ORDER NO. R4-2018-0022-A01
AMENDMENT TO ORDER NO. R4-2018-0022
WASTE DISCHARGE REQUIREMENTS
FOR
CITY OF SANTA PAULA
(SANTA PAULA WASTEWATER RECYCLING PLANT)
(FILE NO. 06-189)

The purpose of this amendment to Waste Discharge Requirements (WDRs) Order No. R4-2018-0022 is to reflect the amendment to Cease and Desist Order (CDO) No. R4-2018-0023 to upgrade the Santa Paula Water Recycling Facility (SPWRF) with an advanced wastewater treatment system with a reverse osmosis process to reduce chloride levels in the discharges to onsite percolation ponds. The proposed upgrade to the SPWRF to add an advanced treatment system replaces the previous compliance approach to recycle water for offsite use. The amendment to the WDRs also reflects a change from mass-based effluent limitations to concentration-based limitations that will ensure direct attainment of water quality objectives. ***Reducing the chloride concentration in the effluent prior to discharge to onsite percolation ponds provides greater benefit to groundwater quality than reducing onsite chloride discharge through offsite use of recycled water within the same groundwater basin as proposed in the original CDO.***

Order No. R4-2018-0022 is hereby amended as follows:

(Language deleted is ~~struck through~~)

(Language added is **bold and underlined**)

Please note that the numbers of the paragraph, table, and figure are adjusted accordingly.

1. On page 1, paragraph No. 1, the operator of the Santa Paula Water Recycling Facility is revised as follows:

   The City of Santa Paula (City or Discharger) is the owner of the Santa Paula Water Recycling Facility (SPWRF), a Publicly-Owned Treatment Works (POTW), located at 920 Corporation Street in Santa Paula, California (Figure 1). The SPWRF, currently operated by ~~American Water~~ **Ventura Regional Sanitation District**, discharges tertiary-treated wastewater to groundwater via three percolation ponds adjacent to the facility.

2. On page 2, paragraph No. 9, the test results for the drinking water quality are added, and Table 1 is updated as follows:

   Drinking water supplied to the City is produced from deep wells including Well 1-B, Well 11, Well 12, Well 13, and Well 14, which are owned and operated by the Water Division of the City and produce up to 10.6 MGD. Water produced at all five wells between 2010 and 20~~16~~**20** complied with all primary state and federal drinking water

standards. Table 1 summarizes drinking water test results for total dissolved solids (TDS), sulfate, chloride, and boron from the City's 2010-20~~16~~**20** Annual Water Quality Reports, as compared to the groundwater quality objectives (GQOs) set forth in the Basin Plan.

Table 1. Drinking Water Quality (milligrams per liter, mg/L)

Period	TDS	Sulfate	Chloride	Boron
2010	941	440	43	0.53
2011	918	428	41	0.54
2012	964	442	42	0.52
2013	693	208	47	0.52
2014	975	420	42	0.54
2015	941	405	44	0.47
2016	981	440	48	0.55
2017	**924.2**	**393.6**	**47.8**	**0.4482**
2018	**924.2[1]**	**450.5**	**48**	**0.525**
2019	**1,036.7**	**477.7**	**48**	**0.4833**
2020	**1,060**	**446**	**49**	**0.6**
GQOs	2,000	800	110	1.0

Table note: [1] Result sampled in 2017.

3. On page 3, paragraph No. 11 is revised as follows:

   A. The SPWRF treats wastewater generated within the City and is designed for a flow of 4.2 MGD. Based on the discharge records between July 2010 and June 2017, the monthly average effluent discharged from the SPWRF ranged between 1.36 and 2.44 MGD, with an average of 1.86 MGD. **The monthly average effluent discharge flow rates between February 2018 and December 2021 ranged from 1.03 to 3.4 MGD, with an average of 1.86 MGD.**

   B. The wastewater treatment process at the SPWRF (See Figure 3 for process flow schematic) consists of preliminary treatment (coarse and fine mechanical screening and grit removal at the Influent Lift Station), flow equalization (two flow equalization tanks), secondary treatment (three aeration tanks with nitrification and denitrification activated sludge), tertiary treatment (six ~~bio~~membrane **bio**reactors, providing further carbonaceous oxidation, nitrification/denitrification and solids removal to meet the limits of the WDRs), and disinfection (UV). Treated and disinfected effluent is discharged to three

percolation ponds (Figure 4**5**). The returned activated sludge is treated at two of three aerobic digesters (one aerobic digester is for backup) after being thickened at two thickeners. The solids generated at the aerobic digesters receive final dewatering at the screw dewatering press. Final solids **are hauled by Synagro to their South Kern Compost Manufacturing Facility where they are composted to** ~~meeting~~ the United States Environmental Protection Agency (USEPA) Class ~~B~~ **A** reuse standards ~~are sent to the Ventura County Regional Bio-Solids facility~~ **for agricultural reuse**.

