

STAFF REPORT

To: Board of Directors

From: Cathleen Brennan, Water Resource Analyst

Agenda: November 12, 2024

Report: November 8, 2024

Subject: Water Resources Informational Report

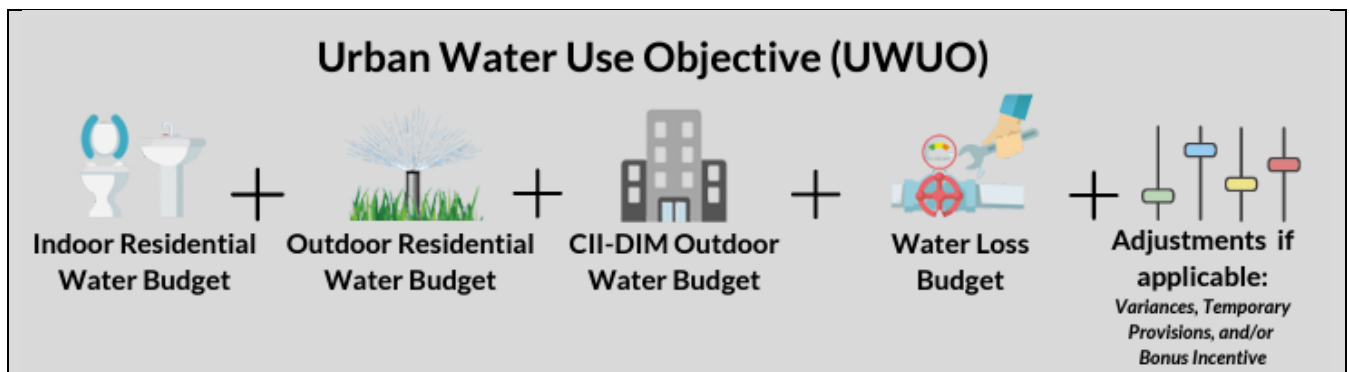
Attachment: Text of Water Conservation Regulation

In 2018, Senate Bill 606 and Assembly Bill 1668 were passed and formed what is now referred to as “Making Conservation a California Way of Life” water conservation legislation.

The regulation was adopted by the State Water Resources Control Board on July 3, 2024, to implement the legislation passed in 2018. It was recently finalized after the State Water Resources Control Board staff responded to comments on the proposed text for accuracy, erroneous information, and typographical errors. This regulation applies to urban retail water suppliers that provide an average annual total of 3,000 acre-feet of water for municipal purposes or serves 3,000 or more service connections.

The term “framework” is used to describe the structure of the regulation that consists of standards and performance measures. The framework consists of three water use standards, one water loss standard, commercial industrial, and institutional (CII) performance measures, and a variety of potential adjustments that are used to calculate an urban water supplier’s budget or Urban Water Use Objective (“UWUO”). The standards are not static. They change over the next decade to become more restrictive.

The infographic below summarizes the standards that go into the UWUO.



The performance measures will be burdensome for the District to fully implement. The water loss budget will also be challenging. To comply with all the requirements will require the use of consultants and/or hiring additional staff.

Indoor Residential Standard or Budget

The indoor standard is multiplied by the service area population of the District to get a gallons per year budget.

Compliance Year	Standard
2020-2024	55 gallons per day per capita
2025-2029	47 gallons per day per capita
2030	42 gallons per day per capita

A census is only completed every ten years, so the accuracy of the service area population is difficult to verify.

Outdoor Residential Standard or Budget

The Department of Water Resources has already provided us with measured residential landscaped area in our service area. The state also provides the effective precipitation (Peff), and the reference evapotranspiration (ETo).

Date	Standard
Through June 30, 2035	0.8
July 1, 2035	0.63
June 30, 2040	0.55
Formula for Residential Outdoor Budget	
Budget = Standard x Residential Landscaped Area x Net ETo x 0.62	

CII – Dedicated Irrigation Meter (DIM) Outdoor Water Standard or Budget

The District does not have the data from DWR on the measured landscaped area for CII, but it is expected by the first quarter of next year. DWR has warned water agencies that the data will need to be vetted carefully. This may require the assistance of a consultant or additional staff.

Date	Standard
Through June 30, 2028	Actual water use
July 1 2028	0.8
July 1 2035	0.63
July 1 2040	0.45
Formula for CII DIM Irrigation Budget	
Budget=Standard x DIM Landscaped Area x Net ETo x 0.62	

CII Performance Measures

The District Will need to classify all our CII water services with categories that the SWRCB has provided in the regulations. The Utility Billing Manager has already created a drop-down menu in our utility billing system to allow for this classification in a user defined field, so that we are able to download the classifications and report to the state annually. The Water Resource Analyst will need to go into each CII account and do the classification. The District must maintain a 95% classification rate for its CII accounts/users.

22 Classification Categories			
Banking/Financial	Mixed Use Properties	Technology/Science	Landscapes with DIMs
Education	Offices	Services	Water Recreation
Entertainment/Public Assembly	Parking	Utility	Car Wash
Food Sales and Service	Public Services	Warehouse/Storage	
Healthcare	Religious Worship	Other	
Manufacturing/Industrial	Retail	CII Laundries	

There are options in other parts of the CII performance measures. By (a) June 30, 2027, the District will need to identify all existing CII water users associated with large landscapes. For purposes of performance measures, a large landscape is defined as half of one acre. If an agency cannot meet that deadline, they have the option (b) of identifying all existing CII large landscapes and determining which users exceed the water budget allowed for a CII outdoor use per the standard by June 30, 2029. It would make sense that most agencies would choose option (a) because it is significantly less workload.

For existing CII large landscapes, a supplier shall install a DIM or employ in lieu technologies and offer BMPs. The District will need to identify existing large landscapes served by a mixed-use meter (MUM) and decide how to get that landscape into compliance with the performance measures.

By June 30, 2024, the District had to identify the disclosable buildings in its service area, as defined by California Energy Commission (CRC 1683). The District will then need to provide specific information at the request of the owner/operator of the disclosable building.

CII water users must be identified according to water consumption and classification. There are three different tracks to choose from for compliance. Track 1 is the least work intensive and the preferable compliance option but the compliance date is six months away.

- 1 By June 30th, 2025, identify (a) all CII water users at or above the 97.5th percentile for CII water use, and (b) existing CII water users at or above the supplier's 80th percentile for CII water use.
- 2 By June 30th, 2027, identify existing CII water users at or above the supplier's 97.5th percentile for CII water use, and existing water users at or above the supplier's 80th percentile for water use in each of the classification described in Section 972.
- 3 By June 30th, 2029, identify existing CII water users that appear to be inefficient according to key business activity indicators (KBAI) the supplier has developed for the classification categories described in section 972. A supplier may also develop KBAs for the specific ENERGY STAR portfolio manager property types.

For water users identified in option 1a or 2a, the water supplier shall design and implement a conservation program that includes at least two of the best management practices listed in the regulations.

For water users identified pursuant to 1b or 2b or 3, a supplier shall design and implement a conservation program that includes at least one of the best management practices listed in the regulations. Best management practices by category are listed below.

- 1 Outreach, Technical Assistance, and Education
- 2 Incentive
- 3 Landscape
- 4 Collaboration and Coordination
- 5 Operational

Water Loss Budget Standard or Budget

This standard is comprised of two separate standards. There is a real loss standard and an apparent loss standard. There are additional requirements under a different regulation (CWC 10608.34) that require the submittal an annual water loss audit and have a level 1 validation by a certified third party by January 1st of each year. In addition, the District has submitted questionnaires on pressure management, assets, and data management.

Description	Coastside CWD Standard
Real Water Loss Standard	15.3 gallons per service connection per day
Apparent Water Loss Standard	3.1 gallons per service connection per day

Adjustments

Water suppliers with indirect potable reuse are able to receive an adjustment (bonus incentive) to their urban water use objective. A variances is allowed for a specific threshold of livestock within the service area. Adjustments can be made for urban/rural wildfire response, recycled water with high total dissolved solids that requires dilution, watering of horse corrals, and supplemental water for wildlife.

Other Considerations

There is a non-functional turf ban (CWC 10608.14) for irrigation with potable water on CII properties. Public water systems shall (no later than January 1, 2027) revise their regulations, ordinances, or policies regarding water service to include the requirements prohibiting irrigation of non-functional turf and communicate the requirements to their customers on or before that date.

Annual Reporting

Legislation required that by January 1, 2024, each urban water retail supplier calculate their objective. The January 2024 submittal was considered a pilot run for reporting since the regulation had not been adopted. The state has provided a workbook to complete the required reporting per the different standards and there is also a certification form required to be signed that will need to be submitted. The actual reporting forms will need to be updated each year to accommodate the phased compliance standards and requirements.

Enforcement of UWUO

There is enforcement associated with the UWUO with civil liability for the urban water supplier.

FINAL TEXT OF “MAKING CONSERVATION A CALIFORNIA WAY OF LIFE” REGULATION

California Code of Regulations
Title 23. Waters
Division 3. State Water Resources Control Board and Regional Water Quality Control Boards
Chapter 3.5. Urban Water Use Efficiency and Conservation
Article 1. Urban Water Use Efficiency Standards, Objectives, and Performance Measures
Effective January 1, 2025

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Adopt new section 965:

§ 965. Definitions

Definitions used in this Article:

- (a) “Animal type-classes” (T) means major categories of animal types based on similar water use and animal weight.
- (b) “Annual precipitation” means total annual precipitation, in inches per year. Annual precipitation will be updated annually by the Department and derived from Parameter-elevation Regressions on Independent Slopes Model data.
- (c) “Augmented Surface Water Reservoir” or “Augmented Reservoir” has the same meaning as “reservoir water augmentation” in section 13561 of the Water Code.
- (d) “Augmented Groundwater Basin” or “Augmented Basin” has the same meaning as “indirect potable reuse for groundwater recharge” in section 13561 of the Water Code.
- (e) “Basin” means either a basin or subbasin as defined and delineated by bulletin 118, or as defined and delineated through an adjudication process.
- (f) “Board” means the State Water Resources Control Board.
- (g) “Budget” means the calculated volume of water for a discrete category of water use associated with efficiency standards, variances, or temporary provisions.
- (h) “Climate zones” means the California Energy Code climate zones as defined by zip code and listed in California Energy Commission Reference Joint Appendix JA2 (Title 24, Part 6, Section 100.1).
- (i) “Climate-ready landscapes” are designed and maintained to reduce greenhouse gas emissions and weather more extreme conditions, save water, reduce waste, nurture soil, sequester carbon, conserve energy, reduce urban heat, protect air and water quality, and create habitat for native plants and pollinators.
- (j) “Collaboration and Coordination best management practices” means formalized operational and institutional arrangements, such as cooperative agreements among parties to streamline requirements, data collection, or implementation of best management practices by coordinating with necessary entities.
- (k) “Commercial, industrial, and institutional water user” means a CII water user meeting any of the definitions in Water Code section 10608.12 (f), (p) and (q).
- (l) “Crop-specific landscape area” means residential agricultural landscapes disaggregated by each crop or crop type grown within the supplier’s service area.
- (m) “Customer” has the same meaning as in section 10611.3 of the Water Code.
- (n) “Dedicated Irrigated Meter” (DIM) means a water meter that is operated and maintained by the supplier that exclusively measures the water a customer uses for irrigation.
- (o) “Department” means the Department of Water Resources.
- (p) “Direct Potable Reuse” (DPR) has the same meaning as in section 13561 of the Water Code. DPR does not require an environmental buffer.
- (q) “Direct potable reuse project” or “DPR project” has the same meaning as in California Code of Regulations, title 22, section 64669.05.
- (r) “Disclosable Building” has the same meaning as in section 1681 in California Code of Regulations, title 20.
- (s) “Effective precipitation” (P_{eff}) means 25 percent of total annual precipitation, or a lower value generated by the California Simulation of Evapotranspiration of Applied Water model if provided by the Department, in inches per year.
- (t) “ENERGY STAR Portfolio Manager” means the tool developed and maintained by the United States Environmental Protection Agency to track and assess building performance.
- (u) “ENERGY STAR Portfolio Manager broad categories” means a superset of property types based on sector.

- (v) “ENERGY STAR Portfolio Manager property types” means a subgroup of ENERGY STAR Portfolio Manager broad categories.
- (w) “Equivalent Technologies” are technologies that are functionally equivalent to Dedicated Irrigation Meters in terms of accuracy and supplier access to the data.
- (x) “Existing CII water users” means CII water users served by the supplier on or before the effective date of this article.
- (y) “Finished water” has the same meaning as in California Code of Regulations, title 22, section 64400.41.
- (z) “High levels of Total Dissolved Solids” (TDS) means concentrations above 900 mg/L.
- (aa) “Indirect Potable Reuse” (IPR) includes “Indirect potable reuse for groundwater recharge” and “reservoir water augmentation” as defined in section 13561 of the Water Code. IPR requires an environmental buffer, including a river, lake, reservoir, or a groundwater aquifer that is used as a source of drinking water.
- (bb) “Irrigable Irrigated Area” is residential area of healthy vegetation where the vegetation appears to be in growth, not senesced, and is foliated. The area is presumed to be maintained and managed through active irrigation, comprising an irrigated hydro-zone. Non-vegetative features may be included.
- (cc) “Irrigable Not Irrigated Area” is residential area that is not currently being irrigated, but was irrigated in the past, or may be managed with irrigation in the future.
- (dd) “In-Lieu Technologies” are technologies that support landscape water use efficiency improvements by means other than the direct measure of water use. They include but are not limited to the technologies identified in section 973.
- (ee) “LA_{crop}” means the landscape area for a crop grown on residential landscapes included in the Department’s agricultural land mask and associated with an account the supplier categorizes as residential, in square feet.
- (ff) “Landscape efficiency factor” (LEF) means a factor applied at the supplier-level that adjusts net reference evapotranspiration for plant factors and irrigation efficiency, two major influences upon the amount of water that is applied to the landscape.
- (gg) “Large landscapes” are Commercial, Industrial, and Institutional landscapes that are ½ acre in size or larger with Mixed-Use meters.
- (hh) “Livestock” has the same meaning as in section 3080 of the Civil Code.
- (ii) “Low-impact development” means new development or redevelopment projects that employ natural and constructed features that reduce the rate of stormwater runoff, filter out pollutants, facilitate stormwater storage onsite, infiltrate stormwater into the ground to replenish groundwater supplies, or improve the quality of receiving groundwater and surface water.
- (jj) “Mixed-Use Meter” (MUM) means a water meter that is operated and maintained by the supplier and that measures the volume of water a customer uses indoors and outdoors.
- (kk) “Net reference evapotranspiration” or “Net ET₀” is the difference between reference evapotranspiration and effective precipitation, in inches per year.
- (ll) “Net ET_{0 crop}” means the net reference evapotranspiration for a supplier’s service area growing season, in inches per year.
- (mm) “Newly constructed residential landscapes” (RLA_{new}) means landscapes that were added to a supplier’s service area in accordance with section 968 (e) after the time period captured by the Landscape Area Measurements Project update released by the Department on December 6, 2023, or any subsequent update to the supplier’s residential landscape area pursuant to section 968 (b)(3).
- (nn) “Newly constructed CII landscapes with DIMs” (DIM LA_{new}) means CII landscapes with DIMs that are added to a supplier’s service area in accordance with section 969 (d)(2) after the most recent analysis a supplier conducts in accordance with section 969 (b)(2).

