

**STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

**WASTE DISCHARGE REQUIREMENTS  
FOR  
CITY OF FILLMORE  
ORDER NO. R4-2006- 0049  
(Fillmore Wastewater Treatment Plant and  
Fillmore Wastewater Recycling Plant)  
(File No. 54-105)**

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

**BACKGROUND**

1. The City of Fillmore (hereinafter Discharger) owns a wastewater treatment plant commonly known as Fillmore Wastewater Treatment Plant (FWTP) located at "C" Street and River Street, in an incorporated area of Ventura County, California (Figure 1, Site Location Map). The FWTP is, and the new Fillmore wastewater recycling plant described herein will be, operated and maintained by an Operating Company under a contract with the City of Fillmore. The FWTP was originally constructed in 1956, and serves the community of the City of Fillmore, which has a population of approximately 15,000.
2. Municipal, domestic and commercial wastewater (including fruit washing) produced from the community of City of Fillmore is treated at the FWTP. The final treated wastewater effluent (effluent) is discharged to the ground through five percolation/evaporation ponds and/or to a subsurface percolation field regulated under Waste Discharge Requirements (WDRs) contained in Order No. 97-038, adopted by the Regional Board on April 7, 1997. When the ponds and subsurface percolation fields are unavailable to dispose of the effluent, the treated effluent is discharged into the Santa Clara River under separate requirements contained in National Pollutant Discharge Elimination System (NPDES) permit, (NPDES No. CA0059021) Order No. R4-2003-0136 adopted by the Regional Board on October 2, 2003.

**PURPOSE OF ORDER**

3. On April 27, 2005, the Discharger filed a Revised Report of Waste Discharge (ROWD) and applied to the Regional Board for revision of its WDRs for disposal and reuse of treated wastewater from a new wastewater treatment plant [which will be known as Fillmore wastewater recycling plant (FWRP)] to be constructed by the Discharger. The Discharger plans to have constructed and in operation the new FWRP by September 2009. The new FWRP capacity is expected to meet the demand for treatment and disposal of municipal wastewater from the forecasted 2025 population of the City of Fillmore. WDRs have been revised to reflect the current and future wastewater

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treatment process and to include additional findings, effluent limitations, prohibitions, and an expanded monitoring and reporting program.

4. The WDRs are issued pursuant to Chapter 9, Division 3, Title 23, California Code of Regulations (CCR) and therefore eligible for a section 20090(a) exemption from CCR Title 27. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, CCR, section 20005 et seq. (hereafter Title 27). The exemption, pursuant to section 20090(a) of Title 27, is based on the following factors; that the waste consists primarily of domestic sewage and treated effluent; that the waste discharge requirements are consistent with water quality objectives; and that the treatment and storage facilities described herein are associated with a municipal wastewater treatment facility.

#### **FACILITY AND TREATMENT PROCESS DESCRIPTION**

5. Municipal wastewater produced from the community of Fillmore has been collected and treated at the FWTP since 1956. The FWTP is a secondary wastewater treatment plant and currently has a design capacity of 1.3 million gallons per day (mgd) and a peak design flow of 2.2 mgd. Treatment at the FWTP consists of a bar screen, comminutor, grit chamber, primary clarifier, trickling filter, secondary clarifier and chlorination. The wastewater is treated prior to discharge to the five percolation/evaporation ponds (8.55 acres) in series and/or to a subsurface percolation and/or to the Santa Clara River. Waste sludge is treated through an onsite sludge digester, dewatered, and then moved to a concrete-lined sludge storage bed. Sludge is hauled offsite and disposed at a legal disposal facility on a periodic basis.
6. The percolation/evaporation ponds and subsurface percolation field are located in and around Section 36, Township 4N, Range 20W, San Bernardino Base & Meridian (See Figure 2. Facility Area Map and Figure 3. Monitoring Well/Subsurface Percolation Location Map). The FWTP's latitude is 34° 23' 35"; its longitude is 118° 55' 30". Ponds are located in the Pole Creek Fan Hydrologic Sub-area.
7. The Discharger owns and operates three municipal water supply wells (Wells 5, 7 and 8) that supply drinking water to the residences and businesses in and around the City of Fillmore (See Figure 4. City of Fillmore, Location of Water Reuse/Disposal Sites and Monitoring Wells). However, the groundwater has high hardness content. Many residents use self-regenerating water softeners to reduce the high hardness levels of the water produced from City wells. However, self-regenerating water softening systems using salts discharge the salty waste (brine) directly into the sewer system. The Discharger believes that eliminating the need for the home water softeners will reduce the concentration of the chloride entering the existing FWTP and future FWRP. Consequently, the Discharger has adopted Ordinance No. 04-777 (copy attached and incorporated herein by reference) which prohibits the prospective installation of self-regenerating water softeners discharging to the City sanitary sewer system or land within

the City of Fillmore pursuant to Health and Safety Code section 116786. The Ordinance will not appreciably reduce existing levels of chloride; it will only eliminate additional discharges. To improve water quality and reduce discharges of self-regenerating water softener brines, the Discharger is analyzing alternatives to construct a centralized well water treatment system. A membrane technology is currently an alternative being considered. The Discharger proposes to discharge the hardness waste generated from the centralized well water treatment softening system by commingling it with the effluent from the FWRP. The commingled wastewater mixture will be discharged only if it meets Basin Plan Water Quality Objectives and complies with the requirements of this Order. The Discharger will select an appropriate softening technology that can be the most cost effective treatment technology system and that complies with the requirements of this Order. The following table displays water quality of the municipal well water and the existing FWTP effluent.

