

Department of Water and Power



the City of Los Angeles

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October 9, 2012

Jeanine Townsend, Clerk of the Board  
State Water Resources Control Board  
1001 I Street, 24<sup>th</sup> Floor  
Sacramento, California, 95814

Dear Ms. Townsend:

Subject: Comment Letter – Amendment to the Recycled Water Policy

The Los Angeles Department of Water and Power (LADWP) appreciates the opportunity to provide comments on the September 14, 2012, Amended Recycled Water Policy and Draft Enclosure A Documents. LADWP strongly supports the development of scientifically defensible policies and regulations that aggressively protect groundwater basins and public health, while encouraging the development of local water supplies.

Recycled water is a vital component of the City of Los Angeles' (City) plans to ensure a sustainable water supply future for its nearly 4 million citizens. The use and expansion of recycled water is more critical than ever as our region continues to face gradual but permanent reductions in imported water supplies.

Currently, LADWP delivers over 8,000 acre-feet per year (AFY) of recycled water to its customers. The City's recycled water deliveries have included an average of 2,000 AFY of advanced treated water for the Dominguez Gap Seawater Intrusion Barrier Project, which ultimately recharges the West Coast Basin. To ensure the safety and reliability of this water, the City actively monitors for constituents of emerging concern (CECs) as a part of the Monitoring and Reporting Program for the project.

In 2012, the City completed the development of the Recycled Water Master Planning documents (RWMP documents). These documents recommend the implementation of a program to replenish groundwater in the San Fernando Basin with up to 30,000 AFY of purified recycled water. As a part of the master planning process, the City pilot tested the treatment system for the groundwater replenishment (GWR) project and monitored for numerous constituents, including CECs. Testing results demonstrated that CECs were removed to non-detectable levels with the proposed treatment process of microfiltration (MF), reverse osmosis (RO), and advanced oxidation.

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Irrigation with recycled water is also important to the City's local water supply strategy. The RWMP documents recommend the expansion of the City's non-potable reuse (purple pipe) systems to provide 29,000 AFY recycled water to targeted LADWP customers for irrigation and other non-potable uses. Together, groundwater replenishment and non-potable projects would increase the amount of recycled water use in the City of Los Angeles to 59,000 AFY by 2035.

LADWP recognizes the Regional Board staff's efforts with addressing the past comments on the amended policy regarding recycled water reuse and Constituents of Emerging Concern (CECs).

LADWP appreciates the changes made to the Policy Amendment based on our July 3, 2012 comment letter. However, there are still several issues in the proposed amendment for which LADWP requests additional action from the State Board. Providing clarity and consistency with the monitoring requirements for CECs within the Recycled Water Policy will allow LADWP to continue delivering recycled water as a safe and reliable water source for the City of Los Angeles. It will help us respond consistently to potential concerns from stakeholders and the general public and will also set the stage for a successful Groundwater Replenishment Project in the future.

### **Comments on Enclosure A**

#### **1) Groundwater Recharge Reuse – Subsurface Application Section 2.2.2, Page 6.<sup>1</sup>**

As additional data are collected and processed, changes to the recycled water treatment systems and reuse criteria are sure to occur. The draft Enclosure A specifies treatment system components by type in this section which may be altered in the future. In order to keep the document from requiring future revision, the reference to the type of treatment units in use should be removed and replaced with the generic wording "treatment". Sampling of the recycled water will still occur both prior to treatment and prior to release while not specifying the type of treatment that is to take place.

LADWP requests that the reference to specific treatment units be removed and this section should state that sampling should occur prior to treatment and after treatment prior to release.

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<sup>1</sup> All reference to page number refer to the marked up copies of the Recycled Water Policy and Enclosure A as provided on the State Water Board website

## **2) Groundwater Recharge Reuse – Section 2.1.2, Page 6.**

This section indicates that monitoring shall be conducted at a location following RO/AOP treatment prior to “discharge” into an aquifer. LADWP suggests that the word “discharge” be changed to “release” and that the specificity of the type of treatment be removed for the following reasons:

- 1) The change from “discharge” to “release” would be consistent with the changes made to Tables 3 and 4 regarding the monitoring point locations where the Table calls for monitoring “prior to release to the aquifer.”
- 2) In an effort to maintain consistency and not confuse what treatment may or may not be needed in different and potentially fluid requirements for groundwater recharge, removing treatment specific language allows the policy to be more flexible in light of future or changing regulatory requirements on the types of treatment that are necessary for the Groundwater Recharge Reuse.

Reiterating, LADWP requests that the reference to discharge be changed to release and all references to RO/AOP be removed.