- (oo) "Owner's Agent" means a person with authorization from a building owner to act on behalf of the building owner.
- (pp) "Plant factor" has the same meaning as in section 491.
- (qq) "Potable deliveries to residential properties and CII landscapes with DIMs" (D_{RLI}) means the total potable water volume delivered to both residential and landscape irrigation connections, as reported to the Board pursuant to Health and Safety Code section 116530.
- (rr) "Potable Reuse Water" includes water produced through both direct potable reuse and indirect potable reuse systems.
- (ss) "Potable Reuse Volume" (V_{PR}) is defined as the individual supplier's volume of potable reuse water.
- (tt) "Process water" has the same meaning as in section 10608.12 of the Water Code.
- (uu) "Recycled water" means water produced by a wastewater treatment plant or water recycling treatment plant permitted to produce recycled water pursuant to California Code of Regulations, title 22.
- (vv) "Reference evapotranspiration" or " ET_0 " has the same meaning as in section 491 and is expressed in inches per year. Reference evapotranspiration will be updated annually by the Department and derived from the California Simulation of Evapotranspiration of Applied Water model using Spatial California Irrigation Management Information System data.
- (ww) "Residential agricultural landscapes" means the residential agricultural area, in square feet, included in the Landscape Area Measurements Project update (released by the Department December 6, 2023), or as later updated by the Department. It is limited to land on which agricultural use is occurring and that is associated with a service connection the supplier categorizes as residential.
- (xx) "Agricultural use" means "agricultural use" as defined in Government Code section 51201 (b), but does not include cleaning, processing, or other similar post-harvest activities.
- (yy) "Residential landscape area" (RLA) means residential Irrigable Irrigated area plus approved Irrigable Not Irrigated area, in square feet.
- (zz) "Residential service area population" (P) means the service area population reported to the Board as "residential" pursuant to Health and Safety Code section 116530 and California Code of Regulations, title 22, section 64412.
- (aaa) "Residential special landscape area" (RSLA) means residential pools, spas, and similar water features, residential areas dedicated solely to edible plants, and residential areas irrigated with recycled water, in square feet.
- (bbb) "Service Connection" (C) has the same meaning as in Health and Safety Code section 116275.
- (ccc) "Temporary provision" means an additional volume of water that an urban retail water supplier may request to add to its urban water use objective for a limited time for a specified beneficial use that will require less water over time.
- (ddd) "Turf" has the same meaning as in section 491.
- (eee) "Total potable water production" (T_{PW}) means all potable water that enters into a supplier's distribution system, excluding water placed into storage and not withdrawn for use during the reporting period and excluding water exported outside the supplier's service area during the reporting period, as reported to the Board pursuant to Health and Safety Code section 116530. Total potable water production includes all non-revenue water, which has the same meaning as in section 638.1 and is equal to the sum of the supplier's unbilled authorized consumption and apparent and real losses.
- (fff) "Urban retail water supplier" or "supplier," has the same meaning as in section 980.

(ggg) “Urban water use objective” (WUO) means an estimate of aggregate efficient water use for the previous year based on adopted water use efficiency standards and local service area characteristics for that year, as described in Water Code section 10609.20 and as calculated pursuant to section 966 (d).

(hhh) “Variance” means an additional volume of water that an urban retail water supplier may request to add to its urban water use objective for a unique use that has a material effect on a supplier’s urban water use objective.

Authority: Sections 1058, 10609.2, and 10609.10, Water Code.

References: Article X, Section 2, California Constitution; Sections 3080, 4080, 4100, and 4100, Civil Code; Section 51201, Government Code; Section 116275 and 116530, Health and Safety Code; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10609.2, 10609.10, 10609.20, 10611.3, and 13561, Water Code.

Adopt new section 966:

§ 966. Urban Water Use Objectives

- (a) No later than January 1, 2025, and by January 1 every year thereafter, each urban retail water supplier shall calculate its urban water use objective and, beginning January 1, 2027, annually demonstrate compliance with its objective.
- (b) The calculation shall be based on the supplier’s water use conditions for the previous state fiscal year.
- (c) The objective shall be composed of the sum of the following budgets:
 - (1) A budget for efficient indoor residential water use (R_{indoor}) as described in section 967.
 - (2) A budget for efficient outdoor residential water use ($R_{outdoor}$) as described in section 968.
 - (3) A budget for efficient water use on commercial, industrial, and institutional landscapes with dedicated irrigation meters or equivalent technology (CII_{DIM}) as described in section 969.
 - (4) A budget for efficient real water losses (L) as described in section 970.
 - (5) Budgets for any approved variances (V) and temporary provisions (Pr) as described in sections 967, 968, and 969.
 - (6) A bonus incentive for potable reuse (B_{PR}) as described in section 971.
- (d) The formula for calculating a supplier’s urban water use objective (WUO), in gallons, is expressed mathematically as follows:

$$WUO = R_{indoor} + R_{outdoor} + CII_{DIM} + L + V + Pr + B_{PR}$$

- (e) If any system owned and operated by a supplier is lacking the data needed to calculate the budgets described in subdivision (c)(1) through (4), that system shall be excluded from the overall objective calculation until the requisite data are obtained. The requisite data must be obtained no later than July 1, 2028, for use in the 2030 reporting year.
- (f) For systems that do not meet the criteria to be considered an urban retail water supplier until after the effective date of this section, and for a system that hydraulically consolidates with a supplier, this section applies beginning five (5) years after the system meets the criteria to be considered a supplier or consolidates with a supplier.
- (g) Compliance with this section shall be assessed on the overall objective, not the individual budgets identified in subdivision (c), except for water loss, which shall also be assessed individually pursuant to section 981.

- (h) If a supplier's calculated objective-based total use is larger than its target-based total use, the supplier's urban water use objective shall be its Water Code section 10608.20 individual target less excluded demands as described in paragraph (3). If the supplier's section 10608.20 target is expressed in gallons per capita daily, the supplier shall multiply the target by its residential service area population for the reporting year and the number of days in the year.
 - (1) For purposes of this subdivision, objective-based total water use, in gallons, is the sum of excluded demands and the urban water use objective calculated pursuant to subdivision (c).
 - (2) For purposes of this subdivision, target-based total water use, in gallons, is a supplier's individual Water Code section 10608.20 target plus demands not included in the target. Demands not included in the section 10608.20 target may include process water and recycled water.
 - (3) Excluded demands are those values provided by the supplier to the Board pursuant to Health and Safety Code section 116530, for the following delivery categories: other; commercial and institutional; and industrial.
 - (4) Until June 30, 2040, this subdivision does not apply to any supplier that is achieving its Water Code section 10608.20 target on a regional basis but has not achieved its individual target.
- (i) Notwithstanding subdivision (a), a supplier shall be considered in compliance with its objective provided all of the following are met:
 - (1) The median household income of the supplier's service area is equal to or less than the median household income of California. The median household income of the supplier's service area shall be the average for the three years preceding the year the supplier initially asserts compliance with its objective pursuant to this subdivision;
 - (2) The supplier's urban water use objective calculated by the supplier pursuant to subdivision (c), using the standards that apply July 1, 2040, would result in an objective that is 80 percent or less of the supplier's average annual water use for the reporting categories identified in section 975 (c)(1)(D) for the state fiscal years ending in 2024, 2025, and 2026;
 - (3) The supplier develops, posts to its public-facing website, and implements a plan that is designed with the goal of achieving, by June 30, 2041, or a different date approved by Board staff, the supplier's urban water use objective. The plan must additionally include efforts to keep trees healthy; and
 - (4) The annual reports the supplier has submitted pursuant to section 975 show that the supplier is reducing its per capita water use by an average of no less than 1.0 percent per year, as shown by data from the reporting year and the immediately preceding two years, from its average per capita annual water use for the state fiscal years ending in 2024, 2025, and 2026.
- (j) Notwithstanding subdivision (a), a supplier shall be considered in compliance with its objective provided all of the following are met:
 - (1) The supplier's urban water use objective, calculated pursuant to subdivision (c), using the standards that apply July 1, 2040, would result in an objective that is 70 percent or less of the supplier's average annual water use for the reporting categories identified in section 975 (c)(1)(D) for the state fiscal years ending in 2024, 2025, and 2026;
 - (2) The supplier develops, posts to its public-facing website, and implements a plan that is designed with the goal of achieving, by June 30, 2041, or a different date approved by Board staff, the supplier's urban water use objective. The plan must demonstrate that the supplier has carefully analyzed the data used to calculate its urban water use objective, including, but not limited to, the data associated with variances and special landscape areas. The plan must additionally include efforts to:

- (A) Increase support for disadvantaged communities, as defined in title 22, section 64300 of the California Code of Regulations, and low-income households;
- (B) Leverage regional and local partnerships to support the installation and maintenance of climate-ready landscapes; and
- (C) Keep trees healthy;
- (3) The supplier verifies adherence to the American Water Works Association G480-20 Water Conservation and Efficiency Program Operation and Management Standard (published February 1, 2021), which is hereby incorporated by reference; and
- (4) The annual reports the supplier has submitted pursuant to section 975 show that the supplier is reducing its per capita urban water use by an average of no less than 2.0 percent per year, as shown by data from the reporting year and the immediately preceding two years, from its average per capita annual water use for the state fiscal years ending in 2024, 2025, and 2026.
- (k) For the purposes of subdivisions (i) and (j):
 - (1) A supplier shall calculate average annual per capita water use by dividing the average annual demand for the reporting categories identified in section 975 (c)(1)(D) for the state fiscal years ending in 2024, 2025, and 2026, by the average annual residential service area population for the state fiscal years ending in 2024, 2025, and 2026, and by the days of the year; and
 - (2) A supplier shall calculate annual per capita water use for the reporting year and the immediately preceding two years by, for each year, dividing annual demand for the reporting categories identified in section 975 (c)(1)(D), by annual residential service area population, and by the days of the year.

Authority: Sections 1058, 10609.2, and 10609.20, Water Code.

References: Article X, Section 2, California Constitution; Section 3080, Civil Code; Section 51201, Government Code; Section 116530, Health and Safety Code; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10608.20, 10609.2, 10609.10, 10609.12, and 10609.27, Water Code.

Adopt new section 967:

§ 967. Indoor Residential Water Use Standard

- (a)
 - (1) Each year, a supplier shall calculate its budget for residential indoor water use (R_{indoor}), in gallons, by multiplying the applicable standard (S_{indoor}) described in Water Code section 10609.4, subdivision (a) by the supplier's residential service area population (P), and by the number of days in the year. This formula is expressed mathematically as follows:

$$R_{\text{indoor}} = S_{\text{indoor}} \times P \times \text{days in year}$$

- (2) For any reporting year that includes more than one standard, each applicable standard shall be multiplied by the number of days for which the standard applies pursuant to Water Code section 10609.4 that occur in the reporting period.
- (b)
 - (1) An urban retail water supplier may, in calculating its urban water use objective, include budgets for variances identified in paragraph (2) for residential indoor use, if:
 - (A) The supplier submits supporting information meeting the criteria described in subdivision (e); and

- (B) The associated water use, for any individual variance, represents 5 percent or more of the budget associated with the standard described in section 966 (c)(1).
- (2) Variances may be requested for water use associated with any of the following:
 - (A) Significant use of evaporative coolers
 - (B) Significant fluctuations in seasonal population.
- (c) Variances available pursuant to subdivision (b) shall be calculated as follows:
 - (1) A variance for water use associated with evaporative coolers (V_{EC}) represents the volume of water evaporative coolers used on operating days. Operating days (N_{DAYS}) are days when the average temperature in the supplier's service area was greater than 78 degrees Fahrenheit for at least one hour. V_{EC} shall be calculated by multiplying the number of evaporative coolers in the service area (N_{EC}) by the number of operating days (N_{DAYS}), the average daily evaporative cooler operating hours (H_O), and the average daily evaporative rate (R_{EC}). This formula is expressed mathematically follows:

$$V_{EC} = N_{EC} \times N_{DAYS} \times H_O \times R_{EC}$$

- (A) The number of evaporative coolers in the service area (N_{EC}) may be estimated based on a representative sample of customers meeting the criteria specified in paragraph (D).
- (B) The evaporative cooler operating hours (H_O) may be a daily average based on a sample meeting the criteria specified in paragraph (D). A supplier shall use the service area average operating hours or the daily maximum operating hours, whichever is lower.
 - (i) The service area wide average operating hours shall equal the average of all operating hours based on the sample.
 - (ii) The service area daily maximum operating hours shall equal the number of hours in a day when the temperature was above 78 degrees Fahrenheit within the supplier's service area.
- (C) The evaporative cooler evaporation rate (R_{EC}) may be a daily average based on a sample meeting the criteria specified in paragraph (D). R_{EC} , in gallons per hour, shall be calculated by multiplying the average air exchange rate of the evaporative cooler units within the supplier's service areas (CFM), in cubic feet per minute, by the average daily difference in hourly wet and dry bulb temperatures (ΔT_{Bulb}), in degrees Fahrenheit, and by a representative efficiency rate of 80 percent. To convert the heat absorbed, in British Thermal Units, to the volume of water evaporated by the coolers, in gallons, that product shall be divided by 8700. This formula is expressed mathematically as follows:

$$R_{EC} = \frac{CFM \times \Delta T_{Bulb} \times 0.8}{8700}$$

The average air exchange rate of the evaporative cooler units within the supplier's service areas (CFM) and the average daily difference in hourly wet and dry bulb temperatures (ΔT_{Bulb}) shall be calculated according to the Department's Methods for Estimating Residential Cooler Water Consumption and Prevalence using Account-Level Water and Energy Consumption Data (published April 15, 2022), which is hereby incorporated by reference, or an alternative method that the supplier has demonstrated to the Department, in coordination with the Board, to be equivalent, or superior, in quality and accuracy.

