CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION
BOARD ORDER NO. R6V-2013-0005
WDID 6B360907005

WASTE DISCHARGE REQUIREMENTS AND WATER RECYCLING REQUIREMENTS FOR THE CITY OF HESPERIA AND VICTOR VALLEY WASTEWATER RECLAMATION AUTHORITY HESPERIA SUB-REGIONAL RECLAMATION PLANT

_____ San Bernardino County _____

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

1. Producer/Discharger

The Victor Valley Wastewater Reclamation Authority (Authority) submitted a Report of Waste Discharge for the proposed Hesperia Sub-Regional Reclamation Plant (sub-regional plant). Assessor Parcel maps as of October 2012 indicate that the Authority owns some of the land and the City of Hesperia owns the remainder of the land. Therefore, the City of Hesperia and the Authority are named Producer/Discharger in this Water Board Order (Order). The City intends to transfer ownership of the land to the Authority when the sub-regional plant is built. If the Water Board receives evidence that the Authority is the sole landowner, it will remove the City as Producer/Discharger.

The Authority is a joint powers authority and public agency of the state of California. The Authority operates the Victor Valley (Regional) Municipal Wastewater Treatment Plant (regional plant) for the benefit of its member agencies. The member agencies are the Town of Apple Valley, the City of Hesperia, San Bernardino County Special Districts (Service Area's No. 42 Oro Grande and No. 64 Spring Valley Lake), and the City of Victorville.

The Producer/Discharger proposes to construct and operate the sub-regional plant and is the agency responsible for production of recycled water. The sub-regional plant is a municipal wastewater treatment facility that produces disinfected tertiary recycled water (also referred to as Title 22 effluent; referring to California Code of Regulations, Title 22, beginning with section 60300). Effluent is intended for landscape irrigation and industrial process recycled water uses. Effluent produced in excess of recycled water demand will be discharged to one or more percolation ponds at the land discharge site.

The Producer/Discharger is responsible for compliance and monitoring prescribed by Waste Discharge Requirements (WDRs) and water recycling requirements (WRRs) adopted by the Water Board in this Order. The City of Hesperia is responsible for the operation and maintenance of the transmission and distribution

system that will deliver recycled water to the various end users and is considered the "Distributor", along with being considered a "Producer/Discharger".

2. Reason for Action

The WDRs and WRRs are needed to authorize the Producer/Discharger to produce disinfected tertiary recycled water and discharge waste exceeding recycled demand into percolation ponds at the land discharge site, which is located adjacent to the sub-regional plant.

3. Report of Waste Discharge

On behalf of the "Producer/Discharger", the Authority submitted a complete Report of Waste Discharge on July 20, 2012. Information comprising that complete Report of Waste Discharge is presented in Table A.

Table A. Report of Waste Discharge Documents

Document	Document date or date received	Purpose
Report of Waste Discharge, Form 200, with attachments	July 9, 2009	Request authorization to a) produce disinfected tertiary recycled water from the new sub-regional plant and b) discharge treated wastewater to the land discharge site
Draft EIR*	December 16, 2010	Satisfy CEQA for the sub-regional plant and land discharge site.
Notice of Determination*	February 18, 2011	Find that project environmental impacts are less than significant with mitigation.
Cumulative Impact Assessment	February 2011	Demonstrate that the proposed treatment process results in "the highest water quality consistent with maximum benefit to the people of the State" (State non-degradation policy, Resolution 68-16)
Notice of Exemption	February 18, 2011	File a notice that the cumulative impacts assessments not a project and is thereby exempted from CEQA.
Title 22 Engineering Report, Revised	November 30, 2011	Identify revised site locations for the sub-regional plant and the land discharge site. The Engineering Report is not complete, nor has been accepted by the CA Department of Public Health.
Report of Waste Discharge, Form 200, Revision 1.	July 20, 2012	Provide other information needed to prepare the WDRs of this Order.

Note: Items marked (*) are not part of the report of waste discharge, but satisfy the California Environmental Quality Act

4. Regulatory History

These are new requirements. As of Order adoption, the sub-regional plant has yet to be constructed.

5. Facility Description

The Producer/Discharger proposes the following sequence of unit processes at the sub-regional plant:

- influent pump station and pumps
- fine screens
- grit removal
- membrane bioreactor (MBR) technology
- ultraviolet disinfection

MBR technology combines aerobic treatment, anoxic treatment, and membrane filtration resulting in a tertiary treated, nitrogen reduced effluent. Ultraviolet disinfection is commonly referred to as UV disinfection.

The Producer/Discharger plans to construct the sub-regional plant in phases. Phase I will be a 1 MGD plant, Phase II will be a 1 MGD expansion to 2 MGD, and Phase III will be a 2 MGD expansion to 4 MGD. This Order covers WDRs and WRRs for Phase I.

Collected solids from the fine screens and grit removal will be transported offsite to an authorized solid waste disposal facility. Biosolids from the aerobic treatment, anoxic treatment, and membrane bioreactor filtration system are discharged to the community sewage collection system where they will be treated at the regional plant.

The sub-regional plant treatment flow-sheet is presented in Attachment C.

6. Recycled Water Uses and Disposal

The Producer/Discharger plans to produce disinfected tertiary recycled water for the following uses within the Hesperia community:

- Landscape or turf irrigation areas
- Industrial uses for cooling or other purposes

7. Authorized Disposal Area/Site

The authorized disposal site is the land discharge site. Disinfected tertiary recycled water produced in excess of recycled water demands will be discharged

to the land discharge site. The location of the sub-regional plant and the land discharge site are shown in Facility Location Map. (Attachment A and B)

8. Current Disposal Practice

Wastewater is currently treated at the regional plant.

9. Recycled Water Use Requirements

The California Department of Public Health's (CDPH) established criteria for the use of recycled water. These criteria are codified in California Code of Regulations, article 3 of chapter 3 of division 4, title 22, section 60303 et seq. This Order requires producers and users of recycled water to comply with applicable *California Code of Regulations (CCR)*, title 22 criteria.

As required under *CCR*, title 22, section 60323, the Discharger must submit an Engineering Report to CDPH, and obtain its approval, for the production, distribution and use of recycled water. VVWRA's status in fulfilling this requirement is the following:

a. The Producer/Discharger submitted the revised Title 22 Engineering Report to CDPH on November 30, 2011, as required in CCR, title 22, CCR, section 60323.

b. CDPH issued a Title 22 engineering report comment letter to the Water Board on January 24, 2012. CDPH commented that an amended Title 22 report which identifies the recycled water distribution system and specific recycled water use sites, including use area inspections, monitoring and employee training, will need to be submitted to the Department for review and approval prior to any production and delivery of recycled water. Implementation of this comment is included in the requirements of this Order.

10. Title 27 California Code of Regulations (CCR) Exemption

As provided in title 27, CCR, section 20090(a), the following discharges are exempt from the State Water Resources Control Board regulations:

> "*Sewage - Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludges or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable SWRCB-promulgated provisions of this division."*

As the State Water Resources Control Board described in its Lodi decision[1], subsection 20090(a) actually contains two distinct exemptions: 1) a conditional "sewage exemption" and 2) and unconditional "sewage treatment plant exemption."

The discharges of treated wastewater to the percolation ponds meet the pre-conditions for Title 27 sewage exemption because they meet the following criteria:

(1) The discharge to the percolation ponds is regulated by this Order.

(2) The discharge of treated wastewater to the percolation ponds complies with the Basin Plan because the discharge of treated effluent must attain effluent limitations that comply with water quality objectives and prohibitions described in the Basin Plan.

Bio-solids from the sub-regional treatment plant are disposed through the interceptor line to the regional treatment plant and are not the subject of this Order.

11. Site Geology

The land discharge site is underlaid with sedimentary deposits. The upper layers consist of clay and sandy clay. Beneath these layers is gravel with clay streaks and layers[2].

12. Site Hydrology

The proposed sub-regional plant and land discharge site are not within or adjacent to surface waters and the proposed discharge is not to surface waters. Surface water runoff during storm events, naturally occurs as sheet flow. However flow running onto the plant will be diverted and runoff will be retained and percolated.

13. Site Hydrogeology

The land discharge site lies above the Upper Mojave River Valley Groundwater Basin. This basin contains two principal aquifers: the Mojave River floodplain aquifer and the regional aquifer (Stamos et al)[3]. The floodplain aquifer contains sands and gravel deposits.

