Water Replenishment District

REGIONAL GROUNDWATER MONITORING REPORT WATER YEAR 2021-2022

Central and West Coast Basins
Los Angeles County, California

March 2023

WRD
WATER REPLENISHMENT DISTRICT

Water Replenishment District

REGIONAL GROUNDWATER MONITORING REPORT
CENTRAL BASIN AND WEST COAST BASIN
LOS ANGELES COUNTY, CALIFORNIA
WATER YEAR 2021 - 2022

MARCH 2023

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View north toward the snow-capped San Gabriel Mountains showing a portion of the Rio Hondo spreading grounds in Pico Rivera, California. The Rio Hondo Channel flows from the top of the photo past holding basins that are nearly full with water captured from the series of Atmospheric River storms that rolled across Southern California in mid-January 2023. Photo taken January 18, 2023.

Executive Summary

The Water Replenishment District (WRD or the District) was formed in 1959 to manage the groundwater replenishment and groundwater quality activities for four million people in 43 cities that overlie the Central Basin and West Coast Basin (CBWCB) in southern Los Angeles County. WRD's service area encompasses most of the Central Basin and nearly all of the West Coast Basin. These two basins currently supply over 40 percent of the water used by the population in the region. Our mission is to provide, protect, and preserve high-quality groundwater through innovative, cost-effective and environmentally sensitive basin management practices for the benefit of residents and businesses of the Central and West Coast Basins.

This year marks the 63rd year that WRD has been monitoring the CBWCB, and this year's annual report presents the most comprehensive information to date utilizing WRD's network of aquifer-specific monitoring wells and in-depth water quality analysis. To that end, WRD has a dedicated Board and staff that engage in year-round activities to closely monitor groundwater conditions. The Regional Groundwater Monitoring Program (RGWMP) currently consists of a network of 354 monitoring wells at 63 locations throughout the District. WRD performs extensive collection, analysis, and reporting of groundwater data to ensure proper resource management. The publication of this Regional Groundwater Monitoring Report (RGWMR) is one result of those efforts. It presents information on groundwater levels and groundwater quality over the past Water Year (WY), which runs from October 1 through September 30. This current report covers WY 2021-2022. Detailed information is presented in the body of the report with a summary below:

Groundwater Levels

Across the WRD service area, water levels have increased slightly over the WY. On average water levels rose more than one foot across the District in WY 2021-2022. In both the Central and West Coast Basins, changes in water levels have been variable in WY 2021-20022. Groundwater levels have increased in some areas, decreased in other areas, and have remained unchanged elsewhere. Overall, there was a loss in

groundwater storage of 20,000 acre-feet (AF); 18,200 AF of that loss in storage occurred in the unconfined Montebello Forebay. There was a loss in storage in the Los Angeles Forebay of about 1,900 AF; the Whittier Area experienced a loss of 900 AF; and there was an increase of 1,000 AF of storage in the Central Basin Pressure Area (CBPA). No appreciable change in groundwater storage was calculated for the West Coast Basin.

Groundwater Quality

Annually, WRD collects over 600 groundwater samples from its monitoring well network and analyzes them for more than 100 water quality constituents to produce over 60,000 individual data points to help track the water quality in the CBWCB. The data from WRD's newest deep nested monitoring well, Paramount #1, is included for the first time in this report. By analyzing and reviewing water quality results on a regular basis, new and emerging water quality concerns can be identified and managed effectively.

Analysis for this report uses water quality maps and trend graphs to focus on 11 key water quality constituents to represent overall groundwater quality in the basins, including total dissolved solids (TDS), iron, manganese, chloride, nitrate, trichloroethylene (TCE), tetrachloroethylene (PCE), arsenic, perchlorate, hexavalent chromium, and 1,4-dioxane. Overall, groundwater quality in the District remains very good, with only some areas facing poor water quality from natural or anthropogenic sources that WRD staff continue to monitor closely to determine increasing or decreasing trends.

This report also complies with the state's Recycled Water Policy to present information for the adopted Salt and Nutrient Management Plan (SNMP) for the CBWCB. Through the RGWMP, 13 key WRD nested monitoring wells track salt and nutrient water quality trends throughout the District and in the most critical areas of the basins, including areas near groundwater recharge projects that utilize recycled water (i.e., the seawater intrusion barriers and the Montebello Forebay Spreading Grounds). Overall, the data show that salt and nutrient concentrations in groundwater are generally stable, and although a few individual well zones do show increasing trends, a comparable number show decreasing trends.

Future Activities

WRD continues to refine the regional understanding of groundwater occurrence, movement, and quality. Water levels will continue to be recorded using automatic dataloggers to monitor groundwater elevation differences throughout the year, and in select wells telemetry systems have recently been installed to transmit water level data remotely to the District. Conductivity sensors are also being utilized at selected nested monitoring wells to track water quality changes and supplement the automated water level data collected by WRD.

WRD also remains committed to its statutory charge to protect and preserve groundwater resources in its service area and will continue to sample groundwater for general water quality constituents including constituents of emerging concern (CECs). WRD staff will also continue to track various regulatory changes nationally as well as those within California.

WRD will continue to use the data generated by the RGWMP along with WRD's Geographic Information System (GIS) capabilities to address current and potential upcoming issues related to water quality and groundwater replenishment in its service area.

WRD staff will be working on refining the hydrogeologic conceptual model of the CBWCB to improve the framework for understanding the groundwater system and for use as a planning tool. WRD will use data from the RGWMP along with an update to the groundwater model that was developed and published by the United States Geological Survey (USGS) in 2021 as tools in its refinement of the conceptual model.

Consistent with WRD's mission to provide, protect, and preserve high quality groundwater and as required by the State's Recycled Water Policy, a SNMP is in place and will continue to be implemented. Existing and planned implementation measures are and will continue to be protective of groundwater quality and its beneficial uses.

Through the RGWMP, WRD will continue to collect CBWCB groundwater level data, track seasonal and long-term trends, and provide the data to the California Statewide Groundwater Elevation Monitoring (CASGEM) program.

Further information is available on the WRD web site at *http://www.wrd.org*, or by calling WRD at (562) 275-4300. WRD welcomes any comments or suggestions to this RGWMR.

TABLE OF CONTENTS

Glossary of Acronyms

Section 1
Introduction

Section 2
Groundwater Levels

Section 3
Groundwater and Replenishment Water Quality

Section 4
Salt and Nutrients in Groundwater

Section 5
Summary of Findings

Section 6
Future Activities

Section 7
References

List of Tables

List of Figures

GLOSSARY OF ACRONYMS

AF	acre-feet
ARC	Albert Robles Center for Water Recycling and Environmental Learning
AWTF	Advanced Water Treatment Facility
BGS	below ground surface
CASGEM	California Statewide Groundwater Elevation Monitoring
CECs	chemicals of emerging concern
CBWCB	Central Basin and West Coast Basin
CBPA	Central Basin Pressure Area
DDW	State Water Resources Control Board, Division of Drinking Water
DME	Designated Monitoring Entity
DWR	California Department of Water Resources
ELWRF	Edward C. Little Water Recycling Facility
ESR	Engineering Survey and Report
GIS	Geographic Information System
GPS	Global Positioning System
GRIP	Groundwater Reliability Improvement Program
LACSD	Los Angeles County Sanitation Districts
LACPW	Los Angeles County Public Works
LAX	Los Angeles International Airport
MCL	Primary Maximum Contaminant Level
mg/L	milligram per liter
µg/L	microgram per liter
MSL	mean sea level
MWD	Metropolitan Water District of Southern California
NAVD88	North American Vertical Datum of 1988
NDMA	N-nitrosodimethylamine
ng/L	nanogram per liter
NL	Notification Level

GLOSSARY OF ACRONYMS (continued)

OEHHA	Office of Environmental Health Hazard Assessment
PCE	tetrachloroethylene
PDF	Portable Document Format
PFAS	perfluoroalkyl and polyfluoroalkyl substances
PFOA	perfluorooctanoic acid
PFOS	perfluorooctane sulfonate
PHG	Public Health Goal
RGWMP	Regional Groundwater Monitoring Program
RGWMR	Regional Groundwater Monitoring Report
RL	Response Level
SMCL	Secondary Maximum Contaminant Level
SNMP	Salt and Nutrient Management Plan
SWRCB	State Water Resources Control Board
TCE	trichloroethylene
TDS	total dissolved solids
TIWRP	Terminal Island Water Reclamation Plant
UCMR	Unregulated Contaminant Monitoring Rule
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
WBMWD	West Basin Municipal Water District
WQO	Water Quality Objective
WRD	Water Replenishment District
WRP	Water Reclamation Plant
WY	Water Year

SECTION 1
INTRODUCTION

The Water Replenishment District (WRD or the District) manages groundwater replenishment and water quality activities for the Central Basin and West Coast Basin (CBWCB) in southern Los Angeles County (**Figure 1.1**). WRD's service area encompasses most of the Central Basin and nearly all of the West Coast Basin. Our mission is to provide, protect, and preserve high-quality groundwater through innovative, cost-effective, and environmentally sensitive basin management practices for the benefit of residents and businesses of the Central and West Coast Basins.

