

ATTACHMENT TO STD-399 FORM

Making Water Conservation a California Way of Life

Note: The numbers presented with headers, when they appear, indicate the associated question(s) in the STD-399 form.

ECONOMIC IMPACT STATEMENT

A. ESTIMATED PRIVATE SECTOR COST IMPACTS

3. Enter the total number of businesses impacted:

Urban retail water suppliers can be either publicly-owned (e.g., municipal agencies, special-purpose and irrigation districts, municipal water districts, and counties) or privately-owned (e.g., investor-owned utilities and nonprofit mutual water companies). The proposed regulation would apply directly to 405 urban retail water suppliers in the state, 337 of which are publicly-owned. For the purpose of this economic impact assessment, we assumed that “businesses” refer to the remaining 68 regulated privately-owned suppliers.

Enter the number or percentage of total businesses impacted that are small businesses:

Suppliers are water companies (utilities) providing drinking water to the public and, pursuant to Government Code section 11342.610, are not small businesses.

4. Enter the number of businesses that will be created:

Because suppliers are generally local monopolies, households and CII customers usually do not have a choice between their water service supplier and another one. Thus, the proposed regulation is not expected to cause entry of new suppliers or the exit of existing ones. Based on increased expenditures by suppliers on residential water use efficiency measures and CII measures, and also on increased expenditures by urban forestry and landscape management agencies, and wastewater management agencies, the top industries experiencing increased sales growth rates include greenhouse, nursery, and floriculture production; major household appliance manufacturing; valve and fittings other than plumbing; architectural, engineering, and related services; and watch, clock, and other measuring and controlling device manufacturing. Sales growth can be met by increases in the size of existing firms or the creation of new firms in these industries. For traditionally local and small scale, labor-intensive firms such as landscapers or nurseries, sales growth will probably encourage new small businesses. On the other hand, existing manufacturers of major household appliances and plumbing fixtures may expand production. The RIMS II model cannot directly estimate the creation or elimination of businesses, as it does not distinguish between more firms entering the market or existing firms producing more output.

6. Enter the number of jobs created:

The RIMS II model cannot directly estimate the number of jobs created or eliminated, but it can calculate the net gain or loss of jobs. The overall impact of the proposed regulation on jobs is negligible compared to California's labor force. The total number of jobs within the state is estimated to increase by approximately 18,000 in 2025. Increase in jobs statewide will range from 5,000 to 11,000 per year in the following years. If we consider the residential water use efficiency measures, the top industries experiencing increased employment are architectural, engineering, and related services; greenhouse, nursery, and floriculture production; and valve and fittings other than plumbing – mostly because of the increase in the demand for turf conversion to California-friendly landscape. This is unsurprising given the heavy reliance on residential landscaping conservation efforts in reducing water use. If we consider the CII measures, the top industries experiencing increased employment are electronic and precision equipment repair and maintenance; and watch, clock, and other measuring and controlling device manufacturing. Increased wastewater treatment will affect employment in other basic inorganic chemical manufacturing and fabricated pipe and pipe fitting manufacturing.

7. Will the regulation affect the ability of California businesses to compete with other states by making it more costly to produce goods or services here?

The proposed regulation would not put in-state firms at a disadvantage. Households and CII customers purchase water from their local water supplier, and they generally do not have a choice between their water service supplier and an out-of-state enterprise. Landscape services are labor-intensive and will likely be provided by existing California-based businesses. Products needed for residential and CII water conservation, such as laundry equipment and valve and fittings manufacturing, tend to be provided by sectors that already compete across state lines. Thus, the proposed regulation is not expected to affect the relative interstate competitiveness of California as a location for those industries.

B. ESTIMATED COSTS

What are the total statewide dollar costs that businesses and individuals may incur to comply with this regulation over its lifetime?

Assuming a discount rate of 3 percent, State Water Board staff estimate present discounted value of \$13.5 billion for the quantified costs from 2025 to 2040, under specific assumptions.

1.a. Initial costs for a small business:

As noted before, suppliers are water companies (utilities) providing drinking water to the public and, pursuant to Government Code section 11342.610, are not small businesses.

1.b. Initial costs for a typical business:

To assess the direct cost impact on the typical regulated business (all regulated businesses are privately-owned suppliers), we analyzed, of the 68 privately-owned suppliers, the 67 for which data were available. Combined, they serve approximately six million people statewide. For this analysis, a typical business is defined as a hypothetical privately-owned supplier with the

average size and average attributes. The typical supplier thus defined has 22,000 service connections and serves approximately 92,000 people. The typical supplier would incur a direct cost of approximately \$7.5 million in 2025. In subsequent years, the typical supplier would incur direct costs ranging between \$1 million and \$5 million.

1.c. Initial costs for an individual:

The proposed regulation applies to suppliers only. Customers who elect to participate in rebate and incentives programs their suppliers may offer will incur upfront costs associated with the implementation of the residential water use efficiency measures. The table below shows the expenses that residential customers are assumed to incur per unit of residential water use measure, including installation costs, before any rebates from suppliers. The table also shows the per-unit costs to residential customers after they receive the rebates. The costs for leak detection and alerts will be incurred entirely by the suppliers.