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[1] State Water Resources Control Board (SWRCB) Water Quality (WQ) Order No. 2012-0001 "IN THE MATTER OF OWN MOTION REVIEW OF CITY OF LODI WASTE DISCHARGE REQUIREMENTS AND MASTER RECLAMATION PERMIT (ORDER NO. R5-2007-0113 [NPDES NO. CA0079243]) ISSUED BY THE CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION - SWRCB/OCC FILE A-1886", which amended SWRCB WQ Order No. 2009-0005.

[2] Bader. J. S. et al, Data on Water Wells in the Upper Mojave Valley Area, San Bernardino County, California, USGS, 1958.

[3] Stamos, C. L, et al, Simulation of Ground-Water Flow in the Mojave River Basin, California, USGS, 2001.

The regional aquifer is located essentially in the entire groundwater basin, and it also lies under the flood plain aquifer. The regional aquifer is deep, and is generally not as permeable as the flood plain aquifer. The deposits in the regional aquifer yield moderately to supply wells. Based on the geology of the site, water exists in permeable layers, between layers of less permeability. Supply wells are typically not screened in shallow zones because the water bearing layers are thin compared to the deeper regional aquifer (DWR, 1967)[4].

The surface elevation of the land discharge sit is 3340 feet above sea level (ASL) based on the 7½ minute USGS map. The estimated groundwater table elevation ranges between 2800 feet ASL and 2850 feet ASL[5]. Therefore, the estimated depth to water is 400 feet[6]. The existing total dissolved solids (TDS) and nitrate-nitrogen groundwater quality is 275 mg/L and 3 mg/L, respectively[5].

14. Receiving Waters

The receiving waters are the groundwaters of the Upper Mojave River Valley Groundwater Basin (CA Department of Water Resources Unit No. 6-42).

15. Basin Plan

The Water Board adopted a Water Quality Control Plan for the Lahontan Region (Basin Plan), which became effective on March 31, 1995. This Order implements the Basin Plan as amended.

16. Beneficial Uses

The beneficial uses of the groundwaters for the Upper Mojave River Valley Groundwater Basin as set forth and defined in the Basin Plan are:

a. Municipal and Domestic Supply (MUN);
b. Agricultural Supply (AGR);
c. Industrial Service Supply (IND);
d. Freshwater Replenishment (FRSH); and
e. Aquaculture (AQUA).

17. Maintenance of High Quality Waters in California, State Board Resolution 68-16, Degradation Analysis

The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16 for both surface and groundwater. That policy

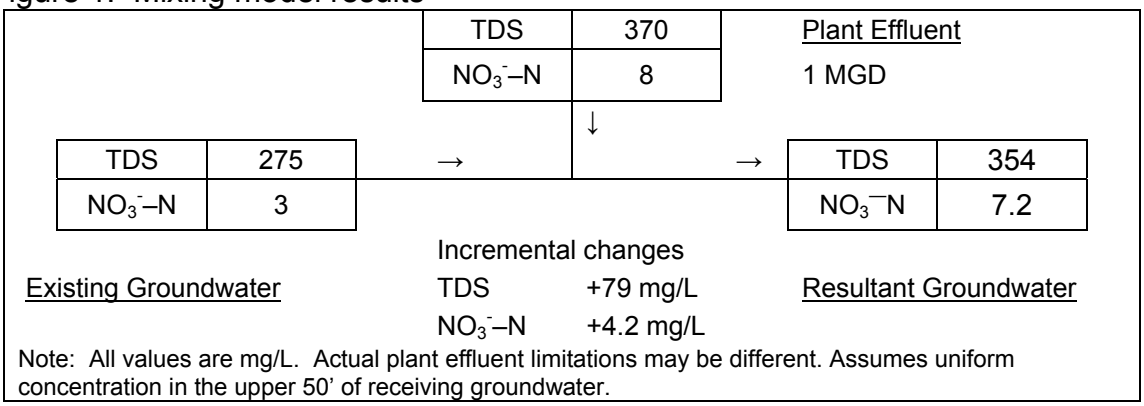
[4] DWR, Mojave River Ground Water Basins Investigation, Bulletin No. 84, August 1967.
[5] Larry Walker and Associates, Victorville Valley Wastewater Reclamation Authority Cumulative Impacts Analysis, February 2011.
[6] Victor Valley Wastewater Reclamation Authority, Incomplete Report of Waste Discharge Apple Valley and Hesperia Sub-Regional Water Reclamation Plants, San Bernardino County, July 20, 2012

requires that whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality will be maintained until it has been demonstrated to the State that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial use of such water and will not result in water quality less than that prescribed in the policies. If degradation is proposed, the proposed discharge that results in degradation must be treated using best practical control technology, pollution or nuisance will not occur, and that the highest water quality consistent with maximum benefit to the people of the State will be maintained. The Water Board's Basin Plan implements, and incorporates by reference, the State antidegradation policy.

The two constituents that may cause significant degradation of the existing groundwater quality are TDS and nitrate–nitrogen. Elevated TDS concentration degrades the taste of the water. High nitrate–nitrogen in water has cause incidents of methemoglobinemia in infants. The water quality objective defined in the Basin Plan for nitrate–nitrogen is 10 mg/L (also drinking water standard or maximum contaminant level, or MCL).

The Producer/Discharger's Cumulative Impact Assessment analyzed potential groundwater degradation predicted by the operation of the sub-regional plant. The Producer/Discharger's Title 22 Engineering Report, Revised, supplemented the Cumulative Impact Assessment report with existing groundwater data and the results of a groundwater mixing model. The model involves a complete mixing column, an estimated hydraulic conductivity of 50 ft/day, and the local groundwater gradient. The mixing column includes the upper part of the aquifer, particularly a thickness extending to 50 feet below the water table, or saturated zone, and a ½ mile radius from the land discharge site. The results of the mixing model are shown in Figure 1. The mixing model results show that TDS and nitrate-nitrogen will increase by 79 mg/L and 4.2 mg/L, respectively, from the discharge to the percolation ponds at the land discharge site. Even with the degradation, the groundwater quality will still meet Basin Plan water quality objectives. In addition, the intent of this Order is to authorize production and delivery of recycled water to users. Specific uses of recycled water will be separately regulated. Recycled water use will reduce and possibly eliminate the discharge to the land discharge site as new users are identified. Therefore, this amount of degradation is acceptable and there is no need for more restrictive requirements.

Figure 1. Mixing model results



Note: All values are mg/L. Actual plant effluent limitations may be different. Assumes uniform concentration in the upper 50' of receiving groundwater.

The Producer/Discharger evaluated the additional capital and operation cost of an alternative process that would remove additional TDS and nitrate-nitrogen by reverse osmosis (RO) technology. Application of this additional technology would produce effluent that is equal or superior to existing underlying groundwater quality. The Producer/Discharger found that the incremental increase in the monthly user cost is $10.89. The Producer/Discharger charges a based fee of $12.03; therefore, the user base fee would double to $22.92 per month (which does not include additional fees added by the member agency).

To determine whether the application of additional RO technology would result in the best practicable treatment or control of the discharge necessary to assure that the highest water quality consistent with maximum benefit to the people of the State will be maintained, the Producer/Discharger performed a maximum benefit analysis. The analysis compared the water quality benefit relative to the social economic benefit when RO technology is added to the treatment process. RO will not result in groundwater degradation, and may even cause a modest improvement in groundwater quality. The Producer/Discharger estimated the social-economic impacts of the increased user fees using the house-hold income distribution for the Victor Valley area. The Producer/Discharger found that the increases in user fees for the alternative process would result in a loss of 60 jobs in the Victor Valley area. Therefore, the alternative treatment process, which would keep the existing groundwater quality, does not result in the highest water quality consistent with the maximum benefit to the people of the State. Further, the degradation still results in groundwater quality meeting Basin Plan water quality objectives.

In summary, groundwater degradation resulting from effluent discharged to percolation ponds is acceptable and justified according to State Water Board Resolution No. 68-16.

