Los Angeles Regional Water Quality Control Board

February 21, 2020

Mr. Shannon Pickett
City of Santa Clarita
23920 Valencia Boulevard
Santa Clarita, CA 91355
spickett@santa-clarita.com

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
CLAIM NO. 7019 0700 0001 9921 4974

EXTENSION OF PUBLIC COMMENT PERIOD FOR THE REVISED TENTATIVE WASTE DISCHARGE REQUIREMENTS AND WATER RECLAMATION REQUIREMENTS FOR VISTA CANYON WATER FACTORY – CITY OF SANTA CLARITA, CALIFORNIA (FILE NO. 14-031, ORDER NO. R4-2020-XXXX, CI-10041, GLOBAL ID WDR100016910)

Dear Mr. Pickett,

On February 14, 2020, the Los Angeles Regional Water Quality Control Board (Regional Water Board) released the tentative Waste Discharge Requirements (WDRs) and Water Reclamation Requirements (WRRs) for the Vista Canyon Water Factory for public review and comment. The tentative WDRs/WRRs included Regional Water Board Order No. R4-2020-XXXX and Monitoring and Reporting Program (MRP) No. CI-10041.

On February 19, 2020, the Regional Water Board received State Water Resources Control Board Division of Drinking Water (DDW)'s conditional acceptance letter for the Vista Canyon Water Factory Title 22 Engineering Report dated November 27, 2019.

Based on a review of DDW's conditional acceptance letter dated February 19, 2020, Regional Water Board staff is proposing revisions to the tentative WDRs/WRRs to incorporate DDW's recommendations and to replace the 2015 conditional acceptance letter in Attachment A with the 2020 conditional acceptance letter. The end of the public comment period will be extended to March 23, 2020.

Enclosed are copies of the revised tentative WDRs/WRRs/MRP consisting of:

a. Revised tentative Regional Water Board Order No. R4-2020-XXXX specifying WDRs and WRRs;

b. Revised tentative MRP No. CI-10041; and

c. Attachments A to D, including Division of Drinking Water's conditional approval letters dated February 19, 2020, Maximum Contaminant Levels, Standard Provisions Applicable to Waste Discharge Requirements, and Priority Pollutants.

The documents are also available at the Regional Water Board's website (https://www.waterboards.ca.gov/losangeles/board_decisions/tentative_orders/).

In accordance with administrative procedures, the Regional Water Board is scheduled to consider the enclosed revised tentative WDRs/WRRs/MRP and comments timely received at a public hearing to be held at **9:00 a.m. on April 9, 2020** at the City of Agoura Hills, City Hall, 30001 Ladyface Court, Agoura Hills, California. The Regional Water Board will hear any testimony pertinent to this discharge and the tentative requirements. It is expected that the Regional Water Board will take action at the hearing; however, as testimony indicates, the Regional Water Board at its discretion may order further investigation.

In order to be evaluated by Regional Water Board staff and included in the Regional Water Board members' agenda packets, written comments or evidence regarding these revised tentative WDRs/WRRs/MRP must be received at the Regional Water Board's office by **5:00 p.m. on March 23, 2020**. Failure to comply with these requirements is grounds for the Regional Water Board to refuse to admit the proposed written comment or evidence into the record. Timely submittal of written comments is required to ensure that all comments are accurately and fully included in the administrative record, that Regional Water Board staff is able to provide timely review and time to respond to comments, and that Regional Water Board members have sufficient time to give full consideration to the comments and issues raised.

The agenda for the meeting will be posted on the Regional Water Board's website (https://www.waterboards.ca.gov/losangeles/board_info/agenda/) approximately 10 days prior to the meeting.

If you have any questions, please contact the Project Manager, Dr. Woonhoe Kim (Woonhoe.Kim@waterboards.ca.gov) at (213) 620-2264, or the Chief of Groundwater Permitting Unit, Dr. Eric Wu (Eric.Wu@waterboards.ca.gov) at (213) 576-6683.

Sincerely,

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

Enclosures: 1. Revised tentative WDRs/WRRs Order No. R4-2020-XXXX
2. Revised tentative MRP No. CI-10041

3. Attachments A to D

cc (via email): Mr. Mark Subbotin, msubbotin76@gmail.com
Mr. Steven Henderson, Dexter Wilson Engineering, steven@dwilsoneng.com
Mr. Glenn Adamick, JSB Development, gadamick@jsbdev.com
Mr. Randy Barnard, Division of Drinking Water, Randy.Barnard@waterboards.ca.gov

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
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ORDER NO. R4-2020-XXXX
FILE NO. 14-031
CI-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 Water Board) finds:

BACKGROUND

1. The Vista Canyon Project proposes to develop an approximately 185-acre 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, a theater, restaurants, and a hotel. Approximately 392,000 gallons per day (GPD) of wastewater will be generated from this project once it is fully developed. Full development is projected to be completed between 2025 and 2027 based upon market conditions.

2. The Vista Canyon Water Factory (Water Factory) is a tertiary wastewater treatment and recycling plant that will treat wastewater generated from the Vista Canyon Project. This treated wastewater will be recycled for onsite and offsite landscape irrigation and other non-potable applications. When use of recycled water for irrigation during rainy weather is prohibited or when the effluent cannot meet effluent limitations prescribed in this Order, effluent will be conveyed to the Saugus Water Reclamation Plant (WRP) and the Valencia WRP, owned and operated by Santa Clarita Valley Sanitation District (SCVSD). The Saugus WRP will be the primary plant treating wastewater. The Valencia WRP will be the backup plant to treat any extra wastewater generated beyond the wastewater treatment capacity of the Saugus WRP.

3. The Water Factory will be operated by the City of Santa Clarita (City). The City, hereafter defined as Permittee or Discharger, will be the owner of the Water Factory

REVISED TENTATIVE

and 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 Water Board.

4. On July 9, 2019, the City adopted the City of Santa Clarita Recycled Water Ordinance to provide for the establishment and enforcement of regulations on the proper uses, sale and distribution of recycled water produced at the Water Factory. The adopted ordinance prohibits the sale, distribution, or use without a Wholesale-Recycled Water Purchase Agreement (Agreement). The ordinance further expressed the City's intent to enter into an Agreement with the Santa Clarita Valley Water Agency (SCVWA) for the distribution of recycled water produced at the Water Factory.

5. The Regional Water Board conducted a Vista Canyon Project site visit on August 9, 2019. 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 Water Factory construction was completed in May 2019. During the visit, Board staff observed the Water Factory in temporary operation using potable water that is recirculated.

REGULATORY AGENCIES

6. The Regional Water Board is the permitting agency for the discharge of disinfected, tertiary-treated effluent from the Water Factory via non-potable recycled water applications. This Regional Water Board issues Waste Discharge Requirements (WDRs) and Water Reclamation Requirements (WRRs) to ensure that discharges of recycled water from the Water Factory do not adversely affect the quality of groundwater and its beneficial uses.

7. The Regional Water Board is required pursuant to California Water Code (CWC) 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

8. On June 9, 2016, the Regional Water Board adopted WDRs and WRRs, as Order No. R4-2016-0220, to regulate the proposed discharge of disinfected, tertiary-treated wastewater generated at the Water Factory for non-potable recycled water applications.

9. On March 14, 2019, the City requested an amendment of the WDRs and WRRs to reevaluate limits established for the Water Factory based on recent potable water supply and ambient groundwater quality data. The City subsequently submitted a

Report of Waste Discharge dated June 4, 2019. A review of the recent potable water supply and groundwater quality data indicated that the previous effluent and groundwater limitations should be updated.

10. The purpose of this Order is to renew WDRs and WRRs for the City's Water Factory. This Order includes updates of the wastewater treatment process, effluent and groundwater limitations based on updated water supply and ambient water quality data, and groundwater impact analysis to ensure that the City's discharge of waste complies with water quality objectives and requirements set forth in *Water Quality Control Plan for the Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties* (Basin Plan) for the protection of beneficial uses.

11. 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 tertiary-treated 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 (TDS), sulfate, salts (e.g., chloride, boron), bacteria, nitrogen, priority pollutants, and constituents of emerging concern. 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.

12. CWC section 13263 authorizes the Regional Water 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.

13. CWC section 13267 authorizes the Regional Water 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 water board requires. The burden, including costs, of these reports, bears a reasonable relationship to the need for the report and the benefits to be obtained from the reports. This Order incorporates Monitoring and Reporting Program (MRP) No. CI-10041 for the City (File No. 14-031), which is necessary to ensure that the discharge of waste, and the use of

recycled water, complies with this Order and is protective of human health and the environment.

14. 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.

VISTA CANYON PROJECT

15. Vista Canyon Project Vicinity

    A. The Vista Canyon Project (Figure 1) is located in the Santa Clarita Valley within 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.

    B. The Vista Canyon Project overlies the Santa Clara River Valley East Groundwater Basin (DWR Basin No. 4-4.07) (Figure 2) as defined in the Basin Plan, specifically within the Santa Clara-Mint Canyon area. For management purposes, the Santa Clara River Valley East Groundwater Basin is divided into six subunits/management zones, which exhibit consistent hydrological, water quality or overlying land use characteristics. The Santa Clara-Mint Canyon area is identified as Management Zone 1.

16. Water Factory

    A. The Water Factory (34º 24' 51.73" N, 118º 26' 22.58" W) is located in the southwest corner of the Vista Canyon Project and approximately 200 feet from Santa Clara River (Figure 1). The Water Factory construction was completed in May 2019.

    B. Wastewater generated from the Vista Canyon Project is conveyed by gravity flow to the Water Factory.

    C. The Water Factory has an average design flow capacity of 392,000 GPD, which is capable of generating 371,000 GPD of effluent to be recycled. The wastewater treatment process consists of primary treatment (vertical fine screen), secondary treatment with a retention time of 20 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) (see Figure 3 for process flow schematic). The sludge (21,000 GPD), any excess treated effluent not recycled from the Water Factory, and any untreated wastewater generated from the Vista Canyon Project is discharged to the Saugus WRP and the Valencia WRP. Any effluent not meeting effluent limitations is delivered to the headworks for further treatment.

D. Treated Effluent/Recycled Water Applications

a. The treated effluent/recycled water will be stored in two 100,000-gallon recycled water storage tanks (Figure 4). Recycled water will be distributed via the recycled water pump station to onsite uses of the Vista Canyon Project for landscape irrigation and other Title 22 non-potable recycled water applications approved by the DDW. This WDR/WRR authorizes treated effluent non-potable recycled water applications in areas overlying the Management Zone 1a of the Santa Clara-Mint Canyon groundwater subbasin. Figure 5 presents onsite recycled water irrigation locations.

A summary of recycled water demand is identified in the Water Factory's Title 22 Engineering Report dated November 27, 2019 as shown in Table 1. SCVWA will be the responsible agency for the conveyance, storage, and onsite and offsite use of the recycled water diverted to its facilities. A separate Title 22 Engineering Report and separate water recycling requirements would be needed for the offsite uses. When the recycled water demand exceeds the supply available from the Water Factory, the potable water will be supplied.

Table 1. Proposed Annual Average Quantities of Recycled Water Applications

Recycled Water Demand	Recycled Water Quantity
Onsite irrigation	77,582 GPD (86.9 AFY)
Offsite irrigation	374,926 GPD (420 AFY)

Table 1 notes: The unit of AFY denotes acre feet per year.

b. An additional 1-million gallon recycled water storage tank will be constructed by SCVWA offsite and to the south of the Vista Canyon Project in order to store the treated wastewater during the following conditions:

i. When there is no demand for recycled water; and

ii. When the volume exceeds the capacity of the two onsite 100,000-gallon recycled water storage tanks.

c. Excess water not diverted to SCVWA's 1-million gallon offsite storage tank will be sent downstream to either the Saugus or Valencia WRPs.

E. Receiving Water Monitoring Network

The City installed six (6) monitoring wells (MW-1 through MW-6) in September 2016. The City has been monitoring groundwater for a minimum of three years since the 2016 Order was issued, once in 2016, once in 2017, and once in 2018, prior to discharge of effluent from the Water Factory to understand the groundwater quality in the shallow and deep aquifers. The groundwater quality data were incorporated into the monitoring reports and were submitted to the Regional Water Board for review.

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 receiving water limitations set forth in Section III, Table 11 of this Order.

The groundwater monitoring program network implemented by the City consists of a total of nine (9) wells: five (5) upgradient, two (2) downgradient, and two (2) cross-gradient. More information of these groundwater monitoring wells is available in Table 4, section V.3.A of the accompanying MRP No. CI-10041.

GLOBAL WARMING AND CLIMATE CHANGE

17. 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.

On March 7, 2017, the State Water Board adopted Resolution No. 2017-0012, *Comprehensive Response to Climate Change*, 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. On May 10, 2018, the Regional Water Board adopted Resolution No. R18-004, *A Resolution to Prioritize Actions to Adapt to and Mitigate the Impacts of Climate Change on the Los Angeles Region's Water Resources and Associated Beneficial Uses*, which encourages mitigating direct and indirect impacts of climate change on water quality and beneficial uses.

On August 26, 2019, the Discharger submitted a Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) as required in the prior Order. This Order requires the Discharger to periodically review and submit a revised Climate Change Plan when conditions at the facility change that may impact water quality.

18. The Water Factory is within the 100-year floodplain of the Santa Clara River. 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 raising the elevation of the Water Factory above the floodplain and designing a concrete retaining wall along the bank of the Santa Clara River. The concrete retaining wall is approximately 18 feet plus a freeboard of 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. 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.

19. 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 is consistent with and implements the Basin Plan, Title 22 California Code of Regulations (CCR), and other essential plans, policies, and regulations to protect the receiving groundwater quality.

20. ***Water Quality Control Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (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 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 Water Board plans and policies and other pertinent water quality policies and regulations. This Order implements the plans, policies and provisions of the Regional Water Board's Basin Plan.

    The Basin Plan (Chapter 3) incorporates Title 22 CCR primary maximum contaminant levels (MCLs) by reference (see Finding No. 21 below) 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 receiving waters 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 receiving waters designated as municipal and domestic supply. These water quality objectives are implemented in this Order to protect groundwater quality.

    In addition, the Basin Plan incorporates 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 are shown in Table 2 as follows:

Table 2. Basin Plan Beneficial Uses of Groundwater

Receiving Water	Beneficial Uses
Santa Clara River Valley East Groundwater Basin-Santa Clara-Mint Canyon (DWR Basin No. 4-4.07)	Existing: Municipal and domestic water supply, industrial service supply, industrial process supply, and agricultural supply.

The water quality objectives applicable to the Santa Clara River Valley East Groundwater Basin-Santa Clara-Mint Canyon are shown in Table 3 as follows:

Table 3. Water Quality Objectives for the Santa Clara River Valley East Groundwater Basin-Santa Clara-Mint Canyon

TDS (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Boron (mg/L)	Nitrate as nitrogen (mg/L)
800	150	150	1.0	10

Table 3 notes: The unit of mg/L denotes milligrams per liter.

