers for the year 2020 is below 55 gallons, as reported to the Board in the Electronic Annual Report.

Proposed Emergency Regulation Section 996, Subdivision (d)

Proposed section 996, subdivision (d) requires every urban water supplier that does not have a water shortage contingency plan in place to implement at a minimum identified model demand reduction actions.

Proposed Emergency Regulation Section 996, Subdivision (e)

Proposed section 996, subdivision (e) 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 (f)

Proposed section 996, subdivision (f) specifies the potential penalties for violations of subdivision (e).

Proposed Emergency Regulation Section 996, Subdivision (g)

Proposed section 996, subdivision (g) specifies process for someone issued an order or decision under this section to seek reconsideration of that order or decision.

Authority and Reference Citations

For Section 996

Authority: Wat. Code, § 1058.5.

References: Article X, Section 2, California Constitution; Sections 4080, 4100, 4110, and 4185, Civil Code; Section 8627.7, Government Code; Sections 102, 104, 105, 275, 350, 377, 491, 1122, 10608.12, 10617, 10632, and 10632.1, Water Code; *Light v. State Water Resources Control Board* (2014) 226 Cal.App.4th 1463; *Stanford Vina Ranch Irrigation Co. v. State of California*

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(2020) 50 Cal.App.5th 976.

Mandate on Local Agencies or School Districts

The State Water Resources Control Board has determined that adoption of section 996 does not impose a new mandate on local agencies or school districts. The sections are generally applicable law.

The State Water Resources Control Board has further determined that adoption of proposed section 996 does not impose a new mandate on local agencies or school districts, because the local agencies affected by the section have the authority to levy service charges, fees, or assessments sufficient to pay for the mandate program or increased level of service. (See Gov. Code, § 17556.)

Suspension of California Environmental Quality Act

On March 28, 2022, the Governor issued an executive order addressing the drought emergency, which, among other things, suspended the California Environmental Quality Act (CEQA) as applied to the State Water Resources Control Board's adoption of this emergency regulation.

Fiscal Impact Estimate

Analysis Summary

For state agencies, implementation of the proposed emergency regulation will result in additional workload of state agency employees, such as the State Water Board and the Department of Water Resources, however it is expected that this work will be accomplished through redirection of resources within existing budgets with no new personnel hires. Increased personnel costs across organizations as well as significant costs or saving for state agencies specifically 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. Level 2 demand reduction actions often include increased communication efforts as listed in the model actions required by the proposed regulation for urban water suppliers that have not adopted water shortage contingency plans; this would increase communication costs for those suppliers. The requirement for a preliminary supply and demand assessment is expected to have little to no fiscal impact on water suppliers, since only a preliminary draft is required by June 1, 2022 and water suppliers are already expected to have the

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final assessment prepared to meet the existing deadline of July 1, 2022. Below is a summary of the fiscal impacts related to requirements of the proposed regulation.

Table 4: Fiscal impact items related to regulation requirements

Proposed requirement	Fiscal impact
Preliminary supply & demand assessment submission by June 1, 2022	little to none
Level 2 demand reduction action implementation	decreased water sales, increased communication costs
Non-functional turf irrigation ban in CII sectors	decreased water sales

Fiscal Impacts to Public Water Supply Agencies

Fiscal impacts to urban water agencies are assumed to result primarily from decreased water sale revenues and increased communication costs. 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 (see Table 3 for summary). 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:

0.6 MAF - (16% x 0.6 MAF) = 0.5 MAF = 500,000 acre-feet

Total estimated revenue decrease:

Minimum of range: \$518 × 500,000 acre-feet = \$260 million

Maximum of range: \$1,052 × 500,000 acre-feet = \$530 million

Median of range: \$390 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.

Minimum required actions of the proposed regulation include public information and outreach campaigns which may increase communication costs for water suppliers. The Save Our Water media was provided a budget of \$8 million in 2021. Phase 1 of the campaign included multilingual social/digital media, outdoor boards, a partnership with the San Francisco 49ers, radio ads, TV, and targeted print ads. Considering suppliers would only need to reach out to customers within their service areas, the communication costs for water suppliers would be a fraction of the statewide Save Our Water media campaign cost. Level 2 actions often already include communication campaigns, so it can be assumed that the proposed regulation itself would not increase communication costs for water suppliers that have already invoked Level 2 or higher. As estimated above, however, approximately 50 percent of customers may be in a water supply service area where Level 2 or higher has not been invoked.

Considering the assumptions above, increased water supplier communication cost is estimated as 50 percent of the statewide communication campaign cost, which amounts to \$4 million total. This does not include costs to water suppliers that have already invoked Level 2 or higher but that may continue to increase water savings communication efforts.

Table 5: Recoverable fiscal impacts for public water suppliers (local agencies)

Total estimated revenue decrease	\$390,000,000
Communication costs	\$4,000,000
Total	\$394,000,000

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