C. ~~The SPWRF was not designed to remove chloride. Since the SPWRF has no ability to remove chloride, chloride is passed through to the effluent and then groundwater via discharges to the percolation pond.~~ **To address levels of chloride in the effluent, an advanced treatment system, consisting of reverse osmosis (RO), will be constructed at the SPWRF, which will be designed to reduce the chloride concentration in the effluent to 110 milligrams per liter (mg/L) or less. The RO system will consist of nanofiltration and RO units to reduce effluent chloride concentrations followed by a RO brine concentrator (Figure 4).**

4. On page 4, paragraph No. 13 is revised as follows:

On August 23, 2018, the Regional Water Board approved the City's modified groundwater monitoring network dated May 1, 2018 to expand the groundwater monitoring network by including agricultural water supply wells. Subsequently, on April 22, 2019, the Regional Water Board approved the Groundwater Chloride Investigation and Well Production Workplan dated December 2018, which proposed installing one additional off-site groundwater monitoring well, MW-9.

The City owns and currently samples ~~eight (8)~~ **nine (9)** groundwater monitoring wells, including MW-1, MW-2a, MW-3, MW-4, MW-5, MW-6, MW-7a, ~~and~~ MW-8**, and MW-9** (shown on Figure 4**5**). ~~Per Section IV.C.3 of the Monitoring and Reporting Program (MRP) (Attachment E), the City will be proposing a modified groundwater monitoring network. Upon approval by the Executive Officer, the modified groundwater monitoring network will be used to determine compliance with the groundwater limitations in this Order, demonstrate that the discharge via percolation ponds does not cause mounding of groundwater, and to generally monitor the change of groundwater quality to ensure that the discharge does not cause adverse impacts to groundwater.~~

5. On page 5, Table 3 in the Compliance History section is updated as follows:

Table 3. Annual Average Chloride Concentrations[1] (mg/L) in SPWRF Effluent

Period	Concentration
2010	156

Period	Concentration
2011	153
2012	149
2013	155
2014	145
2015	134
2016	137
2017 ~~(Jan – Jun)~~	~~141~~ **131**
2018	**121**
2019	**120**
2020	**118.88**
2021	**112**
Range[2]	~~144.4 ± 8.2~~ **135.99 ± 15.61**

Table Notes:
[1] All data collected from grab samples.
[2] Data range is based on one standard deviation.

6. On pages 5 and 6, paragraph No. 15 and Table 4 are revised as follows:

Table 4 summarizes the groundwater annual average chloride concentration before and after the SPWRF began discharging via the percolation pond. The annual average chloride groundwater concentration was 108 mg/L at the downgradient water supply Well AW03 prior to initiation of discharge at the percolation pond in 2010. After the SPWRF began discharging to the percolation pond, the annual average chloride groundwater concentration increased to 135 mg/L at Well AW03. Monitoring data from the upgradient groundwater monitoring Well MW-3 indicates an annual average chloride groundwater concentration of 100 mg/L. This information suggests that the background groundwater chloride concentration was around 100 mg/L. Groundwater chloride concentrations at the downgradient groundwater monitoring Well MW-5 have been recorded between 135 and 155 mg/L, with an average of 142 mg/L. This data closely aligns with the SPWRF's effluent chloride concentration of approximately ~~144~~**136** mg/L (Table 3). The groundwater and effluent data indicate that the chloride discharges from the SPWRF have impacted, and continue to impact, the receiving groundwater quality in the vicinity of the SPWRF.

Table 4. Annual Average Chloride Concentration[1] in Groundwater (mg/L)

Prior to Discharge from SPWRF

Period	Downgradient MW-5[2]	Downgradient 03N21W21G03S[3]	Upgradient MW-3[4]
2003		113	
2004		111	
2005	115	117	92
2006	114	112	88
2007	108	110	85
2008	87	100	78
2009	74	92	96
Range[5]	99.6 ± 16.3	107.9 ± 8.6	87.8 ± 6.1
After Discharge from SPWRF			
2010 (Jul – Dec)	145	138	93
2011	145	146	112
2012	153	135	87
2013	155	136	103
2014	135	129	115
2015	136	129	108
2016	135	134	103
2017 ~~(Jan – Jun)~~	121	131	~~82~~**105**
2018	**128.2**	**126.6**	**123.6**
2019	**128.8**	**129.4**	**163.1**
2020	**129.5**	**127.4**	**126.3**
2021	**130.2**	**129.8**	**114.3**
Range[5]	~~142.4~~**136.8** ± ~~17.6~~**10.5**	~~134.0~~**132.6** ± ~~6.7~~**5.5**	~~100.2~~**112.8** ± ~~15.2~~**19.5**

Table Notes:

[1] All data collected from grab samples.

[2] Data were averaged from samples collected at the City-owned groundwater monitoring Well MW-5 with screen intervals of 42 to 62 feet, located approximately 50 feet downgradient from Percolation Pond 3.