A. **Total Maximum Daily Load (TMDL).** To restore impaired water quality and beneficial uses, in 2003, the Regional Water Board amended the Basin Plan to incorporate a TMDL for Nitrogen Compounds for the Santa Clara River (Figure 7). The TMDL assigns load allocations to groundwater discharges among others. The recycled water percolating from the site will reach underlying groundwater, which is likely connected to the Santa Clara River Reach 7. Therefore, the load allocation assigned to groundwater discharges to "other reaches and tributaries" applies to the Water Factory, which discharges to Reach 7 as defined in the Basin Plan (Table 4).

Table 4. Santa Clara River Nitrogen Compounds TMDL – Load Allocation for Other Reaches and Tributaries

Constituent	Load Allocation
Ammonia-N + Nitrate-N + Nitrite-N	10 mg/L

However, the effluent limit (see section II.2) is based on the more stringent groundwater receiving water limit to ensure the protection of groundwater quality based on the antidegradation analysis.

21. **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 have been incorporated into the Basin Plan as water quality objectives (see Attachments B-1 to B-6). 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.

22. **Nonpoint Source Implementation and Enforcement Policy –** State Water Board adopted the *Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program* (Nonpoint Source Control Policy) on May 20, 2004. The Nonpoint Source Control Policy requires that all sources of nonpoint source pollution be regulated through WDRs, waivers of WDRs, or discharge prohibitions, or some combination of these regulatory tools.

Recycled water applications can adversely impact water quality and impair beneficial uses by contributing excessive contaminants, such as nutrients and salts. These nonpoint source discharges from the Water Factory are discharges of waste that could affect the quality of waters of the State. This Order is consistent with the Nonpoint Source Control Policy because it contains WDRs. This Order requires the Discharger to attain water quality standards through effluent and receiving water limitations and prescribes effluent and groundwater quality monitoring within the recycled water use area to evaluate compliance with limitations.

23. **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 Code of Federal Regulations [CFR] 403.3(q)). The Water Factory meets all above criteria and therefore is considered a POTW.

24. Pursuant to CWC section 13263, the requirements of this Order take into consideration the provisions of CWC section 13241, including the following factors.

    A. Past, present, and probable future beneficial uses of water;

       The receiving water for discharges from the Water Factory is the Santa Clara River Valley East Groundwater Basin, Santa Clara-Mint Canyon subunit. The receiving water limitations in this Order are specified to maintain the beneficial uses of this basin: municipal and domestic water supply (MUN), industrial service supply (IND), industrial process supply (PROC), and agricultural supply (AGR). This Order also specifies effluent limitations protective of the beneficial uses and includes effluent and receiving water monitoring and reporting requirements to verify that discharges will not adversely affect the beneficial uses of groundwater.

    B. Environmental characteristics of the hydrographic unit under consideration, including the quality of the water available thereto;

       This Order incorporates the site-specific water quality objectives for groundwater in the Basin Plan considering geology, hydrogeology, and hydrology. Based on recent and historical data, the groundwater basin currently has high quality water, but is experiencing increases in salt and nitrogen loading from natural and anthropogenic sources. The Water Factory will

produce effluent quality that is better than the groundwater quality objectives and will comply with the state's Antidegradation Policy (Resolution No. 68-16). The project will therefore limit further groundwater degradation.

C. Water quality conditions that could reasonably be achieved through the coordinated control of all factors that affect water quality in the area;

As discussed in Findings 30 and 31, the Water Factory is included in the Salt and Nutrient Management Plan for the entire groundwater basin. In addition, the City performed an impact analysis on potential localized impacts due to the proposed discharge. The analysis demonstrates that, with respect to background TDS, chloride, sulfate, and boron, these constituent concentrations will remain below groundwater quality objectives and will comply with the state's Antidegradation Policy.

D. Economic considerations;

An upgrade of the Water Factory to treat salts and further treat nitrogen compounds would require installation of a reverse osmosis system, which is not currently economically feasible and is unnecessary because the discharge from the Water Factory will not cause adverse impacts to the groundwater quality.

E. The need for developing housing within the region;

The Water Factory will serve the Vista Canyon Project, which will provide 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, a theater, restaurants, and a hotel. This will help address the longstanding housing shortage in California, which ranks among the worst of the 50 states for housing units per capita.

F. The need to develop and use recycled water;

This Order authorizes the City to treat and discharge up to 371,000 GPD of disinfected tertiary-treated wastewater to generate recycled water for onsite irrigation pursuant to CCR Title 22 section 60304(a). This will help offset the need for potable water.

25. **AB 685 – CWC Section 106.3** – 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.

26. The City submitted a revised *Engineering Report for the Vista Canyon Water Factory (Municipal Wastewater Treatment Facility)*, dated November 27, 2019, on its proposed production, distribution, and use of recycled water for irrigation as required by section 60323 of Title 22, CCR. On February 19, 2020, the revised Title 22 Engineering Report was conditionally approved by the DDW. This Order incorporates conditions and requirements consistent with DDW's recommendations in Attachment A. DDW's approval and acceptance conditions of the Title 22 Engineering Report are an enforceable part of this Order.

27. **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.

28. **Recycled Water Policy –** State Water Board Resolution No. 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water* (Recycled Water Policy) as amended in 2013 and 2018, 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.

    The most recent amendment to the Recycled Water Policy was adopted on December 11, 2018 and became effective on April 8, 2019.[1] The amended Recycled Water Policy requires wastewater and recycled water dischargers to annually report monthly volumes of influent, wastewater produced, and effluent, including treatment level and discharge type. As applicable, dischargers are additionally required to annually report recycled water use by volume and category of reuse. This Order incorporates the reporting requirements of the Recycled Water Policy.

    The Recycled Water Policy requires the development of salt and nutrient management plans (SNMPs) in basins where salts and/or nutrients are a threat to water quality and therefore planning is needed to achieve water quality objectives in the long term. SNMPs are required to include a monitoring program, source identification, assimilative capacity estimation, implementation measures to manage

[1] Recycled Water Policy Amendment
https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf

or reduce salt and nutrient loading in the basin on a sustainable basis, and an antidegradation analysis.

In accordance with the Recycled Water Policy, the Upper Santa Clara River Integrated Regional Water Management Group, which is comprised of the Castaic Lake Water Agency (CLWA) (currently SCVWA), the City, Santa Clarita Water Division (currently SCVWA-Santa Clarita Division), Los Angeles County Flood Control District, Newhall County Water District (currently SCVWA-Newhall Division), San Gabriel & Lower Los Angeles Rivers and Mountains Conservancy, SCVSD, and Valencia Water Company (currently SCVWA-Valencia Division) entered into a Memorandum of Understanding to prepare the *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 and facilitated by the CLWA, directed the preparation of the *SNMP East Subbasin* and the accompanying substitute environmental document, which was prepared using guidance set forth by the Regional Water Board. The Regional Water Board amended the Basin Plan to incorporate management measures from the *SNMP East Subbasin* under the title, "a Program of Implementation Consisting of Groundwater Quality Management Measures for Salt and Nutrients in the Upper Santa Clara River Basin," Resolution No. R16-008, on December 8, 2016. The Office of Administrative Law approved the Basin Plan amendment on June 19, 2018.

29. **Antidegradation Policy, State Water Board Resolution No. 68-16 –** State Water Board Resolution 68-16 ("*Statement of Policy with Respect to Maintaining High Quality of Waters in California*") requires that, whenever the existing quality of water is better than the quality established in policies as of the date on which such policies become effective, such existing high quality must be maintained. Resolution 68-16 only allows change in the existing high quality if it has been demonstrated to the Water Board that the change is consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in water quality less than that prescribed in the policies. Resolution 68-16 further requires that discharges meet WDRs which will result in the best practicable treatment or control of the discharge necessary to assure that (a) pollution or nuisance will not occur and (b) the highest water quality consistent with the maximum benefit to the people of the State will be maintained.

ANTIDEGRADATION ANALYSIS

30. The Recycled Water Policy provides that, for non-potable recycled water projects within a groundwater basin with a basin plan amendment based on an accepted SNMP, compliance with the Antidegradation Policy may be based in part on the technical findings of the SNMP or basin plan amendment, as applicable. Therefore, the antidegradation analysis for these WDRs/WRRs is based on the technical

findings of the *SNMP East Subbasin* and additional site-specific modeling for the Water Factory project.

The purpose of the *SNMP East Subbasin* is to document the current ambient water quality conditions in the East Subbasin and to ensure that all water management practices, including the use of recycled water, ensure protection of beneficial uses and allow for the sustainable use of groundwater resources, consistent with water quality objectives for the East Subbasin. The *SNMP East Subbasin* uses a numerical model to predict the impact of the projected discharge from the Water Factory, along with other projects in the East Subbasin, on salt and nutrient loading in the East Subbasin. The SNMP used the 50th percentile of ambient water quality data from potable wells between 2001 and 2011 to determine the assimilative capacity of the East Subbasin. Assimilative capacity is the difference between existing water quality and water quality objectives. The *SNMP East Subbasin* identifies six management zones. Management Zone 1 was separated into Zones 1a and 1b, and the Water Factory is located in Management Zone 1a. The *SNMP East Subbasin* identifies the Water Factory as an individual project. In accordance with the Recycled Water Policy and the Regional Water Board assistance document for the preparation of SNMPs, in order to demonstrate compliance with the Antidegradation Policy, an individual project that utilizes less than 10 percent of the available assimilative capacity (or multiple projects utilizing less than 20 percent of the available capacity in a basin/sub-basin) in a basin/sub-basin need only conduct an antidegradation analysis verifying the use of the assimilative capacity.

In 2016, the Discharger conducted a groundwater impact analysis using a model consistent with the SNMP to evaluate the potential localized impact to groundwater from the Water Factory discharge in Management Zone 1a underlying the recycled water application area. The groundwater impact analysis was reviewed and approved by the Regional Water Board and reflected in the previous Order No. R4-2016-0220.

In 2019, the Discharger conducted another groundwater impact analysis based on more recent ambient groundwater data and revised projected effluent quality. The additional groundwater data included concentrations of TDS, sulfate, chloride, boron and nitrate (as nitrogen) collected by the SCVWA from 15 active water supply wells (Pinetree 1, Pinetree 3, Pinetree 4, Pinetree 5, Honby, Lost Canyon 2, Lost Canyon 2A, Mitchell 5A, Michell 5B, North Oaks Central, North Oaks East, North Oaks West, Sand Canyon, Santa Clara, and Sierra) in Zone 1a. The City analyzed all available groundwater data collected from the 15 groundwater wells between 2001 and 2019 to determine the site-specific background groundwater quality. Consistent with the methodology used in the SNMP, the 50th percentile of the groundwater quality data was used to represent the ambient groundwater quality of Zone 1a (Table 5).

Table 5. 50th Percentile Ambient Groundwater Quality in the Vista Canyon Project Area (Management Zone 1a)

Condition	TDS (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Boron (mg/L)	Nitrate as nitrogen (mg/L)
2001-2019	747.5	101	121	0.92	3.61

Based on this data analysis, the ambient groundwater quality in the Water Factory area (Zone 1a) is better than the Basin Plan water quality objectives (Table 3). Therefore, the receiving water limits for groundwater in this Order are based on the ambient groundwater quality and, consistent with the Antidegradation Policy and Recycled Water Policy, the addition of 10 percent of the difference between the Basin Plan groundwater quality objectives and the 50th percentile of the ambient groundwater quality.

The antidegradation analysis must also show that the Water Factory effluent quality will not cause an exceedance of the receiving water limitations set to comply with the Antidegradation Policy and Recycled Water Policy.

A. Water Factory Influent Quality

a. Because the Water Factory is a new facility, its effluent quality must be estimated based on the influent quality and the effects of the facility's treatment process on the influent quality. The Water Factory is a tertiary treatment facility and its treatment process removes many constituents from the influent. However, the Water Factory is not designed to treat salts, such as TDS, chloride, sulfate, and boron, in the influent. The influent quality is determined based on the potable water supply that will be delivered to the Vista Canyon Project and the addition of salts by users of the water before it is conveyed to the Water Factory. The Santa Clarita Division, one of the divisions under the SCVWA (formerly Santa Clarita Water Division), is the primary water agency that supplies potable water to the Vista Canyon Project. The SCVWA (Newhall Division, Santa Clarita Division, and Valencia Division) and Los Angeles Waterworks District No. 36 are water suppliers delivering potable water to communities in the Santa Clarita Valley.

b. On March 14, 2019, the Water Factory submitted a technical memorandum that reviewed the monthly potable water data collected between January 2017 and December 2018 by Santa Clarita Water Division (SCWD) from a potable water turnout. The memorandum was updated on October 5, 2019 to include more water supply data through August 2019, which would closely represent the projected influent concentrations of TDS, sulfate, chloride, and boron (collectively salts). The monthly potable water data collected by SCWD indicated that salt

concentrations in potable water vary seasonally and are typically elevated in summer months. Table 6 (Column No. 2) shows the 95th percentile concentration of the monthly potable water supply data from January 2017 to August 2019, except for sulfate. Since sulfate data are not available, a sulfate concentration of 150 mg/L is assumed based on groundwater quality objectives in the Basin Plan.

c. The estimated influent quality of the Water Factory (Column 4 of Table 6) results from the summation of Column 2 (95th percentile of sampled potable water quality) and Column 3 in Table 6. Column 3 in Table 6 is the addition of pollutant concentrations as the result of contributions from household and commercial use, adopted from the *Engineering Report for the Vista Canyon Water Factory (Municipal Wastewater Treatment Facility*, dated November 27, 2019.

Table 6. Projection of Water Factory Influent Water Quality

1	2	3	4
Constituent	**95th Percentile of Potable Water (mg/L)**	**Addition to Potable Water (mg/L)**	**Projected Water Factory Influent (mg/L)**
TDS	568	225	793
Chloride	96	31	127
Sulfate	150	20	170
Boron	0.90	0.15	1.05
Nitrate-N	2.87	Not available	Varied

d. The City Plumbing Code adopted on November 26, 2013 and the SCVSD Ordinance adopted on June 11, 2008 prohibit water softener installation within the Vista Canyon Project. The purpose of the Code and the Ordinance is to limit the discharge of TDS, including chloride, to the Water Factory.

