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GOVERNOR

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SECRETARY FOR
ENVIRONMENTAL PROTECTION

Los Angeles Regional Water Quality Control Board

June 17, 2016

Mr. Shannon Pickett
City of Santa Clarita
23920 Valencia Blvd
Santa Clarita, CA 91355-2196

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WASTE DISCHARGE REQUIREMENTS AND WATER RECLAMATION REQUIREMENTS AND A MONITORING AND REPORTING PROGRAM FOR VISTA CANYON WATER FACTORY – CITY OF SANTA CLARITA (FILE NO. 14-031, ORDER NO. R4-2016-0220, CI-10041, GLOBAL ID WDR100016910)

Dear Mr. Pickett,

Our letter of April 21, 2016, transmitted revised tentative Waste Discharge Requirements and Water Reclamation Requirements (WDRs/WRRs), and a Monitoring and Reporting Program (MRP) for Vista Canyon Water Factory-City of Santa Clarita.

Pursuant to Division 7 of the California Water Code, the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) at a public meeting held on June 9, 2016, reviewed the revised tentative WDRs/WRRs and MRP, considered all factors in the case, and adopted WDRs/WRRs Order No. R4-2016-0220 and MRP No. CI-10041, (copies enclosed) relative to this discharge. The adopted WDRs/WRRs and MRP will be posted on the Regional Board's website at:

http://www.waterboards.ca.gov/losangeles/board_decisions/adopted_orders/

City of Santa Clarita shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the WDRs/WRRs and MRP, including groundwater monitoring data, discharge location data, and searchable Portable Document Format of monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100016910.

If you have any questions, please contact the Project Manager, Dr. Don Tsai at (213) 620-2264 (Don.Tsai@waterboards.ca.gov), or me at (213) 576-6683 (Eric.Wu@waterboards.ca.gov).

Sincerely,



Eric Wu, Ph.D., P.E.
Chief of Groundwater Permitting Unit

Enclosures:

1. Waste Discharge Requirements and Water Reclamation Requirements Order No. R4-2016-0220
2. Monitoring and Reporting Program No. CI-10041

CC: Mr. Randy Barnard, SWRCB – Division of Drinking Water
Mr. Kurt Souza, SWRCB – Division of Drinking Water
Mr. Mark Subbotin
Mr. Dexter Wilson, Dexter Wilson Engineering
Ms. Tracy Egoscue

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ORDER NO. R4-2016-0220
FILE NO. 14-031
CI NO. 10041

WASTE DISCHARGE REQUIREMENTS AND WATER RECLAMATION REQUIREMENTS ISSUED TO CITY OF SANTA CLARITA (VISTA CANYON WATER FACTORY)

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

INTRODUCTION

1. **The Vista Canyon Project** proposes to develop an approximately 185-acre Vista Canyon area, providing 1,100 residential units with a residential population estimated at 3,500, as well as up to 950,000 square feet of commercial and medical offices, retail stores, theater, restaurants, and hotel. Approximately 932,000 gallons per day (GPD) of wastewater will be generated from this project, once it is fully developed.
2. **The Vista Canyon Water Factory Project (Water Factory Project)** proposes to build the Vista Canyon Water Factory (Water Factory) that is a tertiary wastewater treatment and recycling plant that treats wastewater generated from the Vista Canyon Project. This treated wastewater is recycled for on-site and off-site landscape irrigation and other non-potable applications. During rainy weather, effluent will be conveyed to downstream facilities of the Santa Clarita Valley Sanitation District (SCVSD), including the Saugus Water Recycling Plant (WRP) or/and the Valencia WRP. The Saugus WRP will be the primary plant to treat wastewater. The Valencia WRP is the backup plant to treat the extra wastewater generated beyond the wastewater treatment capacity of the Saugus WRP.
3. The Water Factory construction is anticipated to be completed and begin operation in October 2017. Once completed, the Water Factory will be operated by the City of Santa Clarita (City). The City, thereafter defined as Permittee or Discharger, will become the owner of the Water Factory. The City will be responsible for the treatment of wastewater, wastewater quality, recycled water quality, and any groundwater quality impacted by the discharge and the recycled water applications. The City will also be responsible for compiling and submitting all monitoring data and reports to the Regional Board.
4. The City will distribute recycled water to the City and the Los Angeles County and will establish appropriate ordinances to (1) regulate the proper uses and distributions of recycled water, (2) maintain and inspect recycled water facilities, and (3) ban water softener use.

REGULATORY AGENCIES

5. The Regional Board is the permitting agency for the Water Factory Project for the discharge of tertiary-treated effluent with disinfection via non-potable recycled water applications. This Regional Board issues Waste Discharge Requirements (WDRs) and Water Reclamation Requirements (WRRs) to assure that this Project does not adversely affect the receiving groundwater quality and its beneficial uses.
6. The Regional Board is required pursuant to California Water Code section 13523 to consult with and receive recommendations from the Division of Drinking Water (DDW) within the State Water Resources Control Board (State Water Board) (formerly within the California Department of Public Health) regarding public health, safety, or welfare.

PURPOSE OF ORDER

7. Pursuant to California Water Code (CWC) sections 13260 (WDRs) and 13522.5 (WRRs), the City submitted a Report of Waste Discharge (ROWD) on March 20, 2014 and applied for WDRs and WRRs to discharge disinfected tertiary-treated wastewater generated at the Water Factory for non-potable recycled water applications.
8. CWC section 13260 requires any person "proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than to a community sewer system," to file a report of waste discharge. The term "waste" is defined in CWC section 13050(d) to include "sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, . . . prior to, and for purposes of, disposal." The Discharger proposes to discharge human sewage, i.e., "waste" to land where it could affect the quality of the waters of the state. Sewage contains various waste constituents, including total dissolved solids, sulfate, salts (e.g., chloride, boron), bacteria, nitrogen, priority pollutants and constituents of emerging concern (CECs). In accordance with CWC section 13263(g), no discharge of waste into waters of the state, whether or not the discharge is made pursuant to waste discharge requirements, shall create a vested right to continue the discharge. All discharges of waste into waters of the state are privileges, not rights.
9. CWC section 13263 authorizes the Regional Board, after any necessary hearing, to prescribe requirements as to the nature of any proposed discharge with relation to the conditions existing in the disposal area or receiving waters upon, or into which, the discharge is made or proposed. The requirements must implement any relevant water quality control plans that have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of CWC section 13241.
10. CWC section 13267 authorizes the Regional Board to require that any person who proposes to discharge waste to furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports. This Order incorporates Monitoring and Reporting Program (MRP) Cl. No. 10041 for the City (File No.

14-031), which is necessary to assure that the discharge of waste, including the use of recycled water complies with this Order and is protective of human health and the environment.

11. This Order is adopted pursuant to CWC sections 13263, 13267, and 13523. It sets forth requirements, prohibitions, and other conditions to implement the Basin Plan; prescribes the limits for the recycled water and the Discharger's responsibilities for the production, distribution, monitoring, and application of recycled water; and includes an MRP. The Discharger is responsible for inspecting point-of-use facilities, and ensuring compliance with the WDRs and WRRs contained in this Order.
12. For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the City.
13. A Water Factory Project site visit was conducted on August 10, 2015. The site is along the Santa Clara River with an estimated distance of 500 feet southeast to the center of the Santa Clara River. The majority of the riverbed adjacent to the site is dry with no surface water observed as this is a dry reach of the Santa Clara River during dry weather. Currently, the site is under grading for development.

VISTA CANYON PROJECT

14. Vista Canyon Project Vicinity

- A. The Vista Canyon Project (Figure 1) is located in the Santa Clarita Valley in the unincorporated Los Angeles County, directly adjacent to the City. The Vista Canyon Project is immediately south of State Route 14 (SR-14), west of La Veda Avenue, north of the Metrolink rail line, and east of the Colony Townhome community. The Vista Canyon Project is also in Management Zone 1 of the *Salt and Nutrient Management Plan Santa Clara River Valley East Subbasin*.
- B. The Vista Canyon Project is in the eastern portion of the easternmost Subbasin of the Santa Clara River, known as the Eastern Santa Clara Groundwater Basins (DWR Basin No. 4-4.07) (Figure 2) defined in the Basin Plan, specifically within the Santa Clara-Mint Canyon area.

15. Water Factory

- A. The proposed Water Factory (34° 24' 51.73" N, 118° 26' 22.58" W) will be located in the southwest corner of the Vista Canyon Project and approximately 200 feet from Santa Clara River (Figure 1).
- B. Wastewater generated from the Vista Canyon Project will be conveyed by gravity flow to the Water Factory.
- C. The Water Factory has a design capacity of 392,000 gallons per day (GPD), which will generate 371,000 GPD of effluent to be recycled. The wastewater treatment process (See Figure 3 for process flow schematic) consists of preliminary treatment (comminutor), flow equalization (flow equalization basin), secondary treatment with a retention time of 18 hours (two aeration tanks with nitrification and denitrification

activated sludge, reducing ammonia and nitrate concentrations), clarification with a retention time of 0.5 hour (two sedimentation tanks with coagulation and flocculation, reducing solids), tertiary treatment (disc filters, reducing turbidity, and suspended solids greater than 85%), and disinfection (UV and chlorination with sodium hypochlorite). The sludge (21,000 GPD), any excess treated effluent not being recycled from the Water Factory, and any untreated wastewater generated from the Vista Canyon Project will be discharged to the downstream facilities of the SCVSD, including the Saugus Water Recycling Plant (WRP) or/and the Valencia WRP. Any effluent not meeting effluent limitations will be delivered to the headworks for further treatment.

D. Influent Quality

- a. The Santa Clarita Water Division (SCWD) is the primary water district which supplies potable water to the Vista Canyon Project and is one of four water retailers (Santa Clarita Water Division, Newhall County Water District, Valencia Water Company, and Los Angeles County Waterworks District No. 36) supplying potable water to communities in the Santa Clarita Valley. The SCWD blends imported water purchased from the Castaic Lake Water Agency (CLWA) with local groundwater. Based on the records provided by SCWD for the period of 2001 through 2014, the percentage of use of imported water from CLWA ranged from 55.7% to 84.7%. In the years between 2011 and 2014, which are considered as drought years, the use of imported water has increased from 60.5 % (2011) to 84.7% (2014).
- b. Based on water quality data collected between year 2010 and 2014, the imported water purchased from CLWA has better water quality (see column 2 of Table 1 below), on average, than the local groundwater (Column 3 of Table 1). The water supply records (2001-2014) indicate that the percentage of imported water for drinking water has never been below 55%. The average imported water used during drought years of 2010 through 2014 was 68.6%. The blending of 50% groundwater with 50% imported water takes into account the range of water supply quality during drought years based on the historical blending records. Column 4 of Table 1 is the anticipated potable water quality, resulting from the blending 50% of imported water with another 50% of local groundwater.
- c. The estimated influent quality of the Water Factory (Column 6 of Table 1) results from the summation of Column 4 (anticipated potable water quality) and Column 5 in Table 1. Column 5 in Table 1 is the addition of concentration as the result of contributions of pollutants from household use.

1	2	3	4	5	6
Constituent	Imported Water (mg/L ^[1])	Local Ground Water (mg/L ^[1])	Anticipated Potable Water ^[3] (mg/L ^[1])	Addition to Potable Water (mg/L ^[1])	Water Factory Influent (mg/L ^[1])
TDS	280 ^[2]	732 ^[2]	506	225 ^[4]	731

1	2	3	4	5	6
Constituent	Imported Water (mg/L ^[1])	Local Ground Water (mg/L ^[1])	Anticipated Potable Water ^[3] (mg/L ^[1])	Addition to Potable Water (mg/L ^[1])	Water Factory Influent (mg/L ^[1])
Chloride	71 ^[2]	91 ^[2]	81	31 ^[5]	112
Sulfate	48 ^[2]	150 ^[2]	99	20 ^[4]	119
Nitrate-N	0.5 ^[2]	5.2 ^[2]	2.7	---	Varied
Boron	0.18 ^[2]	0.87 ^[2]	0.53	0.15 ^[4]	0.68

- [1]. mg/L: milligram per liter.
- [2]. Based on average quality of 2011 – 2015 of Santa Clarita Valley Water Quality Report.
- [3]. The blending of 50% imported water with 50% groundwater takes into account the range of water supply quality during drought years based on historical blending records.
- [4]. *Engineering Report for the Vista Canyon Water Factory (Municipal Wastewater Treatment Facility)*, dated March 21, 2016.
- [5]. *2008 Chloride Source Identification/Reduction, Pollution Prevention, and Public Outreach Plan*, Sanitation districts of Los Angeles County, dated November 2008.

- d. The City Plumbing Code adopted on November 26, 2013 and the SCVSD Ordinance adopted on June 11, 2008 prohibits water softener installation within the site boundary. The purpose of the Code and the Ordinance is to limit the discharge of total dissolved solids including chloride to the Water Factory, which is not designed to remove salts.

E. Effluent Quality

The Water Factory is a new facility and not designed to remove salts through its wastewater treatment process, therefore, the salt concentrations in the effluent will be the same as those in the influent (Table 1), however, compliance with effluent limits must be achieved. Based on the proposed tertiary treatment process, the nutrients in effluent, under proper operation and maintenance, will achieve the effluent limits in Table 2 below.

Constituents	Units	Concentrations
Ammonia-N + Nitrate-N + Nitrite-N	mg/L	6.0 ^[1]
Total Dissolved Solids	mg/L	731 ^[2]
Sulfate	mg/L	119 ^[2]
Chloride	mg/L	112 ^[2]

Table 2 – Projection of Effluent Water Quality		
Constituents	Units	Concentrations
Boron	mg/L	1.0

- [1]. Nitrate-nitrate in effluent is expected to be less than 6.0 mg/L with the full NDN process at the Water Factory.
- [2]. Based on the projected water supply quality described at Table 1.

