CALIFORNIA COASTKEEPER ALLIANCE

Public Comment
Proposed Recycled Water Policy Amendment
Deadline: 12/22/17 by 12 noon

December 22, 2017

Chair Felicia Marcus and Board Members
c/o Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Sent via electronic mail to: commentletters@waterboards.ca.gov

RE: Comment Letter – Proposed Recycled Water Policy Amendment Early Public Consultation

Dear Chair Marcus and Board Members:

California Coastkeeper Alliance (CCKA) is a network of California Waterkeeper organizations working to protect and enhance clean and abundant waters throughout the state, for the benefit of Californians and California ecosystems. We appreciate the opportunity to comment on the Proposed Recycled Water Policy Amendment.

California Waterkeepers always been on the cutting edge of advancing water recycling technology. For example, Orange County Coastkeeper has been a strong supporter of the Orange County Groundwater Replenishment System – the world's largest highly advanced purified water recycling system. And, in late 2014 San Diego Coastkeeper signed a cooperative agreement with the City of San Diego to implement a large-scale potable reuse project that will produce at least 83 million gallons per day by 2035. In 2009, CCKA served on the stakeholder working group to develop California's Water Recycling Policy, which among other things, set a state goal to increase water recycling by approximately two million acre-feet per year by 2030. CCKA has since worked with the State Water Board to adopt a clear and consistent regulatory pathway to help California's water agencies meet its water recycling goals.

Most cities in California use water once, then dispose of it like waste, at tremendous environmental and economic cost. U.C. Davis researchers found that between June 2015 and February 2016, when statewide water conservation measures were in place, California's water conservation rate of 23.9 percent over 2013 levels resulted in energy savings that translated into a reduction in greenhouse gas emissions of 219,653 metric tons.[1] Approximately 12 billion gallons of treated wastewater are discharged into the ocean or an estuary each day. But like many other recycled materials, water can be reused. Advanced filtration technologies, similar to what astronauts have used in outer space for decades, can clean recycled water to such a highly purified state that it is akin to distilled water and requires natural minerals to be added back in before entering the drinking water system.

Water recycling offers a significant untapped water supply, particularly in coastal areas facing water shortages or in areas that rely on imported water. Recycled water could meet nearly one third of California's water supply needs. Water recycling is a wise investment because it creates a local, drought resilient water supply and can reduce wastewater discharges to the ocean. Advanced purified recycled water uses the same filtration technology as ocean desalination, but requires only one third of the energy and is half the cost of desalinated water.

The Proposed Recycled Water Policy Amendment is a prime opportunity for California to re-evaluate and revise its water recycling priorities, and incorporate missing components of a successful Policy that both encourages

[1] Tara Lohan, *Water Conservation Saves Energy in California*, KQED SCIENCE (June 9, 2016), https://ww2.kqed.org/science/2016/06/09/water-conservation-saves-energy-in-california/.

water recycling be put to a beneficial use while ensuring it is used reasonably and protective of both public and aquatic health. To this end, the State Water Board should:

(1) Not remove the recycled water mandate without replacing it with tools to help motivate California to reach its water recycling goal;
(2) Set a statewide goal of zero ocean discharges of treated wastewater;
(3) Expressly state that all recycled water in California must be used for beneficial uses and must be used reasonably and not wastefully;
(4) Require reporting of volume of recycled water produced by region compared to volume of wastewater discharged by region;
(5) Not excuse those that have not completed salt and nutrient management plans, and restrict state and federal funding for those not in compliance;
(6) Incorporate bioassays into the CEC monitoring program to ensure we are detecting emerging constituent;
(7) Reconvene the Science Advisory Panel every 3 years;
(8) Charge future Science Advisory Panels to evaluate the current risk of emerging constituents for aquatic health; and
(9) Incorporate the Proposition 1 Water Recycling Guideline's prioritization scheme, and Water Code Section 79767 to require multi-benefit criteria be considered in future permits and policies.

1. THE STATE WATER BOARD SHOULD SET A STATEWIDE GOAL OF ZERO CCEAN DISCHARGES OF TREATED WASTEWATER.

a. The State Water Board should not remove the recycled water mandate without replacing it with tools to help motivate California to reach its water recycling goal.

California needs a water recycling goal that is ambitious, yet attainable, while also being tied to a tangible outcome. The Recycled Water Policy contains four benchmarks: (1) a water recycling goal; (2) a water recycling mandate; (3) a stormwater goal, and (4) a conservation goal. The State Water Board is considering removing the stormwater and conservation goals because they are now housed in the Strategy to Optimize Resource Management for Storm Water and implementation of Executive Order B-37-16 ("conservation regulations"). We do not object to that change – the Recycled Water Policy should be a stand-alone policy that focuses on only water recycling.

