

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN DIEGO REGION**

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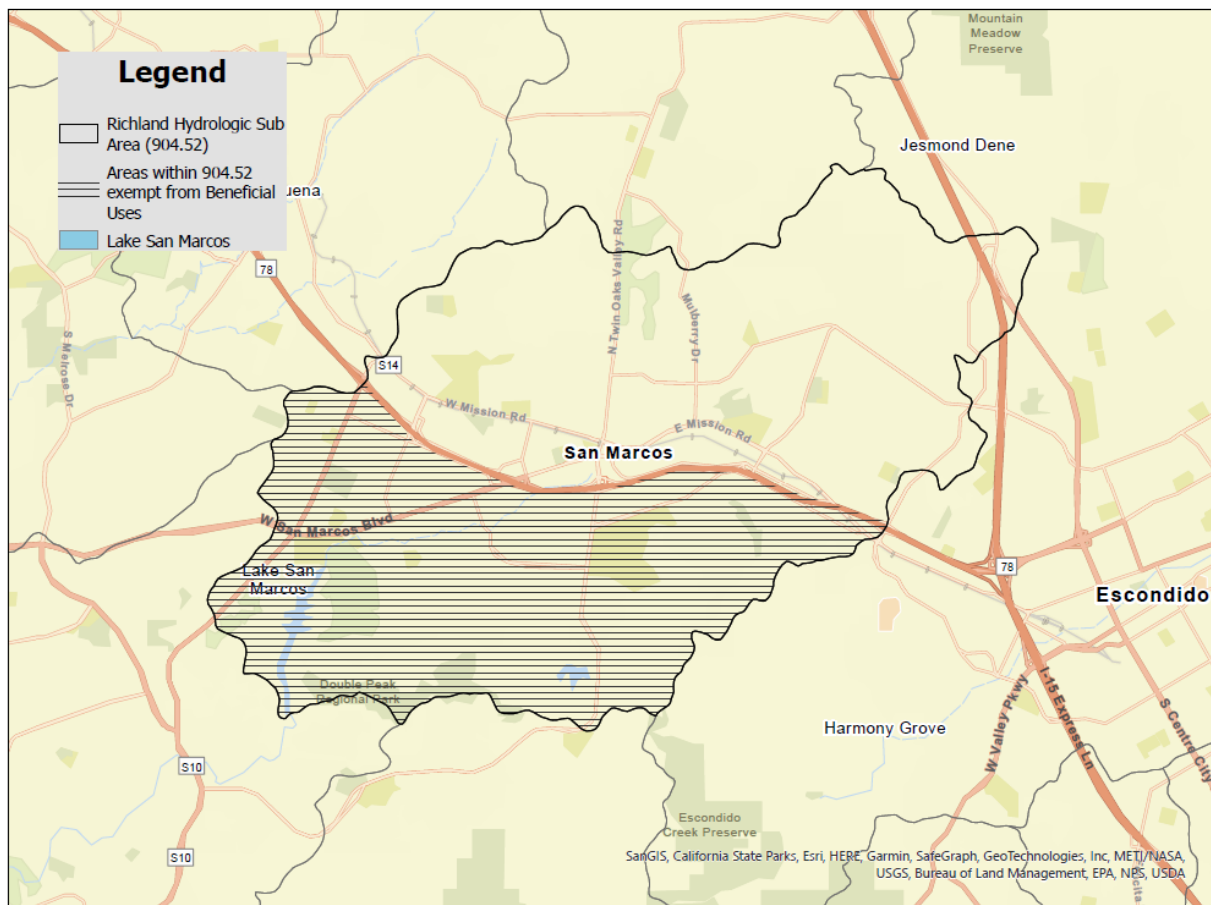
**TENTATIVE TIME SCHEDULE ORDER R9-2024-0110
REQUIRING
CITIZENS DEVELOPMENT CORPORATION
TO COMPLY WITH REQUIREMENTS IN
ORDER R9-2015-0013, NPDES PERMIT CAG919003
FOR GROUNDWATER EXTRACTION DISCHARGES TO LAKE SAN MARCOS**