- (D) For the purposes of this section, the sample must represent at least 10,000 residential connections, or ten percent of residential connections, whichever is smaller.
- (2) A variance for water use associated with seasonal populations (V_{SP}), in gallons, shall be calculated by multiplying the number of dwelling units associated with seasonal occupancy (N_{DU}) by the occupancy rate (R_O) and by the residential indoor use standard for the given time period (S_{indoor}). This formula is expressed mathematically as follows:

$$V_{SP} = N_{DU} \times R_O \times S_{indoor}$$

- (A) The number of dwelling units associated with seasonal occupancy (N_{DU}) shall be calculated according to the Department's Methods for Estimating Seasonal Populations with Water and Energy Data (published by June 22, 2022), which is hereby incorporated by reference, or an alternative method that the supplier has demonstrated to the Department, in coordination with the Board, to be equivalent, or superior, in quality and accuracy.
- (B) The occupancy rate (R_O) shall be calculated by dividing the average number of seasonally occupied rooms (R_S) by the average number of rooms occupied by permanent residents (R_P) and multiplying the quotient by the average number of people per permanently occupied household (H_P) and the average number of days households are seasonally occupied (S_{DAYS}). This formula is expressed mathematically as follows:

$$R_O = \frac{R_S}{R_P} \times H_P \times S_{DAYS}$$

The average number of days households are seasonally occupied (S_{DAYS}) shall be calculated according to the Department's Methods for Estimating Seasonal Populations with Water and Energy Data (published June 22, 2022), which is hereby incorporated by reference, or an alternative method that the supplier has demonstrated to the Department, in coordination with the Board, to be equivalent, or superior, in quality and accuracy.

- (C) Notwithstanding subdivision (b)(1)(B), a supplier is eligible for the variance for water use associated with seasonal populations if the supplier uses detailed daily or hourly Advanced Metering Infrastructure (AMI) data to effectively identify dwelling units with seasonal population and the associated water use represents 1 percent or more of the budget associated with the standard described in section 966 (c)(1). If the supplier uses detailed daily or hourly AMI data, then the occupancy rate (R_O) shall be calculated by multiplying the water used by seasonally occupied homes (W_{SO}) by the supplier's residential service area population (P) and dividing the product by the water used for permanently occupied homes (W_{PO}). The quotient shall be multiplied by the average number of days households are seasonally occupied (S_{DAYS}). This formula is expressed mathematically as follows:

$$R_O = \left(\frac{W_{SO} \times P}{W_{PO}} \right) \times S_{DAYS}$$

The average number of days households are seasonally occupied (S_{DAYS}) shall be calculated according to the Department's Methods for Estimating Seasonal

Populations with Water and Energy Data (published June 22, 2022), or an alternative method that the supplier has demonstrated to the Department, in coordination with the Board, to be equivalent, or superior, in quality and accuracy.

- (d) An urban retail water supplier may request a temporary provision to respond to negative impacts to wastewater collection, treatment, and reuse systems, if the supplier shows to the satisfaction of the Board that meeting the objective pursuant to section 966 would require adhering to the applicable residential indoor standard identified in Water Code section 10609.4 and that meeting the budget for efficient residential indoor use is causing challenges within wastewater collection, treatment, and reuse systems.
- (e) In order to receive approval for a variance or a temporary provision, an urban retail water supplier must submit to the Board, in a machine-readable format for review and approval by the Executive Director, or the Executive Director's designee, a request that includes information quantifying and substantiating each request; information demonstrating that the water applicable to the request is water delivered by the supplier; information verifying that the approval of the request would not jeopardize the ability of a permittee within the supplier's service area to comply with existing permit requirements; and information describing and supporting the methodology the supplier will use to estimate the parameters described in subdivision (c), including the number of households sampled and the total number of residential connections, as reported to the Board pursuant to Health and Safety Code section 116530.
 - (1) Approved variances or temporary provisions submitted between July 1 and October 1 may be included in the associated budget for the prior state fiscal year.
 - (2) Approved variances or temporary provisions submitted between October 2 and June 30 may be included in the associated budget for the current state fiscal year.
 - (3) Approved variances and temporary provisions may be included in the associated budget for up to five years. Variance and temporary provision approval constitutes approval of both methodology and data. Unless otherwise specified in section 975, a supplier may use the same data for each year or update the data annually in accordance with the approved variance or temporary provision methodology.

Authority: Sections 1058, 10609.2, and 10609.20, Water Code.

References: Article X, Section 2, California Constitution; Section 51201, Government Code; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10609.2, 10609.4, and 10609.10, Water Code.

Adopt new section 968:

§ 968. Outdoor Residential Water Use Standard

- (a)
- (1) Through June 30, 2035, the standard for efficient residential outdoor use (S_{outdoor}) shall be a landscape efficiency factor of 0.80.
 - (2) Beginning July 1, 2035, and through June 30, 2040, the standard for efficient residential outdoor use shall be a landscape efficiency factor of 0.63.
 - (3) Beginning July 1, 2040, the standard for efficient residential outdoor use shall be a landscape efficiency factor of 0.55.
 - (4) The standard for efficient residential outdoor use for residential special landscape areas shall be a landscape efficiency factor of 1.0.
 - (5) The standard for newly constructed residential landscapes (S_{new}) shall be a landscape efficiency factor of 0.55.
- (b)
- (1) Each year, an urban retail water supplier shall calculate its budget for efficient residential outdoor water use (R_{outdoor}), in gallons, by multiplying the applicable standard (S_{outdoor}) described in subdivision (a) by the square footage of the most current available residential landscape area (RLA) as described in subdivision (b)(2) or (b)(3), net reference evapotranspiration (Net ET_0), and a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$R_{\text{outdoor}} = S_{\text{outdoor}} \times \text{RLA} \times \text{Net } ET_0 \times 0.62$$

- (2) Until updated residential landscape area data are available pursuant to paragraph (3), residential landscape area shall be, for each supplier:
 - (A)
 - (i) The supplier's unique square footage of Irrigable Irrigated area included in the Landscape Area Measurements Project update released by the Department on December 6, 2023. After the effective date of this section, a supplier may adjust this value by adding the residential parkway area provided by the Department that the supplier has confirmed is associated with a residential service connection; or
 - (ii) For a supplier that has not received residential landscape area data from the Department by the effective date of this section, the supplier's unique square footage of Irrigable Irrigated area shall be what the Department first provides after this section takes effect.
 - (B) If the supplier's actual urban water use for the reporting year, calculated in accordance with Water Code section 10609.22, is greater than the urban water use objective calculated pursuant to section 966 without inclusion of Irrigable Not Irrigated area, a supplier may include:
 - (i) Twenty percent of the supplier's unique square footage of Irrigable Not Irrigated area included in the Landscape Area Measurements Project update released by the Department on December 6, 2023; or
 - (ii) For a supplier that has not received residential landscape area data from the Department by the effective date of this section, twenty percent of the supplier's unique square footage of Irrigable Not Irrigated area first provided by the Department after this section takes effect.
- (3) Residential landscape area shall be, for each supplier, the most current updated Irrigable Irrigated area:

- (A) Provided by the Department;
 - (B) Updated by a supplier pursuant to paragraph (4); or
 - (C) Provided by an entity other than the Department or a supplier according to the following criteria:
 - (i) The residential landscape area is generated as part of a transparent statewide analysis covering the service areas of all urban retail water suppliers;
 - (ii) Developed with methodologies and procedures that have been demonstrated to the Department to be equivalent, or superior, in quality and accuracy, to those used by the Department to develop residential landscape area; and
 - (iii) Results in landscape area data that have been demonstrated to the Department to be equivalent, or superior, in quality and accuracy to the data included in the Landscape Area Measurements Project update released by the Department on December 6, 2023.
- (4) A supplier may, for each reporting year, use an alternative data source for reference evapotranspiration, effective precipitation, or its Irrigable Irrigated area, if it demonstrates to the Department, in coordination with the Board, that the data are equivalent, or superior, in quality and accuracy to the data included in the Landscape Area Measurements Project update released by the Department on December 6, 2023. Alternative data pursuant to this paragraph shall be reported pursuant to section 975.
- (5) Notwithstanding subdivisions (b)(2) and (b)(3), a supplier may subtract landscape area that has been categorized as residential but that the supplier has identified as Commercial, Industrial, or Institutional (CII). If the area consists of CII landscapes with dedicated irrigation meters, it shall be included in a supplier's objective pursuant to section 969.
- (c)
- (1) Notwithstanding subdivision (b)(1), an urban retail water supplier may calculate its residential outdoor water use budget (R_{outdoor}), in gallons, by subtracting the square footage of residential special landscape areas (RSLA) from the square footage of the most currently available residential landscape area (RLA) as defined in subdivision (b)(2) and multiplying the result by the applicable standard (S_{outdoor}) described in subdivision (a); then, by adding that value to the product of the standard for residential special landscape areas (S_{RSLA}) as described in subdivision (a)(4) and the square footage of residential special landscape areas (RSLA); and lastly, by multiplying that sum by net reference evapotranspiration (Net ET_0) and a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$R_{\text{outdoor}} = (S_{\text{outdoor}} \times (\text{RLA} - \text{RSLA}) + S_{\text{RSLA}} \times \text{RSLA}) \times \text{Net ET}_0 \times 0.62$$

- (2) In order to calculate a residential outdoor budget pursuant to this subdivision, a supplier shall demonstrate to the Department, in coordination with the Board, that the landscape areas meet the definition specified in section 965 (aaa). Residential special landscape area data shall be reported pursuant to section 975, and, unless updated by a supplier pursuant to this paragraph, data approved by the Department may be included for up to five years.

- (3) For the purposes of this subdivision, the square footage of existing pools, spas, and similar water features shall be either (A) the value included in the Landscape Area Measurements Project update released by the Department on December 6, 2023, or any updates thereafter, or (B) alternative data, if the supplier demonstrates to the Department, in coordination with the Board, that the data are equivalent, or superior, in quality and accuracy to the data provided by the Department.
- (d) If not included as a variance pursuant to subdivision (g)(3), an urban retail water supplier may add to its residential outdoor budget calculated pursuant to subdivisions (b)(1) or (c)(1) the volume of water associated with residential agricultural landscapes. The budget for residential outdoor water use associated with residential agricultural landscapes (R_{Ag}), in gallons, is calculated by multiplying a unit conversion factor of 0.62 by the standard for residential special landscape areas (S_{RSLA}) described in subdivision (a)(4) and by the values provided by the Department for the following parameters: the square footage of residential agricultural landscapes (LA_{Ag}) and the net reference evapotranspiration for the aggregated growing seasons associated with the crops grown on residential agricultural landscapes ($Net\ ET_{0\ Ag}$). This formula is expressed mathematically as follows:

$$R_{Ag} = S_{RSLA} \times LA_{Ag} \times Net\ ET_{0\ Ag} \times 0.62$$

- (e)
- (1) An urban retail water supplier may add to its residential outdoor budget calculated pursuant to subdivision (b)(1) or (c)(1) the volume of water associated with newly constructed residential landscapes. The budget for residential outdoor water use associated with newly constructed residential landscapes ($R_{outdoor, new}$), in gallons, is calculated by multiplying the standard (S_{new}) described in subdivision (a)(5) by the square footage of the supplier's newly constructed residential landscape area (RLA_{new}) as described in subdivision (e)(2), net reference evapotranspiration ($Net\ ET_0$), and a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$R_{outdoor, new} = S_{new} \times RLA_{new} \times Net\ ET_0 \times 0.62$$

- (2) The existence of newly constructed residential landscape area shall be demonstrated by using:
- (A) Data from annual reporting required by section 495 (b)(6), provided the report has disaggregated newly constructed residential landscapes from the total landscape area reported;
- (B) On the ground measurements of newly constructed residential landscapes; or
- (C) Measurements of newly constructed residential landscapes collected using accurate remote sensing methods.
- (f)
- (1) An urban retail water supplier may annually, in calculating its urban water use objective, include budgets for variances for residential outdoor water use as follows:
- (A) the supplier submits supporting information meeting the criteria described in subdivision (j).
- (B) The associated water use must, for any individual variance identified in paragraph (2)(A) through (C), represent 5 percent or more of the budget associated with the standard described in section 966 (c)(2).