18. Water Quality Objectives (Water Code section 13241(a-f) factors)

Water Code section 13263 requires that the Water Board, when prescribing WDRs, take into consideration the following factors:

a. Past, present, and probable future beneficial uses of water – The current and future beneficial uses and existing water quality in the area will be maintained.

b. Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto – The proposed discharge will replace uses that presently rely on Upper Mojave River Valley Groundwater Basin. This groundwater basin is in an over-draft condition and has been adjudicated. Therefore, any water use that replaces groundwater is an improvement to the overdraft condition.

c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors, which affect water quality in the area – VVWRA and Mojave Water Agency are coordinating actions that affect water quality in the region.

d. Economic considerations - VVWRA compared the sub-regional plant costs to the alternative regional system that includes expanding the regional plant and installing outfall pipes to deliver recycled water to Apple Valley and Hesperia (Cumulative Impacts Assessment, Table 6-8). VVWRA found that the sub-regional plant system is 20% less in cost than the regional plant system. Both capital costs and operation/maintenance costs are included in the cost comparison.

e. The need for developing housing in the region - The order should have no effect on housing development

f. The need to develop and use recycled water - The objective of the sub-regional plant is to develop the recycled water resource.

19. California Environmental Quality Act (CEQA)

The Producer/Discharger certified an Environmental Impact Report (EIR) on February 17, 2011 for its project, which includes the construction of the sub-regional plant and construction of percolation ponds at the land discharge site. The Water Board has used its independent judgment to consider the environmental document and incorporated mitigation measures within its jurisdiction into this Order to mitigate the project's significant impacts that relate to water quality.

Table B summarizes the project's water quality related potential significant impacts, mitigation measures, and the Water Board's findings for its conclusion that the mitigation measures that have been incorporated into the project will avoid or substantially lessen the potentially significant environmental effect, as identified in the final EIR. This Order, the accompanying Monitoring and Reporting Program, Water Board's administration of storm water and stream modification regulations serve as a mitigation monitoring program and ensure compliance with required mitigation measures. The Water Board will file a Notice of Determination within five days from the issuance of this Order.

Table B. Implementation of Water Quality Mitigation Measures

Impact	Mitigation measure	Water Board's Finding
Subregional-related future site-specific projects have a potential to adversely impact listed and sensitive plant and animal species located within the project area.	4.3-6 The Producer/Discharger will provide compensating mitigation for loss of any riparian or wetland areas at a minimum ratio of 2:1.	Water Board administers mitigation through a notice of applicability under the "401" Program.
Potential erosion sedimentation impacts from construction and maintenance of the two Subregional WRPs and support facilities	4.5-1 The construction contractor shall prepare and implement a Storm Water Pollution Prevention Plan. The plan must specify best management practices to prevent and minimize the discharge of erosion materials and sediment-laden storm water.	Water Board administers mitigation through a notice of applicability to a general stormwater order under the Federal National Pollutant Discharge Elimination System (NPDES) Stormwater program.
	4.5-2 The Producer/Discharger will prepare and implement a Water Quality Management Plan following construction. The plan specifies long-term best management practices to prevent and minimize the discharge of erosion materials and sediment-laden storm water.	Water Board will administer mitigation under the City of Hesperia's permit program for the municipal separate storm sewer system, a requirement of the NPDES Stormwater program.
Contingency mitigation measures to address potential groundwater quality impacts even though not forecast to occur in the water quality impact forecast.	4.5-6 The discharge of recycled water must not cause or contribute to a cumulative violation of the Basin Plan maximum benefit objective. In addition to monitoring, the Producer/Discharger will use models to forecast future TDS and nitrate–nitrogen concentration. (The maximum benefit objective is derived from State Antidegradation policy Resolution 68-16.	Water Board administers mitigation in the antidegradation finding of this Order for the land discharge site. Recycled water use effects are separately covered under future WDRs for recycled waters.

20. Basis for Effluent Limitations

a. Secondary treatment of sewage

According to Basin Plan Section 4.4, municipal treatment facilities must provide effective solids removal and some soluble organics removal for percolation pond operations. The U.S. Environmental Protection Agency (EPA) has established secondary treatment standards that represent removal of soluble and solid matter in sewage. Although these standards apply only to surface water discharges, the Water Board is using these standards to ensure that the discharge meets the Basin Plan requirement.

Because the sub-regional plant produces disinfected tertiary recycled water, the plant is capable of producing a lower concentration of BOD and suspended solids than the secondary treatment standards. However, the Basin Plan does not specify tertiary treatment as the standard for discharge to percolation ponds. Therefore, the selected effluent limitations are the U.S. EPA secondary standards, which will be easily met by the Producer's/Discharger's proposed tertiary treatment.

b. Total dissolved solids (TDS)

TDS control is needed to protect groundwater from excessive degradation on account of salts. Ideally, the TDS effluent limitation is set to the Basin Plan numeric TDS objective for the receiving groundwater basin. However, the Basin Plan does not have a numeric TDS objective for the receiving groundwater basin.

The Basin Plan states, in areas where insufficient data preclude the establishment of a TDS objective, and as an interim measure until such data are available, effluent limitations may specify a reasonable incremental increase for constituents above the level contained in the underlying groundwater. However, this method is not suitable for the proposed discharge because the delivered supply quality to the location served by the sub-regional plant will likely differ from the existing underlying groundwater. Specifying an effluent limitation based on current effluent quality is not possible because, as a new discharge, TDS effluent data do not exist.

The Basin Plan does have an objective for all groundwater basins, which states that the groundwater must not contain concentrations of TDS, as a chemical constituent, in excess of the secondary maximum contaminant level (MCL) based upon drinking water standards specified in Title 22, CCR, Table 64449-A of Section 64449, Secondary Maximum Contaminant Levels-Consumer Acceptance Limits. Water Board implements this objective in WDRs as a receiving water limitation. For TDS, the drinking water standard, MCL and thus water quality objective, is a three part

standard; 500 mg/L long-term, 1,000 mg/L recommended, 1,500 mg/L short term.

Based on the above considerations, Water Board is not specifying a TDS effluent limitation in this Order. Control of TDS is implemented as a receiving water limitation.

c. Total nitrogen

Total nitrogen is important because the oxidized component, nitrate–nitrogen, has a primary MCL value of 10 mg/L, which is necessary to protect public health. Wastewater effluent will typically contain some non-oxidized nitrogen components, which are organic nitrogen, ammonia, and nitrite. For the purposes of groundwater protection, the effluent limitation is set for total nitrogen with the assumption that all nitrogen is in the oxidized state by the time the effluent reaches groundwater.

The Producer/Discharger reports in Table 3.4-4 of the draft EIR that the treatment process is designed to meet 8 mg/L total nitrogen limit initially, with the flexibility to meet a future anticipated goal of 4 mg/L. The Producer/Discharger does not describe how the treatment process will be changed to go from total nitrogen limit of 8 mg/L to 4 mg/L. In the development of the NPDES permit for the regional treatment plant, which the Water Board adopted in February 2008, the Water Board examined the ability of MBR technology to achieve nitrogen removal. The Water Board found that an MBR facility can meet a long-term average of 6.0 mg/L total nitrogen. Therefore, Water Board selected 6.0 mg/L as the long-term average of total nitrogen in the effluent.

To evaluate compliance for each monthly monitoring period, Water Board converts the long-term average to an average monthly effluent limitation, and if appropriate, a maximum daily effluent limitation through use of multiplier values. The generalized equations are the following:

$$\left\{\begin{array}{l}\text{Average}\\ \text{monthly}\\ \text{effluent}\\ \text{limitation}\end{array}\right\} = \left\{\begin{array}{l}\text{Long-}\\ \text{term}\\ \text{average}\end{array}\right\} \times \left\{\begin{array}{l}\text{average}\\ \text{monthly}\\ \text{multiplier}\end{array}\right\}$$

and

$$\left\{\begin{array}{l}\text{Maximum}\\ \text{daily}\\ \text{effluent}\\ \text{limitation}\end{array}\right\} = \left\{\begin{array}{l}\text{Long-}\\ \text{term}\\ \text{average}\end{array}\right\} \times \left\{\begin{array}{l}\text{maximum}\\ \text{daily}\\ \text{multiplier}\end{array}\right\}$$

The multiplier values are determined using statistical methods founded in the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP)[7]. The multiplier values are essentially a function of two variables: (1) the variability of the data and (2) the number of samples collected in a month. Data variability is quantified using the coefficient of variation parameter, which is the sample standard deviation divided by the sample mean. The SIP has a lookup table that display multipliers as a function of the two variables. The SIP provides detailed instructions for the coefficient of variation calculation, and includes the statistical equations that are the basis for the multiplier values in the table.

