

**State of California  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

**ORDER NO. R4-2011-0035  
AMENDING ORDER NO. R4-2007-0007  
(File No. 68-085)**

**WATER RECYCLING REQUIREMENTS  
FOR  
TITLE 22 RECYCLED WATER**

**ISSUED TO**

**CITY OF LOS ANGELES**

**(Los Angeles-Glendale Water Reclamation Plant)**

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

**PURPOSE OF ORDER**

1. The City of Los Angeles operates the Los Angeles-Glendale Water Reclamation under Order No. 86-16 issued on March 24, 1986. Order No. 86-16 was readopted without changes under blanket Order No. 97-072 on May 12, 1997. Order No. 86-16 is a Master Waste Discharge Requirements (WDRs) and Water Recycling Requirements (WRRs). At the request of the City, these WRRs are being separated from the WDRs. This Order now becomes a stand alone Water Recycling Requirements and is being reissued to the City pursuant to California Water Code section 13523. This Order prescribes the limits for the recycled water and the City's responsibilities for the production, distribution, monitoring, and application of recycled water. The City is also responsible for processing individual end-users' applications, inspecting point-of-use facilities, and ensuring end-users' compliance with the water recycling requirements contained in this Order. The actual delivery of recycled water to end-users is subject to approval by the California Department of Health Services (DHS), and/or its delegated local health agency. Los Angeles-Glendale Water Reclamation Plant (WRP) discharges tertiary treated water to the Los Angeles River that is currently regulated under a separate Waste Discharge Requirements and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0053953, Order No. R4-2006-0092, adopted by this Regional Board on December 14, 2006. The potential percolation of constituents to groundwater as a result of reusing recycled water is regulated under a separate Waste Discharge Requirements, Order No. R4-2007-0006.

**DESCRIPTION OF FACILITY AND TREATMENT PROCESS**

2. The City of Los Angeles operates the Los Angeles-Glendale WRP located at 4600 Colorado Boulevard, Los Angeles, California, and treats wastewater generated from the cities of Glendale, Burbank, Los Angeles, La Canada-Flintridge, and from the Los Angeles Zoo. The plant has a dry weather design capacity of 20.0 million gallons per day (mgd). All or a portion of the treated municipal wastewater may be reused for irrigation in

Griffith Park, general park and golf course irrigation, fire fighting uses, impoundments, and dust control at permanent facilities. Permanent facilities would include, but not be limited to, horse ranches, open fields, and fairgrounds. The City of Glendale's irrigation and industrial projects are also served by Los Angeles-Glendale WRP.

3. Treatment consists of bar screens, primary sedimentation, activated sludge biological treatment, secondary sedimentation, filtration, chlorination, and dechlorination. The sludge from the primary and secondary treatment processes, and filter backwash are returned to the North Outfall Interceptor sewer line for treatment at the City of Los Angeles Hyperion Treatment Plant.
4. **Modifications to the Treatment Plant:** Los Angeles-Glendale WRP made changes to its treatment system to conduct a pilot study on nitrification and de-nitrification (NDN) process that would limit the nitrogen compounds in its effluent, as required by nitrogen TMDL, Resolution No. R4-2003-009, adopted by Regional Board on July 10, 2003. Los Angeles-Glendale WRP is making changes to its Wastewater Treatment Plant to achieve compliance with the nitrogen compounds by September 2007. Currently, Los Angeles-Glendale WRP is in compliance with the total nitrogen limitation prescribed in the existing WRRs.

#### **Recycled Water Distribution System**

5. The Los Angeles-Glendale Water Reclamation Plant (LAG) provides treated water to the Cities of Los Angeles and Glendale for distribution to reclaimed water customers. Los Angeles Department of Water and Power (LADPW) major customers include Griffith Park (parkland and two golf courses), Forest Lawn Memorial Park, Mount Sinai Memorial Park, Lakeside Golf Course and MCA/Universal Studios. Water is used primarily for irrigation. Glendale's major customers of reclaimed water include Glendale-Greyson Power Plant, Scholl Canyon Park, Scholl Canyon Landfill, Scholl Canyon Golf Course and Glendale Sports Complex. Water is used primarily for irrigation and cooling water. Recycled water may also be used for dust control at permanent facilities. Plans are currently underway to expand reclaimed water service south and east of LAG.

