

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LOS ANGELES REGION**

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**CEASE AND DESIST ORDER  
FOR  
CITY OF SANTA PAULA  
ORDER NO. R4-2018-0023, AS AMENDED BY  
ORDER NO. R4-2018-0023-A01  
(SANTA PAULA WATER RECYCLING FACILITY)  
(FILE NO. 16-189)**

REQUIRING CITY OF SANTA PAULA  
TO UNDERTAKE ACTIONS TOWARD COMPLIANCE WITH  
CHLORIDE REQUIREMENTS IN WASTE DISCHARGE REQUIREMENTS FOR  
DISCHARGES FROM SANTA PAULA WATER RECYCLING FACILITY

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

1. 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. The SPWRF is operated by Ventura Regional Sanitation District and discharges tertiary-treated wastewater to groundwater via three percolation ponds adjacent to the facility.
2. The SPWRF treats wastewater generated within the City and is designed for a flow of 4.2 million gallons per day (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.
3. The wastewater treatment process at the SPWRF 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 biomembrane 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. 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 meeting the United States Environmental Protection Agency (USEPA) Class B reuse standards are sent to the Ventura County Regional Bio-Solids facility.
4. The SPWRF is able to meet all final effluent limitations in the City's waste discharge requirements (WDRs) except for chloride. This is due to the SPWRF not being

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Adopted: February 8, 2018  
Amended: May 12, 2022

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. Noncompliance with chloride effluent and groundwater limitations is the most problematic issue with the SPWRF. Table 1 summarizes the chloride concentrations of effluent discharged from the SPWRF.

**Table 1. Annual Average Chloride Concentrations<sup>[1]</sup> (milligrams per liter, mg/L) in SPWRF Effluent**

Period	Effluent of SPWRF
2010	156
2011	153
2012	149
2013	155
2014	145
2015	134
2016	137
2017	131
2018	121
2019	120
2020	118.88
2021	112
Range <sup>[2]</sup>	135.99 ± 15.61

Table 1 notes:

[1] All data were collected from grab samples.

[2] Data range is based on one standard deviation.

- A. The monthly effluent chloride concentration ranged from 125 to 166 mg/L between July 2010 and June 2017, which continuously exceeded the chloride effluent limitation of 110 mg/L. This has led to an escalation of the chloride concentrations in groundwater below and surrounding the three percolation ponds with a range of 121 to 168 mg/L and an average of 140 mg/L since July 2010. The groundwater and effluent data indicate that the chloride discharges from the SPWRF have impacted the receiving groundwater quality in the vicinity of the SPWRF.
- B. The elevated chloride concentrations in the effluent were believed to be associated with the approximately 1,250 Self-Regenerating Water Softeners (SRWS) installed in the households of the City. These SRWS generate brine

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containing elevated chloride concentrations, which are discharged to sewers and delivered to the SPWRF as influent.

- C. According to the effluent data collected between October 2015 and June 2017, a total of 2,479 pounds/day (lbs/day) of chloride, based on the effluent flow rate of 2.2 MGD [95 percentile of monthly average effluent flows, resulting from data recorded between October 2015 (beginning of the SRWS Buyback Program) and June 2017] and a chloride effluent concentration of 135 mg/L, were discharged to the groundwater underlying the percolation pond.
  - D. The chloride interim effluent limit of 1,983 lbs/day was exceeded twice between 2018 and 2021: 2,040 lbs/day in February 2021, calculated from February 8, 2021 through March 7, 2021, and 2,030 lbs/day in March 2021, calculated from March 8, 2021 through April 7, 2021.
  - E. The chloride interim groundwater limitation was exceeded at downgradient wells AW01 in July 2018 and at AW03 in August 2020.
5. The Regional Water Board issued three Notices of Violation (NOVs), described below, to the City for exceedances of the chloride effluent and groundwater limitations in Order No. R4-2007-0028. These NOVs required the City to implement corrective and preventative actions to bring the City's discharge into full compliance with chloride effluent limitations and receiving water requirements specified in Order No. R4-2007-0028, previously adopted by this Regional Water Board on May 3, 2007.
- A. The November 3, 2011 NOV summarized chloride limit exceedances between the second quarter of 2010 and the third quarter of 2011. These violations included 15 exceedances of chloride and one exceedance of total nitrogen, di(2-ethyl)phthalate, and dioxin in effluent; and 1 exceedance of sulfate, 5 exceedances of chromium, 10 exceedances of aluminum, 1 exceedance of nickel and boron and nitrate plus nitrite, and 26 chloride exceedances of groundwater limitations.
  - B. The December 30, 2014 NOV summarized 36 and 88 chloride exceedances in effluent and groundwater, respectively, between the fourth quarter of 2011 and the third quarter of 2014.
  - C. The March 20, 2017 NOV summarized 27 and 50 chloride exceedances in effluent and groundwater, respectively, between the fourth quarter of 2011 and the fourth quarter of 2016.
6. The City's efforts to reduce the chloride concentration in the influent to the SPWRF are summarized below:

