

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

BOARD ORDER NO. R6V-2006-0009
WDID NO. 6B190501001

**MASTER WATER RECYCLING REQUIREMENTS
LOS ANGELES COUNTY SANITATION DISTRICT NO. 14 (LANCASTER)
DISINFECTED TERTIARY RECYCLED WATER**

Los Angeles County

The California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board) finds:

1. Recycled Water Report

The Los Angeles County Sanitation District No. 14 (District) has filed an application with the Lahontan Water Board under Water Code section 13522.5. Pursuant to Water Code section 13523.1, the District's application requests the Lahontan Water Board to issue Master Water Recycling Requirements to the District for supply of disinfected tertiary recycled water as defined in California Code of Regulations, title 22, section 60301.230. The District submitted information on February 2, 2006 that completed the application. The documents that constitute the complete application under Water Code section 13522.5 are listed in Attachment E (References).

2. Current Board Orders

a. Waste Discharge Requirements

Board Order No. R6V-2002-053 and its amendment, Board Order No. R6V-2002-053A1, adopted on September 11, 2002 and July 13, 2005, respectively, include effluent limits and monitoring requirements for the District's existing primary, secondary, and tertiary treatment facilities located at the District's treatment plant site as shown in Attachments A through C of this Order.

b. Waste Discharge and Water Recycling Requirements (Secondary Treatment)

The District's treatment facilities produce un-disinfected and disinfected secondary recycled water that is supplied to Nebeker Ranch and discharged to Piute Ponds, respectively. Requirements for the discharge at Nebeker Ranch are prescribed by the Lahontan Water Board in Board Order No. 6-85-35, which was adopted on April 11, 1985. Requirements for the discharge at Piute Ponds are contained in Board Order No. R6V-2002-053 and its amendment.

c. Waste Discharge and Water Recycling Requirements (Tertiary Treatment)

The District's existing tertiary treatment plant has a treatment capacity of 0.5 million gallons per day (0.5 mgd). From 1972 to the present, the existing 0.5 mgd tertiary treatment plant has generated recycled water that is used at Apollo Lakes Regional County Park (Apollo Park) and the General W.J. Fox Airfield (Fox

Airfield). Requirements for these uses are prescribed by the Lahontan Water Board in Board Order No. 6-86-58, which was adopted on May 15, 1986. The District also uses the disinfected tertiary recycled water to irrigate a greenbelt at its treatment plant site and for soil compaction and dust control as described, below.

d. Conditional Waiver

On July 13, 2005, the Lahontan Water Board adopted Conditional Waiver No. R6V-2005-0018 for use of the District's disinfected tertiary recycled water and disinfected secondary recycled water for compaction and dust control during specific construction projects.

3. Reason for Action

The District is proposing to supply disinfected tertiary recycled water (hereinafter, recycled water) to additional users. Recycled water will be supplied to the proposed Division Street Corridor Recycled Water Project (Division Street Project) for use in landscape irrigation, dust control, and soil compaction. The total estimated water demand for these uses is 1090 acre-feet per year (0.974 million gallons per day). This Order includes master water recycling requirements, including a requirement that the District regulate the distributor and users of the recycled water to ensure compliance with water recycling requirements contained in State of California laws and regulations.

4. Sources of Recycled Water

The District produces recycled water at its existing 0.5 mgd tertiary treatment plant, located at the District's Lancaster facilities. The District is also proposing to construct a new 1.0 mgd pilot tertiary treatment plant at its Lancaster facilities in the future. The source of recycled water will be disinfected tertiary treated water from the District's Lancaster facilities.

5. Producer, Distributor and Users

Under this Order, the District is the producer of recycled water, and the City of Lancaster is both a distributor and one of the users of the recycled water. Other users will include other governmental agencies and private parties.

6. Recycled Water Distribution System

The City of Lancaster proposes to construct a large diameter force-main pipeline for transporting recycled water along Division Street (Division Street Pipeline) and steel tanks for storage of recycled water and supplemental water. Supplemental water will be supplied by existing water supply well No. 4-15, which is owned by the Los Angeles County Water Works District No. 40. The Division Street Pipeline will connect to the District's existing force-main pipeline, which is located along Avenue E. A lateral pipeline will be constructed for each individual user of recycled water once the site is ready to receive the recycled water.

7. Permit Area

This Order authorizes use of recycled water at sites located within a 12.5 square-mile area (Permit Area). The Permit Area is located in the Lancaster area and is bounded by the following roads: Avenue J (to the south), 10th Street West (to the west), 15th Street East (to the east), and Avenue E (to the north). Division Street passes through the Permit Area.