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

Overview and Regulatory Background

1. Lake San Marcos (Lake) is a privately-owned impoundment owned by Citizen Development Corporation (CDC or Discharger) and is located within San Marcos Creek, a water of the United States and State of California (State).
2. The Lake spans approximately 56 acres and located in the southwest corner of the Richland hydrologic subarea (HSA) (Hydrologic Unit Basin Number 904.52). The lake was formed by damming San Marcos Creek in 1946 to impound water as an agricultural supply. San Marcos Creek, a principal tributary to the Lake, is located upstream of the Lake in both the Richland HSA and the Twin Oaks HSA (Hydrologic Unit Basin Numbers 904.52 and 904.53, respectively). The Lake is located in the north central unincorporated area of San Diego County, just outside the southwestern limits of the City of San Marcos. The headwaters of San Marcos Creek begin in San Diego County and the City of Escondido and travels through the City of San Marcos before flowing into the northern end of the Lake.
3. In 1962, the dam elevation was raised. Five coves and an upper basin were added as shoreline features to the Lake. Over subsequent decades, the area around the Lake was developed to include a variety of uses, including a residential community around the Lake.
4. The *Water Quality Control Plan for the San Diego Basin* (Basin Plan) designates the following beneficial uses for San Marcos Creek and the Lake: agricultural supply, contact water recreation, non-contact water recreation, warm freshwater habitat, and wildlife habitat. The Basin Plan does not designate beneficial uses for groundwater within the Richland HSA when located between the western end of the Lake and Highway 78.

Figure 1: Groundwater without Designated Beneficial Uses in the Richland Hydrologic Subarea 904.52



Known or Suspected Sources of Impairment of the Lake

5. The Lake is listed as impaired for copper, ammonia (as nitrogen), nutrients, and phosphorus pursuant to Clean Water Act section 303(d). San Marcos Creek, downstream of the dam, is listed for sediment toxicity, selenium, DDE, phosphorus, indicator bacteria, and benthic community effects.
6. The Lake is a eutrophic water body with high concentrations of nutrients in the sediment and water column. During the dry season, the dissolved oxygen concentration in the deep Lake decreases during the late spring, summer, and early fall months as a result of thermal stratification. The stratification typically breaks down during short-term events (e.g., an early storm that promoted mixing over the course of a few days) that brings anoxic, nutrient-rich water from the bottom of the Lake to the surface, which can cause fish kills, algae blooms, and nuisance odors. Documented conditions also include the presence of cyanobacteria and cyanotoxins.

7. The Lake receives discharges of waste from urban and suburban areas, private golf courses, agricultural land uses, and open space. Direct and indirect discharges of pollutants to the Lake occur from natural sources and anthropogenic activities, such as, improper waste disposal; poor or unmanaged landscaping practices from commercial, recreational, and residential sites; sanitary sewer overflows; septic system failures; groundwater infiltration; and other non-point source discharges during storm events and dry weather conditions. In addition, because groundwater flows help to maintain Lake levels through much of the year, pollutant transport via surfacing groundwater may also be a significant contributor to the Lake's impairment.
8. The Lake's dam serves as a sediment trap, reducing sediment loading to downstream reaches of the watershed. In addition to trapping sediment behind the dam, particulate forms of nutrients are retained in the Lake sediment. This trapping of nutrient enriched sediment can lead to long-term biogeochemical recycling of nutrients from the sediment to the Lake water column. Bottom sediments were estimated to contribute 31.50, 29.90, and 32.59 percent of the total internal phosphorous loading during the 2012, 2013, and 2014 dry seasons, respectively.

Nutrient Remediation in the Lake

9. On September 20, 2011, the San Diego Water Board issued Investigative Order R9-2011-0033 (IO) directing the Discharger to investigate the causes and extent of nutrient impairment in the Lake.
10. The water quality data and watershed/lake models generated in response to the IO was used to develop a Remedial Investigation/Feasibility Study (RI/FS). The RI/FS identified winter stormwater inputs from the Lake's watershed and internal cycling of nutrients within the Lake as sources of nutrients that were impairing the water quality.
11. The RI/FS also identified remedies to implement in the Lake and watershed to reduce nutrient loading to the Lake and to improve the water quality in the Lake. Three remedies were selected to improve water quality directly in the Lake:
 - Aeration system to prevent stratification (diffused aeration),
 - Flocculation/settling (phosphorus inactivation), and
 - Selective withdrawal

Diffused aeration will help increase mixing in the deep lake and prevent seasonal thermal stratification. The phosphorus inactivation will involve applying aluminum sulfate (alum) or other treatments (e.g., lanthanum-modified clay such as Phoslock) to the Lake to flocculate and settle total phosphorus in the water column and to inactivate mobile phosphorus within surficial sediments. Selective withdrawal involves the removal of water from a specific depth or region of the Lake. Other remedies were proposed in the RI/FS to reduce nutrient loading from the watershed. Among these watershed remedies, a combination of stream restoration and phosphorus inactivation using aluminum chlorohydrate (ACH) was proposed. ACH was proposed to be applied to San Marcos Creek upstream of the

Lake to reduce total phosphorus concentrations in San Marcos Creek prior to its waters entering the Lake.

