

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

TENTATIVE ADDENDUM NO. 1 TO ORDER NO. R9-2009-0021

June 26, 2014
Item No. 5
Supporting
Document No. 1

**AN ADDENDUM TO INCORPORATE REQUIREMENTS FOR RECYCLED WATER
USE AT NEW REUSE SITES, AND MODIFYING DISCHARGE SPECIFICATIONS
FOR SEVERAL CHEMICAL CONSTITUENTS**

**MASTER RECLAMATION PERMIT FOR THE SOUTHERN REGIONAL TERTIARY
TREATMENT PLANT, UNITED STATES MARINE CORPS, CAMP PENDLETON,
SAN DIEGO COUNTY**

The California Regional Water Quality Control Board San Diego Region (hereinafter San Diego Water Board), finds that:

1. Order No. R9-2009-0021 establishes requirements for the maximum discharge of 5.0 million gallons per day (MGD) of tertiary treated recycled water from the Southern Regional Tertiary Treatment Plant (SRTTP). Recycled water produced from the SRTTP is distributed to the Front Gate/Recreation Fields, Marine Memorial Golf Course, Horse Pasture, and Mainside Parade Grounds for spray irrigation.
2. The United States Marine Corps (USMC or Discharger), Camp Pendleton (MCBCP) submitted a Report of Waste Discharge (ROWD) to the San Diego Water Board on October 18, 2013 requesting modifications to Order No. R9-2009-0021. Addendum No. 1 to Order No. R9-2009-0021 (Addendum No. 1) makes the following modifications to Order No. R9-2009-0021:
 - a. Allows the USMC to use recycled water at new reuse sites and for uses not identified in Order No. R9-2009-0021.
 - b. Eliminates daily average discharge specifications for several chemical constituents and replaces them with 12-month average discharge specifications.
 - c. Modifies requirements for reporting spills or releases of recycled water, and plant overflow events.
 - d. Adds reporting requirements for adding new reuse sites, and
 - e. Allows the use of recycled water at new dual-plumbed sites.
3. The USMC proposes to incorporate additional reuse areas for tertiary treated recycled water produced from the SRTTP. Currently Order No. R9-2009-0021 only permits that the tertiary treated recycled water from the SRTTP be used for spray irrigation. The USMC proposes to use recycled water at additional landscape irrigation sites for irrigation of native habitat, for toilet and urinal

flushing (dual-plumbed sites), for construction purposes (includes uses such as dust control, soil compaction, and concrete mixing), and for in-plant uses at the SRTTP.

4. Use sites receiving tertiary treated recycled water produced from the SRTTP will be located in the Ysidora Hydrologic Area (HA 902.10), the Mission Hydrologic Area (HSA 903.11), the Stuart HSA (901.53), and the Las Pulgas HSA (901.52). This Order allows the use of recycled water within the aforementioned HAs/HSAs.
5. The project involves expansion of an existing facility and as such is exempt from the Provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000, *et seq.*) pursuant to California Code of Regulations, Title 14, Chapter 3, Article 19, section 15301.
6. The San Diego Water Board has notified the Discharger and all known interested parties of the intent to modify Order No. R9-2009-0021.
7. The San Diego Water Board in a public meeting has heard and considered all comments pertaining to the proposed modifications to Order No. R9-2009-0021.

IT IS HEREBY ORDERED, that:

Except as modified or superseded by Addendum No.1 to Order No. R9-2009-0021, all of the findings, prohibitions, provisions, specifications, and other requirements of Order No. R9-2009-0021 shall remain in full force and effect. The following modifications to Order No. R9-2009-0021 are hereby incorporated and immediately effective:

1. Section A-Prohibitions is modified as follows:

- A.3 Discharges of treated or untreated solid or liquid waste into waters of the United States are prohibited, unless authorized by an NPDES permit issued by this Regional Board.