B. Water Factory Effluent Quality

The Water Factory is a tertiary treatment facility and its treatment process removes many constituents from the influent. For example, the projected Ammonia-N + Nitrate-N + Nitrite-N concentration in the effluent is based on expected performance of the full nitrification and denitrification (NDN) process at the Water Factory. However, as noted above, the Water Factory is not designed to treat salts such as TDS, chloride, sulfate, and boron in the influent. Therefore, the salt concentrations in the effluent will be the same as those in

the influent presented in Table 6. Based on the tertiary treatment process, recent projections of influent water quality, and assuming proper operation and maintenance, the Water Factory will achieve the effluent concentrations detailed in Table 7 below:

Table 7. Projection of Water Factory Effluent Water Quality

Constituents	Units	Concentrations
TDS	mg/L	793
Chloride	mg/L	127
Sulfate	mg/L	170
Boron	mg/L	1.05
Ammonia-N + Nitrate-N + Nitrite-N	mg/L	6.0

Table 7 notes: Nitrate as nitrogen in effluent is expected to be less than 6.0 mg/L with the full NDN process at the Water Factory.

The projected effluent concentrations of nitrate, TDS, sulfate, chloride, and boron shown in Table 7 are greater than the ambient groundwater quality based on the updated water supply data (January 2017 to August 2019) and groundwater quality data (February 2001 to May 2019). However, the updated 2019 groundwater impact analysis demonstrates, as did the 2016 analysis, that the Water Factory can discharge at the projected effluent quality and still attain the receiving water limitations, as discussed below.

Table 8 below provides the results of the groundwater impact analysis, presenting the Basin Plan groundwater quality objectives, the 50th percentile ambient groundwater quality, and the projected groundwater quality resulting from varying years of Water Factory discharge. The impact analysis used the 95th percentile of the concentrations of TDS, chloride sulfate, boron and nitrate as a constant discharge, and evaluated the corresponding groundwater quality after 1, 10, 20, 30 and 50 years. The model results indicate that the use of recycled water generated from the Water Factory will not cause exceedances of the receiving water limitations based on the Antidegradation Policy for TDS and chloride over a 50-year period of discharge. However, the assimilative capacity for sulfate and boron allocated to the Water Factory by the *SNMP East Subbasin*, which is equivalent to 10 percent of the difference between the Basin Plan groundwater quality objectives and the 50th percentile ambient groundwater quality may be depleted after approximately 20 and 50 years of discharge, respectively, but would still be below the groundwater quality objectives.

Table 8. Antidegradation Analyses: Comparison of Projected Groundwater Quality, Ambient Groundwater Quality, and Basin Plan Groundwater Quality Objectives

		TDS (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Boron (mg/L)	Nitrate as nitrogen (mg/L)
Basin Plan Groundwater Quality Objective		800	150	150	1.0	10
50th Percentile Ambient Groundwater Quality		747.5	101	121	0.92	3.61
Receiving Water Limitations based on Anti-Degradation Policy		752.8	105.9	123.9	0.93	4.25
Projected Groundwater Quality	**1 Year**	747.6	101.1	121.1	0.92	3.62
	10 Years	748.8	101.7	122.4	0.92	3.68
	20 Years	750.1	102.5	123.8	0.93	3.75
	30 Years	751.3	103.2	125.1	0.93	3.81
	50 Years	753.7	104.5	127.6	0.94	3.94

Table 8 notes: The 50th percentile concentrations for ambient groundwater quality are based on data collected from 15 wells between 2001 and 2019, as shown in Table 5.

31. In summary, this Order establishes effluent and receiving water limitations that will comply with the Antidegradation Policy and Recycled Water Policy. The project is allowed to utilize 10% of the available assimilative capacity of the East Subbasin. The impact caused by sulfate and boron is localized to Management Zone 1a; the assimilative capacity of the East Subbasin as a whole will not be depleted. The application of the recycled water for irrigation purposes, allowed by this Order, will not unreasonably affect present and anticipated beneficial uses of the affected water bodies. Similarly, no pollution or nuisance is expected to occur and the highest water quality consistent with the maximum benefit to the people of the state will be maintained.

    This Order will prevent unreasonable threats to present and anticipated beneficial uses and will not result in receiving groundwater 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 the most sensitive beneficial use of the receiving waterbody; thus, all beneficial uses are protected. To ensure such protection, a vigorous monitoring plan is also adopted with this Order. A discussion of the basis for each of the effluent and receiving water limitations is provided in Findings 32 and 33. This Order contains requirements for

ensuring that Best Practicable Technology and Control (BPTC) and the highest water quality consistent with the maximum benefit to the people of the State will be achieved. The Water Factory uses UV disinfection, which reduces the amount of chlorine, and therefore salinity in the effluent, to achieve the required disinfection compared to chlorination alone. 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 Water Board may reopen this Order to reconsider groundwater limitations and other requirements to comply with Resolution 68-16, if necessary.

RATIONALE FOR LIMITATIONS

32. The numeric receiving water limitations for groundwater quality imposed by this Order are based on the following.

    A. TDS, chloride, sulfate, boron, and nitrogen compounds (Ammonia-N + Nitrate-N + Nitrite-N) – Groundwater limitations are based on protecting background groundwater quality set at the values presented in Table 8, *supra,* and in consideration of the antidegradation policy, by adding 10 percent of the difference between the Basin Plan Groundwater Quality Objective and the 50^{th} percentile of the ambient groundwater quality.

    B. Nitrite as nitrogen, total coliform, fecal coliform, and enterococcus – Groundwater limitations are based on the water quality objectives for ground waters in the Basin.

33. The numeric effluent limitations imposed by this Order are based on the following:

    A. Oil and grease – Effluent limitations are based on the narrative water quality objective for surface waters in the Basin Plan and on best professional judgment to interpret the narrative objective. The same numeric limitations are specified in other permits for tertiary-treated wastewater treatment plants adopted by this Regional Water Board.

    B. Biochemical oxygen demand and total suspended solids – Effluent limitations are technology-based limits contained in similar orders for Publicly Owned Treatment Works (POTWs) indicative of treatment levels that are achievable by tertiary-treated wastewater treatment systems.

    C. Methylene blue activated substances – Effluent limitations are based on the water quality objective in the Basin Plan consistent with Title 22 CCR secondary MCLs.

    D. Nitrogen compounds – Effluent limitations are based on the projected Water Factory effluent water quality shown in Table 7, which will ensure attainment of

receiving water limitations based on the groundwater impact analysis as shown in Table 8.

E. TDS and chloride – Effluent limitations are based on projected Water Factory effluent water quality presented in Tables 6 and 7, which will ensure attainment of receiving water limitations based on the groundwater impact analysis as shown in Table 8.

F. Sulfate and boron – Effluent limitations are based on the Basin Plan groundwater quality objectives.

G. The Regional Water Board has determined that it is not practicable to express effluent limitations for TDS, chloride, sulfate, and boron as daily maximum, average weekly, and average monthly effluent limitations because of seasonal variations in the influent source water quality. Further, groundwater quality objectives in the Basin Plan were established primarily to protect the underlying groundwater and impact on groundwater quality from the discharge of these pollutants to land is not immediate. Consequently, a 12-month averaging period is more appropriate. To encourage beneficial reuse of treated wastewater consistent with the State Water Board policy (Finding 27), Section II of this Order incorporates provisions that allow for effluent limitations based on a flow weighted 12-month rolling average period.

CEQA AND NOTIFICATION

34. The City is the lead agency for purposes of the California Environmental Quality Act (CEQA) (Public Resources Code section 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 Water 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. The discharge is also required to obtain all necessary permits for the construction of the Vista Canyon Project and the Water Factory Project.

35. The Regional Water Board is a responsible agency for purposes of CEQA and has considered the EIR prepared by the City. The Regional Water 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 ensure protection of water quality. The Regional Water Board finds that all environmental effects have been identified for project activities that it is required to approve, and that the Project will not have significant adverse impacts on the environment provided that the mitigation presented in the final EIR and conditions of this Order are carried out. In adopting this Order, the Regional Water Board has eliminated or substantially lessened the less-than-significant effects on water quality, and therefore approves the project.

36. **Petition –** Any person aggrieved by this action of the Regional Water 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 filing petitions may be found on the Internet at http://www.waterboards.ca.gov/public_notices/petitions/water_quality/ or will be provided upon request.

37. **Public Notice –** On February 14, 2020, the Regional Water Board notified the City and interested agencies and persons of its intent to issue WDRs/WRRs in Order No. R4-2020-XXXX to revise and replace WDRs/WRRs in Order No. R4-2016-0220 with updated treatment processes, and effluent and groundwater limitations for the distribution and use of tertiary-treated and disinfected effluent as recycled water. The Regional Water Board has provided the City and interested agencies and persons with an opportunity to submit written comments.

The Regional Water 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 392,000 GPD.

II. TERTIARY-TREATED EFFLUENT/RECYCLED WATER LIMITATIONS AND REQUIREMENTS

1. Tertiary-treated effluent/recycled water 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 Tables 9 and 10 and Sections II.3 through II.5. Compliance with the effluent limitations will be determined at the location indicated as "Recycled Water Flow Meter & Sampling" in Figure 4.

Table 9. Effluent/Recycled Water Limitations for Oil and Grease, TSS, BOD, MBAS, and Nitrogen Compounds

Constituents	Units	Monthly Average	Daily Maximum
Oil and grease	mg/L	10	15
Total suspended solids	% removal	≥ 85	
	mg/L	15	45
Biochemical oxygen demand ($BOD_{5@20℃}$)	% removal	≥ 85	
	mg/L	20	45
Methylene blue activated substances (MBAS)	mg/L	0.5	
Ammonia-N + Nitrate-N + Nitrite-N	mg/L		6.0

Table 10. Effluent/Recycled Water Limitations for TDS, Chloride, Sulfate, and Boron

Constituents	Units	Flow Weighted 12-month Rolling Average
TDS	mg/L	793
Chloride	mg/L	127
Sulfate	mg/L	150
Boron	mg/L	1.0

A. The flow weighted 12-month rolling average concentration of TDS, Chloride, Sulfate, and Boron shall not exceed the effluent limitations specified in Table 10 as determined in section IX.

B. The Discharger shall monitor and report the quality of potable water supply and make all reasonable efforts to improve the quality of the potable water supply in the Discharger's service area and thereby the wastewater. Examples of such efforts include participation in regional salinity control and stormwater infiltration projects.

C. If the flow weighted 12-month rolling average effluent concentration for a constituent exceeds 95% of the effluent limitation concentration for 3 consecutive months, the Discharger shall, within 60 days, submit to the Regional Water Board a plan and time schedule for implementation of measures to ensure that the 12-month flow weighted rolling average effluent limitation is not exceeded. Such measures include discharging to Valencia WRP. The plan and schedule are to be implemented upon Regional Water Board approval.

3. The pH of tertiary-treated effluent/recycled water shall at all times be within the range of 6.5 to 8.5. Excursion of 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 and 9.

4. The tertiary-treated effluent/recycled water shall be filtered and subsequently disinfected with UV that meets the following criteria:

   A. UV disinfection shall comply with the "*Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse*" published by National Water Research Institute in August 2012, which specifies for permeability of membrane filtration that:

      a. The design UV dose shall deliver a minimum equivalent dose of 100 millijoules per square centimeter (mJ/cm^2) at all times; and

      b. The filtered effluent UV transmittance shall be 55%.

   B. 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 Water Board and DDW prior to the initial discharge.

   C. In accordance with Title 22 CCR section 60301.230, 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 Water 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.

D. In accordance with Title 22 CCR section 60301.320, 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 Units (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 X.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. RECEIVING WATER LIMITATIONS FOR GROUNDWATER QUALITY

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 11 as a result of this discharge. Compliance with these limits will be determined at groundwater wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, Sand Canyon, Mitchell 5B, and Sierra. More information of these groundwater monitoring wells is available in Table 4, section V.3.A of the accompanying MRP No. CI-10041.

Table 11. Receiving Water Limitations for Groundwater Quality

Constituents	Units	Single Sample Maximum
TDS	mg/L	753
Chloride	mg/L	106
Sulfate	mg/L	124
Boron	mg/L	0.93
Ammonia-N + Nitrate-N + Nitrite-N	mg/L	4.2
Nitrite-N	mg/L	1.0
Total coliform	MPN/100mL	1.1
Fecal coliform	MPN/100mL	1.1

Constituents	Units	Single Sample Maximum
Enterococcus	MPN/100mL	1.1

Table notes: The unit of MPN/100mL denotes most probable number per 100 milliliters.

3. 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 limitations specified in Table 11 and Attachments B-1 to B-6. In the event that the groundwater quality exceeds the limitations specified in Table 11 and Attachments B-1 to B-6, the Discharger shall be in violation of this Order unless it can demonstrate that the discharge or recycled water use does not contribute to the exceedance of the groundwater quality limitations.

4. In addition to being a violation of this Order, an exceedance of the TDS, chloride, sulfate, boron, or nitrogen limitations in Table 11 constitutes an exceedance of allowable project-specific assimilative capacity allocated to the Water Factory in the *SNMP East Subbasin*. Consistent with the SNMP, the City shall submit a plan with a proposal to implement facilities and programs designed to offset the amount of salt discharged in excess of the receiving water limitations into the Santa Clara-Mint Canyon Subbasin. The plan shall be submitted within 90 days of the exceedance.

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

1. The City is responsible for ensuring that appropriate ordinances are established to regulate production, operation, and use of recycled water and its facilities within the Vista Canyon Project and areas that overlie Management Zone 1A of the Santa Clara-Mint Canyon Subbasin, consistent with this Order.

2. The City shall submit a revised Title 22 Engineering Report to DDW and the Regional Water 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 final acceptance from DDW that Title 22 Engineering Report requirements and conditions specified in the DDW's conditional approval letter dated February 19, 2020prior to the initial discharge of recycled water. The City is required to comply with all conditions specified in the Title 22 Engineering Report and the DDW's acceptance letter for the recycled water applications.

5. The delivery of recycled water to new end-users shall be subject to DDW and Regional Water Board approval and/or its delegated local agency.

6. Any effluent not meeting conditions specified in this Order including DDW's conditional acceptance letter in Attachment A shall be diverted to either the Saugus or Valencia WRP.

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 for ensuring 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.

2. There shall be no storage or impoundment of disinfected tertiary-treated water within 100 feet of any domestic water supply well.

3. 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.

4. All above ground irrigation appurtenances need to be marked appropriately.

5. 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 National Pollutant Discharge Elimination System (NPDES) permit issued by the Regional Water 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.

6. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities, and shall not contact any drinking water fountain.

7. Recycled water shall not be used for irrigation during periods of rainfall and/or runoff.

8. Recycled water shall be retained on the designated area and shall not be allowed to escape as surface flow.

9. 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 Water Board.

10. 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.

11. The portions of the recycled water piping system that are in areas subject to access by the general public shall not include any hose bibs (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.

12. Recycled water use shall not result in earth movement in geologically unstable areas.

13. The City or its authorized agency shall 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 Water Board and the DDW.

