CALIFORNIA COASTKEEPER ALLIANCE

#6

August 19, 2014

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 – General NPDES Permit for Drinking Water System Discharges

Dear Chair Marcus and Board Members:

On behalf of California Coastkeeper Alliance ("CCKA"), which represents twelve California Waterkeeper groups spanning the California coast from the Oregon border to San Diego, we appreciate the opportunity to provide comments on the State Water Resources Control Board's ("State Water Board") July 3, 2014 Revised Draft General NPDES Permit for Drinking Water System Discharges ("Draft Permit"). CCKA and our network of California Waterkeepers are actively involved in ensuring that discharges into California waters comply with the mandates of the Clean Water Act.

6.1 During this period of unprecedented drought, California must seize every opportunity to make the best use of water resources, including eliminating wasteful and unreasonable uses of water. We support the State Water Board's work to promote multiple use, beneficial reuse, and ensure that any permitted discharges do not adversely impact ecosystems, aquatic life, or beneficial uses.

In our careful review of the Draft Permit, we have identified some key changes that need to be made in order to ensure that regulated discharges do not harm ecosystems and to most effectively incentivize beneficial reuse of this highly treated water. As described in detail below, we urge the State Water Board to make the following revisions to the Draft Permit:

- 6.2 Classify the discharge of drinking water as waste and unreasonable use when multiple use or beneficial reuse is feasible;
- 6.3 Ensure that water quality monitoring and enforcement fully protects ecosystems and minimizes the threat of polluted runoff;
- 6.4 Require best management practices that incentivize multiple use and beneficial reuse and protect against all constituents present in discharges; and
- 6.5 Retain the scope of the Draft Permit's coverage to include systems with 15 connections or more;

A. CLASSIFICATION OF THE DISCHARGE OF DRINKING WATER AS WASTE AND UNREASONABLE USE.

6.2 cont.

1. *The State Water Board should classify the discharge of drinking water when multiple use or beneficial reuse is feasible as waste and unreasonable use.*

Currently, when highly treated water is flushed from system pipes, the Draft Permit *encourages* multiple use and beneficial reuse.[1] However, California law dictates that the beneficial reuse or multiple use of highly treated drinking water should be required when feasible.

The California Constitution states:

> The right to water or to the use or flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable method of use or unreasonable method of diversion of water.[2]

The right to water in the California Constitution does not extend to unreasonable or wasteful uses of water. The California Water Code authorizes the State Water Board to take any and all appropriate actions, whether executive, legislative, or judicial in nature, in order to prevent wasteful and unreasonable uses of water.[3]

Moreover, there is a robust body of case law demonstrating the reach of California's waste and unreasonable use provisions. In a California Supreme Court case, the court characterized a use of water as wasteful when it was allowed "to flow to a lower level and on to the sea when otherwise a beneficial use could be made of the same."[4] That scenario is analogous to the activity subject to regulation under the Draft Permit, whereby treated drinking water discharges are discharged to receiving waters and often reach the ocean when that same water could be put to a beneficial use instead.

Another California Supreme Court case makes clear that:

> The constitutional mandate forbidding the waste or unreasonable use or unreasonable method of use of water, far from requiring, actually forbids a disposition that would entail not only waste of water but damage to valuable natural resources.[5]

Therefore, where the use of water damages the natural characteristics or qualities of a waterbody, that use runs afoul of the California Constitution. A clear example of such an unconstitutional use would be the discharge of highly treated drinking water, where its chemical additives and pollutants could cause severe damage to the natural resources including the receiving water itself as well as the wildlife within it. Third, and maybe most importantly, the courts have also found that climatic conditions influence what is considered to be waste and unreasonable use. One landmark California Supreme Court case unambiguously stated "[w]hat is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time."[6] California courts explicitly linked the waste and unreasonable use inquiry to water conservation, stating that,

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[1] Draft Permit at Section VI ("The State Water Board encourages water purveyors with a discharge authorized under this Order to place the discharge water to multiple uses or beneficial reuse").
[2] California Constitution Article X, Section 2. (Cal. Water Code § 100 uses the same language).
[3] Cal. Water Code § 275.
[4] *Meridian, Ltd. v. San Francisco*, 90 P.2d 537, 548 (1939).
[5] *Natural Soda Products Co. v. City of Los Angeles*, 143 P.2d 12, 16 (1943) (internal quotations omitted).
[6] *Tulare Irr. Dist. v. Lindsay-Strathmore Irr. Dist.*, 45 P.2d 972, 1007 (1935).

6.2 cont.