[3] Water supply Well AW03 is owned and operated by a private entity. This well is located approximately 300 feet southwest of Well MW-5. The screen intervals of Well AW03 are from 80 to 120 below surface grade. Water produced at this well is used for agricultural irrigation only.

[4] Data were averaged from samples collected at the City-owned groundwater monitoring Well MW-3 with screen intervals of 25 to 45 feet, located approximately 1,800 feet upgradient from Percolation Pond 1.
[5] Data range is based on one standard deviation.

7. On page 7, paragraph No. 17.C is revised as follows:

On June 22, 2015, the City adopted Resolution No. 6918 approving a SRWS Buyback and Incentive Program. This program offers a financial incentive to residents to voluntarily remove SRWS. A Kick-Off SRWS Buyback event was held on September 19, 2015. The removal of SRWS under this program began in October 2015. ~~As of September 30, 2017, 255~~ **Three hundred (300)** of the approximately 1,250 SRWS have been removed **from October 2015 through February 2022**. ~~Table 5 summarizes the progress of SRWS removal by comparing the monthly average chloride concentration in the effluent compared to the accumulated number of SRWS removed. A reliable d~~**D**ecreasing **chloride concentrations in the effluent** ~~trend for chloride has not~~ **have** been observed ~~in the effluent~~**, but they still cannot meet the chloride discharge limitation set forth in the WDRs**.

[Table 5 and footnotes are deleted.]

8. On page 11, paragraph No. 24 is revised as follows:

In the City's report, Chloride Load Reduction Milestones, submitted to the Regional Board on March 14, 2017, the City included the construction of ~~reverse osmosis~~ **RO** treatment at the SPWRF as an option (under Supplemental Strategies), if needed, in order to comply with the chloride groundwater quality objective **(GQO)** of 110 mg/L. The City will continue its source control efforts to remove SRWSs and will first focus on recycling most of its effluent in order to bring the groundwater back into compliance with GQOs. Progress with these efforts ~~will be~~ **was** assessed in Year ~~2022~~ **2020**, and determination ~~will be~~ **was** made ~~as~~ to ~~whether~~ **pursue** advanced treatment ~~will be required~~ to meet the chloride GQO at Year 2027. ~~If advanced treatment is required, effluent limits will be applied in a way to ensure protection of all beneficial uses, including salt-sensitive crops.~~

On April 15, 2020, the City notified the Regional Water Board of its modified approach to install an advanced wastewater treatment system with RO at SPWRF in lieu of the originally proposed recycled water project to meet the effluent limitations in this Order.

9. On page 12, paragraph No. 25 is revised as follows:

Due to the following reasons, the City cannot immediately comply with the chloride effluent and groundwater limitations prescribed in this Order: (1) elevated chloride concentrations in the influent, (2) the wastewater treatment process not currently designed to remove chloride out of the waste stream, and (3) time needed to construct ~~recycled water pipelines to deliver recycled water to users~~**the advanced wastewater treatment system with RO**. In addition, the current progress of the

City's SRWS Buyback Program does not reliably ensure that the SPWRF will comply with the chloride effluent and groundwater limitations. Therefore, the Regional Board has determined that issuance of an accompanying CDO is appropriate and necessary to put the City on the path towards compliance with the effluent and groundwater limitations for chloride set forth in this Order. The CDO requires the City to comply with interim chloride effluent and groundwater limitations and implement actions pursuant to a prescribed time schedule. ~~The CDO provides an option for the City to consider an alternative approach including a request to the Regional Board to consider a Basin Plan amendment for revision of the GQO based on studies on chloride and salt-sensitive agriculture and after formation of a stakeholder working group.~~

~~By the end~~ **During the pendency** of the CDO schedule, there will be permitted degradation of groundwater with respect to chloride within a limited mixing zone radius downgradient and adjacent to the SPWRF percolation ponds, measured from the boundaries of the percolation ponds to 150 feet. This distance is the shortest distance where SPWRF effluent disposed to the percolation pond can mix with groundwater and result in receiving water chloride concentrations of 110 mg/L or less. Groundwater within the 150-foot mixing zone will exceed the chloride GQO of 110 mg/L **for the duration of the CDO schedule**. Based on the available data, there are no water supply wells within the 150-foot mixing zone. The City can arrange for alternative water supplies for any well owners in the mixing zone, if any are discovered. **At the end of the CDO schedule, the mixing zone is no longer allowed, and compliance with the chloride limitations of 110 mg/L at monitoring wells adjacent to and downgradient from the boundaries of the percolation ponds is required.**

10. On page 12, the last paragraph in paragraph No. 26 is revised as follows:

On February 7, 2019, the City submitted a Climate Change Plan. The Climate Change Plan indicated the SPWRF is outside of the 100-year floodplain of the Santa Clara River. This Order requires the City to periodically review and submit a revised Climate Change Plan when conditions at the facility change that may impact water quality. In addition, this ~~This~~ Order contains provisions to require planning and actions to address climate-related impacts that can cause or contribute to violations of this Order and/or degradation of waters of the state.

