

**STATE OF CALIFORNIA  
REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL COAST REGION**

**STAFF REPORT FOR REGULAR MEETING OF DECEMBER 4-5, 2008**

Prepared on November 6, 2008

**ITEM NUMBER: 30**

**SUBJECT:** Master Reclamation Requirements Order No. R3-2008-0069 for the City of Hollister Domestic Wastewater Treatment Plant, San Benito County

**KEY INFORMATION**

Discharger:	City of Hollister
Location:	2690 San Juan Hollister Road, Hollister, CA 95023, San Benito County
Type of Treatment:	Immersed membrane biological reactor (MBR) and chlorination disinfection
Discharge Type:	Disinfected tertiary recycled water to use areas and storage reservoirs. Undisinfected treated wastewater to percolation ponds.
Recycling:	As allowed under Title 22 for disinfected tertiary, including irrigation and other approved uses.
Design Flow:	4.0 million gallons per day (MGD)
Projected Actual Flow:	2.72 MGD to 3.10 MGD (Year 2008 through 2013) 3.10 MGD to 4.04 MGD (Years 2013 through 2023)
Current Disposal Capacity:	<p><u>Domestic Wastewater Treatment Plant:</u></p> <ol style="list-style-type: none"> <li>0.88 MGD non-disinfected treated wastewater to percolation Ponds 1 through 8.</li> <li>1.72 MGD disinfected treated wastewater to seasonal disposal/storage reservoirs Ponds 1, 2, and 3 west of Highway 156 and Ponds 1, 2, and 3 east of Highway 156. Total capacity for all six seasonal disposal/storage reservoirs is 365 million gallons or 1,120 acre-feet. Future upgrades include lining reservoirs and increasing storage capacity.</li> </ol> <p><u>Industrial Wastewater Treatment Plant (IWTP):</u> Time schedule diversion as detailed in the Order beginning with 2.6 MGD through 2010 to a zero allowed discharge to the IWTP by the year 2015.</p> <p><u>Reclaimed Water:</u> 0.60 MGD disinfected tertiary treated domestic and light commercial wastewater. Future upgrades include acquiring additional reuse areas within service area.</p>
Existing Orders:	Waste Discharge Requirements 87-47, Cease and Desist Order R3-2002-0105 (scheduled for rescission on December 5, 2008)
<b>This Action:</b>	<b>Adopt Master Reclamation Requirements Order No. R3-2008-0069</b>

## SUMMARY

The City of Hollister (Discharger, Supplier, Distributor, or User) domestic wastewater treatment plant was originally built in 1979. At that time, the treatment plant consisted of a facultative pond system with percolation ponds. In late 2002, the Discharger initiated interim improvements at the domestic wastewater treatment plant (DWTP) to improve treatment and disposal quality and efficiency until implementation of the Long Term Wastewater Management Plan (LTWMP). The Discharger successfully completed the installation of the DWTP on October 23, 2008. The DWTP upgrade is part of a series of ongoing efforts to manage water resources in the region. These efforts will increase quality of effluent produced and increase the treatment capacity of the DWTP. It will also change the way treated effluent is disposed of by reducing the amount of water disposed of by percolation and develop disposal for agricultural and urban irrigation. The upgraded DWTP uses ultrafiltration technology in the form of an immersed membrane bioreactor (MBR) and chlorination disinfection to achieve turbidity and bacteriological standards for recycled water in its newly constructed 4.0 million gallons per day (MGD) capacity DWTP. A select number of established water use sites will first use the recycled water, but the Discharger plans additional customers in the future. Therefore, the Discharger requested a California Water Code §13523.1 master reclamation permit. This Order proposes such a permit.



## DISCUSSION

In the past eight years, the DWTP has had a lack of disposal capacity to dispose of all the City of Hollister's wastewater. In times when the inflow is too great to process, the Discharger diverts the flow to the Industrial Wastewater Treatment Plant (IWTP). The Discharger developed a Long-term Wastewater Management Plan (LTWMP) as required by Cease and Desist Order No. R3-2002-0105 (CDO) and Administrative Civil Liability Order No. R3-2002-0097 (ACL). Water Board staff accepted the final draft of the LTWMP submitted in March 2007. It was at this time that the Discharger began upgrade construction of its DWTP. The Discharger planned improvements at the DWTP to occur during a 15-year implementation period starting in the year 2008. The project includes two phases (2008 – 2013 and 2014 - 2023). In Phase I, the new DWTP will improve effluent water quality by the installation of an immersed membrane bioreactor process train, which will significantly reduce discharges of nitrogen, suspended solids, and biological oxygen demand, and will produce wastewater that meets Title 22 recycling criteria. The wastewater to be recycled will originate from the City of Hollister's domestic service area.