The State Water Board is also considering removing the statewide mandates for recycled water use because there is no clear method of enforcing the mandate, and the goals serve a similar function of encouraging development and use of recycled water. We generally agree that statewide targets are not enforceable, and would be better served as goals. However, if the State Water Board removes the mandate, we encourage meaningful consideration of "sticks" and "carrots" to help motivate local communities to meet the statewide goal. For example, a "carrot" approach would be prioritizing grant funding and State Revolving Fund grants towards projects within communities that have plans in place to get to zero ocean wastewater discharges. Or a "stick" approach could be requiring Regional Water Boards to conduct additional proceedings consistent with their duty to analyze whether the ongoing discharge from wastewater treatment facilities constitutes a reasonable and beneficial use or a waste and unreasonable use of a water resource, and to prevent any wastes and unreasonable uses based on that analysis. The <u>State Water Board should not remove the recycled water mandate without replacing it with tools to help motivate California to reach its water recycling goal, including Regional Boards' obligation to prevent the waste and unreasonable use of recycled water</u>.

b. The State Water Board should revise its water recycling goal to be based on tangible, beneficial outcomes.

The State Water Board is also considering revising the water recycling goal. The Recycled Water Policy calls on California to "increase the use of recycled water over 2002 levels by at least one million acre-feet per year (afy) by 2020 and by at least two million afy by 2030." The State Water Board states that any "changes to the goals may also acknowledge conservation efforts and long-term water supply challenges that may affect recycled water production or use" – indicating that the State Water Board is likely considering lowering the goals of one million acre-feet by 2020 and two million acre-feet by 2030. We do not disagree that water conservation provides less opportunities for recycling water – that is not a bad thing. Water conservation and efficiency should be prioritized over water recycling.

The State Water Board's reasoning that water conservation may affect recycled water production, and as a result, is justification to reduce California's water recycling goal demonstrates the flaw in the goal generally. Where did 1 million and 2 million afy come from? Was it based on anything tangible – like the maximum potential of recycling treated ocean wastewater discharges? Or was it just picked randomly because they were nice big numbers? To us, 1 million and 2 million afy seems arbitrary and not based on anything tangible. Similarly, in 1991 the State Legislature set a statewide goal to recycle a total of 700,000 acre-feet of water per year by the year 2000 and 1,000,000 acre-feet of water per year by the year 2010, neither of which were achieved.[2] Rather than just pick random goals, which based in reality may be too large or too small, the State Water Board should re-direct California's water recycling aspirations towards tangible outcomes.

Rather than base a statewide water recycling goal on a random number, we strongly encourage California to set a water recycling goal of zero ocean wastewater discharges. This is a goal set by a tangible outcome – California would end our (unconstitutionally) wasteful practice of dumping treated effluent when there is a need to put it to a reasonable beneficial use – and we would be eliminating pollution discharges to our ocean that may result in harmful algae blooms and long-term ocean acidification hot spots.

c. The California Constitution should drive California's water recycling goal to achieve zero wastewater ocean discharges.

California's current water infrastructure and supply is dominated by energy-intensive inter-basin transfers where, at great environmental and economic cost, surface waters from Northern California, Owens Valley, and the Colorado River are diverted and typically pumped long distances and over mountain ranges to meet water demands for agriculture and large metropolitan populations in arid and semiarid regions of California. Climate change forecasts create additional concerns regarding the region's water security as rising temperatures have already caused snowpack in the Sierras to melt earlier and at faster rates, leaving less water available for capture and transport in the late summer and fall months.

The combination of an unpredictable climate, a limited, scarce resource, and a growing public demand creates an undeniable need to conserve water to the fullest extent possible and put all water resources to reasonable and beneficial uses, as reflected in the requirements of the California Constitution and the California Water Code. However, despite these clear legal mandates, the considerable environmental and economic costs of maintaining the State's water infrastructure, and the looming threats posed by a changing climate, water resources are generally transported over great distances, utilized once, and then dumped into our rivers, creeks, and the Pacific Ocean. This "pump and dump" approach to water management is a strategy increasingly at odds with the reality of California's current and future water resources and California law, as it is a strategy that is no longer reasonable, beneficial, nor sustainable.

[2]See, https://www.waterboards.ca.gov/about_us/performance_report_1011/plan_assess/12514_ww_reclamation.shtml.