As part of accomplishing its mission, WRD maintains a thorough and current understanding of groundwater conditions in its service area and strives to predict and prepare for future conditions. This is achieved through groundwater monitoring, modeling, and planning, which provide the necessary information to determine the "health" of the basins. This information in turn provides WRD, the groundwater pumpers in WRD's service area, other interested stakeholders, and the public with the knowledge necessary for responsible water resources planning and management. Each year WRD compiles the most recently collected information into a Regional Groundwater Monitoring Report (RGWMR) that presents the most current understanding of conditions in the basins; the RGWMR is just one of the efforts by WRD to fulfill its mission.

1.1 BACKGROUND OF THE REGIONAL GROUNDWATER MONITORING PROGRAM

Since its formation in 1959, WRD has been actively involved in groundwater replenishment, water quality monitoring, contamination prevention, data management, and data publication. Historical over-pumping of the CBWCB caused overdraft, seawater intrusion, and other groundwater management problems related to supply and quality. Adjudication of the basins in the early 1960s set a limit on allowable groundwater extractions in order to control the over-pumping. Concurrent with adjudication, WRD was

formed to address issues of groundwater recharge and groundwater quality. Following its inception, WRD implemented the Regional Groundwater Monitoring Program (RGWMP) as a program designed to track groundwater levels and groundwater quality in the WRD service area in the effort to ensure the sustainability of groundwater as a reliable resource.

Prior to 1995, WRD relied heavily upon groundwater data collected, interpreted, and presented by other entities such as the Los Angeles County Public Works (LACPW), the California Department of Water Resources (DWR), and the private sector for understanding basin conditions. However, these data were collected primarily from production wells, which are typically screened across multiple aquifers to maximize water inflow. The result is a mixing of waters from different aquifers into a single well casing, causing an averaging of water levels and water quality.

In order to obtain more accurate data for specific aquifers from which to infer localized water level and water quality conditions, depth-specific (nested) monitoring wells that tap discrete aquifer zones are necessary. **Figure 1.2** illustrates the capabilities of nested monitoring wells to assess individual aquifers compared to typical production wells.

Data for the RGWMRs are provided for a Water Year (WY), which occurs from October 1 to September 30. During WY 1994-95, WRD and the United States Geological Survey (USGS) began a cooperative study to improve the understanding of the geohydrology and geochemistry of the CBWCB. The initial study was documented in USGS Water Resources Investigations Report 03-4065, *Geohydrology, Geochemistry and Ground-Water Simulation-Optimization of the Central Basin and West Coast Basin, Los Angeles County, California* (Reichard et al., 2003). The study provides the nucleus of WRD's ongoing RGWMP. In addition to compiling existing available data, that study recognized that the sampling of production wells did not adequately characterize the layered multiple aquifer systems of the CBWCB. The study focused on new data collection through drilling and construction of nested groundwater monitoring wells and conducting depth-specific groundwater monitoring.

Figure 1.3 is a District map showing the locations of wells in WRD's nested monitoring well network that are used in the RGWMP. Currently, there are 354 wells at 63 locations; a few of these wells are used exclusively to monitor groundwater elevations, but most are used to monitor both groundwater elevations and water quality within the WRD service area. A listing and well construction details for the WRD nested wells used in the RGWMP are presented in **Table 1.1.** Listings and well construction details for other wells used to prepare the groundwater elevation contour and groundwater elevation change maps that are included in this report are presented in **Table 1.2**.

An *Annual Report on the Results of Water Quality Monitoring* (*Annual Report*) was published by WRD each year for WYs 1972-73 through 1994-95 and was based on a basinwide monitoring program outlined in the *Report on Program of Water Quality Monitoring* (Bookman-Edmonston Engineering, Inc., January 1973). The latter report recommended a substantial expansion of the then-existing program, particularly the development of a detailed and intensive program for the monitoring of groundwater quality in the Montebello Forebay. The RGWMP was designed to serve as an expanded, more representative basinwide monitoring program for the CBWCB. WRD's RGWMR is published annually in lieu of the previous *Annual Reports*.

On November 4, 2009, the State Legislature amended the Water Code with SBx7- 6, mandating a statewide groundwater elevation monitoring program to track seasonal and long-term trends in California's groundwater basins. In accordance with this amendment, DWR developed the California Statewide Groundwater Elevation Monitoring (CASGEM) program. In October 2011, WRD was assigned as the Designated Monitoring Entity (DME) responsible for collecting and reporting CBWCB groundwater level data to CASGEM. Through the RGWMP, WRD collects groundwater level data from within its service area, tracks seasonal and long-term trends and provides that data to the CASGEM program.

Beginning in WY 2018-19 and culminating in WY 2019-2020, WRD completed a District-wide assessment for the presence of per- and polyfluoroalkyl substance (PFAS)

constituents, including perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA), in WRD nested monitoring wells and CBWCB production wells. Data collected from the two-year PFAS assessment were included in the WY 2019-2020 RGWMR published in March 2021, as were water quality maps illustrating the occurrence of PFOS and PFOA across the District.

1.2 CONCEPTUAL HYDROGEOLOGIC MODEL

As described above, the RGWMP has changed the focus of groundwater monitoring efforts in the WRD service area from production wells with averaged groundwater level and groundwater quality information, to a layered multiple aquifer system with individual zones of groundwater quality and groundwater levels. WRD views each aquifer as a significant component of the groundwater system and recognizes the importance of the interrelationships between aquifers. The most accepted hydrogeologic description of the basins and the names of water-bearing zones are provided in DWR document entitled *Bulletin No. 104: Planned Utilization of the Ground Water Basins of the Coastal Plain of Los Angeles County, Appendix A–Ground Water Geology* (DWR, 1961). WRD generally follows the naming conventions defined in Bulletin 104; however, in some cases WRD's in-house interpretation has resulted in aquifer classifications that differ from those predicted by that report. During WY 2017-18, WRD updated its interpretation of the aquifer classifications assigned to each well so that they more closely match those of Bulletin 104. This resulted in changes to designations at some wells from those that were previously used and published by WRD. **Tables 1.1** and **2.1** list the specific aquifer or formation assigned to each well used in the RGWMP and indicate whether that designation follows Bulletin 104 or is the result of WRD's most current interpretation.

The locations of idealized geologic cross-sections A-A' and B-B' through the WRD service area are shown on **Figure 1.3**. These cross-sections are presented on **Figures 1.4** and **1.5**, respectively. These cross-sections are modified versions of cross-sections presented in Bulletin 104 and illustrate a simplified aquifer system in the CBWCB. The main potable production aquifers described in Bulletin 104 are shown, including the

deeper Lynwood, Silverado, and Sunnyside aquifers of the lower Pleistocene San Pedro Formation. Other shallower aquifers, which locally produce potable water, include the Gage and Gardena aquifers of the upper Pleistocene Lakewood Formation. Also shown on the geologic sections are the aquitards separating aquifers. Throughout this report the aquifers shown on the geologic sections are referred to as discrete groundwater zones. Many references are made to the Silverado Aquifer, typically thought of as the main producing aquifer in the CBWCB; however, substantial pumping can come from the Lynwood and Sunnyside aquifers as well.