> [W]hat is reasonable use of water depends on the circumstances of each case [and] such an inquiry cannot be resolved in [a vacuum] isolated from state-wide considerations of transcendent importance. Paramount among these we see the ever increasing need for the conservation of water in this state, an inescapable reality of life quite apart from its express recognition in the [California Constitution].[7]

California jurisprudence makes clear that waste and unreasonable use are closely tied to prevailing climatic conditions as well as the reality of resource availability. These factors are highly relevant given the unprecedented drought conditions currently prevailing in California, and weigh heavily in favor of classifying the discharge of highly treated drinking water as waste and unreasonable use where multiple uses or beneficial reuse of the water is feasible. Further, the law authorizes the State Water Board to make these sorts of determinations. We urge the State Water Board to expressly characterize the discharge of highly treated drinking water as waste and unreasonable use when multiple use or beneficial reuse is feasible in the Draft Permit.

2. The State Water Board should establish clear parameters for multiple water use or beneficial reuse options.

While the Draft Permit requires permittees to evaluate multiple use and beneficial reuse options, there are no established parameters, definitions or lists of "multiple use" or "beneficial use" options. This allows the dischargers to define multiple use and beneficial reuse, which can create confusion and inconsistent implementation, and could result in the unintended degradation of surrounding waterbodies and hydrological conditions.

For example, the reuse of water for frost protection through the application of overhead sprinklers in viniculture has been show to adversely impact surrounding waterbodies and hydrological conditions.[8] The practice has been found to increase erosion, produce agricultural runoff, and introduce constituents (such as copper) that are highly toxic to aquatic life, all while potentially contaminating surface and groundwater.[9] The reuse of highly treated drinking water, which often contains concentrations of constituents (such as copper) at higher concentrations than would otherwise be found in water used for frost protection, has the potential to amplify these adverse effects.

In order to prevent the diversion or use of highly treated drinking water for applications that will harm ecosystems and the aquatic environment, we urge the State Water Board to establish parameters and criteria for multiple use and beneficial reuse in the Draft Permit.

3. The State Water Board should establish a clear threshold of feasibility.

In conjunction with defining multiple use and beneficial reuse, the State Water Board should establish a threshold for feasibility. Establishing clear guidelines concerning when multiple use and beneficial reuse will be required by permittees will provide regulatory consistency, prevent otherwise unnecessary discharges into waterbodies, and will avoid the possibility that dischargers could exploit undefined feasibility thresholds to divert highly treated drinking water into rivers and streams.

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[7] *Joslin v. Marin Municipal Water Dist.*, 429 P.2d 889, 894 (1967) (cited with approval in *Envtl. Def. Fund, Inc. v. East Bay Municipal Utility Dist.*, 605 P.2d 1 (1980)).

[8] Deitch, M. J., Kondolf, G. M., & Merenlender, A. M. (2009). Hydrologic impacts of small-scale instream diversions for frost and heat protection in the California wine country. *River Research and Applications*, *25*(2), 118-134.

[9] Yates, Gus (2009). Northern Sonoma County Agricultural Reuse Project, Final Environmental Impact Report: Technical Review of Hydrology and Water Quality Issues, Available at http://www.cwcnorthernsonoma.org/CWCattachmts/NSCARP_FEIR_comments_Yates.pdf.

6.2 cont.

In creating a definition for a threshold of feasibility, considerations should be based on the discharger's profile as well as local environmental contexts and conditions, such as hydrology, biological presence, and beneficial uses. When evaluating a threshold of feasibility based on the discharger's profile, a small system size should not be equated with an inability to put highly treated drinking water to multiple uses and beneficial reuse. In many instances, dischargers with a small number of connections will have more flexibility to reuse their discharged water than would a large system with thousands of connections.

In conclusion, we request that the State Water Board establish a threshold of feasibility for the multiple use and beneficial reuse of highly treated drinking water using criteria that takes into consideration potential impacts to the aquatic environment, biological presence, hydrological conditions, as well discharger size.

B. ADEQUACY OF WATER QUALITY MONITORING AND ENFORCEMENT STANDARDS IN PROTECTING ECOSYSTEMS.

6.3 cont.

The discharge of highly treated drinking water can cause erosion, alter pH, and introduce constituents known to cause acute harm to aquatic life. We are concerned that the monitoring provisions of the Draft Permit in their current form do not adequately protect beneficial uses, water quality, and ecosystem success from the potential impacts of highly treated drinking water. We provide several suggestions below to revise the Draft Permit and craft a monitoring program that adequately accounts for possible impacts of highly treated drinking water discharges.

1. The State Water Board should require clear monitoring requirements and enforceable standards.

The Draft Permit's monitoring provisions do not require documentation of adverse impacts stemming from the discharges of highly treated drinking water into receiving waters.