14. Use site-supervisors shall be appointed for the recycled water use areas and their staff shall be trained on the hazards of working with recycled water and periodically retrained.

15. For each new recycled water use area, the City shall provide the Regional Water 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

shall 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, 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 Water Board. The Regional Water 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 Water 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 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 water or groundwater from impacts predicted to occur due to climate change.

2. The Discharger shall evaluate the need to revise its Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) every 3 years or more frequently when conditions change that may impact water quality. The Discharger shall submit a report of its evaluation or a revised Climate Change Plan based on the evaluation. Submittal of the Climate Change Plan is required pursuant to CWC section 13267. As required by this provision, a regional water board may require a person to submit technical or monitoring program reports which the regional water 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 include: 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 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; or

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 offsite 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 Water 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 Water 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 Water 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 Water 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. COMPLIANCE DETERMINATION

1. Compliance with the effluent limitations contained in section II of this Order will be determined as specified below:

A. General

Compliance determinations shall be based on available analyses for the time interval associated with the effluent limitation. Where only one sample analysis is available in a specified time interval (e.g., monthly or weekly average), that sample shall serve to characterize the discharge for the entire interval. If quarterly sample results show noncompliance with the average monthly limit and that sample result is used or compliance determinations for each month of the quarter, then three separate violations of the average monthly limit shall be deemed to have occurred.

B. Average Monthly Effluent Limitation (AMEL)

If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter in Table 9, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no effluent compliance determination can be made for that calendar month.

C. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge exceeds the MDEL for a given parameter in Table 9, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no effluent compliance determination can be made for that day.

D. Flow Weighted 12-Month Rolling Average Effluent Limitation (12-MRAEL)

Compliance with the flow weighted 12-month rolling average limitations under Section II.2 Table 10 shall be determined by the arithmetic mean of the last twelve months, calculated as the sum of monthly discharges (monthly volume multiplied by average monthly concentration) during the last twelve months divided by the sum of the monthly volumetric discharges during the twelve-month time period. Months with no discharge shall not be included in the 12-month running average calculations.

2. Compliance with the receiving water limitations contained in section III of this Order will be determined as specified below:

A. Instantaneous Maximum Receiving Water Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum receiving water limitation for a parameter in Table 11, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum receiving water limitation would result in two instances of non-compliance with the instantaneous maximum receiving water limitation).

X. PROVISIONS

1. The City shall submit plans for any change of the recycled water project to and obtain approval from DDW and the Regional Water 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 Water 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 Water Board.

4. The City shall file with the Regional Water 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 Water Board. The Discharger shall comply with all of the provisions and requirements of the MRP.

5. The City shall notify DDW and this Regional Water 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 CWC.

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 Water Board may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order. The City shall also furnish the Regional Water 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 (No. CI-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 applying infiltrating recycled water into the use areas overlying the Management Zone 1A of the Santa Clara-Mint Canyon Subbasin, the City shall update the operation, maintenance, and monitoring plan (OMM Plan) and submit it to the Regional Water 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 Water Board. Changes in the approved OMM Plan must be approved by the DDW and the Regional Water 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 Water 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 Water Board.

17. In order to limit the presence of constituents of concern 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 (sections 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 and amended the WDRs by Order No. WQ 2008-0002-EXEC and Order No. WQ 2013-0058-EXEC, to provide a consistent, statewide regulatory approach to address sanitary sewer collection systems. The General WDRs require public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all sanitary sewer overflows (SSOs) to the State Water Board's online SSO database. The City's collection system is part of the system that is subject to WQ Order No. 2006-0003, as amended. 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)). The Discharger is currently enrolled under the SSO General WDRs.

21. Spill Reporting Requirements

A. **Initial Notification –** Although State and Regional Water 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 Water 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 Water Board is (213) 576-6683. The phone numbers for after hours and weekend reporting of releases of sewage to the Regional Water Board are (213) 305-2284 and (213) 305-2253.

   At a minimum, the following information shall be provided to the Regional Water 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 X.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, *Escherichia coli* ([*E. coli*], if a 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 X.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 Water 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 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 Water 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 X.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 Water Board upon request and a spill summary shall be included in the annual report, as required in the MRP No. CI-10041. 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 X.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 General WDRs.

E. **Activities Coordination –** The Regional Water 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 General WDRs.

F. **Consistency with General WDRs –** The requirements contained in this Order in sections X.18 (SCP Requirements), X.19 (Construction, Operation, and Maintenance Requirements), and X.21 (Spill Reporting Requirements) are intended to be consistent with the requirements of the General WDRs. The Regional Water Board recognizes that there may be some overlap between the WDRs/WRRs permit provisions and General WDRs requirements. The requirements of the General WDRs are considered the minimum thresholds (see Finding 11 of WQ Order No. 2006-0003). To encourage efficiency, the Regional Water Board will accept the documentation prepared by the City under the General WDRs for compliance purposes, as satisfying the requirements in sections X.18, X.19, and X.21 provided the more stringent provisions enumerated in this Order, have also been addressed.

22. The City shall submit to the Regional Water 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 DDW's approval letter. 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 Water Board on an annual basis.

XI. REOPENER

This Order may be reopened any time at the Regional Water Board's discretion to include the most scientifically relevant limitations or other requirements and may specifically be reopened to make revisions based on monitoring or to be consistent with revisions to the *SNMP East Subbasin*.

XII. EFFECTIVE DATE OF THE ORDER

This Order takes effect upon its adoption.

I, Renee Purdy, 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 April 9, 2020.