- (C) The associated water use for the variances identified in paragraph (2)(D) and in section 969 (e)(2)(A), or the associated water use for the variance identified in paragraph (2)(E) and in section 969 (e)(2)(B), must represent 5 percent or more of the sum of the budgets associated with the standards described in section 966 (c)(2) and (3).
- (2) Variances may be requested for water use associated with any of the following:
- (A) Populations of horses and other livestock
 - (B) Controlling dust on horse corrals or other animal exercise arenas
 - (C) Irrigating agricultural landscapes that are within residential areas but have not been classified as irrigable irrigated by the Department
 - (D) Responding to emergency events, not including drought
 - (E) Landscapes irrigated with recycled water containing high levels of TDS
 - (F) Supplementing ponds and lakes to sustain wildlife as required by existing regulations or local ordinances
 - (G) Irrigating existing residential trees.
- (g) Variances available pursuant to subdivision (f) shall be calculated as follows:
- (1) A variance for water use associated with horses and other livestock ($V_{livestock}$), shall be calculated as the sum of water allocations for each animal type-class (T). The water allocation for an animal type-class shall be calculated by multiplying the daily water use of the animal type-class (V_T), as specified in paragraphs (A) through (D), by the number of animals (N_T), by the average number of days per year where water is provided to the animal type (D_T). This formula is expressed mathematically as follows:

$$V_{livestock} = \sum_T (V_T \times N_T \times D_T)$$

- (A) For sheep, llama, donkey, swine, and other medium-sized livestock between 200 and 500 pounds, the daily water use shall be the lesser of 8 gallons of water per day per animal or the amount specified in section 697.
 - (B) For cattle, bulls, and other livestock greater than 500 pounds, the daily water use shall be 11 gallons of water per day per animal.
 - (C) For horses and mules, the daily water use shall be 13 gallons of water per day per animal.
 - (D) For milking cows, the daily water use shall be 16 gallons of water per day per animal.
- (2) A variance for water use associated with dust control on horse corrals or other animal exercise arenas (V_{corral}) shall be calculated by multiplying the square footage of corrals or other animal exercise arenas (A_{corral}) by the number of days per year the corrals or other animal exercise arenas may be watered (N_W) pursuant to paragraph (B), by 0.021 feet of water per water day, and then by 7.48 gallons per cubic foot. This formula is expressed mathematically as follows:

$$V_{corral} = A_{corral} \times N_W \times 0.021 \times 7.48$$

- (A) The square footage of corrals or other animal exercise arenas in the supplier's service area (A_{corral}) shall be either the value included in the Landscape Area Measurements Project update released as a separate corral dataset by the Department on December 6, 2023, or any updates thereafter, or alternative data, if the supplier demonstrates to the Department, in coordination with the Board, that the data are equivalent, or superior, in quality and accuracy to the data provided by the Department.
- (B) The number of days per year that corrals or other animal exercise arenas (N_w) may receive a water budget varies by climate zone as follows:
- (i) For climate zones 1 through 5 and zone 7, corrals or other animal exercise arenas shall be watered no more than 2 days per week.
 - (ii) For climate zones 6, 8 through 10, 12, and 16, corrals or other animal exercise arenas shall be watered no more than 3 days per week.
 - (iii) For climate zones 11 and 13 through 15, corrals or other animal exercise arenas shall be watered no more than 4 days per week.
 - (iv) If a supplier's service area spans multiple climate zones, the supplier shall, for the purposes of calculating this variance, use the climate zone that covers the majority of the supplier's service area. A supplier may, upon a showing to the satisfaction of the Board, use the climate zone that covers the majority of the square footage of corrals or other animal exercise arenas within the supplier's service area.
- (3) A variance for water used to irrigate residential agricultural landscapes (V_{Ag}) shall be calculated by multiplying a unit conversion factor of 0.62 by the values provided by the Department for the following parameters: the landscape efficiency factor (LEF_{Ag}) as described in paragraph (B), the square footage of residential agricultural landscapes (LA_{Ag}), and the net reference evapotranspiration for the aggregated growing seasons associated with the crops grown on residential agricultural landscapes ($Net\ ET_{0\ Ag}$). This formula is expressed mathematically as follows:

$$V_{Ag} = LEF_{Ag} \times LA_{Ag} \times Net\ ET_{0\ Ag} \times 0.62$$

- (A) Notwithstanding subdivision (f)(1)(B), if a supplier is using crop-specific landscape area, then the supplier may, in calculating its residential outdoor budget, include an approved variance for water used to irrigate residential agricultural landscapes if the associated water use for this variance represents 1 percent or more of the budget associated with the standard described in section 966 (c)(2). A supplier using crop-specific landscape area shall calculate a variance for water used to irrigate residential agricultural landscapes (V_{Ag}) by multiplying the square footage of the landscape area used for each crop (LA_{crop}) by each crop's unique efficiency factor (EF_{crop}) described in paragraph (C), by the net reference evapotranspiration associated with each crop's growing season ($Net\ ET_{0\ crop}$), and by a unit conversion factor of 0.62; and then summing the products for each crop. This formula is expressed mathematically as follows:

$$V_{Ag} = \sum_{crop} EF_{crop} \times LA_{crop} \times Net\ ET_{0\ crop} \times 0.62$$

- (B) The landscape efficiency factor for residential agricultural landscapes (LEF_{Ag}) shall be the annual factor, calculated using data provided by the Department, as the average regional crop coefficient divided by the average regional irrigation efficiency. The average regional crop coefficient for the reporting year will be based on the most recent Statewide Crop Mapping dataset developed by the Department and the most recent crop coefficients identified in the Food and Agriculture Organization of the United Nation's (FAO) Irrigation and Drainage Paper 24 (published in 1977), FAO's Irrigation and Drainage Paper 56 (published in 1998), the University of California Cooperative Extension's (UCCE) Leaflet 21427: Using Reference Evapotranspiration (ET_0) and Crop Coefficients to Estimate Crop Evapotranspiration (ET_C) for Agronomic Crops, Grasses, and Vegetable Crops (published in 1989), or UCCE's Leaflet 21428: Using Reference Evapotranspiration and Crop Coefficients to Estimate Crop Evapotranspiration for Trees and Vines (published in 1989), which are hereby incorporated by reference. The irrigation efficiency shall be based on the Application Efficiency: Hydrologic Region 2010 values developed by the University of California (UC) Davis Water Management Research Group that are located in the Research Report: Spatial Analysis of Application Efficiencies in Irrigation for the State of California (published in June 2013), hereby incorporated by reference, or a comparable tool if the supplier demonstrates to the Department that the tool is equivalent, or superior, in quality and accuracy.
- (C) Each crop's unique efficiency factor (EF_{crop}) shall be calculated as the crop coefficient divided by efficiency of the irrigation system associated with that specific crop in the supplier's service area. The crop coefficient values shall be the most recent crop coefficients identified in the FAO's Irrigation and Drainage Paper 24 (published in 1977), FAO's Irrigation and Drainage Paper 56 (published in 1998), UCCE's Leaflet 21427: Using Reference Evapotranspiration (ET_0) and Crop Coefficients to Estimate Crop Evapotranspiration (ET_C) for Agronomic Crops, Grasses, and Vegetable Crops (published in 1989), or UCCE's Leaflet 21428: Using Reference Evapotranspiration and Crop Coefficients to Estimate Crop Evapotranspiration for Trees and Vines (published in 1989). The irrigation efficiency shall be based on Application Efficiency: Hydrologic Region 2010 values developed by the UC Davis Water Management Research Group that are located in the Research Report: Spatial Analysis of Application Efficiencies in Irrigation for the State of California (published in June 2013), or a comparable tool if the supplier demonstrates to the Department that the tool is equivalent, or superior, in quality and accuracy.
- (4) A variance for water used to respond to a state or local emergency declared in accordance with Government Code section 8558 (b) or 8558 (c), not including a drought, shall be equal to the volume of water used to respond to the emergency event.
- (A) To be eligible for this variance, a supplier shall provide a copy of the emergency declaration pursuant to Government Code section 8558 (b) or 8558 (c), official evacuation orders, official incident reports, a document describing or map showing impacted parcels, and records of the total volume of water used as part of the emergency response efforts.
- (B) This variance shall not include water reported to the Board supporting a variance for unexpected adverse conditions pursuant to section 985.

(5)

- (A) A variance for the volume of water associated with landscapes irrigated with recycled water containing high levels of TDS (V_{HTDS}) shall be calculated by multiplying the applicable landscape efficiency factor (LEF_A) described in paragraph (i) or (ii) by the square footage of the landscape area irrigated with recycled water containing high levels of TDS (LA_{HTDS}), by net reference evapotranspiration ($Net\ ET_0$), and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$V_{HTDS} = LEF_A \times LA_{HTDS} \times Net\ ET_0 \times 0.62$$

- (i) The landscape efficiency factor (LEF_A) for landscapes using recycled water with TDS concentrations between 900 and 1,600 milligrams per liter (mg/L) shall be calculated by multiplying 0.000371 by the difference between the TDS concentration, in mg/L, of the applied recycled water and 900. This formula is expressed mathematically as follows:

$$LEF_A = 0.000371 \times (\text{Concentration of recycled water} - 900)$$

- (ii) The landscape efficiency factor (LEF_A) for landscapes using recycled water with concentrations of TDS equal to or above 1,600 mg/L shall be 0.26.

- (B) Notwithstanding subdivision (f)(1)(C), a supplier may include a variance for water used to irrigate landscapes with recycled water containing high levels of TDS for which the sum of the associated water use calculated pursuant to this paragraph and section 969 (e)(2)(B) represents 1 percent or more of the sum of budgets described in section 966(c)(2) and (c)(3), if the supplier is using detailed plant based leaching requirements. A supplier using detailed, plant based leaching requirements shall calculate a variance for water used to irrigate landscapes with recycled water containing high levels of TDS (V_{HTDS}) by subtracting one from the applicable landscape efficiency factor (LEF_B) described below and multiplying the difference by the square footage of the landscape area irrigated with recycled water containing high levels of TDS (LA_{HTDS}), net reference evapotranspiration ($Net\ ET_0$), and a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$V_{HTDS} = (LEF_B - 1) \times LA_{HTDS} \times Net\ ET_0 \times 0.62$$

- (i) The landscape efficiency factor (LEF_B) for recycled water applied via sprinkler systems shall be calculated by dividing the plant factor (PF) described in paragraph (iii) by the product of an irrigation efficiency factor of 0.75 and the difference between one and the plants' leaching requirement (LR) described in paragraph (iv). This formula is expressed mathematically as follows:

$$LEF_B = \frac{PF}{0.75 \times (1 - LR)}$$

- (ii) The landscape efficiency factor (LEF_B) for recycled water applied via drip irrigation systems shall be calculated by dividing the plant factor (PF) as described in paragraph (iii) by the product of an irrigation efficiency factor of 0.81 and the difference between one and the plants' leaching requirement (LR) as described in paragraph (iv). This formula is expressed mathematically as follows:

$$LEF_B = \frac{PF}{0.81 \times (1 - LR)}$$

- (iii) The plant factor shall be that of the lowest water-using plant that is present in at least 30 percent of the landscaped area.
- (iv) The leaching requirement (LR) shall be equal to the salinity of the recycled water measured as electrical conductivity (EC_{iw}), in dS/m, divided by the difference between the product of 5 and the plant's salinity threshold measured as electrical conductivity (EC_e), in dS/m, and the salinity of the recycled water measured as electrical conductivity (EC_{iw}), in dS/m. EC_{iw} shall be capped at the equivalent of 1,600 mg/L. This formula is expressed mathematically as follows:

$$LR = \frac{EC_{iw}}{(5 \times EC_e) - EC_{iw}}$$

- (C) Suppliers delivering recycled water with high levels of TDS for landscape irrigation shall only be eligible for the variance if the following conditions are met:
- (i) The facility that produces the recycled water has completed annual volumetric reporting requirements consistent with the Board's Water Quality Control Policy for Recycled Water, Resolution No. 2018-0057 (adopted by the Board on December 12, 2018), which is hereby incorporated by reference;
 - (ii) The application of the recycled water complies with all applicable waste discharge requirements;
 - (iii) The application of the recycled water does not violate the terms of the applicable salt or nutrient management plan;
 - (iv) The application of the recycled water adheres to the Board's Anti-Degradation Policy, Resolution No. 68-16 (adopted by the Board on October 28, 1968), which is hereby incorporated by reference, or any update thereto.
- (6) A supplier may include a variance for water use associated with ponds and lakes for sustaining wildlife, if the pond or lake is required to be maintained by regulation or local ordinance. A variance for water associated with ponds or lakes required to be maintained by regulation or local ordinance ($V_{wildlife}$) shall be calculated by multiplying 1.1 by the square footage of applicable ponds and lakes, by reference evapotranspiration less annual precipitation, and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$V_{wildlife} = 1.1 \times \text{Ponds and Lakes Area} \times (ET_0 - \text{Annual Precipitation}) \times 0.62$$

- (A) A supplier may, for each reporting year, use an alternative data source for annual precipitation, if it demonstrates to the Department, in coordination with the Board, that the data are equivalent, or superior, in quality and accuracy to the data provided by the Department. Alternative data pursuant to this paragraph shall be reported pursuant to section 975.

- (7) (A) Beginning July 1, 2040, a supplier may include a variance for water use associated with the irrigation of existing residential trees. This variance ($V_{R-trees}$), in gallons, shall be calculated by multiplying the square footage of existing residential trees ($A_{R-trees}$), by 0.08, by net reference evapotranspiration (Net ET_0), and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$V_{R-trees} = A_{R-trees} \times 0.08 \times \text{Net } ET_0 \times 0.62$$

- (B) The square footage of existing residential trees ($A_{R-trees}$) shall be the square footage of existing residential tree canopy coverage within the supplier's residential landscape area, as described in subdivisions (b)(2) and (3). A supplier must describe and substantiate how the square footage of existing tree canopy was quantified.
- (C) A supplier shall only be eligible for the variance for existing residential trees if the following conditions are met:
- (i) The supplier submits to the Board an analysis that quantifies the irrigation needs of existing trees and evaluates how those needs are being met. The analysis shall be based on an inventory of existing trees within the supplier's service area. The inventory must include detailed tree data including but not limited to tree species and tree diameter at breast height for at least 10 percent of trees, or a statistically valid sample. The analysis and inventory must be prepared or validated by a credentialed or certified urban forester or certified arborist.
 - (ii) The supplier submits to the Board an analysis demonstrating that meeting its water use objective pursuant to section 966 would require adhering to the residential outdoor standard identified in section 968 (a)(3) and that meeting the budget for efficient residential outdoor use would unavoidably and adversely affect tree health. The analysis must also demonstrate that the supplier cannot meet its water use objective pursuant to section 966 by first taking, incentivizing, or causing other feasible actions, such as the conversion of high-water use landscapes to climate-ready landscapes.
 - (iii) The supplier submits, as an attachment to its annual report required by section 975(a), a link to, or an electronic copy of, the urban forest management plan or plans covering the supplier's service area and a description of efforts to prioritize water for existing residential trees, as described in subdivision (j); leverage regional and local partnerships to support the installation and maintenance of climate-ready landscapes; and expand green infrastructure, such as swales or rain gardens, to help meet tree irrigation needs.
- (h)
- (1) An urban retail water supplier may, in calculating its annual urban water use objective, include budgets for temporary provisions for residential outdoor use if the supplier submits supporting information meeting the criteria described in subdivision (j).
 - (2) Temporary provisions may be requested for water use associated with any of the following:
 - (A) The planting of new, climate-ready trees
 - (B) The establishment of qualifying landscapes.
- (i) Temporary provisions available pursuant to subdivision (h) shall be calculated as follows:

- (1) A temporary provision for the volume of water associated with planting climate-ready trees (Pr_{trees}) shall be calculated by multiplying the number of newly planted climate-ready trees (N_{trees}) by 4 square feet, by the number of days per year the newly planted climate-ready trees may be watered (N_w) pursuant to paragraph (C), by 0.85, by net reference evapotranspiration ($Net\ ET_0$), and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$Pr_{trees}=(N_{trees} \times 4) \times N_w \times 0.85 \times Net\ ET_0 \times 0.62$$

- (A) A climate-ready tree is a tree that can be reasonably expected to survive both present and future climatic challenges such as heat, drought, extreme weather events, and pests within the supplier's service area. Each newly planted climate-ready tree is assumed to occupy 4 square feet.
- (B) A temporary provision for the volume of water associated with planting climate-ready trees applies for three years, starting with the fiscal year in which the trees were planted.
- (C) The number of days per year that newly planted climate-ready trees (N_w) may receive a water budget varies by climate zone as follows:
- (i) For climate zones 1 through 5 and zone 7, no more than 2 days per week.
 - (ii) For climate zones 6, 8 through 10, 12, and 16, no more than 3 days per week.
 - (iii) For climate zones 11 and 13 through 15, no more than 4 days per week.
 - (iv) If a supplier's service area spans multiple climate zones, the supplier shall, for the purposes of calculating this temporary provision, use the climate zone that covers the majority of the supplier's service area.
- (2) A temporary provision for the volume of water associated with the establishment of qualifying landscapes (Pr_{land}) as described in paragraph (A), shall be calculated by multiplying the square footage of the qualifying landscapes (LA_{land}) by 0.85, by net reference evapotranspiration ($Net\ ET_0$), and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$Pr_{land}=LA_{land} \times 0.85 \times Net\ ET_0 \times 0.62$$

- (A) Qualifying landscapes are those that require temporary irrigation and are associated with at least one of the following: low-impact development, ecological restoration, and mined-land reclamation projects.
- (B) A temporary provision for water for the establishment of qualifying landscapes applies for three reporting periods, starting with the fiscal year in which irrigation of the qualifying landscape begins.