Treated water is generated by LAG continually, but not always at rates demanded by Reclaimed Water customers. As water is generated, it is temporarily stored in a common tank used by both LADWP and Glendale. Water distributed by the system roughly varies from 2 mgd in the winter months to 5 mgd in the summer months (both flows on monthly averages). Distribution of reclaimed water is higher in the late evening to early morning hours compared to daytime use.

The LADPW and Glendale operate five (5) product water pumps at LAG to fill a recycled water storage tank (2 million gallon capacity) at the beginning of the recycled water distribution system. Each pump is 600 horse power, 4500 gpm and VFD driven. There are provisions to install three additional pumps to facilitate future expansion. Sodium bisulfite is metered by LADWP into the water pumped to the storage tank to partially dechlorinate the treated water from LAG.

Water from the LADWP storage tank is distributed by gravity flow to LADWP customers and to the City of Glendale. Glendale uses a network of pump stations to pump water to five smaller storage tanks (0.13 to 0.30 million gallon capacity). Water is distributed by gravity to end users from these tanks.

LADWP controls the product water pumps remotely and would normally shut down the pumps after verbal confirmation that product water exceeded permit limits. LAG has the capability of shutting down the pumps locally if necessary.

#### **APPLICABLE PLANS, POLICIES AND REGULATIONS**

6. ***Title 22 of the California Code of Regulations*** – The DHS established criteria for using recycled water. These criteria are codified in Title 22, California Code of Regulations, Chapter 3 Water Recycling Criteria, including such requirements as Sources of Recycled Water, Uses of Recycled Water, and Use of Area Requirements, etc. The DHS adopted revised Water Recycling Criteria that became effective on March 20, 2001. Applicable criteria are prescribed in this Order. In a letter dated August 10, 2010, California Department of Public Health finds that recycled water for dust control at permanent facilities is an appropriate and safe use, and recommends that the Regional Board approve such use.
7. The State Board adopted Resolution No. 77-1, Policy with Respect to Water Reclamation in California, which includes principles that encourage and recommend funding for water recycling and its use in water-short areas of the State. On September 26, 1988, the Regional Board also adopted Resolution No. 88-012, Supporting Beneficial Use of Available Reclaimed Water in Lieu of Potable Water for the Same Purpose, which encourages the beneficial use of recycled wastewater and supports water recycling projects.
8. A February 24, 2004 State Board memorandum from Celeste Cantú to the Regional Board Executive Officers entitled "Incidental Runoff of Recycled Water", provided recommendations regarding regulatory management of incidental runoff. The memorandum stated: To further the goal of maximizing the use of recycled water, the water quality laws should be interpreted in a manner that is consistent with the intent of the Legislature to promote recycled water use. Consequently, incidental runoff from recycled water projects should be handled as follows:
  - A. Where reclamation requirements prohibit the discharge of waste to waters of the State and discharges are not expected to occur, occasional runoff should not trigger the need for either an individual NPDES permit or enforcement action.
  - B. If discharges from reclamation project area occur routinely, such discharges can be regulated under municipal storm water NPDES permit in most cases.
  - C. In limited cases, where necessary to address a water quality concern, discharges of recycled water to surface waters may be regulated under an individual NPDES permit. A NPDES permit, however, should not be issued unless necessary to achieve water quality objectives.

The memorandum also describes the framework for regulating incidental runoff from irrigation systems and from storage ponds without issuing such a NPDES permit.

9. Section 13523 of the California Water Code provides that a Regional Board, after consulting with and receiving recommendations from DHS or its delegated local health agency, and after any necessary hearing, shall, if it determines such action to be necessary to protect the health, safety, or welfare of the public, prescribe water recycling requirements for water that is used or proposed to be used as recycled water. Section 13523 further provides **at a minimum**, that the recycling requirements shall include, or be in conformance with, the statewide water recycling criteria established by DHS pursuant to Water Code section 13521.
10. Pursuant to California Water Code section 13523, the Regional Board has consulted with the DHS regarding the proposed recycling project and has incorporated their recommendations in this Order.
11. The requirements contained in this Order are in conformance with the goals and objectives of the Basin Plan and implement the requirements of the California Water Code and Title 22 California Code of Regulations, Chapter 3 Water Recycling Criteria.
12. Section 13523.5 on water reclamation requirements in the Water Code states that a Regional Board may not deny issuance of water reclamation requirements to a project that violates only a salinity standard in a Basin Plan. In 1985, soon after this provision was added to the Water Code, the State Board Office of Chief Counsel issued a legal opinion concluding that this provision does not apply to waste discharge requirements. Hence, waste discharge requirements for projects that recycle water may contain effluent and other limitations on discharges of salts as necessary to meet water quality objectives, comply with the Antidegradation Policy, or otherwise protect beneficial uses.