2. Section B-Discharge Specifications is modified as follows:

- B.1 The 30-day average daily dry weather flow to the SRTTP shall not exceed 7.5 million gallons per day.
- B.4 The recycled water discharged from SRTTP shall not contain constituents in excess of the following discharge specifications:

TABLE 4

Constituent	Units	30-Day Average ^a	Daily Maximum ^b	12-Month Average ^c
Biochemical Oxygen Demand (BOD at 20°C)	mg/L	30	45	-
Total Suspended Solids	mg/L	30	45	-
pH	pH Units	Within the limits of 6.5 to 8.5 at all times		
Chloride	mg/L	NA	NA	325
Sulfate	mg/L	NA	NA	325
Percent Sodium ^d	%	NA	NA	60
Iron	mg/L	NA	NA	0.3
Manganese	mg/L	NA	NA	0.05
Methylene Blue Active Substances	mg/L	NA	NA	0.5
Boron	mg/L	NA	NA	0.6
Fluoride	mg/L	NA	NA	0.7

Table 4 notes:

^aThe 30-day average discharge specification shall apply to the arithmetic mean of the results of all samples collected during any calendar month.

^bThe daily maximum discharge specification shall apply to the results of a single composite or grab sample.

^c The 12-month average discharge specification shall apply to the arithmetic mean of the results of all samples collected during a calendar year.

^d The 12-month average discharge specification for percent sodium shall not be exceeded unless the Discharger demonstrates to the satisfaction of the San Diego Water Board that the exceedance is due solely due to chemical additions needed to meet other discharge specifications, and the Discharger demonstrates that all steps have been taken to optimize chemical additions to minimize exceedances.

B.5 The recycled water discharged from SRTTP shall not contain TDS in excess of 1,200 mg/L¹ as a 12-month average. Recycled water discharged from the SRTTP to the Front Gate/Recreation Fields shall not contain TDS in excess of 800 mg/L as a 12-month average.

B.6 The recycled water discharged from SRTTP to the Irrigation Areas shall not contain total nitrogen (as N) in excess of 4.1 mg/L as a 12-month average.

3. The following requirements are added to Section C-Recycled Water Purveyance Requirements.

¹ The 12-month average discharge specification shall apply to the arithmetic mean of the results of all samples collected during a calendar year.

- C.5 The USMC shall submit a report to the San Diego Water Board, the California Department of Public Health (CDPH), and the County of San Diego Department of Environmental Health (County DEH) prior to providing recycled water to any new reuse sites not identified in Order No. R9-2009-0021. The report shall include a detailed description of each reuse site and shall include the information below:
- i. The number, location, and type of facilities within use areas.
 - ii. The average number of persons estimated to be served by each facility on a daily basis.
 - iii. The specific boundaries of the proposed use area including a map showing the location of each facility to be served.
 - iv. The person or persons responsible for operation of the recycled water system at each facility.
 - v. The specific use to be made of the recycled water at each facility. Plan and specifications for new reuse sites and new dual-plumbed sites shall also be submitted to the CDPH and the County DEH and shall include 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.
 - 4) The methods and devices to be used to prevent backflow of recycled water into the public water system.
 - 5) Provide a domestic water supply well location in a map if the well is within 1,000 feet from the reuse area.
- C.6 Prior to the initial operation of the dual-plumbed recycled water system and annually thereafter, the USMC shall ensure that the dual-plumbed system within each facility and use area is 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 the report submitted pursuant to California Code of Regulations (CCR) Title 22, section 60314. 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. The County DEH shall be notified 30 days prior to any cross connection test. A written report documenting the result of the inspection or testing for the prior year shall be submitted to the County DEH and CDPH within 30 days following completion of the inspection or testing.

