

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401-7906**

ORDER NO. R3-2008-0042

**MASTER RECLAMATION PERMIT
FOR
THE CITY OF SOLEDAD
WATER RECYCLING FACILITY
MONTEREY COUNTY**

(Waste Discharger Identification No. 3 270113001)

The California Regional Water Quality Control Board, Central Coast Region (hereafter "Water Board"), finds:

IMPORTANCE OF RECYCLED WATER

1. California Water Code Section 13510 states that the people of the state have a primary interest in the development of facilities to recycle water containing waste to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the state.
2. California Water Code Section 13512 states that it is the intention of the legislature that the State undertake all possible steps to encourage development of water recycling facilities so that recycled water may be made available to help meet the growing water demands of the State.

FACILITY INFORMATION

3. The City of Soledad (hereafter "Discharger," "Supplier," "Distributor," or "Supplier and Distributor") provides wastewater collection, treatment, and disposal services for City customers, including two California Department of Corrections prison facilities.
4. Wastewater treatment and disposal occurs at two distinct locations; the "City Plant" and the "Prison Plant," as described by Attachment "A."
 - a. The City Owns and operates the City Plant.
 - b. The City Leases and operates Prison Plant, but is pursuing ownership.
5. On December 21, 2007, the City submitted a *Report of Waste Discharge* as an application for a Master Reclamation Permit. The *Report of Waste Discharge* proposes wastewater service improvements that will provide for water recycling. Specifically, the City proposes the following:
 - a. Upgrade the City Plant from a 3.0 MGD oxidation pond system to a 5.5 MGD activated sludge system with tertiary filtration and disinfection.
 - b. Connect the City Plant to the Prison Plant via a 5-mile transmission/distribution pipeline.
 - c. Construct a 2.6 MGD "Scalping Plant" near the City's *Miravale III* expansion area to provide recycled water to that area and to provide additional disposal.

- d. Maintain existing disposal capacities at the City Plant (4.3 MGD) and the Prison Plant (1.2 MGD).

INTENT OF THIS ORDER

6. California Water Code Section 13523.1 provides that a Water Board may issue a master reclamation permit to a supplier or distributor, or both, of reclaimed water.
7. This Order is intended to serve as a master reclamation permit that is consistent with California Water Code Section 13523.1.
8. This Order is intended to supersede Order No. R3-2005-0074, adopted by the Water Board on May 13, 2005.

BASIN PLAN

9. The Water Quality Control Plan, Central Coast Basin (Basin Plan) was adopted by the Water Board on November 19, 1989, and approved by the State Water Resources Control Board (State Water Board) on August 16, 1990. The Water Board approved amendments to the Basin Plan on February 11, 1994, and September 8, 1994. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the Basin Plan.
10. The Basin Plan designates the existing and anticipated beneficial uses of groundwater in the vicinity of the land disposal discharge to include:
 - a. Municipal and Domestic Water Supply;
 - b. Agricultural Water Supply
 - c. Industrial Process Supply; and,
 - d. Industrial Service Supply.
11. The Salinas River is the closest surface water body to the Facility and reuse areas. The Basin Plan designates existing and anticipated beneficial uses of the Salinas River along the reach adjacent to the Facility and reuse areas (Chualar to Nacimiento River) that could be affected by the discharge to include:
 - a. Municipal and Domestic Supply;
 - b. Agricultural Water Supply;
 - c. Industrial Process Supply;
 - d. Industrial Service Supply;
 - e. Groundwater Recharge;
 - f. Water Contact Recreation;
 - g. Non-Contact Water Recreation;
 - h. Wildlife Habitat;
 - i. Cold Freshwater Habitat;
 - j. Warm Freshwater Habitat;
 - k. Migration of Aquatic Organisms;
 - l. Spawning, Reproduction, and/or Early Development
 - m. Rare, Threatened, or Endangered Species
 - n. Commercial and Sport Fishing.
12. This master reclamation permit implements the Basin Plan's water quality objectives.

ANTI-DEGRADATION

13. Antidegradation: State Water Board Resolution No. 68-16 *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (Resolution No. 68-16) requires Regional Water Boards, in regulating the discharge of waste, to maintain high quality waters of the State until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in a Regional Water Board's policies (e.g., quality that exceeds applicable water quality standards). Resolution No. 68-16 also states, in part:

Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in best practicable treatment and control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

The discharges regulated by this Order are subject to waste discharge requirements that will result in best practicable treatment or control, the prevention of pollution and nuisance, and maintenance of the highest water quality consistent with maximum benefit to the people of the State.

TMDL

14. The Salinas River and several of its tributaries are on the Clean Water Act Section 303(d) list as impaired due to elevated concentrations of nutrients and pathogens. Waste load and load allocations will be developed for sources of nutrients and pathogens in the Salinas River, as well as other water bodies within the Salinas River watershed. If the Water Board determines that discharges from the Facility are causing or contributing to nutrient or fecal coliform related water quality impairment, waste discharges described in this Order may be modified to meet the allocations described in proposed future TMDLs.

STORMWATER

15. Stormwater runoff from the Discharger's treatment, disposal, and reuse areas is regulated under separate order.

COLLECTION SYSTEM

16. The Discharger's collection system is regulated under separate order, the *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, Order No. 2006-0003 (General Order).