- (j) In order to receive approval for either a variance or a temporary provision, an urban retail water supplier must submit to the Board in a machine-readable format for review and approval by the Executive Director, or the Executive Director's designee, a request that includes information quantifying and substantiating each request; information demonstrating that the water applicable to the request is water delivered by the supplier; information verifying that the approval of the request would not jeopardize the ability of a permittee within the supplier's service area to comply with existing permit requirements; information describing and supporting the methodology the supplier will use to estimate the parameters described in section 968 (f) and 968 (h); and a description of efforts to prioritize water for existing trees, including, but not limited to service-area wide rebate, direct install, and educational programs focused on transitioning to irrigation systems that promote deep and healthy root growth. Such irrigation systems include but are not limited to soaker hoses, deep drip watering stakes, drip tubing, and emitters.
- (1) Approved variances or temporary provisions submitted between July 1 and October 1 may be included in the associated budget for the prior state fiscal year.
 - (2) Approved variances or temporary provisions submitted between October 2 and June 30 may be included in the associated budget for the current state fiscal year.
 - (3) Approved variances and temporary provisions may be included in the associated budget for up to five years. Variance and temporary provision approval constitutes approval of both methodology and data. Unless otherwise specified in section 975, a supplier may use the same data for each year or update the data annually in accordance with the approved variance or temporary provision methodology.

Authority: Sections 1058 and 10609.2, Water Code.

References: Article X, Section 2, California Constitution; Section 3080, Civil Code; Sections 8558 and 51201, Government Code; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10609.2, and 10609.6, Water Code.

Adopt new section 969:

§ 969. Standard for outdoor irrigation of landscape areas with dedicated irrigation meters or equivalent technology in connection with commercial, industrial, and institutional (CII) water use.

- (a)
- (1) Through June 30, 2028, an urban retail water supplier's budget for commercial, industrial, and institutional landscapes with dedicated irrigation meters (S_{DIM}) shall be the supplier's actual deliveries associated with landscape irrigation reported to the Board pursuant to Health and Safety Code section 116530.
 - (2) Beginning July 1, 2028, and through June 30, 2035, the standard for CII landscapes with DIMs (S_{DIM}) shall be a landscape efficiency factor of 0.80.
 - (3) Beginning July 1, 2035, and through June 30, 2040, the standard for CII landscapes with DIMs (S_{DIM}) shall be a landscape efficiency factor of 0.63.
 - (4) Beginning July 1, 2040, the standard for CII landscapes with DIMs (S_{DIM}) shall be a landscape efficiency factor of 0.45.
 - (5) For CII landscapes with DIMs that are special landscape areas, the standard ($S_{DIM\ SLA}$) shall be a landscape efficiency factor of 1.0. The $S_{DIM\ SLA}$ shall be applied to CII landscapes with DIMs that are special landscape areas as defined in section 491 as well as CII landscapes with DIMs that are any of the following:
 - (A) Slopes designed and constructed with live vegetation as an integral component of stability;

- (B) Ponds or lakes receiving supplemental water for purposes of sustaining wildlife, recreation, or other public benefit, excluding water reported to the Board supporting a variance for ponds and lakes for sustaining wildlife required to be maintained by regulation or local ordinance;
 - (C) Plant collections, botanical gardens, and arboretums;
 - (D) Public swimming pools and similar recreational water features;
 - (E) Cemeteries built before 2015; and
 - (F) Landscapes irrigated with recycled water.
- (6) The standard for newly constructed CII landscapes with DIMs shall be a landscape efficiency factor of 0.45.

(b)

- (1) Beginning July 1, 2028, an urban retail water supplier shall calculate its budget for commercial, industrial, and institutional landscapes with dedicated irrigation meters (CII_{DIM}), in gallons, by multiplying the applicable standard (S_{DIM}) described in subdivision (a) by the measured total square footage of the irrigated area of CII landscapes with DIMs (DIM LA), by net reference evapotranspiration (Net ET₀), and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$CII_{DIM} = S_{DIM} \times DIM\ LA \times Net\ ET_0 \times 0.62$$

- (2) No later than July 1, 2028, and periodically thereafter, a supplier shall quantify the measured total square footage of the irrigated area of CII landscapes with DIMs (DIM LA) and describe and substantiate how that area was quantified. Annual updates shall include the square footage of large landscapes that have had DIMs installed in accordance with section 973.
- (3) A supplier may, for each reporting year, use alternative data sources for reference evapotranspiration and effective precipitation if the supplier demonstrates to the Department, in coordination with the Board, that the data are equivalent, or superior, in quality and accuracy to the data provided by the Department. The alternative data shall be reported pursuant to section 975.

(c)

- (1) Notwithstanding subdivision (b)(1), if an urban retail water supplier delivers water to commercial, industrial, and institutional landscapes with dedicated irrigation meters that are special landscape areas, the supplier may calculate its budget for CII landscapes with DIMs as follows: Subtract the square footage of CII landscapes with DIMs that are special landscape areas (DIM SLA) from the total area of CII landscapes with DIMs (DIM LA). Then multiply the result by the applicable standard for CII landscapes with DIMs (S_{DIM}) described in subdivision (a). Add that value to the product of the standard for CII landscapes with DIMs that are special landscape areas (S_{DIM SLA}) described in subdivision (a)(5) and the square footage of CII landscapes with DIMs that are special landscape areas (DIM SLA). Then, multiply that sum by net reference evapotranspiration (Net ET₀) and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$CII_{DIM} = ((S_{DIM} \times (DIM\ LA - DIM\ SLA)) + (S_{DIM\ SLA} \times DIM\ SLA)) \times Net\ ET_0 \times 0.62$$

- (2) In order to calculate the budget pursuant to this subdivision, a supplier may demonstrate to the Department, in coordination with the Board, that the landscape areas meet the definition specified in subdivision (a)(5). Special landscape area data shall be reported pursuant to section 975, and, unless updated pursuant to this paragraph, approved data may be included for up to five years.

(d)

- (1) Beginning July 1, 2028, an urban retail water supplier may add to its budget for commercial, industrial, and institutional landscapes with dedicated irrigation meters (CII_{DIM}) calculated pursuant to (b)(1) or (c)(1) the volume of water associated with CII landscapes with DIMs that are newly constructed landscapes. The budget for CII landscapes with DIMs that are newly constructed landscapes ($C_{DIM, new}$), in gallons, is calculated by multiplying the standard ($S_{DIM-new}$) described in subdivision (a)(6) by the square footage of newly constructed CII landscapes with DIMs ($DIM LA_{new}$), by net reference evapotranspiration ($Net ET_0$), and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$CII_{DIM, new} = S_{DIM-new} \times DIM LA_{new} \times Net ET_0 \times 0.62$$

- (2) The existence of newly constructed CII landscapes with DIMs shall be demonstrated by using:
- (A) Data from annual reporting required by section 495(b)(6), provided the report has disaggregated newly constructed CII landscapes with DIMs from the total landscape area reported,
 - (B) On the ground measurements of newly constructed CII landscapes with DIMs, or
 - (C) Measurements of newly constructed CII landscapes with DIMs collected using accurate remote sensing methods.

(e)

- (1) An urban retail water supplier may annually, in calculating its urban water use objective, include budgets for variances for water use on commercial, industrial, and institutional landscapes with dedicated irrigation meters, if the supplier submits supporting information meeting the criteria described in section 968(j), and, for the variances identified in (2)(A) and (2)(B), the associated water use meets the applicable criteria specified in section 968(f)(1)(C) or section 968(g)(5)(B).
- (2) Variances may be requested for water use associated with any of the following:
- (A) Responding to emergency events, not including drought
 - (B) Irrigating landscapes with recycled water containing high levels of TDS
 - (C) Supplementing ponds and lakes to sustain wildlife as required by existing regulations or local ordinances
 - (D) Irrigating existing trees on CII landscapes with DIMs.

(f) Variances available pursuant to subdivision (e) shall be calculated as follows:

- (1) A variance for water used to respond to a state or local emergency, not including a drought, shall be calculated in the manner described in section 968(g)(4).
- (2) A variance for water used for landscapes irrigated with recycled water containing high levels of TDS shall be calculated in the manner described in section 968(g)(5).
- (3) A variance for water used to supplement ponds and lakes to sustain wildlife as required by existing regulations or local ordinances shall be calculated in the manner described in section 968(g)(6).

- (4) (A) Beginning July 1, 2040, a supplier may include a variance for water use associated with the irrigation of existing trees on CII landscapes with DIMs. The variance ($V_{\text{CII-trees}}$) for water used to irrigate existing trees on CII landscapes with DIMs, in gallons, shall be calculated by multiplying the square footage of existing trees ($A_{\text{CII-trees}}$) by 0.18, by net reference evapotranspiration (Net ET_0), and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:

$$V_{\text{CII-trees}} = A_{\text{CII-trees}} \times 0.18 \times \text{Net ET}_0 \times 0.62$$

- (B) The square footage of existing trees on CII landscapes with DIMs ($A_{\text{CII-trees}}$) shall be the square footage of existing tree canopy coverage within the square footage of CII landscapes with DIMs calculated pursuant to subdivision (b)(2). A supplier must describe and substantiate how the square footage of existing tree canopy was quantified.
- (C) A supplier shall only be eligible for this variance if the conditions described in section 968(g)(7)(C) are met for existing trees on CII landscapes with DIMs, except that the supplier must substantiate that meeting its water use objective pursuant to section 966 would require adhering to the outdoor standard identified in section 969(a)(3) and that meeting the budget for efficient outdoor use on CII landscapes with DIMs would unavoidably and adversely affect tree health. The analysis must also demonstrate that the supplier cannot meet its water use objective pursuant to section 966 by first taking, incentivizing, or causing other feasible actions, such as the conversion of high-water use landscapes to climate-ready landscapes.
- (g) (1) An urban retail water supplier may annually, in calculating its urban water use objective, include budgets for temporary provisions for water use on commercial, industrial, and institutional landscapes with dedicated irrigation meters if the supplier submits supporting information meeting the criteria described in section 968(j).
- (2) Temporary provisions may be requested for water use associated with any of the following:
- (A) Planting new, climate-ready trees
 - (B) Establishing qualifying landscapes, as defined in section 968(i)(2)(A).
- (h) Temporary provisions available pursuant to subdivision (g) shall be calculated as follows:
- (1) A temporary provision for the planting of new, climate-ready trees shall be calculated in the manner described in section 968(i)(1).
 - (2) A temporary provision for water used for the establishment of qualifying landscapes that require temporary irrigation shall be calculated in the manner described in section 968(i)(2).

Authority: Sections 1058 and 10609.2, Water Code.

References: Article X, Section 2, California Constitution; Section 51201, Government Code; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10609.2, 10609.8, and 10609.9, Water Code.

Adopt new section 970:

§ 970. Water Loss

(a) Suppliers shall calculate system-specific standards for real water loss pursuant to section 982.

(b)

(1) Each year, suppliers that own and operate a single system shall calculate their water loss budget ($B_{\text{water loss}}$), in gallons, by multiplying the applicable water loss standard ($S_{\text{water loss}}$) calculated pursuant to section 982 by the number of days in the year, and, depending on the units associated with the standard calculated pursuant to section 982, by either the number of total service connections (C) or the length of the distribution system, in miles (M). These formulas are expressed mathematically as follows:

$$B_{\text{water loss}} = S_{\text{water loss}} \times C \times \text{days in the year}$$

OR

$$B_{\text{water loss}} = S_{\text{water loss}} \times M \times \text{days in the year}$$

(2) Suppliers that own and operate multiple systems shall calculate an aggregate annual water loss budget ($SB_{\text{water loss}}$) as described in paragraph (1) for each system and then by summing the estimated efficient water loss budgets associated with each system. This formula is expressed mathematically as follows, with $B_{\text{water loss for system (i)}}$ referring to the water loss budget for system i in the set of all the systems owned and operated by the supplier (i is the summation index):

$$SB_{\text{water loss}} = \sum_{\substack{i \text{ in the set of} \\ \text{all the systems} \\ \text{of the supplier}}} B_{\text{water loss for system (i)}}$$

(c) Prior to a supplier's initial compliance deadline specified in section 981, the supplier's water loss budget may, alternatively, be equal to its previous year's real water losses reported in its annual water loss audit submitted to the Department pursuant to Water Code section 10608.34 (c).

Authority: Sections 1058 and 10609.2, Water Code.

References: Article X, Section 2, California Constitution; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10608.34, 10609.2, and 10609.12, Water Code.