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- A. The City identified that the influent to the SPWRF contains brine with elevated chloride concentration from Self-Regenerating Water Softeners (SRWS). There are approximately 1,250 residential SRWS used in the City.
  - B. On September 5, 2006, the City established Ordinance No. 1160 prohibiting the installation or replacement of residential SRWS.
  - C. 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. Three hundred (300) of the approximately 1,250 SRWS have been removed from October 2015 through February 2022. Decreasing chloride concentrations in the effluent have been observed, but they still cannot meet the chloride discharge limitation set forth in the WDRs.
7. To address the City's chloride exceedances in the effluent and groundwater, the Regional Water Board required the City to submit a Chloride Reduction Workplan. Board staff also met with the City on several occasions to discuss the City's chloride exceedances. A summary of these events are as follows:
- A. On December 19, 2013 and May 11, 2015, the Regional Water Board met with the City to discuss its Chloride Reduction Workplan. The City's Chloride Reduction Workplan includes the following tasks:
    - i. Prohibit SRWS installations or replacements;
    - ii. Implement a SRWS Buyback Program;
    - iii. Implement a Recycled Water Program to reduce effluent discharged to the three percolation ponds; and
    - iv. Implement Supplemental Strategies, if needed, including advanced treatment (e.g., reverse osmosis) and disposal of brine.
  - B. On January 28, 2016, Regional Water Board staff discussed with the City the necessary actions to reduce the chloride concentration in the effluent, which included the SRWS Buyback Program. The City also proposed to explore application of recycled water at locations other than identified groundwater hot spots and to conduct groundwater impact investigation and remediation activities. The City was notified that detailed schedules and milestones were required for all actions.
  - C. On March 8, 2016 and September 14, 2016, the City met with Regional Water Board staff to provide an update of its SRWS Buyback Program efforts. The City noted that five City employees were deployed to conduct door-to-door

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visits to encourage participation in the SRWS Buyback Program among 7,500 dwellings within the City.

- D. On October 31, 2016, the City met with Regional Water Board staff to provide an update on the following topics:
  - i. Status of implementing the chloride compliance strategy and potential for reduction of effluent discharged to the three percolation ponds via the City's Recycled Water Program;
  - ii. Assimilative capacities for chloride at different groundwater locations beneath the City based on the Salt and Nutrient Management Plan for the Lower Santa Clara River Basin; and
  - iii. Groundwater hot spots (i.e., chloride impaired areas with no assimilative capacity for recycled water applications) in the City.
- E. On May 1, 2018, the City submitted the Self-Regenerating Water Softener Buyback Program Evaluation Report to comply with CDO requirements. The report concluded that the Buyback Program is partially effective in reducing chloride loadings to the SPWRF, but the estimated reduction in the chloride concentration in the effluent has not been met.
- F. On January 30, 2019, the City submitted the Recycled Water Project Layout Report to identify potential recycled water opportunities, conduct outreach to potential recycled water users, and draft conceptual recycled water projects and evaluate them. During the process, the City met with potential project partners and interested parties to discuss opportunities, project components, design criteria, and project feasibility. However, the City was unable to accomplish the recycled water project due to an incompatibility in schedules between the City and potential recycled water partners.
- G. On September 20, 2019, the City submitted the Alternative Effluent Chloride Mitigation Workplan to request a Basin Plan amendment to adopt a site-specific groundwater quality objective for chloride after discussions on January 30, 2019 and June 27, 2019.
- H. On February 28, 2020, the Regional Water Board provided comments on the Alternative Effluent Chloride Mitigation Workplan. The comments required the City to provide supporting information regarding a site-specific chloride groundwater quality objective that would be protective of beneficial uses for agricultural water supply for salt sensitive crops.
- I. On April 15, 2020, the City notified the Regional Water Board of its modified approach to upgrade the SPWRF with reverse osmosis (RO), in lieu of the proposed recycled water project, to reduce chloride concentrations in the treated effluent to meet the permit requirements.