ENVIRONMENTAL REVIEW

17. On September 21, 2005, the City of Soledad certified a final Environmental Impact Report in accordance with the California Environmental Quality Act (Public Resources Code, Section 621000 et seq.) and the California Code of Regulations. The City of Soledad has determined there are no significant adverse environmental effects or that all potentially significant adverse effects can be avoided through implementation of mitigation measures. Mitigation measures to prevent nuisance and ensure protection of beneficial uses of surface water and groundwater will be implemented through this order.

GENERAL FINDINGS

18. No discharge of waste to waters of the state creates a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights. A permit is conditional upon the discharge complying with provisions of Division 7 of the California Water Code and of the Clean Water Act (as amended or as supplemented by implementing guidelines and regulations) and requirements necessary to implement water quality control plans, protect beneficial uses, and prevent nuisance. Compliance with this Order should ensure that water quality is protected.
19. On April 17, 2008, the Water Board notified the Discharger and other interested parties of its intent to prescribe Supplier and Distributor master water reclamation requirements for the Facility and associated reuse areas, respectively. In addition, the Water Board provided the public with an opportunity for a public hearing and the opportunity to submit written comments.
20. The requirements of this Order conform with and implement the water reclamation criteria of the State Department of Public Health (Title 22) to protect the public health, safety, and welfare. The Water Board has consulted with, and received the recommendations from, the Department of Public Health regarding the regulation of this discharge.
21. The Water Board, at a public meeting held July 11, 2008, heard and considered all comments pertaining to the discharge and found this Order consistent with the above findings.
22. Any person affected by this action of the Water Board may petition the State Water Board to review the action in accordance with Section 13320 of the California Water Code and Title 23 of the California Code of Regulations, Section 2050 et seq. The State Water Board must receive the petition within 30 days of the date of this Order. Copies of the law and regulations applicable to filing petitions will be provided upon request.
23. Requirements specified in this Order are intended to ensure proper treatment and handling of recycled domestic wastewater for the protection of public health. In addition, recycled water treatment and storage requirements of this Order in conjunction with the requirements for the application of the recycled wastewater in designated reuse areas does not pose a significant threat to surface water or underlying groundwater resources.

IT IS HEREBY ORDERED, pursuant to authority in Sections 13263 and 13523.1 of the California Water Code, that the City of Soledad, its agents, successors, and assigns, may produce, store and distribute reclaimed wastewater provided it complies with the following:¹

Throughout these requirements footnotes are listed to indicate the source of requirements specified. Requirement footnotes are as follows (requirements without footnotes are BPJ unless otherwise noted). Numbered footnotes generally reference code sections for direct citations:

BPJ Best Professional Judgment of Regional Water Quality Control Board Staff

¹ General permit conditions, definitions and the method of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements," dated January 1984, included as part of this Order.

ROWD	The Discharger's Report of Waste Discharge
40CFR	Title 40 Code of Federal Regulations
BP	Central Coast Regional Water Quality Control Plan
DPH	California Department of Public Health
T22	Title 22 CCR, Division 4, Chapter 3, Water Reclamation Criteria
CWC	Porter-Cologne Water Quality Control Act (California Water Code)

The Supplier and Distributor shall comply with all Prohibitions, Specification, and Provisions as applicable, and shall ensure that indirect Users also comply with these requirements. The Supplier and Distributor shall comply with the specific Supplier Requirements and Distributor/User Requirements, respectively. The Distributor shall ensure that indirect Users also comply with applicable Distributor/User Requirements.

A. PROHIBITIONS

1. Discharge of treated wastewater to areas other than disposal areas, or areas of authorized storage and use, is prohibited.^{ROWD, BPJ}
2. Discharge of untreated or partially treated wastes; including overflows, bypasses, seepages, and spills; is prohibited.^{BPJ, PC}
3. The treatment, storage, distribution, or reuse of recycled water shall not create a nuisance as defined in section 13050(m) of the California Water Code.^{CWC}
4. No recycled water used for irrigation shall be applied during periods of rainfall or when soils are saturated such that runoff occurs.^{BPJ}
5. No recycled water shall be discharged from the treatment facilities, storage ponds, or other containment, other than for designated irrigation or other approved reuse applications in accordance with this Order.^{BPJ}
6. The incidental discharge of recycled water to waters of the State shall not unreasonably affect the beneficial uses of the water, and not result in an exceedance of an applicable water quality objective in the receiving water.^{2 BPJ}
7. There shall be no cross-connections between the potable water supply and pipes containing recycled water. Supplementing recycled water with water used for domestic supply shall not be allowed except through an air-gap separation. In accordance with California Code of Regulations (CCR) Title 17, Section 7604, a reduced pressure principle backflow device shall be provided at premises where recycled water is used and there is no interconnection with the potable water system.^{3, BPJ, T22}

B. SPECIFICATIONS

Flow and General Limitations

² February 24, 2004, SWRCB memorandum re: Incidental Runoff of Recycled Water.

³ This requirement does not apply to individual residences using recycled water for landscape irrigation as part of an approved dual plumbed use area as defined in CCR Title 17, Table 1 Section (c)(3).