F. Treated Effluent Applications

- a. The treated effluent will be stored in a 100,000-gallon recycled water storage tank. Recycled water will be distributed via the recycled water pump station to on-site uses of the Vista Canyon Project for landscape irrigation and public restrooms in commercial areas and off-site uses for landscape irrigation and other Title 22 non-potable recycled water applications approved by the DDW. A summary of proposed recycled water uses are shown in Table 3. Figure 4 presents the quantity of recycled water uses at each location.

Table 3 – Proposed Quantities of Recycled Water Applications	
On-Site Landscape Irrigation	77,600 GPD (87 AFY ^[1])
On-Site Dual-Plumbed Use	44,600 GPD (50 AFY ^[1])
Off-Site Use	248,300 GPD (278 AFY ^[1])
Total	370,600 GPD (415 AFY ^[1])

[1]. AFY: Acre feet per year.

- b. The recycled water storage tank and the recycled water pump station will be located at the Water Factory.

G. Effluent Storage Equalization Tank

- a. A 200,000-gallon effluent storage equalization tank (Figure 5) will be constructed adjacent to the Water Factory and along the Santa Clara River bank in order to store the treated wastewater with the following conditions:
 - i. Disinfected tertiary-treated effluent when there is no demand for recycled water; and,
 - ii. Overflow from the 100,000-gallon recycled water storage tank.

Water in excess of this capacity will be sent downstream to either the Saugus or Valencia recycling facilities.

- b. The Water Factory and the bank along the Santa Clara River are within the 100-year floodplain and will be raised in elevation and will no longer be within the floodplain. The bank along the Santa Clara River is reinforced and protected by a concrete retaining wall (approximately 18 feet) plus a freeboard (approximately 3 feet) above the Santa Clara River corridor. This wall is

designed in conformance with the County of Los Angeles Capital-Flood (Qcap) requirements, which exceed a 1,000-year storm event.

GROUNDWATER MONITORING PROGRAM

16. Groundwater monitoring wells, specified in Figure 6, are used to ensure that the treated effluent (recycled water) used for landscape irrigation does not cause the groundwater to exceed groundwater limits set forth in Table 9 in the Vista Canyon Project site.
17. The groundwater network monitoring program implemented by the City consists of a total of nine (9) wells, six (6) upgradient; two (2) downgradient, and one (1) cross-gradient. More information of these groundwater monitoring wells is available in Table 4, Section IV. 3.A. of the accompanying Monitoring and Reporting Program CI No. 10041 (MRP).

GLOBAL WARMING AND CLIMATE CHANGE

18. In Southern California, the predicted impacts of climate change are numerous. Annual average temperatures are expected to increase, coupled with a higher frequency of extreme heat days. A likely consequence of this warmer climate will be more severe drought periods, leading to an increase in the amount and intensity of fires and a longer fire season. In addition, precipitation patterns are likely to be modified. A decrease in snowfall, combined with warmer temperatures, will induce a decrease in the amount and duration of snowpack, an essential source of freshwater to the region. Although changes to mean precipitation are expected to be small, the increasing occurrence of extreme precipitation events will amplify the risk of flooding.

These impacts may affect water quality in multiple ways, including decreases in stream flow, reductions in, and changes to, aquatic habitats, increases in surface water temperature, increases in pollutant levels, sedimentation, algal growth, and changes in salinity levels and acidification in coastal areas. For permitted facilities such as Publicly Owned Treatment Works (POTWs), specific impacts could include, but are not limited to, an increase in the concentration of pollutants entering the facility, an increase in the temperature of effluents and receiving waters, an increase in storm water inflow and infiltration, increase in flooding/inundation of facilities, sewer overflows, power outages, pump maintenance issues, and onsite or nearby hillside destabilization.

Executive Order B-30-15, issued on April 29, 2015, recognizing the challenges posed by climate change, directed state agencies to take climate change into account in their planning decisions, guided by the following principles: Priority should be given to actions that both build climate preparedness and reduce greenhouse gas emissions; where possible, flexible and adaptive approaches should be taken to prepare for uncertain climate impacts; actions should protect the state's most vulnerable populations; and natural infrastructure solutions should be prioritized.

19. The Water Factory and the bank along the Santa Clara River are within the 100-year floodplain. Therefore, in response to anticipated climate change effects, the City has considered additional flood control measures and protection of the Vista Canyon Project and the Water Factory Project, including the design of a concrete retaining wall along the Santa Clara River bank exceeding protections from impacts from a 1,000-year storm event

(see Finding No. 15.G.b. for more information). Climate change may also increase drought and related impacts such as reduced potable water supply. The Water Factory will produce a new source of recycled water for areas of Los Angeles County and the City to reduce the need for potable water use in the area.

20. Waste Discharge Requirements for this facility contain provisions to require planning and actions to address climate-related impacts that can cause or contribute to violations of permit requirements and/or degradation of waters of the state.

APPLICABLE PLANS, POLICIES AND REGULATIONS

Due to the unique hydrogeological conditions of the Plant location and its vicinity, this permit incorporates Basin Plan, Title 22 CCR, and other essential plans, policies, and regulations to protect the receiving groundwater quality.

21. ***Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan)*** – On June 13, 1994, the Regional Board adopted a revised Basin Plan. The Basin Plan (i) designates beneficial uses for surface and groundwater, (ii) establishes narrative and numeric water quality objectives that must be attained or maintained to protect the designated beneficial uses, and (iii) sets forth implementation programs to protect the beneficial uses of the waters of the state. The Basin Plan contains prohibitions on the discharge of certain types of waste or to specified locations. The Basin Plan also incorporates State Water Board Resolution 68-16 “Statement of Policy with Respect to Maintaining High Quality of Waters in California” (also called the “Antidegradation Policy”). In addition, the Basin Plan incorporates by reference applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. The Regional Board prepared the 1994 update of the Basin Plan to be consistent with previously adopted State and Regional Board plans and policies. This Order implements the plans, policies and provisions of the Regional Board’s Basin Plan. The Basin Plan has been amended occasionally since 1994.

The Basin Plan (Chapter 3) incorporates Title 22 CCR primary maximum contaminant levels (MCLs) by reference (see Finding No. 20 below for detail) as water quality objectives. This incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect. The Title 22 CCR primary MCLs are applicable water quality objectives for a receiving water to protect beneficial uses when that receiving water is designated as municipal and domestic supply. Also, the Basin Plan specifies that “Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.” Therefore the Title 22 CCR secondary MCLs, which are limits based on aesthetic, organoleptic standards, are applicable water quality objectives for a receiving water to protect beneficial uses when that receiving water is designated as municipal and domestic supply. These water quality objectives are implemented in this Order to protect groundwater quality.

In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Beneficial uses applicable to the groundwater in Table 5 are as follows:

Table 5 – Basin Plan Beneficial Uses of Groundwater	
Receiving Water	Beneficial Uses
Eastern Santa Clara Groundwater (DWR Basin No. 4-4.07)	<u>Existing:</u> Municipal and domestic water supply, industrial service supply, industrial process supply, and agricultural supply.

- A. **Total Maximum Daily Loads (TMDLs).** To restore water quality and impaired beneficial uses, the Regional Board has adopted the Nitrogen Compounds TMDLs for the Santa Clara River Reach 7 (Figure 7). The TMDLs has assigned local allocation for nonpoint source contributions from agricultural and urban runoff and groundwater discharge (Table 6):

Table 6 –TMDLs of Santa Clara River Reach 7	
Nonpoint Source Load Allocation Target	Groundwater
Ammonia-N + Nitrate-N + Nitrite-N (Resolution No. 2003-011) ^[1]	Monthly Average: 8.5 mg/L

[1]. Resolution No. 2003-011 (Santa Clara River Nitrogen Compounds TMDL), adopted by the Regional Board on August 7, 2003, the State Water Board on November 19, 2003, the Office of Administrative Law on February, 27, 2004, and the USEPA on March 18, 2004.

The treated effluent for irrigation percolating from the Site will reach underlying groundwater, which are likely to connect to the Santa Clara River Reach 7. Resolution No. 2003-011 has assigned a load allocation for nutrients to groundwater. However, considering the soil composition, groundwater depth, and quality of effluent discharged, the more stringent nutrient effluent limit (see section II.2.) shall be imposed to ensure the protection of groundwater quality based on the Antidegradation analysis.

- B. **Clean Water Act section 401 Water Quality Certification.** On April 24, 2013, the Regional Board issued an order (File No. 12-034, see Attachment A for more information including the Water Quality Certification, Project Information, and Conditions of Certification) certifying that any discharge from the Vista Canyon Project including Water Factory Project would comply with the applicable provisions of Clean Water Act section 301 (Effluent Limitations), section 302 (Water Quality Related Effluent Limitations), section 303 (Water Quality Standards and Implementation Plans), section 306 (National Standards of Performance), and section 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act, and with other applicable requirements of State law. This discharge is also regulated under State Board Order No. 2003-0017-DWQ, “General Waste Discharge Requirements for Dredge and Fill Discharges that have received State Water Quality Certification” which requires compliance with all conditions of this Water Quality Certification.

22. **Title 22 CCR** –Title 22 CCR contains primary and secondary MCLs for inorganic, organic, and radioactive contaminants in drinking water. These MCLs are codified in Title 22 CCR. Title 22 primary MCLs (see Attachments B-1 to B-6) have been incorporated into the Basin Plan as water quality objectives. MCLs are used as one of the primary bases for effluent limits for discharges of recycled water in WDRs and WRRs to protect the designated beneficial uses of municipal and domestic supply.
23. **Recycled Water Policy** – State Water Board Resolution No. 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water (Recycled Water Policy)*, is intended to support the State Water Board's Strategic Plan to promote sustainable local water supplies. Increasing the acceptance and promoting the use of recycled water is a means towards achieving sustainable local water supplies and can result in reduction in greenhouse gases, a significant driver of climate change. The Recycled Water Policy is also intended to encourage beneficial use of, rather than solely disposal of, recycled water generated from municipal wastewater sources in a manner that fully implements state and federal water quality laws.
24. **State Water Board Resolution No. 68-16** Antidegradation requires the Regional Board, in regulating the discharge of waste, to maintain the high quality waters of the state until it is demonstrated that any change in quality will be consistent with maximum benefit to the people of the State, will not unreasonably affect beneficial uses, and will not result in water quality less than that described in the State Water Board's policies (e.g., quality that exceeds water quality objectives). Further, any activity that produces waste must meet waste discharge requirements that will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.

In accordance with the Recycled Water Policy, the Upper Santa Clara River Integrated Regional Water Management Group, which is comprised of CLWA, City, Santa Clarita Water Division, Los Angeles County Flood Control District, Newhall County Water District, San Gabriel & Lower Los Angeles Rivers and Mountains Conservancy, SCVSD, and Valencia Water Company entered into a Memorandum of Understanding to prepare the draft *Salt and Nutrient Management Plan Santa Clara River Valley East Subbasin (SNMP East Subbasin)*. This group of agencies collectively known as the Salt and Nutrient Task Force facilitated by the CLWA directed the preparation of the *SNMP East Subbasin*, which was prepared using guidance set forth by the Regional Board.

The draft *SNMP East Subbasin* provides a conceptual analysis on the possible groundwater quality impacts resulting from the discharge. Staff conducted an independent antidegradation analysis taking into consideration work done under the SNMP effort and analyzed the data using a mass balance. The use of recycled water generated from the Water Factory will not cause degradation of the receiving groundwater quality for TDS, chloride, nitrate, and sulfate. The concentrations of chloride, nitrate, and sulfate in groundwater will remain the same as the current concentrations.

Table 7 – Antidegradation Analyses: Comparison between 50th Percentile of Ambient Groundwater Quality and the Basin Plan Groundwater Quality Objectives				
Groundwater Subunit Water Quality Comparison	TDS (mg/L)	Chloride (mg/L)	Nitrate-N (mg/L)	Sulfate (mg/L)
Basin Plan GWQO ^[1]	800	150	10	150
50th Percentile Ambient Groundwater Concentration ^[2]	745	89	4.3	152

[1]. Basin Plan GWQO: Basin Plan Groundwater Quality Objectives.

[2]. Groundwater data collected from 18 potable wells between 2001 and 2011.

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25. This Order establishes effluent and groundwater limitations that will prevent unreasonable threats to present and anticipated beneficial uses and will not result in receiving ground water quality that exceeds water quality objectives set forth in the Basin Plan. Limitations for each waste constituent are based on the most stringent applicable water quality objective to protect all beneficial uses. This Order contains requirements for assuring that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved. Accordingly, the discharge is consistent with the antidegradation provisions of Resolution 68-16. Based on the results of wastewater treatment and monitoring of effluent and groundwater quality, the Regional Board may reopen this Order to reconsider groundwater limitations and other requirements to comply with Resolution 68-16.
 26. AB 685 – CWC Section 106 – It is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels developed to protect human health and ensure that water is safe for domestic use.
 27. This Order is established pursuant to CWC section 13263 because this project has the potential to affect the quality of the waters of the State, to impact the beneficial uses of those waters, or to cause a nuisance. This Order conforms to CWC section 13523 and State Water Board Resolution 2009-011, the Recycled Water Policy, because it meets the need for recycled water use.
 28. Section 13523 of the CWC provides that a Regional Board, after consulting with and receiving recommendations from DDW or its delegated local health agency, and after any necessary hearing, shall, if it determines such action to be necessary to protect the health, safety, or welfare of the public, prescribe water recycling requirements for water that is used or proposed to be used as recycled water. Section 13523 further provides at a minimum that the recycling requirements shall include, or be in conformance with, the statewide water recycling criteria established by DDW pursuant to Water Code Section 13521. DDW adopted revised Water Recycling Criteria (Chapter 3, Division 4, Title 22, CCR) that became effective on June 18, 2014. Criteria applicable to this recycling project are prescribed in this Order.
 29. These WRRs are established pursuant to CWC section 13523. The WRRs prescribe the limits for recycled water and the City’s responsibilities for the production and monitoring of recycled water and ensuring compliance with the WRRs contained in this Order.