Constituents	Units	Well 5 <sup>1</sup>	Well 7 <sup>1</sup>	Well 8 <sup>1</sup>	FWTP Effluent <sup>2</sup>
Total Hardness (as CaCo3)	milligrams per liter (mg/L)	504	385	371	--
Boron	mg/L	0.7	0.9	0.9	1.1
Chloride	mg/L	33	36	33	132
Sulfate	mg/L	261	263	260	584
Fluoride	mg/L	0.6	0.9	0.6	--
Nitrate	mg/L	6.9	2.3	2.3	1.25
Nitrite	mg/L	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	1.6
Ammonia	mg/L	NA <sup>3</sup>	NA <sup>3</sup>	NA <sup>3</sup>	26.5
Total Dissolved Solids	mg/L	660	645	650	1,286

1. Based on analyses performed from 1999 through March 2004
2. Based on analyses from January 2004 to March 2004
3. NA: Not Available

8. The FWRP will be constructed at a new location approximately 2,400 feet downstream (west) of the existing FWTP along "E" Street, south of State Route (SR) 126 (See Figures. 2 and 4). The FWRP will be designed for an average dry weather flow of 2.4 mgd and the peak day hydraulic design capacity of 6.0 mgd. The FWRP will include the following treatment processes and facilities:

- Influent Pump Station
- Head works
- Odor Control Facilities
- Membrane Bioreactor
- Disinfection (Ultra Violet Radiation or Sodium Hypochlorite)
- Sludge Thickening
- Digester
- Sludge Dewatering

Treated wastewater will be discharged to the subsurface drip and surface reuse and disposal areas in the community and the reconstructed wastewater percolation ponds at the existing FWTP area.

9. The Discharger is planning to discharge the effluent at the following locations (See Figures. 2 and 4):

<b>Disposal Type</b>	<b>Location</b>	<b>Acreage/Linear Feet (ft)</b>
Percolation	Existing FWTP site	3.3 acres
Emergency Percolation	C Street City Park	22 acres
Subsurface drip irrigation (SDI)	C Street City Park	12 acres
	Heritage Valley Park	32.8 acres (as 5 phases)
	River Walk Park	1.5 acres
	Existing FWTP site	3.5 acres
Levee SDI	Santa Clara Levee West of SR-23	1800 ft
	Santa Clara Levee West of Pole Creek	4300 ft
	Santa Clara Levee East of Pole Creek	6000 ft

The effluent will initially be discharged into reconstructed ponds at the existing FWTP pond site and distributed to subsurface driplines. In the event of an extreme flood event, such as a 100-year flood, the Discharger may use the C Street Park to be constructed as an unlined emergency storage facility for treated wastewater only.

The Discharger has also identified a number of areas including parks, schools, and public landscaped areas in City-approved residential and commercial development sites along the Santa Clara River and other public landscaped areas for future treated wastewater only reuse and disposal areas. The Discharger has identified also a portion of the new FWRP site to be utilized as an unlined emergency storage facility for treated wastewater only. The Discharger is currently developing a supplementary Environmental Impact Report for the following areas:

- Sespe Creek Levee Construction Mitigation Area
- Santa Clara River Levee Construction Mitigation Area
- Sespe Elementary School
- San Cayetano Elementary School
- Fillmore Middle School
- Fillmore High School
- Ball Fields
- Old Telegraph Road
- Business Park Green Belts
- E Street Water Recycling Plant Site

10. The FWRP will provide nitrification, de-nitrification, and tertiary treatment for collected wastewater prior to discharge to the percolation ponds and the subsurface drip irrigation

system. The FWRP will produce an effluent better than that produced by secondary treatment processes as required by the United States Environmental Protection Agency (USEPA) for publicly owned treatment works (POTWs) treating municipal wastewater. The Discharger indicated that the FWRP will be designed to produce the following anticipated effluent water quality (in the Draft Environmental Impact Report for the Fillmore Water Recycling Plant Volume 1, March 2005):

<u>Constituent</u>	<u>Units*</u>	<u>Concentration</u>
Biochemical Oxygen Demand (BOD <sub>5</sub> )	mg/L	10 or less
Total suspended solids (TSS)	mg/L	10 or less
Turbidity	NTU	2 or less
Oil and grease	mg/L	10 or less
Settleable Solids	mg/L	0.1 or less
Total Chlorine Residual	mg/L	0.0
Nitrite Nitrogen	mg/L	1 or less
Nitrate and Nitrite – N	mg/L	5.0 or less
Total dissolved solids	mg/L	2,000
Sulfate	mg/L	800 or less
Chloride	mg/L	155
Boron	mg/L	1.1
Fluoride	mg/L	1.5 or less
Coliform	MPN/100 mL	1.1 or less

\* mg/L: milligrams per liter NTU: nephelometric turbidity Unit MPN/mL: most probable number per milliliter

However, the anticipated effluent characteristics indicate that chloride and boron levels in treated effluent would exceed the water quality objective of 100 mg/L and 1 mg/L, respectively.