11. Portions of paragraph 35 on pages 15-17 are amended as follows:

Excepting chloride (discussed below), the SPWRF's discharge is high quality, tertiary-treated effluent meeting groundwater quality objectives in the Basin Plan and MCLs for drinking water. The Regional Board finds that the discharge, as allowed in this Order, is consistent with Resolution No. 68-16 since this Order: (1) requires compliance with the requirements set forth in this Order, including the use of best practicable treatment and control of the discharges, (2) requires implementation of a Monitoring and Reporting Program (MRP); and (3) requires that the discharges comply with effluent limits to meet water quality objectives. This Order establishes

limitations and requirements that will not unreasonably threaten present and anticipated beneficial uses or result in receiving ground water quality that exceeds water quality objectives set forth in the Basin Plan. ~~This means that where the stringency of the limitations for the same waste constituent differs according to beneficial use, the most stringent limit applies as the governing limitation for that waste constituent, unless otherwise justified. This Order contains tasks for assuring that BPTC and the highest water quality consistent with the maximum benefit to the people of the State will be achieved.~~ **Limitations for each waste constituent are based on the most stringent applicable water quality objectives 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. This Order contains requirements for implementing Best Practicable Technology and Control (BPTC). 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 open this Order to reconsider groundwater limitations and other requirements to comply with Resolution 68-16, if necessary.**

~~The discharge of chloride authorized by this Order will cause some limited and localized groundwater degradation in the immediate vicinity of the SPWRF percolation ponds.~~ Untreated discharges of chloride over the last 10 years have resulted in elevated concentrations of chloride in the effluent and groundwater. The groundwater quality objective for chloride is 110 mg/L and the average effluent chloride concentration in 2016 was 137 mg/L. To comply with the chloride groundwater limitations in this Order, which are based on the chloride groundwater quality objective, the City intends to ~~implement~~ **upgrade the SPWRF with reverse osmosis (RO) in lieu of the** recycled water projects to reduce ~~flow to~~ the **chloride concentration in the effluent prior to discharge into** the percolation pond~~, and thus reduce the mass loading of chloride to the groundwater~~. This will**, in time,** ~~greatly shrink the area of influence of the wastewater and largely~~ restore the impaired groundwater zone adjacent and downgradient to the percolation pond. However, implementation of ~~recycled water projects in the Santa Paula area~~ **the RO system** will take time to fully implement, which will result in continued localized degradation **in the immediate vicinity of the SPWRF percolation ponds**. **Construction and optimization of the RO system is due to be completed by March 30, 2025, at which time, a chloride concentration in the effluent from the SPWRF of 110 mg/L is required. However, a lag in groundwater quality improvement is expected following the improved quality of the discharge.** While groundwater within the 150-foot mixing zone adjacent to the percolation ponds will **temporarily** exceed the chloride groundwater quality objective, this Order imposes limits on flow and chloride mass loading in the effluent to ensure receiving groundwater beneficial uses will be maintained and supported. Beneficial uses will be maintained as all wells utilized for crop irrigation ~~will be~~ **are** located outside the mixing zone. **By the final CDO compliance date of February 8, 2028, the mixing zone is no longer allowed and compliance with chloride limitations of 110 mg/L**

at monitoring wells adjacent and downgradient to the boundaries of the percolation ponds is required.

~~In order to more immediately reduce the chloride concentration in the effluent and groundwater to 110 mg/L at the percolation pond, the City would need to install a Reverse Osmosis (RO) system to treat all or a portion of the effluent.~~ The Regional Board recognizes that reducing chloride concentrations in the effluent or in the groundwater by using RO can be costly. The current estimated cost for the City to install a RO system is $26.6 million with annual operating and maintenance costs of $1.6 million, including brine waste disposal. These costs would be passed on to the ratepayers, who already pay one of the highest sewer rates in the State. The City is also a small low-income community. The costs of RO treatment depend on the volume of effluent or groundwater to be treated in order to meet the groundwater quality objectives specified in the Basin Plan. **To defray the costs of the upgrade, the City has submitted a State Water Board Clean Water State Revolving Fund application with the State Water Board Division of Financial Assistance. The City plans to complete construction of the RO system within two years of receiving the Final Funding Agreement but no later than December 2024.** ~~Therefore, rather than install costly RO at this time, the requirements in this Order provide the City with the opportunity to first pursue recycling efforts and source reduction through the SRWS Buyback Program to meet groundwater quality objectives. If these efforts are deemed unsuccessful, the City may need to implement RO technology as an additional treatment mechanism in the future. Other basin-specific solutions can also be explored to minimize costs while restoring protection of beneficial uses.~~