Residential Measure	Customer Cost	
	Before Rebate	After Rebate
High-efficiency toilet	\$319 /toilet	\$159 /toilet
High-efficiency washer	\$909 /washer	\$749 /washer
Leak detection & alerts	\$0 /home	\$0 /home
Turf conversion	\$6 /sqft	\$4 /sqft

Expenditures will be incurred mainly in the first years of the proposed regulation as this is when much of the water use efficiency measures are expected to be implemented. Before rebates, the upfront expenses incurred by customers with the residential water use efficiency measures is almost \$4 billion in 2025, and ranges between \$50 million and \$300 million per year in the following years. The largest costs are for turf conversion: almost \$3 billion in 2025, before rebates. After rebates are accounted for, expenses incurred by customers with the water use efficiency measures is almost \$700 million in 2025, and ranges between \$7 million and \$51 million per year in the following years.

If an average of 38.9 million individuals are assumed to reside in the service areas of all suppliers in the 2025-2040 period, then, before rebates, the upfront expenses incurred by customers with the residential water use efficiency measures is approximately \$102.6 per person on average in 2025, and ranges between \$1.3 and \$7.7 per person on average, per year in the following years.

To analyze the effect of the proposed regulation on residential customers' water and wastewater bills, we considered (a) suppliers' direct costs and benefits estimated for the residential water use efficiency measures, (b) the reduced residential water use, and associated avoided water cost by households, resulting from the implementation of the residential water use efficiency measures, and (c) the costs that the three types of wastewater management agencies (wastewater treatment facilities, wastewater conveyance systems, and wastewater recycling and reuse systems) would incur because of the proposed regulation.

First, we analyzed the effects of the proposed regulation on water bills, excluding the pass-through of wastewater management agencies' costs. Of the 38.9 million individuals projected to reside in the service areas of all suppliers in the 2025-2040 period (including of those suppliers that we estimate would meet their water use objectives even in the absence of actions suppliers might take specifically for compliance with the proposed regulation):

- Less than 85,000 individuals will experience higher water bills, excluding wastewater charges, on average in 2025-2040 (compared to the assumed future baseline) because of the proposed regulation. These individuals will experience water cost increases of \$0.93 per person, per month on average, relative to the assumed future baseline.
- Approximately 15.9 million individuals will experience lower water bills, excluding wastewater charges, on average in 2025-2040 (compared to the assumed future baseline) because of the proposed regulation. These individuals will experience water cost declines of \$2.07 per person, per month on average, relative to the assumed future baseline.
- The remaining 22.9 million individuals will not experience any changes in their water bills (excluding wastewater charges) that can be attributed to the proposed regulation. These individuals are served by suppliers that will not incur any direct costs or benefits associated with the residential water use efficiency measures (because no efforts are necessary under the proposed regulation for these suppliers to meet their objectives).

To obtain the results above, we calculated, for each supplier, the average water cost change per person. This is how much the cost of water will increase or, more likely, decrease on average for an individual in each service area and in a given month in the entire 2025-2040 period (relative to the projected baseline), assuming that suppliers decide to pass on costs and benefits entirely. The average water cost change per person was calculated by dividing each supplier's 2025-2040 cost (after taking the benefits into account) by the population in its service area and the number of months in the 2025-2040 period (192 months). Thus, the water cost change that we calculate is an average across all the 192 months analyzed and across all customers of a given supplier, and, therefore, should not be interpreted as the change that an individual customer may actually experience in their water bill in a given month. This calculation excluded wastewater management agencies' costs, which we will discuss next.

To account for the potential effects of the proposed regulation on wastewater bills, we assumed that wastewater management agencies would pass on the total wastewater costs to suppliers in proportion to the number of customers in the suppliers' service areas,¹ and that suppliers would in turn pass on those costs to their customers, i.e., the end users.² Accordingly, the average monthly wastewater cost change per customer was calculated by dividing the 2025-2040