Groundwater Discharges to the Lake

- 12. Two groundwater extraction wells currently exist near the Lake: the Executive Golf Course Well (EGC Well) owned by Symphony Asset Pool XXI, LLC, and the St. Mark Golf Course Well (SMGC Well) owned LSM Golf Course Partners, LLC (collectively referred to as the Existing Wells).
- 13. CDC proposes to construct and maintain ownership of two additional groundwater extraction wells along the southwestern shoreline of the Lake.

Table 1: Well Ownership and GPS coordinates

Well	Owner	Latitude	Longitude
Executive Gold Course Well	Symphony Asset Pool XXI, LLC	33.128868° N	117.203294° W
St. Mark Gold Course Well	LSM Gold Course Partners, LLC	33.121677° N	117.215759° W
New Well #1	CDC	33.115088° N	117.210675° W
New Well #2	CDC	33.116938° N	117.209869° W

- 14. The Existing Wells are currently used to maintain water levels in the Lake during the dry season on an as-needed basis. The need is based on timings of the first and last storms of the wet season, magnitude of storm precipitation, and watershed hydrology, all of which vary from year-to-year. The SMGC Well is the primary groundwater source used to maintain water levels in the Lake, while the EGC Well is primarily used to irrigate the Executive Golf Course. The EGC Well is also periodically used to supplement the SMGC Well for Lake replenishment. Once the two new wells are completed, the two new wells will serve as the primary sources of groundwater to maintain water levels in the Lake during the dry season. The Existing Wells will remain in place and serve as backup sources of groundwater to the Lake as needed. Discharge from the two new wells to the Lake may occur annually between April 1 to November 30, with an expected maximum daily discharge rate of 2.5 million gallons per day (MGD) cumulatively between all the wells.
- 15. The groundwater from the two new wells will be discharged to the Lake as part of the selective withdrawal remedial action described in Finding 11 to improve the Lake's water quality, pending approval of the remedy by the San Diego Water Board Site Cleanup Program staff. This remedial action includes the discharge of groundwater to the deeper part of the Lake to maintain a consistent Lake level during the dry season when irrigation demand is highest.

Regulatory Coverage for the Groundwater Discharges to the Lake

16. The Discharger currently discharges untreated, extracted groundwater from the Existing Wells to the Lake.
17. On May 24, 2021, the Discharger submitted a complete Notice of Intent application package to enroll in Order R9-2015-0013, National Pollutant Discharge Elimination System (NPDES) Permit CAG919003, *General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region* (Order). The Order was adopted by the San Diego Water Board on June 24, 2015.
18. The Order expired on September 30, 2020, but the terms and conditions of the Order remain in effect pending the reissuance of the Order, provided that all requirements of United States Environmental Protection Agency's NPDES regulations at 40 Code of Federal Regulations section 122.6 and the State's regulations at California Code of Regulations, title 23, section 2235.4 regarding the continuation of expired NPDES permits and waste discharge requirements are met.
19. The Order establishes effluent limitations for 17 general constituents, 126 priority pollutants, and 9 other volatile, metal, or combination constituents.
20. The Order requires a reasonable potential analysis (RPA) to determine the effluent limitations for the discharge. Attachment C-1, Step 1 of the Order requires the RPA to be based on the maximum pollutant concentration in the groundwater sample(s).
21. The Discharger conducted water quality monitoring of the groundwater from the Existing Wells on July 8, 2019, August 22, 2019, and August 23, 2019, to conduct the RPA described in Finding 20.
22. The Discharger did not conduct water quality monitoring of the groundwater from each of the two new wells. However, the Discharger anticipates the water quality characterized from the two new wells will be similar to that of the Existing Wells; given that the two new wells will be drilled to the same formation that the Existing Wells are drilled which is the Mesozoic metasedimentary and metavolcanic bedrock. The Discharger will confirm the quality of the groundwater once construction of the two new wells begins as consistent with the second task of Table 6 in Compliance Schedule section 2.1.

Parameters with Effluent Limitations in the Order

23. Table 2 describes the reported maximum observed concentrations for parameters that exceeded the RPA trigger value in Attachment C-1, Table D of the Order.

**Table 2: Maximum Observed Concentration of Pollutants
 from the Existing Wells**

Parameter	Units	RPA Trigger Value	Executive Golf Course Well	St. Mark Golf Course Well
Iron, Total Recoverable	milligrams per liter (mg/L)	0.300	0.410	0.910
Manganese, Total Recoverable	mg/L	0.0500	0.110	1.00
Selenium, Total Recoverable	micrograms per liter (µg/L)	5.00	5.50	6.70
Total Nitrogen	mg/L	1.00	1.26	1.50
Total Phosphorus	mg/L	0.100	0.240	0.560

24. The Discharger is unable to comply with the effluent limitations specified in Table 6 of the Order for total recoverable iron, total recoverable manganese, total recoverable selenium, total nitrogen, and total phosphorus.