In order to ensure that dischargers are held accountable for water quality impacts, we urge the State Water Board to require monitoring plans that are site specific and based on the constituents present. Specifically, we ask the State Water Board to revise the Draft Permit in the following ways:

- Clearly specify monitoring locations rather than allow dischargers to identify their own representative monitoring locations;
- Specify that monitoring locations should be required where sampling is representative of all pollutants actually being discharged into receiving waters;
- Require monitoring and sampling at both the source of the discharge and just prior to entering a receiving water to account for urban runoff; and
- Require monitoring when highly treated drinking water is discharged within 1,000 feet of waters of the United States.

2. The State Water Board should develop numeric effluent limitations that protect aquatic life and ecosystems.

While the discharge of highly treated drinking water presents minimal or no harm to human life, these discharges do present large potential impacts to aquatic life and ecosystems. The numeric effluent limitations currently reflected in the Draft Permit do not adequately protect aquatic life and ecosystems because they are based on maximum contamination levels ("MCLs"). As the Environmental Protection Agency ("EPA") states, the expressed purpose of MCL standards is the protection of public health.[10] However, the Draft Permit should also avoid adverse impacts to aquatic life. The sole use of MCL limits, therefore, does not meet the larger goals of the Draft Permit.

[10] Contaminants, D. W. (2010). National Primary Drinking Water Regulations. Accessed online at http://water.epa.gov/drink/contaminants/upload/mcl-2.pdf.

In order to ensure the protection of aquatic life and ecosystems, the State Water Board should develop and incorporate into the Draft Permit numeric effluent limitations that protect aquatic life.

6.7

3. The State Water Board should develop numeric effluent limitations for fluoride, copper, nitrates, arsenic, and constituents of emerging concern.

We appreciate the inclusion of an established numeric effluent limitation for chlorine in the Draft Permit. The very inclusion of a numeric effluent limitation for chlorine serves to educate dischargers on the dangers of chlorinated water to aquatic life and ecosystems. However, chlorine is only one of many constituents present in highly treated drinking water that threaten water quality and beneficial uses. Fluoride, copper, nitrates, arsenic, and constituents of emerging concern are just some of the many constituents found in highly treated drinking water that can be harmful when discharged into waterbodies in certain quantities.

In order to prevent significant harm to aquatic life and ecosystems, we ask that the State Water Board develop numeric effluent limitations for all of the constituents commonly found in highly treated drinking water discharges, including fluoride, copper, nitrates, arsenic, and constituents of emerging concern.

6.8

4. The State Water Board should require monitoring for discharges less than one acre-foot to protect small streams and de-watered rivers.

The Draft Permit only requires monitoring if the discharge exceeds one acre-foot of water.[11] Under many circumstances, a quantity of water smaller than one acre-foot may not merit close monitoring. However, during drought conditions, the quantity and location of discharges requires closer scrutiny. For streams with little or no water, the rapid infusion of highly treated drinking water could significantly alter hydrology, water quality, and beneficial uses. For example, in many stretches of dewatered streams, a discharge of an acre-foot of highly treated drinking water would greatly increase concentrations of harmful constituents above the carrying capacity of dry summer streams.

In order to prevent waterbodies from being unduly impacted by highly treated drinking water--particularly in times of drought and dry conditions--we ask the State Water Board to lower the minimum monitoring threshold to a level more protective of waterbodies with low or limited flows.

6.9

5. The State Water Board should not allow discharges into impaired waterbodies of constituents that are the cause of impairment.

The Draft Permit states that:

> [T]his Order does not authorize the discharge of new drinking water systems (not an expansion of an existing system) into an impaired water body that is impaired for a constituent that exists in the new discharge at a concentration greater than the criteria used to establish the impairment of the water body.[12]

While this guideline is important in preventing further degradation of already stressed waterbodies, it ultimately conflicts with the stated goals and purpose of listing a waterbody as impaired. The purpose of the CWA 303(d) list is not to set a baseline for constituent concentrations. Rather, it is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters".[13] Allowing for discharges at a concentration up to the concentration of the listing criteria will hinder further

[11] Draft Permit, E-5.
[12] Draft Permit, F-19.
[13] 33 USC §1251(a).

improvements to water quality. In essence, this is a provision that only seeks to maintain the status quo of impaired waterbodies, rather than advance mitigation and remediation efforts.

In order to ensure that the Draft Permit is consistent with water quality objectives and TMDLs, we urge the State Water board to set concentration limits for highly treated drinking water discharges into impaired waterbodies at a level that will advance the listing goals.

6.4 cont.

C. Best Management Practices to Incentivize Multiple Use and Beneficial Reuse and Minimize the Discharge of Harmful Constituents.