~~Reference is also made to the Regional Board's past efforts to address chronic chloride exceedances in the Upper Santa Clara River, which utilized findings from studies on chloride and salt-sensitive agriculture. The first of the special studies, entitled "Literature Review and Evaluation (LRE)," was an evaluation of the appropriate chloride threshold for the reasonable protection of salt-sensitive agriculture. The LRE, which was completed in 2005, found that the best estimate of a chloride hazard concentration for avocado crops falls within the range of 100 to 117 mg/L. An independent technical advisory panel (TAP) reviewed the LRE and found a similar protective range of 100 to 117 mg/L. The TAP found that the upper end of the range is only protective if other factors such as quantity and timing of irrigation water and soil drainage are not limiting. An additional study completed in 2008, entitled "Compliance Averaging Period for Chloride Threshold Guidelines in Avocado," found that a 3-month averaging period of the LRE guidelines would be protective of avocados. The TAP co-chairs reviewed this study and agreed that a 3-month averaging period is appropriate. The Regional Board considered the LRE and TAP review of the LRE when developing site-specific water quality objectives (SSOs) for certain reaches of the Upper Santa Clara River to support the Alternative Water Resources Management (AWRM) approach proposed by the Santa Clarita Valley Sanitation District (SCVSD). The Regional Board found that the SSOs were consistent with antidegradation requirements, and subsequently established the SSOs on December 11, 2008 via Resolution No. R08-012. The Regional Board~~

~~rescinded the SSOs in 2014 via Resolution R14-010 only after SCVSD decided to no longer pursue the AWRM approach.~~

Incorporating an ~~approach that utilizes a recycled water approach and has limited groundwater degradation within the immediate vicinity of the percolation pond for chloride at levels that are above the groundwater quality objective is justified considering the socio-economic conditions of this small community that already has one of the highest sewage rates in the state, and is consistent with State Water Board Resolution No. 68-16 in that the resulting water quality constitutes the highest water quality that is reasonable, considering all demands placed on the waters, economic and social considerations, and other public interest factors. Together, these factors are consistent with the maximum benefit to the people of the State~~ **RO system to reduce chloride and other salts from the SPWRF effluent prior to discharge into the percolation pond will benefit water quality locally and effectively reduce the contribution of chloride and other salts to the Santa Clara-Santa Paula groundwater basin. This Order establishes limitations and requirements protective of the present and anticipated beneficial uses or result in receiving ground water quality that meets or exceeds water quality objectives set forth in the Basin Plan and is therefore, consistent with State Water Board Resolution No. 68-16**.

12. On page 17, a new paragraph is added as follows:

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 SPWRF is the Santa Clara Valley River Groundwater Basin-Santa Paula subbasin-West of Peck Road. 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 regional groundwater basin currently has high quality water, but is

experiencing increases in salt and nitrogen loading from natural and anthropogenic sources. The SPWRF will produce effluent quality that is better than or equivalent to 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;

The water quality conditions that can be reasonably achieved are those consistent with the site-specific water quality objectives necessary to protect the beneficial uses of the groundwater basin identified in A, above. through the coordinated control of all factors that affect water quality in the area. The City's plans to upgrade the SPWRF with an advanced treatment system, including RO, is part of the coordinated control of all factors that affect water quality in the areas.

D. Economic considerations;

The City of Santa Paula is identified as a disadvantaged community as defined in CWC section 79505.5. A "disadvantaged community means a community with an annual median household income that is less than 80 percent of the statewide annual median household income." According to the United States Census Bureau, the 2019 California median household income is $80,440 and the City of Santa Paula median household income is $60,468.

Based on the City's *Water and Sewer Rate Study* dated September 2019, the monthly wastewater user rate at monthly water use of 8.1 hundred cubic feet is $98.55 per single family residence in the fiscal year 2021-2022.

Therefore, the implementation of the RO system may cause significant economic impact to the community. The City continuously investigates solutions to minimize economic impact, including submittal of an application to the State Revolving Fund to defray costs to the community.

E. The need for developing housing within the region;

According to the United States Census Bureau, the total population in the City of Santa Paula is 30,657 in 2019. The SPWRF is designed to treat 4.2 MGD of wastewater and currently discharges approximately 2 MGD. The SPWRF has sufficient capacity to treat

additional wastewater generated from newly developed residential, commercial, and industrial districts.

F. The need to develop and use recycled water;

The State Water Board adopted the *Water Quality Control Policy for Recycled Water* (Recycled Water Policy) in 2018 and encourages the increased use of recycled water in California: 714,000 acre-feet per year (AFY) in 2015 to 1.5 million AFY by 2020 and to 2.5 million AFY by 2030. The Recycled Water Policy categorizes recycled water use as agricultural irrigation, landscape irrigation, golf course irrigation, commercial application, industrial application, geothermal energy production, non-potable uses, groundwater recharge, seawater intrusion barrier, reservoir water augmentation, raw water augmentation, and potable uses.

On June 14, 2017, the City enrolled under State Water Board Water Reclamation Requirements for Recycled Water Use Order No. WQ 2016-0068-DDW. The City may distribute the disinfected tertiary-treated wastewater for recycled water applications, as appropriate, consistent with the Recycled Water Policy when the RO system is implemented at the SPWRF. This will help offset the need for potable water.