4. Section E-3 is modified as follows:

The Discharger shall report any noncompliance which may endanger health or the environment. Any sewage overflow or spill shall be immediately reported to the County DEH as required by section 5411.5 of the California Health and Safety Code. In addition, any such information shall be provided orally to the San Diego Water Board within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The San Diego Water Board, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

Discharger notifications and reporting for spills completed in compliance with Order No. R9-2013-0112 (NPDES Permit No. CA0109347) shall be deemed as complying with the requirements of this section. In the event that the NPDES permit lapses, then the Discharger shall comply with the following reporting requirements:

The following occurrence(s) must be reported to the San Diego Water within 24 hours:

- a. Any bypass from any portion of the treatment facility.
- b. Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.
- c. Any treatment plant upset which causes the discharge specifications of this Order to be exceeded.
- d. Failure of chlorination equipment or loss of detectable chlorine residual.
- e. Effluent total coliform most probable number greater than 1,600/100 milliliter in more than one sample.
- f. Any unauthorized discharge of 50,000 gallons or more of recycled water that has been treated to at least disinfected tertiary recycled water², or of 1,000 gallons or more of recycled water that is treated at a level less than disinfected tertiary recycled water in or on any waters of the State, or where it will probably be discharged in or on any waters of the State.
- g. Any known direct cross-connection between recycled and potable water systems.

² Disinfected tertiary recycled water is defined in California Code of Regulations, Title 22, Chapter 3, section 60301.230

These incidents shall also be reported orally to the CDPH and the County DEH within 24 hours of occurrence.

5. Section E-18 shall be modified as follows:

REGIONAL BOARD ADDRESS

Unless otherwise instructed by the Executive Officer, The Discharger shall submit reports required under this Order, or other information required by the San Diego Water Board, to:

California Regional Water Quality Control Board,
San Diego Region
2375 Northside Drive, Suite 100
San Diego, California 92108
Attention: Land Disposal Unit

6. Section F.4 and F.5 are deleted and replaced with the following section.

F.4 Enforcement Actions

If the San Diego Water Board finds that the discharger has violated any requirements or prohibitions in this Order, including the failure to furnish technical or monitoring program reports as required by this Order, the San Diego Water Board may adopt a cleanup and abatement order, cease and desist order, or other enforcement order to prevent recurrence of violations. The San Diego Water Board may issue an order establishing a time schedule and prescribing a civil penalty that will become due if compliance is not achieved in accordance with the time schedule. The corrective actions and time schedule shall be modified at the direction of the San Diego Water Board.

7. Reporting Schedule of the Monitoring and Reporting Program of Order No. R9-2009-0021-Section F is modified as follows:

Unless otherwise instructed by the Executive Officer, monitoring reports shall be submitted to:

California Regional Water Quality Control Board
San Diego Region
2375 Northside Drive, Suite 100
San Diego, CA 92108
Attention: Land Disposal Unit

Ordered by: **TENTATIVE**
David W. Gibson
Executive Officer
DATE: June 26, 2014

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

The following shall be added as Attachment A to Order No. R9-2009-0021

ATTACHMENT A - RULES AND REGULATIONS FOR RECYCLED WATER USE

Pursuant to CWC Section 13523.1(b)(3), this Order requires the USMC to establish and to enforce rules and regulations governing the design, construction and use of recycled water distribution and disposal systems by its customers. The rules and regulations shall be consistent with the following criteria:

- a. Title 22, Division 4, Chapter 3, Wastewater Reclamation Criteria;
- b. Title 17, Division 1, Chapter 5, Group 4, Article 1 & 2, of the California Code of Regulations (CCR);
- c. The California Department of Public Health (CDPH) Guidelines For Use of Recycled Water, Guidelines for Use of Recycled Water for Construction;
- d. Any measures that are deemed necessary for protection of public health, such as the American Water Works Association (AWWA) California/Nevada Section, Guidelines for the Distribution of Non-Potable Water and Guidelines for Retrofitting to Recycled Water or alternate measures that are acceptable to the CDPH.