11. The FWTP sites and associated project components are located in the Santa Clara River Valley, directly north of the confluence of the Santa Clara River and east of Sespe Creek and south of SR 126. Depth to groundwater at the project site ranges from a depth of 10 to 11.5 feet below ground surface. Groundwater gradients generally appear to parallel the ground surface, gently sloping downward to the southwest. During wet years, groundwater may rise to within three to four feet of the ground surface (along C Street).
12. The Discharger is conducting a groundwater-monitoring program for the FWTP according to the requirements of WDR Order No. 97-038. Three groundwater monitoring wells (MW 1, 2 and 3) were constructed around the subsurface percolation field on February 24 and 25, 1994 (See Figure 3). MW 1 and 2 are downstream from the subsurface percolation field and MW-3 is upstream. However, there are no groundwater monitoring wells downgradient of the percolation ponds. The following table shows a comparison of the current groundwater monitoring data obtained from 2003 to 2004 and the data obtained during the initial groundwater assessment in 1994.

Constituents	Units	Range of Concentrations at downgradient wells (MW 1 and 2)		Groundwater Quality Objectives (Basin Plan)
		From 2003 to 2004	March 11, 1994 (initial monitoring)	
Nitrate-N	Mg/L	0.4 - 14	5.2 - 8.8	10 (including Nitrite-N)
Boron	Mg/L	0.5 - 1.2	0.8 - 0.9	1.0
TDS	Mg/L	1170 - 1520	1200 - 1300	2,000
Chloride	Mg/L	100 - 130	58 - 96	100

Based on the above data, constituents including chloride in groundwater have increased. Board staff considers that such elevated levels are substantially attributed to historic waste discharge into the subsurface percolation ponds.

**ENFORCEMENT**

13. With respect to compliance with NPDES No. CA0059021, the Discharger was issued a Notice of Violation (NOV) on May 4, 2001 for 54 violations of suspended solids, coliform, oil and grease, and chloride from April 1998 through December 2000. On July 23, 2001, the Discharger was issued a second NOV for additional effluent limit violations which occurred between December 2000 and May 2001. On October 3, 2004, the Discharger was issued a third NOV, which addressed effluent limit violations noted in prior NOVs, effluent limit violations which have occurred to date and reporting violations during the period October 2000 through October 2004. On June 3, 2004, the Regional Board Executive Officer (Executive Officer) issued Complaint No. R4-2004-0035 for the violations which occurred during the period November 2000 through July 2003. On September 1, 2005, the Regional Board assessed and adopted a mandatory minimum administrative civil liability penalty (\$264,000) imposed on the Discharger for the violations.
  
14. The Regional Board has required the Discharger to make the necessary modifications to the FWTP to bring it into compliance with NPDES No. CA0059021 (Order No. R4-2003-0136). However, despite some modifications to the FWTP, the Discharger has not been able to achieve full compliance with the requirements contained in Order No. R4-2003-0136. According to the Discharger's request, the Regional Board issued Time Schedule Order (TSO) No. R4-2003-0137 containing the following interim effluent limits on October 2, 2003:

Constituent	Units <sup>1</sup>	Monthly Average	Weekly Average
BOD	mg/L	45	65
TSS	mg/L	45	65
Turbidity	NTU	32	-- <sup>2</sup>
Ammonia nitrogen	mg/L	19	--
Nitrite-Nitrogen	mg/L	1.3	--
Chloride	mg/L	187	--

Methylene blue active substances (MBAS)	mg/L	0.7	--
Bis(2-ethylhexyl)phthalate	µg/L	8.6	--

1. µg/L: micrograms per liter
2. -- : no weekly average limits

Currently, the Discharger is operating the FWTP under the interim effluent limits prescribed in TSO No. R4-2003-0137.

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

15. On June 13, 1994, the Regional Board adopted a revised *Water Quality Control Plan for Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan). Subsequently, amendments to the Basin Plan have been adopted by the Regional Board in 1997 (Resolution No. 97-02); 1998 (Resolution No. 1998-018); 1999 (Resolution No. 1999-013); 2000 (Resolution No. 2000-010); 2001 (Resolution Nos. 2001-013, 2001-014, 2001-018); 2002 (Resolution Nos. 2002-004, 2002-011, 2002-017, 2002-022); and 2003 (Resolution Nos. 2003-001, 2003-009, 2003-010, 2003-011, 2003-012, 2003-015). The Basin Plan (i) designates beneficial uses for surface waters and groundwater, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the State antidegradation policy, and (iii) describes implementation programs to achieve and maintain water quality standards contained in the Basin Plan in order to protect all waters in the Region. In addition, the Basin Plan incorporates by reference applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. This Order implements the plans, policies and provisions of the Regional Board's Basin Plan.
16. State Water Resources Control Board (State Board) Resolution No. 68-16 (hereafter Resolution 68-16 or the "Antidegradation" Policy) requires the Regional Board 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 the Regional Board's policies (e.g., quality that exceeds water quality objectives).
17. The Regional Board finds that some degradation of groundwater beneath the FWTP and Use Area is consistent with Resolution 68-16 provided that the degradation is confined to a specified area. The Discharger minimizes the degradation by fully implementing, regularly maintaining, and optimally operating best practicable treatment and control (BPTC) measures. The degradation is limited to waste constituents (boron and chloride) typically encountered in municipal wastewater as specified in the groundwater limitations in this Order. The degradation does not result in water quality less than that prescribed in the Basin Plan.
18. Some degradation of groundwater by some of the typical waste constituents released with discharge from a municipal wastewater facility after effective source control, treatment, and control is consistent with maximum benefit to the people of California.

