



# California Regional Water Quality Control Board

## San Diego Region



Linda S. Adams  
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Item No. 7  
Supporting Document No. 9b

October 1, 2008

**CERTIFIED MAIL – RETURN RECEIPT REQUESTED**  
7007 1490 0003 8753 5223

Mr. K.A. Khan  
Environmental Engineering Division  
AC/S Environmental Security  
U.S. Marine Corps Base  
P.O. Box 555008  
Camp Pendleton, CA 92055-5008

**SUBJECT: ENROLLMENT UNDER CONDITIONAL WAIVER NO. 7- DISCHARGES OF RECYCLED WATER TO LAND**

**FACILITY: SOUTHERN REGION TERTIARY TREATMENT PLANT, UNITED STATES MARINE CORPS, CAMP PENDLETON, CALIFORNIA; PROPOSED DISCHARGE TO MARINE MEMORIAL GOLF COURSE, HORSE PASTURE, AND MAINSIDE PARADE GROUNDS.**

The California Regional Water Quality Control Board, San Diego Region (Regional Board) received your request, dated August 6, 2008, to enroll proposed discharges of recycled water (tertiary treated wastewater) to land under Conditional Waiver of Waste Discharge Requirements (WDRs) No. 7. The recycled water is produced at the Southern Regional Tertiary Treatment Plant (SRTTP). The proposed discharge will irrigate several areas located within the U.S. Marine Corps (USMC) Base at Camp Pendleton. Enrollment under Conditional Waiver No. 7 will allow the USMC to commence discharging recycled water for irrigation uses for a limited time period until the Regional Board adopts Waste Discharge Requirements for this project, or May 20, 2009, whichever occurs first. The request for enrollment was supported by:

- 1.) a Report of Waste Discharge (ROWD), dated February 14, 2008, including the *Engineering Report for the Production, Distribution and Use of Recycled/Reused Water*, and
- 2.) supplemental conditions for the proposed discharge provided by the California Department of Public Health (CDPH) in their letters dated September 15, 2008 and September 17, 2008.

Based upon the information referenced above, your project is eligible for enrollment under Conditional Waiver No. 7, "Discharges of Recycled Water to Land" for the discharges of recycled water for irrigation uses listed in Table 1.

*California Environmental Protection Agency*

**TABLE 1 ELIGIBLE RECYCLED WATER DISCHARGES**

<b>Irrigation Site</b>	<b>Area (acre)</b>	<b>Latitude (approximate)</b>	<b>Longitude (approximate)</b>	<b>Delivery Rate Design (acre-feet/yr)</b>
Marine Memorial Golf Course	180	33°15'53" N	117°22'26" W	963
Horse Pasture	142	33°17'15" N	117°18'24" W	517
Mainside Parade Grounds	18	33°18'18" N	117°18'36" W	66

The proposed discharges of recycled water for irrigation uses at Camp Pendleton are not expected to adversely affect the quality or beneficial uses of underlying groundwater in the San Luis Rey River watershed. The potential affects upon water quality in the Santa Margarita River watershed are unknown; therefore the proposed discharge in the Front Gate area<sup>1</sup> is prohibited.

The USMC must ensure that the eligible discharges (Table 1) comply with the enclosed General Waiver Conditions for Recycled Water Projects (7.I.A) and Specific Waiver Conditions for Permanent Recycled Water Projects (7.II.B), and any conditions required in the applicable letters from the CDPH (dated September 15 and 17, 2008). The USMC shall also continue to comply with the reporting requirements of the Monitoring and Reporting Program for Order No. 2000-45.<sup>2</sup> As certified by the USMC in its ROWD and *Engineering Report* for this project, the discharge of effluent from the SRTTP under Conditional Waiver No. 7 shall meet federal requirements for treated municipal wastewater and applicable state requirements (CCR Title 22) for tertiary treated wastewater.

The Regional Board hereby enrolls the discharges identified in Table 1 (above) under Conditional Waiver No. 7. The enrollment is effective until the Regional Board adopts tentative Order No. R9-2008-0089,<sup>3</sup> or May 20, 2009, whichever occurs first.

<sup>1</sup> The ROWD identifies the Santa Margarita River watershed discharge location as the "Front Gate recreational fields" located at latitude 33°13'36" N and longitude 117°23'27" W covering 34 acres with a delivery rate at 124 acre-feet/year

<sup>2</sup> Order No. 2000-45: WDR for USMC, Camp Pendleton, Plant No. 1 (Headquarters) and Plant No. 2 (San Luis Rey), Water Recycling Facilities, San Diego County currently specifies requirements for discharge of secondary treated effluent to the Marine Memorial Golf Course.