30. The City prepared the revised *Engineering Report for the Vista Canyon Water Factory (Municipal Wastewater Treatment Facility)*, dated November 16, 2015, on its proposed production, distribution, and use of recycled water for irrigation as required by section 60323 of Title 22, CCR. On December 1, 2015, the revised Title 22 Engineering Report was conditionally approved by the DDW with recommendations to the Regional Board. This Order incorporates conditions and requirements in the Attachment A, consistent with DDW's recommendations.
31. **State Water Board Resolution No. 77-1** – The State Water Board adopted Resolution No. 77-1, Policy with Respect to Water Recycling in California, which includes principles that encourage and recommend funding for water recycling and its use in water-short areas of the State. On September 26, 1988, the Regional Board also adopted Resolution No. 88-012, *Supporting Beneficial Use of Available Reclaimed Water in Lieu of Potable Water for the Same Purpose*, which encourages the beneficial use of recycled wastewater and supports water recycling projects.
32. The requirements contained in this Order are in conformance with the goals and objectives of the Basin Plan, the TMDLs, and implement the requirements of the CWC, Title 22, Recycled Water Policy, and Resolutions specified in this Order.
33. **Publicly Owned Treatment Works (POTW)** – The term POTW means a treatment works as defined by section 212 of the federal Clean Water Act, which is owned by a State or municipality (as defined by section 502(4) of the Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment facility. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such treatment works. (40 CFR 403.3(q)). The Water Factory meets all above criteria and therefore is considered a POTW.
34. **Constituents of Emerging Concerns (CEC) Requirements** - In recent years, the Regional Board has incorporated monitoring of a select group of anthropogenic chemicals, particularly pesticides, pharmaceuticals and personal care products, known collectively as CECs, into permits to better understand the propensity, persistence and effects of CECs in our environment. Recently adopted permits in this region contain requirements for CEC effluent monitoring, including identification of the CECs to be monitored in the effluent, sample type, sampling frequency, and sampling methodology.

CEQA AND NOTIFICATION

35. The City is the lead agency for purposes of the California Environmental Quality Act (CEQA) (Pub. Res. Code §§21000 et seq). The City released a Notice of Preparation (NOP) on October 1, 2009. The NOP provided notice to the public and public agencies that an Environmental Impact Report (EIR) would be prepared for the construction of the Vista Canyon Project. The Draft EIR was released for public comment on October 19, 2010, with notices published in the Signal Newspaper, notices mailed to interested parties, and notices mailed to the State Clearinghouse for circulation to responsible agencies (SCH No. 2007071039). The comment was due on December 3, 2010. Thirty-one written and oral comments were received, including a comment letter from the Regional Board dated December 2, 2010. The City conducted Planning Commission Meetings on October

19, 2010, November 2, 2010, and December 21, 2010 and a City Council Hearing on March 22, 2011 to accept verbal comments on the Draft EIR. On April 26, 2011, the City Council held a public hearing and certified the Final EIR.

The EIR had identified the potential impacts on wastewater disposal and water quality, resulting from the development of the Vista Canyon Project. To mitigate the impacts to groundwater and surface water quality caused by wastewater disposal, the Water Factory Project, pursuant to local, regional, state and federal design standards, proposed to treat the domestic wastewater to the Title 22 Recycled Water standards at the Water Factory and will not cause any adverse impact to the underlying groundwater aquifer. The discharge is also required to obtain all necessary permits for the construction of the Vista Canyon Project and the Water Factory Project.

36. The Regional Board is a responsible agency for purposes of CEQA and has considered the EIR prepared by the City. The Regional Board has incorporated requirements into this Order to protect the quality of the waters of the state consistent with the applicable plans and policies that apply to the discharges regulated by this Order. This Order is consistent with the mitigation measures identified by the City in the EIR because it requires compliance with Title 22 standards. This Order includes a monitoring and reporting program to determine compliance with the terms of the Order, including the Title 22 standards, and to assure protection of water quality.
37. *Petition* – Any person aggrieved by this action of the Regional Board may petition the State Water Board to review the action in accordance with CWC section 13320 and CCR title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or a state holiday, the petition must be received by the State Water Board by 5:00 pm on the next business day. Copies of the law and regulations applicable to filling petitions may be found on the Internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality/ or will be provided upon request.
38. *Public Notice* – On April 20, 2016, the Regional Board notified the City and interested agencies and persons of its intent to issue WDRs/WRRs Order No. R4-2016-0220 for the distribution and use of tertiary-treated and disinfected effluent as recycled water, and has provided them with an opportunity to submit written comments.

The Regional Board, in a public meeting, heard and considered all comments pertaining to these WDRS/WRRs.

IT IS HEREBY ORDERED that the City shall comply with the following:

I. INFLUENT LIMITS AND REQUIREMENTS

Influent waste shall be limited to domestic wastewater from the Vista Canyon Project and a portion of existing domestic flows from the City and shall not exceed its design capacity of 392,000GPD.

II. TERTIARY-TREATED EFFLUENT/RECYCLED WATER LIMITS

1. The wastewater discharged from the Water Factory shall not exceed 371,000_GPD.
2. Tertiary-treated effluent/recycled water shall not contain constituents with concentrations exceeding limits listed in Table 8.

Table 8 – Effluent/Recycled Water Limits			
Constituents	Units	Monthly Average	Daily Maximum
Oil and grease	mg/L	10 ^[1]	15 ^[1]
Total suspended solids	mg/L	15 ^[1]	45 ^[1]
	% removal	≥ 85 ^[2]	---
BOD _{5@20 °C}	mg/L	20 ^[1]	45 ^[1]
	% removal	≥ 85 ^[2]	---
MBAS	mg/L	0.5 ^[3]	---
Ammonia-N + Nitrate-N + Nitrite-N	mg/L	---	6.0 ^[4]
Total Dissolved Solids	mg/L	731 ^[5]	---
Sulfate	mg/L	119 ^[5]	---
Chloride	mg/L	112 ^[5]	---
Boron	mg/L	1.0 ^[6]	---

- [1]. Limits are based on best professional judgment. Limits adopted by this Regional Board exist in the permits for tertiary-treated wastewater treatment plants.
 - [2]. Limits are based on secondary treatment requirements, 40 CFR section 133.102.
 - [3]. Basin Plan Title 22 Drinking Water Standard for methylene blue activated substances (MBAS).
 - [4]. Considering the soil composition, groundwater depth, and quality of effluent discharged, the more stringent nutrient effluent limit shall be imposed to ensure the protection of groundwater quality based on Antidegradation analysis.
 - [5]. Based on projected water supply and effluent water quality (see findings 15.E).
 - [6]. Basin Plan Groundwater Quality Objective.
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3. The pH of effluent discharged shall at all times be within the range of 6.5 to 8.5. Excursion from this range shall not be considered a violation provided the duration is not more than 10 minutes in a 24-hour period, and pH shall at all times be within 6 to 9.
 4. The tertiary-treated effluent shall be filtered and subsequently disinfected with UV and chlorination that meets the following criteria:
 - A. UV disinfection shall comply with the “Ultraviolet Disinfection Guidelines for Water Research Institute, which specifies for permeability of membrane filtration that:

- a. The design UV dose shall be at least 100 millijoules per square centimeter (mJ/cm^2) under maximum daily flow; and,
- b. The filtered effluent UV transmittance shall be 55%.

The City shall submit a performance testing protocol for the UV system prior to operation and submit results of the performance testing to the Executive Officer of the Regional Board and DDW prior to the initial discharge.

- B. Effluent shall be, at all times, adequately disinfected and oxidized. In the event that the effluent exceeds any of the following, based on daily grab samples, the City shall suspend recycled water applications until such time that the cause of the failure has been identified and corrected. Any failure to meet the total coliform limits shall be reported to the DDW and the Regional Board in the next quarterly report.
 - a. A 7-day median of 2.2 most probable number (MPN) per 100 milliliters for two consecutive days;
 - b. 23 MPN per 100 milliliters in more than one sample in any 30-day period; and,
 - c. 240 MPN per 100 milliliters in any sample.
- C. Filtered wastewater shall be an oxidized wastewater that has been coagulated and passed through a bed of filter media under the following conditions:
 - a. At a rate that does not exceed 5 gallons per minute per square foot of surface area in mono, dual or mixed media gravity, upflow or pressure filtration systems, or does not exceed 2 gallons per minute per square foot of surface area in a traveling bridge automatic backwash filter; and,
 - b. The turbidity of the filtered wastewater does not exceed any of the following:
 - i. An average of 2 Nephelometric Turbidity Unit (NTU) within a 24-hour period;
 - ii. 5 NTU more than 5 percent of the time within a 24-hour period; and,
 - iii. 10 NTU at any time.
5. Maximum Contaminant Limits: The effluent shall not contain trace, toxic and other constituents in concentrations exceeding the applicable maximum contaminant levels (Attachment B) for drinking water established by the DDW in sections 64431 (Attachment B-1), 64442 (Attachment B-2), 64443 (Attachment B-3), 64444 (Attachment B-4), 64449 (Attachment B-5), and 64533 (Attachment B-6), Article 5, Chapter 15, Title 22 of the CCR, or subsequent revisions or at levels that adversely affect the beneficial uses of receiving groundwater. Concentrations of contaminants in the effluent shall, at all times, not exceed the following MCLs. In case of a

violation of any primary or secondary MCL, the City shall notify and submit a report according to Provision IX.5. of this Order.

- A. Primary MCLs specified in Chapter 15, Domestic Water Quality and Monitoring, Title 22, CCR:
 - a. Inorganic chemicals in Section 64431, Table 64431-A, except for nitrogen compounds, Attachment B-1 of this Order;
 - b. Radionuclides in Section 64442, Table 64442, Attachment B-2 and Section 64443, Table 64443, Attachment B-3 of this Order; and,
 - c. Regulated organic chemicals in Section 64444, Table 64444-A, Attachment B-4 of this Order.
- B. Secondary MCLs in Chapter 15, Domestic Water Quality and Monitoring, Title 22, CCR, Table 64449-A, Attachment B-5 of this Order.
- C. Primary MCLs for disinfection byproducts specified in Chapter 15.5, Article 2, Section 64533, Table 64533-A, Attachment B-6 of this Order.

III. GROUNDWATER LIMITATIONS

1. The City is prohibited from altering the quality or elevation of the underlying groundwater.
2. Groundwater shall not contain constituents with concentrations exceeding limits specified in Attachments B-1 to B-6 and Table 9 as a result of this discharge.

Table 9 – Receiving Water Limits for Groundwater Quality		
Constituents	Units	Single Sample Maximum
Total Dissolved Solids	mg/L	750 ^[1]
Sulfate	mg/L	150 ^[2]
Chloride	mg/L	95 ^[1]
Ammonia-N + Nitrate-N + Nitrite-N	mg/L	4.9 ^[1]
Nitrite-N	Nitrite-N	1.0 ^[3]
Boron	mg/L	1.0 ^[3]
Total coliform	MPN/100mL	1.1 ^[3]
Fecal coliform	MPN/100mL	1.1 ^[3]
Enterococcus	MPN/100mL	1.1 ^[3]

[1]. Limits for groundwater are based on protecting background groundwater quality set at the 50th percentile of the ambient groundwater concentrations measured between 2001 to 2011 for this constituent, and in consideration of the antidegradation policy by adding 10 percent of the difference between the Basin Plan Groundwater Quality Objective and the 50th percentile of the ambient groundwater quality.

[2]. Limits for all groundwater quality consider both the antidegradation analyses and the

Basin Plan Groundwater Quality Objective. The Basin Plan Groundwater Quality Objective is used as groundwater quality limitation because it is more protective.

[3]. Basin Plan Groundwater Quality Objective.

3. The City shall monitor groundwater for a minimum of two years, once in 2016 and once in 2017, prior to operation of the Water Factory to understand the groundwater quality in the shallow and deep aquifer before any discharge and/or recycled water application.
4. The City shall demonstrate that the discharge and recycled water use from the Water Factory do not contribute to the degradation of groundwater quality by meeting all groundwater quality limits specified in Table 9. In the event that the groundwater quality exceeds the limits specified in Table 9, the discharger shall demonstrate that the discharge/recycled water use do not contribute to the groundwater quality exceedance.

IV. SPECIFICATIONS FOR PRODUCTION, OPERATION, AND USE OF RECYCLED WATER AND ITS FACILITIES

1. The City is responsible to ensure that appropriate ordinances are established to regulate production, operation, and use of recycled water and its facilities.
2. The City shall submit a revised Title 22 Engineering Report to DDW and the Regional Board for review and approval, if additional recycled water use is proposed.
3. Recycled water shall not be used for direct human consumption or for the processing of food or drink intended for human consumption.
4. The City shall receive the final approval from DDW prior to the initial discharge of recycled water.
5. The delivery of recycled water to new end-users shall be subject to DDW approval and/or its delegated local agency.

V. USE AREA REQUIREMENTS

“Use area” means an area with defined boundaries, which may contain one or more facilities where recycled water is used. The City shall be responsible to ensure that all users of recycled water comply with the following:

1. No irrigation with disinfected tertiary-treated recycled water shall take place within 50 feet of any domestic water supply well is located within 100 feet of any domestic water supply well.
2. Recycled water shall be applied at such a rate and volume as not to exceed vegetative demand and soil moisture conditions. Special precautions must be taken to prevent clogging of spray nozzles and over-watering, and minimize the production of runoff. Pipelines shall be maintained so as to prevent leakage.
3. All above ground irrigation appurtenances need to be marked appropriately.

4. Any incidental runoff from recycled water projects shall be handled as follows:
 - A. The discharge of recycled water to surface water is prohibited.
 - B. Discharges of recycled water to surface waters may only occur where regulated under a separate NPDES permit issued by the Regional Board.

Incidental runoff is defined as unintended small amounts (volume) of runoff from recycled water use areas, such as unintended, minimal over-spray from sprinklers that escapes the recycled water use area. Irrigation system maintenance shall be consistent with the requirements found in the State Water Board's Recycled Water Policy.

5. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities, and shall not contact any drinking water fountain.
6. Recycled water shall not be used for irrigation during periods of rainfall and/or runoff.
7. Recycled water shall be retained on the designated area and shall not be allowed to escape as surface flow.
8. All recycled water use areas that are accessible to the public shall be posted with signs that are visible to the public, in a size no less than 4 inches high by 8 inches wide, that include the following wording: "RECYCLED WATER – DO NOT DRINK" as shown in Figure 8. Each sign shall display an international symbol similar to that shown in Figure 8. An alternative signage and wording may be used upon approval by the Executive Officer of the Regional Board.
9. No physical connection shall be made or allowed to exist between any recycled water piping and any piping conveying potable water, except as allowed under Section 7604 of Title 17, CCR.
10. The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibs (a faucet or similar device to which a common garden hose can be readily attached). Only quick couplers that differ from those used on the potable water system shall be used on the portions of the recycled water piping system in areas subject to public access.
11. Recycled water use shall not result in earth movement in geologically unstable areas.
12. The City or its authorized agency will develop the User Agreements and Ordinances with the potential non-potable users of recycled water. Copies of the User Agreements and Ordinances shall be provided to the Regional Board and the DDW.
13. Use/site-supervisors must be appointed for the recycled water use areas and their staff must be trained on the hazards of working with recycled water and periodically retrained.
14. For each new recycled water use area, the City needs to provide the Regional Board and DDW with a description of the use area including, but not limited to: a description

of the recycled water use (e.g. landscape, specific food crop, cooling tower, etc.); method of use (e.g. spray, flood, or drip); the location of domestic water supply facilities adjacent to the use areas; site containment measures; the party responsible for the distribution and use of the recycled water at the site; identification of other governmental entities which may have regulatory jurisdiction over the reuse site(s) such as State Food and Drug, State Licensing and Certification, County Health Department, etc. These Agencies should also be provided with a copy of the approved Title 22 Engineering Report for review and comment.

VI. REQUIREMENTS FOR DUAL-PLUMBED SYSTEMS

1. "Dual plumbed" means a system that utilizes separated piping systems for recycled water and potable water within a facility and where the recycled water is used for either of the following purposes:
 - A. To serve plumbing outlets (excluding fire suppression systems) within a building; or,
 - B. Outdoor landscape irrigation at individual residences.
2. The public water supply shall not be used as a backup or supplemental source of water for a dual-plumbed recycled water system unless the connection between the two (2) systems is protected by an air gap separation which complies with the requirements of Section 7602 (a) and 7603 (a) of Title 17, CCR, and that such connection has been approved by the DDW and/or its delegated local agency.
3. The City or its authorized agency shall not deliver recycled water to a facility using a dual-plumbed system unless the report required pursuant to Section 13522.5 of the CWC, and which meets the requirements set forth in sections VI.4. and/or VI.5. of this Order, has been submitted, and approved by DDW or its delegated local agency and the Regional Board. The Regional Board shall be furnished with a copy of the DDW approval within 30 days following the approval.
4. Prior to the initial operation of the dual-plumbed recycled water system and annually thereafter, the dual-plumbed system within each facility and use site shall be inspected by the City or its authorized agency for possible cross connections with the potable water system. The recycled water system shall also be tested for possible cross connections at least once every four (4) years. The inspections and the shutdown testing shall be performed by a cross connection control specialist certified by the California-Nevada section of the American Water Works Association or an organization with equivalent certification requirements. A written report documenting the result of the inspection and shutdown testing for the prior year shall be submitted to the DDW and the Regional Board within 30 days following completion of the inspection or shutdown testing. The procedures used to conduct the shutdown testing must be described.
5. The City shall notify DDW of any incidence of backflow from the dual-plumbed recycled water system into the potable water system within 24 hours of discovery of the incident.
6. Any backflow prevention device installed to protect the public water system serving

the dual-plumbed recycled water system shall be inspected and maintained in accordance with Section 7605 of Title 17, CCR.

7. The City shall obtain the final approval from DDW prior to the initial use of recycled water.

VII. GENERAL REQUIREMENTS

1. Dischargers shall operate and maintain facilities, treatment operations, associated collection systems and outfalls in ways to preclude adverse impacts to surface or groundwater from impacts predicted to occur due to climate change.
2. The Discharger shall submit a Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) no later than 12 months after adoption of this permit. Submittal of the Climate Change Plan is required pursuant to Water Code section 13267. As required by this provision, a regional board may require a person to submit technical or monitoring program reports which the regional board requires. The Climate Change Plan is needed in order to assess and manage climate change related-effects associated with Discharger operations that may affect water quality.

The Climate Change Plan shall include an assessment of short and long term vulnerabilities of the facility(ies) and operations as well as plans to vulnerabilities of collection systems, facilities, treatment systems, and outfalls for predicted impacts in order to ensure that facility operations are not disrupted, compliance with permit conditions is achieved, and receiving waters are not adversely impacted by discharges. Control measures shall include, but are not limited to, emergency procedures, contingency plans, alarm/notification systems, training, backup power and equipment, and the need for planned mitigations to ameliorate climate-induced impacts including, but not limited to, changing influent and receiving water quality and conditions, as well as the impact of rising sea level (where applicable) storm surges and back-to-back severe storms that are expected to become more frequent.

3. The recycling facility and areas where any potential pollutants are stored shall be adequately protected from inundation and damage by storm flows and run-off.
4. Adequate freeboard and/or protection shall be maintained in the recycled water storage tanks and process tanks to ensure that direct rainfall will not cause overtopping.
5. The wastewater treatment and use of recycled water shall not result in nuisance conditions caused by breeding of mosquitoes, gnats, midges, or other pests.
6. Odors of sewage origin shall not be perceivable any time outside the boundary of the treatment facility.
7. The City shall, at all times, properly operate and maintain all treatment facilities and control systems (and related appurtenances), which are installed or used by the City to achieve compliance with the conditions of this Order. Proper operation and maintenance includes: effective performance, adequate funding, adequate operator

- staffing and training, and adequate laboratory and process controls (including appropriate quality assurance procedures).
8. Any wastes that do not meet the foregoing requirements shall be held in impervious containers and discharged at a legal point of disposal.
 9. A copy of these requirements shall be maintained at the water recycling facility so as to be available at all times to operating personnel.
 10. The distribution and irrigation systems shall be maintained and periodically inspected by the City or its authorized agency for proper maintenance and operation.
 11. Pursuant to section 3860 of Title 23 CCR, the Water Factory Project shall meet the standard conditions specified in Attachment F Conditions of Certification File No. 12-034.

VIII. PROHIBITIONS

1. Recycled water shall not be used for direct human consumption or for the processing of food or drink intended for human consumption.
2. Wastes discharged and recycled water applications shall not contain tastes, odors, color, foaming, any materials, or other objectionable characteristics in concentrations that would:
 - A. Affect human, animal, and plant life;
 - B. Cause nuisance or adversely affect the beneficial uses and quality of the receiving groundwater; and,
 - C. Impact surface water that may be in hydraulic connection with groundwater.
3. Discharge of waste classified as 'hazardous', as defined in Section 2521(a) of Title 23, CCR, Section 2510 et seq., is prohibited. Discharge of waste classified as 'designated,' as defined in CWC Section 13173, in a manner that causes violation of receiving water limitations, is prohibited.
4. The recycled water storage basin and storage tank shall not contain floating materials, including solids, foams or scum in concentrations that cause nuisance, adversely affect beneficial uses, or serve as a substrate for undesirable bacterial or algae growth or insect vectors.
5. There shall be no onsite disposal of sludge. Sludge-drying activities are allowed, but only as an intermediate treatment prior to off-site disposal. Any offsite disposal of wastewater or sludge shall be made only to a legal point of disposal. For purposes of this Order, a legal disposal site is one for which requirements have been established by a California Regional Board or comparable regulatory entity, and which is in full compliance therewith. Any wastewater or sludge handling shall be in such a manner as to prevent its reaching surface waters or watercourses.

6. Odors originating at this Water Factory shall not be perceivable beyond the limits of the property owned by the City.
7. No new connections of using recycled water may be made without notification to the Regional Board and DDW.
8. The discharge of waste shall not create a condition of pollution, contamination, or nuisance.
9. Bypass, discharge or overflow of untreated wastes, except as allowed by Section VIII.10. of this Order, is prohibited.
10. Bypass (the intentional diversion of waste stream from any portion of a treatment facility) is prohibited. The Regional Board may take enforcement action against the City for bypass unless:
 - A. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that cause them to become inoperable, or substantial and permanent loss in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.)
 - B. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated waste, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment shall have been installed in the exercise of reasonable engineering judgment to prevent a bypass that could occur during normal periods of equipment downtime or preventive maintenance.
 - C. The City must submit written notice at least 24 hours in advance of the need for a bypass to the Regional Board Executive Officer.
11. Any discharge of wastewater from the treatment system (including the wastewater collection system) at any point other than specifically described in this Order and except as provided for in Section VIII.10 of this Order, is prohibited and constitutes a violation of this Order.
12. Any discharge of effluent/recycled water at any point(s) other than designated recycled water use areas is prohibited and constitutes a violation of this Order.
13. The discharge of effluent, including runoff, spray or droplets from the irrigation system, shall not occur outside the boundaries of the land application area.
14. The discharge of waste to surface waters of the state or of the United States is prohibited.

IX. PROVISIONS

1. The City shall submit plans for any change of the recycled water project to and obtain approval from DDW and the Regional Board. The American Water Works Association Guidelines for the Distribution of Non-Potable Water shall be followed, including installation of purple pipe, adequate signs, etc. As-built drawings shall show the final locations of the potable water, sewer, and recycled water pipelines; and indicate adequate separation between the recycled water and potable domestic water lines, which shall also be marked clearly or labeled using separate colors for identification. In addition, a copy of each application to DDW for a recycled water project shall be delivered to the Regional Board for inclusion in the administrative file.
2. If the recycled water system lateral pipelines are located on an easement contiguous to a homeowners private property and where there is a reasonable probability that an illegal or accidental connection to the recycled water line could be made, the City or its authorized agency shall provide a buffer zone or other necessary measures between the recycled water lines and the easement to prevent any illegal or accidental connection to the recycled water lines. If the City or its authorized agency does not feel it can maintain adequate control of the recycled water system pipelines, the pipelines will need to be relocated or a physical barrier needs to be installed to prevent this type of potential problem. The homeowners need to be educated on the use of recycled water in the area. The City or its authorized agency should specify a plan to interface with the homeowners as a part of the Rules of Service Agreement in an adjacent property awareness program.
3. The City or its authorized agency shall inspect the recycled water use areas on a periodic basis. A report of findings of the inspection shall be submitted to the City that will incorporate it with the quarterly report, specified in the MRP, to the DDW and the Regional Board.
4. The City shall file with the Regional Board, under penalty of perjury, annual and quarterly reports on self-monitoring work performed according to the detailed specifications contained in MRP attached hereto and incorporated herein by reference, as directed by the Executive Officer. The results of any monitoring done more frequently than required at the location and/or times specified in the MRP shall be reported to the Regional Board. The Discharger shall comply with all of the provisions and requirements of the MRP.
5. The City shall notify DDW and this Regional Board by telephone or electronic means within 24 hours of knowledge of any violations of recycled water use conditions, any adverse conditions as a result of the use of recycled water and any discharge exceeding the effluent limits prescribed in this Order from the Water Factory or/and the recycled water storage basin; written confirmation shall follow within 5 working days from date of notification, unless otherwise specified in this Order. The report shall include, but not limited to, the following information, as appropriate:
 - A. Nature and extent of the violation;
 - B. Date and time: when the violation started, when compliance was achieved; and, when discharge was suspended and restored, as applicable;

- C. Duration of violation;
 - D. Cause(s) of violation;
 - E. Corrective and/or remedial actions taken and/or will be taken with time schedule for implementation to prevent future violations; and
 - F. Impact of the violation.
6. The direct use of disinfected recycled water for irrigation and unpaved roadway dust control could affect the public health, safety, or welfare; requirements for such uses are therefore necessary in accordance with Section 13523 of the Water Code.
 7. This Order does not exempt the City and its authorized agencies from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize the recycling and use facilities; and they leave unaffected any further constraint on the use of recycled water at certain site(s) that may be contained in other statutes or required by other agencies.
 8. This Order does not alleviate the responsibility of the City and its authorized agencies to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order; nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency. Expansion of the recycled water distribution facility shall be contingent upon issuance of all necessary requirements and permits, including a conditional use permit.
 9. After notice and opportunity for a hearing, this Order may be modified, revoked and reissued, or terminated for cause, that include, but is not limited to: failure to comply with any condition in this Order, endangerment of human health or environment resulting from the permitted activities in this Order, obtaining this Order by misrepresentation or failure to disclose all relevant facts, and acquisition of new information which could have justified the application of different conditions if known at the time of Order adoption.

The filing of a request by the City for modification, revocation and reissuance, or termination of the Order; or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.
 10. The City shall furnish, within a reasonable time, any information that the Regional Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The City shall also furnish the Regional Board, upon request, with copies of records required to be kept under this Order for at least three years.
 11. In an enforcement action, it shall not be a defense for the City that it would have been necessary to halt or to reduce the permitted activity in order to maintain compliance with this Order. Upon reduction, loss, or failure of the treatment facility, the City shall, to the extent necessary to maintain compliance with this Order, control production or all discharges, or both, until the facility is restored or an alternative

method of treatment is provided. This provision applies, for example, when the primary source of power of the treatment facility fails, is reduced, or is lost.

12. This Order includes "Standard Provisions Applicable to Waste Discharge Requirements" (Attachment C – Standard Provisions). In the event of conflict between provisions stated herein and the Standard Provisions, the provisions stated herein prevail.
13. This Order includes the WDRs/WRRs and the attached MRP (CI No. 10041). If there is any conflict among provisions stated in the MRP and these WDRs/WRRs, those provisions stated herein before prevail.
14. After a year of percolating recycled water into the aquifers, the City shall update the operation, maintenance, and monitoring plan (OMM Plan) and submit it to the Regional Board for review and approval, if there is any change to the original OMM Plan. The Water Factory shall be operated in accordance with the approved plan.