Adopt new section 971:

§ 971. Bonus Incentive

- (a) If an urban retail water supplier delivers water from a groundwater basin, reservoir, or other source that is augmented by potable reuse water, the supplier may add a bonus incentive to its objective. The bonus incentive shall be calculated pursuant to subdivision (b), in accordance with one of the following:
- (1) If the potable reuse water is produced at an existing facility as defined in Water Code section 10609.20(d)(4), the bonus incentive shall not exceed 15 percent of the sum of the budgets described in section 966(c)(1) through (5).
 - (2) For potable reuse water produced at all other facilities, the bonus incentive shall not exceed 10 percent of the sum of the budgets described in section 966(c)(1) through (5).
- (b) The bonus incentive shall be calculated by multiplying the urban retail water supplier's potable reuse volume (V_{PR}), in gallons, calculated in accordance with any combination of paragraphs (1), (2), or (3), depending on where the potable reuse water is obtained, by the portion of total potable water production (T_{PW}) delivered to residential and landscape irrigation connections (D_{RLI}) for the reporting year. This formula is expressed mathematically as follows:

$$Bonus\ Incentive = V_{PR} \times \frac{D_{RLI}}{T_{PW}}$$

- (1) A supplier shall calculate the volume of potable reuse water obtained from a groundwater source (V_{PRG}) by dividing the product of the loss factor for groundwater recharge and recovery (LF_G) and the volume of potable recycled water recharging the groundwater basin (R) by total groundwater basin extractions (V_{BP}). The quotient is then multiplied by the supplier's groundwater basin extraction (V_G). The formula is expressed mathematically as follows:

$$V_{PRG} = \left(\frac{LF_G \times R}{V_{BP}} \right) \times V_G$$

The loss factor for groundwater recharge and recovery (LF_G) shall be calculated according to the Department's Recommendations for Bonus Incentive Methods of Calculation and Supporting Data Requirements (published September 22, 2022), which is hereby incorporated by reference, or an alternative method that the supplier has demonstrated to the Department, in coordination with the Board, to be equivalent, or superior, in quality and accuracy.

- (2) A supplier shall calculate the volume of potable reuse water obtained from an augmented reservoir source (V_{PRS}) by dividing the product of the loss factor for evaporation and seepage (LF_S) and the volume of potable recycled water augmenting the reservoir (A) by the total volume of water produced from the augmented reservoir (V_{SWP}). The quotient is then multiplied by the volume of water the supplier produced from the augmented reservoir (V_{SW}). The formula is expressed mathematically as follows:

$$V_{PRS} = \left(\frac{LF_S \times A}{V_{SWP}} \right) \times V_{SW}$$

- (3) A supplier shall calculate the volume of potable reuse water obtained from a Direct Potable Reuse project (V_{PRD}) by multiplying the volume of finished water produced from the DPR project ($V_{FIN-DPR}$) by the fraction (F) of water the supplier derived from the facility producing the finished water. The formula is expressed mathematically as follows:

$$V_{PRD} = V_{FIN-DPR} \times F$$

Authority: Sections 1058 and 10609.20, Water Code.

References: Article X, Section 2, California Constitution; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10609.2, 10609.20, and 10609.21, Water Code.

Adopt new section 972:

§ 972. Performance Measures: Commercial, Industrial, and Institutional classification system

- (a) Each urban retail water supplier shall annually classify each commercial, industrial, and institutional water user, based on the end-use of water for the water user, in accordance with ENERGY STAR Portfolio Manager's broad categories.
- (b) In addition to ENERGY STAR Portfolio Manager's broad categories, each supplier shall identify every CII water user associated with:
 - (1) CII laundries
 - (2) Landscapes with Dedicated Irrigation Meters
 - (3) Water recreation
 - (4) Car wash. For every CII water user associated with a car wash for which the car wash accounts for the majority of that water user's water use, the supplier shall also identify the water user's ENERGY STAR Portfolio Manager property type.
- (c) Each supplier shall classify its existing CII water users by June 30, 2027. By June 30, 2028 and thereafter, the supplier shall maintain, for each reporting year, at least a 95 percent classification rate of all its CII water users.
- (d) For systems that do not meet the criteria to be considered an urban retail water supplier until after the effective date of this section, and for a system that hydraulically consolidates with a supplier, this section applies beginning five (5) years after the system meets the criteria to be considered a supplier or consolidates with a supplier.

Authority: Sections 1058 and 10609.10, Water Code.

References: Article X, Section 2, California Constitution; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10609.2, and 10609.10, Water Code.

Adopt new section 973:

§ 973. Threshold for converting Commercial, Industrial, and Institutional landscapes with mixed meters to Dedicated Irrigation Meters or employing in-lieu water management technologies

- (a) Each urban retail water supplier shall either:
- (1) By June 30, 2027, identify all existing commercial, industrial, and institutional (CII) water users associated with large landscapes; or
 - (2) By June 30, 2029, identify all existing CII water users associated with a large landscape and for which estimated outdoor water use exceeds the water budget calculated pursuant to subdivision (c)(1).
- (b)
- (1) For existing CII water users identified pursuant to subdivision (a), a supplier shall either install dedicated irrigation meters (DIMs) or employ at least one of the in-lieu technologies from paragraph (2) and offer the best management practices (BMPs) from paragraph (3).
 - (2) In-lieu technologies include:
 - (A) Water budget-based management program without a rate structure
 - (B) Water budget-based rate structures
 - (C) Installation of technologies that enables the supplier to identify, estimate, and analyze outdoor water use, which may include but is not limited to Advanced Metering Infrastructure
 - (D) Use of technologies that enable suppliers to identify, estimate, and analyze outdoor water use, which may include but are not limited to remote sensing
 - (E) Other in-lieu technologies that enable suppliers to identify, estimate, and analyze water use or improve outdoor water use efficiency, subject to Board approval.
 - (3) Best management practices include, at a minimum, one BMP from section 974(f)(1) and at least two BMPs identified in section 974 (f)(3), including (B) and (C).
- (c)
- (1) A supplier that calculates a budget for commercial, industrial, and institutional water users associated with large landscapes (CII_{MUM}) pursuant to subdivision (a)(2) shall do so by multiplying the area of those landscapes (LA_{LL}) by net reference evapotranspiration ($Net\ ET_0$), by 0.63 or, for Special Landscape Areas, 1.0, and by a unit conversion factor of 0.62. This formula is expressed mathematically as follows:
$$CII_{MUM} = LA_{LL} \times Net\ ET_0 \times (0.63\ or,\ for\ Special\ Landscape\ Areas,\ 1.0) \times 0.62$$
 - (2) For purposes of this section, the area of the landscapes (LA_{LL}) shall include only CII water users associated with large landscapes and shall be quantified and substantiated by the supplier using data generated by the Department.
 - (3) Notwithstanding paragraph (2), a supplier may use data that it has demonstrated to the Department, in coordination with the Board, to be equivalent or superior in quality and accuracy.
- (d) By June 30, 2039, a supplier shall have either installed dedicated irrigation meters (DIMs) on, or employed in-lieu water technologies for and offered BMPs to, all the water users identified pursuant to subdivision (a). By June 30, 2040 and thereafter, the supplier shall either have installed a DIM on, or employed in-lieu water technologies for and offered BMPs to, at least 95 percent of all commercial, industrial, and institutional (CII) water users associated with large landscapes, as assessed on a reporting year basis.

- (e) For systems that do not meet the criteria to be considered an urban retail water supplier until after the effective date of this section, and for a system that hydraulically consolidates with a supplier, this section applies beginning fifteen (15) years after the system meets the criteria to be considered a supplier or consolidates with a supplier.

Authority: Sections 1058 and 10609.10, Water Code.

References: Article X, Section 2, California Constitution; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10609.2, and 10609.10, Water Code.

Adopt new section 974:

§ 974. Commercial, Industrial and Institutional water use best management practices for customers that exceed a recommended size, volume of water use, or other threshold

- (a) By June 30, 2024, or the effective date of this section, whichever comes later, each supplier shall identify the disclosable buildings in its service area. In identifying the disclosable buildings within its service area, a supplier shall use the list of disclosable buildings the California Energy Commission has made available on its public website pursuant to California Code of Regulations, title 20, section 1683.
- (b) For a building that meets the definition of a disclosable building in section 1681 of the California Code of Regulations at title 20, a supplier shall, upon the building owner or Owner's Agent request, complete the following:
 - (1) For each meter, deliver the last four characters of the meter serial number serving the building.
 - (2) For each meter, aggregate water use data, in monthly intervals, for at least the previous year, by one of the following methods:
 - (A) A supplier not using ENERGY STAR Portfolio Manager's Data Exchange Services shall send the data to the building owner or Owner's Agent using the template provided by ENERGY STAR Portfolio Manager or in a format compatible with the template.
 - (B) Suppliers using ENERGY STAR Portfolio Manager's Data Exchange Services shall provide the data by direct upload to the building owner's or Owner's Agent's ENERGY STAR Portfolio Manager account, or, at the building owner's or Owner's Agent's request, send the data to the building owner or Owner's Agent using the template provided by ENERGY STAR Portfolio Manager or in a format compatible with the template.
- (c) Each supplier shall identify CII water users according to one of the following paragraphs (1), (2), or (3):
 - (1) By June 30, 2025, identify:
 - (A) Existing CII water users at or above the 97.5th percentile for CII water use; and
 - (B) Existing CII water users at or above the supplier's 80th percentile for CII water use.
 - (2) By June 30, 2027, identify:
 - (A) Existing CII water users at or above the supplier's 97.5th percentile for CII water use; and
 - (B) Existing CII water users at or above the supplier's 80th percentile for water use in each of the classification categories described in section 972.
 - (3) By June 30, 2029, identify existing CII water users that appear to be inefficient according to key business activity indicators (KBAI) the supplier has developed for the classification categories described in section 972. A supplier may also develop KBAIs for the specific ENERGY STAR Portfolio Manager property types.

- (d) For the water users identified pursuant to (c)(1)(A) or (c)(2)(A), a supplier shall design, and implement pursuant to subdivision (h), a conservation program that includes at least two of the best management practices from each of paragraphs (1) through (5) in subdivision (f).
- (e) For the water users identified pursuant to (c)(1)(B), (c)(2)(B), or (c)(3), a supplier shall design, and implement pursuant to subdivision (h), a conservation program that includes at least one of the best management practices from each of paragraphs (1) through (5) in subdivision (f).
- (f)
 - (1) Outreach, Technical Assistance, and Education best management practices.
 - (A) Direct contacts via site visits or phone calls
 - (B) Informative or educational bill inserts
 - (C) Conducting workshop or developing training videos
 - (D) Webpage portals to access information, tools, and rebates
 - (E) Cost-effectiveness analysis tools
 - (F) Commercials or advertisements
 - (G) Grass roots marketing
 - (H) Community based social marketing
 - (I) Other CII-best management practices derived from additional innovation and technology advancement that can be taken by suppliers, subject to Board approval
 - (2) Incentive best management practices.
 - (A) Rebates and cost-sharing for replacing inefficient fixtures, equipment, irrigation systems or landscapes with water efficient ones
 - (B) Certification or branding programs that recognize customers as water efficient
 - (C) Incentives for technologies that enable customers to identify, measure, and analyze indoor and outdoor water use
 - (D) Other CII-best management practices derived from additional innovation and technology advancement that can be taken by suppliers, subject to Board approval
 - (3) Landscape best management practices.
 - (A) Landscape and irrigation management practices to promote improved water use efficiency
 - (B) Irrigation system inspections, audits, or surveys
 - (C) Training or guidance on irrigation scheduling and maintenance
 - (D) New development landscape inspection, workshops, and training
 - (E) Programs to remove turf and replace it with climate-ready vegetation
 - (F) Programs to decrease urban heat and reduce turf water use by planting trees
 - (G) Programs to install green infrastructure such as swales or rain gardens that offset irrigation needs
 - (H) Other CII-best management practices derived from additional innovation and technology advancement that can be used by suppliers, subject to Board approval
 - (4) Collaboration and coordination best management practices.
 - (A) Coordination with “green” building certification or recognition programs to promote water use efficiency
 - (B) Coordination with land use authorities to check new landscapes design and implementation
 - (C) Collaboration with non-governmental organizations on outreach and education
 - (D) Collaboration with municipal arborists and tree planting organizations to expand and maintain urban forests
 - (E) Collaboration with stormwater agencies to install green infrastructure such as swales or rain gardens to also offset irrigation needs

- (F) Other CII-best management practices derived from additional innovation and technology advancement that can be taken by suppliers, subject to Board approval
- (5) Operational best management practices.
 - (A) Infrastructure changes (for example, smart meter replacement programs)
 - (B) Billing or data collection procedures (for example, data tracking, analysis, and reporting improvements)
 - (C) Other operational best management practices to facilitate CII best management practices program implementation and evaluation
 - (D) Other CII best management practices derived from additional innovation and technology advancement that can be taken by suppliers, subject to Board approval
- (g)
 - (1) Notwithstanding subdivisions (d) and (e), a supplier for which annual CII water deliveries are 10 percent or less of total deliveries, as averaged over a five-year period, shall design and implement pursuant to subdivision (h) a conservation program that includes at least two of the best management practices from in subdivision (f)(1).
 - (2) Notwithstanding subdivisions (d) and (e), a supplier need not offer BMPs from subdivision (f)(3) to customers that meet the criteria identified in this section but do not use water outdoors.
 - (3) For purposes of subdivisions (d) and (e), a supplier may rely on a regional entity in lieu of designing its own conservation program.
- (h)
 - (1) By June 30, 2039, a supplier shall implement a conservation program for existing CII customers meeting the criteria identified in this section. After June 30, 2040, the supplier shall maintain a conservation program for all CII customers meeting the criteria identified in this section.
 - (2) For purposes of this section, a supplier may rely on implementation by a regional entity in lieu of implementing its own conservation program.
- (i) For systems that do not meet the criteria to be considered an urban retail water supplier until after the effective date of this section, and for a system that hydraulically consolidates with a supplier, this section applies beginning fifteen (15) years after the system meets the criteria to be considered a supplier or consolidates with a supplier.

Authority: Sections 1058 and 10609.10, Water Code.

References: Article X, Section 2, California Constitution; Section 4185, Civil Code; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10609.2, and 10609.10, Water Code.