<sup>3</sup> Tentative Order No. R9-2008-0089: Master Reclamation Permit for Southern Region Tertiary Treatment Plant United States Marine Corps, Camp Pendleton San Diego County

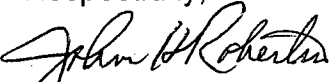
US Marine Corps  
Southern Region Tertiary Treatment Plant  
Enrollment: Conditional Waiver No. 7

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October 1, 2008  
WDID 9000001834

If you have any questions, please contact Mr. Robert Pierce at (858) 627-3935 or at RPierce@waterboards.ca.gov.

Respectfully,

  
JOHN H. ROBERTUS  
Executive Officer

JHR:jac:jro:rep

Enclosure: Conditional Waiver No. 7 Discharges of Recycled Water to Land

CIWQS:

Regulatory Measure ID	335881
Place ID	638334 726535 726536 726537

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## Conditional Waiver No. 7 – Discharges of Recycled Water to Land

Conditional Waiver No. 7 is for discharges of recycled water to land. Discharges of recycled water may contain pollutants that can adversely affect the quality of waters of the state. The application of recycled water to land may result in pollutants being concentrated in soils, which may adversely impact the quality of the waters of the state when those concentrated pollutants are leached out during rainfall events and/or overuse of irrigation water. This waiver would not be available or applicable to recycled water projects and users subject to rules and regulations established by master reclamation permits (MRPs), issued pursuant to Water Code section 13523.1, or otherwise regulated under waste discharge requirements (WDRs) or water reclamation requirements (WRRs), issued pursuant to Water Code sections 13260 and 13523, respectively.

The following types of discharge not regulated or authorized under WDRs, WRRs, and/or MRP may be eligible for Conditional Waiver No. 7:

- Discharges to land from short-term recycled water projects (without permanent recycled water delivery and/or distribution systems, not to exceed 365 days)
- Discharges to land from permanent recycled water projects (with permanent recycled water delivery and/or distribution systems, limited to the period prior to the discharge being authorized and regulated under WDRs, WRRs, and/or MRP, not to exceed 365 days)

Discharges from these types of projects have similar properties, threat to water quality, and waiver conditions. Therefore, these types of discharge were grouped together into one discharge classification. Recycled water projects that comply with the waiver conditions are not expected to pose a threat to the quality of waters of the state.

Recycled water may only include sources that contain domestic waste, whole or in part.<sup>1</sup> Domestic wastewater reclamation is subject to the requirements of Water Code Articles 1 through 7 (commencing with section 13500) of Chapter 7, and the use of recycled water must not degrade water quality.<sup>2</sup> Recycled water cannot be discharged without authorization under WDRs, WRRs, or a MRP,<sup>3</sup> unless issued a waiver. A conditional waiver is not available or applicable to recycled water discharges authorized and regulated under WDRs, WRRs, and/or a MRP.

The California Department of Public Health (CDPH), formerly known as the California Department of Health Services, established statewide wastewater reclamation criteria for each type of recycled water use to protect public health.<sup>4</sup> Depending on the planned

<sup>1</sup> California Code of Regulations Title 22 section 60302

<sup>2</sup> Water Code section 13550(a)(4)

<sup>3</sup> Water Code section 13529.2(b)

<sup>4</sup> California Code of Regulations Title 22, Division 4, Chapter 3, Articles 1 through 10

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use of the recycled water, the domestic wastewater must be treated to one of the following minimum standards:

- Undisinfected Secondary Recycled Water<sup>5</sup>
- Disinfected Secondary-23 Recycled Water<sup>6</sup>
- Disinfected Secondary-2.2 Recycled Water<sup>7</sup>
- Disinfected Tertiary Recycled Water<sup>8</sup>

Domestic wastewater that is treated to CDPH secondary recycled water standards contains more pollutants than domestic wastewater that is treated to CDPH tertiary recycled water standards. Domestic wastewater treated to CDPH secondary recycled water standards does not require filtering and will have higher concentrations of nutrients, suspended and dissolved solids, and possibly metals compared to domestic wastewater treated to CDPH tertiary recycled water standards. CDPH domestic wastewater reclamation criteria also require disinfection for most recycled water uses. However, for those uses that do not require disinfection, bacteria may be present in relatively high concentrations.