Total Nitrogen and Total Phosphorus

25. Although the Order specifies effluent limitations for total nitrogen and total phosphorus of 1.0 mg/L and 0.1 mg/L, respectively, the Basin Plan establishes a numeric WQO for phosphorus of 0.025 mg/L for standing bodies of water, which includes the Lake as the receiving water body. The numeric WQO for phosphorus is not to be exceeded more than ten percent of the time unless studies of the specific water body clearly show that WQO changes are permissible, and the changes are approved by the San Diego Water Board. Analogous threshold values have not been set for total nitrogen; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of nitrogen to phosphorus of 10:1, on a weight-to-weight basis shall be used. In the absence of information on the natural ratios for the Lake, the receiving water WQO for total nitrogen is 0.25 mg/L. Based upon the preceding findings, namely the discharge of groundwater as discussed in Findings 12 through 14 above, the discharge has a reasonable potential to contribute to an in-stream excursion above the Basin Plan WQOs for total nitrogen and total phosphorus. Excursions above the Basin Plan WQOs would be in violation of the Discharge Prohibition in section IV.G of the Order and may result in a violation of the Receiving Water Limitation in section VI.B.3.c of the Order.

Discharge Prohibitions

25.1. Section IV.G of the Order requires the discharge of extracted groundwater to comply with Discharge Prohibitions contained in the Basin Plan.

25.1.1. The Basin Plan prohibits the discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving WQOs.

Receiving Water Limitations

25.2. Section VI.B.3.c of the Order requires that waters not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses.

Groundwater Monitoring Results

25.3. Based on the groundwater monitoring of the Existing Wells described in Finding 21, the reported maximum concentrations of total nitrogen and total phosphorus from the Existing Wells are described in Table 3 below.

Table 3: Maximum Observed Concentration of Total Nitrogen and Total Phosphorus from the Existing Wells

Parameter	Units	Basin Plan Surface Water Quality Objective	Executive Golf Course Well	St. Mark Golf Course Well
Total Nitrogen	mg/L	0.250	1.26	1.50
Total Phosphorus	mg/L	0.0250	0.240	0.560

Receiving Water

25.4. As described in Finding 5, the Lake is listed as impaired for phosphorus and nutrients pursuant to Clean Water Act section 303(d). The Lake has limited, if any, assimilative capacity for additional total nitrogen and total phosphorus loading.

Compliance

25.5. The Discharger is unable to consistently comply with the Basin Plan WQOs for total nitrogen and total phosphorus and may violate the receiving water limitation for biostimulatory substances.

Minerals

26. Although the Order neither specifies effluent limitations nor requires monitoring of the discharge for total dissolved solids (TDS), sulfate, and chloride (collectively, Minerals), based upon the following facts, the discharge of groundwater, as discussed in Findings 12 through 14 above, has a reasonable potential to contribute to an in-stream excursion above the Basin Plan WQOs for TDS, sulfate, and chloride. In-stream excursions caused by the discharge would be a violation of the Discharge Prohibition in section IV.G of the Order and the Receiving Water Limitation in section VI.B.3.g of the Order.

Basin Plan

- 26.1. The Basin Plan states that inland surface waters shall not contain TDS in concentrations in excess of the numerical objectives described in Table 3-9. Table 3-9 of the Basin Plan contains a numerical objective for TDS of 500 mg/L applicable to the waters of San Marcos Creek, which includes the Lake. Concentrations are not to be exceeded more than ten percent of the time during any one-year period.
- 26.2. The Basin Plan states that inland surface waters shall not contain sulfate in concentrations in excess of the numerical objectives described in Table 3-9. Table 3-9 of the Basin Plan contains a numerical objective for sulfate of 250 mg/L for San Marcos Creek, which includes the Lake. Concentrations are not to be exceeded more than ten percent of the time during any one-year period.
- 26.3. The Basin Plan states that inland surface waters shall not contain chlorides in concentrations in excess of the numerical objectives described in Table 3-9. Table 3-9 of the Basin Plan contains a numerical objective for chloride of 250 mg/L for San Marcos Creek, which includes the Lake. Concentrations are not to be exceeded more than ten percent of the time during any one-year period.

Receiving Water Limitations

- 26.4. Section VI.A of the Order requires that the discharge of waste not cause violations of WQOs, federal pollutant criteria or other provisions applicable to the authorized receiving water as contained in the State water quality control plans and policies and federal regulations.
- 26.5. Section VI.B.3.g of the Order requires that the discharge of waste to inland surface waters shall not contribute to concentrations in excess of the mineral objectives specified in Table 3-2 of the Basin Plan.¹

Discharge Prohibitions

- 26.6. Section IV.G of the Order requires that the discharge of extracted groundwater comply with Discharge Prohibitions contained in the Basin Plan.
- 26.6.1 The Basin Plan prohibits the discharge of waste to inland surface waters, except in cases where the quality of the discharge complies with applicable receiving WQOs.