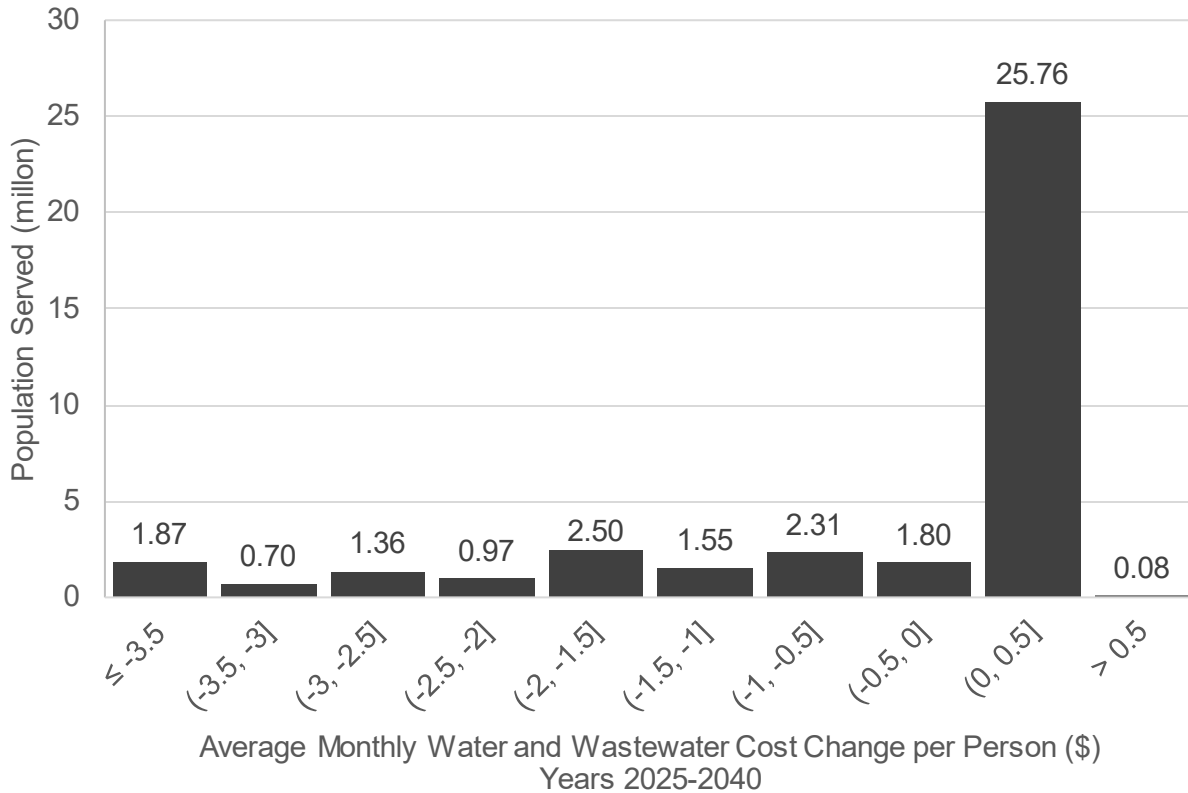
¹ Equivalently, we could have assumed that wastewater management agencies would pass on total wastewater costs directly to customers and obtain the same results.

² There is a "many-to-many" mapping between wastewater management agencies and suppliers. A single supplier may rely on several wastewater management agencies, and a single wastewater management agency may serve several suppliers. Currently, data on the wastewater management agency-supplier mapping are limited and do not allow for a more detailed analysis of cost pass-through from the wastewater sector to suppliers.

residential wastewater cost by the number of residential customers in the service areas of all suppliers and the number of months (192 months) in the 2025-2040 period.³ Thus, the wastewater cost change that we calculate is not only an average across all the 192 months, but also an average across residential customers from all suppliers analyzed. Under these assumptions, wastewater cost would increase by approximately \$0.37 per person-month, relative to the assumed future baseline. Like the water cost change per person, the wastewater cost change should not be interpreted as the change that an individual customer may actually experience in their wastewater bill in a given month.

The graph below is a visual representation of the data used in the cost pass-through analysis and combines both water and wastewater costs. Average monthly water and wastewater cost changes per person (relative to the assumed future baseline) are grouped into bins along the horizontal axis. The height of each bar indicates the population served by suppliers that fall into that bin. As shown in the graph, most individuals, almost 26 million, will experience combined water and wastewater cost increases no greater than \$0.50 per person-month on average (compared to the assumed future baseline). Fewer than 85,000 individuals will experience cost increases greater than \$0.50 per person-month on average. Much of the average cost increase is due to wastewater costs (\$0.37). Additionally, approximately 13 million individuals will experience combined water and wastewater cost declines of up to \$3.50 per person-month on average (compared to the assumed future baseline).

³ Note that in this calculation we include the service area population of suppliers that, we estimate, would not be required to take further water conservation actions under the proposed regulation as compared to the baseline. Given the many-to-many mapping between wastewater management agencies and suppliers, it is possible that some of the estimated wastewater costs would be passed on to these suppliers too, and not just to those who would not meet their water use objectives under the proposed regulation.



1.d. Describe other economic costs that may occur:

Most of the estimated costs originate from the implementation of residential water use efficiency measures, approximately \$5.8 billion from 2025 to 2040 or 43 percent of total estimated costs, and revenues that would be lost by suppliers (and, to a lesser extent, wastewater management agencies), approximately \$4.7 billion or 35 percent. The estimated cost of wastewater infrastructure improvements and other related infrastructure projects during that period is approximately \$1.6 billion or 12 percent of total estimated costs.

Cost Impact Description	Cost (\$ million)
Residential water use efficiency measures	5,799
Lost revenues (assuming no rate changes)	4,686
Infrastructure improvement	1,568
Operations and maintenance	793
CII performance measures	476
Urban tree inventory and forestry management plans	77
Program creation and reporting	35
Public education and outreach	26
Total	13,459

2. If multiple industries are impacted, enter the share of total costs for each industry:

Urban retail water suppliers are the only ones on which the proposed regulation imposes obligations; other parties may be affected indirectly, based on suppliers' compliance paths. Suppliers would incur aggregate costs of almost \$9.9 from 2025 to 2040 or 74 percent of total cost of \$13.5 billion. Local wastewater management agencies would incur costs of \$2.5 billion or 19 percent. Residential customers would incur costs of \$1.0 billion or 7 percent. Urban forestry and landscape management agencies would incur costs of approximately \$100 million or 0.7 percent.