The different CDPH recycled water standards only include standards for bacteria to be protective of human health, not water quality. Pollutants that are typically present in domestic wastewater that can potentially have an adverse effect on receiving water

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<sup>5</sup> Defined in California Code of Regulations Title 22 section 60301.900 as "oxidized wastewater" or "wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen."

<sup>6</sup> Defined in California Code of Regulations Title 22 section 60301.225 as wastewater "that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a most probable number (MPN) of 23 per 100 milliliters utilizing 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 of 240 per 100 milliliters in more than one sample in any 30 day period."

<sup>7</sup> Defined in California Code of Regulations Title 22 section 60301.220 as wastewater "that has been oxidized and disinfected so that the median concentration of total coliform bacteria in the disinfected effluent does not exceed a MPN of 2.2 per 100 milliliters utilizing 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 of 23 per 100 milliliters in more than one sample in any 30 day period."

<sup>8</sup> Defined in California Code of Regulations Title 22 section 60301.230 as "a filtered and subsequently disinfected wastewater that meets the following criteria: (a) The filtered wastewater has been disinfected by either: (1) A chlorine disinfection process following filtration that provides a CT (the product of total chlorine residual and modal contact time measured at the same point) 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; or (2) 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; (b) The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 milliliters utilizing 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 of 23 per 100 milliliters in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 milliliters."

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quality include suspended and dissolved solids and nutrients, among others. Therefore, the discharge of recycled water to land can potentially contain bacteria, nutrients, dissolved and suspended solids, and other pollutants.

Recycled water is suitable for a direct beneficial use or a controlled use that would otherwise not occur. However, the pollutants remaining in the recycled water, and recycled water that comes into contact with pollutants and transports those pollutants in surface runoff or leaches those pollutants into the soil and groundwater, can potentially have an adverse effect on the quality of waters of the state.

Recycled water that is discharged directly to surface water would be subject to federal National Pollutant Discharge Elimination System (NPDES) regulations. Recycled water indirectly discharged to surface waters, through surface runoff or overspray, may also be subject to NPDES regulations, but is subject to the water quality standards in the Basin Plan and the regulations of the Water Code. In either case, discharges of recycled water to surface waters could exceed and cause the receiving waters to exceed the water quality objectives in the Basin Plan and would require regulation under WDRs.

Excessive use of recycled water discharged to land can result in a significant amount of infiltration and leaching of pollutants to underlying groundwaters. Over time, recycled water that percolates to groundwater can potentially have an adverse effect on water quality. The San Diego Water Board may not deny issuance of WRRs to a project that only violates a salinity standard in the Basin Plan.<sup>9</sup> However, discharges that are eligible for a conditional waiver are not expected to adversely affect or pose a threat to water quality. With proper planning, management, and application, the potential threat to groundwater quality from discharges of recycled water to land can be minimized or eliminated. Therefore, waiver conditions must require proper planning, management, and application of recycled water discharged to land to minimize or eliminate the discharge of pollutants to waters of the state.

Waiver conditions should be developed in order for members of the public, cities, counties, local agencies and organizations, and/or the San Diego Water Board to determine if any discharges of recycled water to lands pose a threat to the quality of the waters of the state. If recycled water dischargers are not in compliance with waiver conditions, they can be issued a Notice of Violation and required to correct deficiencies in order to be eligible for Conditional Waiver No. 7. If recycled water dischargers violate any waiver conditions, the San Diego Water Board has the option to terminate the conditional waiver for the discharge and begin regulating the discharge with individual WDRs and/or take other enforcement actions.

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<sup>9</sup> Water Code section 13523.5

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In order to be eligible for Conditional Waiver No. 7, discharges must comply with certain conditions to be protective of water quality. The waiver conditions applicable to discharges of recycled water to land include the following:

- 7.I.A. General Waiver Conditions for Recycled Water Projects
- 7.II.A. Specific Waiver Conditions for Short-term Recycled Water Projects
- 7.II.B. Specific Waiver Conditions for Permanent Recycled Water Projects

Discharges of recycled water to land that comply with the general and specific waiver conditions in Conditional Waiver No. 7 are not expected to pose a threat to the quality of waters of the state.