The technology, energy, water recycling, and waste management advantages of municipal utility service for the City of Fillmore far exceed any benefits derived from a community otherwise reliant on numerous concentrated individual wastewater systems, and the impact on water quality will be substantially less.

19. This Order establishes limitations that will not unreasonably threaten present and anticipated beneficial uses or result in receiving quality that exceeds water quality objectives set forth in the Basin Plan. This means that where the stringency of the limitations for the same waste constituent differs according to beneficial use, the most stringent applies as the governing limitation for that waste constituent. This Order contains tasks for assuring that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved. Accordingly, the discharge is consistent with the antidegradation provisions of Resolution 68-16. Based on the results of the scheduled tasks, the Regional Board may reopen this Order to reconsider groundwater limitations and other requirements to comply with Resolution 68-16.
20. The FWTP is located west of Pole Creek Fan in the Fillmore Hydrologic area and overlies the Ventura Central Groundwater Basin. The Basin Plan designates beneficial uses and water quality objectives for the Fillmore Hydrologic Area and Ventura Central Groundwater Basin waterbody as following:

Groundwater (Pole Creek Fan):

Existing: Municipal and Domestic Supply, Industrial Service Supply, Industrial Process Supply, and Agricultural Supply.

21. The Discharger will be able to achieve compliance with all the effluent limitations listed in this Order and will not discharge any wastewater to surface water from the new treatment plant when the plant becomes operational.
22. The Regional Board adopted a total maximum daily load (TMDL) to address chloride impairments of the Upper Santa Clara River (USCR) on May 6, 2004 (Resolution 04-004). The TMDL was approved by the State Water Resources Control Board (State Board), Office of Administrative Law (OAL) and United States Environmental Protection Agency (USEPA), and became effective on May 4, 2005. The TMDL applies to reaches 5 and 6 of the Santa Clara River, upstream of the Fillmore WWTP and requires the Sanitation Districts of Los Angeles County (Districts) to implement special studies and actions to reduce chloride loadings from the Saugus and Valencia Water Reclamation Plants (WRPs). Currently, TMDL studies are underway, including a groundwater and surface water interaction (GWSI) model study to provide information for the Regional Board to consider if a Site Specific Objective (SSO) for chloride and/or groundwater objective revisions is appropriate. The TMDL studies include reach 4 of the USCR. Based on these studies, the Regional Board may revised objectives or implements a site-specific objective in reach 4. The effluent limits of these waste discharge requirements may be revised to implement site specific objectives for chloride.



23. Section 13523 of the California Water Code (CWC) provides that a Regional Board, after consulting with, and receiving the recommendations of the State Department of Health Services (SDHS), and after any necessary hearing, shall, if it determines such action to be necessary to protect the public health, safety, or welfare, prescribe water reclamation requirements for water which is used, or proposed to be used, as reclaimed water. With respect to the use of the treated wastewater proposed by the Discharger, on July 27, 2005, the SDHS acknowledged that the proposed discharge is a direct beneficial use for which CCR Title 22 Recycled Water Criteria would apply. However, SDHS also indicated that the SDHS has no specific recommendations for the proposed discharge because it is intended for subsurface disposal rather than surface irrigation.
24. CWC section 13263(c) also provides for a time schedule to meet the requirements of a WDR Order.

#### **CALIFORNIA ENVIRONMENTAL QUALITY ACT AND NOTIFICATION**

25. In accordance with the provisions of the California Environmental Quality Act (CEQA) (Public Resources Code section 21000 et seq.), the Discharger prepared and circulated an Environmental Impact Report for public comments. The Discharger certified the document on May 24, 2005.
26. The Regional Board has notified the Discharger and interested agencies and persons of the intent to issue WDRs for this discharge, and has provided them with an opportunity to submit their written views and recommendations for the requirements.
27. The Regional Board, in a public meeting, heard and considered all comments pertaining to the discharge and to the tentative requirements.
28. Pursuant to CWC section 13320, any aggrieved party may seek review of this Order by filing a petition with the State Board. A petition must be received by the State Water Resources Control Board, P.O. Box 100, Sacramento, California, 95812, within 30 days of the date this Order is adopted.

**IT IS HEREBY ORDERED** that the Discharger, City of Fillmore, shall be responsible for and shall comply with the following requirements in all operations and activities at the Fillmore Wastewater Treatment Plant (FWTP) and future Fillmore wastewater recycling plant (FWRP), both of which are included within the term "wastewater treatment plant":

#### **A. INFLUENT LIMITATIONS**

1. Waste received by the wastewater treatment plant ("influent") shall be limited to domestic, commercial, industrial, and, if needed, a small amount of dry weather storm drain flow. The Discharger shall not allow new water softener regeneration brines to be discharged to the wastewater treatment plant. Industrial wastewater

subject to the Prohibited Discharge Standards listed in 40 CFR 403.5 shall not be accepted by wastewater treatment plant.

2. The influent shall not exceed a daily average flow of 2.4 mgd and a peak wet weather daily flow of 6.0 mgd. The flow limitations also apply to effluent discharged to the percolation ponds.