1. Monthly average influent wastewater flow to the City Plant shall not exceed 5.5 MGD. ^{ROWD, BPJ}
2. Monthly average influent wastewater flow to the Scalping Plant shall not exceed 2.6 MGD. ^{ROWD, BPJ}
3. Monthly average treated wastewater flow to the City Plant percolation basins shall not exceed 4.3 MGD. ^{ROWD, BPJ}
4. Monthly average treated wastewater flow to the Prison Plant percolation basins shall not exceed 1.2 MGD. ^{ROWD, BPJ}
5. Through January 2010, the Facility effluent shall not exceed the following effluent limitations:

Effluent Limitations (mg/L)

Parameter	Daily Max	30-Day Mean
BOD ₅ ^a	30	--
Total Suspended Solids ^a	30	--
Ammonia, as N ^a	--	--
Nitrate as N ^a	--	--
Total Dissolved Solids ^b	--	990
Sodium ^b	--	175
Chloride ^b	--	250
Boron ^b	--	0.5
Sulfate ^b	--	205

Notes:

- a. As measured after disinfection and prior to the effluent storage basins
- b. As delivered concentrations measured in the second effluent storage pond

6. After January 2010, the Facility effluent shall not exceed the following effluent limitations:

Effluent Limitations (mg/L)

Parameter	Daily Max	30-Day Mean
BOD ₅ ^a	10	--
Total Suspended Solids ^a	10	--
Ammonia, as N ^a	5	--
Nitrate as N ^a	5	--
Total Dissolved Solids ^b	--	990
Sodium ^b	--	175
Chloride ^b	--	250
Boron ^b	--	0.5
Sulfate ^b	--	205

Notes:

- c. As measured after disinfection and prior to the effluent storage basins
- d. As delivered concentrations measured in the second effluent storage pond

7. The effluent pH shall not be less than 6.5 or greater than 8.4. ^{BP}

Disinfected Tertiary Recycled Water Limitations

8. The Supplier shall ensure that treated effluent put to use for disinfected tertiary recycled water applications shall be an adequately oxidized, filtered, and disinfected water, as defined in CCR Title 22, Division 4, Chapter 3, Sections 60301-60335, or alternatively defined and approved by State Department of Public Health (DPH).
9. The turbidity of the disinfected tertiary recycled water shall not exceed any of the following:^{4, 5, 6}
 - a. An average of 2 nephelometric turbidity units (NTU) within a 24-hour period;
 - b. 5 NTU more than 5 percent of the time within a 24-hour period; and
 - c. 10 NTU at any time.
10. Disinfected tertiary recycled water shall not contain total coliform concentrations exceeding the following limits:⁷
 - a. the seven-day median concentration must not exceed an MPN of 2.2/100 ml; and
 - b. concentrations must not exceed 23/100 ml in more than one sample taken over a 30-day range;
 - c. concentrations must be less than 240/100 ml at all times.
11. For chlorine-based disinfection, the chlorine residual within the disinfection process following filtration shall provide a CT value⁸ 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. Ultraviolet disinfection must maintain compliance with the Water Research Institute's (NWRI) "UV Disinfection Guidelines for Wastewater Reclamation in California."^{9, 10}

C. SUPPLIER AND DISTRIBUTOR REQUIREMENTS

1. Reclamation facilities shall be operated in conformance with the California Department of Public Health "Guidelines for Use of Reclaimed Wastewater for Irrigation and Impoundment," "Guidelines for Worker Protection at Reclamation Use Areas," the American Water Works Association, California-Nevada Section's *Guidelines for the Distribution of Non-potable Water*, and the Distributor's approved reclaimed water use rules and regulations (which may clarify and/or modify the above guidelines) and the appropriate local administrative procedures.

⁴ CCR Title 22, Div. 4, Chap.3, Section 60301.320

⁵ Pursuant to CCR Title 22, Div. 4, Chap.3, Section 60301.320(a) coagulation need not be used as part of the treatment process provided that the filter effluent turbidity does not exceed 2 NTU, the turbidity of the influent to the filters is continuously measured, the influent turbidity does not exceed 5 NTU for more than 15 minutes and never exceeds 10 NTU, and that 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.

⁶ Pursuant to CCR Title 22, Div. 4, Chap.3, Section 60301.320(b) for filtration via microfiltration, ultrafiltration, nonofiltration, or reverse osmosis the effluent turbidity shall not exceed 0.2 NTU more than 5 percent of the time within a 24-hour period, and 0.5 NTU at any time.

⁷ CCR Title 22, Div. 4, Chap.3, Section 60301.230

⁸ The product of total chlorine residual and modal contact time measured at the same point.

⁹ CCR Title 22, Div. 4, Chap.3, Section 60301.230(a)(1)

¹⁰ Or pursuant to CCR Title 22, Div. 4, Chap.3, Section 60301.230 (a)(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.

2. Personnel involved in producing, transporting, or using recycled water shall be informed of possible health hazards that may result from contact and use of recycled water. ^{T22, BPJ}
3. Personnel involved in inspecting, maintaining or operating any distribution system equipment for recycled water shall be informed of the possible health hazards that may result from contact and use of recycled water. ^{T22, BPJ}
4. Delivery of recycled water shall cease during any period the Facility fails to produce "disinfected tertiary recycled water" meeting CCR Title 22 criteria. The delivery of recycled water shall not be resumed until all conditions which caused the limits to be violated have been corrected and effluent in the storage ponds is suitable for disinfected tertiary recycled water applications. ^{BPJ}
5. All recycled effluent storage reservoirs and use areas with public access shall be posted (in English and Spanish) to warn the public recycled wastewater is being stored or used. ^{BPJ}
6. Recycled water systems shall be properly labeled and regularly inspected to ensure proper operation, absence of leaks, and absence of illegal connections. ^{BPJ, T22}
7. Recycled effluent storage ponds and wastewater ponds shall have sufficient freeboard, no less than two feet¹¹ (measured vertically, from the water surface up to the point on the surrounding berm or dike having the lowest elevation and not including engineered outlet structures), at all times and shall be designed and constructed to prevent overtopping as a result of windy storm conditions. To determine pond freeboard, the Discharger shall install and maintain permanent markers with calibration indicating the water level at design capacity and available operational freeboard ^{BPJ}
8. The Supplier and Distributor shall maintain in good working order and operate as efficiently as possible any facility or control system installed by the Supplier, Distributor or Users to achieve compliance with this Order and all applicable water reclamation requirements.
9. The Supplier and Distributor shall implement, and ensure that Users implement, annual employee training to ensure proper operation of reclamation facilities, worker protection, and compliance with this Order.
10. The Supplier and Distributor shall ensure that all above-ground equipment, including pumps, piping, storage reservoir, and valves, etc. under their respective control which may at any time contain reclaimed water shall be adequately and clearly identified with warning signs. The Supplier and Distributor shall make all necessary provisions to inform the public that the water being stored or distributed is reclaimed municipal wastewater and is unfit for human consumption. The Supplier and Distributor shall ensure that each User complies with these requirements for all above-ground equipment under a User's control.
11. The Facilities shall be managed so as to minimize mosquito-breeding habitat. ^{BPJ}