A. Standard Rules and Regulations

At a minimum, the rules and regulations shall notify the users that:

- 1. The use of recycled water shall not cause a pollution, contamination or nuisance, as defined by CWC Section 13050.
- 2. The USMC, the San Diego Water Board, the CDPH, and the County of San Diego Department of Environmental Health (County DEH), or an authorized representative of these parties, upon presentation of proper credentials, shall have the right to enter upon the recycled water use site during reasonable hours, to verify that the user is complying with the District's rules and regulations.
- 3. The recycled water user shall provide written notification, in a timely manner, to the District of any material change or proposed change in the character of the use of recycled water.
- 4. The recycled water user shall designate a recycled water supervisor who is responsible for the recycled water system at each use area under the user's control. Specific responsibilities of the recycled water supervisor include the proper installation, operation, and maintenance of the irrigation system; compliance of the project with the USMC's rules and regulations, prevention of potential hazards and preservation of the recycled water distribution system plans

in "as built" form. Designated recycled water supervisors shall obtain instruction in the use of recycled water from an institution approved by the CDPH and County DEH, as required.

5. All recycled water storage facilities owned and/or operated by recycled water users shall be protected against erosion, overland runoff, and other impacts resulting from a 100-year, 24 hour frequency storm unless the San Diego Water Board approves relaxed storm protection measures for the facility.
6. All recycled water storage facilities owned and/or operated by recycled water users shall be protected against 100-year frequency peak stream flows as defined by the County of San Diego flood control agency unless the San Diego Water Board approves relaxed storm protection measures for the facility.
7. The San Diego Water Board may initiate enforcement action against any recycled water user who discharges recycled water in violation of any applicable discharge requirement prescribed by the San Diego Water Board or in a manner which creates or threatens to create conditions of pollution, contamination or nuisance, as defined in CWC section 13050.
8. A copy of the recycled water rules and regulations, irrigation system layout map, and a recycled water system operations manual shall be maintained at the use area. These documents shall be available to operating personnel at all times.
9. Irrigation with disinfected tertiary recycled water shall not take place 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.
 - e. The owner of the well approves of the elimination of the buffer zone requirement.

10. Impoundment of disinfected tertiary recycled water shall not occur within 100 feet of any domestic water supply well.
11. Irrigation with, or impoundment of, disinfected secondary-2.2³ or disinfected secondary -23⁴ recycled water shall not take place within 100 feet of any domestic water supply well.
12. Irrigation with, or impoundment of, undisinfected secondary recycled water shall not take place within 150 feet of any domestic water supply well.
13. Reclaimed water use areas shall be operated in accordance with best management practices (BMPs) to prevent direct human consumption of reclaimed water and to minimize misting, ponding, and runoff. BMPs shall be implemented that will minimize both public contact and discharge onto areas not under customer control.
14. Irrigation with reclaimed water shall be during periods of minimal human use of the service area. Consideration shall be given to allow a maximum dry-out time before the irrigated area will be used by the public.
15. All drinking fountains located within the approved use area shall be protected by location and/or structure from contact with recycled water spray, mist, or runoff. Protection shall be by design, construction practice, or system operation.
16. Facilities that may be used by the public, including but not limited to eating surfaces and playground equipment and located within the approved use areas, shall be protected to the maximum extent possible by siting and/or structure from contact by irrigation with recycled water spray, mist, or runoff. Protection shall be by design, construction practice or system operation.
17. Spray irrigation with recycled water, other than disinfected tertiary recycled water, shall not take place within 100 feet of the property line of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.
18. All use areas where recycled water is used and that are accessible to the public shall be posted with conspicuous signs, in a size no less than 4 inches by 8 inches, that include the following wording in a size no less than 4 inches high by 8 inches wide: "RECYCLED WATER - DO NOT DRINK". The sign(s) shall be of a size easily readable by the public.