The new facilities at the DWTP include:

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| <ul style="list-style-type: none"> <li>a. Grit removal with grit classifier</li> <li>b. Fine screens with screening washer/compactor</li> <li>c. Screened wastewater flow split structure</li> <li>d. Biological process basins (anoxic, aeration and post-anoxic zones)</li> <li>e. Mixed liquor recirculation pump station</li> <li>f. MBR basins to house the membrane filters</li> <li>g. MBR permeate pumps</li> <li>h. Chlorine contact basins</li> <li>i. Plant water and effluent pump stations</li> <li>j. Process blower and membrane blower building</li> <li>k. Solids thickening and dewatering facility</li> <li>l. Solids stabilization basin (utilizing the existing Pond 1A)</li> </ul> | <ul style="list-style-type: none"> <li>m. Chemical feed and storage building</li> <li>n. Operations building, including laboratory and maintenance shop</li> <li>o. Septage receiving station</li> <li>p. Odor control biofilter</li> <li>q. Plant drain pump station</li> <li>r. New electrical power service</li> <li>s. Standby power generators</li> <li>t. Plant access/security system</li> <li>u. Instrumentation and control system</li> <li>v. Recycled water distribution pump station</li> <li>w. Return water pumping station</li> <li>x. Seasonal storage ponds</li> <li>y. Nine miles of distribution pipelines</li> </ul> |
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Water use studies project wastewater flows into the DWTP to be from 2.72 MGD to 4.04 MGD through to the year 2023. It is the Discharger's goal to maximize the reuse of disinfected tertiary treated wastewater within the Hollister region. The Discharger has performed environmental studies at several areas throughout the Hollister region as potential reclaimed water use areas with an estimated 200 to 300 acres of spray fields acquired during Phase I. Currently, the Discharger has approved two spray field sites: 1) Hollister Municipal Airport and 2) Riverside Park/Brigantino properties. The Discharger can maintain or eliminate the current level of wastewater disposal to percolation ponds as the Discharger increases areas of reclaimed water use areas, therefore increasing the disposal capacity of the DWTP.

The proposed order sets requirements for municipal wastewater recycling and disposal, incorporating relevant regulations, plans, and guidelines to protect water quality and public health. This staff report discusses the relevant regulations, plans, and guidelines as they relate to the specific needs of the greater Hollister area.

### **Water Recycling -- Regulatory Considerations**

Water Code

The California Water Code provides the Water Board authority to regulate water recycling in order to protect water quality. Relevant water recycling regulations are as follows:

California Water Code Section	Language
13576(e)	The use of recycled water has proven to be safe from a public health standpoint and that the State Department of Public Health is updating regulations for the use of recycled water.
13510	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.
13512	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.
13523.1	<p>Provides that (a) Each regional board, after consulting with, and receiving the recommendations of, the California Department of Public Health and any party who has requested in writing to be consulted, with the consent of the proposed permittee, and after any necessary hearing, may, in lieu of issuing waste discharge requirements pursuant to Section 13263 or water reclamation requirements pursuant to Section 13523 for a user of reclaimed water, issue a master reclamation permit to a supplier or distributor, or both, of reclaimed water. A master reclamation permit shall include, at least, all of the following:</p> <ol style="list-style-type: none"> <li>1. Waste discharge requirements, adopted pursuant to Article 4 (commencing with Section 13260) of Chapter 4.</li> <li>2. A requirement that the permittee comply with the uniform statewide reclamation criteria established pursuant to Section 13521. Permit conditions for a use of reclaimed water not addressed by the uniform statewide water reclamation criteria shall be considered on a case-by-case basis.</li> <li>3. A requirement that the permittee establish and enforce rules or regulations for reclaimed water users, governing the design and construction of reclaimed water use facilities and the use of reclaimed water, in accordance with the uniform statewide reclamation criteria established pursuant to Section 13521.</li> <li>4. A requirement that the permittee submit a quarterly report summarizing reclaimed water use, including the total amount of reclaimed water supplied, the total number of reclaimed water use sites, and the locations of those sites, including the names of the hydrologic areas underlying the reclaimed water use sites.</li> <li>5. A requirement that the permittee conduct periodic inspections of the facilities of the reclaimed water users to monitor compliance by the users with the uniform statewide reclamation criteria established pursuant to Section 13521 and the requirements of the master reclamation permit.</li> <li>6. Any other requirements determined to be appropriate by the regional board after the regional water board issues a master reclamation permit.</li> </ol>