¹¹ Lesser freeboard, no less than one foot, is acceptable for below grade impoundments, and may be approved by the Executive Officer for above ground impoundments if documented by a registered civil engineer that structural integrity and required capacity will not be compromised with the proposed freeboard.

Alarms¹²

12. Alarm devices required for various unit processes as specified in other sections of these regulations shall be installed to provide warning of:
- Loss of power from the normal power supply.
 - Failure of a biological treatment process.
 - Failure of a disinfection process.
 - Failure of a coagulation process.
 - Failure of a filtration process.
 - Any other specific process failure for which warning is required by the regulatory agency.

All required alarm devices shall be independent of the normal power supply of the Facility.

13. The person to be warned shall be the plant operator, superintendent, or any other responsible person designated by the management of the reclamation plant and capable of taking prompt corrective action.
14. Individual alarm devices may be connected to a master alarm to sound at a location where it can be conveniently observed by the attendant. In case the reclamation plant is not attended full time, the alarm(s) shall be connected to sound at a police station, fire station or other full-time service unit with which arrangements have been made to alert the person in charge at times that the reclamation plant is unattended.

Power Supply¹³

15. The power supply shall be provided with one of the following reliability features:

- Alarm and standby power source.
- Alarm and automatically actuated short-term retention or disposal provisions as specified in Title 22 Section 60341.
- Automatically actuated long-term storage or disposal provisions as specified in Title 22 Section 60341.

Flexibility of Design¹⁴

16. The design of process piping, equipment arrangement, and unit structures in the reclamation plant must allow for efficiency and convenience in operation and maintenance and provide flexibility of operation to permit the highest possible degree of treatment to be obtained under varying circumstances.

Personnel¹⁵

17. Each reclamation plant shall be provided with a sufficient number of qualified personnel to operate the facility effectively so as to achieve the required level of treatment at all times.
18. Qualified personnel shall be those meeting requirements established pursuant to Chapter 9 (commencing with Section 13625) of the Water Code.

Maintenance¹⁶

¹² CCR Title 22, Div. 4, Chap. 3, Section 60335

¹³ CCR Title 22, Div. 4, Chap. 3, Section 60337

¹⁴ CCR Title 22, Div. 4, Chap. 3, Section 60333

¹⁵ CCR Title 22, Div. 4, Chap. 3, Section 60325

¹⁶ CCR Title 22, Div. 4, Chap. 3, Section 60327

19. A preventive maintenance program shall be provided at each reclamation plant to ensure that all equipment is kept in a reliable operating condition.

Operating Records and Reports¹⁷

20. Operating records shall be maintained at the reclamation plant or a central depository within the operating agency. These shall include: all analyses specified in the reclamation criteria; records of operational problems, plant and equipment breakdowns, and diversions to emergency storage or disposal; all corrective or preventive action taken.
21. Process or equipment failures triggering an alarm shall be recorded and maintained as a separate record file. The recorded information shall include the time and cause of failure and corrective action taken.
22. A monthly summary of operating records as specified in these requirements shall be filed monthly with the regulatory agency.¹⁸
23. Any discharge of untreated or partially treated wastewater to the use area, and the cessation of same, shall be reported immediately by telephone to Water Board staff, the State Department of Health, and the local health officer at the numbers provided in the Monitoring and Reporting Requirements.

Bypass¹⁹

24. There shall be no bypass of untreated or partially treated wastewater from the reclamation plant or any intermediate unit processes to the point of use.

Off-Specification Effluent Contingency Plan

25. In the event effluent discharged to the effluent storage ponds does not meet the criteria for disinfected tertiary recycled water, the Supplier shall implement the Off-Specification Contingency Plan.^{20, ROWD}
26. The Off-Specification Contingency Plan shall be reviewed and updated annually as necessary. A copy of the revised Off-Specification Contingency Plan or statement indicating the Plan has been reviewed, but not updated shall be submitted to the Water Board as part of the annual monitoring report.^{BPJ}
27. Alternative reuse methods for off-specification effluent may be implemented on an as needed basis if they meet the criteria for the "Uses of Recycled Water" contained in CCR Title 22, Division. 4, Chapter 3, Article 3 (Sections 60303-60309) and prior approval is given by the Water Board and DPH.^{BPJ}

Sludge and Solid Waste

(Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment. Biosolids refers to sludge that has been

¹⁷ CCR Title 22, Div. 4, Chap. 3, Section 60329

¹⁸ Per CCR Title 22 Div. 4, Chap. 3, Section 60301.740. "Regulatory agency" means the California Regional Water Quality Control Board(s) that have jurisdiction over the recycling plant and use areas.