California law reflects the scarcity and value of water resources. For nearly a century, a self-executing provision of the California Constitution has required that all water resources of the State be put to reasonable and beneficial use to the maximum extent possible and has prohibited *any* waste and unreasonable use of a water resource. (Cal. Const., article X, § 2.) Thus, the State Board and the nine Regional Boards must ensure uses are both beneficial and reasonable, and prevent waste and unreasonable use when regulating all water resources in California.

The State Water Board should set a water recycling goal that puts recycled water to a reasonable beneficial use to the fullest extent. This is codified in Article X, section 2 of the Constitution which requires that uses be reasonable and beneficial while also prohibiting the waste and unreasonable use of all water resources of the State. Article X, section 2 reads in pertinent part as follows:

> It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that the waste and unreasonable use or unreasonable method of use of water be prevented, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare.

Recycled water is defined as "water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource."[3] The State Board's Recycled Water Policy developed pursuant to California Water Code section 13140 also provides that the reuse of wastewater in California is meant to supplement and/or substitute for the use of surface or groundwater. Accordingly, the Recycled Water Policy highlights and applies the mandates already contained in Article X, section 2 of the California Constitution and Water Code section 100 that the use and management of wastewater, like all water in the State, must be reasonable and not wasteful.

Article X, section 2 and Water Code section 100 impose an affirmative, non-discretionary duty on the State Board to ensure the reasonable and beneficial use of water resources and to prevent the waste and unreasonable use of all water resources of the State.[4] California Water Code section 275 explicitly requires that the State Board take all necessary action in executive, legislative, and judicial forums to prevent unreasonable use of water. "Section 275 directs that the [State Board] and DWR take appropriate action to prevent waste and the unreasonable use of water."[5] The State Board also states in the Recycled Water Policy that the policy "fully implements state . . . water quality laws and regulations . . . and put the waters of the state to the fullest use of which they are capable."[6]

The Recycled Water Policy update is the prime opportunity to incorporate the State Water Board's duties to execute the Waste and Unreasonable Use Doctrine. Therefore, the State Water Board should <u>revise California's statewide water recycling goal to achieve zero ocean wastewater discharges</u>.

d. The State Water Board should expressly require that recycled water is used reasonably and not wastefully.

As detailed above, Article X, section 2 of the Constitution mandates that all water resources in California are used both for beneficial uses and reasonably. And, as also explained above, Water Code section 275 provides that the State Water Board take all appropriate executive, legislative, and judicial actions to prevent the waste and unreasonable use of water.

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[3] (Cal. Wat. Code § 13050(n).)
[4] (*City of Barstow v. Mojave Water Agency* (2000) 23 Cal. 4th 1224, 1236; *Environmental Defense Fund*, 20 Cal.3d at 341; *Imperial Irrigation Dist.*, 186 Cal.App.3d at 1170–71; see also *In the Matter of the Alleged Waste and Unreasonable Use of Water by Imperial Irrigation Dist.*, (June 21, 1984) State Water Resource Control Board, Decision No. 1600 at 9.)
[5] (*Central Delta Water Agency v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 245, 260, fn.9.)
[6] (Recycled Water Policy, p. 2.)

One purpose of the Recycled Water Policy is to "provide direction to the Regional Water Quality Control Boards (Regional Water Boards), proponents of recycled water projects, and the public regarding the appropriate criteria to be used by the State Water Board and the Regional Water Boards in issuing permits for recycled water projects." Given this purpose and the requirement that recycled water be used both beneficially and reasonably, the update to the Recycled Water Policy provides the State Board an opportunity to execute its duties imposed by Article X, section 2 and provide that "water recycling requirements" permits must ensure that the permitted use is both reasonable and beneficial.

Once available, California's water resources must be managed in an integrated way if California is to solve its water challenges—which are certain to become increasingly difficult given the State's growing population and extended droughts. Without ensuring that recycled water is used reasonably and not wastefully the State Board risks substantial, and likely irreversible, commitments of water to unsustainable uses in the face of the state's worsening water imbalance. Such unsustainable commitments of recycled water already exist, including irrigation of water intensive crops in over-allocated, over-drafted basins. Further, merely adding recycled water to existing supplies without integration and rationalization of uses via a reasonable use analysis will do nothing to restore overdrawn and impaired waters, and will only further foster urban sprawl. Yet, the Recycled Water Policy is meant to combat California's "unprecedented water crisis" by "mov[ing California] towards sustainable management of surface waters and groundwater…." Failing to require that all recycled water is used reasonably and not wastefully would completely undermine this purpose and the State Water Board's laudable goals of encouraging the development and use of recycled water.

Therefore, the State Water Board must revise the Recycled Water Policy to expressly state that all recycled water in California must be used for beneficial uses and must be used reasonably and not wastefully, and that the reasonable beneficial requirement be incorporated into all permits governing recycled water.