#### **CEQA AND NOTIFICATION**

13. The City of Los Angeles prepared a "Final Supplemental Environmental Impact Statement/Environmental Impact Report (EIS/EIR) City of Los Angeles Wastewater Facilities Plan Update" that was reported on October 1990. No significant adverse impacts on ground water quality were identified in the EIS/EIR as a result of proposed irrigation projects.
14. This Title 22 recycled water project for purposes of the California Environmental Quality Act is the use of disinfected tertiary-treated effluent, produced at the Los Angeles-Glendale WRP, as recycled water in conformance with DHS regulations and the Regional Board's Basin Plan. The Regional Board is a CEQA responsible agency for the project and has reviewed the EIS/EIR and concludes that based on substantial evidence set forth in the EIS/EIR, that there will be no adverse impact on the environment that cannot be mitigated.
15. Pursuant to the California Water Code section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be sent to: State Water Resources Control Board, P.O. Box 100, Sacramento, CA 95812, within 30 days of adoption.

The Regional Board has notified the City of Los Angeles and interested agencies and persons of its intent to issue Water Recycling Requirements Order No. R4-2007-0007 and a separate Waste Discharge Requirements Order No. R4-2007-0006 for the production, distribution and use of recycled water, and has provided them with an opportunity to submit their written views and recommendations.

The Regional Board, in a public meeting, heard and considered all comments pertaining to these Water Recycling and separate Waste Discharge Requirements.

**IT IS HEREBY ORDERED** that the City of Los Angeles shall comply with the following:

**I. RECYCLED WATER LIMITATIONS**

1. Recycled water used for irrigation shall be limited to tertiary-treated and disinfected effluent only as proposed for irrigation, industrial and other uses. The disinfected tertiary-treated effluent used as recycled water (hereafter disinfected tertiary recycled water or recycled water) is wastewater that has been filtered and subsequently disinfected that meets the following criteria:

- A. The filtered wastewater has been disinfected by either Section I.1.A.a or Section I.1.A.b.:

- a. A chlorine disinfection process that provides a concentration-time (CT) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow. The CT is the product of total chlorine residual and modal contact time measured at the same period. The modal contact time is the amount of time that elapsed between the time that a tracer, such as salt or dye, is injected into the influent at the entrance of the chlorination chamber and the time that the highest concentration of the tracer is observed in the effluent from the chamber. The peak dry weather design flow is the arithmetic mean of the maximum peak flow rates sustained over some period of time (for example three hours) during the maximum 24-hour dry weather period. Dry weather period is defined as periods of little or no rainfall.

For purposes of calculating and demonstrating compliance with the CT requirement, within 30 days after the initial delivery of recycled water, the City shall complete tracer studies under four different flow rates (the maximum, the minimum, and two points in between) to determine the respective modal contact time at the chlorine contact basin. The studies shall follow the protocol outlined in *Tracer Studies in Water Treatment Facilities: A Protocol and Case Studies* published by the American Water Works Association Research Foundation. A curve of flow rate vs. modal contact time, based on the study results, shall be used for estimating the modal contact time at a given flow rate, which is essential for the CT calculation. A final report on the tracer studies shall be submitted to the

DHS and the Regional Board within 30 days after the completion of the studies.

In the interim period before the completion of tracer studies, the theoretical retention time based on the volume of the chlorine contact basin and the design flow rate shall be used as the modal contact time in the calculation of CT.

- b. A disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration.  
F-specific bacteriophage MS-2 means a strain of a specific type of virus that infects coliform bacteria that is traceable to the American Type Culture Collection (ATCC 15597B1) and is grown on lawns of *E. coli* (ATCC 15597).
- B. The median concentration of total coliform bacteria measured in the disinfected wastewater does not exceed a most probable number (MPN) or a colony forming unit (CFU) of 2.2 per 100 milliliters based on the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN/CFU of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN/CFU of 240 total coliform bacteria per 100 milliliters.
- C. A filtered wastewater shall be an oxidized wastewater that has been coagulated and passed through natural undisturbed soil or a bed of filter media under the following conditions:
  1. At a rate that does not exceed 5 gallons per minute per square foot of surface area in mono, dual or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 gallons per minute per square foot of surface area in a traveling bridge automatic backwash filter; and,
  2. The turbidity of the filtered wastewater does not exceed any of the following:
    - i. An average of 2 NTU within a 24-hour period;
    - ii. 5 NTU more than 5 percent of the time within a 24-hour period; and
    - iii. 10 NTU at any time.