1.3 GIS DEVELOPMENT AND IMPLEMENTATION

WRD uses a Geographic Information System (GIS) as a tool for groundwater management in its service area. Much of the GIS data was compiled during the WRD/USGS cooperative study described above in Section 1.1. The GIS links spatially related information (e.g., well locations, geologic features, cultural features, and contaminated sites) to data on well production, water quality, water levels, and replenishment amounts. WRD uses industry standard Esri ArcGIS® software for data analysis and preparation of spatially related information (maps and graphics tied to data).

WRD utilizes Global Positioning System (GPS) technology to determine and document the locations of basinwide production wells, nested monitoring wells, and other geographic features for use in the GIS database. During WY 2015-16, WRD updated and modernized its database so that a consistent reference surface datum is used when describing the mean sea level (MSL) elevation at each monitoring well. This update required a re-survey of the measurement reference point at each of WRD's wells relative to the North American Vertical Datum of 1988 (NAVD88) reference plane. This update resulted in adjustment for some of the "reference point elevations" that were previously used and published by WRD. Current NAVD88 reference point elevations are listed in **Table 2.1**.

WRD is constantly updating the GIS with new data and newly acquired archives of data acquired by staff or provided by pumpers and other agencies. The GIS is a primary tool

for WRD and other water-related agencies to accurately track current and past use of groundwater, track groundwater quality, and project future water demands, thus allowing improved management of the basins.

In early 2003, WRD completed the development of its internet-based GIS and Interactive Well Search Tool, which was made available to the public for access to CBWCB groundwater information. In 2018, a major upgrade to this site was completed to enhance its capabilities, and in November 2019 further enhancements to the site were launched. WRD's internet-based GIS can be accessed through our GIS website at *http://gis.wrd.org*. The website provides the public with access to much of the water level and water quality data contained in this report. The well information on the website can be accessed through interactive maps or text searches, and the results can be displayed in both tabular and graphical formats.

1.4 SCOPE OF REPORT

This report updates information on groundwater conditions in the WRD service area for WY 2021-2022 and discusses the status of the RGWMP. Section 1 provides an overview of the WRD and its RGWMP. Section 2 discusses district-wide groundwater levels for WY 2021-2022. Section 3 presents water quality data for the WRD nested monitoring wells, basinwide production wells, and replenishment water. Section 4 summarizes salt and nutrient management in the CBWCB and presents water quality trends for total dissolved solids (TDS) and chloride. Section 5 summarizes findings from the evaluation of data in this report. Section 6 presents future regional groundwater monitoring and related activities. Section 7 lists the references used in this report. Tables and figures are presented in separate sections at the end of the report. This current WY 2021-2022 RGWMR, along with previously published reports for past WYs, can be viewed online and downloaded in Portable Document Format (PDF) form from the WRD website at *http://www.wrd.org* .

SECTION 2
GROUNDWATER LEVELS

Groundwater levels are a direct indication of the amount of groundwater in the basins. Groundwater levels can identify areas of recharge and discharge from the basins. Differences in groundwater levels suggest which way groundwater is moving so that recharge water or contaminants can be tracked. WRD uses groundwater levels to determine when additional replenishment water is required and to calculate groundwater storage changes. Groundwater levels can also be used to identify possible source areas and pathways for seawater intrusion, and to demonstrate the effectiveness of seawater barrier injection wells. Groundwater levels are dependent on both regional precipitation and on the amount of water extracted by pumping.

WRD tracks groundwater levels throughout the year by measuring the depth to water in monitoring wells and production wells located throughout its service area. Groundwater elevations are calculated by comparing depth to water measurements to the MSL elevation at the reference measurement point of each well. **Table 2.1** presents manual groundwater level measurements collected from the District's nested monitoring wells during WY 2021-2022. In order to capture the daily and seasonal variations in water levels, WRD has installed automatic data-logging equipment in most of the nested monitoring wells to collect water levels more frequently than practical for manual measurements. Recent improvements in cellular telemetry equipment have allowed WRD to equip 51 datalogger-equipped individual wells at 25 nested well sites with telemetry systems that allow near real-time water level data to be remotely transmitted to the District. WRD also obtains water level data from cooperating entities such as pumpers, DWR, and LACPW who measure and collect water levels from their own wells. These data are entered into WRD's GIS water level database for archiving and analysis.

From the water level database, a groundwater elevation contour map, change in groundwater elevation map, and groundwater elevation hydrographs for selected wells

were prepared to aid in analysis and illustrate the current and historical groundwater conditions in the basins. These are presented and explained in the following sections.

2.1 GROUNDWATER ELEVATION CONTOURS

A contour map showing the groundwater elevations measured across the WRD service area in the deeper, main producing aquifers during the fall of 2022 is presented in **Figure 2.1**. Specific well zones used to develop the groundwater contour map are identified on **Table 2.1**. The fall 2022 Contour Map shows that in the Central Basin water levels range from highs of nearly 160 feet above MSL to lows deeper than 80 feet below MSL. The highest water levels are in the Montebello Forebay; water levels decrease to the south and west towards the Long Beach area, the Newport-Inglewood Uplift, and the Los Angeles Forebay.

In the West Coast Basin, water levels range from highs of nearly 10 feet above MSL to lows of more than 40 feet below MSL. The highest water levels occur near the West Coast Basin Seawater Intrusion Barrier: they decrease to the east where they are generally at their lowest elevations in the City of Gardena near the Charnock Fault and in the City of Carson slightly seaward of the Newport-Inglewood Uplift. The Charnock Fault and Newport-Inglewood Uplift are geologic structural features that partially restrict groundwater flow.

2.2 CHANGES IN GROUNDWATER LEVELS

Figure 2.2 is a groundwater level change map that illustrates the difference between groundwater levels measured in fall 2021 and those measured in fall 2022. Specific well zones used to develop the groundwater level change map are identified on **Table 2.1**. During WY 2021-2022, changes in groundwater levels across the WRD service area have generally increased, although in some areas they have decreased, and in others they have remained unchanged.

In the Central Basin, changes in groundwater levels were variable in WY 2021-2022. Across the unconfined Montebello Forebay water levels have generally decreased; they are at their lowest levels in the north in and around the spreading grounds where they are more than 11 feet lower than they were in the previous year. The decrease in water levels is less pronounced moving away from the spreading grounds; along the eastern reach of the Forebay they range from more than 7 feet lower in the north to almost two feet lower in the south, and along the western reach they are about one foot lower than they were in fall 2021. Moving south away from the spreading grounds water levels gradually increase, enough so that along the southern reach of the Montebello Forebay they are more than one foot higher than they were in fall 2021. Across the unconfined Los Angeles Forebay, water levels are either unchanged, or slightly lower than those measured in fall 2021. In the western portion of the Los Angeles Forebay water levels are as much as three feet lower than were measured in fall 2021, while those in the eastern and southern-central portions are generally unchanged from the previous year. In the Whittier Area water levels gradually increase from west to east; in the west they are as much as seven feet lower than, and in the east they are essentially unchanged from, water levels measured in fall 2021.

Water levels generally increased across most of the rest of the Central Basin in WY 2021-2022. In the Central Basin Pressure Area (CBPA) downgradient from both of the Forebays and the Whittier Area, water levels steadily increase towards the south; they are at their highest along the Newport-Inglewood Uplift near the eastern border of the CBPA where they are as much 17 feet higher than they were in fall 2021. In the northwestern portion of the CBPA immediately west of the Los Angeles Forebay water levels are as much as four feet lower than they were in fall 2021 but moving south from there along the Newport-Inglewood Uplift they steadily increase. In the area between the Los Angeles and Montebello Forebays water levels are essentially unchanged from those measured in fall 2021.