California Water Code Section	Language
	Section 13522.5(e) exempts any such user of recycled water from the requirement to file a report with a regional water board related to any material change in the character of the recycled water or its use, except when requested by the regional water board.

#### California Code of Regulations

The California Code of Regulations (CCR) provides the California Department of Public Health the authority to regulate water recycling in order to protect public health.

#### State Water Board and DPH MOA

On February 20, 1996, a Memorandum of Agreement (MOA) was executed between the California Department of Public Health (formerly the California Department of Health Services) and the State Water Resources Control Board (State Water Board), on behalf of the State Water Board and nine California Regional Water Quality Control Boards. The MOA allocates primary areas of responsibility and authority between these agencies. The MOA provides methods and mechanisms necessary to ensure ongoing and continuous future coordination of activities relative to the use of recycled water in California.

#### **Wastewater Disposal -- Regulatory Considerations**

The Water Board regulates wastewater discharges under California Water Code authority, according to the Water Quality Control Plan for the Central Coast Basin (Basin Plan).

#### Basin Plan

The Basin Plan was adopted by the Water Board on November 19, 1989, and approved by the State Water Resources Control Board (State 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.

The Basin Plan designates the existing and anticipated beneficial uses of groundwater in the vicinity of the land discharge to include:

1. Municipal and Domestic Water Supply
2. Agricultural Water Supply
3. Industrial Process Supply
4. Industrial Service Supply

The Basin Plan specifies median water quality objectives for certain groundwater basins, which are intended to serve as a baseline for evaluating water quality management in the basin. The objectives are, at best, representative of gross areas only, and are as follows for the San Benito River sub-area of the Pajaro River groundwater basin beneath the Facility and recycled water irrigation reuse areas:

**Median Groundwater Objectives for the Pajaro River Groundwater Sub-basin/Hollister Sub-area**

<b>Parameter</b>	<b>Concentration (mg/L)</b>
Total Dissolved Solids (TDS)	1200
Chloride (CL)	150
Sulfate	250
Boron	1.0
Sodium	200
Total Nitrogen as N	5

Excerpted from Table 3-8, page III-16 of the Basin Plan

The San Benito River is the closest surface water body to the DWTP and reuse areas. The Basin Plan designates existing and anticipated beneficial uses of the San Benito River along the reach adjacent to the Facility and reuse areas that could be affected by the discharge to include:

- a. Municipal and Domestic Supply
- b. Agricultural Water Supply
- c. Industrial Service Supply
- d. Groundwater Recharge
- e. Water Contact Recreation
- f. Non-Contact Water Recreation
- g. Wildlife Habitat
- h. Warm Freshwater Habitat
- i. Spawning, Reproduction, and/or Early Development
- j. Freshwater Replenishment
- k. Commercial and Sport Fishing

The Basin Plan specifies water quality objectives for certain surface waters, which are intended to serve as a baseline for evaluating water quality management in the basin. The objectives are, at best, representative of gross areas only, and are based on preservation of existing quality or water quality enhancement believed attainable following control of point sources. Water quality objectives are as follows for the San Benito River:

**Surface Water Quality Objectives for the San Benito River**

<b>Parameter</b>	<b>Concentration (mg/L)</b>
Total Dissolved Solids (TDS)	1400
Chloride (Cl)	200
Sulfate	350
Boron	1.0
Sodium	250

Excerpted from Table 3-7, page III-13 of the Basin Plan

Municipal and domestic water supply beneficial use designations are applied to receiving waters in accordance with the provisions of State Water Resources Control Board

Resolution No. 88-63. Resolution 88-63 designates all surface and groundwater within the State as suitable or potentially suitable for municipal or domestic supply except where:

- TDS exceeds 3,000 mg/L (5,000 uS/cm electrical conductivity)
- Contamination exists, that cannot reasonably be treated for domestic use, or
- The source is not sufficient to supply an average sustained yield of 200 gallons per day.