13. On page 18, the chloride effluent limitation in Table 9 is revised as follows:

Table 9 - Effluent Limits

Constituents	Units	Monthly Average	Daily Maximum
Oil and grease	mg/L	10[1]	15[1]
Total suspended solids	mg/L	10[1]	15[1]
	% removal	≥85[2]	None
$BOD_{5@20°C}$	mg/L	10[1]	15[1]
	% removal	≥85[2]	None
Ammonia as nitrogen + nitrate as nitrogen + nitrite as nitrogen	mg/L	10[3]	None
Nitrite as nitrogen	mg/L	1	None
Total dissolved solids	mg/L	2,000[4]	None
Sulfate	mg/L	800[4]	None

Constituents	Units	Monthly Average	Daily Maximum
Boron	mg/L	1.0[5]	None
Chloride	~~lbs/day~~ **mg/L**	~~79~~[5] **110[4]**	None

Table Notes:

[1] Limit is based on best professional judgment. Limits adopted by this Regional Board exist in the permits for tertiary-treated wastewater treatment plants.

[2] Limit is based on secondary treatment requirements, 40 C.F.R. section 133.102.

[3] Limit is based on the Load Allocations for nonpoint sources set forth in the Santa Clara River Nitrogen Compounds TMDL, Resolution No. 2003-011.

[4] Limit based on Basin Plan Groundwater Quality Objective.

~~[5] This mass-based effluent limit is derived from the City's Chloride Model and Chloride Load Reduction Milestones, which is based on an allowable flow to the percolation pond of 0.07 MGD and chloride effluent concentration at 135 mg/L in order to meet the chloride groundwater quality objective of 110 mg/L at 150 feet from the percolation pond.~~

14. Additional requirements are added in Section IV General Requirements on pages 21 and 22 as follows:

K. 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).

15. Additional prohibitions are added in Section V Prohibitions on pages 22 and 23 as follows:

L. The wastewater treatment and percolation ponds shall not result in nuisance conditions caused by breeding of mosquitoes, gnats, midges, or other pests.

16. Section VI Provisions are revised as follows:

C. The City shall ~~submit a~~**evaluate the need to revise its** Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) ~~no later than 12 months after adoption of this Order~~**when conditions change that may impact water quality**. **The City shall periodically submit a report of its evaluation or a revised Climate Change Plan based on its evaluation.** Submittal of the Climate Change Plan is required pursuant to California Water Code section 13267. As required by this provision, a regional board may require a person to submit technical or monitoring program reports that the

regional board requires. The Climate Change Plan is needed in order to assess and manage climate change related-effects associated with City 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 address 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.

N. Collection System Requirements

The City must properly enroll under the applicable General WDRs for Sanitary Sewer Systems and comply with the requirements specified in the General WDRs. The State Water Board adopted General WDRs for Sanitary Sewer Systems (Order No. 2006-0003-DWQ) 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 and statewide approach to regulating sanitary sewer systems to prevent and/or reduce sanitary sewer overflows (SSOs). Order No. 2006-0003-DWQ requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. The City's collection system is part of the system that is subject to Order No. 2006-0003-DWQ. The City enrolled in Order No. 2006-0003-DWQ on July 27, 2006. As such, the City must properly operate and maintain its collection system. The City must also report any non-compliance and mitigate any discharge from the collection system in violation of this Order.

11. On page 32, Final Certification of Order is revised as follows:

I, ~~Samuel Unger~~ **Renee Purdy**, Executive Officer, do hereby certify that ~~this Order with all attachments~~ **the foregoing** is a full, true, and correct copy of an Order **originally** adopted **on February 8, 2018 and amended and adopted** by the California Regional Water Quality Control Board, Los Angeles Region on ~~February 8, 2018~~ **May 12, 2022**.