Renee Purdy
Executive Officer

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

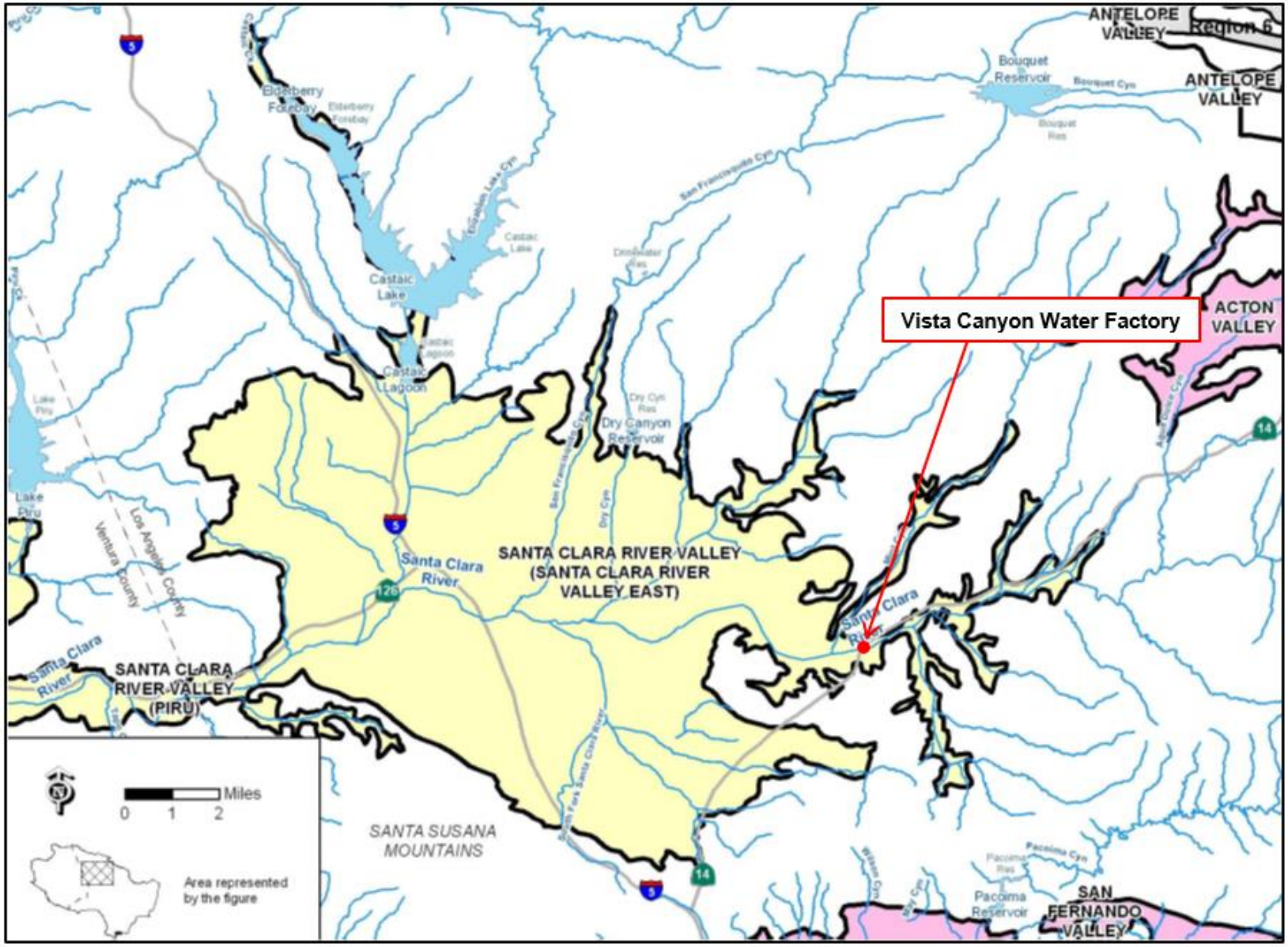

Figure 2. Santa Clara River Valley East Groundwater Basin

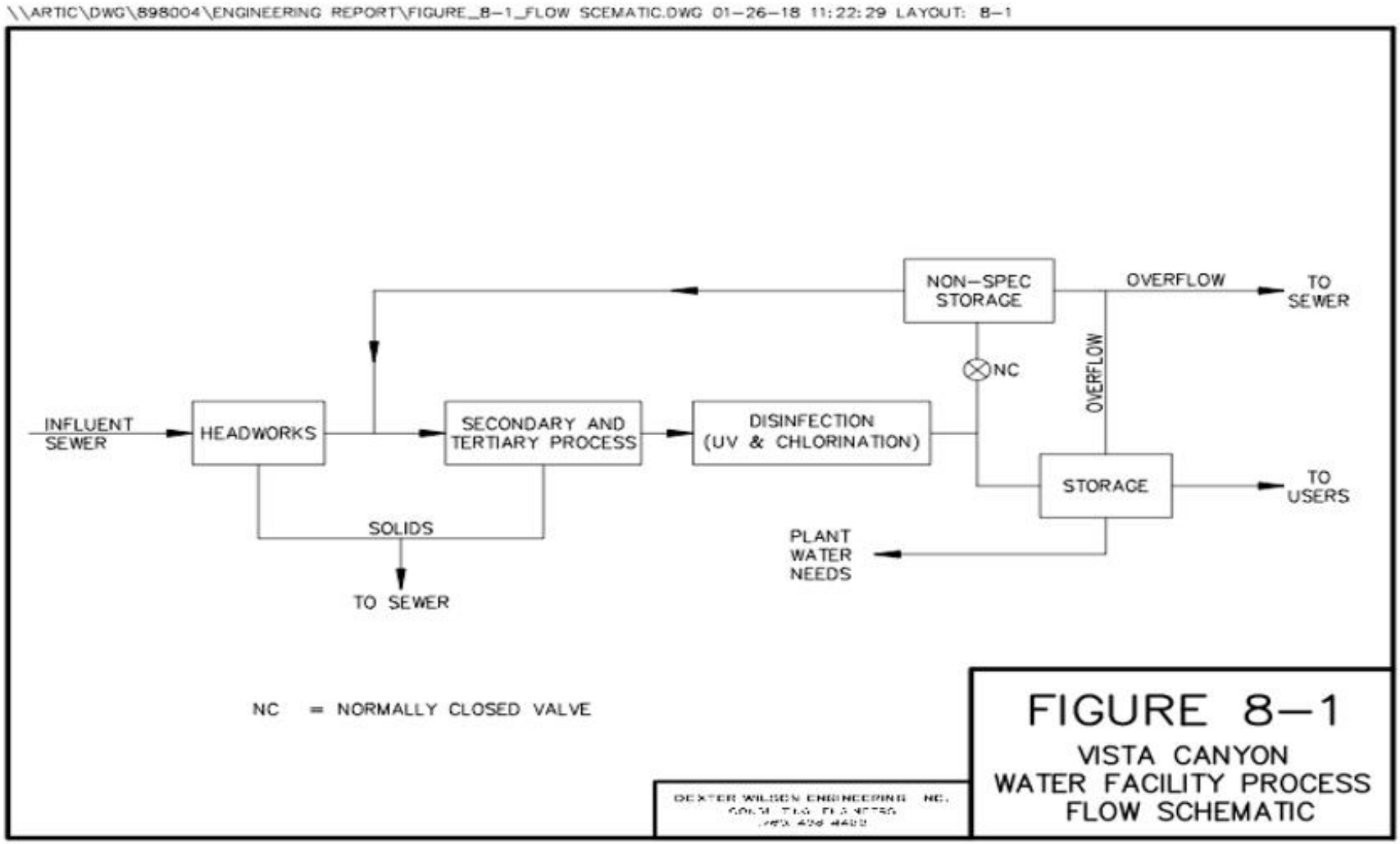

Figure 3. Process Flow Schematic of Vista Canyon Water Factory

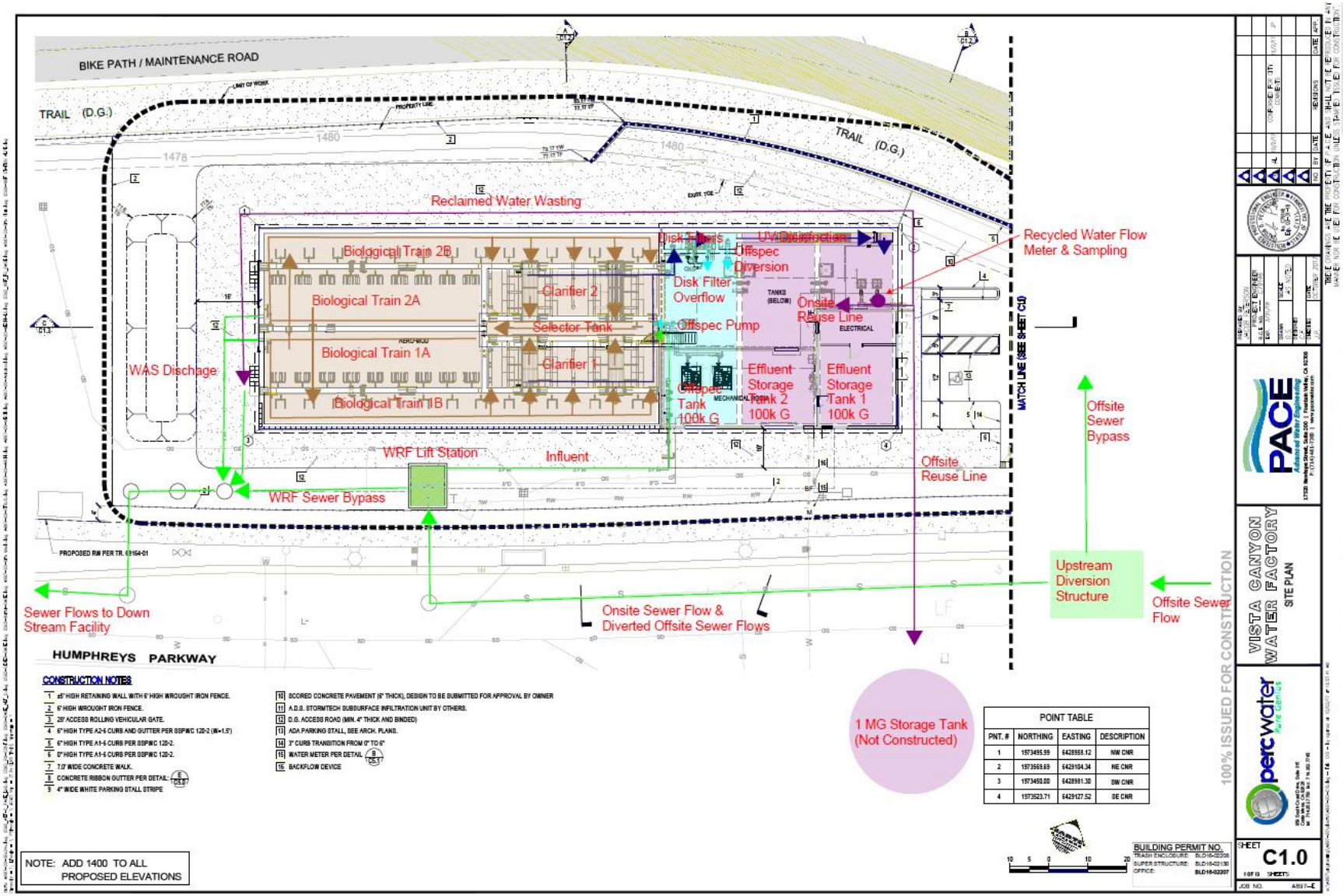

Figure 4. Layout of Vista Canyon Water Factory

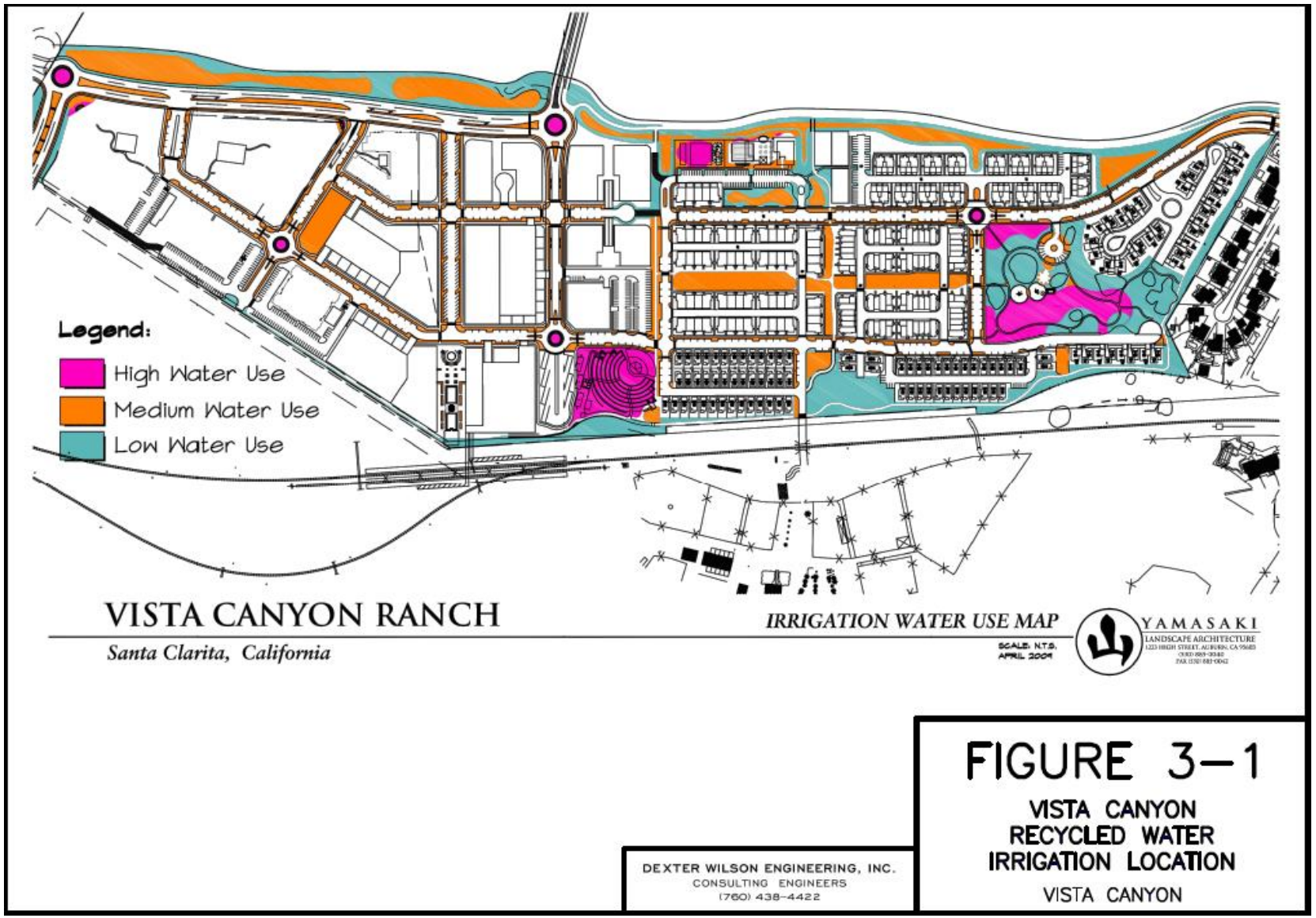

Figure 5. Locations of Potential Recycled Water Uses

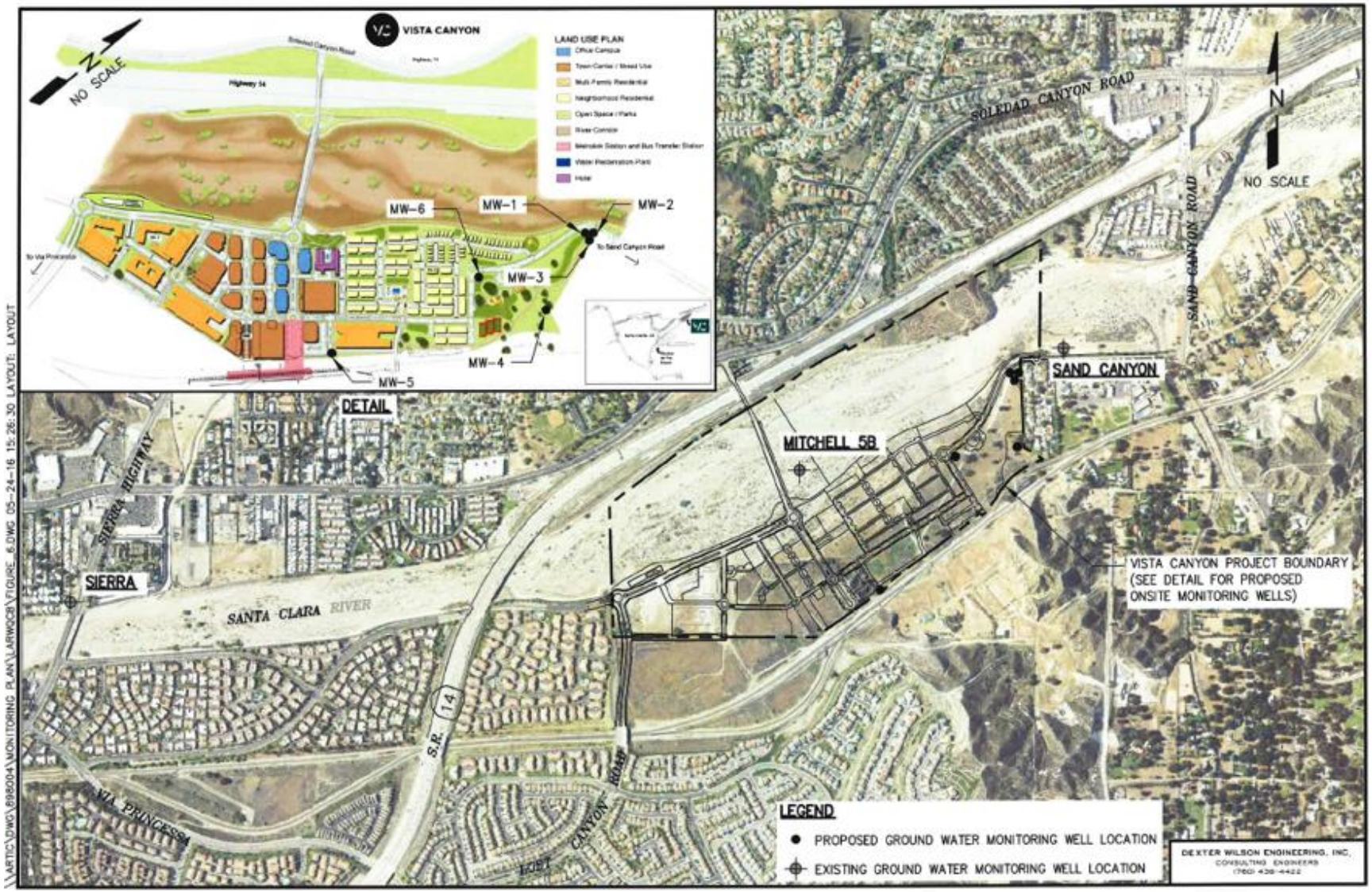

Figure 6. Locations of Groundwater Monitoring Wells for Vista Canyon Water Factory Project

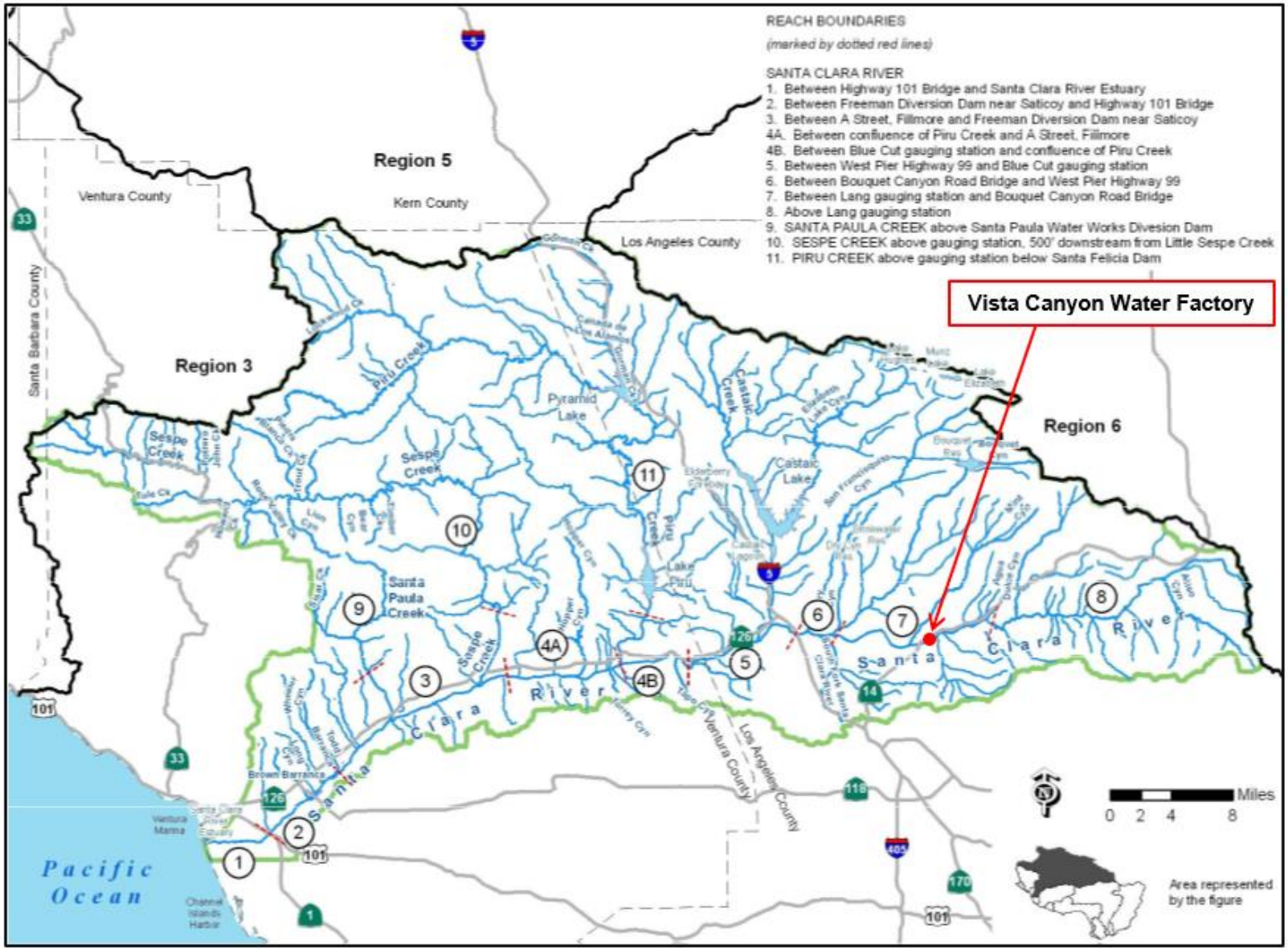

Figure 7. Santa Clara River Watershed Surface Reaches

Figure 8. Exhibit of “Recycled Water – Do Not Drink” Signage

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

320 West 4th Street, Suite 200, Los Angeles, California 90013
(213) 576-6660 • Fax (213) 576-6640
http://www.waterboards.ca.gov/losangeles/

REVISED TENTATIVE

MONITORING AND REPORTING PROGRAM NO. CI-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 Water Board) to require the City of Santa Clarita (City) who discharges the disinfected 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) in Order No. R4-2020-XXXX 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 Water 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 tank data, and use of recycled water data. These reports shall be received by the Regional Water Board via the 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 Water 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 Water Board by April 30, 2020.