Pursuant to Resolution 88-63, the Basin Plan designates all groundwater throughout the Central Coast Basin, except for that found in the Soda Lake Sub-basin, suitable for agricultural supply, municipal and domestic water supply, and industrial use.

Numeric inorganic constituent guidelines and water quality objectives for agricultural supply beneficial use are listed in Basin Plan Tables 3-3 and 3-4 on pages III-8 and III-9, respectively.

Section II.A.4. (Objectives for Groundwater) of the Basin Plan contains both narrative and numeric groundwater quality objectives for the protection of municipal and domestic water supply beneficial uses. The numeric water quality objectives include primary and secondary Maximum Contaminant Levels (MCLs) for drinking water supply.

The MCLs for various constituents are set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

The narrative groundwater objectives found on page III-14 of the Basin Plan state: "Groundwater shall not contain taste or odor producing substances at concentrations that adversely affect beneficial uses." The Department of Public Health has established secondary MCLs for certain substances that will cause adverse taste and/or odor in drinking water. Secondary MCLs are generally presented as recommended, upper, and short-term water supply limits based on consumer acceptance levels. "Recommended" concentrations are desirable for a higher degree of consumer acceptance. "Upper" concentrations are acceptable if it is neither reasonable nor feasible to provide more suitable waters for supply. "Short-term" concentrations are acceptable only for existing systems on a temporary basis pending construction of treatment facilities or development of acceptable new water sources.

There are no narrative or numeric water quality objectives specific to the protection of the industrial supply beneficial use in the Basin Plan. Acceptable constituent levels for industrial use vary significantly from one industry to the next. For example, excessive salinity in industrial supply waters may impair beneficial use through such factors as scaling and corrosion or elevated salt concentrations for food processing industries. Certain industries may require extremely low salinity levels only achievable through pretreatment prior to use, even in cases where supply water has low salinity in comparison to other standards. In general protection of agricultural, municipal and domestic supply beneficial uses will be reasonably protective of most industrial uses.

#### Anti-Degradation

When issuing WDRs and MRRs, the Water Board must consider State Water Board Resolution 68-16. State Water Board Resolution No. 68-16 – "Statement of Policy With Respect to Maintaining High Quality of Waters in California" requires that the Water

Board, in regulating the discharge of waste, to maintain high quality waters of the state (i.e., background water quality) unless 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 Water Board's policies (e.g., quality that exceeds water quality objectives). Resolution 68-16 requires that any discharge to existing high quality water be required to meet waste discharge requirements which will result in the best practicable treatment or control (BPTC) 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 application of disinfected tertiary recycled water to appropriately sited, designed and managed reuse areas as authorized by this Order will not cause degradation of receiving waters, including San Benito River and groundwater. This permit requires that recycled water meeting California Code of Regulations Title 22 criteria for disinfected tertiary recycled water be applied to applicable reuse areas at times and rates which do not result in surface runoff and minimize the leaching of water, nutrients, and minerals to groundwater. In addition, this Order requires elimination of waste constituents at concentrations that exceed Basin Plan water quality objectives or background conditions in the groundwater basin or that exceed the assimilative capacity of the groundwater basin.

The Discharger is implementing wastewater reclamation at this DWTP to maximize the potable water supply. The reclamation project directly and incidentally provides a net environmental benefit by minimizing potable water supply usage that the Discharger would otherwise utilize for routine landscape irrigation.

#### Total Maximum Daily Loads

Section 303(d) of the Clean Water Act requires states to identify and prepare lists of water bodies that do not meet water quality standards and to establish Total Maximum Daily Loads (TMDL) for listed water bodies. The San Benito River and several of its tributaries are on the Clean Water Act Section 303(d) list as impaired due to elevated concentrations of sediment and fecal coliform. The US Environmental Protection Agency approved the Pajaro River (including San Benito River) Sediment TMDL on May 3, 2007. Water Board staff continue to develop waste load and load allocations for sources of fecal coliform entering the San Benito River, as well as other water bodies within the Pajaro River watershed. The Water Board may modify requirements described in this Order to meet the allocations described in current and future TMDLs if the Water Board determines that discharges from the Discharger's DWTP facility are causing or contributing to water quality impairment.