In the West Coast Basin, changes in water levels were somewhat variable in WY 2021-2022. In the northeast portion of the basin between the Newport-Inglewood Uplift and the Charnock Fault water levels have increased and are as much as 7 feet higher than they were

in fall 2021. In the southern portion of the basin near the Newport-Inglewood Uplift and southern coastal area, as well as in the vicinity of the northern portion of the West Coast Barrier Project near the cities of Hermosa Beach-Redonda Beach-El Segundo, water levels have decreased slightly and are between one and five feet lower than they were in fall 2021. In much of the Carson-Torrance-Lawndale and Los Angeles International Airport (LAX) areas, water levels are relatively unchanged from those measured in fall 2021.

District-wide, groundwater levels increased an average of more than one foot in WY 2021-2022. Water levels decreased across much of the northern portion of the Central Basin; in the Montebello Forebay region water levels decreased an average of more than three feet, in the Los Angeles Forebay region they decreased an average of more than one foot, and in the Whittier Area they decreased by an average of more than two feet. In, the CBPA water levels increased by an average of more than four feet. In the West Coast Basin, water levels decreased by an average of less than one-half of one foot.

There was an overall loss of 20,000 acre-feet (AF) in groundwater storage across the District in WY 2021-2022, nearly all of which occurred in the Central Basin. In the unconfined Montebello Forebay, there was a loss in groundwater storage of 18,200 AF, in the Los Angeles Forebay a loss of 1,900 AF, in the Whittier Area a loss of 900 AF, and in the CBPA a gain of 1,000 AF. In the West Coast Basin there was no appreciable change in groundwater storage in WY 2021-2022.

2.3 GROUNDWATER LEVEL HYDROGRAPHS

WRD relies on hydrographs to track the changes in water levels in wells over time. Hydrographs reveal the seasonal fluctuations of water levels caused by variations in natural and artificial recharge, and the effects of pumping and other basin discharge. Historical hydrographs of water level data going back to the 1930s and 1940s in the Montebello Forebay, Los Angeles Forebay, CBPA, and West Coast Basin are presented in the annual WRD Engineering Survey and Report (ESR). In general, the hydrographs show that in the Central Basin, water levels were in steep decline through the 1930s and into the

late 1950s as a result of excessive pumping (overdraft). Initiation of groundwater management policies in the late 1950s and early 1960s including formation of the WRD, adjudication of the basins, and installation of seawater barrier wells are evident on the hydrographs in the form of a distinct reversal in water level decline followed by a steady increase through the 1960s. Despite repeated fluctuation between periods of decreasing and increasing trends, water levels in the Central Basin have generally been relatively stable since the 1960s, although over the past several years they have been in decline. In the West Coast Basin, the hydrographs show a similar steep decline in water levels in the 1930s through the 1950s as a result of overdraft, followed by stabilization and steady increase through the 1960s that continues to the present day. ESR hydrographs are not presented in this RGWMR; however, they can be viewed in the ESR reports online and downloaded from the WRD website at *http://www.wrd.org* .

Hydrographs for WRD nested monitoring wells that plot water level measurements from individual aquifer zones against time provide WRD with a graphical method to observe changes in water level and can aid in identifying current and historic trends in aquifer conditions. The data for these annual hydrographs are collected from WRD's network of nested monitoring wells. **Figures 2.3 through 2.15** are hydrographs of 13 key WRD nested monitoring wells, including three in the Montebello Forebay, one in the Los Angeles Forebay, four in the CBPA, one in the Whittier Area, and four in the West Coast Basin. The 13 key nested monitoring well locations are shown on **Figure 1.3**. These hydrographs illustrate that there can be distinct groundwater elevation differences, up to 90 feet, between adjacent aquifers at a single nested well location. The differences in elevation are influenced by variable discharge (i.e., pumping from wells), recharge (i.e., injection, percolation, or underflow) and the degree of hydraulic communication between aquifers. These hydrographs are particularly useful in identifying the zones that are in the main flow system and the zones that show the greatest depth and seasonal fluctuations in groundwater levels during the WY. A discussion of the hydrographs shown on **Figures 2.3 through 2.15** is presented in the following sections.

2.4 GROUNDWATER LEVELS IN THE MONTEBELLO FOREBAY

Figure 2.3 is a hydrograph for WRD's Rio Hondo #1 key nested monitoring well located in the Montebello Forebay at the Rio Hondo Spreading Grounds. There are six individual wells (zones) that are screened, from shallowest to deepest, in the Gardena, Hollydale, Silverado, and Sunnyside (two zones) Aquifers, and the Pico Formation, with depths ranging from 140 to 1,130 feet below ground surface (BGS). Because this well is located in the Montebello Forebay, where the aquifers are in general hydraulic communication with each other, water level responses in each of the aquifers are similar. Seasonal highs and lows are in response to local recharge and pumping. Groundwater elevations are lowest in Zone 4, the Silverado Aquifer, suggesting that this aquifer is the most heavily pumped in the area. Water levels in Zone 4 decreased slightly more than four feet this year compared to the previous WY.

Figure 2.4 is a hydrograph for WRD's Pico #2 key nested monitoring well located in the Montebello Forebay adjacent to the San Gabriel River and just south of the San Gabriel River Spreading Grounds. There are six individual wells (zones) that are screened, from shallowest to deepest, in the Gaspur/Gage, Lynwood, Silverado, and Sunnyside (three deepest zones) Aquifers, with depths ranging from 100 to 1,200 feet BGS. Groundwater elevations are lowest in Zones 1, 2, and 3, all of which are screened in the Sunnyside Aquifer, suggesting that the Sunnyside Aquifer is the most heavily pumped in this area. At the end of WY 2021-2022, water levels in the three Sunnyside Zones were between three and five feet lower than they were at the end of the previous WY, similar to levels last observed at this location in the fall of 2018.

Figure 2.5 is a hydrograph for WRD's Norwalk #2 key nested monitoring well located in the Montebello Forebay, 3.5 miles south of the San Gabriel River Spreading Grounds. There are six individual wells (zones) that are screened in the following aquifers (from shallowest to deepest): Gardena, Silverado, and Sunnyside (two zones) Aquifers, and the Pico Formation (two deepest zones), with depths ranging from 236 to 1,480 feet BGS. Norwalk #2 is the third key well representing the Montebello Forebay and is at the southern

margin of the Forebay where it transitions into the CBPA. Unlike Rio Hondo #1 and Pico #2, water level responses to seasonal discharge and recharge influences are less pronounced at Norwalk #2, with seasonal swings of around 20 feet compared to the greater than 30-foot seasonal swings observed at Rio Hondo #1 and Pico #2. Groundwater elevations are deepest in Zones 3 and 4, which are both screened in the Sunnyside Aquifer, suggesting that this aquifer is the most heavily pumped in the area. Water levels in Zones 3 and 4 increased more than three feet from those measured in the fall of 2021.

2.5 GROUNDWATER LEVELS IN THE LOS ANGELES FOREBAY

Figure 2.6 is a hydrograph for WRD's Huntington Park #1 key nested monitoring well located in the Los Angeles Forebay near the intersection of Slauson Avenue and Alameda Street. There are five individual wells (zones) that are screened in the following aquifers (from shallowest to deepest): Gaspur, Gage, Hollydale, Lynwood, and Silverado, with depths ranging from 114 to 910 feet BGS. Only four of the five zones are shown on the hydrograph because the shallowest well (screened from 114 to 134 feet BGS in the Gaspur Aquifer) is dry. There is a large separation in water levels between Zone 4 and the three deeper zones, suggesting the presence of a low permeability aquitard(s) above Zone 3 that hydraulically isolates the Gage Aquifer from the deeper aquifers. Water levels in the deepest two zones, screened within the Lynwood and Silverado Aquifers, are generally similar and both decreased slightly in WY 2021-2022 compared to the previous WY. Unlike the fluctuations between increasing and decreasing water levels typically observed in the Montebello Forebay, water levels in the Los Angeles Forebay have remained relatively stable over the past 22 years.