## **3) Initial Assessment Monitoring Phase, Page 8.**

LADWP appreciates the changes made to the testing frequency as previously outlined in Enclosure A and to the monitoring programs, by including the case-by-case determination. However, LADWP suggests that language be clear on how the pilot test data should be used in order to move forward into the monitoring program without having to repeat significant amounts of sampling that has already been done.

LADWP suggests that pilot plant studies conducted by facilities be able to be used to move forward with the testing program. The pilot plant studies should also be considered the initial and baseline monitoring programs since these studies will provide sufficient data to make the appropriate determinations to determine that all requirements are satisfied.

This recommendation is supported by data obtained through the City’s “Groundwater Replenishment Treatment Pilot Study”, which took place over 16 months at the Donald C. Tillman Water Reclamation Plant. The pilot study demonstrated the treatment efficacy of advanced water purification processes on the alternative source waters to remove pathogens, salts, and organic compounds from treated wastewater, creating purified recycled water that can be used indirectly to supplement potable water supplies.

The City’s pilot testing was conducted in three phases. Phase 1 validated the proposed processes used at existing advanced water purification facilities in California, including microfiltration (MF), RO, and ultraviolet (UV)/peroxide, considered the baseline

treatment process. Phase 2 evaluated ozone/peroxide as an alternative to UV/peroxide, with both advanced oxidation processes (AOPs) tested side-by-side and with target contaminants spiked into the AOP supply. Phase 3 confirmed the recommended operating conditions from Phases 1 and 2 and also evaluated two alternative RO membranes.

Water quality results from the pilot testing confirmed that all existing and draft drinking water and recycled water regulations can be met using the RO treatment processes. All of the regulated compounds had average and maximum values in the product water below their regulatory limits, with the vast majority already below regulatory limits in the source water.

Over 200 regulated and non-regulated parameters were tested in the pilot study. All but ten non-regulated pharmaceuticals and personal care products were removed to concentrations below detection levels by the RO process. All but three of these (TCEP, Tri (chloroisopropyl) phosphate (TCPP), and 1,3-Dichloro-2-propanol phosphate (TDCPP)) were removed to below detection levels by the UV/peroxide process, and all but two were removed by the ozone/peroxide.

By allowing robust testing from pilot studies to be used by facilities for the initial and baseline studies, projects will be able to conserve limited resources and bring recycled water projects to operation in a more efficient and timely manner. In these cases where the initial and baseline monitoring requirements are satisfied, projects should be eligible for the standard monitoring phase.

LADWP recommends that the policy be reworded to state that any project conducting pilot studies and that collects sufficient data to satisfy the initial assessment requirements be allowed to skip the Initial Assessment Phase and move directly to the standard monitoring phase.

#### **4) Priority Pollutant Testing – Recycled Water Policy, Section b, Item 4, Page 9.**

The amended Recycled Water Policy calls for priority pollutant testing for landscape irrigation projects, but is not specific on where this testing should take place. The requirements are unclear as to where the water should be tested for the priority pollutants. Since the recycled water system distribution systems are closed systems, the location where the water leaves the treatment facilities and enters the distribution system would be the logical choice as the testing location for the priority pollutants in the recycled water. This information could also be made available to all recycled water users on the system, not just landscape irrigation projects.

The current language is not clear, the language needs to indicate that the sample be taken at the recycled water plant at a representative discharge point before the water enters into the distribution system and not the individual landscape irrigation projects.

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LADWP suggests that the following wording be included to clarify the language:  
Monitoring for priority pollutants be taken at a representative discharge location, within the recycled water treatment plant, to the distribution system.

LADWP appreciates the opportunity to provide these comments on the amended Recycled Water Policy and Enclosure A and supports the comments submitted by the WaterReuse Association, and the Association of California Water Agencies (ACWA). LADWP looks forward to working with the State Board in developing a comprehensive solution to the use and monitoring of recycled water to ensure that California continues to develop this vital resource.

If you have any questions, please feel free to contact Ms. Katherine Rubin at (213) 367-0436 or Ms. Evelyn Cortez-Davis at (213) 367-2360.

Sincerely,



Mark J. Sedlacek  
Director of Environmental Affairs

MH:ms

Enclosure

c: Mr. Charles Hoppin, Chair, State Water Resources Control Board (SWRCB)  
Ms. Francis Spivy-Weber, Vice Chair, SWRCB  
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Ms. Felicia Marcus, Member, SWRCB  
Mr. Steven Moore, Member, SWRCB  
Mr. Thomas Howard, Executive Director, SWRCB  
Ms. Katherine Rubin  
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