"NTU" (Nephelometric Turbidity Unit) is a turbidity measurement determined by the ratio of the intensity of light scattered by the sample to the intensity of incident light as measured by Method 2130 B. in *Standard Methods for the Examination of Water and Wastewater*, 20<sup>th</sup> Edition;

Eaton, A. D., Clesceri, L. S., and Greenberg, A. E., Eds; American Public Health Association, Washington, D.C., 1998; p2-8.

3. Continuous chemical addition upstream of the filters is not required if
  - i. Final effluent turbidity does not exceed 2 NTU;
  - ii. The turbidity of the influent to the filters is continuously measured;
  - ii. The influent turbidity to the filters does not exceed 5 NTU for more than 15 minutes in any 24-hour period and never exceeds 10 NTU; and,
  - iv. There is the capability to automatically activate chemical addition or divert the wastewater should the filter influent turbidity exceed 5 NTU for more than 15 minutes.
- D. A coagulated wastewater shall be an oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated upstream from a filter by the addition of suitable floc-forming chemicals.
- E. An oxidized wastewater shall be wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen.

## II. SPECIFICATIONS FOR USE OF RECYCLED WATER

The City shall oversee the end-users such that the following requirements are complied with.

1. The disinfected tertiary recycled water may be used for those applications specified in Title 22, Division 4, Chapter 3, Water Recycling Criteria of the California Code of Regulations. Should the water not meet the definition of tertiary recycled water, but instead meet the definition of disinfected secondary -23 recycled water, it may only be used for those applications specified for use of disinfected secondary -23 recycled water in Title 22, Division 4, Chapter 3, Water Recycling Criteria of the California Code of Regulations.
  - A. In a letter dated August 10, 2010, California Department of Public Health finds that recycled water for dust control at permanent facilities is an appropriate and safe use for this application. Permanent facilities include but are not limited to horse ranches, open fields, and fairgrounds.
2. Indirect potable uses and groundwater recharge are not covered by this Order.
3. Recycled water shall not be used other than those specified in section II.1 unless a revision to engineering report has been submitted to and approved by the DHS for such other uses and/or requirements for these uses have been prescribed by this Regional Board, in accordance with Section 13523 of the California Water Code.

Any additionally approved recycled water applications to this permit can be approved by the Executive Officer of this Regional Board.

### III. USE AREA REQUIREMENTS

Use area is an area of recycled water use with defined boundaries, which may contain one or more facilities where recycled water is used.

The City shall be responsible to ensure that all users of recycled water comply with the following:

1. No irrigation areas with disinfected tertiary recycled water shall be located within 50 feet of any domestic water supply well unless all of the following conditions have been met:
  - A. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface;
  - B. The well contains an annular seal that extends from the surface into the aquitard;
  - C. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities;
  - D. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well; and,
  - E. The owner of the well approves of the elimination of the buffer zone requirement.
2. There shall be no storage or impoundment of disinfected tertiary recycled water within 100 feet of any domestic water supply well.
3. No irrigation shall take place within 50 feet of any open reservoir, subsurface storage reservoir, or stream currently used as a source of domestic water.
4. Use of recycled water shall comply with the following:
  - A. Recycled water shall be applied at such a rate and volume as not to exceed vegetative demand and soil moisture conditions. Special precautions must be taken to: prevent clogging of spray nozzles, prevent over-watering, and minimize the production of run-off. Pipelines shall be maintained so as to prevent leakage;
  - B. Any incidental runoff from recycled water projects should be handled as follows and shall not be considered a violation of this Order:

1. Where these WRRs prohibit the discharge of recycled water to waters of the State or the United States and discharges are not expected to occur, occasional runoff should not trigger the need for either an individual NPDES permit or enforcement action.
  2. If discharges from recycling project area occur routinely, such discharges can be regulated under municipal storm water NPDES permit in most cases.
  3. In limited cases, where necessary to address a water quality concern, discharges of recycled water to surface waters may be regulated under an individual NPDES permit. A NPDES permit, however, should not be issued unless necessary to achieve water quality objectives.
- C. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities, and shall not contact any drinking water fountain; and,
- D. Recycled water shall not be used for irrigation during periods of rainfall and/or runoff.
- E. Recycled water used for dust control at permanent facilities shall employ the Best Management Practices as described in Attachment 1. The vehicles to be used for transporting recycled water for dust control shall be equipped with an air gap filling port for receiving potable or recycled water, or shall be equipped with two separate hoses, one for potable and one for recycled water, which shall be of different sizes to prevent cross connection of sources. In addition the spray heads and nozzles shall be configured and maintained to minimize runoff, ponding, and drift.
5. All recycled water use areas that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER – DO NOT DRINK". Each sign shall display an international symbol similar to that shown in Figure 1. An alternative signage and wording may be used provided they are approved by the DHS.
  6. No physical connection shall be made or allowed to exist between any recycled water piping and any piping conveying potable water, except as allowed under Section 7604 of Title 17, California Code of Regulations.
  7. The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibbs (a faucet or similar device to which a common garden hose can be readily attached). Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.

8. Recycled water use shall not result in earth movement in geologically unstable areas.

#### IV. REQUIREMENTS FOR DUAL-PLUMBED SYSTEM

1. "Dual plumbed" means a system that utilizes separated piping systems for recycled water and potable water within a facility and where the recycled water is used for either of the following purposes:
  - A. To serve plumbing outlets (excluding fire suppression systems) within a building, or
  - B. Outdoor landscape irrigation at individual residences.
2. The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of Section 7602 (a) and 7603 (a) of Title 17, California Code of Regulations, and that such connection has been approved by the DHS and/or its delegated local agency.
3. The City shall not deliver recycled water to a facility using a dual-plumbed system unless the report required pursuant to Section 13522.5 of the California Water Code, and which meets the requirements set forth in sections IV.4 and/or IV.5 of this Order, has been submitted, and approved by, the DHS and/or its delegated local agency. The Regional Board shall be furnished with a copy of the DHS approval together with the aforementioned report within 30 days following the approval.
4. The report pursuant to Section 13522.5 of the California Water Code shall contain the following information for dual-plumbed systems, in addition to the information required by Section 60323 of Title 22, California Code of Regulations (Engineering Report):
  - A. A detailed description of the intended use site identifying the following:
    1. The number, location, and type of facilities within the use area proposing to use dual-plumbed systems;
    2. The average number of persons estimated to be served by each facility on a daily basis;
    3. The specific boundaries of the proposed use site including a map showing the location of each facility to be served;
    4. The person or persons responsible for operation of the dual-plumbed system at each facility; and
    5. The specific use to be made of the recycled water at each facility.

- B. Plans and specifications describing the following:
1. Proposed piping system to be used;
  2. Pipe locations of both the recycled and potable systems;
  3. Type and location of the outlets and plumbing fixtures that will be accessible to the public; and
  4. The methods and devices to be used to prevent backflow of recycled water into the public water system.
- C. The methods to be used by the City to assure that the installation and operation of the dual-plumbed system will not result in cross connections between the recycled water piping system and the potable water piping system. These shall include a description of pressure, dye or other test methods to be used to test the system every four years.
5. Prior to the initial operation of the dual-plumbed recycled water system and annually thereafter, the dual-plumbed system within each facility and use site shall be inspected for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four years. The testing shall be conducted in accordance with the method described in section IV.4.C. of this Order. The inspections and the testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection and testing for the prior year shall be submitted to the DHS within 30 days following completion of the inspection or testing.
  6. The City shall notify the DHS of any incidence of backflow from the dual-plumbed recycled water system into the potable water system within 24 hours of discovery of the incident.
  7. Any backflow prevention device installed to protect the public water system serving the dual-plumbed recycled water system shall be inspected and maintained in accordance with Section 7605 of Title 17, California Code of Regulations.

## V. GENERAL REQUIREMENTS

1. Recycled water shall not be used for direct human consumption or for the processing of food or drink intended for human consumption.
2. Bypass, discharge, or delivery to the use area of inadequately treated recycled water, at any time, is prohibited.
3. The recycling facility shall be adequately protected from inundation and damage by storm flows and run-off.