Renee Purdy
Executive Officer

12. A new Figure 4 for the process flow schematic of the advanced wastewater treatment system is added.

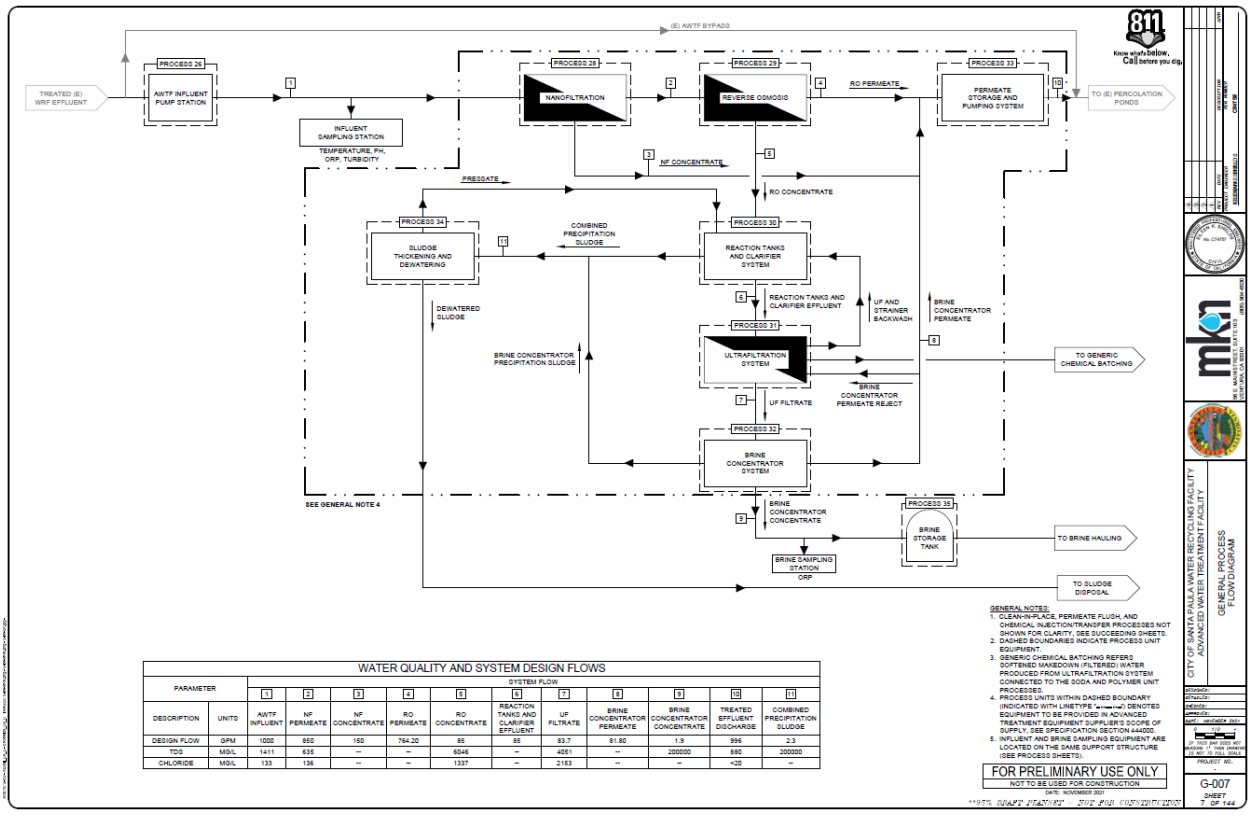

Figure 4 – Process Flow Schematic of Reverse Osmosis Advanced Wastewater Treatment System at Santa Paula Water Recycling Facility

13. On page 36, Figure 4 is replaced with a map showing the new groundwater monitoring well and three agricultural supply wells.