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- J. On July 13, 2020, the City requested development of a site-specific groundwater quality objective for chloride of 117 mg/L as a Basin Plan amendment to reduce the cost of the RO implementation.
  - K. On December 1, 2021, the City and Regional Water Board staff discussed the progress of the RO plant development and the requested Basin Plan amendment. The City decided to implement the advanced wastewater treatment system with RO based on the existing groundwater quality objective for chloride of 110 mg/L.
8. On July 9, 2015, the Regional Water Board adopted Resolution No. R15-007, an amendment to the Basin Plan that incorporated stakeholder-developed groundwater quality management plan for salts and nutrients in the Lower Santa Clara River groundwater basins. Groundwater quality management measures were developed by stakeholders as part of the Salt and Nutrient Management Plan (SNMP) for the Lower Santa Clara River Basins in Ventura County. Such plans are a requirement of the State Water Resources Control Board's (State Water Board) Recycled Water Policy and are intended to maintain high quality waters and to protect the beneficial uses of groundwater while promoting recycled water use throughout the state. The SNMP utilized a groundwater quality model that characterized the water quality in the Santa Paula Basin and examined the degree of impairment to water quality in the Basin. The model shows there is available assimilative capacity for salts and nutrients, including chloride, in most areas of the Santa Paula Basin to allow for recycled water projects consistent with the Recycled Water Policy. As described below, the City is planning to recycle effluent that is currently discharged to the percolation pond.
9. The City developed and utilized a simple spreadsheet mixing model, the *Groundwater Chloride Transportation Model* (Chloride Model), to analyze the effect of future effluent discharges on groundwater overtime at various distances from the percolation pond. The City's modeling assumed some degradation of groundwater with respect to chloride within a limited range of mixing zone radius below and adjacent to the SPWRF, measured from the boundaries of the percolation pond. This distance is the maximum allowable 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 in order to provide protection to groundwater beneficial uses at the first encountered water supply wells which are at 150 feet away from the percolation ponds. Groundwater within the mixing zone will exceed the chloride groundwater quality objective (GQO) of 110 mg/L. Mass-volume balance calculations along with Darcy's Law are used to account for travel in porous media. The Chloride Model simulates instantaneous and complete mixing of ambient groundwater with effluent seepage reaching the water table from the percolation pond using SPWRF data for flow and chloride effluent concentrations. It was conservatively assumed that any effluent discharge to the percolation pond would infiltrate into the underlying aquifer and not be diverted for other uses. Groundwater parameters within the spreadsheet model were selected based on recent monitoring reports in order to be representative of average conditions within the vicinity of the

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SPWRF. The Chloride Model assumes an initial volume of groundwater underlying the ponds possessing background chloride concentrations of 136 mg/L. The volume of the existing groundwater body is calculated as the product of the radius of interest (150-1200 feet), an assumed saturated thickness of potentially impacted groundwater (50 feet), and the porosity of the underlying sediments (assumed to be 0.2) based on the low end of published literature values for a sand and gravel mixture. Based on the regional groundwater quality data documented in the SNMP, regional groundwater inflow is assumed to have a chloride concentration of 91 mg/L.

On December 14, 2016, Regional Water Board staff met with the City to discuss the results of the Chloride Model, which evaluated compliance with the groundwater quality objectives beneath and adjacent to the three percolation ponds, for various discharge scenarios. Based on Regional Water Board staff's comments, the City implemented additional discharge scenarios in the Chloride Model, which was discussed in meetings held on February 8, 2017, February 17, 2017, July 24, 2017, and August 7, 2017.