Groundwater Monitoring Results

- 26.7. Based on the groundwater monitoring of the Existing Wells described in Finding 21, the reported maximum concentrations of TDS, sulfate, and chloride are described in Table 4 below.

¹ Table 3-2 of the Basin Plan was changed to Table 3-9 pursuant to the Basin Plan amendments effective on or before September 1, 2021.

Table 4: Maximum Observed Concentration of Minerals from the Existing Wells

Parameter	Units	Surface Water Quality Objective	Executive Golf Course Well	St. Mark Golf Course Well
TDS	mg/L	500	1,400	1,700
Sulfate	mg/L	250	250	340
Chloride	mg/L	250	420	460

Receiving Water

26.8. The Lake may have limited, if any, assimilative capacity for additional TDS, sulfate, and chloride loading.

Compliance

26.9. The Discharger is unable to consistently comply with the WQOs in the Basin Plan for TDS, chloride, and sulfate.

Tentative Time Schedule Order

27. The purpose of this Tentative Time Schedule Order (Tentative TSO) is to provide the Discharger additional time to attain compliance with the Order and its reissuance, including compliance of the discharge from the Existing Wells and the two new wells with effluent limitations, receiving water limitations, and discharge prohibitions.

27.1. The Discharger needs additional time to investigate, develop, and implement control measures for the Existing Wells and the two new wells for total nitrogen and total phosphorus capable of complying with the Basin Plan WQOs and effluent limitations in the Order and its reissuance.

27.2. The Discharger requested additional time to assess development of site-specific WQOs for total phosphorus, total nitrogen, TDS, chloride, sulfate, total recoverable iron, total recoverable manganese, and total recoverable selenium for the Lake. Any site-specific WQOs will require a Basin Plan amendment and must be adopted by the San Diego Water Board at a public hearing. The Discharger needs additional time to conduct site-specific studies and propose the site-specific WQOs for the San Diego Water Board's independent consideration.

27.2.1. In the event the San Diego Water Board does not approve the site-specific WQOs, the Discharger will need additional time to investigate, develop, and implement control measures for the discharges from the Existing Wells and the two new wells capable of complying with the existing Basin Plan WQOs and existing effluent limitations in the Order and its reissuance.

27.2.2. In the event the San Diego Water Board approves the site-specific WQOs but the Discharger cannot comply with the site-specific WQOs, the Discharger needs additional time to investigate, develop, and implement

control measures for the discharges from the Existing Wells and the two new wells capable of complying with the site-specific WQOs and revised effluent limits.

28. The compliance schedule in this Tentative TSO includes the following:

- 28.1. Based on site-specific studies of the Lake, the Discharger may propose site-specific WQOs for total phosphorus, total nitrogen, TDS, chloride, sulfate, total recoverable iron, total recoverable manganese, and total recoverable selenium for the Lake. Based on the anticipated well operations schedule (dry season of April 1 through November 30, see Finding 14), the Discharger may propose season-specific WQOs to attain and maintain beneficial uses.
 - 28.2. The Discharger will develop a schedule for implementing control measures for the discharges from the Existing Wells and the two new wells capable of achieving compliance with the existing Basin Plan WQOs and the existing effluent limitations in the Order or its reissuance in the event the San Diego Water Board does not adopt the site-specific WQOs for the Lake.
 - 28.3. The Discharger will develop a schedule for implementing control measures for the discharges from the Existing Wells and the two new wells capable of achieving compliance with the revised effluent limitations or site-specific WQOs in the event the Existing Wells and the two new wells will be incapable of immediately complying with any revised effluent limitations or proposed site-specific WQOs in the event the San Diego Water Board adopts of site-specific WQOs for the Lake.
29. The compliance schedule in this Order includes interim average monthly effluent limitations (AMELs) for TDS, chloride, sulfate, total recoverable iron, total recoverable manganese, total recoverable selenium, total nitrogen, and total phosphorus. The interim AMELs for the Existing Wells are based on the maximum observed concentration found in the groundwater for samples collected on July 8, 2019, August 22, 2019, and August 23, 2019. Mass-based AMELs for the Existing Wells are based on an expected discharge rate of 2.5 MGD. Groundwater samples have not been collected for the two new wells. The Discharger anticipates the two new wells will have the same or similar water quality as the Existing Wells because the two new wells will be drilled to the same formation as the Existing Wells. Based on this assumption, interim AMELs for the two new wells are calculated from the samples collected for the Existing Wells to estimate maximum concentrations. The interim AMELs for the two new wells are estimated by adding the product of the standard deviation of the Existing Well samples multiplied by 3.3 to the mean of the Existing Well samples; this was done separately for each constituent subject to an AMEL for the two new wells. Assuming the samples from the Existing Wells are normally distributed and are representative of the two new wells, 99.9 percent of all the expected values from the two new wells should lie within the calculated AMEL and be representative as the maximum concentrations in the two new wells. Mass-based AMELs for the two new wells are based on the expected maximum discharge rate of 2.5 MGD.