In the absence of sample data, the Water Board cannot derive a coefficient of variability. In those cases where no sample data exist, the SIP instructs the user to select a default coefficient of variation of 0.6. Using that default coefficient of variation, the resulting average monthly multiplier and maximum daily multiplier values are 1.55 and 2.01. Therefore, the proposed nitrogen limits are the following:

Average monthly effluent limitation	=	6 mg/L	×	1.55	=	**9.3 mg/L**

and

Maximum daily effluent limitation	=	6 mg/L	×	2.01	=	**12.1 mg/L**

21. Compliance Determination

A Monitoring and Reporting Program has been developed for this discharge and is incorporated into the requirements of this Order. The Monitoring and Reporting Program is necessary to check for compliance with the effluent limitations of this Order.

[7] The SIP implements criteria for priority toxic pollutants contained in the California Toxics rule promulgated by the US EPA, as well as other toxic pollutant criteria and objectives, and does not apply specifically to discharges to groundwater. Nonetheless, the standardized approach set forth in the SIP for developing water quality-based effluent limitations is being used to develop effluent limitations in groundwater for total nitrogen and TDS because it provides useful guidance that is not theoretically limited to application to surface waters.

This Order also requires the Producer/Discharger to install detection groundwater monitoring wells. The objective of these wells is to observe the changes to groundwater quality as a result of the discharge with respect to receiving water objectives.

As a further measure of compliance, the Producer/Discharger is required to submit a recycled water use performance report every five years. This report is justified because the Producer/Discharger intends to maximize the supply of recycled water to users and to minimize the quantity discharged to the land discharge site, thereby reducing the groundwater degradation. The report is also justified to assess whether the movement of degraded groundwater has impacted groundwater beyond the groundwater mixing zone that is defined in the anti-degradation finding and the Producer/Discharger's 2011 Title 22 Engineering Report.

22. Classification

The threat to Water Quality from the sub-regional plant is level (3) because water quality degradation will result from the discharge, and the complexity is level (b) because there are numerous discharge points and groundwater monitoring is required. This classification is subject to change based on treatment or disposal method modifications or revised state regulations.

23. Notification of Interested Parties

The Water Board has notified the Discharger and interested persons of its intent to adopt new WDRs for the discharge.

24. Consideration of Interested Parties

The Water Board, in a public meeting held January 16 and 17, 2013, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the Producer/Discharger shall comply with the following:

I. SPECIFICATIONS

A. Land discharge site

1. The discharge to the land discharge site shall meet the following constituent limitations of Table C.

Table C. Effluent limitations

Constituent	Units	Average monthly	Average weekly	Maximum daily
Biochemical oxygen demand (BOD) (5-day at 20°C)	mg/L	30	45	– –
Total suspended solids	mg/L	30	45	– –
Total nitrogen	mg/L	9.3	– –	12.1

2. The average monthly percent removal between the influent and effluent at the sub-regional plant shall be 85% or greater for BOD and 85% or greater for total suspended solids.

3. The pH in the discharge shall not be less than 6.5 pH units or greater than 8.5 pH units.

4. The combined flow discharged to the land discharge site and produced for recycled water uses shall not exceed 1.0 MGD in a calendar year.

B. Recycled water production

The requirements in this section only apply when recycled water is being produced for distribution.

1. Produced recycled water shall not exceed the following numerical limits for turbidity:

   a. 0.2 NTU more than 5 percent of the time within a 24-hour period; and
   b. 0.5 NTU at any time.

2. The median concentration of total coliform bacteria in produced recycled water shall not exceed a most probable number (MPN) of 2.2 per 100 mL utilizing the bacteriological results of the last seven days for which analyses have been completed and the number of total coliform bacteria does not exceed an MPN of 23 per 100 mL in more than one sample in any 30 day period. No sample shall exceed an MPN of 240 total coliform bacteria per 100 mL.

3. The production of recycled water shall meet the definition for disinfected tertiary recycled water in title 22, CCR, section 60301.230.

4. The Producer/Discharger shall not produce or supply recycled water until the CDPH accepts the distribution and use of recycled water through an updated and approved Title 22 Engineering Report.

C. Establishment of a detection groundwater monitoring program - The Producer/Discharger shall install detection groundwater monitoring wells at sufficient locations and depths to evaluate changes in groundwater quality in the uppermost aquifer beneath the land discharge site, pursuant to the attached Monitoring and Reporting Program.

D. Receiving water limitations

The discharge must not cause a violation of the following water quality objectives in the Upper Mojave River Valley Groundwater Basin:

1. Bacteria – In groundwater designated as MUN, the median concentration of coliform organisms over any seven-day period shall be less than 1.1/100 milliliters.

2. Chemical Constituents – Groundwater designated as MUN shall not contain concentrations of chemical constituents in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following provisions of Title 22, of the California Code of Regulations which are incorporated by reference into this plan: Table 64431-A of Section 64431 (Inorganic Chemicals), Table 64431-B of Section 64431 (Fluoride), Table 64444-A of Section 64444 (Organic Chemicals), Table 64449-A of Section 64449 (Secondary Maximum Contaminant Levels – Consumer Acceptance Limits), and Table 64449-B of Section 64449 (Secondary Maximum Contaminant Levels – Ranges).

   Waters designated as AGR shall not contain concentrations of chemical constituents in amounts that adversely affect the water for beneficial uses (i.e. agricultural purposes).

   Groundwater shall not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.

3. Radioactivity – Groundwaters designated as MUN shall not contain concentrations of radionuclides in excess of the limits specified in Table 4 of section 64443 (Radioactivity) of Title 22 of the California Code of Regulations.

4. Taste and Odors – Groundwaters shall not contain taste or odor-producing substances in concentrations that cause nuisance or that adversely affect beneficial uses. For groundwater designated as MUN, at a minimum, concentrations shall not exceed adopted secondary maximum contaminant levels specified in Table 64449-A of Section 64449 (Secondary Maximum Contaminant Levels – Consumer Acceptance Limits), and Table 64449-B of Section 64449 (Secondary Maximum Contaminant Levels - Ranges) of Title 22 of the California Code of Regulations.

E. General Requirements and Prohibitions

1. There must be no discharge, bypass, or diversion of untreated or treated wastewater, sludge, grease, or oils from the transport, treatment, or authorized disposal and recycling sites to adjacent land areas or surface waters.

2. Surface flow, or visible discharge of untreated or treated wastewater, from the authorized disposal sites to adjacent land areas or surface waters, is prohibited.

3. All facilities used for collection, transport, treatment, or disposal of waste regulated by this Order must be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

4. The freeboard of any percolation pond at the land discharge site shall not be less than 24 inches.

5. The discharge must not cause pollution, or threatened pollution, as defined in Water Code section 13050, subdivision l.

6. Neither the treatment nor the discharge must cause a nuisance, as defined in Water Code section 13050, subdivision m.

7. The disposal of waste residue, including sludge (biosolids), must be in a manner in compliance with all local, state, and federal requirements.

8. Treated wastewater used for dust control or soil compaction must be applied at a rate and amount that does not cause runoff or excessive ponding.

9. The discharge of waste, as defined in the Water Code, which causes violation of any narrative water quality objective contained in the Basin Plan, is prohibited.

10. The discharge of waste, which causes violation of any numeric water quality objective contained in the Basin Plan, is prohibited.

II. PROVISIONS

A. Pursuant to Water Code, section 13267, the Producer/Discharger must comply with the attached Monitoring and Reporting Program No R6V-2013-0005, which is made a part of this Order. Reports requested under the Monitoring and Reporting Program are required to monitor the effects on water quality from known or suspected discharges of waste to waters of the State as a result of releases of treated waste water regulated by this Order.

B. The Producer/Discharger must comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, which is included as Attachment “D” and is made part of this Order.

C. The sub-regional plant must be supervised by persons possessing a Waste Water Treatment Plant Operator certificate of appropriate grade pursuant to California Code of Regulations, title 23, section 3670 et seq.

D. The Producer/Discharger must develop and/or participate in the development of a salt/nutrient management plan for the Mojave River Valley Groundwater Basin that is consistent with Paragraph 6 of the Recycled Water Policy. The Mojave Water Agency is taking the lead role to develop the plan which must be submitted to the Water Board by May 14, 2014.

E. The Discharger shall immediately notify the Water Board whenever an adverse condition occurs. Written confirmation shall follow. An adverse condition includes, but is not limited to such things as nuisance odors, overflowing units, extended power outages or mechanical breakdowns that affect effluent quality.