8. Authorized Recycled Water Uses

This Order authorizes recycled water use for dust control and soil compaction, and irrigation of landscape. The types of sites where recycled water will be used for dust control and soil compaction include construction sites, roadside areas, and the existing Lancaster landfill. Recycled water will be used for landscape irrigation at sites such as: parks, schools, cemeteries, and greenbelts. This Order does not authorize use of recycled water in "dual plumbed systems" as defined in California Code of Regulations, title 22, section 60301.250. A "dual plumbed system" includes a system, which: (a) serves a single residence; (b) has separate piping for conveying potable water and recycled water; and (c) conveys the recycled water to irrigate landscape at the residence.

9. Authorized Recycled Water Use Sites

The sites authorized for use of recycled water under this Order (Authorized Recycled Water Use Sites) are those:

- a. Located within the Permit Area described in Finding No. 7, above,
- b. Where the use is limited to those described in Finding No. 8, above, and
- c. Where the requirements described in Provisions No. II.A.2 and II.A.4 of this Order have been met.

10. Topography

The Permit Area is located southwest of Rosamond Dry Lakebed and drains either in a northerly or easterly direction toward the Dry Lakebed.

11. Hydrogeology

Unconsolidated alluvial deposits consisting of inter-bedded gravel, sand, silt and clay underlie the Permit Area. An extensive layer of lacustrine deposits is located at a depth of approximately 500 feet. Its depth and thickness varies.

Groundwater underlying the Permit Area occurs in an upper unconfined aquifer (principal aquifer) and a lower aquifer. Historically, the lacustrine deposits have been used to define the boundary between the two aquifers. The lower aquifer is generally considered to be confined. Depth to groundwater (water table for the principal unconfined aquifer) ranges from approximately 130 to 250 feet below ground surface.

The direction and slope of the groundwater gradient varies depending on the location within the Permit Area. There is also groundwater located in a shallow perched aquifer located above the principal aquifer. The volume of groundwater located in this aquifer, however, is small in comparison to the volume in the other two aquifers.

12. Groundwater Quality

Groundwater underlying the Permit Area often contains high concentrations of arsenic, and hexavalent and total chromium. (See Column No. 3 and 4, Table No. 1). The concentrations of arsenic in groundwater underlying the permit area vary with depth. The principal aquifer has lower arsenic concentrations than concentrations found in groundwater at greater depths. An example of the quality of groundwater in the permit area for a well with screened intervals located only in the principal aquifer is given in Column No. 3. An example of water quality for several wells that include screened intervals located at greater depths is given in Column No. 4. (*USGS, 2005, Oct*), (*USGS, 2006, Jan.*) (*LAWWD40, 2006, Feb.*), (*City of Lancaster, 2006, Jan*), (*USGS, 2006, Jan.*)

Table No. 1
Quality of Groundwater

1	2	3	4
	Maximum Contaminant Level (MCL)	Data from one well screened in the principal aquifer ¹	Data from wells with screened intervals that include the lower aquifer
Nitrate (mg/L as N)	10	<0.5	<0.2 to 2.55
Total Dissolved Solids (mg/L)	500 - 1500	174	150 to 400
Arsenic (ug/L)	10	2 to 5.0	13.0 to 60.3
Total Chromium (ug/L)	50	21.0	<10 to 60
Hexavalent Chromium (ug/L)	Not Established	11.5 to 14.6	<1.0 to 20

13. Receiving Waters

The receiving waters are the groundwaters of the Antelope Hydrologic Unit.

14. Lahontan Basin Plan

The Water Board adopted a Water Quality Control Plan for the Lahontan Region (Basin

¹ This is existing water supply well No. 4-15, owned by the Los Angeles County Water Works District No. 40 and the source of supplemental water for the Division Street Project.

Plan), which became effective on March 31, 1995. This Order implements the Basin Plan as amended.

15. Beneficial Uses – Groundwater

The beneficial uses of the groundwaters of the Antelope Hydrologic Unit as set forth and defined in the Basin Plan are:

- a. Municipal and Domestic Supply (MUN);
- b. Agricultural Supply (AGR);
- c. Industrial Service Supply (IND); and
- d. Freshwater Replenishment (FRSH).

16. Regulation of Recycled Water

a. Engineering Reports

As required under California Code of Regulations, title 22, section 60323, the District has submitted an engineering report dated December 27, 2005 for production of recycled water at its existing 0.5 mgd tertiary treatment plant. (*LACSD14, 2005, Dec.*) On November 3, 2005, the City of Lancaster submitted an engineering report dated for distribution and use of recycled water in the Permit Area. (*City of Lancaster, 2005, Nov.*) The District and City submitted the engineering reports to the Lahontan Water Board and State Department of Health Services.