4. Adequate freeboard and/or protection shall be maintained in the recycled water storage tanks and process tanks to ensure that direct rainfall will not cause overtopping.
5. The wastewater treatment and use of recycled water shall not result in problems caused by breeding of mosquitoes, gnats, midges, or other pests.
7. Odors of sewage origin shall not be perceivable any time outside the boundary of the treatment facility.
8. The City shall, at all times, properly operate and maintain all treatment facilities and control systems (and related appurtenances) which are installed or used by the City to achieve compliance with the conditions of this Order. Proper operation and maintenance includes: effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls (including appropriate quality assurance procedures).
9. A copy of these requirements shall be maintained at the water reclamation facility so as to be available at all times to operating personnel.
10. The City shall furnish each user of recycled water a copy of these requirements and ensure that the requirements are maintained at the user's facility so as to be available at all times to operating personnel.
11. The current Title 22 Engineering Report for the San Fernando Valley Water Recycling Project was issued on June 1992. In accordance with section 13522.5 of the California Water Code, and Title 22, Division 4, Chapter 3, Article 7, Section 60323 of the California Code of Regulations, the City shall file an updated engineering report, prepared by a properly qualified engineer registered in California, for any material change or proposed change in character, location or volume of the recycled water or its uses, and send copy to the Regional Board and to the DHS for review and approval within one year from the adoption date of January 11, 2007. This updated engineering report shall describe the current treatment plant, their impacts on the recycled water operation, and the operation and maintenance management plan, including a preventive (fail-safe) procedure and contingency plan for controlling accidental discharge and/or delivery to users of inadequately treated recycled water.

## VI. PROVISIONS

1. The City shall continue to submit plans for proposed and as-built drawings for recycled water projects to and obtain approval from DHS or its delegated local health agency for each recycled water project. The American Water Works Association Guidelines for the Distribution of Non-Potable Water shall be followed, including installation of purple pipe, adequate signs, etc. As-built drawings shall show the final locations of the potable water, sewer, and recycled water pipelines; and indicate adequate separation between the recycled water and potable domestic water lines, which shall also be marked clearly or labeled using separate colors for identification.

In addition, a copy of each application to DHS for a recycled water project shall be delivered to the RWQCB for inclusion in the administrative file with the following information:

- A. A description of each use area including, but not limited to, a description of what will be irrigated (e.g., landscape, specific food crop, etc.); method of irrigation (e.g., spray, flood, or drip); the location of domestic water supply facilities adjacent to the use areas; site containment measures; the party responsible for the distribution and use of the recycled water at the site; identification of other governmental entities which may have regulatory jurisdiction over the reuse site(s).
- B. A map showing specific areas of use, areas of public access, surrounding land uses, the location and construction details of wells in or near the use areas, location and type of signage, the degree of potential access by employee or the public, and any exclusionary measures (e.g. fencing).

The City shall submit to the Regional Board a copy of the approved Recycled Water Project for the recycled water distribution system and the DHS approval within 30 days of approval.

2. For any extension or expansion of the recycled water system or use areas not covered by the Recycled Water Plan, the City shall submit a report detailing the extension or expansion plan for approval by the DHS or its delegated local health agency. The plan shall include, but not limited to, the information specified in sections VI.1.A. and B. above. Following construction, as-built drawings shall be submitted to the DHS or its delegated local health agency for approval prior to delivery of recycled water.

The City shall submit to the Regional Board a copy of the approved expansion plan and the DHS approval within 30 days of approval.

3. If the recycled water system lateral pipelines are located on an easement contiguous to a homeowners private property and where there is a reasonable probability that an illegal or accidental connection to the recycled water line could be made, the City shall provide a buffer zone or other necessary measures between the recycled water lines and the easement to prevent any illegal or accidental connection to the recycled water lines. The City shall notify homeowners about the recycled water lateral and restrictions on usage of recycled water.
4. The City shall inspect the recycled water use areas on a periodic basis. The City shall propose an inspection schedule, based the type of use site, for approval by DHS within 90 days of the effective date of this permit. A report of findings of the inspection shall be submitted to the DHS, County Health Department, and the Regional Board on a quarterly basis.
5. The City shall submit to the Regional Board, under penalty of perjury, technical self-monitoring reports according to the specifications contained in the Monitoring and Reporting Program as directed by the Executive Officer.