10. The Chloride Model simulated chloride concentrations in the receiving groundwater resulting from chloride mass loading reduction in the three percolation ponds. The Model predicted GQOs being achieved at 150 feet away from the percolation pond when the total mass of chloride in the effluent is significantly reduced. The initial mass of chloride is calculated based on the average chloride effluent concentration of 135 mg/L and the discharge rate of 2.2 MGD, which results in 2,479 pounds total mass of chloride discharged per day. The reduction of chloride mass discharged to the percolation pond can be achieved by improving the effluent chloride concentration (e.g., source control or treatment), or diverting a significant amount of flow for recycled water uses, or a combination of both in order to protect water supply wells AW01, AW02, and AW03, approximately 150, 150, and 300 feet, respectively, away from percolation pond. Water produced from these wells is primarily for agricultural irrigation use.

To achieve the chloride GQO of 110 mg/L in groundwater at least 150 feet away from the percolation pond, the City provided various effluent chloride concentrations and allowable flow combinations (Table 2). Based on the hydrology and hydrogeologic condition at the SPWRF percolation ponds area, the higher the concentration of chloride in the effluent, the less volume and mass can be discharged to percolation ponds to comply with the chloride GQO in the Basin Plan. For example, if the chloride concentration in the effluent is 135 mg/L, only 0.07 MGD, which is equivalent to 79 pounds of chloride per day, could be discharged to the percolation pond to achieve the chloride GQO of 110 mg/L at 150 feet away from the percolation pond. If the chloride concentration in the effluent is reduced to 120 mg/L, then more flow (0.2 MGD) can be discharged to the percolation pond and achieve the chloride GQO 150 feet away from the percolation pond.

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**Table 2. Groundwater Chloride Transportation Model – Continuous Discharge**

<b>Chloride Effluent Concentration</b>	<b>Flow to Percolation Ponds (% of 2.2 MGD)</b>	<b>Allowable Effluent Mass Load to Groundwater (Daily)</b>	<b>Chloride Groundwater Concentration at 150 feet</b>
135 mg/L	0.07 MGD (3.2%)	79 pounds (lbs)	110 mg/L
130 mg/L	0.1 MGD (4.5%)	108 lbs	110 mg/L
125 mg/L	0.13 MGD (5.9%)	135 lbs	110 mg/L
120 mg/L	0.2 MGD (9.1%)	200 lbs	110 mg/L
115 mg/L	0.4 MGD (18.2%)	384 lbs	110 mg/L

11. To achieve compliance with the chloride GQO and to conserve potable water, the City will construct the advanced wastewater treatment system with RO as proposed in the April 15, 2020 letter. The Regional Board has evaluated the proposed RO system and determined that it will be consistent with the State Water Board's Recycled Water Policy and will preserve available assimilative capacity within the Santa Paula Basin consistent with the SNMP. The mass-based effluent limitation for chloride previously established in the WDRs will no longer be applicable, but the concentration-based effluent limitation for chloride is appropriate after implementing the RO system. The groundwater limitations are based on the GQOs in the Basin Plan.
12. On December 22, 2015, the City submitted the Recycled Water Program Technical Report and Notice of Intent with the Title 22 Engineering Report to the State Water Board's Division of Drinking Water (DOW) for approval. DOW conditionally approved the Title 22 Engineering Report on August 19, 2016. On June 14, 2017, the Regional Water Board enrolled the City's recycled water program under separate Water Reclamation Requirements for Recycled Water Use Order WQ 2016-0068-DDW, issued by the State Water Board on June 7, 2016.

In March 2020, the City decided to upgrade the SPWRF with the RO process to reduce the chloride concentrations in the effluent to meet the permit requirements. In December 2021, the City stated that the RO system would be able to produce 110 mg/L of chloride in the effluent to meet the groundwater quality objective in the Basin Plan. Currently, the City has completed the 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.