**B. EFFLUENT LIMITATIONS**

1. Effluent (wastewater discharged from the wastewater treatment plant or treated wastewater to be discharged through the reuse and disposal system) shall not contain heavy metals, arsenic, or cyanide, or other pollutants designated Priority Pollutants by the USEPA in concentrations exceeding the limits contained in the SDHS Drinking Water Standards.
2. Radioactivity shall not exceed the limits specified in the CCR title 22, chapter 15, section 64441 et seq., or subsequent revisions.
3. Effluent shall not contain organic chemicals, inorganic chemicals (i.e., heavy metals, arsenic, or cyanide) in concentrations exceeding the limits contained in the current California Drinking Water Standards, CCR title 22, sections 64431 and 64444 or subsequent revisions.
4. The pH in the effluent shall at all times be from 6.5 to 8.5 pH units.
5. Effluent shall not contain constituents in excess of the following limits:

<u>Constituent</u>	<u>Units<sup>1</sup></u>	<u>Monthly Average</u>	<u>Daily Maximum</u>
BOD <sub>5</sub>	mg/L	10	15
Suspended solids	mg/L	10	15
Ammonia plus Nitrate plus Nitrite plus Organic Nitrogen as nitrogen	mg/L	10	--
Nitrite-Nitrogen	mg/L	1	--
Oil and grease	mg/L	15	--

<sup>1</sup> mg/L: milligrams per liter

**C. INTERIM EFFLUENT LIMITATIONS**

Recognizing that the Discharger cannot meet the effluent limitations of Section B above until the new FWRP is constructed and operational, NPDES Order No. R4-2003-0136 and TSO No. R4-2003-0137 for Fillmore remain in full force and effect until that

treatment plant is completed and operational by September 10, 2009. Interim effluent limits in TSO No. R4-2003-0137 include:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>
BOD <sub>5</sub>	mg/L	45	65
Suspended solids	mg/L	45	65
Ammonia nitrogen	mg/L	19	--
Nitrite nitrogen	mg/L	1.3	--
Chloride	mg/L	187	--
MBAS	mg/L	0.7	--
<u>Bis(2-ethylhexyl)phthalate</u>	<u>mg/L</u>	<u>0.0086</u>	<u>--</u>

TSO No. R4-2003-0137 also includes interim effluent coliform limits as follows:

1. Geometric Mean Limits:

- a) E. coli density shall not exceed 126/100 mL
- b) Fecal coliform density shall not exceed 200/100 mL

2. Single Sample Limits:

- a) E. coli density shall not exceed 235/100 mL
- b) Fecal coliform density shall not exceed 400/100 mL

The above interim effluent limits shall not be applicable after September 10, 2009 or if TSO No. R4-2003-0137 is rescinded or no longer effective.

D. SURFACE AND SUBSURFACE DRIP REUSE AND DISPOSAL LIMITATIONS OF TREATED WASTEWATER

1. In addition to meeting all effluent limitations in the above Section B, the treated wastewater to be discharged through subsurface drip and surface irrigation reuse and disposal shall be at all times adequately oxidized, disinfected tertiary-treated wastewater only (Figures 6 and 7 – FWRP Process Flow Diagrams). A disinfected tertiary-treated wastewater is wastewater that has been filtered and subsequently disinfected, and that meets the following criteria:
  - a. The filtered wastewater has been disinfected by one of the following processes:
    - i. A chlorine disinfection process that provides a concentration-time (CT) value of not less than 450 milligram-minutes per liter at all times with a modal contact time of at least 90 minutes, based on peak dry weather design flow. The CT is the product of total chlorine residual and modal contact time measured at the same period. The modal contact time is

- the amount of time that elapsed between the time that a tracer, such as salt or dye, is injected into the influent at the entrance of the chlorination chamber and the time that the highest concentration of the tracer is observed in the effluent from the chamber. The peak dry weather design flow is the arithmetic mean of the maximum peak flow rates sustained over some period of time (for example three hours) during the maximum 24-hour dry weather period. Dry weather period is defined as periods of little or no rainfall.
- ii. A disinfection process that, when combined with the filtration process, has been demonstrated to inactivate and/or remove 99.999 percent of the plaque-forming units of F-specific bacteriophage MS2, or polio virus in the wastewater. A virus that is at least as resistant to disinfection as polio virus may be used for purposes of the demonstration. F-specific bacteriophage MS-2 means a strain of a specific type of virus that infects coliform bacteria that is traceable to the American Type Culture Collection (ATCC 15597B1) and is grown on lawns of E. coli (ATCC 15597).
  - iii. Where ultraviolet (UV) disinfection is used for disinfection, UV disinfection shall deliver under worst operating conditions a minimum UV dose of 140 milli-watts seconds per square centimeters ( $\text{mW-s/cm}^2$ ) at maximum weekly flow and  $100 \text{ mW-s/cm}^2$  at peak daily flow, unless otherwise approved by the California Department of Health Services.
- b. The median concentration of total coliform bacteria measured in the disinfected wastewater does not exceed a most probable number (MPN) of 2.2 per 100 milliliters based on the bacteriological results of the last seven days for which analyses have been completed, and the number of total coliform bacteria does not exceed an MPN 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.
  - c. A filtered wastewater shall be an oxidized wastewater that meets either (1) or (2):
    - (1) Has been coagulated and passed through natural undisturbed soil or a bed of filter media under the following conditions:
      - (a) At a rate that does not exceed 5 gallons per minute per square foot of surface area in mono, dual or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 gallons per minute per square foot of surface area in a traveling bridge automatic backwash filter; and,
      - (b) The turbidity of the filtered wastewater does not exceed any of the following:

- An average of 2 NTU within a 24-hour period;
  - 5 NTU more than 5 percent of the time within a 24-hour period; and
  - 10 NTU at any time.
- (c) "NTU" (Nephelometric Turbidity Unit) is a turbidity measurement determined by the ratio of the intensity of light scattered by the sample to the intensity of incident light as measured by Method 2130 B. in *Standard Methods for the Examination of Water and Wastewater*, 20<sup>th</sup> Edition; Eaton, A. D., Clesceri, L. S., and Greenberg, A. E., Eds; American Public Health Association, Washington, D.C., 1998; p2-8. Continuous chemical addition upstream of the filters is not required if:
- i) Final effluent turbidity does not exceed 2 NTU;
  - ii) The turbidity of the effluent to the filters is continuously measured;
  - iii) The influent turbidity to the filters does not exceed 5 NTU for more than 15 minutes in any 24-hour period and never exceeds 10 NTU; and,
  - iv) There is the capability to automatically activate chemical addition or divert the wastewater should the filter influent turbidity exceed 5 NTU for more than 15 minutes.
- (2) Has been passed through a microfiltration, ultrafiltration, nanofiltration, or reverse osmosis membrane so that the turbidity of the filtered wastewater does not exceed any of the following:
- (a) 0.2 NTU more than 5 percent of the time within any calendar day; and
  - (b) 0.5 NTU at any time.
- d. A coagulated wastewater shall be an oxidized wastewater in which colloidal and finely divided suspended matter have been destabilized and agglomerated upstream from a filter by the addition of suitable floc-forming chemicals.
- e. An oxidized wastewater shall be wastewater in which the organic matter has been stabilized, is nonputrescible, and contains dissolved oxygen.
2. Treated wastewater shall not be directly reused for purposes other than those defined above until requirements for other uses have been established by the

Regional Board, in accordance with CWC section 13523, unless the Regional Board finds that the above cited standards are applicable to other uses.

3. No disposal areas with treated wastewater shall be located within 50 feet of any domestic water supply well unless all of the following conditions have been met:
  - a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from and the ground surface;
  - b. The well contains an annular seal that extends from the surface into the aquitard;
  - c. The well is housed to prevent any treated wastewater spray from coming into contact with the wellhead facilities;
  - d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well; and,
  - e. The owner of the well approves of the elimination of the buffer zone requirement.
4. There shall be no storage or impoundment of treated wastewater within 100 feet of any domestic water supply well.
5. No disposal of sludge, waste, and treated wastewater shall take place within 50 feet of any reservoir or stream used as a source of domestic water.
6. Use of treated wastewater shall comply with the following:
  - a. Treated wastewater shall not be applied above ground at such a rate and volumes as to exceed vegetative demand and soil moisture conditions. Special precautions must be taken to: prevent clogging of spray nozzles, prevent over-watering, and minimize the production of run-off. Pipelines shall be maintained so as to prevent leakage;
  - b. Any runoff shall be confined to the proposed disposal area and shall not be allowed to escape as surface flow, unless the runoff does not pose a public health threat and is authorized under a National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Board. For the purpose of this requirement, however, minor amounts of irrigation return water from peripheral areas shall not be considered a violation of this Order;
  - c. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities, and shall not contact any drinking water fountain; and,

- d. Treated wastewater shall not be used for surface irrigation during periods of rainfall and/or run-off.
7. All treated wastewater use areas that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER – DO NOT DRINK". Each sign shall display an international symbol similar to that shown in Figure 5. An alternative signage and wording may be used provided they are approved by SDHS.
8. No physical connection shall be made or allowed to exist between any treated wastewater piping and any piping conveying potable water, except as allowed under section 7604 of CCR Title 17.
9. The portions of the treated wastewater piping system that are in areas subject to access by the general public shall not include any hose bibbs (a faucet or similar device to which a common garden hose can be readily attached). Only quick couplers that differ from those used on the potable water system shall be used on the portions of the treated wastewater piping system in areas subject to public access.
10. Treated wastewater use shall not result in earth movement in geologically unstable areas.
11. Treated wastewater shall not be used for direct human consumption or for the processing of food or drink intended for human consumption.

#### E. GROUNDWATER LIMITATIONS

1. "Receiving water" is defined as groundwater underlying the wastewater treatment plant, and the discharge areas described in Finding 9.
2. The discharged treated wastewater from the wastewater treatment plant shall not cause the receiving water to contain waste constituents statistically greater than background water quality except the limits in E.4.
3. The discharged treated wastewater from the wastewater treatment plant shall not cause the concentration of total coliform in the receiving water over a seven-day period to exceed 1.1 most probable number (MPN) per 100 milliliters.
4. The discharged treated wastewater from the wastewater treatment plant shall not cause the receiving water (groundwater) to exceed the following limits:

<u>Constituent</u>	<u>Units</u>	<u>Maximum</u>
Total Dissolved Solids (TDS)	mg/L	2,000
Sulfate	mg/L	800

Chloride	mg/L	100
Boron	mg/L	1.0
Nitrate as nitrogen plus Nitrite as nitrogen	mg/L	10
Nitrite-N	mg/L	1