Table 1. Reporting Period and Due Dates for Quarterly Reports

Reporting Period	Report Due Date
January – March	April 30

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

B. **Annual Summary Reports** shall be received by the Regional Water Board by March 1 of each year. The first Annual Summary Report under this program must be received by the Regional Water Board no later than March 1, 2021.

C. **Annual Summary Reports** for wastewater and recycled water volumes shall be uploaded to the GeoTracker system at https://geotracker.waterboards.ca.gov/ using Global ID WDR100016910 by March 1 of each calendar year. Data for the prior calendar year shall be reported for the months of January through December. The wastewater and recycled water volumes summary report shall furnish information detailed in section III of this MRP. The City must submit this annual report containing monthly data in an electronic format. All data will be made publicly accessible as machine readable datasets. The City shall continue to comply with all existing permits and MRP provisions.

2. If there is no discharge and/or water recycled during any reporting period, the report shall so state.

3. Effluent sampling data shall be included in the quarterly, and annual effluent groundwater monitoring reports and monitoring wells sampling data shall be included in the quarterly and annual report. The data shall include the sampling date and location, well specifications, well heads elevation relative to mean sea level (MSL) and when applicable, the method used to develop the well. The construction of wells shall follow *California Well Standards* of the California Department of Water Resources, and comply with all county, city, or other applicable well construction ordinances.

4. All reports 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. Effluent and/or well sampling location identification

B. Date and time of sampling;

C. Sampler identification;

D. Laboratory identification; and

E. Quarterly and annual reports must also contain observations of groundwater levels, recorded to 0.01 feet MSL, and interpreted flow direction based on groundwater elevation and other site characteristics.

II. MONITORING REQUIREMENTS

1. Monitoring shall be used to determine compliance with the requirements of Order No. R4-2020-XXXX and shall include, but not be 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 Title 40 Code of Federal Regulations [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 (DLRs) for unregulated and regulated chemicals. For unregulated and regulated chemicals, please see the DDW's website (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Chemicalcontaminants.html).

   F. Quality assurance and control measures.

2. Unless specified differently below, the 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, the

Regional Water Board and/or State Water Board. The City shall select the analytical methods that provide reporting limits (RLs) lower than the limits prescribed in the accompanying Order No. R4-2020-XXXX.

3. The City shall instruct its laboratories to establish calibration standards so that the RLs (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 Water Board, in consultation with the USEPA or DDW and the State Board Quality Assurance Program, may establish RLs, in any of the following situations:

   A. When the pollutant has no established method under 40 CFR 136 (revised May 14, 1999, or subsequent revision);

   B. When the method under 40 CFR 136 for the pollutant has an RL 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 Water 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 Water 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 Water Board, in event that D, E, and F are occurring.

III. MONITORING REQUIREMENTS FOR WASTEWATER AND RECYCLED WATER VOLUMES

1. Wastewater and recycled water volumes monitoring reports must include the information below in accordance with the Recycled Water Policy:

   A. *Influent*: Monthly volume of wastewater collected and treated by the wastewater treatment plant.

   B. *Production*: Monthly volume of wastewater treated, specifying level of treatment.

   C. *Discharge*: Monthly volume of treated wastewater discharged to each of the following, specifying level of treatment:

      a. Underground injection wells, such as those classified by USEPA's Underground Injection Control Program, excluding groundwater recharge via subsurface application intended to reduce seawater intrusion into a coastal aquifer with a seawater interface.

      b. Land, where beneficial use is not taking place, including evaporation or percolation ponds, overland flow, or spray irrigation disposal, excluding pasture or fields with harvested crops.

   D. *Reuse*: Monthly volume of recycled water distributed.

   E. *Reuse Categories*: Annual volume of treated wastewater distributed for beneficial use in compliance with California Code of Regulations, Title 22 in each of the use categories listed below:

a. Agricultural irrigation: pasture or crop irrigation.

b. Landscape irrigation: irrigation of parks, greenbelts, and playgrounds; school yards; athletic fields; cemeteries; residential landscaping, common areas; commercial landscaping; industrial landscaping; and freeway, highway, and street landscaping.

c. Golf course irrigation: irrigation of golf courses, including water used to maintain aesthetic impoundments within golf courses.

d. Commercial application: commercial facilities, business use (such as laundries and office buildings), car washes, retail nurseries, and appurtenant landscaping that is not separately metered.

e. Industrial application: manufacturing facilities, cooling towers, process water, and appurtenant landscaping that is not separately metered.

f. Geothermal energy production: augmentation of geothermal fields.

g. Other non-potable uses: including but not limited to dust control, flushing sewers, fire protection, fill stations, snow making, and recreational impoundments.

h. Groundwater recharge: the planned use of recycled water for replenishment of a groundwater basin or an aquifer that has been designated as a source of water supply for a public water system. Includes surface or subsurface application, except for seawater intrusion barrier use.

i. Seawater intrusion barrier: groundwater recharge via subsurface application intended to reduce seawater intrusion into a coastal aquifer with a seawater interface.

j. Reservoir water augmentation: the planned placement of recycled water into a raw surface water reservoir used as a source of domestic drinking water supply for a public water system, as defined in section 116275 of the Health and Safety Code, or into a constructed system conveying water to such a reservoir (Water Code § 13561).

k. Raw water augmentation: the planned placement of recycled water into a system of pipelines or aqueducts that deliver raw water to a drinking water treatment plant that provides water to a public water system as defined in section 116275 of the Health and Safety Code (Water Code § 13561).

l. Other potable uses: both indirect and direct potable reuse other than for groundwater recharge, seawater intrusion barrier, reservoir water augmentation, or raw water augmentation.

IV. REPORTING REQUIREMENTS

The City shall submit all reports to the Regional Water 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 treated wastewater used for non-potable Title 22 recycled water applications including landscape irrigation. If no wastewater and recycled water are used during the quarter, the report shall so state.

b. The volume of the effluent to sewer. If no effluent to sewer is delivered during the quarter, the report shall so state.

c. The date and time of sampling and analyses on the influent, effluent, and groundwater.

d. All analytical results of samples collected during the monitoring period of the influent, effluent, and groundwater.

e. Documentation of all QA/QC procedures that were followed during sampling and laboratory analyses.

f. 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 Santa Clarita Valley Water Agency (SCVWA) and local groundwater purveyor(s) to the service area for the Vista Canyon Water Factory.

g. 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.

h. Discussion of compliance, non-compliance, or violation of requirements.

i. All corrective or preventive action(s) taken or planned with schedule of implementation, if any violation occurs.

Documentation of all non-compliances with this Order including conditions specified in DDW's February 19, 2020 conditional acceptance letter in Attachment A.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 RL must be reported "as measured" by the laboratory (i.e., the measured chemical concentration in the sample);

b. Sample results less than the RL, 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 "Not detected," or ND. It is appropriate to leave the result blank and qualify the result as ND (i.e., *Qualifier* = [ND]) for database entry.

d. 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 Water Board may request supporting documentation, such as daily logs of operations.

2. **Annual Reports**

A. The separate annual reports in accordance with the Recycled Water Policy shall include the information specified in section III of this MRP above. If no wastewater or recycled water is produced during the month, the report shall so state.

B. Tabular and graphical summaries of the monitoring data (quantity and quality of water imported from SCVWA and local groundwater; quality of influent, effluent, and groundwater; quantity of influent, effluent to effluent storage 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.

C. 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. R4-2020-XXXX.

Documentation of all non-compliances with this Order including conditions specified in DDW's February 19, 2020 conditional acceptance letter in Attachment A.D. 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.

E. The description of any changes and anticipated changes including any impacts in operation of any unit processes or facilities shall be provided.

F. 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.

G. The report shall confirm operator certification and provide a list of current operating personnel, their responsibilities, and their corresponding grade of certification.

H. The report shall demonstrate the compliance with conditions specified in DDW's February 19, 2020 Conditional Acceptance letter and 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.

V. WATER QUALITY MONITORING REQUIREMENTS

1. Influent Monitoring

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

A. The BOD shall report 5-day biochemical oxygen demand at 20℃.

B. For total waste flow, the City shall report the daily minimum, maximum, and average values.

C. For total suspended solids and BOD shall be monitored on a daily basis during the startup period of the first month.

Table 2. Influent Monitoring

Constituents	Units	Type of Sample	Minimum Frequency of Analysis
Total waste flow	gpd	Recorder	Continuous
Total suspended solids	mg/L	24-hour composite	Weekly
$BOD_{5@20℃}$	mg/L	24-hour composite	Weekly

Table 2 notes: The unit of gpd indicates gallons per day; the unit of mg/L indicates milligrams per liter.

2. Effluent Monitoring

A. The City shall monitor the tertiary-treated effluent downstream of all treated effluent passing through the final disinfection process of UV and chlorination at the location indicated as “Recycled Water Flow Meter & Sampling” in Figure 4.

B. The following shall constitute the effluent monitoring program, specified in Table 3.

a. 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.

b. For total flow, 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.

c. 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.

d. During the startup period of the first month, weekly monitoring constituents shall be monitored on a daily basis.

e. During the startup period of the first month, monthly constituent shall be monitored on a weekly basis.

Table 3. Effluent/Recycled Water Monitoring

Constituents	Units	Type of Sample	Minimum Frequency of Analysis
Total flow	gpd	Recorder	Continuous
Turbidity	NTU	Recorder	Continuous
UV transmittance	%	Recorder	Continuous
UV intensity	W/m^2	Recorded	Continuous
UV dose	mJ/cm^2	Calculated	Continuous
pH	pH units	Grab	Daily

Constituents	Units	Type of Sample	Minimum Frequency of Analysis
Total coliform	MPN/100 mL	Grab	Daily
Fecal coliform	MPN/100 mL	Grab	Daily
$BOD_{5@20℃}$	mg/L	24-hour composite	Weekly
Total suspended solids	mg/L	Grab	Weekly
Nitrate as nitrogen	mg/L	Grab	Weekly
Nitrite as nitrogen	mg/L	Grab	Weekly
Ammonia as nitrogen	mg/L	Grab	Weekly
Organic nitrogen	mg/L	Grab	Weekly
Total nitrogen	mg/L	Grab	Weekly
Oil and grease	mg/L	Grab	Monthly
Total phosphorus	mg/L	Grab	Monthly
Total dissolved solids	mg/L	Grab	Monthly
Sulfate	mg/L	Grab	Monthly
Chloride	mg/L	Grab	Monthly
Boron	mg/L	Grab	Monthly
MBAS	mg/L	Grab	Monthly
Constituents listed in Attachments B-1 to B-6	various	Grab/24-hour composite	Quarterly
Remaining priority pollutants in Attachment D	µg/L	Grab	Annually

Table 3 notes:

- The unit of NTU denotes nephelometric turbidity unit.
- The unit of MPN/100 mL denotes most probable number per 100 milliliters.
- The unit of mJ/cm^2 denotes millijoules per square centimeter.
- The unit of µg/L denotes micrograms per liter.
- MBAS stands for methylene blue active substances.
- Total nitrogen is the sum of nitrate, nitrite, organic nitrogen and ammonia (all expressed as nitrogen).

3. **Groundwater Monitoring**

A. Groundwater Monitoring Well Specifications: Table 4 shows specifications of groundwater monitoring wells for groundwater monitoring programs.

Table 4. Specifications of Groundwater Monitoring Wells

Monitoring Well Identification	Monitoring Well Location	Purpose of Monitoring Location
MW-1	$34^0$25'09.9690" N; $118^0$25'44.3696" W	Upgradient background groundwater quality
MW-2	$34^0$25'09.9820" N; $118^0$25'43.4433" W	Upgradient background groundwater quality

Monitoring Well Identification	Monitoring Well Location	Purpose of Monitoring Location
MW-3	34^{0}25'09.2759" N; 118^{0}25'43.8822" W	Upgradient background groundwater quality
MW-4	34^{0}25'03.2932" N; 118^{0}25'43.5712" W	Upgradient background groundwater quality
MW-5	34^{0}24'50.5360" N; 118^{0}25'58.5262" W	Cross-gradient groundwater quality for impacts of recycled water for irrigation
MW-6	34^{0}25'02.4202" N; 118^{0}25'50.3356" W	Cross-gradient groundwater quality for impacts of recycled water for irrigation
Sand Canyon	34^{0}25'12.2121" N; 118^{0}25'38.5636" W	Upgradient background groundwater quality
Mitchell 5B	34^{0}25'01.1846" N; 118^{0}26'07.3717" W	Impacts of recycled water for irrigation
Sierra	34^{0}24'49.2181" N; 118^{0}27'26.7537" W	Impacts of recycled water for irrigation

B. Groundwater Monitoring

a. Groundwater monitoring is used to monitor any possible impact from landscape irrigation and non-potable recycled water applications.

b. Groundwater monitoring shall be simultaneously collected the minimum constituents and parameters, specified in Table 5, for monitoring groundwater quality at all nine (9) monitoring wells.

c. Water level elevations must be measured to the nearest 0.01 feet and referenced to mean sea level.

d. Annual samples shall be collected during the dry season each year.

Table 5. Groundwater Monitoring

Constituent/Parameter	Units	Type of Sample	Minimal Frequency
Water level	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/100 mL	Grab	Quarterly
Fecal coliform	MPN/100 mL	Grab	Quarterly
Enterococcus	MPN/100mL	Grab	Quarterly

Constituent/Parameter	Units	Type of Sample	Minimal Frequency
Constituents listed in Attachments B-1 to B-6	various	Grab	Annually
Remaining priority pollutants in Attachment D	µg/L	Grab	Annually

C. 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.

D. 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 Tank Monitoring**

The City shall record the volume in gallons per day of treated wastewater stored in the effluent storage tanks, discharged for non-potable recycled water use and discharged to the sewer.

5. **Water Supply Monitoring**

The City shall annually submit monthly water supply report for each calendar year stating the amount supplied to the sewered area served by the Water Factory, each source of water and the resulting flow-weighted water supply quality for TDS, chloride, boron, and sulfate.

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

   C. The written authorization is submitted to the Executive Officer of this Regional Water 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 Water 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 Water 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: Date: April 9, 2020

Renee Purdy
Executive Officer

Attachment A

DDW Conditional Acceptance Letter (February 19, 2020)

California Water Boards

Gavin Newsom
Governor

Jared Blumenfeld
Secretary for Environmental Protection

State Water Resources Control Board

Division of Drinking Water

February 19, 2020

Renee Purdy
Executive Officer
Los Angeles Regional Water Quality Control Board
320 W. 4th Street, Suite 200, 1st floor
Los Angeles, CA 90013

CONDITIONAL ACCEPTANCE LETTER FOR CITY OF SANTA CLARITA'S VISTA CANYON WATER FACTORY ENGINEERING REPORT (1995019-701)

Dear Ms. Purdy,

This letter transmits the State Water Resources Control Board's Division of Drinking Water (Division) conditional acceptance of the Title 22 Engineering Report (Report), dated November 27, 2019, prepared and submitted by Dexter Wilson Engineering Inc. on behalf of the City of Santa Clarita (City) for the production, distributions, and use of recycled water from the Vista Canyon Water Factory plant (Plant). A previous engineering report was submitted on February 2, 2018 which the Division reviewed for compliance with the California Water Recycling Criteria (Title 22) requirements and sent review comments via email on March 23, 2018. The Division reviewed the November 27, 2019 Report and finds that it addressed the previous review comments.