LEGAL BASIS

30. This Tentative TSO is issued in accordance with California Water Code (Water Code) section 13300, which states: “Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.”
31. The Discharger may not consistently achieve compliance with the effluent limitations in the Order for total recoverable iron, total recoverable manganese, total recoverable selenium, total nitrogen, and total phosphorus. Additionally, the Discharger may cause or contribute to an exceedance of the Basin Plan WQOs for sulfate, TDS, chloride, total nitrogen, and total phosphorus. Accordingly, pursuant to Water Code section 13300, a discharge of waste threatens to take place that would violate requirements in the Order prescribed by the San Diego Water Board.
32. Water Code section 13385, subdivisions (h) and (i), require the San Diego Water Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. Section 13385(j)(3) exempts violations of an effluent limitation from mandatory minimum penalties where the waste discharge is in compliance with a time schedule order issued pursuant to section 13300 or 13308, if all of the specified requirements are met. In accordance with Water Code section 13385(j)(3)(B), mandatory minimum penalties do not apply to a violation of an effluent limitation where: a) The waste discharge is in compliance with a TSO issued pursuant to Section 13300 or 13308; b) The discharger is not able to consistently comply with the effluent limitation because it is a new, more stringent limitation that became applicable after adoption of the prior permit; new or modified control measures are necessary in order to comply with the effluent limitation; and c) The new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.
33. The effluent limitations for total recoverable iron, total recoverable manganese, total recoverable selenium, total nitrogen, and total phosphorus in the Order are new, more stringent, or modified regulatory requirements that have become applicable to the waste discharge requirements. It is necessary for the Discharger to implement new or modified control measures to comply with the new, more stringent, or modified regulatory requirements. These control measures cannot be designed, installed, and put into operation within 30 calendar days.
34. Pursuant to Water Code section 13385(j)(3)(C), a Tentative TSO for bringing the waste discharge into compliance with the effluent limitation must be as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures

that are necessary to comply with the effluent limitation. The time schedule shall not exceed five years in length.

35. This Tentative TSO includes interim requirements and the dates for their achievement. The interim requirements include interim effluent limitations for total recoverable iron, total recoverable manganese, total recoverable selenium, total nitrogen, total phosphorus, sulfate, TDS, and chloride, as well as actions and milestones leading to compliance with the final effluent limitations and WQOs for these pollutants. Consistent with the requirements of Water Code sections 13385(j)(3)(C)(i), this Tentative TSO has established a final compliance date that is as short as possible and does not exceed five years.
36. This Order is consistent with State Water Board Resolution Nos. 92-49 and 68-16. This Tentative TSO will not cause further degradation of the environment. The groundwater discharge from the Existing Wells currently does not meet the standards for TDS, chloride, sulfate, total recoverable iron, total recoverable manganese, total recoverable selenium, total nitrogen, and total phosphorus, and the two new wells may also not meet these standards. The Tentative TSO will provide the Discharger with additional time to either develop site-specific WQOs or develop a treatment system or alternative measures capable of achieving compliance with the effluent limitations in the Order and the Basin Plan WQOs.
37. Issuance of this Tentative TSO is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, section 21000 et seq.; CEQA) pursuant to Water Code section 13389, since the adoption or modification of a NPDES permit for an existing source is statutorily exempt and this Order only serves to implement a NPDES permit. (*Pacific Water Conditioning Ass'n, Inc. v. City Council of City of Riverside* (1977) 73 Cal.App.3d 546, 555-556.) Issuance of this Order is also exempt from CEQA pursuant to California Code of Regulations, title 14, section 15321, since adoption of this Tentative TSO is an enforcement action by the San Diego Water Board.
38. The San Diego Water Board notified the Discharger and interested agencies and persons of its intent to issue this Tentative TSO concerning compliance with WDRs and provided them with an opportunity to submit their written comments and recommendations pursuant to Water Code Section 13167.5.
39. The San Diego Water Board, in a public meeting, heard and considered all comments on this matter.