2. THE STATE WATER BOARD SHOULD REQUIRE REGIONAL REPORTING OF RECYCLED WATER COMPARED TO VOLUME OF WASTEWATER DISCHARGES WITH THE POTENTIAL TO BE RECYCLED.

Currently, there is no streamlined statewide reporting program and data management system for tracking recycled water production, use or potential production. We applaud the State Water Board for propsing that the Recycled Water Policy include language requiring annual reporting of recycled water production, use, and potential by recycled water producers.

The State Water Board indicated that recycled water reporting may include: (1) volume of recycled water produced by facility; (2) volume of recycled water used for several categories like groundwater recharge or irrigation; and (3) volume of potential recycled water. We support these categories but would strongly encourage the State Water Board to require reporting of volume of recycled water produced by region compared to volume of wastewater discharged by region. This way, we are tying reporting to our proposed goal of achieving zero ocean wastewater discharges, but more importantly, we are tying reporting to a tangible outcome – maximizing the reasonable use of recycled water while minimizing pollutant discharges to our marine environment.

3. THE STATE WATER BOARD SHOULD NOT EXCUSE THOSE THAT HAVE NOT COMPLETED SALT AND NUTRIENT MANAGEMENT PLANS WITHIN THE SEVEN-YEAR COMPLIANCE DEADLINE.

The State Water Board should continue to require all groundwater basins to develop salt and nutrient management plans. The Recycled Water Policy states that it "is the intent of this Policy for every groundwater basin/sub-basin in California to have a consistent salt/nutrient management plan." However, the State Water Board suggests that the "proposed Recycled Water Policy amendment may require Regional Water Boards to prioritize which groundwater basins or sub-basins need salt and nutrient management plans..." This new language implies that the

State Water Board intends to backslide on its requirement to require all basins to develop a salt and nutrient management plan.

The State Water Board should not excuse those that ignored the State Water Board's mandate. Many groundwater basins in the state contain salts and nutrients that exceed or threaten to exceed water quality objectives established in the applicable Basin Plans, and not all Basin Plans include adequate implementation procedures for achieving or ensuring compliance with the water quality objectives for salt and nutrients. All plans were due no later than February 3, 2016. The Recycled Water Policy states that salt and nutrient management plans shall be completed and proposed to the Regional Board within five years from the date of the Recycled Water Policy (2/3/14) and *in no case* the period for the completion of a plan *shall exceed seven years* (2/3/16). To now exonerate those that are clearly not in compliance is bad public policy, and devalues the State Water Board's credibility towards holding the regulated community accountable for statewide directives.

Local agencies have now had nine years to complete salt and nutrient management plans. It is inappropriate to forgive those that are now almost two years passed the absolute last deadline. It sends the wrong message to forgive those regions that have not completed their plans. The State Water Board should develop a "stick" and "carrot" approach for motivating non-compliers to achieve salt and nutrient management plans. As a "stick", projects without salt and nutrient management plans should be prohibited from state and federal funding. Those not in compliance should also be prohibited from streamlined permitting found in General Orders, and required to conduct an anti-degredation analysis until a salt and nutrient management plan is adopted. As a "carrot", those that have completed salt and nutrient management plans will be prioritized for state and federal funding.

The State Water Board should not excuse those that have not completed salt and nutrient management plans within the seven-year compliance deadline. Instead, the State Water Board should restrict state and federal for those that have ignored the statewide mandate, while providing funding incentives for those that followed the State Water Board's directive.

4. THE STATE WATER BOARD SHOULD INCORPORATE THE SCIENCE ADVISORY PANEL'S RECOMMENDATIONS TO OFFER MONITORING ONRAMPS AND TO RE-EVALUATE MONITORING CONSTITUENTS EVERY THREE YEARS.

A Science Advisory Panel on Constituents of Emerging Concern (CECs) in recycled water was reconvened in 2017 to review the current state of scientific knowledge and monitoring data related to human health risks associated with exposure to CECs in recycled water, including antibiotic resistant bacteria and antibiotic resistance genes. CCKA was a Member of the Public Advisory Group, and we will be commenting on the Advisory Panel's specific recommendations. However, given the December 15th Science Advisory Panel Workshop, we thought it was appropriate to provide initial feedback on the Panel's proposed recommendations.

First, we want to thank the panel for seriously considering our initial thoughts and recommendations from the July Public Advisory Group workshop. Next, we want to strongly support two initial recommendations made by the Panel: that the State Water Board include bioassays into water recycling monitoring protocols to capture emerging contaminants as a constituent monitoring "onramp"; and to shorten the Expert Panel's review period to three years. Lastly, we want to urge the State Water Board to reconsider its limited scope of only being concerned with only public health.