6. The City shall notify this Regional Board and the DHS by telephone or electronic means within 24 hours of knowledge of any violations of recycled water use conditions or any adverse conditions as a result of the use of recycled water from this facility; written confirmation shall follow within 5 working days from date of notification.
7. The City shall notify this Regional Board and the DHS, immediately by telephone, of any confirmed coliform counts that could cause a violation of the requirements. This information shall be confirmed in the next monitoring report. For any actual coliform limit violation that occurred, the report shall also include the cause(s) of the high coliform counts, the corrective measures undertaken (including dates thereof), and the preventive measures undertaken to prevent a recurrence.
8. The direct use of Title 22 tertiary treated and disinfected recycled water for impoundments and irrigation could affect the public health, safety, or welfare; requirements for such uses are therefore necessary in accordance with Section 13523 of the Water Code.
9. Based on February 24, 2004 memorandum, recycled water ponds should follow the following:
  - a. The recycled water pond is designed not to spill during wet months. Under this circumstance, spills that occur under extreme weather conditions or emergencies should not be considered for enforcement.
  - b. Recycled water ponds can be drained and refilled with potable water or flushed with potable water prior to the onset of the wet season. Flushing will not displace all of the recycled water but the water quality threat is minimal.
  - c. Recycled water ponds designed to spill recycled water during the wet season can be regulated under Phase 1 municipal storm water permits or under a general storm water permit. These permits require reduction of pollutants to the maximum extent practicable. The permits also incorporate receiving water limitations requiring the implementation of an iterative process for addressing any exceeding of water quality objectives.
10. This Order does not exempt the City from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize the recycling and use facilities; and they leave unaffected any further constraint on the use of recycled water at certain site(s) that may be contained in other statutes or required by other agencies.
11. This Order does not alleviate the responsibility of the City to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency. Expansion of the recycled water distribution facility shall be contingent upon issuance of all necessary requirements and permits, including a conditional use permit.

12. After notice and opportunity for a hearing, this Order may be modified, revoked and reissued, or terminated for cause, that include, but is not limited to: failure to comply with any condition in this Order; endangerment of human health or environment resulting from the permitted activities in this Order; obtaining this Order by misrepresentation or failure to disclose all relevant facts; acquisition of new information which could have justified the application of different conditions if known at the time of Order adoption.

The filing of a request by the City for modification, revocation and reissuance, or termination of the Order; or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

13. The City shall furnish, within a reasonable time, any information the Regional Board or the DHS may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The City shall also furnish the Regional Board, upon request, with copies of records required to be kept under this Order for at least three years.
14. In an enforcement action, it shall not be a defense for the City that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the City shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost.
15. This Order includes the Water Recycling Requirements (WRRs) and the attached Monitoring and Reporting Program (MRP, CI No. 9198). If there is any conflict between provisions stated in the MRP and these WRRs, those provisions stated herein before prevail.

#### **VII. EFFECTIVE DATE OF THE ORDER**

This Order takes effect upon its adoption.

I, Samuel Unger, 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, Los Angeles Region on February 3, 2011.

  
Samuel Unger, P.E.  
Executive Officer

/RMedina

**ATTACHMENT 1**

**Best Management Practices**



LADWP Water Recycling  
Recycled Water User Guidelines  
**DUST CONTROL**

**ALLOWED USE**

The California Code of Regulations, Title 22 Section 60307(b)(6) allows the use of recycled water for dust control on streets and roads. In addition, this Dust Control Guideline has been approved by the California Department of Public Health for dust control within facilities (pending DPH). Recycled water is **NOT** allowed for drinking, washing, or animal water supply.

**REQUIREMENTS FOR USE**

- Vehicles used for collecting and distributing recycled water for dust control shall:
  - Have an adequate tank and plumbing system to ensure that leaks and ruptures will not occur due to normal use.
  - Either be equipped with two risers, one for potable water and one for recycled water, or each tank used shall be equipped with approved air-gap separation between the filler tube and the tank.
  - Have color-coded risers, hoses, and fittings: blue for potable water and purple for recycled water.
  - Be equipped with uniquely sized fittings to prevent accidental connection between the potable and recycled systems.
  - Be equipped with spray heads/nozzles configured to minimize runoff, ponding, or spray drift.
  - Be equipped with control valves configured such that recycled water can be applied in a controlled fashion on the site and completely retained during transit.
  - Be clearly labeled as specified in the "Signage Requirements" section on Page 2.
- Prior to use, \_\_\_\_\_ will inspect the Users' vehicles to ensure compliance with the requirements listed above.
- Each vehicle tank used to store and/or transport recycled water must be flushed and disinfected prior to storage and/or transport of potable water or recycled water of better quality.
- User must maintain a log recording details of all recycled water deliveries (date, location, volume, and end use).
- Any storage facility containing recycled water for reuse applications shall be managed in a manner to control odor.
- Sites shall be designed and operated using Best Management Practices (BMPs) as stated below, or as revised by LADWP, to prevent recycled water spray, mist, or surface flow from either leaving the site or reaching:
  1. Any storm drain or surface water with year-round flow located adjacent to the Site;
  2. Areas with public access (e.g. dwellings, designated outdoor eating areas, or food handling facilities);
  3. Drinking fountains, unless specifically protected with a shield device.