THEREFORE IT IS HEREBY ORDERED that, pursuant to the Water Code sections 13300, 13383, and 13385(j)(3), in order to meet the effluent limitations for total recoverable iron, total recoverable manganese, total recoverable selenium, total nitrogen, and total phosphorus in Order R9-2015-0013, NPDES Permit CAG919003, or its reissuance, and to ensure that the discharge does not cause or contribute to an in-stream excursion above the Basin Plan WQOs for TDS, sulfate, chloride, total nitrogen, and total phosphorus, the Discharger shall comply with the requirements, directives, and provisions of this Tentative TSO.

1. **Interim Effluent Limitations**

1.1. The Discharger shall comply with the interim effluent limitations contained in Table 5 below for Existing Wells and the two new wells on the effective date of this Tentative TSO.

Table 5. Interim Average Monthly Effluent Limitations

Parameter	Units	Executive Golf Course Well	St. Mark Golf Course Well	New Well #1	New Well #2
TDS	mg/L	1,400	1,700	1,970	1,970
TDS ^[1]	Pounds per day (lbs/day)	29,200	35,400	41,000	41,000
Chloride	mg/L	420	460	495	495
Chloride ^[1]	lbs/day	8,760	9,590	10,320	10,320
Sulfate	mg/L	350	340	360	360
Sulfate ^[1]	lbs/day	7,300	7,090	7,530	7,530
Iron, Total Recoverable	mg/L	0.410	0.910	1.10	1.10
Iron, Total Recoverable ^[1]	lbs/day	8.55	19.0	22.9	22.9
Manganese, Total Recoverable	mg/L	0.110	1.00	1.10	1.10
Manganese, Total Recoverable ^[1]	lbs/day	2.29	20.9	22.9	22.9
Selenium, Total Recoverable	ug/L	5.50	6.70	8.10	8.10
Selenium, Total Recoverable ^[1]	lbs/day	0.110	0.140	0.170	0.170
Total Nitrogen	mg/L	1.26	1.50	2.40	2.40
Total Nitrogen ^[1]	lbs/day	26.3	31.3	50.0	50.0
Total Phosphorus	mg/L	0.240	0.560	0.700	0.700
Total Phosphorus ^[1]	lbs/day	5.00	11.7	14.6	14.6

^[1] The mass-based effluent limitations expressed as lbs/day in Table 5 are calculated as follows:

Parameter Concentration (if expressed as mg/L) x Flow Limit (expressed as MGD) x 8.34 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day.

OR

Parameter Concentration (if expressed as ug/L) x Flow Limit (expressed as MGD) x 0.00834 (conversion factor) = Mass-based Effluent Limitation expressed as lbs/day
 The Flow Limit value used in this equation is the Discharger's Maximum allowable flow rate (2.5 MGD) as specific in the NOA. The discharge shall not exceed the calculated mass-based effluent.

- 1.2. If the Discharger is unable to comply with the interim effluent limitations, the Discharger shall develop, implement, and submit to the San Diego Water Board, a Pollution Prevention Plan (PPP) pursuant to Water Code section 13263.3 for the noncompliant parameters by March 10, 2025. The PPP shall include the following:
 - 1.2.1. An analysis of the pollutants discharged into the Lake, a description of the sources of the pollutants, and a comprehensive review of the processes used by the Discharger that result in the discharge of the pollutants.
 - 1.2.2. An analysis of the potential for pollution prevention to reduce the discharge of pollutants, including the application of innovative and alternative technologies and any adverse environmental impacts resulting from the use of those methods.
 - 1.2.3. A detailed description of the tasks and time schedules required to investigate and implement various elements of pollution prevention techniques.
 - 1.2.4. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action.
 - 1.2.5. A description of the existing pollution prevention methods.
 - 1.2.6. A statement that the existing and planned pollution prevention strategies do not constitute cross media pollution transfers unless clear environmental benefits of such an approach are identified, and information that supports this statement.
 - 1.2.7. An analysis, to the extent feasible, of the relative costs and benefits of the possible pollution prevention activities.
 - 1.2.8. A specification of, and rationale for, the technically feasible and economically practicable pollution prevention measures selected by the discharger for implementation.

2. **Compliance Schedule**

- 2.1. The Discharger shall complete all compliance tasks in Table 6 no later than the specified dates.