The State Water Board needs to invest in building analytical models for detecting CECs. The CEC monitoring program lacks the ability to comprehensively detect a significant portion of CECs with the potential to impact human health and aquatic life. The general public are genuinely concerned that regulatory agencies appear to be unaware of the full range of public health and environmental dangers associated with CECs, and that there has been little meaningful action to redress these informational and regulatory gaps. We strongly encourage the State

Water Board to heed the Science Advisory Panel's recommendation to incorporate bioassays into the CEC monitoring program to ensure we are detecting emerging constituents.

The Recycled Water Policy was amended on January 22, 2013 to require the Regional Water Quality Control Boards (Regional Water Boards) to include CEC monitoring requirements for groundwater recharge projects. The Recycled Water Policy includes provisions that require staff to reconvene a science advisory panel every five years to provide guidance on future actions related to CECs in recycled water. During the 2013 Policy Amendment comment period, CCKA urged the State Water Board to reconvene the science advisory group annually, arguing that a five-year period is far too long to stay up-to-date on emerging constituents. We strongly recommend the State Water Board reconvene the Science Advisory Panel every 3 years, at a minimum, to stay current on the most cutting-edge constituents that maybe detected in our drinking water.

The original intent of the Recylced Water Policy was to protect both public health and the environment from CECs. The Recycled Water Policy established the Panel for the purpose of "describing the current state of scientific knowledge regarding the risks of emerging constituents *to public health and the environment*." (Emphasis added.) The Policy further called on the Panel's Report to "recommend actions that the State of California should take to improve our understanding of emerging constituents" because "[r]egulating most CECs will require . . . more specific determinations as to how and at what level CECs impact public health or our environment." This mandate was directed at an expert panel because, as the Report notes, "[t]here needs to be additional research . . . to determine *potential environmental and public health impacts*." (Emphasis added.) This research is further needed to implement the Policy's direction to agencies to "minimize the likelihood of CECs impacting *human health and the environment* by means of source control and/or pollution prevention programs." (Emphasis added.)

CECs are entering our waterways and having an impact on aquatic life. The discharge of recycled water to receiving waters occurs daily - many streams in Southern California are effluent-dominated streams with 80-95 percent of dry weather flows coming from recycled water discharges. In Northern California many streams may receive recycled water effluent interact regularly and closely with groundwater. As such, the importance of including monitoring recommendations for those CECs that potentially pose a risk to aquatic life and ecosystems is critical. We recommend the State Water Board charge future Science Advisory Panels to recommend CEC monitoring that evaluates the current risk of emerging constituents for both public and aquatic health.

5. THE STATE WATER BOARD SHOULD INCORPORATE EXISTING PRIORITIZATION AND CRITERIA GUIDANCE INTO THE RECYCLED WATER POLICY TO DEMONSTRATE THE TYPE OF WATER RECYCLING PROJECTS WE SHOULD BE VALUING.

Given the state's need to improve local water supply reliability to protect flows for the environment, we think the most sensible projects to fund are those that provide greater resilience. Direct and indirect potable reuse, groundwater recharge projects, and projects using recycled water for commercial, industrial, and institutional uses are more likely to provide substantial drought resiliency than landscaping and irrigation.

We recommend the State Water Board use this opportunity to incorporate the Proposition 1 Water Recycling Guideline's prioritization scheme into the Recycled Water Policy to provide statewide intent guidance on how communities should be prioritizing water recycling projects:

(1) Direct Potable Reuse (when authorized by the State Water Board);
(2) Indirect Potable Reuse;
(3) Recycled Water Distribution Systems;
(4) Groundwater Recharge Facilities; and
(5) Recycled Water Treatment Facilities.

Furthermore, we recommend the State Water Board incorporate Water Code Section 79767 to require the following criteria be considered in future permits and policies to prioritize multi-benefit projects: Water supply reliability; Water quality and ecosystem benefits from decreased reliance on diversions from the Delta or instream flows; Public health from improved water quality or supply; Cost-Effectiveness; and Energy efficiency and GHGs. Non-potable reuse should only be authorized to replace potable water or an instream diversion.

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California needs to overhaul its Water Recycling Policy to re-evaluate and revise its water recycling priorities, and incorporate missing components of a successful Policy that both encourages water recycling while ensuring it is protective of both public and aquatic health. We look forward to working with the State Water Board and the water recycling industry to modernize California's water recycling program.

Sincerely,

Sean Bothwell
Policy Director
California Coastkeeper Alliance