3. If the regulation imposes reporting requirements, enter the annual costs a typical business may incur to comply with these requirements.

We estimated the one-time cost to a supplier for creating programs to be equal to approximately \$27,000 in the first year. This amount is based on one quarter of the annual work hours of a typical engineer. Additionally, we estimated the annual administrative reporting costs per supplier as approximately \$5,000, which is based on the annual cost of one eight-hour day each month for a typical engineer. These work-hour estimates for the general program cost and reporting costs were obtained based on outreach with suppliers across California and a review of conservation programs statewide.

C. ESTIMATED BENEFITS

1. Briefly summarize the benefits of the regulation, which may include among others, the health and welfare of California residents, worker safety and the State's environment.

Most of the benefits that were estimated originate from reduced water purchases or reduced water production by the affected suppliers (compared to the assumed future baseline). They also originate from reduced water use by, and thus lower water bills (compared to the assumed future baseline) for, the residential customers (reduced water use by the affected CII customers, although also a benefit, could not be quantified). A smaller fraction of the estimated benefits originates from savings on residential energy bills and from suppliers' having to do less stormwater-related work. Potentially important benefits could not be estimated. These include, for example, the benefits of reduced overall pressure on the limited water resources that many sectors in California compete for, reduced need for emergency water conservation when there is a severe drought, increased volumes of water that suppliers could store for their future use, improved water quality, and improved soils (and therefore potentially more carbon sequestration).

2. Are the benefits the result of specific statutory requirements or goals developed by the agency based on broad statutory authority? Explain.

Water Code section 10609.2 directed the State Water Board to adopt standards for urban retail water suppliers for the efficient use of water and performance measures for commercial, industrial, and institutional water use. The State Water Board staff proposal for this *Making Water Conservation a California Way of Life* regulation would require suppliers to calculate and

adhere to “urban water use objectives” based on efficiency standards for a subset of urban water uses (residential indoor and outdoor use, CII landscapes with dedicated irrigation meters (DIMs), and real water losses); implement CII performance measures; and submit annual progress reports. The proposed water use objectives would start in 2025 and reach their final, lowest values in 2035.

3. What are the total statewide benefits from this regulation over its lifetime?

In the 2025-2040 period, assuming a discount rate of 3 percent, the State Water Board estimates a present discounted value of \$16.0 billion for the quantified benefits. Suppliers would accrue benefits of approximately \$10.6 billion from 2025 to 2040. Residential customers would accrue benefits of almost \$5.5 billion. Benefits for local wastewater management agencies and urban forestry and landscape management agencies could not be quantified.

4. Briefly describe any expansion of businesses currently doing business within the State of California that would result from this regulation.

Gross output is the value of the goods and services produced by an economy. It is principally measured using industry sales or receipts, including sales to final users and sales to other industries (intermediate inputs) during a given period. For that reason, gross output is commonly used as an aggregate measure for business impacts. In 2025 – the year with the greatest spending by suppliers and households – the estimated increase in state gross output is \$4.1 billion. Increase in gross output ranges from \$1.1 billion to \$1.7 billion per year in the following years.

The increased production by various businesses, due to increased spending by suppliers, households, urban forestry and landscape management agencies, and local wastewater management agencies should be met through increased production by in-state companies. Landscape services will grow, and given that these are labor-intensive, it seems unlikely that out-of-state companies will displace local landscaping companies. Production and manufacturing in other growth industries including greenhouse and nursery production, valve and fittings manufacturing, household laundry equipment, and plumbing fixture manufacturers will experience growth as well, which should attract in-state producers. Additionally, investments in wastewater-related infrastructure will in turn increase production and manufacturing in other industries including fabricated pipe and pipe fitting manufacturing, and pump and pumping equipment manufacturing, which, again, should attract in-state manufacturers.

D. ALTERNATIVES TO THE REGULATION

1. List alternatives considered and describe them below.

Two alternatives to the proposed regulation were evaluated. The parameters for each are summarized in the table below and compared to those of the proposed regulation. These parameters include the standards, which are Landscape Efficiency Factors (LEFs), as well as the irrigation status of the landscapes that the standards would be applied to.