The OMM Plan shall cover critical operational parameters to include routine testing procedures for optimization of the UV dose for disinfection and reduction of light-sensitive contaminants, and all treatment processes, maintenance and calibration schedules for all monitoring equipment, process alarm set points, and response procedures for all alarms in each treatment process of the Water Factory, including criteria for diverting recycled water if water quality requirements are not met, start-up, emergency response and contingency plans. During the first year of operation of the Water Factory, all treatment processes shall be optimized to reduce contaminant levels. The results of these initial optimization efforts shall be incorporated into the updated OMM Plan. The OMM Plan shall include staffing levels with applicable certification levels for the Water Factory operations personnel. Significant changes in the operation of any of the treatment processes shall be reported to the DDW and the Regional Board. Changes in the approved OMM Plan must be approved by the DDW and the Regional Board prior to instituting changes.

15. For any material change or proposed change in character, location or volume of recycled water, or its uses, the City shall submit at least 120 days prior to the proposed change an engineering report or addendum to the existing engineering report to the Regional Board and DDW [pursuant to CWC, sections 13260(c) and 13522 and CCR, Title 22, Section 60320.080] for approval.
16. The City shall provide an Annual Report described in the MRP to this Regional Board.
17. In order to limit the presence of constituents of concerns specified in Section II in the effluent including regulated and unregulated contaminants identified in Attachments B-1 to B-6 and Attachments D to E of the accompanying MRP, the City shall, for the purposes of protecting public health, ensure that its equipment and facilities for treatment and disposal operate at levels of peak performance.
18. Spill Clean-Up Contingency Plan (SCP) Requirements – Within six (6) months prior to discharge, the City is required to submit a SCP, which describes the activities and protocols to address clean-up of spills, overflows, and bypasses of untreated or partially treated wastewater from the City's collection system or treatment facilities.

At a minimum, this SCP shall include sections on spill clean-up and containment measures, public notification, and monitoring. The City shall review and amend this SCP as appropriate after each spill from the Water Factory or in the service area of the Water Factory. The City shall include a discussion in the annual summary report of any modifications to the SCP and the application of the SCP to all spills during the year.

19. Construction, Operation, and Maintenance Requirements

- A. The Water Factory subject to this Order shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to CCR, Title 23, division 3, chapter 26 (Section 13625 - 13633).
- B. The City shall maintain in good working order a sufficient alternate power source for operating the wastewater treatment and disposal facilities. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, and other physical phenomena. The alternate power source shall be designed to permit inspection and maintenance and shall provide for periodic testing. If such alternate power source is not in existence, the City shall halt, reduce, or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power.
- C. The City shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

20. Collection System Requirements

The State Water Board adopted General WDRs for Sanitary Sewer Systems, (WQ Order No. 2006-0003) on May 2, 2006, to provide a consistent, statewide regulatory approach to address SSO. The SSO WDRs require public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. The City's collection system is part of the system that is subject to the WQ Order No. 2006-0003. As such, the City must properly operate and maintain its collection system (40 CFR part 122.41(e)). The City must report any non-compliance (40 CFR part 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 CFR part 122.41(d)).

21. Spill Reporting Requirements

- A. **Initial Notification** – Although State and Regional Board staff do not have duties as first responders, this requirement is an appropriate mechanism to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses. For certain spills, overflows and bypasses, the City shall make notifications as required below:
 - a. In accordance with the requirements of Health and Safety Code section 5411.5, the City shall provide notification to the local health officer or the

director of environmental health with jurisdiction over the affected water body of any unauthorized release of sewage or other waste that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but no later than two (2) hours after becoming aware of the release.

- b. In accordance with the requirements of CWC section 13271, the City shall provide notification to the California Emergency Management Agency (Cal EMA) of the release of reportable quantities of hazardous substances or sewage that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but not later than two (2) hours after becoming aware of the release. CCR, Title 23, section 2250, established 1,000 gallons or more as a reportable quantity of sewage. The phone number for reporting these releases to the Cal EMA is (800) 852-7550.
- c. The City shall notify the Regional Board of any unauthorized release of sewage from the Water Factory that causes, or probably will cause, a discharge to a water of the state as soon as possible, but not later than two (2) hours after becoming aware of the release. This initial notification does not need to be made if the City has notified Cal EMA and the local health officer or the director of environmental health with jurisdiction over the affected waterbody. The phone number for reporting these releases of sewage to the Regional Board is (213) 576-6683. The phone numbers for after hours and weekend reporting of releases of sewage to the Regional Board are (213) 305-2284 and (213) 305-2253.

At a minimum, the following information shall be provided to the Regional Board:

- i. The location, date, and time of the release;
 - ii. The water body that may be impacted by the discharge;
 - iii. An estimate of the amount of sewage or other waste released and the amount that reached the receiving water at the time of notification;
 - iv. If ongoing, the estimated flow rate of the release at the time of the notification;
 - v. The name, organization, phone number and email address of the reporting representative; and,
 - vi. A certification that the State Office of Emergency Services and the local health officer or directors of environmental health with jurisdiction over the possibly affected water bodies have been notified of the discharge.
- B. **Monitoring** – For spills, overflows and bypasses reported under Section IX.21.A., the City shall monitor as required below:

To define the geographical extent of spill's impact, the City shall obtain grab samples (if feasible, accessible, and safe) for all spills, overflows or bypasses of any volume that reach any waters of the State (including surface and ground waters). The City shall analyze the samples for total and fecal coliform, E. coli (if fecal coliform test shows positive), enterococcus, and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible and safe). This monitoring shall be done on a daily basis from time the spill is known until the results of two (2) consecutive sets of bacteriological monitoring indicate the return to the background level or the County Department of Public Health authorizes cessation of monitoring.

- C. **Reporting** – The initial notification required under Section IX.21.A. shall be followed by:
- a. As soon as possible, but not later than twenty-four (24) hours after becoming aware of an unauthorized discharge of sewage or other waste from its wastewater treatment plant to a water of the state, the City shall submit a statement to Regional Board staff via email. If the discharge is 1,000 gallons or more, this statement shall certify that Cal EMA has been notified of the discharge in accordance with CWC section 13271. The statement shall also certify that the local health officer or director of environmental health with jurisdiction over the affected water bodies has been notified of the discharge in accordance with Health and Safety Code section 5411.5. The statement shall also include at a minimum the following information:
 - i. Agency, Order No., and MRP CI No.;
 - ii. The location, date, and time of the discharge;
 - iii. The water body that received the discharge;
 - iv. A description of the level of treatment of the sewage or other waste discharged;
 - v. An initial estimate of the amount of sewage or other waste released and the amount that reached the impacted water body;
 - vi. The Cal EMA control number and the date and time that notification of the incident was provided to Cal EMA; and,
 - vii. The name of the local health officer or director of environmental health representative notified (if contacted directly); the date and time of notification; and the method of notification (e.g., phone, fax, email).
 - b. A written preliminary report shall be submitted to the Regional Board within five (5) working days after disclosure of the incident via the State Water Board GeoTracker database under Global ID WDR100016910. The final written report shall be included in the next quarterly monitoring report submitted to the GeoTracker database above. The written report

shall document the information required in paragraph Section IX.21.D. below, monitoring results and any other information required in provisions of the Standard Provisions document including corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences.

- c. The City shall include a certification in the annual summary report (due according to the schedule in the accompanying MRP) that states that the sewer system emergency equipment, including alarm systems, backup pumps, standby power generators, and other critical emergency pump station components were maintained and tested in accordance with the City's preventive maintenance plan. Any deviations from or modifications to the Plan shall be discussed.
- D. **Records** – The City shall prepare and maintain a record of all spills, overflows or bypasses of raw or partially treated sewage from its collection system or Water Factory. This record shall be made available to the Regional Board upon request and a spill summary shall be included in the annual report, as required in the MRP CI No. 10042. The record shall contain:
- a. The date and time of each spill, overflow, or bypass;
 - b. The location of each spill, overflow, or bypass;
 - c. The estimated volume of each spill, overflow, or bypass including gross volume, amount recovered and amount not recovered, monitoring results as required by Section IX.21.B.;
 - d. The cause of each spill, overflow, or bypass;
 - e. Whether each spill, overflow, or bypass entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;
 - f. Any corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and
 - g. The mandatory information included in Sanitary Sewer Overflows (SSO) online reporting for finalizing and certifying the SSO report for each spill, overflow, or bypass under the SSO WDR.
- E. **Activities Coordination** – The Regional Board expects that the City will coordinate their compliance activities for consistency and efficiency with other entities that have responsibilities to implement: (i) this WDRs/WRRs permit, and (ii) the SSO WDRs.
- F. **Consistency with SSO WDRs** – The requirements contained in this Order in Sections IX.18. (SCP Requirements), IX.19. (Construction, Operation, and Maintenance Requirements), and IX.21. (Spill Reporting Requirements) are intended to be consistent with the requirements of the SSO WDRs. The Regional Board recognizes that there may be some overlap between the

WDRs/WRRs permit provisions and SSO WDRs requirements. The requirements of the SSO WDRs are considered the minimum thresholds (see Finding 11 of WQ Order No. 2006-0003). To encourage efficiency, the Regional Board will accept the documentation prepared by the City under the SSO WDRs for compliance purposes, as satisfying the requirements in Sections IX.18., IX.19., and IX.21. provided the more stringent provisions enumerated in this Order, have also been addressed.

22. Constituents of Emerging Concerns (CEC) Requirements

The City shall monitor the CECs in the effluent discharge as listed in Attachment D. Monitoring results shall be reported as part of the annual report. Analysis under this section is for monitoring of occurrence purposes only. Analytical results will not be used for compliance determination purposes, as there are not water quality standards for these chemicals at this time.

23. The City shall submit to the Regional Board an Operation, Maintenance, and Monitoring Plan (OMM Plan) for the entire Water Factory and disposal facilities prior to startup of the Water Factory. The OMM Plan shall address all conditions specified in the Attachment A, DDW Conditional Approval Letter dated December 1, 2015. The City shall maintain the OMM Plan in useable condition, and available for reference and use by all applicable personnel. The City shall regularly review, and revise or update as necessary, the OMM Plan in order for the document(s) to remain useful and relevant to current equipment and operation practices. Reviews shall be conducted annually, and revisions or updates shall be completed as necessary and submitted to the Regional Board on an annual basis.

X. REOPENER

This Order may be reopened any time at the Regional Board's discretion to include the most scientifically relevant, and appropriate limits or other requirements for the Water Factory and may specifically be reopened to make revisions consistent with an approved salt and nutrient management plan.

XI. EFFECTIVE DATE OF THE ORDER

This Order takes effect upon its adoption.

I, Samuel Unger, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Los Angeles Region on June 9, 2016.


Samuel Unger, P.E.
Executive Officer



-  : Boundary of Vista Canyon Project
-  : Vista Canyon Water Factory
-  : Metrolink