2.6 GROUNDWATER LEVELS IN THE CENTRAL BASIN PRESSURE AREA

Figure 2.7 is a hydrograph for WRD's South Gate #1 key nested monitoring well, which is located in the north-central portion of the CBPA, just outside the Montebello and Los Angeles Forebays. There are five individual wells (zones) that are screened, from shallowest to deepest, in the Exposition, Lynwood, Silverado, and Sunnyside (two

deepest zones) Aquifers, with depths ranging from 220 to 1,460 feet BGS. Water levels in Zones 1 through 4 generally behave similarly in response to seasonal discharge and recharge. The upper Zone 5 has much shallower water levels, shows little seasonal response, and is isolated from the aquifers below by an aquitard, resulting in the observed hydraulic separation. Water levels in the deepest three aquifers at South Gate #1 increased by more than two feet in WY 2021-2022 compared to the previous WY. Water levels are relatively unchanged in Zone 5 from the previous WY but have steadily decreased by more than 20 feet over the past 15 years.

Figure 2.8 is a hydrograph for WRD's Willowbrook #1 key nested monitoring well, which is located in the CBPA, about seven miles down-gradient of the Montebello Forebay. There are four individual wells (zones) that are screened, from shallowest to deepest, in the Gage, Lynwood, Silverado, and Sunnyside Aquifers, with depths ranging from 200 to 905 feet BGS. Zone 1 is screened in the deepest responding aquifer. Water levels in the upper three zones are typically shallower than those observed in Zone 1. The differences in water levels between Zones 1 and 2, and between Zones 2 and 3, indicate hydraulic separation, and thus suggest the presence of aquitards that separate these zones from one another. Water levels in Zones 3 and 4 track very closely which indicates there is little hydraulic separation between them. Water levels in Zone 1 increased nearly one foot from those measured in fall 2021, and water levels in the overlying shallower zones have increased by slightly more than one foot. Water levels in Willowbrook #1 have generally declined over the past 23 years.

Figure 2.9 is a hydrograph for key nested monitoring well Long Beach #6 located in the southern portion of the CBPA. There are six individual wells (zones) that are screened, from shallowest to deepest, in the Gage, Lynwood, Silverado, and Sunnyside (two zones) Aquifers, and the Pico Formation, with depths ranging from 220 to 1,510 feet BGS. Because this portion of the CBPA has multiple confined aquifers separated by substantial aquitards, and experiences heavy local seasonal pumping cycles, water level fluctuations can be larger here than in other areas. For example, water levels in Zones 4 and 5 are the deepest responders; they are screened in the Silverado and Lynwood Aquifers, they can

rise and fall by more than 100 feet through typical seasonal cycles, and have been recorded historically at elevations ranging from highs near sea level to lows deeper than 120 feet below sea level. Water levels in the other zones also show significant seasonal variation. **Figure 2.9** shows that water levels in all six zones are as much as ten feet higher than they were in the fall of 2021.

Figure 2.10 is a hydrograph for key nested monitoring well Seal Beach #1, which is included as a key nested monitoring well for the CBPA due to its proximity inland of the Alamitos Gap Seawater Intrusion Barrier Recycled Water Project. There are seven individual wells (zones) that are screened, from shallowest to deepest, in the Artesia, Gage, Lynwood, Silverado, and Sunnyside (three deepest zones) Aquifers, with depths ranging from 60 to 1,365 feet BGS. Zone 4, screened in the Silverado Aquifer, is the deepest responding unit at Seal Beach #1. Zone 5 responds similarly to Zone 4 but draws down less during heavily pumped periods. Zones 1, 2, and 3 overlay on the hydrograph and water levels within them have increased by more than six feet over WY 2021-2022. Water levels in Zone 4 increased by nearly 17 feet, and in Zone 5 by seven feet during WY 2021-2022. Water levels within Zones 6 and 7 have increased by between one and four feet over the WY; here they show a smaller seasonal response than the five deeper zones, with groundwater elevations at or slightly below sea level, suggesting partial isolation from the lower aquifer systems.

2.7 GROUNDWATER LEVELS IN THE WHITTIER AREA

The Whittier Area of the Central Basin extends from the Puente Hills south and southwest to the Santa Fe Springs-Coyote Hills uplift. The western boundary is an arbitrary line separating the Whittier Area from the Montebello Forebay and the eastern boundary is the Orange County line. **Figure 2.11** is a hydrograph from WRD's Whittier #1 key nested monitoring well located in the eastern part of the Whittier Area. There are five individual wells (zones) that are screened, from shallowest to deepest, in the Jefferson, Silverado, and Sunnyside Aquifers, and the Pico Formation (two deepest zones), with depths ranging from 200 to 1,200 feet BGS. Groundwater levels in the Whittier Area do not

show a seasonal fluctuation typical of other areas of the Central Basin and adjacent Montebello Forebay Area, which suggests limited groundwater discharge and recharge. Zones 1 through 4 have similar groundwater elevations and have tracked very closely over time while the Zone 5 groundwater elevation is more than 80 feet higher than elevations in the deeper zones suggesting substantial isolation by an aquitard(s). The Whittier #1 hydrograph indicates that groundwater levels in the Whittier Area have remained relatively unchanged over WY 2021-2022 and have decreased about 12 feet over the past 22 years.

2.8 GROUNDWATER LEVELS IN THE WEST COAST BASIN

Figure 2.12 is a hydrograph for WRD's PM-4 Mariner key nested monitoring well, which is located in the City of Torrance, in the coastal area inland from the West Coast Basin Seawater Intrusion Barrier. There are four individual wells (zones) that are screened, from shallowest to deepest, in the Gardena, Lynwood, Silverado, and Sunnyside Aquifers, with depths ranging from 200 to 710 feet BGS. All four zones respond similarly to seasonal fluctuations. Historically, water levels in Zone 1 (Sunnyside) have been the deepest and were consistently separated from Zone 2 (Silverado) water levels by one or two feet; however, since about April 2020 water levels within the two zones have converged and now fluctuate above and below one another. In Fall 2022 water levels in Zone 2 were observed to be more than one foot deeper than those in Zone 1. Water levels in both zones have decreased by less than one foot over WY 2021-2022. Water levels in Zones 3 and 4 (Lynwood and Gardena) are both about two feet higher than those in Zones 1and 2 and are essentially unchanged from those measured in the fall of 2021.

Figure 2.13 is a hydrograph for WRD's Carson #1 key nested monitoring well, which is located in the inland region of the West Coast Basin. There are four individual wells (zones) that are screened, from shallowest to deepest, in the Gage, Lynwood, and Silverado (two deepest zones) Aquifers, with depths ranging from 250 to 1,010 feet BGS. Water levels in Zone 1 track very similar to Zone 2 throughout the year and are the deep responding aquifers at this location. Zone 3 tracks similar to Zone 4. Groundwater

elevations currently differ by about 30 feet between the upper two and lower two zones, which suggests the presence of a low permeability aquitard(s) between them that hydraulically isolate the shallow aquifers from the deeper ones. Water levels in Zones 1 and 2 have decreased more than five feet over WY 2021-2022 but have generally increased by about 30 feet over the past 23 years.

Figure 2.14 is a hydrograph for WRD's Manhattan Beach #1 key nested monitoring well for the West Coast Basin located one half mile inland of the West Coast Basin Seawater Intrusion Barrier. There are seven individual wells (zones) at Manhattan Beach #1 that are screened, from shallowest to deepest, in the Gage, Silverado, and Sunnyside (two zones) Aquifers, and the Pico Formation (three deepest zones), with depths ranging from 180 to 1,990 feet BGS. Zone 3 is screened in the Pico Formation and has the deepest groundwater levels, as much as 30 feet lower than Zones 1, 2, 4, and 5 which all generally track together. Water levels in Zones 6 and 7 track together and are about six to eight feet higher than those in Zones 1, 2, 4, and 5. Seasonal fluctuations are not pronounced at the Manhattan Beach #1 location and groundwater levels did not change significantly over the previous WY. Water levels in Zone 3 have increased less than one foot over the previous WY but nearly 13 feet since it was installed in WY 2010-11.