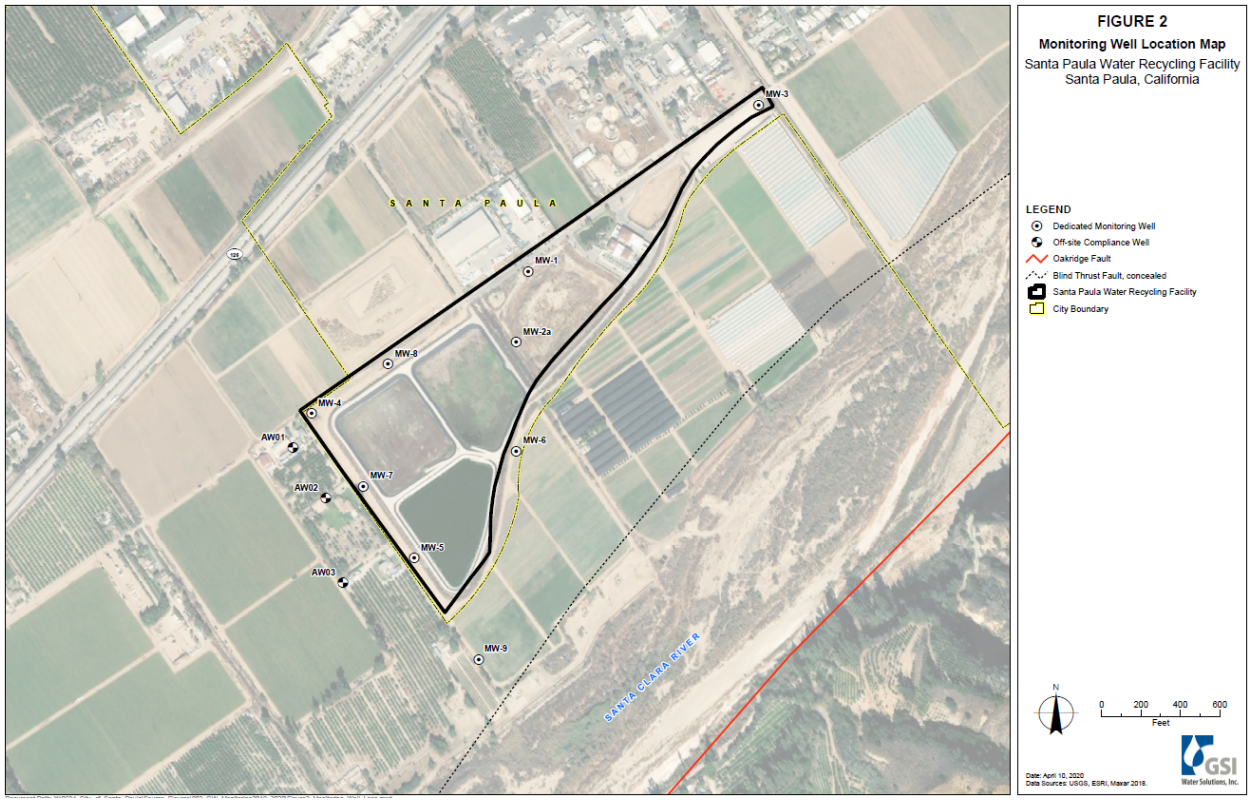

Figure 4**5** – Locations of Groundwater Monitoring Wells

14. Attachment E, Monitoring and Reporting Program: Monitoring well, MW-9 is added to all paragraphs listing the wells comprising the groundwater monitoring network in the following paragraphs:

    a) Page 9, paragraph C.2

    b) Page 10, paragraph C.3

15. Table 64431-A in Attachment A-1 is updated as follows:

Chemical	Maximum Contaminant Levels (mg/L[2])	Reporting Detection Limit (mg/L[2])
Aluminum	1	0.05
Antimony	0.006	0.006
Arsenic	0.01**0**	0.002
Asbestos	7 MFL[31]	0.2 MFL [2]~~> 10 µm~~
Barium	1	0.1

Chemical	Maximum Contaminant Levels (mg/L[2])	Reporting Detection Limit (mg/L[2])
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
~~Chromium (VI)~~	~~0.010~~	~~0.001~~
Mercury	0.002	0.001
Nickel	0.1	0.01
Selenium	0.05	0.005
Thallium	0.002	0.001
Perchlorate	0.006	~~0.004~~ **0.002** **0.001[3]**

Notes: [1] **MFL = million fibers per liter; MCL for fibers exceeding 10 µm in length.** ~~California Code of Regulation (CCR), Title 22, Section 64431, last updated July 16, 2015.~~

[2] **Reporting detection limit for fibers exceeding 10 µm in length.** ~~mg/L = milligrams/liter.~~

[3] **Effective January 1, 2024.** ~~MFL = million fibers per liter; MCL for fibers exceeding 10µm in length.~~

16. Table 64442 in Attachment A-2 is revised, and Table 64443 in Attachment A-3 is combined with Attachment A-2 as follows:

Gross alpha and gross beta analysis must be performed. If gross alpha is greater than 1 picocurie per liter (pCi/L), uranium analysis must be performed. Compliance with this Order shall then be based on comparing gross alpha minus total uranium to the gross alpha limit of 15 pCi/L.

Radium-226 and radium-228 analysis must be performed, and combined Radium-226 and radium-228 activity must be less than or equal to 5 pCi/L. If gross alpha is less than 50 pCi/L, one can assume radium-226 activity is equal to gross alpha activity for purposes of meeting the 5 pCi/L limit.

~~Chemical~~ **Radionuclide**	Maximum Contaminant Levels (pCi/L[2])	Reporting Detection Limit (pCi/L[2])
Radium-226		1

~~Chemical~~ **Radionuclide**	**Maximum Contaminant Levels (pCi/L[2])**	**Reporting Detection Limit (pCi/L[2])**
Radium-228	~~5 pCi/L (combined radium-226 and radium-228)~~	1
Combined radium-226 and radium-228	**5**	
Gross Alpha particle activity (excluding radon and uranium)	15	3
Uranium	20	1

Notes: [1] **pCi/L = picocuries per liter.** ~~CCR, Title 22, Section 64442, last updated July 16, 2015.~~
~~[2]. pCi/L = picocuries/liter.~~

Table 64443

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

17. Table 64449-A in Attachment A-4 is revised as follows:

Chemical	Levels/Units
Aluminum	0.2 mg/L
Color	15~~0~~ Units
Copper	1.0 mg/L
Foaming 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

18. Attachment C is updated as follows:

Table C-1. Health-based and Performance Indicator CECs and Required Reporting Limits [1]

Constituent	Constituent Group	Reporting Limit (µg/L)
1,4-Dioxane	Industrial chemical	0.1
N-Nitrosodimethylamine (NDMA)	Disinfection byproduct	0.002
N-Nitrosomorpholine (NMOR)	Industrial chemical	0.002
Perfluorooctane sulfonate (PFOS)	Consumer/industrial chemical	0.0065
Perfluorooctanoic acid (PFOA)	Consumer/industrial chemical	0.007
Sucralose	Food additive	0.1
Sulfamethoxazole	Antibiotic	0.01

Note: [1] *Water Quality Control Policy for Recycled Water* (Recycled Water Policy), effective April 8, 2019.