### **7.I.A. General Waiver Conditions for Recycled Water Projects**

1. Prevent all windblown spray and surface runoff of recycled water on to property not owned or controlled by the discharger by implementation of management measures (MMs) and/or best management practices (BMPs).
2. Recycled water discharged to land must not adversely affect the quality or beneficial uses of underlying groundwater.
3. The San Diego Water Board and/or other local regulatory agencies must be allowed reasonable access to the site in order to perform inspections and conduct monitoring.
4. The use of recycled water must comply with the requirements of California Code of Regulations Title 22 section 60310(a) through (j), unless sufficient information is provided to demonstrate that a proposed alternative is protective of water quality and human health.
5. Recycled water cannot be used for groundwater recharge unless sufficient information is provided to demonstrate that it will be protective of water quality and human health.

### **7.II.A. Specific Waiver Conditions for Short-term Recycled Water Projects**

1. The operator of a short-term project proposing to discharge recycled water must file a Notice of Intent containing information about the operator, location of the project, source of the recycled water, planned period of and frequency of discharge of recycled water, and the MMs/BMPs or other measures that will be taken to eliminate or minimize the discharge of pollutants that might affect surface water and groundwater quality.
2. The Notice of Intent must include a letter from the permitted recycled water agency supplying the recycled water stating that the project will comply with recycled water regulations in California Code of Regulations Title 22, Division 4, Chapter 3, Articles 1 through 10. The letter shall also specify any monitoring and/or reporting required by the recycled water agency to demonstrate compliance with California Code of Regulations Title 22, Division 4, Chapter 3, Reclamation Criteria, Articles 2, 3, 4, 5, and 5.1.

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3. Sufficient information demonstrating that the operator will comply with waiver conditions and applicable recycled water regulations must be submitted before the discharge may begin.
4. The Notice of Intent is valid for 365 days after the submittal of a complete Notice of Intent. A new Notice of Intent must be filed with the San Diego Water Board if the short-term project will exceed 365 days. A new Notice of Intent must be received by the San Diego Water Board at least 60 days prior to the expiration of the previous Notice of Intent. If no new Notice of Intent is received 60 days prior to the expiration of the previous Notice of Intent, the short-term recycled water project must cease operation 365 days after a complete Notice of Intent has been submitted.

## **7.II.B. Specific Waiver Conditions for Permanent Recycled Water Projects**

1. A recycled water agency proposing to supply and/or distribute recycled water through permanently installed facilities or structures before receiving WDRs must file a Report of Waste Discharge (RoWD) pursuant to Water Code sections 13260 and 13522.5 containing the following:
  - a) Sufficient information for the San Diego Water Board to determine that the project will be consistent with the Water Quality Control Plan for the San Diego Basin and any State Water Resources Control Board recycled water policies, and will comply with all applicable recycled water regulations.
  - b) A letter from the California Department of Public Health (CDPH) stating that the project will comply with recycled water regulations in California Code of Regulations Title 22, Division 4, Chapter 3, Articles 1 through 10. The letter shall also specify any provisions, monitoring, and/or reporting required by the CDPH to demonstrate compliance with California Code of Regulations Title 22, Division 4, Chapter 3, Reclamation Criteria, Articles 2, 3, 4, 5, and 5.1.
  - c) A list of recycled water end users that will be regulated by the recycled water agency, and the proposed monitoring and reporting program the recycled water agency will implement to demonstrate that the end users are complying with the waiver conditions and applicable recycled water regulations.
2. The recycled water agency must submit sufficient information demonstrating that the recycled water agency and its end users will comply with waiver conditions and applicable recycled water regulations before the discharge may begin.
3. The conditional waiver issued to the recycled water agency is valid for 365 days after a completed RoWD has been submitted, or until WDRs are adopted for the project, whichever occurs first. The San Diego Water Board will adopt WDRs at the earliest possible opportunity. If the WDRs cannot be adopted within 365 days after the completed RoWD has been submitted, the recycled water agency must request an extension of the conditional waiver at least 60 days prior to the expiration of the previous conditional waiver. If no



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request for an extension is received 60 days prior to the expiration of the previous conditional waiver, the permanent recycled water project must cease the discharge of recycled water 365 days after the completed RoWD was submitted.

4. If a recycled water agency that obtains a waiver in accordance with the waiver conditions in 7.II.B proposes to significantly add to or modify the treatment process (e.g., change the disinfection or filtration processes), then the discharger shall submit a new RoWD containing the information listed in 7.II.B.1 above.