F. Any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge shall be reported to this Water Board at least one hundred and forty (140) days in advance of implementation of any such proposal.

G. The Producer/Discharger shall submit a recycled water use performance report every five years, pursuant to the attached Monitoring and Reporting Program. The report must determine and assess groundwater degradation within and outside the groundwater mixing zone. The groundwater mixing zone is defined in the Producer’s/Discharger’s 2011 Title 22 Engineering

Report as a column that extends downward 50 feet from the top of the saturated zone and outward for a radius of ½ mile beneath the land discharge site.

I, Patty Z. Kouyoumdjain, 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, Lahontan Region, on January 17, 2013.

Patty Z. Kouyoumdjian

PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachments: A. Vicinity Map
B. Facility Location Map
C. Process Flow Diagram
D. Standard Provisions for Waste Discharge Requirements

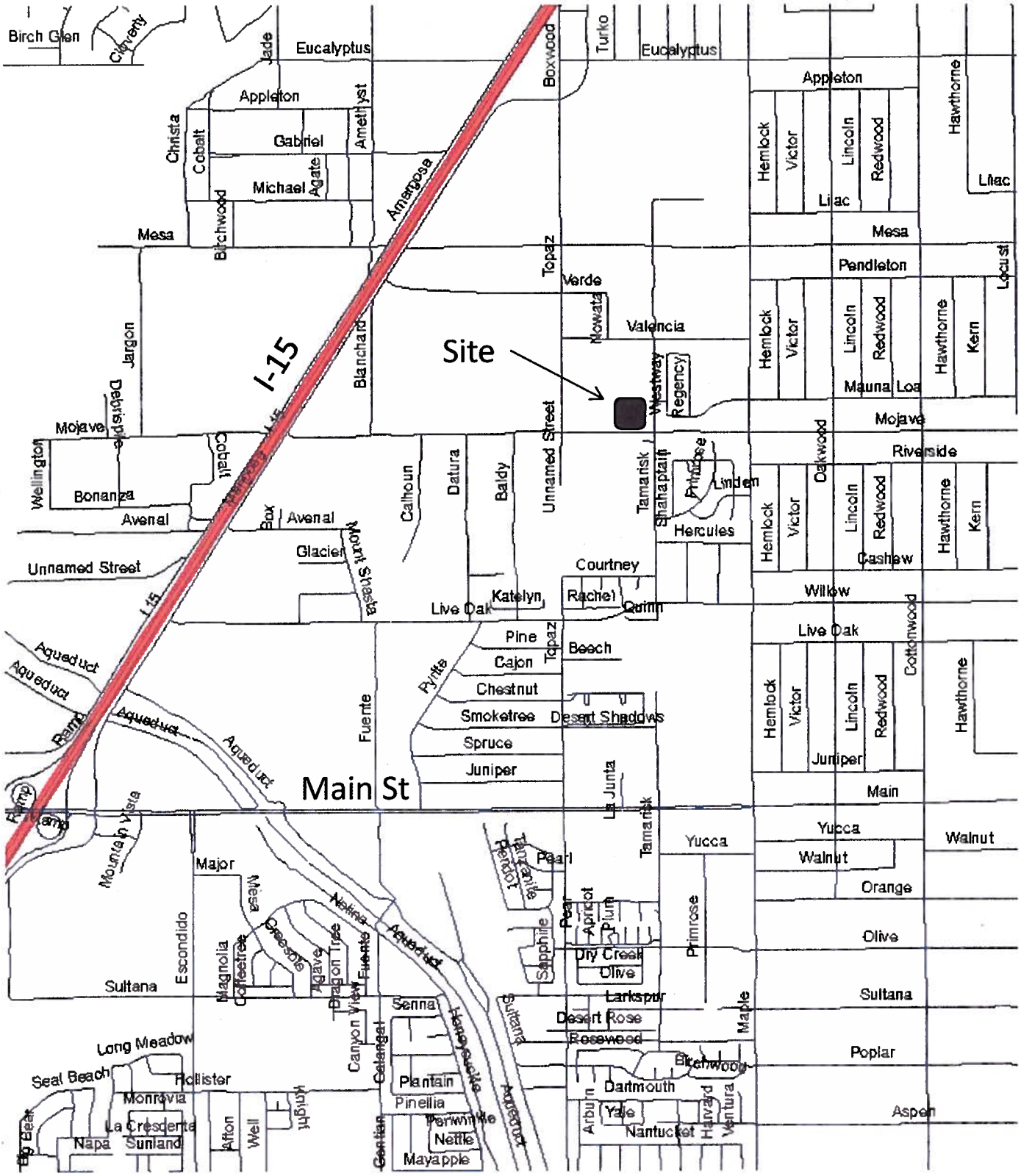
MC/rp BO 2013 / r6v-2013-0005_wdr_hesperia_subreg