	Alternative 1		Proposed Regulation		Alternative 2		
	LEF	INI Buffer?	LEF	INI Buffer?	LEF	INI Buffer?	
Now until 2025							
Residential outdoor	80%	Yes	80%	No	80%	No	
CII DIM landscapes	80%	n/a	80%	n/a	80%	n/a	
2025-2035							
Residential outdoor	63%	Yes	63%	No	55%	No	
CII DIM landscapes	63%	n/a	63%	n/a	45%	n/a	
2035 onwards							
Residential outdoor	63%	Yes	55%	No	55%	No	
CII DIM landscapes	63%	n/a	45%	n/a	45%	n/a	

Under the proposed regulation, the outdoor residential water use standard would be an LEF equal to 80 percent of ET_o until 2030, when it would decline to an LEF of 63 percent. The residential outdoor standard would then decrease to an LEF of 55 percent in 2035. Under the proposed regulation, the standard would apply to Irrigable Irrigated area and, provided a supplier can demonstrate that previously unirrigated areas have come under irrigation, up to 20 percent of Irrigable Not Irrigated area. Under the proposed regulation, the standard for CII landscapes with DIMs would be an LEF equal to 80 percent of ET_o until 2030, when it would decline to an LEF of 63 percent. The standard for CII landscapes with DIMs would decrease to an LEF of 45 percent in 2035.

For performance measures associated with the outdoor landscapes of CII properties, we evaluated the number of affected properties in the suppliers' service areas. The proposed regulation would require CII landscapes estimated to consume 500,000 or more gallons per year (the threshold under the proposed regulation) to install a dedicated irrigation meter or implement "in-lieu" technologies. Under Alternative 1, the threshold would be 1,000,000 gallons per year—and thus far fewer landscapes would be affected; under Alternative 2, the threshold would be 250,000 gallons per year—and thus far more landscapes would be affected.

2. Summarize the total statewide costs and benefits from this regulation and each alternative considered

Like the proposed regulation, and assuming a discount rate of 3 percent, the quantified benefits of Alternatives 1 and 2 are estimated to exceed the respective quantified costs.

Alternative 1, which is less stringent than the proposed regulation, would save approximately 4.1 million acre-feet of water in the entire 2025-2040 period, about 65 percent of the water saved under the proposed regulation. Benefits during that period are estimated to outweigh costs, with present discounted values of \$10.5 billion and \$9.9 billion, respectively. The estimated cost-effectiveness of Alternative 1 is approximately \$2,406/ac-ft.

Alternative 2, which is more stringent than the proposed regulation, would save approximately 7.1 million acre-feet of water in the entire 2025-2040 period, about 113 percent of the water saved under the proposed regulation. Benefits during that period also are estimated to outweigh

costs, with present discounted values of \$18.4 billion and \$14.9 billion, respectively. The estimated cost-effectiveness of Alternative 2 is approximately \$2,075/ac-ft.

Projected Impact		Alternative 1	Proposed Regulation	Alternative 2
Water savings	(ac-ft)	4,102,628	6,325,644	7,166,479
	(relative to proposed regulation)	65%	100%	113%
Benefit	(\$ million)	10,496	16,013	18,369
	(relative to proposed regulation)	65%	100%	114%
Cost	(\$ million)	9,871	13,459	14,869
	(relative to proposed regulation)	73%	100%	110%
Cost-effectiveness	(\$/ac-ft)	2,406	2,128	2,075
	(relative to proposed regulation)	113%	100%	98%

3. Briefly discuss any quantification issues that are relevant to a comparison of estimated costs and benefits for this regulation or alternatives.

The main drivers of the estimated impacts of Alternatives 1 and 2 are qualitatively the same as the ones of the proposed regulation. Most of the estimated benefits for the two alternatives originate from reduced water purchases or reduced water production by the affected suppliers (compared to the assumed future baseline). They also originate from reduced water use by, and thus lower water bills (compared to the assumed future baseline) for, the residential customers. Most of the estimated costs for the two alternatives originate from the implementation of residential water use efficiency measures and revenues that would be lost by suppliers (and, to a lesser extent, wastewater management agencies).

E. MAJOR REGULATIONS

2. Briefly describe each alternative, or combination of alternatives, for which a cost-effectiveness analysis was performed:

Please refer to D.1 and D.2 above.

3. For the regulation, and each alternative just described, enter the estimated total cost and overall cost-effectiveness ratio:

Please refer to D.2 for calculations. A comparison of the estimated cost-effectiveness of the two alternatives and proposed regulation ranks Alternative 2 as the most cost-effective in the 2025-2040 period, and Alternative 1 as the least cost-effective. Alternative 2 is slightly more cost-effective than the proposed regulation (2.5 percent more cost-effective), but significantly more expensive in absolute terms (10.5 percent more expensive), and therefore was not chosen over the proposed regulation.

5. Briefly describe the following:

The increase or decrease of investment in the State:

As described in C.4, landscape services will expand. Production and manufacturing in other growth industries including greenhouse and nursery production, valve and fittings manufacturing, household laundry equipment, and plumbing fixture manufacturing will

experience growth as well. The growth of these firms will require investment in capital equipment and raw materials.

Additionally, local wastewater management agencies are expected to invest in wastewater infrastructure improvements, such as pipe replacement in wastewater collection systems, and other related infrastructure projects, amounting to approximately \$1.6 billion from 2025 to 2040. These investments in wastewater-related infrastructure will in turn increase production and manufacturing in other industries including fabricated pipe and pipe fitting manufacturing, and pump and pumping equipment manufacturing. Again, the growth of these firms will require further investment in capital equipment and raw materials.