13. In the City's report, *Chloride Load Reduction Milestones*, submitted to the Regional Water Board on March 14, 2017, the City included the construction of reverse osmosis treatment at the SPWRF as an option (under Supplemental Strategies), if needed, in order to comply with the chloride groundwater quality objective of 110 mg/L. The City will continue its source control efforts to remove SRWSs and will first

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focus on recycling most of its effluent in order to bring the groundwater back into compliance with GQOs. Progress with these efforts was assessed at Year 2020 and determination was made to pursue advanced treatment to meet the chloride GQO at Year 2027.

In March 2020, the City decided to upgrade the SPWRF with an advanced treatment system, including RO, to reduce the chloride concentrations in the effluent to meet the permit requirements. In December 2021, the City stated that the RO system would be able to produce effluent with a chloride concentration of 110 mg/L to meet the groundwater quality objective in the Basin Plan. 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.

14. 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 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.

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 limitation of 110 mg/L at monitoring wells adjacent to and downgradient from the boundaries of the percolation ponds is required.

15. California Water Code (CWC) section 13301 provides in pertinent part "When a regional board finds that a discharge of waste is taking place, or threatening to take place, in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge

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prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action ... Cease and desist orders may be issued directly by a board, after notice and hearing."

16. As a result of the historical monitoring data and other activities described in this CDO, the Regional Water Board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the Regional Water Board in the City's WDRs, Order No. R4-2018-0022. This CDO requires the City to take appropriate remedial action and to comply in accordance with the time schedule set forth below. The compliance schedules provide the City sufficient time to achieve compliance with the chloride requirements in its WDRs.
17. This Order includes interim effluent and groundwater limitations, identified below, and actions and milestones proposed by the City leading to compliance with the effluent and groundwater limitations for chloride. The interim effluent and groundwater limitations are based on gradual reductions in chloride mass loading. The established compliance schedule is as short as possible, taking into account the technological, operation, and economic factors that affect the design, development, and implementation of the remedial actions that are necessary to comply with the effluent and groundwater limitations.
18. A CDO is appropriate in these circumstances to allow time for the City to implement the advanced wastewater treatment system to bring the SPWRF into compliance with the effluent and groundwater limitations. The temporary exceedances allowed by this CDO are in the public interest given the significant environmental benefits associated with reducing chloride loading to groundwater to promptly achieve compliance with the effluent and groundwater limitations, and to allow for potential recycled water use throughout the City of Santa Paula, especially in light of California's historic drought and predictions for future climatological effects from climate change.
19. CWC section 13267 provides in pertinent part:
  - (a) A regional board, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating to any plan or requirement or authorized by this division, may investigate the quality of any waters of the state within its region.
  - (b)(1) In conducting an investigation specified in subdivision (a). the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region ... shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those

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reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

20. The technical and/or monitoring reports required by this CDO are necessary to assure compliance with the WDRs Order No. R4-2018-0022 and this CDO. The City operates the SPWRF that produces and discharges the waste subject to WDRs. The actions and reports required by this CDO are directly related to the City's compliance with these requirements and do not require expense that is not already required pursuant to the WDRs. This CDO provides time for the City to comply and to spread costs over several years. The burden of these actions and reports bears a reasonable relationship to the need for the actions and reports.
21. This CDO concerns an existing facility and does not significantly alter the status with respect to the SPWRF. The issuance of this Order is an enforcement action by a regulatory agency and is being taken for the protection of the environment. Therefore, issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code, Section 21100, et seq.) in accordance with sections 15061(b)(3), 15301, 15306, 15307, 15308, and 15321 (a)(2) of Title 14 of the California Code of Regulations.
22. The Regional Water Board has notified the City and interested agencies and persons of its intent to issue this CDO concerning compliance with the WDRs. The Regional Water Board accepted written comments, and heard and considered all comments and evidence pertaining to this matter in a public hearing.
23. Any person aggrieved by this action of the Regional Water Board may petition the State Water Board to review the action in accordance with California Water Code section 13320 and California Code of Regulations, 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 state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at [Water Quality Petitions | California State Water Resources Control Board \(http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality\)](http://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

**THEREFORE, IT IS HEREBY ORDERED** that, pursuant to California Water Code sections 13301 and 13267, the City of Santa Paula, as owner of the SPWRF, shall comply with the following measures to ensure compliance with Order No. R4-2018-0022:

1. Cease and desist discharging chloride in violation or threatened violation of Order No. R4-2018-0022. No term or condition of Order No. R4-2018-0022 is superseded or stayed by this CDO.