Figure 2.15 is a hydrograph for WRD's Wilmington #2 key nested monitoring well, which is located in the West Coast Basin, inland of the Dominguez Gap Seawater Intrusion Barrier. There are five individual wells (zones) that are screened, from shallowest to deepest, in the Gage, Lynwood, Silverado (two zones), and Sunnyside Aquifers with depths ranging from 120 to 970 feet BGS. Water levels in Zones 1 through 4 are generally deeper and behave similarly in response to seasonal influences. The upper Zone 5 has shallower water levels and shows less seasonal change than the deeper zones suggesting hydraulic separation from them. Wilmington #2 water levels decreased between one and three feet in WY 2021-2022 compared to the previous WY, but over the past 24 years they have increased by as much as 25 feet.

SECTION 3
GROUNDWATER AND REPLENISHMENT WATER QUALITY

This section discusses the vertical and horizontal distribution of water quality constituents in WRD's service area based on data from WRD's nested monitoring wells, purveyors' production wells, and source waters used for CBWCB groundwater replenishment. Regional groundwater quality maps included herein depict constituents of interest to WRD and District stakeholders in the nested monitoring wells and production wells where water quality data is available.

Comparisons of water quality results to various regulatory standards are made throughout this section. A brief discussion of the regulatory standards used in the report follows. A Primary Maximum Contaminant Level (MCL) is an enforceable drinking water standard that the California Environmental Protection Agency, State Water Resources Control Board, Division of Drinking Water (DDW) establishes after health effects, risk assessment, detection capability, treatability, and economic feasibility are considered. A Secondary Maximum Contaminant Level (SMCL) is established for constituents that impact aesthetics of the water, such as taste, odor, and color, but do not impact health. A Public Health Goal (PHG) is an advisory level that is developed by the Office of Environmental Health Hazard Assessment (OEHHA) after a thorough review of health effects and risk assessment studies. A Notification Level (NL) and Response Level (RL) are non-enforceable health-based advisory levels established by the DDW based on preliminary reviews of health effects studies for which enforceable levels have not been established. NLs and RLs replaced State Action Levels effective January 1, 2005 per California Health and Safety Code Section 116455. It should be noted that constituents with NLs often are considered unregulated contaminants for which additional monitoring may be required to determine the extent of exposure before MCLs and/or PHGs are established.

3.1 QUALITY OF GROUNDWATER

The focus of this section is groundwater quality in samples collected from WRD nested monitoring wells and purveyors' production wells. Section 1 of this report described the value of data from aquifer-specific nested monitoring wells and that these data provide the most valuable insight into CBWCB groundwater quality. Groundwater samples collected from WRD's nested wells are submitted immediately after collection to a State-certified laboratory for analysis for general water quality constituents, known or suspected natural and man-made contaminants, and other select constituents of interest.

Historically, WRD has performed groundwater sampling of its nested monitoring wells on a semi-annual schedule, and over the past few decades has compiled an enormous database of analytical results. In WY 2017-18, WRD conducted an intensive review of this database specifically to determine if the frequency of sampling could be reduced at some wells without compromising its current high-quality assessment of groundwater conditions in the CBWCB. Using criteria such as the length of time a well has been in service, and the nature of concentration trends within each zone at a nested monitoring well site, WRD was able to identify 11 nested wells where the sampling frequency could be reduced from semi-annual to annual. Commencing in WY 2017-18 and continuing into WY 2021-2022, semi-annual sampling was not conducted during fall sampling events at Bell Gardens #1, Carson #2, Cerritos #1, Commerce #1, Compton #2, Hawthorne #1, Lakewood #1, Long Beach #2, Long Beach #8, Norwalk #1, and Whittier #2. However, annual sampling was conducted at those wells each year during the spring sampling events. This reduction in sampling has produced net cost savings without sacrificing the quality of data provided by WRD. As the quantity of data from each nested well site continues to increase, WRD will periodically review that data and where conditions allow, will reduce the sampling frequency at additional nested well sites. WRD will closely monitor the data collected from the reduced frequency wells to assure that conditions that allowed their reductions still exist; if they do not, sampling will be resumed on a semi-annual schedule.

Table 3.1 presents water quality analytical results from 38 WRD nested monitoring wells (220 individual well zones) in the Central Basin during WY 2021-2022. Included in these results for the first time this WY are data from the seven individual well zones that were installed at the Paramount #1 nested well site at the beginning of WY 2021-2022. **Table 3.2** presents water quality analytical results from 22 WRD nested monitoring wells (112 individual well zones) in the West Coast Basin during WY 2021-2022. Complementing the data from WRD's nested monitoring well network, data for CBWCB production wells were obtained from the DDW based on results submitted by purveyors for their DDW Title 22 drinking water compliance.

Water quality maps for nested monitoring wells for WY 2021-2022, and production wells for the three-year period spanning October 2019 through September 2022, are presented herein for 11 water quality constituents (**Figures 3.1 – 3.22**). The 11 constituents include TDS, iron, manganese, chloride, nitrate, trichloroethylene (TCE), tetrachloroethylene (PCE), arsenic, perchlorate, hexavalent chromium, and 1,4-dioxane. The maps illustrate areal and vertical differences in water quality and compare the aquifer-specific water quality data from WRD's nested monitoring wells to the averaged water quality data collected from purveyors' production wells.

3.1.1 Total Dissolved Solids (TDS)

TDS is a measure of the total mineralization of water and is indicative of general water quality. In general, the higher the TDS, the less desirable a given water supply is for beneficial uses. The SMCL for TDS ranges from 500 milligrams per liter (mg/L), which is the recommended level, to an upper level of 1,000 mg/L, and to 1,500 mg/L, which is the level allowed for short-term use. WRD uses the 1,000 mg/L upper level SMCL for water quality comparisons and analyses.

WRD nested monitoring well data for WY 2021-2022 indicate relatively low TDS concentrations for groundwater in the producing aquifers of the Central Basin. As shown on **Figure 3.1**, in the Central Basin, TDS was detected in WRD nested monitoring wells at concentrations above the SMCL in 21 out of 220 individual well zones (10%). In the West

Coast Basin, TDS was detected in WRD nested monitoring wells at concentrations above the SMCL in 42 out of 112 individual well zones (38%). Elevated TDS concentrations in the West Coast Basin were observed along the coast from Redondo Beach to LAX, in the Torrance area, Inglewood area, and Dominguez Gap area.

Figure 3.2 presents DDW water quality data for the maximum TDS detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. In the Central Basin, TDS was not detected above the Upper Level SMCL of 1,000 mg/L in any of the 174 production wells sampled for TDS during this period. In the West Coast Basin, TDS was detected at concentrations above the SMCL in five out of 30 production wells (20%). The elevated TDS levels detected in the West Coast Basin may be caused by seawater intrusion, connate brines, or perhaps oil field brines.

3.1.2 Iron

Iron occurs naturally in groundwater. Sources for iron in the water supply are both natural and man-made. Iron is leached from sediments in subsurface aquifers and steel pipes used for construction of water wells and distribution systems. Sufficient concentrations of iron in water can affect its suitability for domestic or industrial purposes. Some industrial processes cannot tolerate more than 0.1 mg/L iron. The SMCL for iron in drinking water is 0.3 mg/L. High concentrations of iron in water can stain plumbing fixtures and clothing, encrust well screens, clog pipes, and may impart a salty taste. While these problems are recognized, iron is considered an essential nutrient, important for human health, and does not pose significant health effects except in special cases.

Nested monitoring well data do not indicate iron to be a widespread water quality problem in groundwater in the WRD service area. As shown on **Figure 3.3,** in the Central Basin, iron was detected in WRD nested monitoring wells at concentrations above the SMCL of 0.3 mg/L in 14 out of 220 individual well zones (6%). In the West Coast Basin, iron was detected in WRD nested monitoring wells at concentrations above the SMCL in 16 out of 112 individual well zones (14%).