The incentive for innovation in products, materials, or processes:

We expect spending by suppliers to spur innovation in certain areas. Given the noticeable increase in spending on landscape conservation programs, we anticipate that the industry will respond by developing new technologies and products, for example, new drip irrigation systems and new California-friendly landscapes, and by improving on existing installation processes. Many households will seek new low-cost California-friendly landscape strategies, and entrepreneurs who can supply products and services accordingly will grow. Additionally, leak detection equipment and infrastructure are growing and developing, and the increased spending by suppliers will hasten those developments.

The benefits of the regulations:

Please refer to C.1 above and A.2 below.

FISCAL IMPACT STATEMENT

A. FISCAL EFFECT ON LOCAL GOVERNMENT

2. Additional expenditures in the current State Fiscal Year NOT reimbursable by the State

In present discounted value terms, publicly-owned suppliers would incur aggregate costs of approximately \$8.45 billion and accrue benefits of approximately \$9.09 billion from 2025 to 2040. Local wastewater management agencies would incur costs of \$2.5 billion; benefits for these agencies could not be quantified. Urban forestry and landscape management agencies would incur costs of approximately \$100 million; benefits for these agencies could not be quantified. Combined, these expenditures amount to \$11.05 billion from 2025 to 2040. The underlying calculations and assumptions are described next.

Suppliers Operated by Local Governments

Most suppliers are operated by local governments, usually a city, county, or district, and these suppliers serve almost 81 percent of the total population in the state. Like privately-owned suppliers, some publicly-owned suppliers will likely incur costs to meet their water use objectives. Like privately-owned suppliers, publicly-owned suppliers on the one hand will spend less to acquire water and less on stormwater-related corrective measures, but on the other

hand, will potentially lose revenue due to the water use reductions. Ultimately, we expect that suppliers will fully make up for their lost revenues by adjusting their rates to end-customers over time. (Please refer to B.1.c and subdivision (d) of Government Code section 17556, which identifies the types of actions that are not reimbursable state mandates: “the local agency... has the authority to levy service charges, fees, or assessments sufficient to pay for the mandated program or increased level of service. This subdivision applies regardless of whether the authority to levy charges, fees, or assessments was enacted or adopted prior to or after the date on which the statute or executive order was enacted or issued.”)

Costs

Suppliers, including those operated by local governments, will devote staff resources toward creating and implementing efficiency and conservation programs. There are also ongoing administrative costs of compliance reporting. The total general program cost and reporting costs across all publicly-owned suppliers are approximately \$11 million in 2025 and \$1.7 million per year thereafter.

Of all public-owned suppliers analyzed, 198 are assumed to achieve water reductions through residential water use efficiency measures. The direct cost incurred by publicly-owned suppliers with the residential rebate and incentive programs is approximately \$2.9 billion in 2025, and ranges between \$25 million and \$220 million per year in the following years. Direct costs will be incurred mainly in the first years of the proposed regulation as this is when much of the water use efficiency measures are expected to be implemented. Costs with rebate programs for turf conversion are the most significant, totaling \$2.2 billion in 2025, and ranging between \$23 million and \$213 million per year in the following years.

The costs associated with installing a CII DIM, paying the fees for the appropriate inspections, and carrying out the three CII BMPs (program and account management, parcel water budget development, and ESPM-compatible water use data) are assumed to represent the CII direct costs incurred by the suppliers. The largest annual cost is the installation of the dedicated irrigation meters themselves, followed by required tie-in equipment. Backflow device installation is required, as are permit and backflow inspection fees, which are paid to local governments. Across all publicly-owned suppliers, the total cost of the CII DIM performance measures is approximately \$76 million per year between 2025 and 2030, of which almost \$41 million per year are for DIM installation on affected properties.

Program and account management and parcel water budget development are mostly staff costs for suppliers. ESPM-compatible water use data is the cost associated with publicly-owned suppliers carrying out the BMP to provide “disclosable buildings” with water use data in a format compatible with ENERGYSTAR portfolio manager. Across all publicly-owned suppliers, the total cost of the CII BMPs is approximately \$960,000 in 2025 and \$2.3 million per year between 2026 and 2030, of which \$810,000 are for the initial water budget development and \$1.4 million are for the ESPM-compatible water use data. After 2030, together publicly-owned suppliers incur ongoing costs of \$150,000 for program and account management.

Benefits

Most of the water savings come from the residential sector. In 2025, suppliers will save 205,000 acre-feet of water because of the residential measures. Water savings from the CII performance measures start in 2026 at about 18,000 acre-feet. Water savings increase gradually over time. Publicly-owned suppliers, combined, will save from about 235,000 acre-feet in 2026 to about 375,000 acre-feet of water in 2040. Cumulatively, publicly-owned suppliers will achieve a total water use reduction of 5.4 million acre-feet by the end of 2040.

Most of the avoided water costs are associated with the residential measures. In 2025, publicly-owned suppliers' avoided costs totaled \$367 million. In the following years, their avoided water costs increased gradually from \$436 million in 2027 to over \$1 billion in 2040.