Figure 1 – Vicinity of Vista Canyon Project and Vista Canyon Water Factory

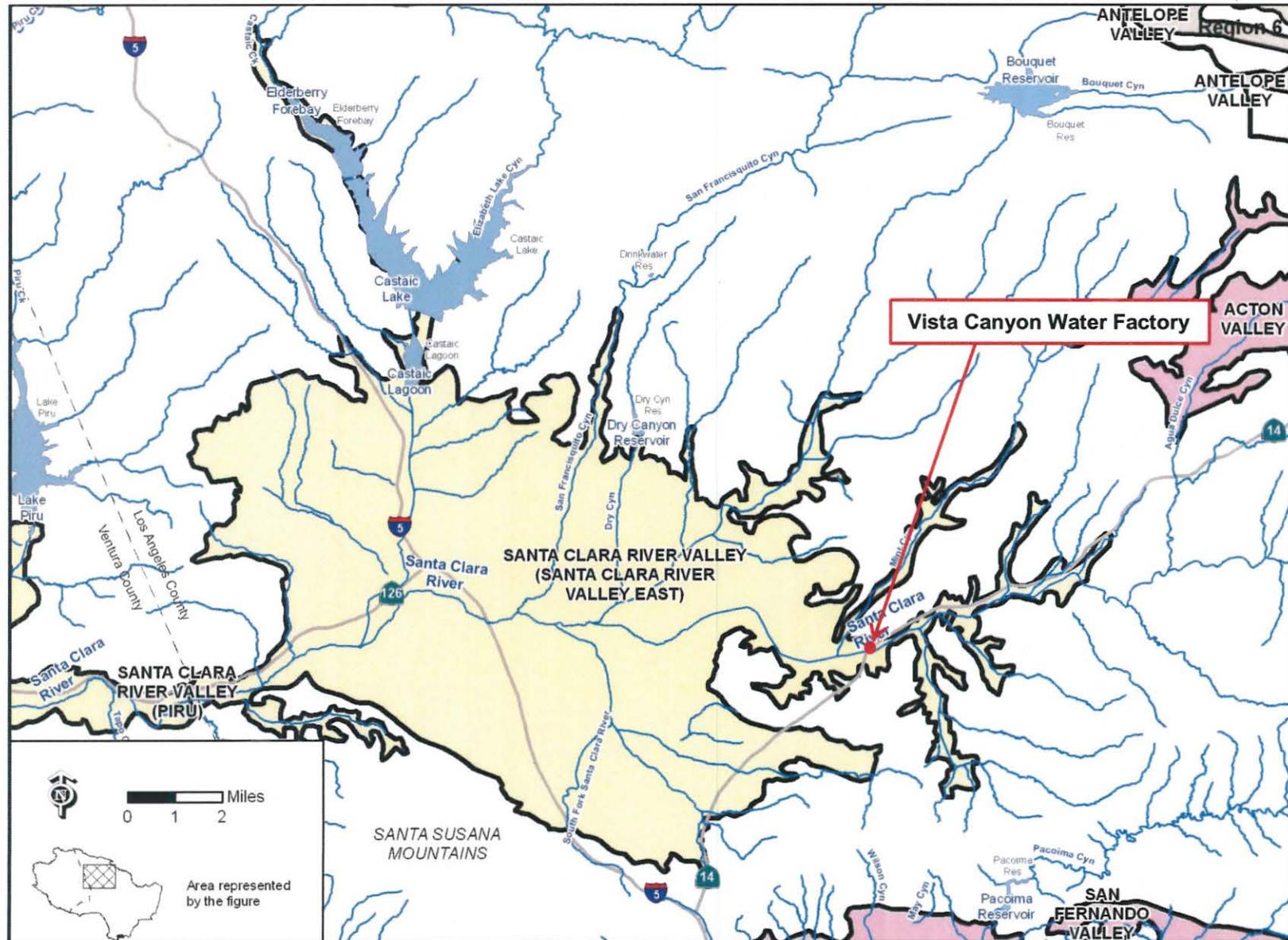


Figure 2 – Eastern Santa Clara Groundwater Basin

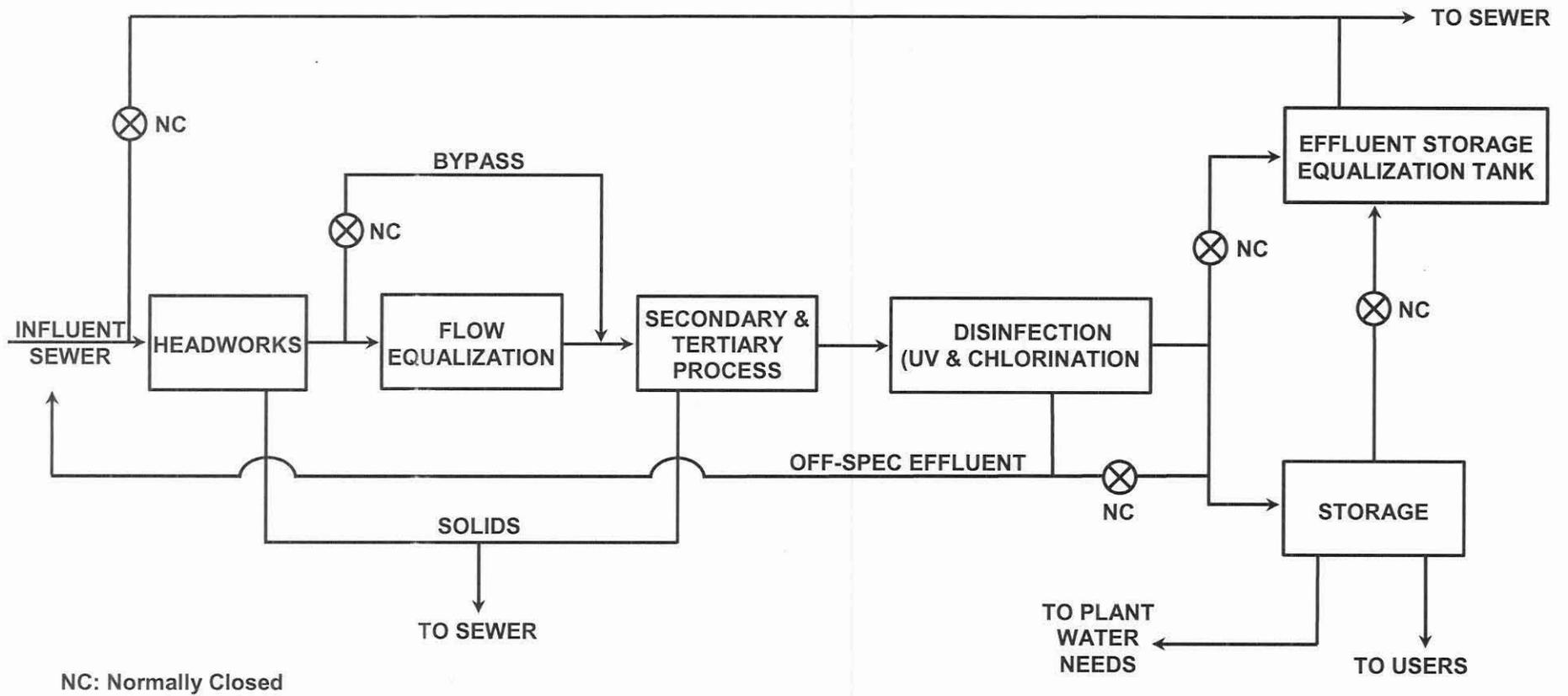


Figure 3 – Process Flow Schematic of Vista Canyon Water Factory



Figure 4 – Locations of Quantities and Recycled Water Uses

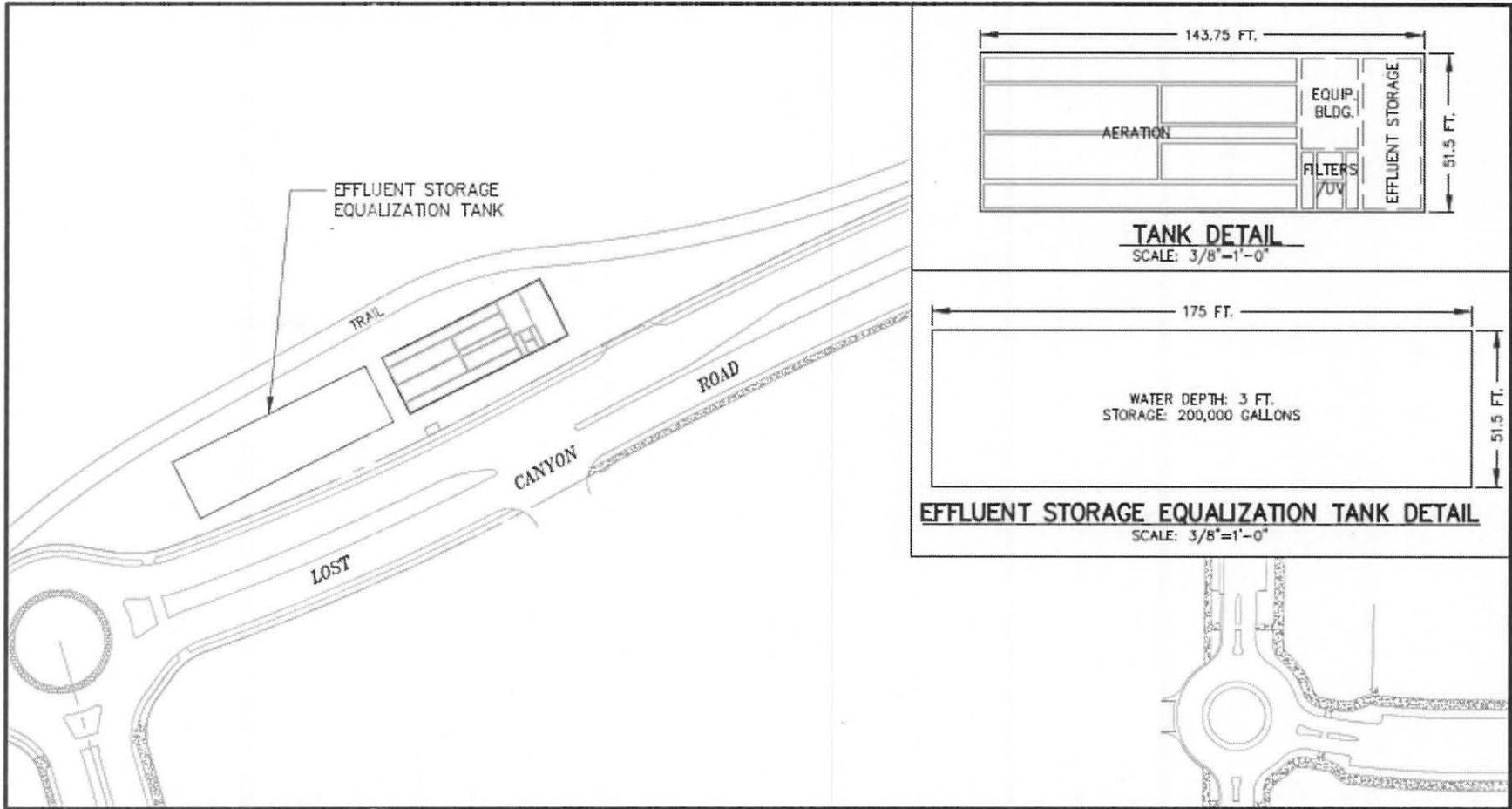


Figure 5 – Layouts of Vista Canyon Water Factory

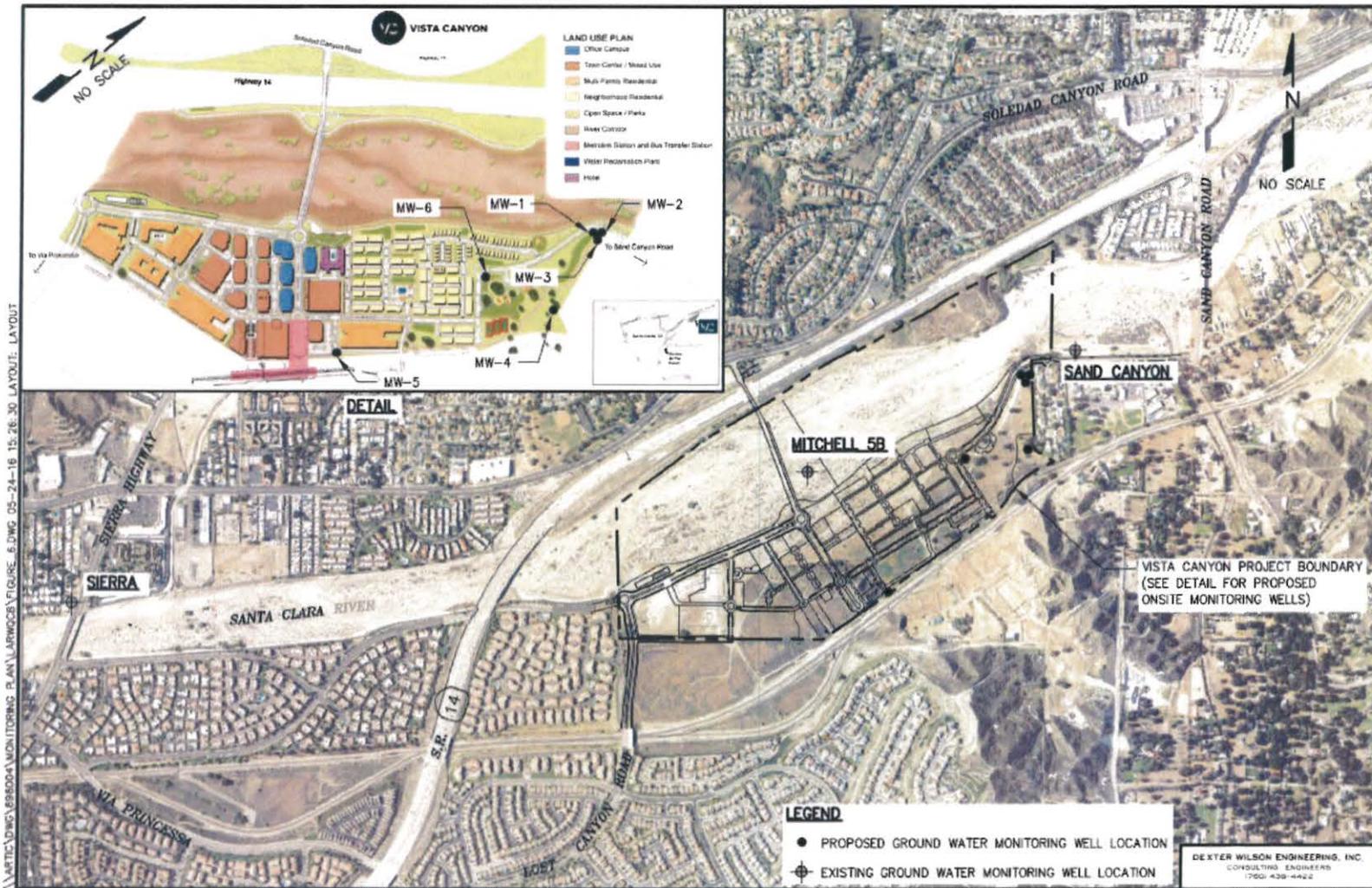


Figure 6 – Locations of Groundwater Monitoring Wells for Vista Canyon Water Factory Project