#### Biosolids Handling and Disposal

Municipal wastewater treatment generates biosolids. 40 CFR Part 503 sets forth the United States Environmental Protection Agency (USEPA) final rule for the use and disposal of biosolids, or sewage sludge, and governs the final use or disposal of biosolids. The intent of this federal program is to ensure that sewage sludge is used or disposed of in a way that protects both human health and the environment.

The promulgated regulations require that producers of sewage sludge meet certain reporting, handling, and disposal requirements. 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.

Use of biosolids as a soil amendment must comply with valid waste discharge requirements issued by the Water 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). The Discharger must file a complete Notice of Intent and receive a Notice of Applicability for each project in order for Water Board staff to enroll the biosolids use project into the General Biosolids Order.

#### Sanitary Sewer Overflows

The Supplier's sanitary sewer system collects wastewater using pipes, pumps, and/or other conveyance systems, and directs the raw sewage to the wastewater treatment facility. A "sanitary sewer overflow" is defined as a discharge to ground or surface water from the sanitary sewer system at any point upstream of the wastewater treatment facility. Temporary storage and conveyance facilities (such as wet wells, regulated impoundments, tanks, highlines, etc.) may be part of a sanitary sewer system, and discharges to these facilities are not considered sanitary sewer overflows provided that the waste is fully contained within these temporary storage/conveyance facilities.

Sanitary sewer overflows can consist of varying mixtures of domestic sewage, industrial wastewater, and commercial wastewater. The mixture generally depends on the pattern of land use in the sewage collection system area tributary to an overflow location. The chief causes of sanitary sewer overflows include, but are not limited to, line blockages due to grease, roots, or debris, sewer line flood damage, manhole structure failures, vandalism, pump station mechanical failures, power outages, storm or groundwater inflow/infiltration, lack of capacity, and contractor-related incidents.

Sanitary sewer overflows often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oxygen demanding organic compounds, oil and grease, and other pollutants. Sanitary sewer overflows can pose a threat to public health, cause temporary exceedances of applicable water quality objectives, adversely affect aquatic life, and impair the public recreational use and aesthetic enjoyment of surface waters in the area.

The State Water Board adopted Statewide General Waste Discharge Requirements for sanitary sewer systems and the associated monitoring and reporting program by issuing Order No. 2006-0003 (General Order) on May 2, 2006.

All federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California are required to apply for coverage under and comply with the terms of the General Order. The City of Hollister is enrolled under the General Order.

## PROPOSED ORDER

Pursuant to authority in Sections 13263 and 13523.1 of the California Water Code, the proposed order sets requirements to govern the production, distribution, storage, and use of reclaimed wastewater, as well as the disposal of treated wastewater. The requirements have been developed considering:

- Best Professional Judgment of Regional Water Quality Control Board staff
- The Discharger's Report of Waste Discharge
- Title 40 Code of Federal Regulations
- State Water Board Resolution 68-16
- Water Quality Control Plan-Central Coast Region
- California Department of Public Health
- Title 22 CCR, Division 4, Chapter 3, Water Reclamation Criteria
- Porter-Cologne Water Quality Control Act (California Water Code)

The proposed Order substantially revises and updates the existing order and associated monitoring and reporting program. Water Board staff has divided the proposed Order into Supplier and Distributor specific requirements with general prohibitions, specifications and provisions applicable to both parties.

Significant changes from the existing Order include:

### Supplier Requirements

- **Wastewater Flows** are increased from 2.69 MGD to 4.0 MGD capacity with a future potential increase of wastewater flow to 5.0 MGD capacity after installation of a fifth Zenon Zeeweed 500d system ultrafiltration membrane.
- **Disinfected Tertiary Recycled Water Limitations** – new turbidity, coliform, and disinfection requirements excerpted from Title 22 of the California Code of Regulations for disinfected tertiary recycled water are added.
- **Reclamation Facility Operational Requirements** – Detailed reclamation facility requirements excerpted from Title 22 are added to the proposed Order for the operation and maintenance of the treatment facility.
- **Off-Specification Contingency Plan** – Requirements for the implementation of a contingency plan in the event effluent that does not meet the criteria for disinfected tertiary recycled water is discharged to the effluent storage basins.

### Distributor and User Requirements

- **Design Requirements** - Detailed distribution system and use area requirements excerpted from Title 22 are added to the proposed Order for the design, operation and maintenance of the distribution system and application areas.