The benefits to suppliers from the CII DIM standard and performance measures include not only the avoided water costs, but also the avoided costs of stormwater-related corrective measures. Publicly-owned suppliers' combined annual stormwater benefits increase from none in year 2025 to approximately \$1 million in 2040.

Urban Forestry and Landscape Management Agencies

When compliance with an objective requires a reduction in residential water use, other government sectors may be affected. Several government sectors were noted within the legislative requirements as requiring an evaluation of environmental impacts, including local agencies that manage urban forestry resources, local agencies that manage urban parklands, and wastewater management.

Potentially affected areas may develop or update urban forestry management plans to prioritize spending on new trees. Within the modeled scenario for the proposed regulation, urban forests within 149 suppliers would be at risk of reduced water availability. In such areas, likely mitigation actions would include improved public education programs for irrigation management, development of urban forestry management plans and updated tree inventories, and new investments in irrigation technologies adapted to tree watering needs.

If all suppliers serving areas where urban tree canopies could be affected by demand changes pursued increased public education and planning, the resulting estimated total costs would be an average of \$11.8 million per year between 2025 and 2035, which includes: \$3 million per year for new public education and outreach focused on urban tree irrigation and planting, assuming an annual spending of \$20,000 per supplier; \$8.1 million per year to update urban tree inventories, assuming a cost of \$600,000 for an inventory in one city; and \$700 thousand per year to update urban forestry management plans, assuming a cost of \$50,000 for an updated plan in one city.

Local Wastewater Management Agencies

Another potential fiscal impact of the proposed regulation is on wastewater treatment facilities, wastewater conveyance systems, and wastewater recycling and reuse systems, collectively referred to as wastewater management agencies. These are downstream of suppliers and are run by city or county agencies or are organized as special districts. Below we describe the costs that each of the three types of wastewater management agencies likely will incur because of the

proposed regulation. As discussed before, wastewater management agencies are assumed to pass on wastewater costs to customers.

Wastewater management agencies may experience increased costs, as well as potential benefits, when the influent volumes are reduced or become more concentrated. Collection systems, in particular, may experience the need for increased chemical use, increased pipe corrosion and replacement pipe rate, increased labor for removing clogs and tree roots, increased flushing of lines, increased replacement or upgrades of pumps, and reduced energy costs associated with pumping wastewater. These costs are all related to operations and maintenance. In addition, lower flows could lead to accelerated infrastructure improvements that would be new capital investment requirements. Similarly, wastewater treatment facilities may also experience increased costs for chemical use and treatment plant operations, and additional infrastructure improvements. Other costs could include more fines for not meeting discharge permit requirements, or hiring more consultants, among others. Finally, water reuse agencies may experience changes in operations, but also see less revenue from decreased sales of recycled water if influent is reduced to levels that force a decrease in reuse production.

Together, the three types of wastewater management agencies would incur costs of \$385 million per year between 2025 and 2030, and \$78 million per year afterward. Wastewater treatment facilities are the type most affected with costs at approximately \$329 million per year from 2025 to 2030, followed by wastewater collection systems at \$45 million per year in that period. Wastewater recycling and reuse agencies will lose approximately \$11 million per year in revenues during the period analyzed.

3. Annual savings

Local Institutional Water Users

Suppliers, both privately- and publicly-owned, and wastewater management agencies may choose to pass on some or all of their increased costs and benefits to their end-customers, likely in the form of higher (or lower) monthly water bills (compared to the assumed future baseline). Some of their end-customers are local governments, i.e., local institutional water users. To calculate suppliers' costs relevant for pass-through to local institutional water users, we relied on suppliers' direct costs and benefits estimated for CII performance measures and on wastewater management agencies' costs. Given that suppliers' estimated CII benefits exceed direct costs, we find that the average water cost for an affected CII property might decrease by approximately \$168 per month in the 2025-2040 period (compared to the assumed future baseline). The average wastewater cost might increase by approximately \$6 per month in the same period (compared to the assumed future baseline). Combined, water and wastewater costs would decline on average by \$1,944 a year (compared to the assumed future baseline). Because the data do not distinguish commercial, industrial, and institutional water users, the estimated water cost change per CII property is an average across all three types of properties.

Local institutional water users will not incur the cost of purchasing from their suppliers the water that they save. More specifically, local institutional water users, as well as other CII customers, will not use as much water as they would in the absence of the proposed regulation. These water savings are a direct result of the CII performance measures that CII customers, including

local institutional water users, implement. All else equal, water savings mean lower water bills (compared to the assumed future baseline). Because of data limitations, the water cost avoided by CII customers, including local institutional water users, cannot be estimated.

6. Other. Explain

Local Sales Tax

Suppliers and households will spend more on residential water use efficiency programs and CII performance measures. Wastewater management agencies and urban forestry and landscape management agencies will also incur expenses because of the proposed regulation. Much of that spending includes purchases of several types of goods, including, for example, landscape material, high-efficiency toilets and washers, valves, and water leak monitoring equipment. Sales tax will generally apply to such purchases. The proposed regulation therefore is expected to have an impact on sales tax revenues.