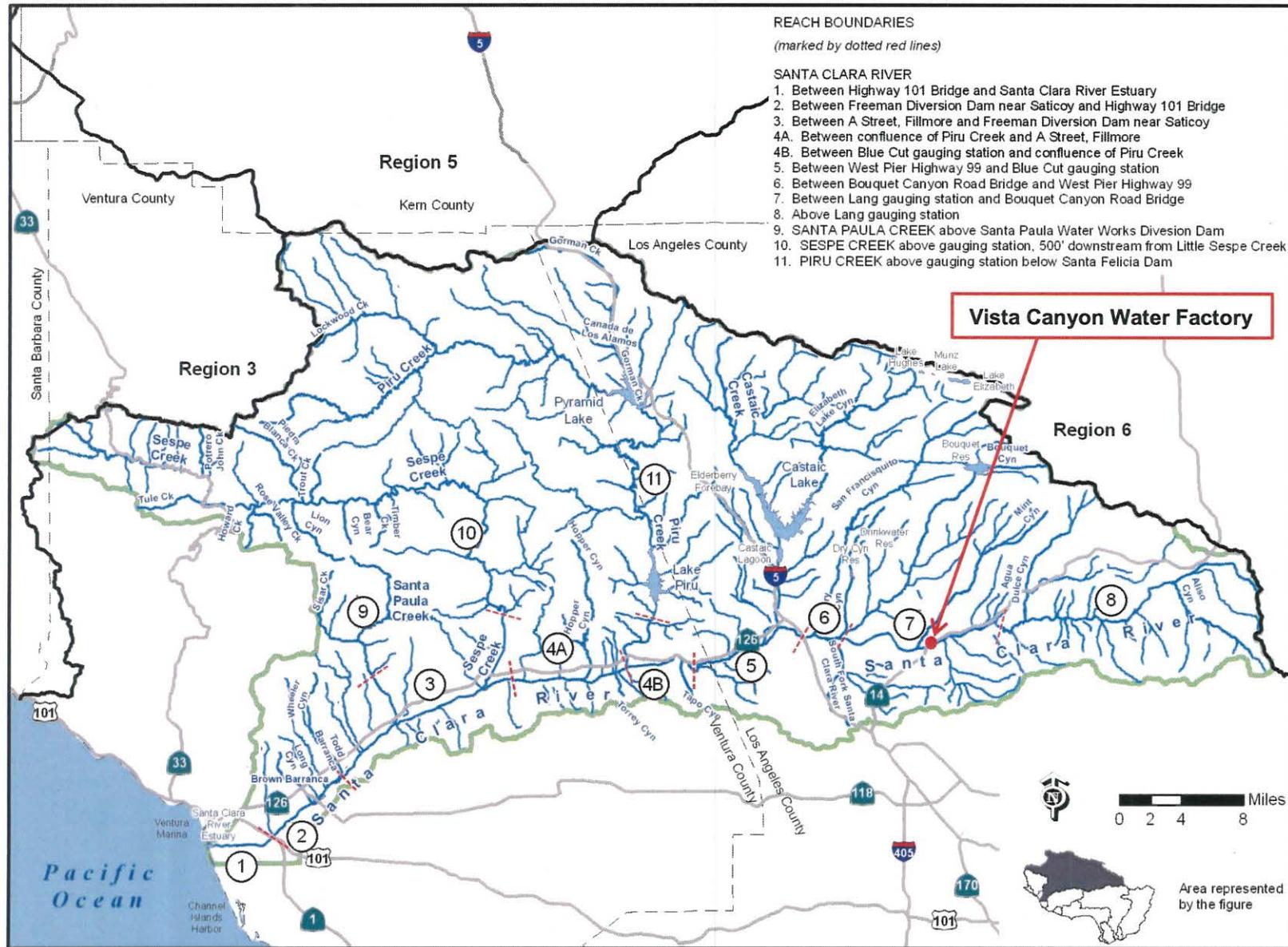


Figure 7 – Santa Clara River Watershed Surface Reaches



Figure 8 – Exhibition of “Recycled Water – Do Not Drink”

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD LOS ANGELES REGION

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MONITORING AND REPORTING PROGRAM CI. NO. 10041 FOR THE VISTA CANYON WATER FACTORY (File No. 14-031)

ISSUED TO CITY OF SANTA CLARITA

This Monitoring and Reporting Program (MRP) No. CI 10041 is issued pursuant to California Water Code section 13267, which authorizes the Regional Water Quality Control Board, Los Angeles Region, (Regional Board) to require the City of Santa Clarita (City) who discharges the tertiary-treated wastewater generated from the Vista Canyon Water Factory (Water Factory) for landscape irrigation and non-potable recycled water applications to furnish technical or monitoring reports. The reports required herein are necessary to assure compliance with Waste Discharge Requirements (WDRs) and Water Reclamation Requirements (WRRs) Order No. R4-2016-0220 and to protect the waters of the state and their beneficial uses. The evidence that supports the need for the reports is set forth in the WDRs/WRRs and the Regional Board record.

I. SUBMITTAL OF REPORTS

1. The City shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports (including reports conducted by the City's authorized agencies) required under the MRP, including electronic data format (EDF) effluent and groundwater monitoring data, effluent storage equalization tank data, and use of recycled water data. These reports shall be received by the Regional Board via the State Water Resources Control Board (State Water Board) GeoTracker database under Global ID WDR100016910 on the dates indicated as follows:
 - A. **Quarterly Monitoring Reports** shall be received by the Regional Board by the 30th day of the month following the end of each quarterly monitoring period according to Table 1. The first Quarterly Monitoring Report under this program must be received by the Regional Board by October 30, 2016.

Reporting Period	Report Due Date
January ~ March	April 30
April ~ June	July 30
July ~ September	October 30
October ~ December	January 30

- B. **Annual Summary Report** shall be received by the Regional Board by March 1 of each year. The first Annual Summary Report under this program must be received by the Regional Board no later than March 1, 2017.
- 2. If there is no discharge and/or water recycled during any reporting period, the report shall so state.
- 3. Data collected from monitoring wells shall be included in the quarterly and annual report. The data shall include the well specifications, ordinances, well heads elevation to mean sea level (MSL) and the method to develop the well. The construction of wells shall follow *California Well Standards* of the California Department of Water Resources.
- 4. All report shall be prepared by or under the direction of a licensed engineer in the State of California or a certified hydrogeologist in the State of California. All monitoring reports must include, at minimum, the following:
 - A. Well and surface water station identification, date and time of sampling;
 - B. Sampler identification, and laboratory identification; and,
 - C. Quarterly observation of groundwater levels, recorded to 0.01 feet MSL, and flow direction.

II. MONITORING REQUIREMENTS

- 1. Monitoring shall be used to determine compliance with the requirements of the Order No. R4-2016-0220 and shall include, but not limited to, implementation, documentation, and reporting of the following:
 - A. Locations of each monitoring point, including groundwater wells where representative samples can be obtained and the rationale for the selection. The City must include a map, at a scale of 1 inch equals 1,200 feet or less, that clearly identifies the locations of the Water Factory and all groundwater monitoring wells.
 - B. Sampling protocols (specified in 40 CFR Part 136 or American Water Works Association standards where appropriate) and chain of custody procedures.
 - C. For groundwater monitoring, outline the methods and procedures to be used for measuring water levels; purging wells; collecting samples; decontaminating equipment; containing, preserving, and shipping samples; and maintaining appropriate documentation. Also include the procedures for handling, storing, testing, and disposing of purge and decontamination waters generated from the sampling events.
 - D. Laboratory or laboratories, which conducted the analyses. Include copy or copies of laboratory certifications by the Environmental Laboratory Accreditation Program (ELAP) of the State Water Board's Division of Drinking Water (DDW) every year or when the City change their contract laboratory.

- E. Analytical test methods used and the corresponding Detection Limits for Purposes of Reporting (DLR) for unregulated and regulated chemicals. Please see the DDW's website at http://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/EDT.shtml for unregulated and regulated chemicals.
 - F. Quality assurance and control measures.
2. Unless specified differently below, all samples shall be analyzed using analytical methods described in 40 CFR Part 136; or where no methods are specified for a given pollutant, by commercially available methods approved by the United State Environmental Protection Agency (USEPA) or DDW, Regional Board and/or State Water Board. The City shall select the analytical methods that provide reporting detection limits (RDLs) lower than the limits prescribed in the accompanying Order No. R4-2016-0220.
 3. The City shall instruct its laboratories to establish calibration standards so that the RDLs (or its equivalent if there is a different treatment of samples relative to calibration standards) are the lowest calibration standard. At no time shall the City use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
 4. Upon request by the City, the Regional Board, in consultation with the USEPA or DDW and the State Board Quality Assurance Program, may establish RDLs, in any of the following situations:
 - A. When the pollutant has no established method under 40 CFR 136 (revised May14, 1999, or subsequent revision);
 - B. When the method under 40 CFR 136 for the pollutant has a RDL higher than the limit specified in this Order; or,
 - C. When the City agrees to use a test method that is more sensitive than those specified in 40 CFR Part 136 and is commercially available.
 5. Samples of influent and disinfected effluent must be analyzed within allowable holding time limits as specified in 40 CFR Part 136.3. All QA/QC analyses must be run on the same dates when samples were actually analyzed. The City shall make available for inspection and/or submit the QA/QC documentation upon request by Regional Board staff. Proper chain of custody procedures must be followed and a copy of that documentation shall be submitted with the quarterly report.
 6. For unregulated chemical analyses, the City shall select methods according to the following approach:
 - A. Use drinking water methods, if available;
 - B. Use DDW-recommended methods for unregulated chemicals, if available;

- C. If there is no DDW-recommended drinking water method for a chemical, and more than a single USEPA-approved method is available, use the most sensitive USEPA-approved method;
 - D. If there is no USEPA-approved method for a chemical, and more than one method is available from the scientific literature and commercial laboratory, after consultation with DDW, use the most sensitive method;
 - E. If no approved method is available for a specific chemical, the City's laboratory may develop or use its own methods and should provide the analytical methods to DDW or the Regional Board for review. Those methods may be used until DDW recommended or USEPA-approved methods are available.
 - F. If the only method available for a chemical is for wastewater analysis (e.g., a chemical listed as a priority pollutant only), sample and analyze for that chemical in the treated and disinfected effluent. Use this approach until the City's laboratory develops a method for the chemical in drinking water, or until a DDW-recommended or USEPA-approved drinking water method is available.
 - G. The City is required to inform the Regional Board, in event that D, E, F is occurring.
7. For constituents of emerging concerns (CECs) analyses:

CECs (see Attachment D) are being collected to determine occurrence of these compounds in the effluent. There are currently no numeric water quality objectives for the constituents listed in Attachment D. The attached (in Appendix D) reporting limits shall be used for these constituents.

III. REPORTING REQUIREMENTS

The City shall submit all reports to the Regional Board by the dates indicated in Section I. All quarterly, and annual monitoring reports shall contain a separate section titled "Summary of Non-Compliance", which discusses the compliance records and corrective actions taken or planned that may be needed to bring the reuse into full compliance with water reclamation requirements. All quarterly and annual reports shall clearly list all non-compliance with WDRs/WRRs, as well as all excursions of effluent limits.

1. Quarterly reports

- A. These reports shall include, at a minimum, the following information:
 - a. The volume of the effluent to sewer and the volume of treated wastewater used for non-potable Title 22 recycled water applications including landscape irrigation. If no recycled water is used during the quarter, the report shall so state.
 - b. The date and time of sampling and analyses on the influent, effluent, and groundwater.
 - c. All analytical results of samples collected during the monitoring period of

the influent, effluent, and groundwater.

- d. Documentation of all QA/QC procedures that were followed during sampling and laboratory analyses.
 - e. Santa Clarita Water District water quality data containing information on the quality and quantity of these two water sources (State Water Project water and local groundwater) provided by Castaic Lake Water Agency (CLWA) and local groundwater purveyor(s) to the service area for the Vista Canyon Water Factory.
 - f. Records of any operational problems, plant upset and equipment breakdowns or malfunctions, and any discharge(s) used for non-potable Title 22 recycled water applications including landscape irrigation.
 - g. Discussion of compliance, noncompliance, or violation of requirements.
 - g. All corrective or preventive action(s) taken or planned with schedule of implementation, if any violation occurs.
 - h. Documentation of all non-compliances with Conditions of Certification File No. 12-034 specified in Attachment F and all corrective or preventive action(s) taken or planned with schedule of implementation.
- B. For the purpose of reporting compliance with numerical limitations, analytical data shall be reported using the following reporting protocols:
- a. Sample results greater than or equal to the RDL must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample);
 - b. Sample results less than the RDL, but greater than or equal to the laboratory's method detection limit (MDL), must be reported as "Detected, but Not Quantified", or DNQ. The laboratory must write the estimated chemical concentration of the sample next to DNQ as well as the words "Estimated Concentration" (may be shortened to Est. Conc.); or,
 - c. Sample results less than the laboratory's MDL must be reported as "None-Detected", or ND.
- If more than one analytical test method is available for a given parameter, the City must select the test method with lowest Minimum Level.
- C. If the City samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any sample more frequently than required in this MRP using approved analytical methods, the results of those analyses shall be included in the report. These results shall be included in the calculation of the average used in demonstrating compliance with average effluent, receiving groundwater water, etc., limitations.

- D. The Regional Board may request supporting documentation, such as daily logs of operations.

2. Annual Reports

- A. Tabular and graphical summaries of the monitoring data (quantity and quality of water imported from CLWA and local groundwater, quality of influent, effluent, and groundwater; quantity of influent, effluent to effluent storage equalization tank and sewer, and effluent used for recycled water applications) obtained during the previous calendar year. A comparison of laboratory results against effluent limits contained in these WDR/WRRs and notations of any exceedances of limits or other requirements shall be summarized and submitted at the beginning of the report.
- B. Discussion of the compliance record and corrective or preventive action(s) taken or planned that may be needed to bring the following items into full compliance with:
 - a. Requirements of the treated effluent, including the treated effluent used for recycled water specified in the accompanying Order No. R4-2016-0220, and/or,
 - b. Conditions of Certification File No. 12-034 specified in the accompanying Attachment F.
- C. An in-depth discussion of the results of the final effluent monitoring and groundwater monitoring conducted during the previous year includes:
 - a. Any change of receiving groundwater resulting from effluent discharges as recycled water for landscape irrigation;
 - b. Any change of groundwater flow pattern resulting from irrigation; and,
 - c. Mass balance and groundwater assimilative capacity calculations for total dissolved solids, chloride, sulfate, boron, and nitrate.

Temporal and spatial trends in the data shall be analyzed, with particular reference to comparisons between stations with respect to distances from the monitoring wells and comparisons to data collected during previous years. Appropriate statistical tests and indices, subject to approval by the Executive Officer, shall be calculated and included in the annual report.

- D. The description of any changes and anticipated changes including any impacts in operation of any unit processes or facilities shall be provided.
- E. A list of the analytical methods employed for each test and associated laboratory quality assurance/quality control procedures shall be included. The report shall restate the laboratories used by the City to monitor compliance with the accompanying Order, their status of certification, and provide a summary of analyses.