¹⁹ CCR Title 22, Div. 4, Chap. 3, Section 60331

²⁰ August 2005, RMC, Proposed Pond #1 Monitoring Plan

treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agriculture, silviculture, horticulture, and land reclamation activities.)

28. Sludge and solid waste shall be removed from treatment facilities as needed to ensure optimal plant operation.
29. Treatment and storage of sludge shall be confined on-site and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations.
30. Any storage of residual sludge and solid waste shall be temporary and controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations.
31. Sludge and solid waste shall be disposed of in a manner approved by the Executive Officer and consistent with Title 27. Removal for further treatment, disposal, or reuse at sites (i.e., landfill, composting sites, soil amendment sites) operated in accordance with valid waste discharge requirements issued by a regional water quality control board will satisfy this specification.
32. Use of biosolids as a soil amendment shall comply with valid waste discharge requirements issued by a regional water quality control board. In most cases, this will mean the General Biosolids Order (SWRCB Water Quality Order No. 2004-0012-DWQ, General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities). For a biosolids use project to be covered by the General Biosolids Order, the Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project.
33. Use and disposal of biosolids should comply with the self-implementing federal regulations of Title 40, Code of Federal Regulations (CFR), Part 503, which are subject to enforcement by the U.S. Environmental Protection Agency not the Water Board. If during the life of this Order the State accepts primacy for implementation of 40 CFR 503, the Water Board may also initiate enforcement where appropriate.

General Requirements

34. Extraneous surface drainage shall be excluded from the wastewater treatment and effluent storage facilities. ^{BPJ}
35. Best management practices shall be implemented to minimize the inflow and infiltration of storm water and/or unauthorized wastewater into the Facility. ^{BPJ}
36. All storm water contacting raw domestic wastewater or disinfected tertiary recycled water shall be contained and managed as such. ^{BPJ}
37. The Supplier shall provide weekly irrigation reports to the Distributor and Users documenting Facility influent flows, User irrigation flows (including Facility irrigation flows reported separately), and the amount of recycled effluent in storage and remaining storage capacity. ^{BPJ}

D. USER REQUIREMENTS²¹

1. The application of disinfected tertiary recycled water is limited to the following areas pursuant to Title 22, Division 4, Chapter 3, Section 60304 of the California Code of Regulations:
 - a. Food crops, including all edible root crops, where the recycled water comes into contact with the edible portion of the crop,
 - b. Parks and playgrounds,
 - c. School yards,
 - d. Residential landscaping,
 - e. Unrestricted access golf courses,²² and
 - f. Any other irrigation use not specified in Section 60304 (Title 22) and not prohibited by other sections of the California Code of Regulations, or within these requirements.
2. The Supplier and Distributor may add additional use areas/Users for the application of disinfected tertiary treated wastewater as long as they meet all applicable requirements contained within this Order and the California Code of Regulations.
3. No irrigation with disinfected tertiary recycled water shall 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.
4. No impoundment of disinfected tertiary recycled water shall occur within 100 feet of any domestic water supply well.
5. Any use of recycled water shall comply with the following:
 - a. Any irrigation runoff shall be confined to the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the regulatory agency.
 - b. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.
6. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.
7. Spray irrigation of recycled water shall be accomplished at a time and in a manner to minimize ponding and the possibility of public contact with sprayed materials.^{BPJ}

²¹ CCR Title 22, Div. 4, Chap. 3, Section 60310

²² For golf course use, the scorecards must clearly state that reclaimed water is used for irrigation.^{BPJ}

8. No spray irrigation of any recycled water, other than disinfected tertiary recycled water, shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.
9. All use areas where recycled water is used 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 60310-A of CCR Title 22, Section 60310. The Department may accept alternative signage and wording, or an educational program, provided the applicant demonstrates to the Department that the alternative approach will assure an equivalent degree of public notification.
10. Except as allowed under section 7604 of title 17, California Code of Regulations, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water.
11. The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibs. 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.
12. The Distributor shall ensure that backflow prevention devices are in proper working order by testing initially and annually thereafter, in accordance with CCR Title 18, Section 7605. Reports of testing and maintenance shall be maintained by the Distributor.

Design Requirements

13. 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 sections 7602(a) and 7603(a) of title 17, California Code of Regulations, and the approval of the public water system has been obtained.²³
14. All pipes installed above or below the ground, on and after June 1, 1993, that are designed to carry recycled water, shall be colored purple or distinctively wrapped with purple tape.²⁴
15. The Distributor shall implement a Cross Connection Control Plan²⁵ to protect the public water supply system. The Cross Connection Plan shall be reviewed and updated annually as necessary. A copy of the revised Plan or statement indicating the Plan has been reviewed, but not updated shall be submitted to the Water Board as part of the Distributor's annual monitoring report.^{ROWD, BPJ}

Nutrient Management Plan

16. Hydraulic and nutrient loading rates for the application of disinfected tertiary recycled water shall be based on food crop, vegetation or landscaping consumption and tolerance and shall not exceed what is reasonable for production of the food crops, vegetation or landscaping (i.e., recycled water shall be applied in an amount that will not cause nitrogen within the root