Sales tax rates in California have three parts: the state tax rate, the local tax rate, and any district tax rate that may be in effect. The minimum sales tax in California is 7.25 percent. Local and district tax rates range from 0.10 percent to 1.00 percent and some areas may have more than one district tax in effect. To estimate the impact of the proposed regulation on local sales tax revenues, we obtained tax rates, effective October 1, 2022, for California cities and counties, and calculated the average of the incremental local tax rate, relative to the state's 7.25 percent. The average incremental local sales tax rate corresponds to 0.94 percent. We assumed this rate for years 2025 to 2040.

To estimate the increase in local sales tax revenues due to the proposed regulation, we applied the incremental local sales tax rate to the costs that suppliers, wastewater management agencies, and urban forestry and landscape management agencies will incur, estimated in previous sections. We adjusted these costs to the extent possible such that only the sale of goods was included, not services. Generally, services that do not result in a tangible good are exempt from sales tax in California. Local sales tax revenues will be greater in the first years of the proposed regulation as this is when much of the water use efficiency measures are expected to be implemented. Aggregate local sales tax revenues are estimated to increase (compared to the assumed future baseline) by almost \$21 million in 2025, and between \$500,000 and \$3.6 million per year in the following years.

Local Inspection and Permit Fees

As DIM, DIM tie-ins, and backflow devices are installed, suppliers will pay fees to local governments for the appropriate permits and backflow inspections. Local governments thus will experience an increase in revenues from such fees. The aggregate increase in revenue from inspection and permit fees across all local governments will amount to approximately \$2.9 million per year between 2025 and 2030. We conservatively assumed that the workload generated to local governments by these inspections and permitting processes would not be fully absorbed by current staff and programs. Accordingly, we estimated that the additional staff would cost approximately \$1.8 million per year, including overhead, between 2025 and 2030 to local governments.

Local Property Taxes

We analyzed the costs that each of the three types of wastewater management agencies would incur because of the proposed regulation. Together, wastewater management agencies would incur costs of \$385 million per year between 2025 and 2030, and \$78 million per year afterward. We assume that such costs would be passed on to customers. Wastewater management agencies may pass service charges to customers in different ways, including, for example, through wastewater service bills and property taxes.

Wastewater charges are not a property tax and are not related to the assessed value of a property. However, these charges are sometimes included in property tax statements to save on administrative costs. If the estimated wastewater costs were passed on entirely via property tax statements, aggregate revenues across all counties in California would increase (compared to the assumed future baseline) by as much as \$385 million in 2025, and \$78 million per year in the following years. Likely, across the state, a portion of such amounts would not be passed on via property tax statements, and instead would be reflected on customers' water-, wastewater-, or combined bills for various related services.

B. FISCAL EFFECT ON STATE GOVERNMENT

1. Additional expenditures in the current State Fiscal Year

State Water Resources Control Board

The State Water Board does not anticipate an increase in resource needs because of the proposed regulation.

2. Savings in the current State Fiscal Year

State Institutional Water Users

As discussed for local institutional water users, some of the suppliers' end-customers are state institutional water users. The cost pass-through calculation for state institutional water users is the same as the one performed for local institutional water users, and, therefore, relies on the same assumptions and has the same limitations. To calculate suppliers' costs relevant for pass-through to state institutional water users, we relied on suppliers' direct costs and benefits estimated for CII performance measures and on wastewater management agencies' costs. We find that the average water cost for an affected CII property might decrease by approximately \$168 per month in the 2025-2040 period (compared to the assumed future baseline). The average wastewater cost might increase by approximately \$6 per month in the same period (compared to the assumed future baseline). Combined, water and wastewater costs would decline on average by \$1,944 per year (compared to the assumed future baseline). Because the data do not allow us to distinguish commercial, industrial, and institutional water users, the estimated water cost change per CII property is an average across all three types of properties.

Collectively, state institutional water users would not incur the cost of purchasing from their suppliers the water that they would save as a result of the proposed regulation. That is, state institutional water users, as well as other CII customers, will not use as much water as they

would in the absence of the proposed regulation. These water savings are a direct result of the CII performance measures that CII customers, including state institutional water users, implement. All else equal, water savings mean lower water bills (compared to the assumed future baseline). Because of data limitations, the water cost avoided by CII customers, including state institutional water users, cannot be estimated.

4. Other. Explain

State Sales Tax

As explained for local sales tax, much of the spending by suppliers, households, wastewater management agencies, and urban forestry and landscape management agencies includes purchases of several types of goods; and sales tax will generally apply to such purchases. The proposed regulation therefore is expected to have an impact on the state's sales tax revenue. As mentioned before, the sales tax in California is 7.25 percent. To estimate the increase in state sales tax revenue due to the proposed regulation, we applied that rate to the costs that suppliers, wastewater management agencies, and urban forestry and landscape management agencies will incur. We adjusted these costs to include only the sale of goods, not services. State sales tax revenues will be greater in the first years of the proposed regulation as this is when much of the water use efficiency measures are expected to be implemented. State sales tax revenues are estimated to increase (compared to the assumed future baseline) by almost \$162 million in 2025, and between \$4 million and \$28 million per year in the following years.