1. The State Water Board should require BMPs for all harmful constituents.

The Draft Permit states that BMPs are to be put in place to prevent the adverse impacts of chlorine, erosion, sediment, copper, and nickel.[14] While these provisions are key to ensuring the protection of water quality and beneficial uses, they do not reflect the full list of harmful constituents often found in highly treated drinking water. As currently constructed, the Draft Permit does not require BMPs when fluoride, nitrates, arsenic, or constituents of emerging concern are present in highly treated drinking water. This omission is at odds with scientific evidence that demonstrates that the above-mentioned constituents, even in small amounts, cause harm to water quality, aquatic life and ecosystems.[15] [16]

In order to protect against the degradation of water quality and the loss of beneficial uses due to the above-mentioned constituents, we request that the State Water Board require the implementation of BMPs when fluoride, nitrates, arsenic, or constituents of emerging concern are found in discharged waters.

2. The State Water Board should incorporate BMPs to address polluted runoff.

While the Draft Permit requires BMPs for selected constituents that are present in highly treated drinking water,[17] there is no similar requirement for the creation and adherence to BMPs for constituents that are likely to be conveyed by discharged water after it is flushed onto impermeable surfaces. When thousands of gallons of highly treated drinking water are discharged per minute, without appropriate BMPs in place, those discharges will act as a conveyance for trash, motor oil, and other common runoff contaminants, and will create an additional source of polluted runoff.

Failing to include necessary BMPs to address polluted runoff would undermine the State Water Board's hard-fought innovative policies, including the development of the Statewide Stormwater Strategy Initiative and the Statewide Water Quality Control Plans for Trash.

In order to mitigate foreseeable impacts from polluted runoff reaching and contaminating receiving waters, we urge the State Water Board to require BMP development and implementation for drinking water discharges that will create polluted runoff.

6.5 cont.

D. RETAIN DRAFT PERMIT COVERAGE TO INCLUDE SYSTEMS WITH 15 CONNECTIONS OR MORE.

The Draft Permit declares that dischargers the size of community water systems will be covered.[18] As defined in the Draft Permit, "[c]ommunity water systems provide daily drinking water for at least 15

[14] Draft Permit, C-3.
[15] Camargo, J. A. (2003). Fluoride toxicity to aquatic organisms: a review. *Chemosphere*, 50(3), 251-264.
[16] Hallgren, P., Nicolle, A., Hansson, L. A., Brönmark, C., Nikoleris, L., Hyder, M., & Persson, A. (2014). Synthetic estrogen directly affects fish biomass and may indirectly disrupt aquatic food webs. *Environmental Toxicology and Chemistry*, 33(4), 930-936.
[17] Draft Permit, F-27.
[18] Draft Permit, 1.

service connections and at least 25 individuals at least 60 days each year."[19] At the initial Draft Permit hearing, there was significant debate as to the appropriateness of covering systems as small as those with only 15 connections. We submit that covering systems, including those with only 15 connections is essential for protecting against harmful impacts to aquatic life, ecosystems, and overall water quality.

First, community water systems (commonly found in mobile home parks, and rural areas) are the most likely to be near streams and other waterbodies. For example, the San Lorenzo River, which is the principle freshwater supply to the city of Santa Cruz and is a waterbody under significant stress due to the ongoing drought[20], is abutted by several small water systems in its rural, sparsely populated upper watershed. Any discharges of highly treated drinking water into this waterbody have the potential to significantly alter water quality, hydrology, and endangered species habitat.

Second, these small systems have the most flexibility in putting highly treated drinking water to multiple uses and beneficial reuse. While larger systems will have the resources to reuse highly treated drinking water, small systems will more likely be in a position conducive to beneficial reuse. For example, a small mobile home park system will likely have landscape irrigation needs that can be served through the beneficial reuse of highly treated drinking water.

In order to protect at-risk waterbodies and incentivize multiple uses and beneficial reuse, we request that the State Water Board retain the current scope of the Draft Permit's coverage, which includes systems with 15 connections or more.

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6.1 cont.

The drought illustrates that our state must reexamine all aspects of water management. We thank the State Water Board for taking steps to encourage water practices that incentivize multiple use and beneficial reuse, and protect and enhance water quality in the process.

We look forward to continued work together to ensure clean, abundant water for California.

Sincerely,

Rickey Russell
Policy Analyst

Sara Aminzadeh
Executive Director

[19] Draft Permit, F-3.
[20] State Water Board, Drought Conditions Update by Regional Liaison to Water Rights Division, July 18, 2014. Available at http://www.swrcb.ca.gov/centralcoast/board_info/agendas/2014/july/item6/item6_stfrpt.pdf