- **Nutrient Management Plan** – Specific requirements are added to the proposed Order requiring the Distributor to develop and implement a nutrient management plan for the application of recycled water to ensure it is applied at agronomic rates and will not result in the leaching of nitrogen to the groundwater basin.
- **Long Term Salinity Management Program** - Specific requirements are added to the proposed Order requiring the Distributor to develop and implement a Long Term Salinity Management Program to document salt loading and to evaluate and implement reduction measures as practicable to reduce salt loading to the groundwater basin.
- **Individual Recycled Water Use Permits** – The proposed Order requires the Distributor to develop a set of rules and regulations for the Users and apply them via Recycled Water User Permits for each individual User.

### **MONITORING AND REPORTING PROGRAM**

The proposed Monitoring and Reporting Program requirements are organized as follows:

- Supplier Requirements
  - Water Supply Monitoring
  - Influent Monitoring
  - Effluent Monitoring
  - Waste Disposal and Storage Facility Monitoring
  - Solids/Biosolids Monitoring
  - Equipment Calibration
  - Reporting
- Distributor Requirements
  - Recycled Water Use Area Monitoring
  - Groundwater Monitoring
  - Reporting
- Supplier and Distributor Requirements
  - Provisions
  - Implementation

Significant changes from the existing Monitoring and Reporting Program include:

#### Supplier Requirements

- **Water Supply Monitoring** –The proposed Monitoring and Reporting Program requires the distributor to supply annual data representing the City of Hollister’s water supply quality.
- **Influent Monitoring** – Biochemical Oxygen Demand (BOD), pH, Total Suspended Solids (TSS), and Settleable Solids (SS) monitoring are to be sampled weekly. Total nitrogen as N, nitrate as N, and ammonia as N are to be sampled monthly. Semiannual Total Dissolved Solids (TDS), sodium, chloride, and sulfate monitoring is changed to quarterly. Quarterly boron, perchlorate, total trihalomethanes, and total trihaloacetic acid sampling is added.
- **Effluent Monitoring** – Continuous min/max flow, continuous turbidity, continuous total chlorine residual monitoring is added. Daily calculated average daily flow and coliform monitoring is added. Weekly BOD, ammonia (as N), nitrate (as N), and TSS

monitoring is added. Quarterly pH monitoring is changed to weekly. Quarterly TDS, sodium, and chloride are changed to monthly. Boron and sulfate are added to be monitored monthly. Total nitrogen and nitrite (as N) are added to be monitored quarterly. Annual monitoring additions include aluminum, antimony, arsenic, barium, beryllium, cadmium, chromium, copper, cyanide, fluoride, lead, mercury, nickel, selenium, thallium, and zinc. VOCs, PCBs, and pesticides are now to be tested for every 5 years.

- **Storage Facility Monitoring** – The proposed Monitoring and Reporting Program requires the Supplier to conduct visual monitoring of the recycled water disposal and storage ponds. Weekly analyses of pH and dissolved oxygen are required from all disposal and storage ponds. Sludge depth is required once every three years.
- **Solids/Biosolids Monitoring** – The proposed Monitoring and Reporting Program requires the Supplier to provide an annual report of the amount of solids generated at the facility, with a description of the disposal methods.
- **Equipment Calibration** – The proposed Monitoring and Reporting Program requires the Supplier to keep onsite calibration records of flow meters and other process instrumentation.
- **Reporting** – The Supplier is required to submit quarterly monitoring reports summarizing data for reclaimed water supplied. The Supplier is also required to submit annual monitoring reports compiling the previous year's worth of supplied reclaimed water.

#### Distributor Requirements

- **Recycled Water Use Area Monitoring** – the proposed monitoring requirements require the Users or Distributor to conduct weekly metering of irrigation flows to each irrigation area receiving recycled water and weekly visual monitoring. Records will be kept to ensure the application of recycled water is being conducted in accordance with the Order. In addition, the Distributor is required to conduct quarterly operation monitoring of the reuse site irrigation systems. The Users are required to provide quarterly updates to the Distributor regarding daily irrigation flow rates, proposed system modifications, system peculiarities, and to verify employee training. These requirements also require annual testing of backflow prevention devices and cross-connection testing.
- **Groundwater Monitoring** – The Distributor is required to conduct groundwater monitoring from all monitoring wells (existing and required) on a quarterly frequency for depth to water, total nitrogen, nitrate (as N), nitrite (as N), total Kjeldahl nitrogen (as N), pH, TDS, sodium, chloride, sulfate, boron, perchlorate, total trihalomethanes, and total trihaloacetic acid.
- **Reporting** – The Distributor is required to submit quarterly monitoring reports summarizing reclaimed water use. The Distributor is also required to submit annual monitoring reports compiling the previous years worth of irrigation flow, groundwater, and visual inspection data along with the required nutrient management plan and salt management program evaluations.