- F. The report shall confirm operator certification and provide a list of current operating personnel, their responsibilities, and their corresponding grade of certification.
- G. The report shall also summarize any change of the **Operation, Maintenance, and Monitoring Plan (OMM Plan)** due to the optimization of the existing Water Factory operation. The summary shall discuss conformance with the Water Factory's OMM Plan for operations, maintenance, and monitoring of the Water Factory, and whether the OMM Plan requires revision for the current facilities.

IV. WATER QUALITY MONITORING REQUIREMENTS

1. Influent Monitoring

- A. The City shall monitor influent to the Water Factory at Influent Pump Station located in the main stream of the influent channel prior to the headworks as specified in Table 2.

Constituents	Units ^[1]	Type of Sample	Minimum Frequency of Analysis
Total waste flow	gpd	Recorder	Continuous ^[2]
Total suspended solids	mg/L	24-hour comp.	Weekly ^[3]
BOD _{5@20} ^{°C}	mg/L	24-hour comp.	Weekly ^[3]

[1]. gpd: gallons per day;

mg/L: milligram/liter;

[2]. The City shall report the daily minimum, maximum, and average values.

[3]. During the startup period of the first month, this constituent shall be monitored on a daily basis.

2. Effluent Monitoring

- A. The City shall monitor the tertiary-treated effluent at downstream of all treated effluent passing through the final disinfection process of UV and chlorination.
- B. The following shall constitute the effluent monitoring program, specified in Table 3:

Constituent	Unit ^[1]	Type of Sample ^[2]	Minimum Frequency of Analysis
Total Flow	gpd	Recorder	Continuous ^[3]
pH	pH units	Grab	Daily
BOD _{5@20} ^{°C}	mg/L	24-hour composite	Weekly ^[4]

Table 3 – Effluent/Recycled Water Monitoring			
Constituent	Unit ^[1]	Type of Sample ^[2]	Minimum Frequency of Analysis
Total Suspended Solids	mg/L	Grab	Weekly ^[4]
Turbidity	NTU	Recorder	Continuous ^[5]
UV Transmittance	%	Recorder	Continuous
UV dose	mW-s/cm ²	Calculated	Continuous
Total Coliform	MPN/100mL	Grab	Daily
Fecal Coliform	MPN/100mL	Grab	Daily
Oil and Grease	mg/L	Grab	Monthly ^[6]
Nitrate as Nitrogen	mg/L	Grab	Weekly ^[4]
Nitrite as Nitrogen	mg/L	Grab	Weekly ^[4]
Ammonia Nitrogen	mg/L	Grab	Weekly ^[4]
Organic Nitrogen	mg/L	Grab	Weekly ^[4]
Total Nitrogen ^[7]	mg/L	Grab	Weekly ^[4]
Total Phosphorus	mg/L	Grab	Monthly ^[6]
Total Dissolved Solids	mg/L	Grab	Monthly ^[6]
Sulfate	mg/L	Grab	Monthly ^[6]
Chloride	mg/L	Grab	Monthly ^[6]
Boron	mg/L	Grab	Monthly ^[6]
MBAS ^[8]	mg/L	Grab	Monthly ^[6]
Constituents listed in Attachments B-1 to B-6	various	Grab/24-hour composite	Quarterly
CECs ^[9] in Attachment D	various	Grab	Annually
Priority Pollutants in Attachment E	µg/L	Grab	Annually

[1]. NTU: nephelometric turbidity unit;

MPN/100mL: Most Probable Number/100 milliliter

[2]. Grab sample is an individual sample collected in a short period of time not exceeding 15 minutes. Grab samples shall be collected during normal peak loading conditions for the parameter of interest, which may or may not be during hydraulic peaks. When an automatic composite sampler is not used, composite sampling shall be done as follows: If the duration of the discharge is equal to or less than 24 hours but greater than eight (8) hours, at least eight (8) flow-weighted samples shall be obtained during the discharge period and composited. For discharge duration of less than eight (8) hours, individual 'grab' sample may be substituted. 24-hour composite is for semi-volatile and volatile chemicals.

[3]. The City shall report the daily minimum, maximum, and average values. The City shall report the estimated daily volume of wastewater used for irrigation and for disposal.

- [4]. During the startup period of the first month, this constituent shall be monitored on a daily basis.
- [5]. If the continuous turbidity meter and recorder failed, grab sampling may be substituted for a period of up to 24-hours. The turbidity samples must be taken at intervals of no more than 1.2 hours over a 24-hour period to determine compliance for turbidity.
- [6]. During the startup period of the first month, this constituent shall be monitored on a weekly basis.
- [7]. Total nitrogen: Sum of nitrate, nitrite, organic nitrogen and ammonia (all expressed as nitrogen).
- [8] MBAS: Methylene Blue Active Substances
- [9]. CECs: Constituents of Emerging Concerns. The City shall monitor the CECs in the effluent discharge. The City shall follow the requirements as discussed in the accompanying Permit Section IX.22.B. Analysis under this section is for monitoring of occurrence purposes only. Analytical results obtained will not be used for compliance determination purposes, as there are not water quality standards for these chemicals at this time.

D. CECs: CECs, listed in Attachment D, shall be monitored annually. The Executive Officer may add or delete chemicals from this list as new analytical methods become available and may also make revisions to approved analytical methods as needed. A revised CECs list will be made available to the City when changes occur. The City shall request (and submit a justification for) any deviation from the attached list for EO approval, if a change is required, before collecting samples.

3. Groundwater Monitoring

A. Groundwater Monitoring Well Specifications: Table 4 shows specifications of groundwater monitoring wells for baseline and long-term groundwater monitoring programs.

ID	Monitoring Well Location	Purpose of Monitoring Location
MW-1	34°25'09.9690" N; 118°25'44.3696" W	Upgradient background groundwater quality
MW-2	34°25'09.9820" N; 118°25'43.4433" W	Upgradient background groundwater quality
MW-3	34°25'09.2759" N; 118°25'43.8822" W	Upgradient background groundwater quality
MW-4	34°25'03.2932" N; 118°25'43.5712" W	Upgradient background groundwater quality
MW-5	34°24'50.5360" N; 118°25'58.5262" W	Upgradient background groundwater quality
MW-6	34°25'02.4202" N; 118°25'50.3356" W	Cross-gradient groundwater quality for impacts of recycled water for irrigation

ID	Monitoring Well Location	Purpose of Monitoring Location
Sand Canyon	34°25'12.2121" N; 118°25'38.5636" W	Upgradient background groundwater quality
Mitchell 5B	34°25'01.1846" N; 118°26'07.3717" W	Impacts of recycled water for irrigation
Sierra	34°24'49.2181" N; 118°27'26.7537" W	Impacts of recycled water for irrigation

- B. Baseline groundwater monitoring:
- a. Baseline groundwater monitoring is required to:
 - i. Establish groundwater water quality database prior to landscape irrigation; and,
 - ii. Determine the responsibility of possible non-compliances in the future.
 - b. The City shall initiate the baseline groundwater quality monitoring during the dry season by September 15, 2016 and shall conclude the baseline monitoring prior to initiation of the landscape irrigation. Representative samples of groundwater shall be simultaneously collected at nine (9) monitoring wells specified in Table 4.
 - c. Table 5 sets forth the minimum constituents and parameters for monitoring baseline groundwater quality.

Constituent/Parameter	Units	Type of Sample	Minimal Frequency
Water Level ^[1]	feet	Vertical measure	Annually ^[2]
pH	pH unit	Grab	Annually ^[2]
Total Dissolved Solids	mg/L	Grab	Annually ^[2]
Sulfate	mg/L	Grab	Annually ^[2]
Chloride	mg/L	Grab	Annually ^[2]
Boron	mg/L	Grab	Annually ^[2]
Ammonia nitrogen	mg/L	Grab	Annually ^[2]
Nitrate as nitrogen	mg/L	Grab	Annually ^[2]
Nitrite as nitrogen	mg/L	Grab	Annually ^[2]
Total Coliform	MPN/100mL	Grab	Annually ^[2]
Fecal Coliform	MPN/100mL	Grab	Annually ^[2]
Enterococcus	MPN/100mL	Grab	Annually ^[2]

Table 5 – Groundwater Monitoring			
Constituent/Parameter	Units	Type of Sample	Minimal Frequency
Constituents listed in Attachments B-1 to B-6	various	Grab	Annually ^[2]
CECs ^[3] in Attachment D	various	Grab	Annually ^[2]
Priority Pollutants in Attachment E	µg/L	Grab	Annually ^[2]

[1]. Water level elevations must be measured to the nearest 0.01 feet, and referenced to mean sea level.

[2]. Annual samples shall be collected during the dry season each year.

[3]. CECs: Constituents of Emerging Concerns. The City shall monitor the CECs in the receiving groundwater. The City shall follow the requirements as discussed in the accompanying Permit Section IX.22.B. Analysis under this section is for monitoring of occurrence purposes only. Analytical results obtained will not be used for compliance determination purposes, as there are not water quality standards for these chemicals at this time.

C. Long-Term Groundwater Monitoring after Discharge:

- a. Long-term groundwater monitoring is used to monitor any possible impact from landscape irrigation.
- b. Long-term groundwater monitoring after discharge shall be simultaneously collected the minimum constituents and parameters, specified in Table 6, for monitoring groundwater quality at all nine (9) monitoring wells.

Table 6 – Groundwater Monitoring			
Constituent/Parameter	Units	Type of Sample	Minimal Frequency
Water Level ^[1]	feet	Vertical measure	Quarterly
pH	pH unit	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Sulfate	mg/L	Grab	Quarterly
Chloride	mg/L	Grab	Quarterly
Boron	mg/L	Grab	Quarterly
Ammonia nitrogen	mg/L	Grab	Quarterly
Nitrate as nitrogen	mg/L	Grab	Quarterly
Nitrite as nitrogen	mg/L	Grab	Quarterly
Total Coliform	MPN/100mL	Grab	Quarterly
Fecal Coliform	MPN/100mL	Grab	Quarterly
Enterococcus	MPN/100mL	Grab	Quarterly
Constituents listed in	various	Grab	Annually ^[3]

Table 6 – Groundwater Monitoring			
Constituent/Parameter	Units	Type of Sample	Minimal Frequency
Attachments B-1 to B-6			
CECs ^[2] in Attachment D	various	Grab	Annually ^[3]
Priority Pollutants in Attachment E	µg/L	Grab	Annually ^[3]

[1]. Water level elevations must be measured to the nearest 0.01 feet, and referenced to mean sea level.

[2]. CECs: Constituents of Emerging Concerns. The City shall monitor the CECs in the receiving groundwater. The City shall follow the requirements as discussed in the accompanying Permit Section IX.22.B. Analysis under this section is for monitoring of occurrence purposes only. Analytical results obtained will not be used for compliance determination purposes, as there are not water quality standards for these chemicals at this time.

[3]. Annual samples shall be collected during the dry season each year.

- D. All monitoring reports must include, at minimum, the following:
- a. Well or location identification, date and time of sampling;
 - b. Sampler identification, laboratory identification; and chain of custody;
 - c. Water temperature (in field); and,
 - d. Calculation of vertical separation of the water table from the bottom of the disposal system.
- E. Based on the results of the quarterly analyses, the City may propose to the Executive Officer for review and approval a reduced sampling and testing program to annually.
4. **Effluent Storage Equalization Tank Monitoring**

The City shall record the volume in gallons per day of treated wastewater discharged to the effluent storage equalization tank, therefore to sewer as well.

VI. GENERAL MONITORING AND REPORTING REQUIREMENTS

1. The City shall comply with all Standard Provisions (Attachment C) related to monitoring, reporting, and recordkeeping.
2. For every item where the requirements are not met, the City shall submit a statement of the actions undertaken or proposed which will bring the treated effluent and/or treated effluent used for the recycled water program into full compliance with requirements at the earliest possible time, and submit a timetable for implementation of the corrective measures.

3. Monitoring reports shall be signed by either the principal Executive Officer or ranking elected official. A duly authorized representative of the aforementioned signatories may sign documents if:
 - A. The authorization is made in writing by the signatory;
 - B. The authorization specifies the representative as either an individual or position having responsibility for the overall operation of the regulated facility or activity; and,

The written authorization is submitted to the Executive Officer of this Regional Board.

4. The monitoring report shall contain the following completed declaration:

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, 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 a fine and imprisonment."

Executed on the ___ day of _____ at _____

Signature

Title

5. The City shall retain records of all monitoring information, including all calibration and maintenance, monitoring instrumentation, and copies of all reports required by this Order, for a period of at least three (3) years from the date of sampling measurement, or report. This period may be extended by request of the Regional Board at any time and shall be extended during the course of any unresolved litigation regarding the regulated activity.
6. Records of monitoring information shall include:
 - A. The date, exact place, and time of sampling or measurements;
 - B. The individual(s) who performed the sampling or measurements;
 - C. The date(s) analyses were performed;
 - D. The individual(s) who performed the analysis;
 - E. The analytical techniques or methods used; and
 - F. The results of such analyses.
7. The City shall submit to the Regional Board, together with the first monitoring report required by this Order, a list of all chemicals and proprietary additives which could

affect the quality of the treated effluent and the treated effluent used for recycled water, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly. An annual summary of the quantities of all chemicals, listed by both trade and chemical names, which are used in the treatment process shall be included in the annual report.

VII. WASTE HAULING REPORTING

In the event that waste sludge, septage, or other wastes are hauled offsite, the name and address of the hauler shall be reported, along with types and quantities hauled during the reporting period and the location of final point of disposal. In the event that no wastes are hauled during the reporting period, a statement to that effect shall be submitted in the quarterly monitoring report.

VIII. MONITORING FREQUENCIES

Monitoring frequencies may be adjusted to a less frequent basis or parameters dropped by the Executive Officer if the City makes a request (with justification) and the Executive Officer determines that the request is adequately supported by statistical trends in the monitoring data submitted. The City cannot make any adjustments until written approval is received from the Executive Officer.

These records and reports are public documents and shall be made available for inspection during normal business hours at the office of the California Regional Water Quality Control Board, Los Angeles Region.

Ordered by:


Samuel Unger, P.E.
Executive Officer
Date: June 9, 2016