#### F. GENERAL REQUIREMENTS

1. Standby or emergency power facilities and/or sufficient capacity shall be provided for treated wastewater storage during rainfall or in the event of plant upsets or outages, and at times when irrigation cannot be practiced.
2. Adequate facilities shall be provided to protect the FWRP, treatment system devices, sewer collection system and recycling/disposal facilities from damage by storm flows and runoff or runoff generated by a 100-year storm.
3. The treatment system, including the collection system that is a part of the treatment system and the disposal system, shall be maintained in such a manner that prevents sewage from surfacing or overflowing at any location.
4. A minimum of two feet of freeboard shall be maintained in the percolation ponds to ensure that direct rainfall will not cause overtopping.
5. Discharge of hardness wastes generated from the proposed centralized well water treatment facility to be constructed shall not cause exceedance of constituent limits in Section E of this Order. Any proposed discharge of hardness waste generated from the centralized well water treatment facility shall be identified and approved by the Executive Officer prior to its discharge.

#### G. PROHIBITIONS

1. There shall be no waste overflows or discharge of partially-treated wastes from the FWRP's treatment, storage or disposal facilities to adjacent drainage ways, adjacent properties or waters of the State at any time.
2. Wastes discharged shall not impart adverse tastes, odors, color, foaming or other objectionable characteristics to the receiving groundwater.
3. There shall be no onsite permanent disposal of sludge. Sludge-drying activities are allowed, but only as an intermediate treatment prior to off-site disposal. Any offsite disposal of sewage or sludge shall be made only to a legal point of disposal. For purposes of this Order, a legal disposal site is one for which requirements have been established by a regional water quality control board or comparable regulatory entity, and which is in full compliance therewith. Any sewage or sludge



- handling shall be in such a manner as to prevent its reaching surface waters or watercourses.
4. Sewage odors from the wastewater treatment plant shall not be detectable at property line.
  5. Wastes discharged from the wastewater treatment plant shall at no time contain any substances in concentrations toxic to human, animal, or plant life.
  6. The discharge of waste shall not create a condition of pollution, contamination, or nuisance.
  7. Nutrient materials in the waste discharged to the percolation ponds shall not cause objectionable aquatic growth or degrade indigenous biota.
  8. The discharge of any wastewater to surface waters or surface water drainage courses is prohibited without a NPDES permit.
  9. The percolation ponds shall not contain floating materials, including solids, foams or scum in concentrations that cause nuisance, adversely affect beneficial uses, or serve as a substrate for undesirable bacterial or algae growth or insect vectors.
  10. The percolation ponds, drying beds and the berms surrounding the ponds shall not contain plants, shrubs, or bushes that may damage the berms and the ponds.
  11. Bypass (the intentional diversion of waste stream from any portion of a treatment facility) is prohibited. The Regional Board may take enforcement action against the Discharger for bypass unless:
    - (a) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that cause them to become inoperable, or substantial and permanent loss in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production);
    - (b) There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance; and

- (c) The Discharger submitted a notice at least 48 hours in advance of the need for a bypass to the Regional Board.
- 12. Any discharge of wastewater from the treatment system (including the wastewater collection system) at any point other than specifically described in this Order is prohibited and constitutes a violation of this Order.

#### H. PROVISIONS

- 1. A copy of this Order shall be maintained at the wastewater treatment plant so as to be available at all times to operating personnel.
- 2. The Discharger shall file with the Regional Board technical reports on self-monitoring work performed according to the detailed specifications contained in Monitoring and Reporting Program No. CI-1076 attached hereto and incorporated herein by reference, as directed by the Executive Officer. The results of any monitoring done more frequently than required at the location and/or times specified in the Monitoring and Reporting Program shall be reported to the Regional Board. The Discharger shall comply with all of the provisions and requirements of the Monitoring and Reporting Program.
- 3. Monitoring and Reporting Program No. CI-1076 contains requirements, among others, specifying that a groundwater monitoring program for the FWRP shall be established so that the groundwater downgradient and upgradient from the percolation ponds and discharge/disposal area can be measured, sampled, and analyzed to determine if discharges from the percolation pond/disposal system are impacting water quality. A background groundwater quality shall be established at the discharge areas described in Finding 9 based on the first year groundwater monitoring data. The Discharger shall submit a technical workplan as required in Section III of Monitoring and Reporting Program No. CI-1076.
- 4. The Discharger shall monitor the background of the receiving groundwater quality as it relates to its effluent discharges. Should the constituent concentrations in any downstream monitoring well exceed the receiving water quality objectives in the Basin Plan and the increase in constituents is attributable to the Discharge's FWRP effluent disposal practices, the Discharger must develop a source control plan including a detailed source identification and pollution minimization plan, together with the time schedule of implementation, and must be submitted within 120 days of recording the exceedance.
- 5. Should effluent monitoring data indicate possible contamination of groundwater attributable to Discharger's effluent, the Discharger shall submit, within 120 days after discovery of the problem, plans for measures that will be taken, or have been taken, to mitigate any long-term effects that may result from the discharge(s).