## COMPLIANCE HISTORY/STATUS

The City of Hollister has two wastewater treatment and disposal facilities, the domestic plant and the industrial plant. The Water Board adopted Existing Order No. 87-47 in March 1987 to regulate discharges from the domestic plant. Both plants achieved treatment through influent screening and facultative ponds. Disposal is through percolation beds. Historically, the two have been separate entities, with the DWTP handling the Discharger's domestic, commercial, institutional, and certain industrial wastewater flows, and the IWTP seasonal flows from tomato canneries. Currently, the DWTP continues to treat the same flows it always received, while the IWTP receives seasonal tomato cannery wastewater from a single operation and diverted domestic wastewater that would normally be directed to the DWTP. Wastewater diversion to the IWTP became necessary when the Discharger lacked adequate disposal capacity for treated wastewater at the DWTP.

The Discharger approached the Water Board to divert domestic wastewater flows to the IWTP in 1999. The Discharger proposed the IWTP represented excess treatment and disposal capacity, given both the seasonal nature of the cannery and the reduced cannery flow subsequent to some of the canneries shutting down operations. The Discharger proposed diverting a certain volume of domestic wastewater during the canning season, and greater volumes during the non-canning season (roughly October through June) to allow them greater flexibility for managing flows at the DWTP during the wet season when percolation capacity is reduced. Water Board staff drafted revised IWTP WDRs to allow the Discharger to divert domestic wastewater, and presented them to the Water Board.

The Water Board was strongly opposed to the Discharger's proposal, but eventually adopted modified IWTP WDRs that included provisions requiring the Discharger to develop a Long-term Wastewater Management Program (LTWMP) that would address the Discharger's overall wastewater treatment and disposal issues. Therefore, although the need for a LTWMP is focused on issues at the DWTP, the requirements for developing it are included in the IWTP WDRs. The Regional Board also included specific milestones for the Discharger in developing the LTWMP that were linked to incremental flow allocations for domestic wastewater diversion.

The Discharger was granted the initial flow allocation for diverting domestic wastewater to the IWTP shortly after the Water Board adopted the WDRs. However, the Discharger fell behind schedule in reaching subsequent milestones and faced other difficulties that prevented them from being granted subsequent flow allocations. The major issues were summarized as follows:

- The Discharger was unable to accurately measure influent flow rates at the DWTP. The Discharger's inability to accurately measure influent flow rates, led, in part, to the Discharger's decision to construct new headworks facilities at the DWTP.
- Treated wastewater seeped from a disposal bed at the DWTP to an inactive portion of the San Benito River channel over a 122-day period between November 2001 and March 2002. An estimated 6,100 gallons seeped out to the river channel. This violated the DWTP WDRs and was the direct result of the Discharger breaching an internal berm in the disposal bed that was originally constructed to increase separation between the disposal bed

and the river channel. The internal berm was breached without consultation with Water Board staff, and Discharger inspections of the riverbank after the berm was breached never occurred. The seepage occurred in an area where seepage was suspected during the wet season of 1997-98.

- On May 6, 2002, a disposal pond levee breached at the IWTP, resulting in approximately 15 million gallons of treated wastewater spilling to the San Benito River, which was dry at the time of discharge. The levee breach was attributed to a hole from a burrowing animal or earthquake activity. As a result, the City Council enacted an emergency sewer connection ban.

In response to the potential flow violations, seepage incident, 15-million gallon spill, and delays in developing the LTWMP, Water Board Executive Officer issued Cleanup or Abatement Order (CAO) R3-2002-0082. The CAO required the Discharger to keep in effect its self-imposed connection ban and submittal of various technical reports evaluating flow-metering issues, disposal capacity, and implementing levee inspection and burrowing animal control programs. However, the Water Code specifically allows the Water Board to impose a connection ban through a Cease and Desist Order (CDO); therefore, the Water Board imposed the connection ban through CDO R3-2002-0105. At the same time, staff issued a complaint for Administrative Civil Liability (ACL) for the 15-million gallon spill. Both of these Orders were presented to the Water Board in September 2002. The CDO was adopted, and the ACL was deferred for further action in November. After the CDO was adopted, the Water Board Executive Officer rescinded the CAO.