²³ CCR Title 22, Div. 4, Chap. 3, Section 60315

²⁴ California Health & Safety Code Section 116815

²⁵ August 2005, RMC, Engineering Report for Production, Distribution, and use of Recycled Water, Appendix E – Las Palmas Ranch Cross Connection Control Plan

zone to exceed the agronomic demand for nitrogen and result in the leaching of nitrate to groundwater).^{BPJ}

17. The Supplier and Distributor shall prepare and implement a nutrient management plan for the application of recycled water to protect the beneficial uses of groundwater. The plan shall account for all nutrient loading to the application areas and ensure that the total amount of nitrogen applied does not exceed the amount of nitrogen required by the food crops, vegetation or landscaping being irrigated.
18. As part of the nutrient management plan, the Supplier and Distributor shall submit an annual report documenting allowable and actual nitrogen loading to the recycled water application areas. The report shall include, at a minimum:
 - a. Analysis of the contributing sources of nutrients being applied to the recycled water application areas;
 - b. Analysis of annual nitrogen loading to the basin and individual application areas from each contributing source;
 - c. Analysis of the allowable nutrient and hydraulic loading (based on limiting nitrogen loading) of recycled water based on characteristic effluent data for nitrogen, other contributing nitrogen sources, and the nutritive requirements of the application areas;
 - d. Comparison of the actual and allowable annual nitrogen loading rates;
 - e. Analysis of groundwater monitoring data for nitrogen constituents;
 - f. Evaluation of potential impacts of nutrient loading on the groundwater basin;
 - g. Evaluation of potential nutrient reduction measures; and,
 - h. Recommendations and time schedules for the implementation of measures addressing excessive nitrogen loading (i.e. actual loading greater than allowable loading) as applicable.
19. **Annual nutrient management reports are due January 31st of each year** and may be included as part of the annual monitoring report. **The first annual nutrient management plan report is due January 31, 2009.** The plan shall be reviewed and updated annually thereafter as necessary. A copy of the revised plan or statement indicating the plan has been reviewed, but not updated shall be submitted to the Water Board as part of the annual monitoring reports.
20. Additional annual nutrient management reports will not be required upon request by the Supplier and Distributor and approval by the Executive Officer given the following conditions are met:
 - a. The initial nitrogen loading evaluation indicates the application of recycled water at appropriate hydraulic rates along with other nitrogen sources will not exceed the nutritive requirements of the food crops, vegetation or landscaping being irrigated
 - b. Recycled water is not over applied in an effort to increase disposal that may result in significant soil flushing and runoff;
 - c. A nutrient management plan is implemented for the controlled application of fertilizers by landscaping contractors maintaining the application areas; and,
 - d. Effluent nitrogen concentrations from the Facility regularly meet or are less than the effluent limitations of this Order and are stable.

(Approval of this variance is contingent on reasonable and scientifically defensible assumptions being applied to the loading evaluation.)

21. Discharges that exceed the hydraulic loading rate based on the nutritive requirements of the receiving vegetation may be allowable on a case-by-case basis upon request by the Distributor and approval by the Executive Officer given the following conditions are met:
- a. The nitrogen loading evaluation indicates the land application of wastewater at appropriate hydraulic rates (based on soil permeability) will not exceed the nutritive requirements of the vegetation being irrigated by more than a total nitrogen concentration as determined by the following equation²⁶:

$$\Delta N = (\text{TOC} - 5) / 2$$

TOC = effluent Total Organic Carbon

- b. Wastewater is not over applied in an effort to increase disposal that may result in significant soil flushing and runoff;
- c. Effluent nitrogen concentrations from the Facility regularly meet or are less than the effluent limitations of this Order and are stable; and,
- d. The Discharger provides an assimilative capacity analysis and nitrogen balance showing that the additional nutrient loading to the groundwater basin will not cause or contribute to exceedances of water quality objectives for nitrate in groundwater

(Approval of this variance is contingent on reasonable and scientifically defensible assumptions being applied to the assimilative capacity analysis and nitrogen balance.)

Salts Management Program

22. The Supplier and Distributor shall implement a salts management program to document salt loading and evaluate and implement measures for the reduction of salt loading as the result of the application of recycled water. Salt reduction measures shall focus on all potential salt contributions from the water supply, and residential, commercial and industrial uses as applicable prior to disposal. The Supplier and Distributor shall evaluate limiting or prohibiting domestic water softeners and conditioners under California Health and Safety Code Section 116786 and shall adopt an ordinance under Section 116786 as appropriate and feasible to reduce salt loading from the domestic use of water softeners.
23. As part of the salts management program, the Supplier and Distributor shall submit an annual report documenting salt loading and salt reduction efforts. This report shall include, at a minimum:
- a. Analysis of annual salt (TDS, sodium, chloride, sulfate, and boron) loading to the basin and individual application areas;
 - b. Analysis of the contributing sources of salt mass in the recycled water (including the evaporative concentration of salts within the effluent storage ponds);
 - c. Analysis of groundwater monitoring data for salt constituents;
 - d. Evaluation of potential impacts of salt loading on the groundwater basin;
 - e. Evaluation of potential salt reduction measures including a water softener ordinance;
 - f. Summary of existing salt reduction measures and their impact; and,

²⁶ Maximum of nitrogen that can be effectively denitrified during rapid infiltration under optimum operating conditions; Metcalf and Eddy, Third Ed., 1991, page 972.

- g. Recommendations and time schedules for implementation of proposed salt reduction measures.