Before the District can supply recycled water to the Permit Area from its proposed 1.0 mgd pilot tertiary treatment plant, the District must obtain waste discharge requirements for the plant.

b. Regulation

Water Code section 13523, subdivision (a) states that:

Each Regional Board after consulting with and receiving the recommendations of the State Department of Health Services and any party who has requested in writing to be consulted, and after any necessary hearing, shall, if in the judgement of the board, it is necessary to protect the public health, safety, or welfare, prescribe water reclamation requirements for water which is used or proposed to be used as reclaimed water.

This Order includes water-recycling requirements. It requires the District:

- i. Comply with Uniform Statewide Reclamation Criteria (California Code of Regulations, title 22, sections 60301 through 60355) established pursuant to Water Code section 13521;
- ii. Establish and enforce *Requirements for Recycled Water Users*, which govern the design and construction of facilities located at use sites and the use of recycled water at those sites;

- iii. Conduct periodic inspections of recycled water use sites to monitor compliance by users with the Uniform Statewide Reclamation Criteria established pursuant to Water Code section 13521 and the requirements of this Order; and .
- iv. Submit quarterly reports that include the results of the District's compliance monitoring and the information required by Water Code section 13521.

Provisions No. II.A and II.B of this Order require the District demonstrate there will be compliance with recycled water use requirements before supplying recycled water to a user, including recycled water use requirements contained in this Order and in all applicable laws and regulations.

17. Environmental Analysis

The City of Lancaster completed an environmental analysis for the project. The analysis concludes that the project is not expected to result in significant increased nitrate (nitrogen) concentrations in groundwater. The analysis concludes that there may be increases in total dissolved concentrations in underlying groundwater; however, these increases would not be significantly different than those resulting from irrigation with existing sources. The project will provide water supply benefits (to both local and Statewide water users) through the use of recycled water in lieu of existing potable water sources. The implementation of the mitigation measures included in the initial study (described below) constitute the best practical means of minimizing potential impacts to the groundwater quality because these measures will minimize over-application of recycled water and fertilizer use. The project provides the best and most reasonable means of ensuring that existing potable water sources are put to their best and highest use while still maintaining the water quality of the groundwater such that beneficial uses are being preserved to an extent that is reasonable.

18. California Environmental Quality Act Compliance (CEQA)

The City of Lancaster (City) prepared an Initial Study dated November 30, 2005 for the Project and adopted a negative declaration on February 14, 2006.

The Initial Study found that no significant impacts will occur as a result of the project. Mitigation measures that will be implemented as part of the project include best management practices (BMPs) to ensure:

- a. Application of recycled water at agronomic rates so irrigation does not promote downward migration of salts (including nitrates), which could adversely impact the quality of groundwater,
- b. There is adequate erosion control so soil is not released into stormwater runoff and surface waters, and
- c. Fertilizer application does not adversely impact waters of the State.

The Regional Board is requiring implementation of the above mitigation measures through the Provisions of this Order. Provision No. II.A.1 of this Order requires that, the

District establish *Requirements for Recycled Water Users* that require implementation of the above mitigation measures. Through Recycled Water Specifications No. I.A.2 of this Order, the District is required to enforce compliance with the mitigation measures. The attached monitoring and reporting program includes requirements for the District to monitor and report compliance with the mitigation measures.

19. Notification of Interested Parties

The Lahontan Water Board has notified the District and interested persons of its intent to prescribe master recycling requirements.

20. Consideration of Public Comments

The Lahontan Water Board, in a public meeting, heard and considered all comments pertaining to the use of recycled water.

IT IS HEREBY ORDERED that the District shall comply with the following:

I. WATER RECYCLING SPECIFICATIONS

A. Regulation and Enforcement

1. Pursuant to Water code section 13523.1, subdivision (b)(2), the District shall comply with the Uniform Statewide Reclamation Criteria, which are contained in California Code of Regulations, title 22, sections 60301 through 60355 and are established pursuant to Water Code section 13521.
2. Pursuant to Water Code section 13523.1, subdivision (b)(3), the District shall establish *Requirements for Recycled Water Users* governing the design and construction of recycled water use facilities and the use of recycled water, in accordance with the Uniform Statewide Reclamation Criteria.
3. The District shall establish a *Compliance Inspection and Enforcement Program* describing its programs for conducting periodic inspections required under Water Code section 13523.1, subdivision (b)(5) and its enforcement program to address user violations of the Uniform Statewide Reclamation Criteria and the District's *Requirements for Recycled Water Users*.
4. Pursuant to Water Code section 13523.1, subdivisions (b)(3) and (b)(5), the District shall conduct periodic inspections of the facilities of the recycled water users to monitor compliance by the users with the Uniform Statewide Reclamation Criteria and the District's *Requirements for Recycled Water Users*. During the inspections, the District shall also monitor compliance with Water Recycling Specifications No. I.B.1 through I.B.14 of this Order.