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2. The discharge of treated wastewater from the SPWRF shall not cause an exceedance of the groundwater limitations in Table 3. Comply immediately with the interim effluent and groundwater limitations for chloride prescribed in Table 3 below, and in accordance with the following schedule.

**Table 3. Interim Chloride Limitations**

<b>Effluent Limitation (Monthly Average)<sup>[0]</sup></b>	<b>Mass Reduction</b>	<b>Groundwater Limitation (Monthly Average)</b>	<b>Deadline</b>
2,479 lbs/day <sup>[1]</sup>	0%	136 mg/L <sup>[2]</sup>	February 8, 2018
2,231 lbs/day <sup>[1]</sup>	10%	136 mg/L <sup>[2]</sup>	February 8, 2020
1,983 lbs/day <sup>[1]</sup>	20%	136 mg/L <sup>[2]</sup>	February 8, 2021
1,983 lbs/day <sup>[5][6]</sup>	20%	136 mg/L <sup>[2]</sup>	July 1, 2022
110 mg/L <sup>[3]</sup>	Not applicable	129 mg/L <sup>[4]</sup>	March 30, 2025
110 mg/L <sup>[3]</sup>	Not applicable	114 mg/L <sup>[4]</sup>	February 8, 2027

Table 3 notes:

- [0] Monthly Average except as noted.
- [1] Based on the City's *Chloride Load Reduction Milestones* dated August 8, 2017.
- [2] Based on the 95<sup>th</sup> percentile of chloride effluent concentrations during the implementation of the SRWS Buyback Program from October 2015 to September 2017.
- [3] The concentration-based effluent limitation is based on the groundwater quality objective in the Santa Paula Groundwater Basin-West of Peck Road Subbasin. The deadline considers the date of December 30, 2024 for completion of construction of the reverse osmosis unit and a 90-day optimization period.
- [4] The change in the groundwater concentration is not expected to be immediate.
- [5] Based on paragraph No. 4.D, the City cannot consistently comply with the effluent limitation on a monthly basis due to a lack of flow control measures that would have been in place with the recycled water project.
- [6] Compliance with the effluent limitation is based on a 12-month running average of the monthly average values. For example, to comply with the interim limit of 1,983 lbs/day for July 1, 2022, the average of the 12 monthly average values reported from July 2021 to June 2022 must be no greater than 1,983 lbs/day.

3. Comply with the following remedial actions and milestones according to the time schedule below:
  - A. By **May 1, 2018**, the City shall submit a technical report evaluating the long-term effectiveness of the SRWS Buyback Program for the reduction of chloride concentration in the SPWRF's effluent and the groundwater.

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- B. By **August 1, 2018**, the City shall submit a *Groundwater Chloride Investigation and Well Protection Workplan* (with schedules and milestones) for the Executive Officer's review and approval. The City shall implement this Workplan within 120 days from the Executive Officer's approval. The Workplan shall:
- i. Identify the names/numbers and locations of the groundwater monitoring wells to determine site-specific groundwater flow direction and gradient for the purposes of adequately assessing any impacts of chloride discharges to the quality of the receiving groundwater;
  - ii. Identify all water supply wells that may be influenced by the discharge of chloride from the SPWRF, the well structures, ownership and associated groundwater quality; and
  - iii. Include an approach to ensure that groundwater quality influenced by the discharge of chloride from the SPWRF and delivered from agricultural water supply wells to irrigate salt-sensitive crops be no higher than 117 mg/L. Alternatively, the City may voluntarily provide alternative water supplies to private well owners to irrigate salt-sensitive crops, upon request by the well owners.
- C. By **March 15, 2022**, the City shall submit the final design report for the advanced treatment system at the SPWRF, including brine concentration facility and brine management plan.
- D. By **October 15, 2022**, the City shall complete all necessary regulatory requirements, including compliance with the California Environmental Quality Act (CEQA), and obtain all necessary permits for construction and/or installation of the advanced treatment system.
- E. **Within three months** of receiving the Final Funding Agreement from the Department of Financial Assistance, but no later than **March 30, 2023**, the City shall complete and release a Bid Package for the advanced wastewater treatment system with a reverse osmosis process.
- F. No later than **June 30, 2023**, the City shall complete contractor selection and award the contract for construction of the advanced wastewater treatment system with a reverse osmosis process.
- G. **Within twenty-four months** of receiving the Final Funding Agreement from the Department of Financial Assistance, but no later than **December 30, 2024**, the City shall complete construction and start-up of the advanced wastewater treatment system with a reverse osmosis process.