6. The Discharger shall participate in the implementation of the Watershed-wide Monitoring Program if the Executive Officer determines that a surface water monitoring program for the Santa Clara River is needed to fully evaluate the impact from Discharger's effluent discharge on groundwater. The Regional Board may require the Discharger to participate with the Regional Board, Santa Clara River Enhancement and Management Plan Steering Committee, and other stakeholders, in the development and implementation of a watershed-wide monitoring program.
7. Should the nitrate and nitrite-nitrogen concentration in effluent of FWRP exceed 15 mg/L in three (monthly sampling plus two additional sampling events for result verification) consecutive samples taken within one month, the Discharger must submit an investigation plan (Plan) to the Executive Officer for approval within 90 days from the occurrence. The Plan must contain a detailed description of pollutant minimization strategies and prevention measures proposed, together with the time schedule of implementation.
8. The Discharger shall submit a final engineering report for centralized well water treatment facility and FWRP to the Executive Officer within one year of the effective date of this Order.
9. The Discharger shall not discharge any treated wastewater from the FWRP to the effluent disposal areas that have not been addressed in the Environmental Impact Report certified on May 24, 2005, without completion of CEQA documents and approval by the Executive Officer.
10. The Discharger shall prepare a CCR Title 22 Engineering Report for the production, Distribution and Use of Recycled Water using the guidelines prepared by the CDHS. The report shall be prepared, reviewed and approved by the CDHS-Drinking Water Field Operations Branch, Santa Barbara office prior to delivering recycled water to use sites.
11. Wastewater treatment and discharge at the centralized well water treatment facility shall not cause pollution or nuisance as defined in CWC section 13050.
12. In accordance with CWC section 13260(c), the Discharger shall file a report of any material change or proposed change in the character, location, or volume of the discharge.
13. The Discharger shall operate and maintain its wastewater collection, treatment and disposal facilities in a manner to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary, to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's responsibilities. Anyone employed in the operation of the

wastewater treatment plant must be certified pursuant to CWC sections 13625-13633.

14. The Discharger shall submit to the Regional Board an Operations and Maintenance Manual (O & M Manual) for the entire FWRP and disposal facilities prior to startup of the new FWRP facility. The Discharger shall maintain the O & M Manual in useable condition, and available for reference and use by all applicable personnel. The Discharger shall regularly review, and revise or update as necessary, the O & M Manual(s) in order for the document(s) to remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary and submitted to the Regional Board.
15. In event that the FWRP employs UV disinfection, the Discharger shall establish an operation manual including quartz sleeve cleaning frequencies that ensure the minimum required UV dose delivery is consistently met, and file the operation manual with the Regional Board within 30 days after commissioning the UV disinfection system. The FWRP using UV disinfection shall comply with the National Water Research Institute/American Water Works Association Research Foundation UV Disinfection Guidelines specifying design and performance of US systems.
16. The Discharger shall take all reasonable steps to minimize or prevent any discharge that has a reasonable likelihood of adversely affecting human health or the environment.
17. For any violation of requirements in this Order, the Discharger shall notify the Regional Board within 24 hours of knowledge of the violation either by telephone or electronic mail. The notification shall be followed by a written report within one week. The Discharger in the next monitoring report shall also confirm this information. In addition, the report shall include the reasons for the violations or adverse conditions, the steps being taken to correct the problem (including dates thereof), and the steps being taken to prevent a recurrence.
18. This Order does not relieve the Discharger from the responsibility to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency.
19. After notice and opportunity for a hearing, this Order may be terminated or modified for causes including, but not limited, to:
  - a) Violation of any term or condition contained in this Order;

- b) Obtaining this Order by misrepresentation, or failure to disclose all relevant facts; or
  - c) A change in any condition, or the discovery of any information, that requires either a temporary or permanent reduction or elimination of the authorized discharge.
20. The Discharger shall furnish, within a reasonable time, any information the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The Discharger shall also furnish to the Regional Board, upon request, copies of records required to be kept by this Order.
21. This Order includes the attached *Standard Provisions Applicable to Waste Discharge Requirements* which are incorporated herein by reference. If there is any conflict between provisions stated herein and the *Standard Provisions Applicable to Waste Discharge Requirements*, the provisions stated herein will prevail.
22. The Discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:
- a) Enter upon the Discharger premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
  - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;
  - c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
  - d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the CWC, any substances or parameters at any locations.
23. The WDRs contained in this Order will remain in effect for a period of 10 years. Should the Discharger wish to continue discharging to groundwater for a period of time in excess of 10 years, the Discharger must file an updated Report of Waste Discharge with the Regional Board no later than 180 days in advance of the 10th-year anniversary date of the Order for consideration of issuance of new or revised waste discharge requirements. Any discharge of waste ten years after the date of adoption of this Order, without filing an updated Report of Waste

Discharge with the Regional Board, is a violation of CWC section 13264. The Regional Board is authorized to take appropriate enforcement action for any noncompliance with this provision including assessment of penalties.

24. All discharges of waste into the waters of the State are privileges, not rights. In accordance with CWC section 13263(g), these requirements shall not create a vested right to continue to discharge and are subject to rescission or modification.

#### G. REOPENER

1. The Regional Board may modify, or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have the potential to cause, or will contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters.
2. This Order may be reopened to include additional or modified requirements to address Discharger's expansion or mitigation plans, TMDL or Basin Plan mandates, or groundwater limitation compliance with Resolution 68-16.

#### H. RESCISSION

Except for enforcement purposes, Order No. 97-038, adopted by the Regional Board on April 7, 1997, is hereby rescinded.

I, Jonathan S. Bishop, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region, on May 11, 2006.

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Jonathan S. Bishop  
Executive Officer