5. Pursuant to Water Code section 13523.1, subdivision (b)(3), the District shall enforce the Uniform Statewide Reclamation Criteria and the District's *Requirements for Recycled Water Users*.
6. The District shall not supply recycled water to parties who distribute, store or use recycled water in a manner that is in violation of the Uniform Statewide Reclamation Criteria and the requirements of the Master Recycling Requirements.

B. General Requirements and Prohibitions

1. The use of recycled water shall not cause a pollution as defined in Water Code section 13050 of the California Water Code, or a threatened pollution.
2. Neither the treatment of wastewater nor the use of recycled water shall cause a nuisance as defined in Water Code section 13050.
3. The use of recycled water under this Order shall be limited to the Authorized Recycled Water Use Sites defined in Finding No. 9 of this Order.
4. The uses of recycled water authorized under this Order are limited to those described in Finding No. 8 of this Order.
5. The source of recycled water shall be limited to those described in Finding No. 4 of this Order.
6. Recycled water used to irrigate landscape areas shall be applied at a rate and amount that does not exceed the needs of the vegetation.
7. Recycled water shall be applied at a rate and amount that does not cause ponding or runoff.
8. Pipelines shall be maintained so as to prevent leakage.
9. The discharge of recycled water, which causes violation of any narrative water quality objective (WQO) contained in the Basin Plan, is prohibited.
10. The discharge of recycled water, which causes violation of any numeric WQO contained in the Basin Plan, is prohibited.
11. Where any numeric or narrative WQO contained in the Basin Plan is already being violated, the discharge of recycled water, which causes further degradation or pollution, is prohibited.

12. All facilities used to transport and store recycled water shall be adequately protected against overflow, structural damage, or a significant reduction in efficiency resulting from a 100-year, 24-hour storm or flood.

II. PROVISIONS

- A. Before supplying recycled water under this Order, the District shall:
 1. Complete and submit a report to the Lahontan Water Board containing its proposed *Requirements for Recycled Water Users*, and its *Compliance Inspection and Enforcement Program* required under Recycled Water Specifications No. I.A.2 and I.A.3, above, and obtain acceptance of the report from the Lahontan Water Board Executive Officer. For the report to be accepted it must include the elements listed in Attachment D and comply with the Uniform Reclamation Criteria. The *Requirements for Recycled Water Users* and compliance Inspection and Enforcement Program shall include all elements in Attachment D of this Order.
 2. Submit to the Lahontan Water Board a copy of the final engineering report for the Division Street Recycled Water Distribution System.
 3. Submit to the Lahontan Water Board a copy of the final engineering report for the 0.5 mgd tertiary treatment plant.
 4. Submit to the Lahontan Water Board a copy of the final engineering report for the 1.0 mgd tertiary treatment plant.
 5. Obtain Waste Discharge Requirements for the discharge from the 1.0 mgd tertiary treatment plant, prior to supplying recycled water from the 1.0 mgd tertiary plant.
 6. Have received, reviewed and approved a completed *Report of Proposed Recycled Water Use*, which contains information demonstrating the user will comply with the Uniform Statewide Reclamation Criteria and the District's *Requirements for Recycled Water Users*. Copies of all approved *Reports of Proposed Recycled Water Use* and approval letters shall be maintained on file by the District.
- B. Pursuant to California Code of Regulations, title 22, section 60316, subdivision (b), the District shall notify the Lahontan Water Board, State Department of Health Services and County of Los Angeles Department of Health Services of any incidence of backflow from a recycled water system into the potable water system within 24 hours of discovery of the incident.
- C. Pursuant to Water Code section 13267, subdivision (b), the District shall comply with the Monitoring and Reporting Program R6V-2006-0009 as specified by the Executive Officer.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on March 8, 2006.

HAROLD J. SINGER
EXECUTIVE OFFICER

- Attachments:
- A. Location Map
 - B. Permit Area
 - C. Wastewater Treatment Plant Site Plan
 - D. Requirements For Recycled Water Users
 - E. References
 - F. Standard Provisions for Waste Discharge Requirements