Adopt new section 975:

§ 975. Reporting

- (a) Each urban retail water supplier shall submit to the Board, no later than January 1, 2024, and by January 1 every year thereafter, the report required by Water Code section 10609.24. The report shall reflect the conditions of the previous state fiscal year, except as specified in subdivision (b).
- (b) No later than January 1, 2025, and by January 1 every year thereafter, each urban retail water supplier shall submit to the Board, on a machine-readable form provided by the Board, the supplier's urban water use objective calculated pursuant to section 966 along with relevant and supporting data. Relevant and supporting data shall reflect the previous state fiscal year's conditions, unless approved pursuant to section 967(e) or section 968(j), and shall include:

- (1) For the residential indoor water use budget described in section 967, the following parameters:
 - (A) The volume of water associated with the residential indoor budget (R_{indoor}) calculated pursuant to section 967.
 - (B) Residential service area population. The residential service area population shall be the annual value reported to the Board pursuant to Health and Safety code section 116530 and California Code of Regulations, title 22, section 64412.
 - (C) If the supplier has requested and received approval to include in its objective a budget associated with the evaporative cooler variance pursuant to section 967(b)(2), the following information:
 - (i) The volume of water associated with the variance (V_{EC}) calculated pursuant to section 967(c)(1). This must be calculated and updated annually.
 - (ii) The number of evaporative coolers in the service area (N_{EC})
 - (iii) The average daily operating hours (H_{O})
 - (iv) The average daily evaporative rate (R_{EC})
 - (v) The number of operating days as described in section 967(c)(1). This must be calculated and updated annually.
 - (D) If the supplier has requested and received approval to include in its objective a budget associated with the seasonal population variance pursuant to section 967(b)(2), the following information:
 - (i) The volume of water associated with the variance (V_{SP}) calculated pursuant to section 967(c)(2)
 - (ii) The number of dwelling units associated with seasonal occupancy (N_{DU})
 - (iii) The occupancy rate (R_{O})
 - (iv) If using the method described in section 967(c)(2)(C), the parameters described in this paragraph must be calculated and updated annually.
- (2) For the residential outdoor water use budget described in section 968:
 - (A) The volume of water associated with the residential outdoor budget (R_{outdoor}) calculated pursuant to section 968.
 - (B) Annual reference evapotranspiration and effective precipitation data provided by the Department, or alternative reference evapotranspiration or effective precipitation data meeting the criteria specified in section 968(b)(4).
 - (C) Residential landscape area data provided by the Department, or alternative residential landscape area data meeting the criteria specified in section 968(b)(3).
 - (D) Any residential special landscape area meeting the criteria specified in section 968 (c). For residential special landscape areas irrigated with recycled water, the supplier shall, unless otherwise specified, provide information to trace the recycled water network at least once every five years:
 - (i) The Public Water System Identification (PWSID) number associated with each system delivering recycled water to residential landscapes
 - (ii) Annual metered non-potable residential landscape irrigation demand, as reported to the Board pursuant to Health and Safety Code section 116530. This must be updated annually.
 - (iii) The GeoTracker Global Identification Number used for Volumetric Annual Reporting by each facility producing the recycled water that the supplier reported delivering to residential landscapes
 - (iv) The PWSID number associated with each system producing the recycled water from each facility identified in (iii)

- (v) The square footage of residential land irrigated with recycled water. If annually reported to a Regional Water Quality Control Board, the value reported pursuant to this section shall be the same value as annually reported to the Regional Water Quality Control Board.
 - (vi) The Waste Discharge Identification Number (WDID) associated with the land application of recycled water.
- (E) Any residential landscape area associated with new construction and meeting the criteria specified section 968 (e)(2).
- (F) If the supplier has requested and received approval to include in its objective a budget associated with the variance for horses and other livestock water use pursuant to section 968(f)(2):
- (i) The volume of water associated with the variance ($V_{\text{livestock}}$) calculated pursuant to section 968(g)(1)
 - (ii) The number of animals according to each animal type-class
 - (iii) The average number of days per year that water is provided to each animal type-class.
- (G) If the supplier has requested and received approval to include in its objective a budget associated with the variance for water associated with dust control on horse corrals or other animal exercise arenas pursuant to section 968(f)(2):
- (i) The volume of water associated with the variance (V_{corral}) calculated pursuant to section 968(g)(2)
 - (ii) The square footage of corrals or other animal exercise arenas provided by the Department, or alternative data as specified in section 968(g)(2)(A).
- (H) If the supplier has requested and received approval to include in its objective a budget associated with the variance to irrigate residential agricultural landscapes pursuant to section 968(f)(2), the following information:
- (i) The volume of water associated with the variance (V_{Ag}) calculated pursuant to section 968(g)(3). This must be calculated and updated on an annual basis.
 - (ii) Reference evapotranspiration and effective precipitation data for the aggregated growing seasons associated with the crops grown on residential agricultural landscapes This must be calculated and updated on an annual basis
 - (iii) The average regional crop coefficient
 - (iv) The average regional irrigation efficiency
 - (v) The square footage of residential agricultural landscapes.
- (I) If the supplier has requested and received approval to include in its objective a budget associated with the variance to irrigate residential agricultural landscapes pursuant to section 968(f)(2) and if the variance is calculated using crop-specific landscape area, the following information:
- (i) The volume of water associated with the variance (V_{Ag}) calculated pursuant to section 968(g)(3)(A). This must be calculated and updated on an annual basis
 - (ii) The reference evapotranspiration and effective precipitation data associated with each crop's growing season. This must be calculated and updated on an annual basis
 - (iii) The unique efficiency factor for each crop, calculated according to section 968(g)(3)(C)
 - (iv) The landscape area associated with each crop, as estimated by the supplier.

- (J) If the supplier has requested and received approval to include in its objective a budget associated with the variance for water used to respond to state or local emergency events pursuant to sections 968(f)(2), the following information, which must be calculated and updated on an annual basis:
 - (i) The volume of water associated with the variance
 - (ii) The required documentation described in section 968(g)(4).
- (K) If the supplier has requested and received approval to include in its objective a budget associated with the variance to irrigate landscapes with recycled water containing high levels of TDS pursuant to section 968(f)(2) and relied on the calculation method described in section 968(g)(5)(A):
 - (i) The volume of water associated with the variance (V_{HTDS}) calculated pursuant to section 968(g)(5)(A). This must be calculated and updated on an annual basis.
 - (ii) The square footage of residential land irrigated with recycled water containing high levels of TDS. If reported to a Regional Water Quality Control Board, the value reported pursuant to this section shall be the same value as reported to the Regional Water Quality Control Board.
 - (iii) The concentration of TDS, in mg/L
 - (iv) The Public Water System Identification (PWSID) number associated with each system delivering to residential landscapes recycled water containing high levels of TDS
 - (v) Annual metered non-potable residential landscape irrigation demand, as reported to the Board pursuant to Health and Safety Code section 116530. This must be updated annually.
 - (vi) The GeoTracker Global Identification Number used for Volumetric Annual Reporting by each facility producing the recycled water containing high levels of TDS
 - (vii) The PWSID associated with each system producing the recycled water from each facility identified in (vi)
 - (viii) The waste discharge identification number (WDID) for the Waste Discharge Requirements associated with the land application of treated recycled water with high levels of TDS
 - (ix) The permitted concentration of TDS, in mg/L
 - (x) The permitted volume of applied recycled water, in gallons
 - (xi) An electronic copy of the applicable salt and nutrient management plan or plans, if any.
- (L) If the supplier has requested and received approval to include in its objective a budget associated with the variance to irrigate landscapes with recycled water containing high levels of TDS pursuant to section 968(f)(2) and relied on the calculation method described in section 968(g)(5)(B):
 - (i) All parameters identified in paragraph (K), except (iii)
 - (ii) The plant factor
 - (iii) The leaching requirement
 - (iv) The salinity of the recycled water
 - (v) The plant threshold salinity.
- (M) If the supplier has requested and received approval to include in its objective the budget associated with the variance for water used to sustain wildlife in ponds and lakes pursuant to section 968 (f)(2):
 - (i) The volume of water associated with the variance ($V_{wildlife}$), calculated pursuant to section 968 (g)(6). This must be calculated and updated annually

- (ii) The area of ponds and lakes, in square feet
 - (iii) Annual precipitation data provided by the Department or annual precipitation data meeting the criteria in section 968 (g)(6)(A).
- (N) If the supplier has requested and received approval to include in its objective the budget associated with the variance for water used to irrigate existing residential trees pursuant to section 968 (f)(2):
- (i) The volume of water associated with the variance ($V_{R-trees}$), calculated pursuant to section 968 (g)(7). This must be calculated and updated annually
 - (ii) The area of existing residential trees, in square feet.
- (O) If the supplier has requested and received approval to include in its objective a budget associated with the temporary provision for new, climate-ready trees pursuant to section 968 (h)(2):
- (i) The volume of water associated with the temporary provision (Pr_{trees}), calculated pursuant to section 968 (i)(1). This must be calculated and updated annually
 - (ii) The number of newly planted trees.
- (P) If the supplier has requested and received approval to include in its objective a temporary provision associated with establishing qualifying landscapes pursuant to section 968 (h)(2):
- (i) The volume of water associated with the temporary provision (Pr_{land}), calculated pursuant to section 968 (i)(2). This must be calculated and updated annually
 - (ii) The square footage of qualifying landscapes receiving temporary irrigation.
- (3) For the budget for commercial, industrial, and institutional landscapes with Dedicated Irrigation Meters described in section 969:
- (A) The volume of water for CII landscapes with DIMs (CII_{DIM}) calculated pursuant to section 969.
 - (B) Annual reference evapotranspiration and effective precipitation data provided by the Department, or alternative reference evapotranspiration or effective precipitation data meeting the criteria specified in section 969(b)(3).
 - (C) The area of CII landscapes with DIMs measured by the supplier and meeting the criteria specified in section 969(b)(1).
 - (D) Any special landscape area meeting the criteria specified in section 969(c). For CII landscapes with DIMs irrigated with recycled water, the supplier shall, unless otherwise specified, provide information to trace the recycled water network at least once every five years:
 - (i) The Public Water System Identification (PWSID) number associated with each system delivering recycled water to CII landscapes with DIMs
 - (ii) Annual Non-Residential Recycled Water demand, as reported to the Board pursuant to Health and Safety Code section 116530. This must be updated annually.
 - (iii) Annual Non-Residential Non-Potable demand, as reported to the Board pursuant to Health and Safety Code section 116530. This must be updated annually.
 - (iv) The GeoTracker Global Identification Number used for Volumetric Annual Reporting by each facility producing the recycled water
 - (v) The PWSID associated with each system producing the recycled water from each facility identified in (iv)

- (vi) The square footage of CII landscapes with DIMs irrigated with recycled water. If annually reported to a Regional Water Quality Control Board, the value reported pursuant to this section shall be the same value as annually reported to the Regional Water Quality Control Board
 - (vii) The Waste Discharge Identification Number (WDID) associated with the land application of recycled water.
- (E) Any CII landscape area with DIMs associated with new construction and meeting the criteria specified section 969(d)(2).
- (F) Any landscape area associated with a DIM that the Department classified as residential and included in the residential landscape area defined in section 968(b)(2), but that the supplier classifies as CII and has therefore subtracted from residential landscape area.
- (G) If the supplier has requested and received approval to include in its objective a budget for the variance for water used to respond to state or local emergency events pursuant to section 969(f)(1), the following information, which must be calculated and updated on an annual basis:
- (i) The volume of water associated with the variance
 - (ii) The required documentation described in section 968(g)(4).
- (H) If the supplier has requested and received approval to include in its objective a budget associated with the variance to irrigate landscapes with recycled water containing high levels of TDS pursuant to section 969(f)(2) and relied on the calculation method described in 968(g)(5)(A):
- (i) The volume of water associated with the variance (V_{HTDS}) calculated pursuant to section 968(g)(5)(A). This must be calculated and updated on an annual basis.
 - (ii) The square footage of CII landscapes with DIMs irrigated with recycled water containing high levels of TDS. If reported to a Regional Water Quality Control Board, the value reported pursuant to this section shall be the same value as reported to the Regional Water Quality Control Board.
 - (iii) The concentration of TDS, in mg/L
 - (iv) The Public Water System Identification (PWSID) number associated with each system delivering recycled water containing high levels of TDS to CII landscapes with DIMs
 - (v) Annual metered non-potable non-residential landscape irrigation demand, as reported to the Board pursuant to Health and Safety Code section 116530. This must be updated annually.
 - (vi) The GeoTracker Global Identification Number used for Volumetric Annual Reporting by each facility producing the recycled water containing high levels of TDS
 - (vii) The PWSID associated with each system producing the recycled water from each facility identified in (vi)
 - (viii) The waste discharge identification number (WDID) for the Waste Discharge Requirements associated with the land application of treated recycled water with high levels of TDS
 - (ix) The permitted concentration of TDS, in mg/L
 - (x) The permitted volume of applied recycled water, in gallons
 - (xi) An electronic copy of the applicable salt and nutrient management plan or plans, if any.

- (I) If the supplier has requested and received approval to include in its objective a budget associated with the variance to irrigate landscapes with recycled water containing high levels of TDS pursuant to section 969(f)(2) and relied on the calculation method described in section 968(g)(5)(B):
 - (i) All parameters identified in paragraph (H), except (iii)
 - (ii) The plant factor
 - (iii) The leaching requirement
 - (iv) The salinity of the recycled water
 - (v) The plant threshold salinity
- (J) If the supplier has requested and received approval to include in its objective a budget associated with the variance for water used to sustain wildlife in ponds and lakes pursuant to section 969(f)(3):
 - (i) The volume of water associated with the variance (V_{wildlife}), calculated pursuant to section 968(g)(6). This must be calculated and updated annually.
 - (ii) The area of ponds and lakes, in square feet
 - (iii) Annual precipitation data provided by the Department or annual precipitation data meeting the criteria in section 968(g)(6)(A).
- (K) If the supplier has requested and received approval to include in its objective the budget associated with the variance for water used to irrigate existing trees on CII landscapes with DIMs pursuant to section 969(f)(4):
 - (i) The volume of water associated with the variance ($V_{\text{CII-trees}}$), calculated pursuant to section 969(f)(4). This must be calculated and updated annually
 - (ii) The area of existing trees on CII landscapes with DIMs, in square feet.
- (L) If the supplier has requested and received approval to include in its objective a budget associated with the temporary provision to plant new, climate-ready trees pursuant to section 969(g)(2):
 - (i) The volume of water associated with the temporary provision (Pr_{trees}), calculated pursuant to section 968(i)(1). This must be calculated and updated annually.
 - (ii) The number of newly planted trees.
- (M) If the supplier has requested and received approval to include in its objective a budget associated with the temporary provision for qualifying landscapes pursuant to section 969(g)(2):
 - (i) The volume of water associated with the temporary provision (Pr_{land}) calculated pursuant to section 968(i)(2). This must be calculated and updated annually.
 - (ii) The square footage of qualifying landscapes receiving temporary irrigation.
- (4) For the budget for real water losses described in section 970:
 - (A) The volume of water in gallons per year associated with the real water loss budget ($B_{\text{water loss}}$) calculated pursuant to section 970.
 - (B) For systems with water loss standards expressed in units of gallons per connection per day, the supplier shall report the number of service connections for each system it owns and operates, as reported to the Department pursuant to Water Code section 10608.34.
 - (C) For systems with water loss standards expressed in units of gallons per mile per day, the supplier shall report the length of mains for each system it owns and operates, as reported to the Department pursuant to Water Code section 10608.34.
- (5) For the bonus incentive described in section 971, the following parameters, which, unless otherwise specified, must be calculated and updated on an annual basis:
 - (A)