29. **Annual salts management reports are due January 31st of each year** and may be included as part of the annual monitoring report. **The first annual salts management report is due January 31, 2009.**

Groundwater Limitations

24. The discharge shall not cause the pH of underlying groundwater to exceed 8.3 or recede below 6.5.^{BP}
25. The use or disposal of treated wastewater shall not cause the median concentration of coliform organisms in groundwater over any seven-day period to be more than 2.2/100 ml.^{BP, BPJ}
26. The use or disposal of treated wastewater shall not cause a statistically significant increase of mineral or organic constituent concentrations in underlying groundwater, as determined by statistical analysis of samples collected from wells in the vicinity of the disposal area.^{BP, BPJ}
27. The use or disposal of treated wastewater shall not cause nitrate concentrations in affected groundwater to exceed 8 mg/l (as N) and shall not cause a statistically significant increase of nitrate concentrations in underlying groundwater.^{27, BPJ, BP}
28. The use or disposal of treated wastewater shall not cause groundwater to contain taste- or odor-producing substances in concentrations that adversely affect beneficial uses.^{BP}
29. To protect the *municipal and domestic supply* beneficial uses of groundwater underlying the use or disposal areas, the application of treated wastewater shall not cause groundwater to:^{BP, BPJ, T22}
- exceed the Primary Maximum Contaminant Levels for organic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5.5, Section 64444.
 - exceed the Primary Maximum Contaminant Levels for inorganic chemicals set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 4, Section 64431.
 - exceed the levels for radionuclides set forth in the California Code of Regulations, Title 22, Division 4, Chapter 15, Article 5, Section 64443.
30. The use or disposal of treated wastewater shall not cause radionuclides to be present in groundwater in concentrations that are deleterious to human, plant, animal, or aquatic life, or result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.^{BP}

Individual Recycled Water Use Permits

²⁷ The evaluation of this requirement will consider pre-existing conditions based on available characteristic groundwater quality data in the vicinity of the use areas.

30. The Supplier and Distributor shall enforce rules and regulations for recycled water users governing the design, construction and maintenance of recycled water use facilities and the use of recycled water, in accordance with the uniform statewide reclamation criteria established pursuant to California Water Code Section 13521.²⁸ The Supplier and Distributor shall also develop administrative procedures specifying how the recycled water rules and regulations and permit-based system for regulating users will be implemented. **The implementation procedures shall be submitted to the Department of Public Health and Central Coast Water Board by October 31, 2008, for review and approval.** The rules and regulations shall be reviewed and updated annually thereafter as necessary. A copy of the revised rules and regulations or statement indicating they have been reviewed, but not updated shall be submitted to the Water Board as part of the annual monitoring reports.
31. The Supplier and Distributor shall require each User to (i) designate a Reclaimed Water Site Supervisor responsible for compliance with permit conditions and answerable to the Supplier and Distributor²⁹, and (ii) immediately notify the Supplier and Distributor of changes in the Reclaimed Water Site Supervisor and provide documentation that the new supervisor has received training.
32. Recycled Water Use permits, issued by the Supplier and Distributor in accordance with the approved rules and regulations, form the basis of permitted recycled water use by specific Users. Recycled Water Use permits shall specify self-monitoring and reporting requirements for each User, and require compliance with all applicable requirements of this Order. The Distributor must provide a copy of the Recycled Water Use permit and this Order to the Users. Recycled Water Use permits shall require Users to have these available at all times for inspection by Water Board staff, the Distributor, or State/County Health Officers.
33. If someone other than the User is responsible for applying the recycled water (i.e. secondary distributor like a truck hauler) then the Supplier and Distributor shall inform the secondary distributor of these requirements in a written permit or other suitable manner. In addition, the secondary distributor shall fill out a Recycled Water Release Form when receiving reclaimed water from the Supplier and Distributor. The secondary distributors must carry the Recycled Water Release Form at all times.

E. PROVISIONS

1. This Order supersedes Order No. R3-2005-0074 for all uses specified by that Order. Order No. R3-2005-0074 is hereby rescinded.
2. The Supplier and Distributor shall comply with all applicable requirements of Monitoring and Reporting Program No. R3-2008-0042 as adopted by the Water Board and as may be amended by the Executive Officer. The Supplier and Distributor shall be responsible for collecting necessary data and reports from the Users. The Supplier and Distributor shall require Users to appoint and train a Reclaimed Water Supervisor and to submit on-site observation reports and use data to the Supplier and Distributor, who will compile and file self-monitoring reports with the Water Board. The Supplier and Distributor, at its discretion, may appoint and train the Users' Reclaimed Water Supervisors and collect on-site observation reports and use data.

²⁸ CWC Section 13523.1(b)(3)