CDO R3-2002-0105 instituted a formal sewer system connection ban, and set deadlines for various projects/submittals deemed necessary to bring the Discharger into compliance with its WDRs. These projects/submittals included an updated financial assessment for implementing the LTWMP, expanded water conservation efforts, reducing DWTP effluent suspended solids concentrations to 60 mg/L or less (to address plugging of the disposal beds and reduction in percolation capacity), construction of new headworks, submittal of a Report of Waste Discharge for the LTWMP, and full implementation of the LTWMP by October 2005. The Discharger has since then completed all the requirements of the CDO. See Agenda Item No. 36 for request for rescission of CDO R3-2002-0105.

After further discussion at the November 2002 meeting, the Water Board adopted ACL R3-2002-0097, doubling staff's recommended civil liability amount to a total of \$1.2 million. All but \$24,000 in staff costs was suspended pending successful completion of various milestones. These included expending \$150,000 on an emergency storage basin at the DWTP, \$126,000 on water conservation efforts in the City, and \$300,000 on a hydrogeologic study assessing impacts of wastewater disposal at both the DWTP and IWTP. \$600,000 was suspended in \$200,000 increments for constructing new headworks by August 1, 2003, reducing DWTP effluent suspended solids concentrations to 60 mg/L by August 1, 2003, and fully implementing the LTWMP by October 15, 2005.

The Discharger submitted its proposed LTWMP in September 2002. Water Board staff responded to the Discharger stating the submitted LTWMP lacked specific details in meeting water quality requirements and required the Discharger to re-submit the LTWMP. The Discharger re-submitted the LTWMP in December 2005 and a final draft in March 2007 along with its final Report of Waste Discharge.

More recent violations from the DWTP include low dissolved oxygen levels in the disposal ponds and minor spills (less than 100 gallons) from their sanitary sewer collection system mostly due to grease blockages.

### **POTENTIAL PROBLEMS**

The facility poses the usual problems associated with municipal wastewater treatment, disposal, and recycling. Construction of a new treatment plant, a distribution system, and other appurtenances may have start-up problems. The Discharger is required to implement a Long-term Salinity Management Program which will set milestones in creating reclaimed water capable of agricultural uses throughout the Hollister region. The milestones are imposed by the Order requiring a reduction and eventual elimination of disinfected tertiary treated wastewater to the IWTP by the year 2015. It is possible that the Discharger will not meet the milestones set in the Long-term Salinity Management Program therefore, not meeting the elimination of discharges to the IWTP.

### **ENVIRONMENTAL SUMMARY**

The Hollister City Council 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 on October 31, 2006, for the City of Hollister's Domestic Wastewater System Improvements and the San Benito County Water District Recycled Water Project (SCH2006012149). The City of Hollister determined the DWTP facility upgrade will have significant adverse environmental effects and 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.

The Hollister City Council certified a final Supplemental Environmental Impact Report in accordance with the California Environmental Quality Act (Public Resources Code, Section 621000 et seq.) and the California Code of Regulations on April 7, 2008, for the City of Hollister's Reclaimed Water Irrigation Project (SCH2007021136). The City of Hollister determined the Reclaimed Water Irrigation Project will have no significant adverse environmental effects, although implementation of mitigation measures were prescribed. Mitigation measures to prevent nuisance and ensure protection of beneficial uses of surface water and groundwater will be implemented through this Order.

### **COMMENTS & RESPONSES**

The City of Hollister and the California Department of Public Health submitted comments. Water Board staff has provided these comments and a copy of the original comment letters as Attachments C, D, and E.

### **RECOMMENDATION**

Adopt Order No. R3-2008-0069 as proposed.

### **ATTACHMENTS**

- A. Master Reclamation Requirements Order No. R3-2008-0069
- B. Monitoring and Reporting Program Requirements Order No. R3-2008-0069

- C. Comments and Responses
- D. City of Hollister Comment Letter and Email
- E. California Department of Public Health Comment Letter

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