- (i) The volume of the bonus incentive calculated pursuant to section 971(b) and subject to the limitations described in section 971(a)
 - (ii) Annual total potable water production (T_{PW}) reported to the Board pursuant to Health and Safety Code section 116530
 - (iii) Annual potable water deliveries to single-family residential, multi-family residential, and landscape irrigation (D_{RLI}) reported to the Board pursuant to Health and Safety Code section 116530.
- (B) If a supplier delivers water from a groundwater basin that is augmented by potable reuse water, the following information:
- (i) Volume of potable reuse water obtained from a groundwater source (V_{PRG}) for the reporting year, calculated pursuant to section 971(b)(1)
 - (ii) The annual loss factor for recharge and recovery (LF_G). The supplier shall document that the loss factor was calculated and provided by the appropriate groundwater basin management authority in accordance with section 971(b)(1).
 - (iii) The total volume of potable recycled water recharged into the basin. The total volume of potable recycled water recharged into the basin shall be an annual average, calculated using the values provided to the Board through the Volumetric Annual Report, for the preceding five years, for each facility producing recycled water used to recharge the basin. It shall be confirmed by the appropriate groundwater basin authority.
 - (iv) The GeoTracker Global Identification Number used for Volumetric Annual Reporting by each facility producing recycled water used to recharge the basin. This identifier shall be provided at least once every five years.
 - (v) The total volume of water extracted from the augmented groundwater basin (V_{BP}), to be obtained from the appropriate groundwater basin authority
 - (vi) The Public Water System Identification (PWSID) number associated with each system drawing from the augmented basin
 - (vii) The Primary Station Codes identifying each source drawing from the augmented basin
 - (viii) The volume of water the supplier produces from the augmented basin (V_G) reported to the Board pursuant to Health and Safety Code section 116530
 - (ix) The name of the basin augmented by potable reuse water. This shall be provided at least once every five years.
 - (x) The Bulletin 118 identification number. This shall be provided at least once every five years.
- (C) If a supplier delivers water from a reservoir that is augmented by potable reuse water, the following information:
- (i) The volume of potable reuse water obtained from an augmented surface water reservoir source (V_{PRS}) for the reporting year, calculated pursuant to section 971(b)(2)
 - (ii) The annual loss factor for evaporation and seepage (LF_S). The supplier shall document that the loss factor was calculated and provided by the owner or operator of the augmented surface water reservoir.
 - (iii) The total volume of potable recycled water used to augment the reservoir. The total volume of potable recycled water used to augment the reservoir shall be an annual average, calculated using the values provided to the Board through the Volumetric Annual Report, for the preceding five years, for each facility producing recycled water used to augment the reservoir. It shall be confirmed by the appropriate surface water authority.

- (iv) The GeoTracker Identification Number used for Volumetric Annual Reporting by each facility producing recycled water used to augment the surface water reservoir. This identifier shall be provided at least once every five years.
 - (v) The total volume of water obtained from the augmented reservoir (V_{SWP}), to be obtained from the owner or operator of the augmented surface water reservoir
 - (vi) The Public Water System Identification (PWSID) number associated with each system drawing from the augmented reservoir
 - (vii) The Primary Station Codes identifying each source drawing from the augmented reservoir
 - (viii) The volume of water the supplier produces from the augmented reservoir (V_{SW}), as reported to the Board pursuant to Health and Safety Code section 116530.
- (D) If a supplier delivers water from direct potable reuse (DPR) project, the following information:
- (i) The volume of potable reuse water obtained from the DPR project (V_{PRD})
 - (ii) The volume of finished water produced from the DPR project ($V_{FIN-DPR}$)
 - (iii) The fraction of water the supplier derived from the facility producing the finished water
- (6) The supplier's urban water use objective calculated pursuant to section 966.
- (7)
- (A) If a supplier meets the criteria described in section 966(i), the following:
 - (i) For the reporting year the supplier initially asserts compliance with its objective pursuant to section 966(i), the average median household income of the service area in accordance with section 966(i)(1), based on data from the United States Census Bureau's American Community Survey or an alternative source that the supplier has demonstrated to the Board to be equivalent, or superior, in quality and accuracy.
 - (ii) Average annual per capita water use for the state fiscal years ending in 2024, 2025, and 2026, pursuant to section 966(k)(1).
 - (iii) Annual per capita water use for the reporting year and the immediately preceding two years pursuant to section 966(k)(2).
 - (iv) A link to the plan required pursuant to section 966(i)(3).
 - (B) If a supplier meets the criteria described in section 966(j), the following:
 - (i) Average annual per capita water use for the state fiscal years ending in 2024, 2025, and 2026, pursuant to section 966(k)(1).
 - (ii) Annual per capita water use for the reporting year and the immediately preceding two years pursuant to section 966(k)(2).
 - (iii) Verified adherence to the American Water Works Association G480-20 Water Conservation and Efficiency Program Operation and Management Standard (published February 1, 2021).
 - (iv) A link to the plan required pursuant to section 966(j)(2).
- (c) No later than January 1, 2025, and by January 1 every year thereafter, each urban retail water supplier shall submit to the Department and the Board, on a machine-readable form provided by the Board, the actual urban water use for the previous state fiscal year, calculated in accordance with section 10609.22 along with relevant supporting data for:
- (1) Demands relevant to the objective, specifically:
- (A)
 - (i) Annual deliveries to "Single-Family Residential" connections, as reported to the Board pursuant to Health and Safety Code section 116530

- (ii) Annual deliveries to “Multi-Family Residential” connections, as reported to the Board pursuant to Health and Safety Code section 116530
 - (iii) Annual “Residential Recycled Water Demand,” as reported to the Board pursuant to Health and Safety Code section 116530
 - (iv) Annual “Residential Non-potable Water Demand,” as reported to the Board pursuant to Health and Safety Code section 116530
 - (v) The volume of annual deliveries to single-family residential customers that are at or above the 90th percentile for single-family residential water use across the supplier’s service area
 - (vi) The volume of annual deliveries to multi-family residential customers that are at or above the 90th percentile for multi-family residential water use across the supplier’s service area
 - (vii) Deliveries to residential landscapes with dedicated irrigation meters, where the supplier classifies those landscapes as residential, and the Department included those landscapes in the supplier’s residential landscape area described in section 968(b)(2)
 - (viii) Deliveries to landscapes the supplier categorizes as residential landscapes but were not included in the supplier’s residential landscape area described in section 968(b)(2). The supplier shall report these deliveries separate from paragraph (A)(i) or (A)(ii) until residential landscape area is updated to include these landscapes pursuant to section 968(b)(2) or 968(b)(3).
- (B) Aggregate annual deliveries to “Metered Irrigation of Commercial, Industrial, or Institutional Landscapes,” as reported to the Board pursuant to Health and Safety Code section 116530. This shall be limited to:
- (i) Potable demand
 - (ii) Non-potable demand
 - (iii) Deliveries to landscapes the Department included in the supplier’s residential landscape area described in section 968(b)(2) but that the supplier categorizes as CII. If this condition is met, the supplier shall correspondingly adjust its residential landscape area pursuant to section 968(b)(2) or (b)(3).
- (C) Aggregated real water losses. If available, the real water losses shall be those reported in the water audits submitted to the Department pursuant to Water Code section 10608.34.
- (D) Total demands relevant to the objective, which shall be the sum of the values reported in paragraphs (A)(i) through (iv), (B)(i) and (B)(ii), and (C).
- (2) Excluded demands, specifically:
- (A) Aggregate annual water deliveries to “Commercial and Institutional” connections, as reported to the Board pursuant to Health and Safety Code section 116530. This includes deliveries to landscapes the supplier categorizes as commercial or institutional and that are served by mixed-use meters. If the Department included such landscapes in a supplier’s residential landscape area described in section 968(b)(2), then the supplier shall correspondingly adjust its residential landscape area pursuant to section 968(b)(2) or (b)(3).
 - (B) Aggregate annual water deliveries to “Industrial” connections, as reported to the Board pursuant to Health and Safety Code section 116530. The supplier shall additionally estimate the percentage of aggregate annual water deliveries to “Industrial” connections that is process water, as defined by Water Code section 10608.12(y).
 - (C) Aggregate annual water deliveries to “Other” connections, as reported to the Board pursuant to Health and Safety Code section 116530.

- (D) Aggregate annual water deliveries to “Agriculture” connections, as reported to the Board pursuant to Health and Safety Code section 116530.
 - (E) Total aggregate demands excluded from the objective, which shall be the sum of the values reported in paragraphs (A), (B), and (C).
- (d) No later than January 1, 2025, and by January 1 every year thereafter, each urban retail water supplier shall submit to the Department and the Board, for the previous state fiscal year, on a machine-readable form provided by the Board, the following:
- (1) Relevant data pursuant to section 972, specifically:
 - (A) The total number of commercial, industrial, and institutional (CII) connections served, as reported to the Board pursuant to Health and Safety Code section 116530.
 - (B) The total number of CII water users classified pursuant to section 972.
 - (C) The number of CII water users falling into each of the classification categories specified in section 972(a) and section 972(b).
 - (2) Relevant data pursuant to section 973, specifically:
 - (A) For all suppliers:
 - (i) The total number of water users associated with large landscapes
 - (ii) The total estimated, aggregate volume of water applied to large landscapes
 - (iii) The total aggregate square footage of large landscapes.
 - (B) For suppliers that identified water users pursuant to section 973(a)(2):
 - (i) The number of water users associated with those large landscapes
 - (ii) The estimated, aggregate volume of water applied to those large landscapes
 - (iii) The total aggregate square footage of those large landscapes.
 - (C) For suppliers that have installed dedicated irrigation meters (DIMs) pursuant to section 973(b):
 - (i) The number of water users associated with large landscapes that have had a DIM installed
 - (ii) The aggregate square footage of large landscapes that have had a DIM installed.
 - (D) For suppliers that have employed in-lieu technologies and offered Best Management Practices (BMPs) pursuant to section 973(b):
 - (i) The number of water users associated with large landscapes for which the supplier has employed in-lieu technologies and offered BMPs
 - (ii) The aggregate square footage of those large landscapes
 - (iii) The in-lieu technologies that have been employed
 - (iv) If the Board has approved the use of an in-lieu technology other than those listed in section 973(b)(2), a narrative description of the technology employed
 - (v) The BMPs offered pursuant to section 973(b)(3)
 - (vi) The estimated annual water savings associated with section 973(b).
 - (3) Relevant data pursuant to section 974(a) and (b), specifically:
 - (A) The number of disclosable buildings identified pursuant to 974(a).
 - (B) The number of customers for which the supplier has provided the information required pursuant to section 974(b).
 - (4) Relevant data pursuant to section 974(c) through 974(h) in accordance with paragraph (A), (B), or (C) below, as applicable:
 - (A) For suppliers that have identified water users pursuant to 974(c)(1):
 - (i) The number of CII water users at or above the 97.5th percentile for water use
 - (ii) The best management practices (BMPs) offered to the water users identified in paragraph (i)

- (iii) The estimated annual water savings associated with the BMPs identified in paragraph (ii)
 - (iv) The number of CII water users at or above the 80th percentile for CII water use
 - (v) The BMPs offered to the water users identified in paragraph (iv)
 - (vi) The estimated annual water savings associated with the BMPs identified in paragraph (v).
- (B) For suppliers that have identified water users pursuant to 974(c)(2):
- (i) The number of CII water users at or above the 97.5th percentile for water use
 - (ii) The best management practices offered to the water users identified in paragraph (i)
 - (iii) The estimated annual water savings associated with the BMPs identified in paragraph (ii)
 - (iv) The number of water users at or above the 80th percentile for water use in each of the classification categories specified in section 972(a) and 972(b)
 - (v) The BMPs offered to the water users within each of the classification categories identified in paragraph (iv)
 - (vi) The estimated annual water savings associated with the BMPs identified in paragraph (v).
- (C) For suppliers that have identified water users pursuant to 974(c)(3):
- (i) The key business activity indicators (KBAI) developed for each of the classification categories specified in section 972(a) and 972(b)
 - (ii) Any KBAI the supplier has developed for specific ENERGY STAR Portfolio Manager property types
 - (iii) For each of the classification categories specified in section 972(a) and (b), the number of water users identified pursuant to section 974(c)(3)
 - (iv) The BMPs offered to the water users within each of the classification categories identified in paragraph (iii)
 - (v) The estimated annual water savings associated with the BMPs identified in paragraph (iv).
- (e) Unless otherwise specified, any volume of water reported pursuant to this section shall be reported in gallons.
- (f) On or before January 1, 2027, a copy of a supplier's regulation, ordinance, or policy governing water service that shows the supplier's compliance with Water Code section 10608.14.

Authority: Sections 1058 and 10609.28, Water Code.

References: Article X, Section 2, California Constitution; Section 116530, Health and Safety Code; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10608.12, 10608.14, 10608.34, 10609.2, 10609.10, 10609.22, 10609.24, 10728, and 12924 Water Code.

Adopt new section 978:

§ 978. Urban Water Use Objectives – Enforcement

- (a) The failure to provide the information requested under this article within the time provided in the order, or as specified under this article, is a violation subject to civil liability pursuant to Water Code section 1846 or 1846.5.

- (b) A decision or order issued under this article or under Water Code section 10609.24, subdivision (c), section 10609.26, subdivisions (a) or (c), or section 10609.28 is subject to reconsideration under article 2 (commencing with section 1122) of chapter 4 of part 1 of division 2 of the Water Code.
- (c) Orders issued under this article are effective upon issuance.

Authority: Sections 1058, Water Code.

References: Article X, Section 2, California Constitution; Sections 102, 104, 105, 350, 1122, 1123, 1124, 1846, 1846.5, 10609.24, 10609.26, 10609.27, 10609.28, 10617, and 10632, Water Code.

Title 23. Waters

Division 3. State Water Resources Control Board and Regional Water Quality Control Boards

Chapter 3.5. Urban Water Use Efficiency and Conservation

~~Article 1~~ Article 2. Water Loss Performance Standards for Urban Retail Water Suppliers

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~~Article 2~~ Article 3. Reporting

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~~Article 3~~ Article 4. Prevention of Drought Wasteful Water Uses

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