Table 6. Time Schedule

Task	Compliance Date
<p>Submit a work plan that outlines the specific steps the Discharger will take to develop proposed site-specific WQOs for the Lake. The parameters for which the Discharger may develop site specific WQOs are total phosphorus, total nitrogen, TDS, chloride, sulfate, total recoverable iron, total recoverable manganese, and total recoverable selenium. The work plan shall be submitted to the San Diego Water Board’s Executive Officer for concurrence and implemented as directed by the Executive Officer.</p>	<p>3 MONTHS FROM EFFECTIVE DATE</p>
<p>Submit a work plan for conducting groundwater monitoring at areas and depths representative of the source water for two new wells. The work plan shall include a quality assurance project plan, a description of the sampling parameters and procedures, the location of the test wells, and a schedule for conducting the monitoring and submission of the monitoring results. At minimum, the Discharger shall monitor for TDS, sulfate, chloride, and the parameters listed in Table B and D in Attachment C-1 of Order R9-2015-0013. The work plan shall be submitted to the San Diego Water Board’s Executive Officer for concurrence and implemented as directed by the Executive Officer.</p>	<p>3 MONTHS FROM EFFECTIVE DATE</p>
<p>Submit an updated Notice of Intent to enroll in the Order. The updated Notice of Intent shall include a reasonable potential analysis for the two new wells consistent with Attachment C of Order R9-2015-0013 and a refined feasibility analysis for the selection of control measures to ensure compliance with the Order or its reissuance and Basin Plan WQOs for total nitrogen and total phosphorus. The updated Notice of Intent shall also include a refined feasibility analysis for the selection of control measures to ensure compliance with the Order or its reissuance for total phosphorus, total nitrogen, TDS, chloride, sulfate, total recoverable iron, total recoverable manganese, and total recoverable selenium as an assurance if the San Diego Water Board does not adopt the site-specific WQOs for the Lake.</p>	<p>14 MONTHS FROM EFFECTIVE DATE</p>

Task	Compliance Date
Submit a technical report that outlines the proposed site-specific WQOs for the Lake and the evidence to support that the site-specific WQO will not cause or contribute to water quality impairments in the Lake.	30 MONTHS FROM EFFECTIVE DATE
Complete preliminary design of an appropriate treatment system or develop alternative measures to ensure compliance with the Order for all parameters that have reasonable potential to exceed effluent limitations or WQOs and do not have an approved site-specific WQO, or parameters that have approved site-specific WQOs but the two new wells and Existing Wells will not be able to comply with the site-specific WQOs.	36 MONTHS FROM EFFECTIVE DATE
Complete final design of the treatment system or alternative measures and, if applicable, select a contractor for construction of treatment system.	40 MONTHS FROM EFFECTIVE DATE
Begin construction of selected treatment options or implementation of alternative measures.	42 MONTHS FROM EFFECTIVE DATE
Complete construction or implementation of alternative measures.	59 MONTHS FROM EFFECTIVE DATE
Achieve full compliance with the Order or its reissuance.	60 MONTHS FROM EFFECTIVE DATE

3. Provisions

- 3.1. All technical and monitoring reports required by this Tentative TSO are in accordance with Water Code section 13383. The San Diego Water Board needs this information to determine compliance with the Tentative TSO and the Order or its reissuance and for the protection of water quality, beneficial uses, and human health. The Discharger is already subject to similar reporting requirements pursuant to the Order. Therefore, the burdens, including costs, of these reports bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. Based on information provided by the Discharger, the San Diego Water Board estimates the cost to comply with the monitoring and reporting requirements of this Tentative TSO will be between \$290,000 and \$348,000.
- 3.2. The Discharger shall provide documentation that plans and reports required under this Tentative TSO are prepared under the direction of appropriately qualified professionals. California Business and Professions Code sections 6735, 7835 and 7835.1 require that engineering and geologic evaluations and judgments be performed by or under the direction of registered professionals. A

statement of qualifications and registration numbers of the responsible lead professionals shall be included in all plans and reports submitted by the Discharger. The lead professional shall sign and affix their registration stamp to the report, plan or document.

- 3.3. Any person signing a document submitted under this Tentative TSO 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.”

- 3.4. If the Discharger fails to comply with any requirement of this Tentative TSO, the San Diego Water Board may take any further action authorized by law. The Executive Officer, or his/her delegee, is authorized to take appropriate enforcement action pursuant, but not limited to, Water Code sections 13350 and 13385. The San Diego Water Board may also refer any violations to the Attorney General for judicial enforcement, including injunction and civil monetary remedies.
- 3.5. The San Diego Water Board may reopen this Tentative TSO at its discretion or at the request of the Discharger, if warranted. Lack of progress towards compliance with this Tentative TSO may be cause for the San Diego Water Board to modify the conditions of or terminate this Tentative TSO.
- 3.6. Except as modified or superseded by this Tentative TSO requirements and provisions set forth below, all of the findings, prohibitions, provisions, and other requirements of the Order remain in full force and effect.

4. This Tentative TSO becomes effective on EFFECTIVE DATE and expires 60 MONTHS FROM EFFECTIVE DATE.

I, David W. Gibson, 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, San Diego Region, on EFFECTIVE DATE.

David W. Gibson, Executive Officer