Attachment A

Hesperia Sub-regional Plant Facility and Land Discharge Site

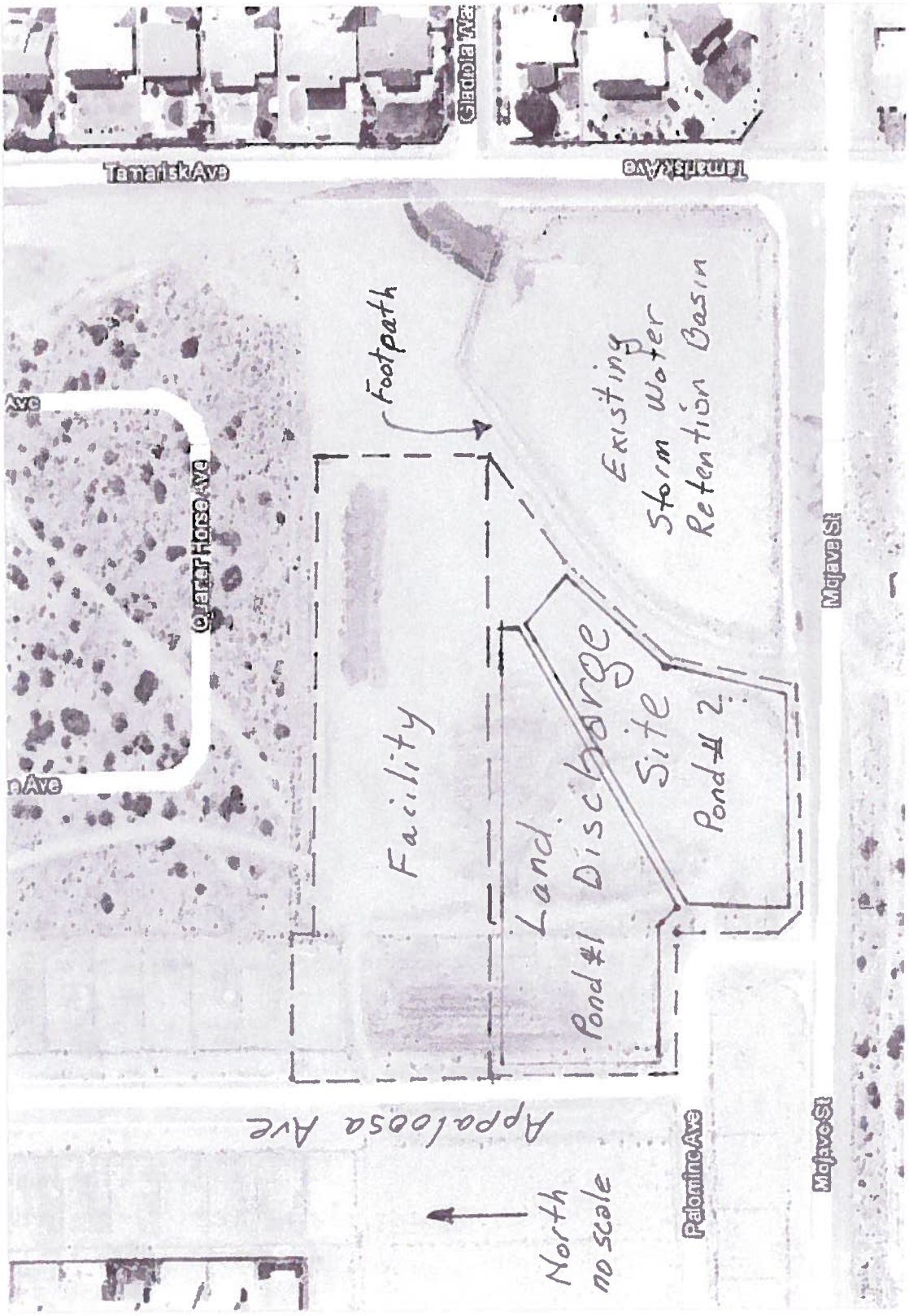
North

Scale: 1 in = 2000 ft

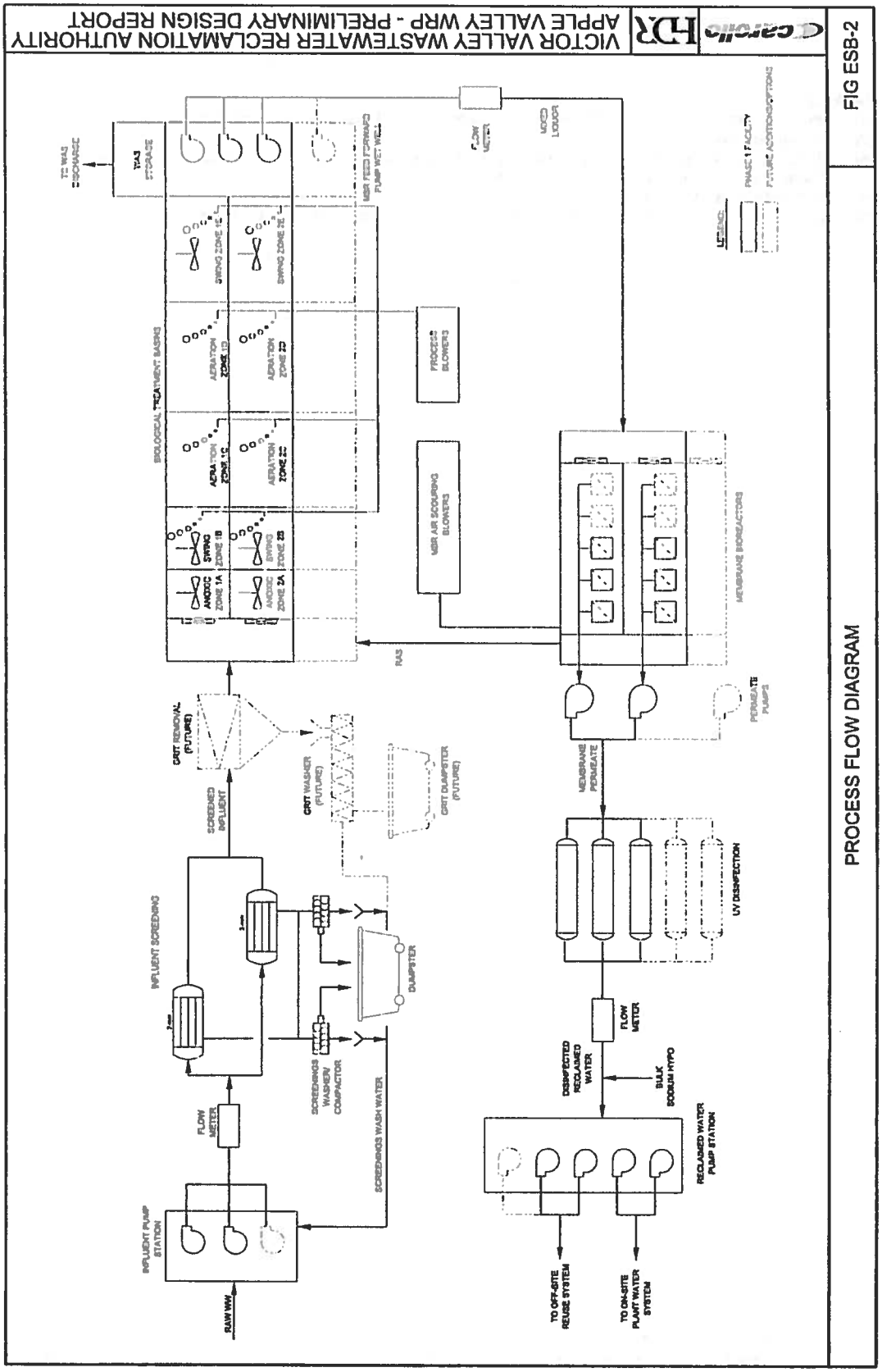


Attachment B

Hesperia Sub-regional Plant



Attachment C



ATTACHMENT D

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

STANDARD PROVISIONS
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The Discharger shall permit Regional Board staff:

a. to enter upon premises in which an effluent source is located or in which any required records are kept;

b. to copy any records relating to the discharge or relating to compliance with the Waste Discharge Requirements (WDRs);

c. to inspect monitoring equipment or records; and

d. to sample any discharge.

2. Reporting Requirements

a. Pursuant to California Water Code 13267(b), the Discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.

b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.

c. The Owners/Discharger of property subject to WDRs shall be considered to have a continuing responsibility for ensuring compliance with applicable WDRs in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the WDRs shall be reported to the Regional Board. Notification of applicable WDRs shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.

d. If a Discharger becomes aware that any information submitted to the Regional Board is incorrect, the Discharger shall immediately notify the Regional Board, in writing, and correct that information.

e. Reports required by the WDRs, and other information requested by the Regional Board, must be signed by a duly authorized representative of the Discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation.

f. If the Discharger becomes aware that their WDRs (or permit) are no longer needed (because the project will not be built or the discharge will cease) the Discharger shall notify the Regional Board in writing and request that their WDRs (or permit) be rescinded.

3. Right to Revise WDRs

The Regional Board reserves the privilege of changing all or any portion of the WDRs upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the WDRs may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and re-issuance, or modification.

5. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the WDRs which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the Discharger to achieve compliance with the WDRs. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the Discharger, when necessary to achieve compliance with the conditions of the WDRs.

7. Waste Discharge Requirement Actions

The WDRs may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for waste discharge requirement modification, revocation and re-issuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any of the WDRs conditions.

8. Property Rights

The WDRs do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the WDRs including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the WDRs shall be kept and maintained by the Discharger and be available at all times to operating personnel.

11. Severability

Provisions of the WDRs are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board's Executive Officer.

14. Definitions

a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.

b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

MONITORING AND REPORTING
PROGRAM NO. R6V-2013-0005
WDID NO. 6B360907005

FOR THE

CITY OF HESPERIA AND VICTOR VALLEY
WASTEWATER RECLAMATION AUTHORITY
HESPERIA SUB-REGIONAL RECLAMATION PLANT

————————————————San Bernardino County————————————————

California Water Code sections 13267 and 13383 authorize the Regional Water Quality Control Board (Water Board) to require technical and monitoring reports. This Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirement consistent with the California Water Code. The following information must be provided in each monitoring report, or as required.

I. Monitoring

A. Flow and freeboard

The Producer/Discharger shall record the following items in a permanent log book:

1. For each day, the volume, in million gallons (Mgal), of wastewater to the:

   a. sub-regional plant (in-plant landscape uses);
   b. land discharge site;
   c. recycled water reuse sites, as a sum; and
   d. community sewer system.

2. For each month, the total volume, in Mgal, of wastewater flow to the:

   a. sub-regional plant (in-plant landscape uses) ;
   b. land discharge site;
   c. recycled water use sites, as a sum; and
   d. community sewer system.

3. For each month, the calculated average flow rate, in million gallons per day (MGD), of wastewater flow to the:

   a. sub-regional plant (in-plant landscape uses);
   b. land discharge site;
   c. recycled water use sites, as a sum; and
   d. community sewer system.

4. For each day, the minimum and maximum instantaneous flow rate, in MGD, of wastewater to the sub-regional plant.

5. For each week, the freeboard in inches, for each percolation pond at the land discharge site. The freeboard is the distance from the top of the lowest part of the dike to the water surface in the percolation ponds. If a percolation pond contains less than ½ inch of treated wastewater along the entire flat bottom surface, indicate that it is empty.

B. Influent monitoring

For parameters indicated in bold with specified numerical effluent limitations, each monitoring report shall include a compliance assessment with respect to the limit in the Order.