Figure 3.4 presents DDW water quality data for the maximum iron detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. In the Central Basin, iron was detected at concentrations above the SMCL of 0.3 mg/L in 15 out of 217 production wells (6%). In the West Coast Basin, iron was detected at concentrations above the SMCL in six out of 35 production wells (17%).

3.1.3 Manganese

Manganese is naturally occurring and in high concentrations may be objectionable in water in the same manner that iron is. Stains caused by manganese are black and are more unsightly and harder to remove than those caused by iron. While manganese is considered an essential nutrient for human health at low levels, an SMCL of 50 micrograms per liter (µg/L) is established for manganese due to its undesirable aesthetic qualities; manganese also has an NL of 500 µg/L.

Manganese concentrations in the WRD nested monitoring wells exhibit widespread vertical and horizontal variations across the WRD service area. In the southeast portion of the Central Basin, elevated manganese typically occurs in shallower aquifers above the Silverado producing zones. In the northern portion of the Central Basin, manganese is present in shallow zones, the Silverado zones, and the deeper zones. As shown in **Figure 3.5**, in the Central Basin nested well sites, manganese concentrations exceed the SMCL of 50 µg/L in 72 out of 220 individual well zones (33%), and in three of those 72 zones (4%) manganese was detected at concentrations above the NL of 500 µg/L. In West Coast Basin nested well sites, manganese was detected at concentrations above the SMCL in 51 out of 112 individual well zones (46%), and in six of those 51 zones (12%) it was detected at concentrations above the NL.

Figure 3.6 presents DDW water quality data for the maximum manganese detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. Manganese was detected in Central Basin production wells at concentrations above the SMCL of 50 µg/L in 36 out of 182 production wells (20%), and in one of those 36 wells (3%) manganese was detected at a concentration above the

NL of 500 µg/L. Manganese was detected in West Coast Basin production wells at concentrations above the SMCL in 20 out of 35 production wells (57%) but was not detected at concentrations above the NL in any of those 35 wells.

3.1.4 Chloride

Chloride at elevated levels causes water to taste salty and it is the characteristic constituent used to identify seawater intrusion. The recommended SMCL for chloride is 250 mg/L with an upper SMCL of 500 mg/L, and a short term SMCL of 600 mg/L.

Figure 3.7 presents water quality data for chloride in WRD nested monitoring wells in the WRD service area during WY 2021-2022. In the Central Basin, with only a few exceptions all 38 nested well sites generally have low chloride concentrations. As shown on Figure 3.7, chloride was detected in WRD nested monitoring wells in the Central Basin at concentrations above the upper SMCL of 500 mg/L in six out of 220 individual well zones (3%) and in five of those six wells (83%) chloride was detected above the short term SMCL of 600 mg/L. In the West Coast Basin, chloride was detected in WRD nested monitoring wells at concentrations above the upper SMCL of 500 mg/L in 30 out of 112 individual well zones (27%); in 26 of those 30 individual well zones (87%) chloride was at a concentration above the short term SMCL of 600 mg/L.

Figure 3.8 presents DDW water quality data for the maximum chloride detection in production wells in the WRD service area for a three-year period spanning WYs 2019-2022. Chloride was not detected above the upper SMCL of 500 mg/L in any of the 179 Central Basin production wells sampled for chloride during this period. In the West Coast Basin, four of the 32 (12%) production wells tested, all of which are located on the west side of the basin near the coast, had chloride concentrations above both the upper SMCL of 500 mg/L and the short term SMCL of 600 mg/L.

3.1.5 Nitrate

MCLs were established by DDW for two forms of nitrogen in drinking water, nitrate and nitrite. Nitrate (measured as nitrate) has an MCL of 45 mg/L, which corresponds

to 10 mg/L of nitrate as nitrogen. Nitrite (measured as nitrogen) has an MCL of 1 mg/L. The combined total of the nitrate and nitrite, measured as nitrogen, has an MCL of 10 mg/L. These constituents are regulated because they present possible acute health risks and can cause anoxia in infants. When consumed at concentrations in excess of the MCLs, they reduce the uptake of oxygen causing shortness of breath, lethargy, and a bluish skin color.

Nitrate concentrations in groundwater are also a concern because their presence indicates that a degree of contamination has occurred due to the degradation of organic matter. Native groundwater typically does not contain nitrate. It can be introduced into groundwater from agricultural practices such as fertilization of crops or lawns and leaching of animal wastes. Low concentrations of nitrogen compounds, including nitrate and nitrite, are present in treated recycled water below regulatory and permitted limits and may be a source of nitrate loading to groundwater. Typically, organic nitrogen and ammonia are the initial byproducts of the decomposition of human or animal wastes. Upon oxidation, the organic nitrogen and ammonia are converted first to nitrite and then to nitrate ions in the subsurface. A portion of the nitrate and nitrite are converted to nitrogen gas and are returned to the atmosphere.

Figure 3.9 presents nitrate (as nitrogen) water quality data for nested monitoring wells in the WRD service area during WY 2021-2022. In the Central Basin, nitrate (as nitrogen) was detected in WRD nested monitoring well locations at concentrations above the MCL of 10 mg/L in three out of 220 individual well zones (1%). In general, nested monitoring wells in the immediate vicinity of the Montebello and Los Angeles Forebays typically contain nitrate at concentrations below the MCL in the shallower zones. Some wells downgradient from the Montebello Forebay have middle zones with nitrate detections below the MCL. Nested wells further downgradient from the Forebays generally do not have detectable concentrations of nitrate. In the West Coast Basin, nitrate was detected in WRD nested monitoring well locations at concentrations above the MCL in four out of 112 individual well zones (4%).

Figure 3.10 presents DDW water quality data for the maximum nitrate detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. None of the 212 Central Basin production wells tested for nitrate contained nitrate (as nitrogen) above the MCL of 10 mg/L. None of the 33 production wells tested in the West Coast Basin for nitrate exceeded the MCL during WYs 2019-2022.

3.1.6 Trichloroethylene (TCE)

TCE is a solvent used in metal degreasing, textile processing, and dry cleaning. In addition to its multiple, acute effects on health, TCE is also classified as a probable human carcinogen. The MCL for TCE in drinking water is 5 µg/L. If present in water, TCE can be removed easily by common treatment processes, including air stripping or vapor extraction utilizing granular activated carbon filtration media.

As shown on **Figure 3.11**, in the Central Basin TCE was detected in WRD nested monitoring well locations at concentrations above the MCL of 5 µg/L in eight out of 220 individual well zones (4%). In the West Coast Basin, TCE was detected in WRD nested monitoring well locations at concentrations above the MCL in one out of 112 individual well zones (<1%). Nested wells impacted by TCE are generally located in the northern portion of the Central Basin, within or near the Los Angeles Forebay.

Figure 3.12 presents DDW water quality data for the maximum TCE detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. As shown on Figure 3.12, in the Central Basin TCE was detected at concentrations above the MCL of 5 µg/L in 16 out of 212 production wells (8%). Wells impacted by TCE are generally located in the northern portion of the Central Basin within, between and downgradient of the Montebello and Los Angeles Forebays. In the West Coast Basin, TCE was detected at a concentration above the MCL of 5 µg/L in one of the 33 production wells (3%) tested for TCE during WYs 2019-2022.

3.1.7 Tetrachloroethylene (PCE)

PCE (also known as tetrachloroethylene, tetrachloroethene, perc, perclene, and perchlor) is a solvent used commonly in the dry-cleaning industry, as well as in metal degreasing and textile processing. The MCL for PCE in drinking water is 5 µg/L. In addition to its multiple acute health effects, PCE is also classified as a probable human carcinogen. If present in water, PCE can be removed easily by common treatment processes, including air stripping or vapor extraction utilizing granular activated carbon filtration media.

As shown on **Figure 3.13**, in the Central Basin PCE was detected in WRD nested monitoring well locations at a concentration above the MCL of 5 µg/L in one out of 220 individual well zones (<1%). PCE was not detected at a concentration above the MCL in any of the WRD nested monitoring well sites located in the West Coast Basin.