The City must implement all applicable recycled water requirements found in Title 17 and Title 22 for production and use of recycled water in addition to the requirements below:

1. To verify performance of the UV disinfection process on the site-specific recycled water, upon completion of construction and prior to operation and delivery of produced recycled water, an on-site check-point bioassay must be performed using seeded MS2 coliphage as described in the August 2012 NWRI Guidelines. The Division reviewed and accepted the submitted spot-check bioassay testing protocol for the UV disinfection system in an email sent on March 23, 2018. The results, documenting virus disinfection performance of the system to the standards specified by Title 22 criteria, must be submitted to the Division for review and acceptance.

2. Prior to operation and delivery of recycled water, the engineering report may need to be updated following the completion of the spot-check bioassay and review of the results by the Division to include the specific operating requirements of the UV disinfection system at the Plant.

3. Each UV channel must be operated independently to deliver a minimum validated equivalent UV dose of 100 mJ/cm^2 at all times.

4. The equations below must be used for each UV reactor as part of the automatic UV disinfection control system for calculating UV dose and should be specified as a permit provision. They are from the ""Xylem Water Solutions Duron UV System 2012 NWRI Validation Report" (Carollo Engineers, February 2015)".

$$S_{pred} = 10^{-7.97} \times UVT^{4.491} \times P^{0.6804}$$

$$RED_{module} = 0.877 \times 10^{2.1242} \times UVA^{-1.104} \times [S/So]^{0.722} \times [1/Q_{lamp}]^{0.7167} \times M$$

Where:

S_{pred} = Predicted UV sensor value (W/m^2),
UVT= Percent UV transmittance expressed as a decimal (55% = 55),[1]
UVA= UV absorbance at 254 nm
S = Measured UV sensor intensity value (W/m^2).
S_o = Predicted UV intensity at full lamp power, corresponding to 600W for new lamps with clean sleeves (W/m^2).
P = Percent ballast power setting expressed as a decimal (100% = 100)
RED_{module} = UV dose per module calculated with the RED-monitoring equation (mJ/cm^2).
Q_{lamp} = Flow rate in a channel, calculated as gallons per minute (gpm) divided by the number of modules in parallel in one channel and then divided by 12 lamps (gpm/lamp)[2]
M = Number of operating modules.

5. This UV dose equation assumes that the intensity sensors would measure the decline as the lamps age. Since there is one UV Intensity sensor that monitors two of the 24 lamps in a bank, the two lamps with the highest number of hours should be the ones closest to the UV intensity sensor.

6. The UV disinfection system is limited to the following operational parameter ranges:

   a. Permit total plant flow up to the maximum that is tested during full-scale UV commissioning.
   b. UVTs at or above 55 percent,
   c. UV sensor intensities to be specified after UV commissioning.

7. On-line monitoring of UV intensity, flow, and UVT must be provided at all times.

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[1] At UVT values above 83 percent, the value (83 percent UVT) shall be used as the default value in the RED calculation

[2] At flow rates below 28 gpm/lamp, this value (28 gpm/lamp) should be used as the default value in the RED calculation

8. Flow meters, UV intensity sensors, and UVT monitors must be properly calibrated to ensure proper disinfection.

9. At least monthly, all duty UV intensity sensors must be checked for calibration against a reference UV intensity sensor.

10. For all UV intensity sensors in use, the ratio of the duty UV sensor intensity to the reference UV sensor intensity must be less than or equal to 1.2. If the calibration ratio is >1.2, the failed duty UV sensor must be replaced by a properly calibrated sensor and recalibrated by a qualified facility. The reference UV intensity sensors shall be recalibrated at least annually by a qualified facility using a National Institute of Standards and Technology (NIST) traceable standard.

11. UVT meter must be inspected and checked against a reference bench-top unit weekly to document accuracy.

12. If the on-line analyzer UVT reading varies from the bench-top spectrophotometer UVT reading by 2% or more, the on-line UVT analyzer must be recalibrated by a procedure recommended by the manufacturer.

13. Flow meters measuring the flow through a UV reactor must be verified to determine accuracy at least monthly via checking the flow reading against other flow determination methods.

14. Each UV reactor at the UV system must be designed with built-in automatic reliability features that must be triggered by critical alarm setpoints.

15. Conditions triggering an alarm and startup of the redundant UV bank include the following:

    a. the UV dose goes below 105 mJ/cm^2,

    b. whole bank failure,

16. Conditions that should divert effluent to waste include the following:

    a. UV dose is below the minimum UV dose of 100 mJ/cm^2,

    b. UVT is below of 55%,

    c. UV intensity below the minimum that is tested during full-scale UV commissioning

    d. complete UV channel failure, and

    e. flow above the maximum that is tested during full-scale UV commissioning.

17. The UV system should be operated in accordance with an approved operations plan, which specifies clearly the operational limits and responses required for critical alarms. The operations plan should be submitted and approved prior to issuance of the operating permit. A copy of the approved operations plan should be maintained at the treatment plant and be readily available to operations personnel and regulatory agencies. A quick reference plant operations data sheet should be posted at the treatment plant and include the following information:

    a. The alarm set points for flow, UV dose, UV intensity, and UVT.

    b. The values of flow, UV dose, UV intensity, and UVT when effluent must be diverted to waste.

    c. The required frequency of verification and calibration for all meters/analyzers measuring flow, UV intensity, and UV transmittance.

    d. The required frequency of mechanical cleaning and equipment inspection.

    e. The UV lamp hour tracking procedures and replacement intervals.

18. Equivalent or substitutions of equipment are not acceptable without an adequate demonstration of equivalent disinfection performance.

19. These applicable recommendations should be incorporated into the final permit for the UV system. Approval for the use of any and all water recycling applications is granted through the Regional Water Quality Control Board's Water Reclamation permitting process.

20. Prior to operation and delivery of recycled water, an Operations and Maintenance Manual must be submitted to the Division for review and acceptance.

21. Sampling of the disinfected tertiary recycled water for total coliform bacteria must be conducted daily in accordance with Title 22 section 60301.230.

22. Continuous Monitoring of turbidity in the disinfected tertiary recycled water must be conducted in accordance with the requirements specified in Title 22 section 60301.320.

23. The City must submit an updated engineering report to the Division for review and acceptance if any changes to the information provided in the current Report are considered in the future.

24. The City must submit a supplementary engineering report along with all necessary information and drawings for new recycled water use sites in the future for review and acceptance by the Division.

If you have any questions regarding this letter, please contact Saeedreza Hafeznezami at (818) 551-2972 or via email at Saeedreza.Hafeznezami@waterboards.ca.gov or me at (619) 525-4022 or via email at Randy.Barnard@waterboards.ca.gov.

Sincerely,

Randy Barnard, P.E.
Recycled Water Unit Chief
Recycled Water Unit
Division of Drinking Water
State Water Resources Control Board
1350 Front St., Rm. 2050
San Diego, CA 92101

cc:

Milasol Gaslan, Los Angeles Regional Water Quality Control Board (via email)

Kim Woonhoe, Los Angeles Regional Water Quality Control Board (via email)

Shu-Fang Orr, Angeles District Engineer, Division of Drinking Water (via email)

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RWU File

Attachment B

Maximum Contaminant Levels
California Code of Regulation Title 22
(Updated April 16, 2019)

Attachment B-1

Table 64431-A and Table 64432-A – Inorganic Chemicals

Chemical	Maximum Contaminant Levels (mg/L)	Reporting Detection Limit (mg/L)
Aluminum	1	0.05
Antimony	0.006	0.006
Arsenic	0.010	0.002
Asbestos	7 MFL	0.2 MFL > 10 µm
Barium	1	0.1
Beryllium	0.004	0.001
Cadmium	0.005	0.001
Chromium	0.05	0.01
Cyanide	0.15	0.1
Fluoride	2.0	0.1
Mercury	0.002	0.001
Nickel	0.1	0.01
Nitrate (as nitrogen)	10	0.4
Nitrate+Nitrite (sum as nitrogen)	10	
Nitrite (as nitrogen)	1	0.4
Perchlorate	0.006	0.004
Selenium	0.05	0.005
Thallium	0.002	0.001

Table notes:

- The unit of mg/L denotes milligrams per liter.
- The unit of MFL denotes million fibers per liter; MCL for fibers exceeding 10 micrometer (µm) in length.

Attachment B-2

Table 64442 – Radionuclides

Chemical	Maximum Contaminant Levels (pCi/L)	Reporting Detection Limit (pCi/L)
Radium-226	5 (combined radium-226 and radium-228)	1
Radium-228	5 (combined radium-226 and radium-228)	1
Gross Alpha particle activity (excluding radon and uranium)	15	3
Uranium	20	1

Table notes: The unit of pCi/L denotes picocuries per liter.

Attachment B-3

Table 64443 – Radionuclides

Chemical	Maximum Contaminant Levels (pCi/L)	Reporting Detection Limit (pCi/L)
Beta/photon Emitters	4 millirem/year dose equivalent to the total body or any internal organ	Gross Beta particle activity: 4
Strontium-90	8 (=4 millirem/year dose to bone marrow)	2
Tritium	20,000 (=4 millirem/year dose to total body)	1,000

Attachment B-4

Table 64444-A – Organic Chemicals – (a) Volatile Organic Chemicals

Chemical	Maximum Contaminant Levels (mg/L)	Reporting Detection Limit (mg/L)
Benzene	0.001	0.0005
Carbon Tetrachloride (CTC)	0.0005	0.0005
1,2-Dichlorobenzene	0.6	0.0005
1,4-Dichlorobenzene	0.005	0.0005
1,1-Dichloroethane	0.005	0.0005
1,2-Dichloroethane (1,2-DCA)	0.0005	0.0005
1,1-Dichloroethene (1,1-DCE)	0.006	0.0005
cis-1,2-Dichloroethylene	0.006	0.0005
trans-1,2-Dichloroethylene	0.01	0.0005
Dichloromethane	0.005	0.0005
1,2-Dichloropropane	0.005	0.0005
1,3-Dichloropropene	0.0005	0.0005
Ethylbenzene	0.3	0.0005
Methyl-*tert*-butyl-ether (MTBE)	0.013	0.003
Monochlorobenzene	0.07	0.0005
Styrene	0.1	0.0005
1,1,2,2-Tetrachloroethane	0.001	0.0005
Tetrachloroethylene (PCE)	0.005	0.0005
Toluene	0.15	0.0005
1,2,4-Trichlorobenzene	0.005	0.0005
1,1,1-Trichloroethane	0.200	0.0005
1,1,2-Trichloroethane	0.005	0.0005
Trichloroethylene (TCE)	0.005	0.0005
Trichlorofluoromethane	0.15	0.005

Chemical	Maximum Contaminant Levels (mg/L)	Reporting Detection Limit (mg/L)
1,1,2-Trichloro-1,2,2-Trifluoroethane	1.2	0.01
Vinyl Chloride	0.0005	0.0005
Xylenes (m,p)	1.750	0.0005

Table notes: Xylenes MCL is for either a single isomer or the sum of the isomers.

Table 64444-A (continued) – Organic Chemicals – (b) Synthetic Organic Chemicals

Chemical	Maximum Contaminant Levels (mg/L)	Reporting Detection Limit (mg/L)
Alachlor	0.002	0.001
Atrazine	0.001	0.0005
Bentazon	0.018	0.002
Benzo(a)pyrene	0.0002	0.0001
Carbofuran	0.018	0.005
Chlordane	0.0001	0.0001
2,4-D	0.07	0.01
Dalapon	0.2	0.01
Dibromochloropropane	0.0002	0.00001
Di(2-ethylhexyl)adipate	0.4	0.005
Di(2-ethylhexyl)phthalate	0.004	0.003
Dinoseb	0.007	0.002
Diquat	0.02	0.004
Endothall	0.1	0.045
Endrin	0.002	0.0001
Ethylene Dibromide (EDB)	0.00005	0.00002
Glyphosate	0.7	0.025
Heptachlor	0.00001	0.00001
Heptachlor Epoxide	0.00001	0.00001
Hexachlorobenzene	0.001	0.0005
Hexachlorocyclopentadiene	0.05	0.001

Chemical	Maximum Contaminant Levels (mg/L)	Reporting Detection Limit (mg/L)
Lindane	0.0002	0.0002
Methoxychlor	0.03	0.01
Molinate	0.02	0.002
Oxamyl	0.05	0.02
Pentachlorophenol	0.001	0.0002
Picloram	0.5	0.001
Polychlorinated Biphenyls	0.0005	0.0005
Simazine	0.004	0.001
Thiobencarb	0.07	0.001
Toxaphene	0.003	0.001
1,2,3-Trichloropropane	0.000005	0.000005
2,3,7,8-TCDD (Dioxin)	3×10^{-8}	5×10^{-9}
2,4,5-TP (Silvex)	0.05	0.001

Attachment B-5

Table 64449-A – Secondary Maximum Contaminant Levels

Chemical	Maximum Contaminant Levels/Units
Aluminum	0.2 mg/L
Color	15 Units
Copper	1.0 mg/L
Foam Agents (MBAS)	0.5 mg/L
Iron	0.3 mg/L
Manganese	0.05 mg/L
Methyl-*tert*-butyl-ether (MTBE)	0.005 mg/L
Odor – Threshold	3 Units
Silver	0.1 mg/L
Thiobencarb	0.001 mg/L
Turbidity	5 Units
Zinc	5.0 mg/L

Attachment B-6

Table 64533-A – Disinfection Byproducts

Chemical	Maximum Contaminant Levels (mg/L)	Reporting Detection Limit (mg/L)
Total trihalomethanes (TTHM)	0.080	
Bromodichloromethane		0.0010
Bromoform		0.0010
Chloroform		0.0010
Dibromochloromethane		0.0010
Haloacetic acid (five) (HAA5)	0.060	
Monochloroacetic acid		0.0020
Dichloroacetic acid		0.0010
Trichloroacetic acid		0.0010
Monobromoacetic acid		0.0010
Dibromoacetic acid		0.0010
Bromate	0.010	0.0050 0.0010
Chlorite	1.0	0.020

Table notes:

- Bromate is listed for plant using ozone disinfection only.
- The detection limit for purposes of reporting for the bromate is 0.0010 mg/L when using EPA Method 317.0 Revision 2.0, 321.8, or 326.0.
- Chlorite is listed for plant using chlorine dioxide only.