The Producer/Discharger shall monitor the influent to the sub-regional plant as follows:

Constituent	Units	Sample type	Minimum sampling frequency
Biochemical oxygen demand (BOD) (5-day at 20°C)	mg/L	24-hour composite	1/week
Total suspended solids	mg/L	24-hour composite	1/week
Total Kjeldahl nitrogen	mg/L	grab	1/month
Ammonia nitrogen	mg/L	grab	1/month
Nitrate nitrogen	mg/L	grab	1/month
pH	standard units	continuous	1/day

C. Effluent monitoring

1. The Producer/Discharger shall monitor the effluent from the sub-regional plant as follows:

Constituent	Units	Sample type	Minimum sampling frequency
Biochemical oxygen demand (BOD) (5-day at 20°C)	mg/L	24-hour composite	1/week
Total suspended solids	mg/L	24-hour composite	1/week
Total Kjeldahl nitrogen	mg/L	grab	1/2 weeks
Ammonia nitrogen	mg/L	grab	1/2 weeks
Nitrate nitrogen	mg/L	grab	1/2 weeks
pH	pH units	grab	1/week-field
TDS	mg/L	24-hour composite	1/2 weeks
Total nitrogen	mg/L	Calculated	1/2 weeks

Note: Items in bold are constituents with numerical effluent limitations in the Order.

2. The Producer/Discharger shall calculate and report percentage reduction between influent and effluent for BOD and total suspended solids for each week.

D. Recycled Water Monitoring

1. In addition to effluent monitoring, the Producer/Discharger shall monitor effluent from the sub-regional plant as follows during periods of recycled water production for distribution, at a point prior to the place of reuse:

Constituent	Units	Sample type	Minimum frequency	Special instructions
Coliform, total (15 tube)	MPN/100 mL	grab	1/day	15 tube method
Turbidity	NTU	continuous	continuous	must submit certification of installation before production of recycled water
Turbidity	minutes	calculated	1/day	time within a 24-hour period when turbidity exceeds 0.2 NTU, noting any day turbidity exceeds 0.2 NTU more than 5% of a day
Turbidity	NTU	calculated	1/day	maximum value in a 24-hour period, noting any day when 0.5 NTU is exceeded

2. Modal contact time at 24-hour high and low flow – not applicable

3. Lowest daily CT value – not applicable

E. Groundwater Monitoring

1. The Producer/Discharger shall collect grab samples from detection groundwater monitoring wells and analyze the samples for the following constituents at the stated frequency.

Constituent	Units	Minimum sampling frequency	Specific instructions
TDS	mg/L	1/half year	Apr & Oct
Sulfate ion	mg/L	1/half year	Apr & Oct
Chloride ion	mg/L	1/half year	Apr & Oct
Total Kjeldahl nitrogen	mg/L	1/half year	Apr & Oct
Ammonia nitrogen	mg/L	1/half year	Apr & Oct
Nitrate nitrogen	mg/L	1/half year	Apr & Oct
MBAS	mg/L	1/half year	Apr & Oct
Volatile constituents	µg/L	1/2 years	SIP, Appendix 4, Table 2a
Semi-volatile constituents	µg/L	1/2 years	SIP, Appendix 4, Table 2b
Inorganic constituents	µg/L	1/2 years	SIP, Appendix 4, Table 2c

SIP = SWRCB, 2005, *Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*.

2. The Producer/Discharger shall measure and record the following "field parameters" at the time of sample collection:

Constituent	Units
electrical conductivity	µS/cm
pH	pH units
Temperature	°C
Dissolved oxygen	mg/L
Turbidity	NTU
Color	visual

The final field parameters at the time of sample collection shall be recorded in a table and reported with laboratory analytical data.

3. Purging

The Producer/Discharge Designated shall purge detection groundwater monitoring wells in accordance with USEPA, *Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers*, or subsequent revisions.

4. SIP Constituents

The Producer/Discharger shall analyze the volatile, semi-volatile, and inorganic constituents listed in Table 2a, Table 2b, and Table 2c, respectively, of the SIP. The Producer/Discharger shall also meet the ML values that are specified in these tables by constituent.

5. Well measurement information

The Producer shall measure, record, and report the depth to the groundwater during each detection groundwater monitoring well sampling event.

6. Monitoring reports shall include a map showing well locations, groundwater elevation contours and tables summarizing the final field and laboratory analytical data.

F. <u>Unsaturated Zone Monitoring</u>

Monitoring of the unsaturated zone, also called the vadose zone, is not required.

G. Sampling and Analysis Definitions

1. Method Detection Limit (MDL)

MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the constituent concentration is greater than zero, as defined in Code of Federal Regulations, Title 40, Part 136, Attachment D, revised as of July 3, 1999.

2. Minimum Level (ML)

ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

3. Not Detected (ND)

ND means sample results that are less than the laboratory's MDL.

4. Reporting Level (RL)

RL is the ML (and its associated analytical method) chosen by the Producer/Discharger for reporting and compliance determination from the MLs included in this monitoring and reporting program. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten.

H. Operation and Maintenance - The Discharger must maintain a log of any operational problems and maintenance activities that may affect effluent quality or disposal site operations and submit the information to the Water Board with each monthly monitoring report.

II. REPORTING

A. General Provisions

1. Except for the establishment of detection groundwater monitoring wells, the monitoring and reporting required by this program becomes effective

during the month when the Producer/Discharger initiates either supply of recycled water or discharge to the land application site.

2. Following the initiation of supplying recycled water or discharging to the land discharge site, monitoring of the influent and effluent is not required during sub-regional plant shut-down periods or during periods when all produced effluent is discharged to the community sewer system. However, groundwater monitoring is required in accordance with the monitoring schedule regardless of the sub-regional plant operating status.

3. The Producer/Discharger shall comply with the "General Provisions for Monitoring and Reporting," dated September 1, 1994, which is attached to and made part of this monitoring and reporting program. (Attachment A).

4. The Producer/Discharger shall arrange all reported data in tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance this monitoring and reporting program.

5. The results of any analysis taken more frequently than required for the parameters and locations specified in this monitoring and reporting program shall be submitted to the Water Board in the next monitoring report.

6. The Producer/Discharger must attach to any monitoring report provided to the Water Board a certified cover letter containing the information in Attachment B, which is made part of this monitoring and reporting program. The information contained in the certified cover letter must clearly identify any violations of this monitoring and reporting program and the Waste Discharge Requirements for the sub-regional plant, discuss corrective actions taken or planned, and propose a time schedule for completing identified corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation. The Producer/Discharger shall notify the Water Board by letter when compliance with requirement has been achieved.

7. In each monitoring report, the Discharger shall submit a Discharger Self-Analysis Report. In the report, the Discharge shall analyze reported values with all requirements of the Order. For total coliform, the Discharger shall include the previous month's results so that the Discharger can analyze compliance with the 30-day and 7 previous days total coliform limits.

8. The Producer/Discharger shall furnish to the Water Board within a reasonable time, any information that the Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this monitoring and reporting program or to determine

compliance with the monitoring and reporting program. Upon request, and pursuant to Water Code section 13267, the Producer/Discharger shall also furnish to the Water Board copies of records required to be kept by this monitoring and reporting program.

9. In each monthly monitoring report, the Producer/Discharger shall report activities associated with development of the regional salt and nutrient management plan during the reporting period. If no activity occurred, the Producer/Discharger shall report "No activity occurred during the reporting period."

B. Report Content and Submittal Periods

1. Monthly facility monitoring reports

The monthly report shall be submitted to the Water Board by the first working day of the second month following each monthly monitoring period.

2. Semi-annual groundwater monitoring reports

a. Frequency

Semi-annual reports shall be submitted to the Water Board by the 1st working day in February and August. The semi-annual monitoring period shall end on June 30th and December 31st of each calendar year. Data that are required on a frequency longer than one semi-annual period will be incorporated into the semi-annual report that coincides with the period for which the analyses are required.

b. Required data

The Producer/Discharger shall report sample results and field parameters in each report. If a sample cannot be obtained, the Producer/Discharger shall include an explanation of the cause of the problem and describe how the monitoring deficiency will be corrected.

c. Results discussion

Groundwater monitoring reports shall include a discussion of monitoring results:

i spatial and temporal trends in nitrate and TDS concentrations;

ii. detection or increase in any monitored constituent that may indicate the Producer/Discharger's activities have caused additional impacts to groundwater;
iii. pertinent well construction details. These details include, but are not limited, 1) top of well casing and 2) for each screened interval, the top of screen elevation and bottom of screen elevation. All values shall be presented to the nearest 0.1 feet above mean sea level.

3. Annual Report

The annual report duplicates the information in monthly and semi-annual reports. Therefore, an annual report is not required.