²⁹ CCR Title 17, Division 1, Chapter 5, Group 4, Article 1, Section 7586

3. The Supplier and Distributor shall develop a groundwater monitoring plan capable of determining the impact of treated wastewater and recycled water upon underlying groundwaters. The Groundwater Monitoring Plan shall be submitted to the Department of Public Health and Water Board by October 31, 2008, for review and approval.
4. The Supplier shall be responsible for ensuring and documenting that reclaimed water meets the quality standards of this Order. The Distributor shall be responsible for regulating the design, construction, maintenance and operation of recycled water transport facilities, application areas and associated appurtenances owned and operated by the Users and for ensuring that Users meet all water application, operations and maintenance requirements of this Order. The Distributor shall conduct periodic inspections of User facilities and conduct monitoring and reporting to document compliance with the conditions of the Users' permits and this Order.
5. The Supplier, Distributor and Users shall permit the Water Board staff or its authorized representative in accordance with California Water code section 13267(c):
 - Entry upon premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of the Order,
 - Access to and copy of any records that must be kept under conditions of this Order,
 - Inspection of any facility, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order,
 - To photograph, sample, and monitor for the purpose of assuring compliance with this Order.
6. Prior to the initial delivery of recycled water to each use site, the Producer shall submit piping plans for that site to California Department of Public Health for approval.
7. For any extension or expansion of the recycled water system or use areas not covered by the Title 22 report, the Producer shall submit to California Department of Public Health an addendum to the Title 22 report for approval.
8. Upon Executive Officer approval, additional storage/percolation may be allowed at the scalping plant site.
9. The Supplier and Distributor shall comply with all applicable items of the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated January 1984. The Water Board will revise this Order periodically and may revise these requirements when necessary.
10. Pursuant to CCR Title 23, Division 3, Chapter 9, , the Discharger must submit a written report to the Executive Officer not later than January 31, 2018, addressing:
 - a. Whether there will be changes in the continuity, character, location, or volume of the discharge; and,
 - b. Whether, in their opinion, there is any portion of the Order that is incorrect, obsolete, or otherwise in need of revision.

I, **ROGER W. BRIGGS, Executive Officer**, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Coast Region, on July 11, 2008

Ordered By:

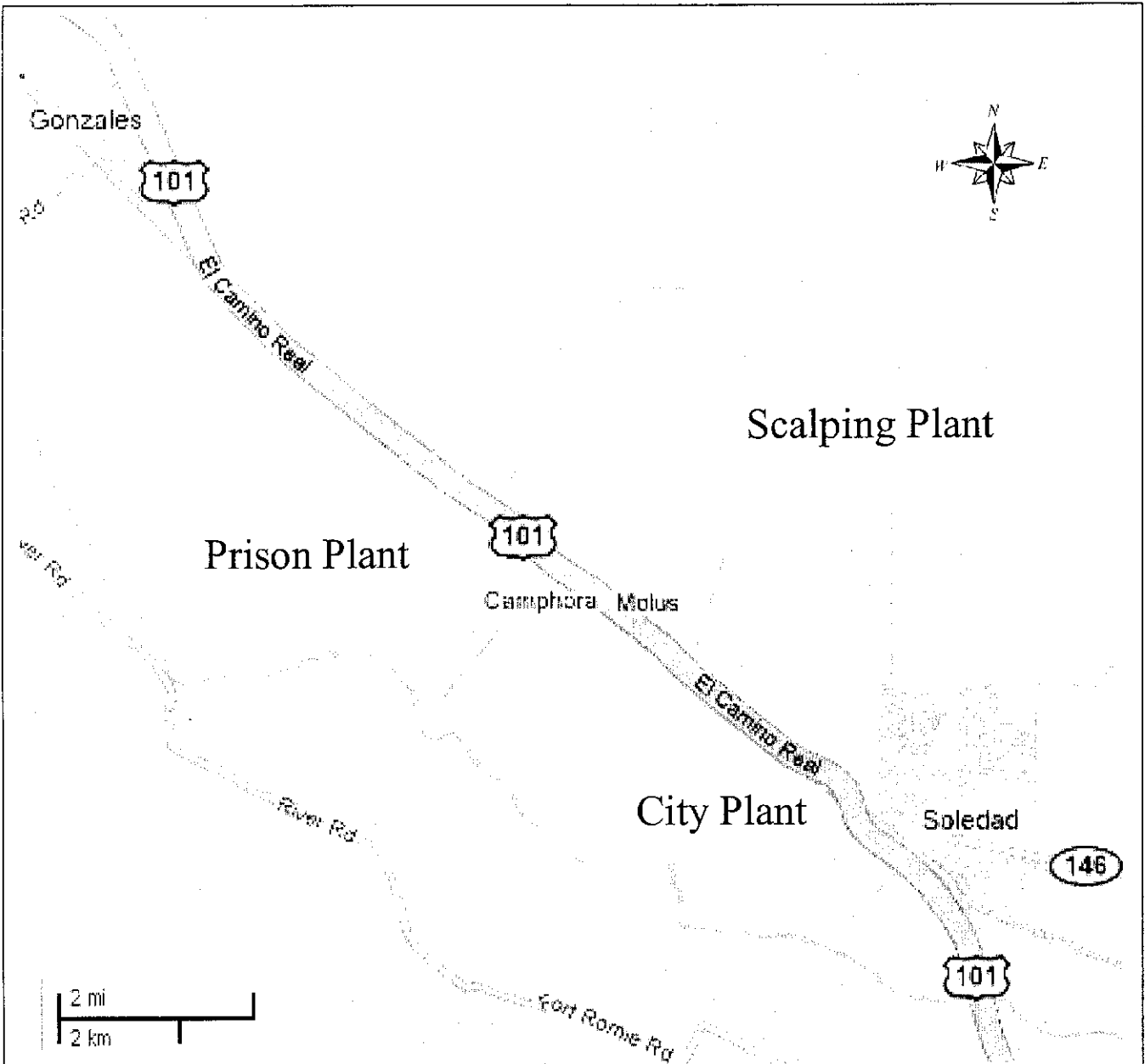
Executive Officer

TJK

126-01

Paper File: City of Soledad

Electronic File: S:\WDR\WDR Facilities\Monterey Co\City of Soledad WWTP\Reclamation Requirements\WRR.doc



Location Map
City of Soledad
Recycled Water Facilities
Monterey County, California

Attachment

A

