

October 17, 2023

Courtney Tyler
Clerk to the State Water Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100

Re: Proposed Making Conservation a California Way of Life Regulation

To whom it may concern:

On behalf of the approximately 1,300 member companies of the Irrigation Association, many of which are headquartered or have a large employee presence and customer base in California, we appreciate the opportunity to provide comments on the State Water Resources Control Board's proposed "Making Conservation a California Way of Life Regulation."

As stewards of water resources, irrigation professionals and companies recognize the important role we serve in ensuring water resources are accessible and provide for future generations. Our industry and our members are committed to investing in new product development and contributing expertise to encourage dialogue and successful solutions that have a lasting impact on the sustainability of our water resources.

We support efforts to foster enhanced water conservation and to advance efficient irrigation in California, and we provide the following comments for the Board's consideration on elements of the proposal to improve the final regulation.

Landscape Efficiency Factor

The proposed standard 0.45 Landscape Efficiency Factor (LEF) for commercial, industrial, and institutional (CII) landscapes with Dedicated Irrigation Meters (DIMs) and new construction and 0.55 for residential landscapes will not be possible to achieve without significant financial investment by landowners. Even with new construction that is designed to meet these Model Water Efficient Landscape Ordinance (MWELO) standards, achieving these targets is challenging in practice. In addition to the design characteristics of irrigation systems, there are several other factors that significantly influence how much water can be beneficially used, including the organic content of the soil, plant

type, potential runoff, irrigation scheduling, sprinkler uniformity and evaporation. Each can have varying degrees of influence on the irrigation efficiency of a landscape.

Expecting *existing* landscapes to be retrofitted in a short period of time to meet the standards that *new* construction have difficulty meeting is unrealistic. We recommend a more achievable and realistic LEF that takes into account the multitude of factors that can ultimately influence an irrigation system's ability to provide water efficiency.

Effective Precipitation Rate

In California, the period in which rainfall occurs and the need for supplement irrigation do not coincide. Rainfall predominantly occurs between October and April, while the irrigation season spans from May through October. Assuming that up to 25% of the rainfall can be considered both effective and available water is a risky presumption. This could result in plant mortality if the water budget is decreased based on rainfall that occurred outside the primary irrigation season.

Additionally, obtaining precipitation updates on an annual basis after the rainfall events have taken place would involve retrospective analysis and would not accurately represent the current conditions.

Enhanced precision can be achieved at the microclimate level by utilizing smart irrigation controllers on a parcel-specific basis. These controllers can utilize real-time data, or a combination of real-time weather data and predictive local weather conditions, to make irrigation scheduling changes. When smart controllers are complemented with on-site sensors, they will pause irrigation cycles upon detecting precipitation. These types of sensors can be calibrated to replicate on-site soil conditions, thereby accurately factoring in effective precipitation.

MWEL Section 494 (a) Effective Precipitation states: "*(a) A local agency **may** consider Effective Precipitation (25% of annual precipitation) in tracking water use...*" The use of the word "may" is an indication that it is up to the local agency to make that determination and make adjustments based off local conditions that evaluate effective precipitation on a local level. We recommend that effective precipitation considerations on an aggregated service area level be removed from the proposed regulations.

Benefits of Healthy Landscapes

Healthy landscapes have a bevy of beneficial qualities to the environment and to the residents of California. Healthy plants produce oxygen, stabilize soil, filter stormwater, aid in groundwater recharge, sequester carbon and can help contribute to a lower heat island effect. Due to recent droughts, California has unfortunately seen a vicious cycle of drought, wildfires and soil degradation during heavy rain events leading to mudslides and other stormwater runoff calamities. While healthy landscapes across the state will not solve all these problems, they can help mitigate them by helping keep the soil

intact and limiting the soil loss during volatile weather events. As the wildland-urban interface continues to grow, healthy landscapes can also help alleviate the associated damage to life and property when wildfires do occur, ultimately making these communities more resilient.

Healthy landscapes also improve the quality of life by providing open space, recreational and business opportunities and enhanced property values to the local community. During the COVID-19 pandemic, we saw the benefit of being able to spend time outside in our natural environment. Research has shown that “greater land-cover greenness within a 250 m radius around a respondent’s postcode was important in predicting higher levels of mental wellbeing.”¹ Moreover, the cooling effect of a healthy landscape also cannot be overlooked; urban areas with fewer grasses and landscape plants are 10% to 15% warmer than their rural neighbors.² Regardless of plant selection, irrigation systems can efficiently provide the water a healthy landscape requires. The IA encourages the Board to review the underlying assumptions in this proposed regulation to ensure policies do not lead to a reduction in healthy landscapes.

Trees and green infrastructure are also critically important contributors to climate change mitigation and adaptation, and supplemental rainfall irrigation is necessary to sustain these spaces. Supplemental rainfall irrigation allocations must be based in science to maximize the climate change mitigation needed from these spaces.