C. Sampling and Analysis Plan

Pursuant to General Provision No. 1.d. of the General Provisions for Monitoring and Reporting, the Discharger shall submit to the Water Board no later than **six months prior** to the initiation of the discharge, a Sampling and Analysis Plan (SAP). The SAP shall include a detailed description of procedures and techniques for:

1. Sample collection, sample locations, including purging techniques, sampling equipment, and decontamination of sampling equipment;
2. Groundwater well purging methods;
3. Groundwater well sample collection methods;
4. Sample preservation and shipment;
5. Analytical methods and procedures;
6. Chain of custody control; and
7. Quality assurance/quality control (QA/QC).

III. INSTALLATION OF DETECTION GROUNDWATER MONITORING WELLS

A. The Producer/Discharger shall submit a draft work plan within a reasonable time, no later than twelve months, prior to initiation of the discharge. The Producer/Discharger needs to allow two months for Water Board review. The work plan shall be signed by a California registered civil engineer or geologist and specify: (1) location, (2) well design details, (3) drilling methods (4) waste handling methods, (5) well purging, (6) initial well sampling procedures, and (7) initial water quality constituent analyses plan. The initial water quality must include standard minerals, including nitrate, and metals (Table 2c, SIP). The initial water quality constituent analyses plan shall also specify the minimum number of collected samples needed to establish existing groundwater quality.

B. The Producer/Discharger shall submit a detection groundwater monitoring well completion and installation report no later than 60 days prior to the initiation of discharge. The report shall include, for each well, a copy of the well completion report filed with the California Department of Water Resources in accordance with Water Code section 13750 et seq. The report shall also contain the initial water quality sample results and the derived background water quality for each measured constituent. Field parameters shall also be included for each sample.

C. All ordered reports in this section must be signed and stamped by a California state licensed geologist.

IV. RECYCLED WATER USE PERFORMANCE REPORT

The Producer/Discharger shall submit a recycled water use performance report every five years. Each ordered report in this section must be signed and stamped by a California state licensed geologist or civil engineer. The scope of each report is the following (if an amount is 0, report 0):

A. The amount of effluent, in Mgal, delivered for recycled uses for:

1. each month,
2. each calendar year, and
3. total for all years.

B. The amount of effluent, in Mgal, discharged to the land discharge site for:

1. each month,
2. each calendar year, and
3. total for all years.

C. The amount of effluent, in Mgal, discharged to the community sewer system for:

1. each month,
2. each calendar year, and
3. total for all years.

D. An assessment of the degradation (occurrence, movement, and magnitude) of total nitrogen and TDS in groundwater within the groundwater mixing column brought about by:

1. actual land discharge, compared to,
2. hypothetical land discharge that assumes no recycled water delivery based on the mixing model.

E. The five year report must be submitted on or before the first working day in:

1. April 2019 for calendar years 2013 through 2018,
2. April 2024 for calendar years 2013 through 2023,
3. April 2029 for calendar years 2013 through 2028, and
4. April 2034 for calendar years 2013 through 2034.

V. EFFECTIVE DATES

A. Sections I and II of this Order are effective on the date (1) when the Discharger producers recycled water for reuse or (2) when the Discharger discharges effluent to the land discharge site, whichever occurs first.

B. Influent and effluent monitoring in Section I are not required when the sub-regional plant is shut down and/or when the plant discharges effluent into the community sewer system, over a complete month.

Ordered by: Patty Z Kouyoumdjian Dated: January 24, 2013
PATTY Z. KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachments: A - General Provisions for Monitoring and Reporting
B - Water Board certified cover letter form

MC/rp BO2013/ r6v-2013-0005_mrp_hesperia_subreg

ATTACHMENT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LAHONTAN REGION

GENERAL PROVISIONS
FOR MONITORING AND REPORTING

1. SAMPLING AND ANALYSIS

a. All analyses shall be performed in accordance with the current edition(s) of the following documents:

i. Standard Methods for the Examination of Water and Wastewater

ii. Methods for Chemical Analysis of Water and Wastes, EPA

b. All analyses shall be performed in a laboratory certified to perform such analyses by the California State Department of Health Services or a laboratory approved by the Regional Board Executive Officer. Specific methods of analysis must be identified on each laboratory report.

c. Any modifications to the above methods to eliminate known interferences shall be reported with the sample results. The methods used shall also be reported. If methods other than EPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Regional Board prior to use.

d. The Discharger shall establish chain-of-custody procedures to insure that specific individuals are responsible for sample integrity from commencement of sample collection through delivery to an approved laboratory. Sample collection, storage, and analysis shall be conducted in accordance with an approved Sampling and Analysis Plan (SAP). The most recent version of the approved SAP shall be kept at the facility.

e. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and equipment to ensure accuracy of measurements, or shall insure that both activities will be conducted. The calibration of any wastewater flow measuring device shall be recorded and maintained in the permanent log book described in 2.b, below.

f. A grab sample is defined as an individual sample collected in fewer than 15 minutes.

g. A composite sample is defined as a combination of no fewer than eight individual samples obtained over the specified sampling period at equal intervals. The volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling. The sampling period shall equal the discharge period, or 24 hours, whichever period is shorter.

2. OPERATIONAL REQUIREMENTS

a. Sample Results

Pursuant to California Water Code Section 13267(b), the Discharger shall maintain all sampling and analytical results including: strip charts; date, exact place, and time of sampling; date analyses were performed; sample collector's name; analyst's name; analytical techniques used; and results of all analyses. Such records shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

b. Operational Log

Pursuant to California Water Code Section 13267(b), an operation and maintenance log shall be maintained at the facility. All monitoring and reporting data shall be recorded in a permanent log book.

3. REPORTING

a. For every item where the requirements are not met, the Discharger shall submit a statement of the actions undertaken or proposed which will bring the discharge into full compliance with requirements at the earliest time, and shall submit a timetable for correction.

b. Pursuant to California Water Code Section 13267(b), all sampling and analytical results shall be made available to the Regional Board upon request. Results shall be retained for a minimum of three years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge, or when requested by the Regional Board.

c. The Discharger shall provide a brief summary of any operational problems and maintenance activities to the Board with each monitoring report. Any modifications or additions to, or any major maintenance conducted on, or any major problems occurring to the wastewater conveyance system, treatment facilities, or disposal facilities shall be included in this summary.

d. Monitoring reports shall be signed by:

i. In the case of a corporation, by a principal executive officer at least of the level of vice-president or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates;

ii. In the case of a partnership, by a general partner;

iii. In the case of a sole proprietorship, by the proprietor; or

iv. In the case of a municipal, state or other public facility, by either a principal executive officer, ranking elected official, or other duly authorized employee.

e. Monitoring reports are to include the following:

i. Name and telephone number of individual who can answer questions about the report.

ii. The Monitoring and Reporting Program Number.

iii. WDID Number.

f. Modifications

This Monitoring and Reporting Program may be modified at the discretion of the Regional Board Executive Officer.

4. NONCOMPLIANCE

Under Section 13268 of the Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars ($1,000) for each day of violation under Section 13268 of the Water Code.

Date _____

California Regional Water Quality Control Board
Lahontan Region
14440 Civic Drive, Suite 200
Victorville, CA 92392

Facility Name: _____

_____

Address: _____

_____

_____

_____

Contact Person: _____

Job Title: _____

Phone: _____

Email: _____

WDR/NPDES Order Number: _____

WDID Number: _____

Type of Report (circle one): **Monthly Quarterly Semi-Annual Annual Other**

Month(s) (circle applicable month(s)*: **JAN FEB MAR APR MAY JUN**

JUL AUG SEP OCT NOV DEC

***annual Reports** (circle the first month of the reporting period)

Year: _____

Violation(s)? (Please check one): _____**NO** _____ **YES***

***If YES is marked complete a-g (Attach Additional information as necessary)**

a) Brief Description of Violation: _____

_____

_____

_____

_____

b) Section(s) of WDRs/NPDES Permit Violated: _____

_____

_____

_____

c) Reported Value(s) or Volume:_____

d) WDRs/NPDES Limit/Condition:

e) Date(s) and Duration of Violation(s):

f) Explanation of Cause(s):

g) Corrective Action(s)
(Specify actions taken and a schedule for actions to be taken)

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision following a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my knowledge of the person(s) who manage the system, or those directly responsible for data gathering, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

If you have any questions or require additional information, please contact _____at the number provided above.

Sincerely,

Signature:_____

Name: _____

Title: _____