³ Disinfected secondary-2.2 recycled water is defined in California Code of Regulations, Title 22, Chapter 3, section 60301.220

⁴ Disinfected secondary-23 recycled water is defined in California Code of Regulations, Title 22, Chapter 3, section 60301.225

19. No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
20. The recycled water piping system shall not include any hose bibs. Quick couplers that are different from that used on the potable water system may be used.
21. The public water supply shall not be used as a backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of sections 7602(a) and 7603(a) of California Code of Regulations (CCR), Title 17 and the approval of the public water system has been obtained. If a "Swivel-ell" type connection is used it must be used in accordance with the provisions of the CDPH Policy Memo 95-004. Approved backflow prevention devices shall be provided, installed, tested, and maintained by the recycled water user in accordance with the applicable provisions of CCR Title 17, Division 1, Chapter 5, Group 4, Article 2.
22. No person other than the USMC shall deliver recycled water to a facility. Connection to the irrigation system by an individual residence is prohibited.
23. All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with Chapter 7.9, section 4049.54 of the California Health and Safety Code.
24. Reuse site shut down tests and inspections shall be monitored by the CDPH.
25. Customer complaints concerning recycled water use that may involve public illness shall be reported to the County DEH, the CDPH, and to the District who shall maintain a log of all customer complaints regarding recycled water.
26. Any backflow prevention device installed to protect the public water system shall be inspected and maintained in accordance with section 7605 of CCR Title 17.
27. The nutrient loading from application of recycled water and fertilizers shall not exceed the nutrient demand of landscape vegetation.

B. Rules and Regulations for Transfer and Distribution of Recycled Water From Vehicle Fill Stations or Use of Recycled Water for Construction Purposes

The USMC must comply with the following requirements, unless the CDPH and/or the County DEH determine that alternative criteria provide equivalent or better protection of public health and the environment:

1. Each vehicle shall have two risers, one for potable and one for recycled water. An air gap separation between the riser outlet and water tank shall be provided.
2. The risers, hoses and fittings for each supply shall be color coded (painted), blue for potable and purple for recycled water.
3. The hoses, hydrants and risers for each supply shall have separate and unique fittings (e.g., 2-1/2 inch diameter on the potable system and 2 inch diameter on the recycled water system) such that the potable system cannot accidentally be used on the recycled system and vice versa.
4. All vehicles used in transporting recycled water must be clearly marked with typical signage that reads: "CAUTION: RECYCLED WATER - DO NOT DRINK" in English and Spanish. The USMC shall conduct annual inspections of the trucks to assure that all requirements in this Order are being met and that recycled water is being used in compliance with the requirements of this Order.
5. Each vehicle shall be completely cleaned and disinfected prior to delivery of potable water for human consumption.
6. Each customer must assign a Recycled Water Site Supervisor that will receive training prior to receiving a permit.
7. The Recycled Water Site Supervisor will be responsible for ensuring that all employees working with recycled water are trained on its proper use and that adequate signage is maintained to make employees aware that recycled water is being used.
8. Records of training should be maintained by the recycled water purveyor.
9. Vehicles used for transportation or distribution of recycled water, or for street sweeping must be equipped with an air gap to ensure backflow protection.
10. Vehicles used for transportation and distribution of recycled water must have water-tight valves and fittings, and must not leak.
11. The Recycled Water Use Permit must be available for inspection at all times.
12. Truck drivers should be equipped with an adequate first aid kit. Cuts or abrasions should be promptly washed, disinfected, and bandaged.

13. Recycled water must not be introduced into any potable water piping system and no connection shall be made between the tank and any part of a potable water system.
14. Recycled water shall not be applied where it could spray on external drinking water fountains, passing vehicles, buildings, or areas where food is handled or eaten.
15. Recycled water users should wash their hands with soap and potable water or apply hand sanitizer after working with recycled water, especially before eating or smoking.
16. Precautions should be taken to avoid food coming in contact with recycled water while the use site is wet.
17. Obtain recycled water from an approved recycled water filling station or from a potable source. When the vehicle is filled from a potable water source, a water agency or municipality provided meter or other acceptable tracking system must be used. There must also be a reduced pressure principle backflow device protecting the potable system or the vehicle must be equipped with two risers, one for potable water and one for recycled water.
18. Vehicles used to transport recycled water shall not be used to carry water for potable purposes, regardless of the source water. The use of recycled water for construction shall comply with the appropriate local or county storm water ordinance. Typical compliance measures include preventing overspray, ponding, or runoff of recycled water from the use area.