Trees have been continually identified as priority assets in the landscape because of their ecosystem service abilities, which include, but are not limited to, wildlife habitat and food, aesthetics, high property values, happier and safer communities, heat island effect reduction, and carbon sequestration to help fight climate change. We appreciate that the State Water Control Resources Board recognizes this and has created a non-functional turf-with-trees irrigation allowance to support tree health. However, we are concerned about potential unintended consequences of the regulation. Specifically, a large portion of historic non-functional turf in CII landscapes does include trees, which has been a standard development practice for decades. As water use allocations for these spaces are made, water budgets will be undoubtedly exceeded. As no plan of action has been identified by the Board, we are concerned that historic trees in these spaces may be lost due to lack of dedicated irrigation, thus losing the climate change mitigation and adaptation support of these valuable assets.

Losing these historic trees becomes exponentially harmful and contributes to climate change impacts. Removal, haul-away and distribution of debris all require carbon impact. Additionally, sourcing, procuring, installing, establishing new irrigation and maintaining replacement trees require increased carbon impacts compared to maintaining historical trees. The Southern Nevada Water Authority commissioned a study that showed a newly planted tree requires seven years of establishment before reaching carbon neutrality (the point at which the carbon sequestration value of the tree is equal to the

¹<https://pubmed.ncbi.nlm.nih.gov/33668228/>

² <https://bookstore.ksre.ksu.edu/pubs/MF2940.pdf>

establishment and ongoing maintenance, including irrigation, carbon impacts). With such a long establishment period, the chance of repeat mortality is high creating a circularity of failure which the State and our environment cannot afford.

The California Climate Plan for 2045 recognizes ambitious carbon removal and capture targets in the coming decades and indeed calls for an increase of the state's urban tree canopy by 10% by 2035³. Moreover, the U.S. Forest Service reports that urban trees are able to sequester 25.1 tons of carbon per hectare on average in the U.S., which equates to a \$460 million value⁴.

As our understanding of the value of urban forests increases and green infrastructure investments are expanded, it is counterintuitive, and potentially damaging, to place arbitrary water management practices on these proven assets. As the State Water Control Resources Board focuses on water management, its consideration would be improved by factoring in the greater ecosystem that these decisions affect, namely climate change.

Instead of setting anecdotal water management practices, we recommend a science-based approach to better understand the impact of water use while promoting ecosystem services to mitigate climate change. Specifically, the Board should consider

- taking a 'carbon accounting' approach to better understand the impacts of development, replacement and maintenance of trees and green infrastructure to make informed decisions that align with the ecosystem of goals delivered by the State.
- working with the U.S. Forest Service to baseline California urban forestry carbon sequestration capability.
- utilizing tools such as the Lawrence Livermore National Laboratory Water/Energy Flow charts⁵ to measure the imbedded carbon in the movement of irrigation water to support green infrastructure.
- utilizing updated evapotranspiration data to calculate the water investment needed to promote healthy trees to mitigate and adapt to climate change.

Costs and Regulatory Burdens

We are concerned that the costs and potential regulatory burdens associated with this proposal are not adequately addressed. We are particularly concerned about the impacts this proposal could have on economically disadvantaged communities.

The proposal will place a large financial burden on individual properties, especially those that are already struggling financially just to meet basic maintenance requirements for their existing landscape.

³ <https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp.pdf>

⁴ [https://doi.org/10.1016/S0269-7491\(01\)00214-7](https://doi.org/10.1016/S0269-7491(01)00214-7)

⁵ <https://flowcharts.llnl.gov/commodities/energywater>

Based on the experience of our members, we are concerned owners and managers of many properties will not have the resources to completely retrofit their plantings and irrigation systems. For example, our California members have shared with us that the cost to replace turf with low water use plantings can range between \$4 and \$12 per square foot. We encourage the Board to carefully consider the adverse financial impact on communities across the state, especially economically disadvantaged communities, and have a plan to address costs associated with equitable access to reclaimed water, upgraded irrigation devices and needed green infrastructure investments.

We also note that depending on how these regulations are implemented, reporting requirements associated with irrigation maintenance and scheduling could result in new administrative burdens and create additional operational challenges for irrigation contractors and professionals. These businesses, like many across the country, struggle with recruiting and retaining talent. Additional administrative burdens will exacerbate these staffing challenges and detract from the productive work these professionals could otherwise be engaged in to advance water conservation efforts. We encourage the Board to work closely with us and others potentially impacted to minimize these burdens.

Other Recommendations Considerations

We underscore the important role qualified irrigation and landscape professionals will play in implementing this regulation. To that end, it is vital that funding be made available for grants and other partnerships to provide needed education and training to professionals, as well as end users. We also highlight the necessity of ensuring funding is available to expanded water recovery programs and the need to ensure equitable access to reclaimed water in the state.

We appreciate your attention and welcome the opportunity to discuss our comments and recommendations in greater detail. Please do not hesitate to reach out to Irrigation Association Advocacy and Public Affairs Vice President Nathan Bowen (nathanbowen@irrigation.org) if you require any further information or if we can be of assistance.

Sincerely,

A handwritten signature in black ink that reads "Natasha L. Rankin". The signature is written in a cursive, flowing style.

Natasha L Rankin, MBA, CAE
Chief Executive Officer