**BEST MANAGEMENT PRACTICES**

- For dust control adjacent to surface waters, install runoff barriers, such as vegetative strips, collection system, or 100-foot buffers.
- Maintain distance buffers if applying recycled water near sensitive land uses.
- Do not apply recycled water for dust control during strong winds.
- The application method must not cause ponding of water. For example: avoid excessive application volumes, use after heavy rains, or application to excessively uneven surfaces.
- Recycled water must not run off the site where it is applied. Conduct visual inspections to determine the necessary delivery rates and volumes. If runoff cannot be restricted by application method (for example, if the ground surface is strongly sloped or the soil has low water permeability), runoff needs to be collected via a drainage system and reused.
- If hand watering is used, keep the hose low to ground and point it in the direction of the wind to prevent spray drift.
- Signage should be displayed at site of storage, during watering, and while the area is still wet (see "Signage Requirements" on Page 2).
- When watering is completed, drain hose and return hose to secure position. Ensure that there is no risk that recycled water may be used for drinking purposes or animal water supply.



LADWP Water Recycling  
**Recycled Water User Guidelines**  
**DUST CONTROL**

**HEALTH AND SAFETY GUIDELINES**

- All workers that are likely to be present during dust control activities are required to have training in the proper use of recycled water. Supervisory personnel and Site supervisors should be held accountable to ensure that employees are using recycled water properly.
- It is the responsibility of the User to train all operations personnel so they are familiar with the use of recycled water. Training for operations personnel should include, but not be limited to, awareness of the following:
  1. Working with recycled water IS SAFE if common sense is used and if appropriate regulations followed.
  2. Recycled water, although highly treated, is non-potable.
  3. Conditions such as ponding and runoff are not allowed.
  4. Good personal hygiene must be followed (e.g. wash hands after working with recycled water, do not consume food or drink while working with recycled water, cover wounds to prevent contact with recycled water).
  5. Cross-connections between the recycled water system and the potable water system must not be allowed to exist.

**DID YOU KNOW?**

**Tertiary treated recycled water is considered safe for full-body contact**

*California Code of Regulations  
Title 22, 60305(a) & 60301.220*

Report any accidental spills of recycled water or personal hygiene issues that have received medical attention to LADWP for action and record keeping. LADWP will initiate normal incident management procedures.

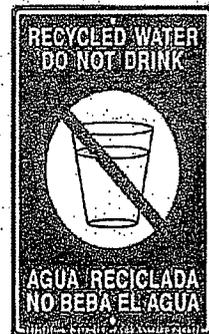
**SIGNAGE REQUIREMENTS**

**Vehicle-Mounted Recycled Water Storage Tanks**

While using vehicle-mounted recycled water for dust control, the User must install, maintain, and keep in place three magnetic signs (on both sides and the rear of each vehicle, at the outlet) indicating that recycled water is in use. The signs must contain the words "RECYCLED WATER - DO NOT DRINK" in 2-inch high letters on a purple background and the "Do Not Drink" symbol, as shown to the right. All labels and signs must be placed where they can easily be seen by the personnel using the vehicle.

**Other Equipment and Devices**

All stationary pipe, materials, and equipment used to carry recycled water onsite (such as pipes, air vacuum relief valves, pressure reducing valves, pumps, pump control valves, etc.) must be properly identified. If the User installs any stationary recycled water equipment, information on required markings and tagging is found in the 2005 Los Angeles County Reclaimed Water Advisory Committee Recycled Water User Manual (RW User Manual), Page 23.



**USER AGREEMENTS**

All potential recycled water users in the City of Los Angeles must meet LADWP's requirements and must enter into a written agreement with LADWP. LADWP reserves the right to take any action necessary with respect to the operation of the User's onsite recycled water operations in order to safeguard public health and to meet applicable regulations and permits. For information on User Agreements, refer to the RW User Manual, Pages 8 and 33.

*The City of Los Angeles has safely used recycled water since 1979 for irrigation and industrial purposes. For more information about recycled water, treatment processes, and availability in the City of Los Angeles, please contact the LADWP Water Recycling Group at (213) 367-3637 or (213) 367-4141 or visit [www.ladwp.com](http://www.ladwp.com)*