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- H. As soon as possible, but no later than **February 8, 2028**, the City shall achieve full compliance with the effluent and groundwater limitations for chloride prescribed in Order No. R4-2018-0022.
  - I. After each date listed in subsection A through G above, the City shall provide a verbal report at the next regularly scheduled Board meeting pertaining to the compliance, or lack thereof, with the requirement.
  - J. Subsections F and G, above, do not limit the City's ability to propose a Basin Plan amendment for Regional Water Board consideration prior to November 14, 2024. At any time during the term of this CDO, the City may propose a Basin Plan amendment that the Regional Water Board will consider, including an averaging period and/or a site-specific chloride GQO that protects beneficial uses. As with subsection G, the City shall include supporting scientific and technical information and analysis demonstrating that beneficial uses would be protected, as well as documentation that such a proposal was discussed in detail by a stakeholder working group.
4. Submit quarterly progress reports on the status of the City's compliance with the effluent and groundwater limitations for chloride in Order No. R4-2018-0022 and this CDO.
- A. Each quarterly progress report shall include, but is not limited to:
    - i. Continuous SRWS Buyback Program Assessment - The City shall report its progress on the SRWS Buyback Program and evaluate whether the Program is resulting in chloride reductions in the effluent and groundwater.
    - ii. Groundwater and Well Protection Program - The City shall report its progress on implementing the Groundwater Chloride Investigation and Well Protection Workplan, including the actions taken to protect water supply wells influenced by the discharge of chloride from the SPWRF.
    - iii. Alternative Effluent Chloride Mitigation Implementation - The City shall provide the progress of implementing the alternative effluent chloride mitigation workplan and evaluate the compliance with the schedule and milestones set forth in the CDO and WDRs.
  - B. Quarterly progress 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 4 below. The first report is due by April 30, 2018.

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**Table 4. Reporting Period and Due**

Quarterly Report	Reporting Period	Report Due
First Quarter	January – March	April 30
Second Quarter	April – June	July 30
Third Quarter	July – September	October 30
Fourth Quarter	October – December	January 30
Annual	January – December	April 30

Table 4 notes if a deadline falls on a Saturday, Sunday, or State holiday, the report must be received by the next business day.

- Any person signing a document submitted under this CDO shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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 fine and imprisonment for knowing violations."

- In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the City shall contain the professional's signature and/or stamp of the seal.
- The City shall submit all reports required under this CDO, including groundwater monitoring data in Electronic Data Format, well and discharge location data, and searchable Portable Document Format (PDF) of reports and correspondence, to the State Water Board's GeoTracker database under Global ID WDR100000849.
- If the City fails to comply with any provision of this CDO, the Regional Water Board may take any further action authorized by law. The Executive Officer, or his/her delegee, may take appropriate administrative enforcement action pursuant, but not limited to, California Water Code sections 13268 and/or 13350. The Regional Water

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Board may also refer any violations to the Attorney General for judicial enforcement, including injunction and civil monetary remedies.

9. This CDO may be reopened at the Regional Water Board's discretion to consider limits or other requirements for the SPWRF and may specifically be reopened to make revisions consistent with the City's efforts to reduce chloride discharge from the SPWRF.
10. This Order becomes effective immediately upon issuance.

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 May 12, 2022.

Renee Purdy  
Executive Officer

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