Attachment C – Standard Provisions
Applicable to Waste Discharge Requirements

1. DUTY TO COMPLY

The discharger must comply with all conditions of these waste discharge requirements. A responsible party has been designated in the Order for this project, and is legally bound to maintain the monitoring program and permit. Violations may result in enforcement actions, including Regional Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Regional Board. (California Water Code, Sections 13261, 13263, 13265, 13268, 13300, 13301, 13304, 13340, and 13350). Failure to comply with any waste discharge requirement, monitoring and reporting requirement, or other order or prohibition issued, reissued or amended by the Los Angeles Water Board or State Water Resources Control Board is a violation of these waste discharge requirements and the Water Code, which can result in the imposition of civil liability. (California Water Code, Section 13350, subdivision (a).)

2. GENERAL PROHIBITION

Neither the treatment nor the discharge of waste shall create a pollution, contamination or nuisance, as defined by California Water Code section 13050. In addition, the discharge of waste classified as hazardous, as defined in California Code of Regulations, Title 23, Section 2521, subdivision (a) is also prohibited.

3. AVAILABILITY

A copy of these waste discharge requirements shall be maintained at the discharge facility and be available at all times to operating personnel. (California Water Code, Section 13263)

4. CHANGE IN OWNERSHIP

The discharger must notify the Executive Officer, in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current discharger and the new discharger. This agreement shall include an acknowledgement that the existing discharger is liable for violations up to the transfer date and that the new discharger is liable from the transfer date forward. (California Water Code, Sections 13267 and 13263)

5. CHANGE IN DISCHARGE

In the event of a material change in the character, location, or volume of a discharge, the discharger shall file with this Regional Board a new Report of Waste Discharge. (California Water Code, Section 13260, subdivision (c)). A material change includes, but is not limited to, the following:

(a) Addition of a major industrial waste discharge to a discharge of essentially domestic sewage, or the addition of a new process or product by an industrial facility resulting in a change in the character of the waste.

(b) Significant change in disposal method, e.g., change from a land disposal to a direct discharge to water, or change in the method of treatment which would significantly alter the characteristics of the waste.

(c) Significant change in the disposal area, e.g., moving the discharge to another drainage area, to a different water body, or to a disposal area significantly removed from the original area potentially causing different water quality or nuisance problems.

(d) Increase in flow beyond that specified in the waste discharge requirements.

(e) Increase in the area or depth to be used for solid waste disposal beyond that specified in the waste discharge requirements. (California Code of Regulations, Title 23, Section 2210)

6. REVISION

These waste discharge requirements are subject to review and revision by the Regional Board. (California Water Code, Sections 13263)

7. NOTIFICATION

Where the discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Regional Board, it shall promptly submit such facts or information. (California Water Code, Sections 13260 and 13267)

8. VESTED RIGHTS

This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the discharger from his liability under Federal, State or local laws, nor do they create a vested right for the

discharger to continue the waste discharge. (California Water Code, Section 13263, subdivision (g).)

9. SEVERABILITY

Provisions of these waste discharge requirements are severable. If any provisions of these requirements are found invalid, the remainder of the requirements shall not be affected.

10. OPERATION AND MAINTENANCE

The discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the discharger to achieve compliance with conditions of this Order. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Order. (California Water Code, Section 13263, subdivision (f).)

11. NOTIFICATION REQUIREMENT

Except for a discharge which is in compliance with these waste discharge requirements, any person who, without regard to intent or negligence, causes or permits any hazardous substance or sewage to be discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) that person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State toxic disaster contingency plan adopted pursuant to Article 3.7 (commencing with Section 8574.7) of Chapter 7 of Division 1 of Title 2 of the Government Code, and immediately notify the State Board or the appropriate Regional Board of the discharge. This provision does not require reporting of any discharge of less than a reportable quantity as provided for under subdivisions (f) and (g) of Section 13271 of the Water Code unless the discharger is in violation of a prohibition in the applicable Water Quality Control plan. (California Water Code, Section 13271, subdivision (a).)

12. OIL OR PETROLEUM RELEASES

Except for a discharge which is in compliance with these waste discharge requirements, any person who without regard to intent or negligence, causes or permits any oil or petroleum product to be discharged in or on any waters of the

State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, shall, as soon as (a) such person has knowledge of the discharge, (b) notification is possible, and (c) notification can be provided without substantially impeding cleanup or other emergency measures, immediately notify the Office of Emergency Services of the discharge in accordance with the spill reporting provision of the State oil spill contingency plan adopted pursuant to Article 3.5 (commencing with Section 8574.1) of Chapter 7 of Division 1 of Title 2 of the Government Code. This provision does not require reporting of any discharge of less than 42 gallons unless the discharge is also required to be reported pursuant to Section 311 of the Clean Water Act or the discharge is in violation of a prohibition in the applicable Water Quality Control Plan. (California Water Code, Section 13272)

13. INVESTIGATIONS AND INSPECTIONS

The discharger shall allow the Regional Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

(a) Enter upon the discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

(c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and

(d) Sample or monitor at reasonable times, for the purposes of assuring compliance with this Order, or as otherwise authorized by the California Water Code, any substances or parameters at any location. (California Water Code, Section 13267)

(e) Except for material determined to be confidential in accordance with applicable law, all reports prepared in accordance with the terms of this Order shall be available for public inspection at the office of the Los Angeles Water Board. Data on waste discharges, water quality, geology, and hydrogeology shall not be considered confidential.

14. MONITORING PROGRAM AND DEVICES

The discharger shall furnish, under penalty of perjury, technical monitoring program reports; such reports shall be submitted in accordance with specifications prepared by the Executive Officer, which specifications are subject to periodic revisions as may be warranted. (California Water Code, Section 13267)

All monitoring instruments and devices used by the discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year, or more frequently, to ensure continued accuracy of the devices. Annually, the discharger shall submit to the Executive Office a written statement, signed by a registered professional engineer, certifying that all flow measurement devices have been calibrated and will reliably achieve the accuracy required.

The analysis of any material required pursuant to Division 7 of the Water Code shall be performed by a laboratory that has accreditation or certification pursuant to Article 3 (commencing with Section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code. However, this requirement does not apply to field tests, such as test for color, odor, turbidity, pH, temperature, dissolved oxygen, conductivity, and disinfectant residual chlorine. (California Water Code, Section 13176). Unless otherwise permitted by the Regional Board Executive officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Water Resources Control Board's Division of Drinking Water. All analyses shall be required to be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136) promulgated by the United States, Environmental Protection Agency (USEPA). (California Code of Regulation, Title 23, Section 2230)

The Quality Assurance-Quality Control Program must conform to the USEPA Guidelines "Laboratory Documentation Requirements for Data Validation", January 1990, USEPA Region 9) or procedures approved by the Los Angeles Regional Water Quality Control Board.

All quality assurance and quality control (QA/QC) analyses must be run on the same dates when samples were actually analyzed. All QA/QC data shall be reported, along with the sample results to which they apply, including the method, equipment, analytical detection and quantitation limits, the percent recovery, and explanation for any recovery that falls outside the QC limits, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses. Sample results shall be reported unadjusted for lank results or spike recoveries. In cases where contaminants are detected in QA/QC samples (e.g., field, trip, or lab blanks); the accompanying sample results shall be appropriately flagged.

The Discharger shall make all QA/QC data available for inspection by Regional Board staff and submit the QA/QC documentation with its respective quarterly report. Proper chain of custody procedures must be followed and a copy of that documentation shall be submitted with the quarterly report.

15. TREATMENT FAILURE

In an enforcement action, it shall not be a defense for the discharger 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 discharger 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. (California Water Code, Section 13263, subdivision (f).)

16. DISCHARGE TO NAVIGABLE WATERS

A person who discharges pollutants or proposes to discharge pollutants or proposes to discharge pollutants to the navigable waters of the United States within the jurisdiction of this state or a person who discharges dredged or fill material or proposes to discharge dredged or fill material into the navigable waters of the United States within the jurisdiction of this state shall file a report of waste discharge in compliance with the procedures set forth in Water Code section 13260. (California Water Code, Section 13376)

17. ENDANGERMENT TO HEALTH AND ENVIRONMENT

The discharger shall report any noncompliance which may endanger health or the environment. Any such information shall be provided verbally to the Executive Officer within 24 hours from the time the discharger becomes aware of the circumstances. A written submission shall also be provided within five days of the time the discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The following occurrence(s) must be reported to the Executive Office within 24 hours:

(a) Any bypass from any portion of the treatment facility.

(b) Any discharge of treated or untreated wastewater resulting from sewer line breaks, obstruction, surcharge or any other circumstances.

(c) Any treatment plan upset which causes the effluent limitation of this Order to be exceeded. (California Water Code, Sections 13263 and 13267)

18. MAINTENANCE OF RECORDS

The discharger shall retain records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies off all reports required by this Order, and record of all data used to complete the application for this Order. Records shall be maintained for a minimum of three years from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Board Executive Officer.

Records of monitoring information shall include:

(a) The date, exact place, and time of sampling or measurement;

(b) The individual(s) who performed the sampling or measurement;

(c) The date(s) analyses were performed;

(d) The individual(s) who performed the analyses;

(e) The analytical techniques or method used; and

(f) The results of such analyses.

19. (a) All application reports or information to be submitted to the Executive Office shall be signed and certified as follows:

(1) For a corporation – by a principal executive officer or at least the level of vice president.

(2) For a partnership or sole proprietorship – by a general partner or the proprietor, respectively.

(3) For a municipality, state, federal, or other public agency – by either a principal executive officer or ranking elected official.

(b) A duly authorized representative of a person designated in paragraph (a) of this provision may sign documents if:

(1) The authorization is made in writing by a person described in paragraph (a) of this provision.

(2) The authorization specifies either an individual or position having responsibility for the overall operation of the regulated facility or activity; and

(3) The written authorization is submitted to the Executive Officer.

Any person signing a document under this Section shall make the following certification:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. [California Water Code Sections 13263, 13267, and 13268]"

20. OPERATOR CERTIFICATION

Supervisors and operators of municipal wastewater treatment plants and privately owned facilities regulated by the Public Utilities Commission, used in the treatment or reclamation of sewage and industrial waste shall possess a certificate of appropriate grade in accordance with California Code of Regulations, Title 23, section 3680. State Boards may accept experience in lieu of qualification training. (California Code of Regulations, Title, 23, Sections 3680 and 3680.2.) In lieu of a properly certified wastewater treatment plant operator, the State Board may approve use of a water treatment plant operator of appropriate grade certified by the State Department of Public Health where reclamation is involved. (California Code of Regulations, Title, 23, Section 3670.1, subdivision (b).)

ADDITIONAL PROVISIONS APPLICABLE TO PUBLICLY OWNED TREATEMENT WORKS' ADEQUATE CAPACITY

21. Whenever a regional board finds that a publicly owned wastewater treatment plant will reach capacity within four years, the board shall notify the discharger. Such notification shall inform the discharger that the regional board will consider adopting a time schedule order pursuant to Section 13300 of the Water Code or other enforcement order unless the discharger can demonstrate that adequate steps are being taken to address the capacity problem. The notification shall require the discharger to submit a technical report to the regional board within 120 days showing how flow volumes will be prevented from exceeding existing capacity or how capacity will be increased. A copy of such notification shall be sent to appropriate local elected officials, local permitting agencies and the press. The time for filing the required technical report may be extended by the regional board. An extension of 30 days may be granted by the executive officer. Longer extensions may be granted by the regional board itself. (California Code of Regulations, Title, 23, Section 2232.)

Attachment D – Monitoring for Priority Pollutants

Acenaphthene
Acrolein
Acrylonitrile
Benzene
Benzidine
Carbon tetrachloride
Chlorobenzene
1,2,4-trichlorobenzene
Hexachlorobenzene
1,2-dichloroethane
1,1,1-trichloreothane
Hexachloroethane
1,1-dichloroethane
1,1,2-trichloroethane
1,1,2,2-tetrachloroethane
Chloroethane
Bis(2-chloroethyl) ether
2-chloroethyl vinyl ethers
2-chloronaphthalene
2,4,6-trichlorophenol
Parachlorometa cresol
Chloroform
2-chlorophenol
1,2-dichlorobenzene
1,3-dichlorobenzene
1,4-dichlorobenzene
3,3-dichlorobenzidine
1,1-dichloroethylene
1,2-trans-dichloroethylene
2,4-dichlorophenol
1,2-dichloropropane
1,3-dichloropropylene
2,4-dimethylphenol
2,4-dinitrotoluene
2,6-dinitrotoluene
1,2-diphenylhydrazine
Ethylbenzene
Fluoranthene
4-chlorophenyl phenyl ether
4-bromophenyl phenyl ether
Bis(2-chloroisopropyl) ether
Bis(2-chloroethoxy) methane
Methylene chloride
Methyl chloride
Methyl bromide
Bromoform
Dichlorobromomethane
Chlorodibromomethane
Hexachlorobutadiene
Hexachlorocyclopentadiene
Isophorone
Naphthalene
Nitrobenzene
2-nitrophenol
4-nitrophenol
2,4-dinitrophenol
4,6-dinitro-o-cresol
N-nitrosodimethylamine
N-nitrosodiphenylamine
N-nitrosodi-n-propylamine
Pentachlorophenol
Phenol
Bis(2-ethylhexyl) phthalate
Butyl benzyl phthalate
Di-N-Butyl Phthalate 2
Di-n-octyl phthalate
Diethyl Phthalate
Dimethyl phthalate
Benzo(a) anthracene
Benzo(a) pyrene
Benzo(b) fluoranthene
Benzo(k) fluoranthene
Chrysene
Acenaphthylene
Anthracene
Benzo(ghi) perylene
Fluorene
Phenanthrene
Dibenzo(,h) anthracene
Indeno (1,2,3-cd) pyrene
Pyrene
Tetrachloroethylene

Toluene
Trichloroethylene
Vinyl chloride
Aldrin
Dieldrin
Chlordane
4,4-DDT
4,4-DDE
4,4-DDD
Alpha-endosulfan
Beta-endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Alpha-BHC
Beta-BHC
Gamma-BHC
Delta-BHC
PCB-1242 (Arochlor 1242)
PCB-1254 (Arochlor 1254)
PCB-1221 (Arochlor 1221)
PCB-1232 (Arochlor 1232)
PCB-1248 (Arochlor 1248)
PCB-1260 (Arochlor 1260)
PCB-1016 (Arochlor 1016)
Toxaphene
Antimony
Arsenic
Asbestos
Beryllium
Cadmium
Chromium
Copper
Cyanide, Total
Lead
Mercury
Nickel
Selenium
Silver
Thallium
Zinc
2,3,7,8-TCDD