Figure 3.14 presents DDW water quality data for the maximum PCE detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. In the Central Basin, PCE was detected at concentrations above the MCL of 5 µg/L in 12 out of 212 production wells (6%). Production wells with detectable PCE concentrations are primarily located within and in between the Los Angeles and Montebello Forebays; however, several are located to the south and further into the CBPA. PCE was not detected in any of the 33 West Coast Basin production wells tested for PCE.

3.1.8 Arsenic

Arsenic is an element that occurs naturally in the earth's crust and accordingly there are natural sources of arsenic, including weathering and erosion of rocks, deposition of arsenic in water bodies, and uptake of the metal by plants and animals. Consumption of food and water are the major sources of arsenic exposure for the majority of U.S. citizens. Over 90% of commercial arsenic is used as a wood preservative in the form of chromate copper arsenate to prevent dry rot, fungi, molds, termites, and other pests. People may also be exposed from industrial applications, such as semiconductor manufacturing, petroleum refining, animal feed additives, and herbicides. Arsenic is classified as a known human

carcinogen by the United States Environmental Protection Agency (USEPA), and causes other health effects, such as high blood pressure and diabetes. The DDW established an MCL of 10 µg/L for arsenic.

Figure 3.15 presents water quality data for arsenic in WRD nested monitoring wells during WY 2021-2022. In the Central Basin, arsenic was detected in WRD nested monitoring well locations at concentrations above the MCL of 10 µg/L in 20 out of 220 individual well zones (9%). In the West Coast Basin, arsenic was detected at a concentration above the MCL in one out of 112 individual well zones (<1%).

Figure 3.16 presents DDW water quality data for the maximum arsenic detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. In the Central Basin, arsenic was detected at concentrations above the MCL of 10 µg/L in eight out of 178 (4%) production wells. In the West Coast Basin, arsenic was not detected at a concentration above the MCL in any of the 28 production wells tested for arsenic.

3.1.9 Perchlorate

Perchlorate is used in a variety of defense and industrial applications, such as rockets, missiles, road flares, fireworks, air bag inflators, lubricating oils, tanning and finishing leather, and the production of paints and enamels. Under certain conditions, perchlorate is also reported to occur naturally in groundwater (Trumpolt, 1995). When ingested, it can inhibit the proper uptake of iodide by the thyroid gland, which causes a decrease in hormones for normal growth and development and normal metabolism. In October 2007, the DDW established an MCL of 6 µg/L for perchlorate.

Figure 3.17 presents perchlorate water quality data for WRD nested monitoring wells during WY 2021-2022. In the Central Basin, perchlorate was not detected in WRD nested monitoring well locations at concentrations above the MCL of 6 µg/L in any of the 220 individual well zones. In the West Coast Basin, perchlorate was detected in WRD

nested monitoring well locations at concentrations above the MCL in one out of 112 individual well zones (<1%).

Figure 3.18 presents DDW water quality data for the maximum perchlorate detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. In the Central Basin, perchlorate was detected at concentrations above the MCL of 6 µg/L in two out of 189 production wells (1%). Perchlorate was not detected in any of the 30 West Coast Basin production wells that were tested for perchlorate.

3.1.10 Hexavalent Chromium

Hexavalent chromium (chromium-6) and trivalent chromium (chromium-3) are two forms of the metal chromium found in groundwater. Together, these two forms of chromium are designated "total chromium". The MCL for total chromium is 50 µg/L. In 2014 California established an MCL of 10 µg/L for hexavalent chromium; however, on May 31, 2017, a judgment was issued by the Superior Court of California that invalidated the MCL for hexavalent chromium in drinking water. The Court has ordered the State Water Resources Control Board (SWRCB) to adopt a new MCL; in the meantime, the MCL for Total Chromium will remain in place. The SWRCB will use data collected since the standard was adopted in 2014 to help establish a new MCL; they note that it generally takes between 18 and 24 months to develop regulation. To remain consistent with prior reporting and aid in assessing concentration trends, WRD will continue to discuss hexavalent chromium results herein in terms of the historic MCL value of 10 µg/L until a new MCL is established by the SWRCB.

Both forms of chromium occur naturally in groundwater and are also introduced to soil and groundwater through disposal practices from commercial and industrial operations. Only hexavalent chromium is considered to pose health risks. It has been known to increase cancer risk when inhaled and has recently been shown to increase the risk of cancer if ingested.

Figure 3.19 shows hexavalent chromium concentrations in WRD nested monitoring wells in the WRD service area. In the Central Basin, hexavalent chromium was detected at concentrations above the historic MCL value of 10 µg/L in three out of 220 individual well zones (1%). In the West Coast Basin, hexavalent chromium was not detected at concentrations above the MCL in any of the individual well zones.

Figure 3.20 presents DDW water quality data for the maximum hexavalent chromium detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. In the Central Basin, hexavalent chromium was detected at a concentration above the historic MCL of 10 µg/L in six out of 58 production wells (10%). Hexavalent chromium was not detected in any of the 14 West Coast Basin production wells that were tested for hexavalent chromium.

3.1.11 1,4-Dioxane

1,4-Dioxane is a synthetic organic compound. It is used as a stabilizer for solvents (in particular 1,1,1-trichloroethane) and as a solvent itself in several industrial and commercial applications. 1,4-Dioxane is also found in trace amounts in some cosmetic and personal care products such as detergents and shampoos. 1,4-Dioxane is highly soluble in water, does not readily bind to soils, readily leaches to groundwater, and is resistant to naturally occurring biodegradation processes. The USEPA classifies 1,4-Dioxane as a probable human carcinogen and a known irritant, and as a result it is included in the Third Unregulated Contaminant Monitoring Rule (UCMR 3). In November 2010, the SWRCB established a drinking water NL of 1 µg/L, and a RL of 35 µg/L, for 1,4-Dioxane.

Figure 3.21 shows 1,4-Dioxane concentrations in WRD nested monitoring wells in the WRD service area. In the Central Basin, 1,4-Dioxane was detected at concentrations above the NL of 1 µg/L in 28 out of 220 individual well zones (13%). In the West Coast Basin, 1,4-Dioxane was detected above the NL of 1 µg/L in one of the 112 individual well zones (<1%). 1,4-Dioxane was not detected at concentrations above the RL of 35 µg/L in any of the individual well zones in the CBWCB.

Figure 3.22 presents DDW water quality data for the maximum 1,4-Dioxane detection in production wells across the WRD service area for a three-year period spanning WYs 2019-2022. In the Central Basin 1,4-Dioxane was detected at concentrations above the NL of 1 µg/L in 51 of the 73 (70%) production wells that were tested. In the West Coast Basin, 1,4-Dioxane was not detected in any of the two production wells that were tested. 1,4-Dioxane was not detected at concentrations above the RL of 35 µg/L in any CBWCB production wells.

3.2 QUALITY OF REPLENISHMENT WATER

This section discusses water quality data for key water quality constituents in CBWCB replenishment water and local surface water. Although numerous constituents are monitored, the constituents discussed and reported here are the ones found to be most prevalent at elevated levels or are of current regulatory interest. The data are classified according to their sources. The key water quality parameters of this discussion were also discussed for the WRD nested monitoring wells: TDS, iron, manganese, chloride, nitrate, TCE, PCE, arsenic, perchlorate, hexavalent chromium, and 1,4-Dioxane. Monitoring of these constituents helps to understand the general chemical nature of the recharge source, and its suitability for replenishing the groundwater basins.

3.2.1 Quality of Imported Water

Surface water is imported by the Metropolitan Water District of Southern California (MWD) to the WRD service area from the Colorado River and from Northern California via the State Water Project for potable supply and for groundwater recharge. Untreated imported water, when needed and available, is used for recharge at the Montebello Forebay Spreading Grounds. For groundwater recharge at the spreading grounds, Colorado River water deliveries have been suspended due to the potential presence of quagga mussels and there was no imported water received from the State Water Project for groundwater replenishment at the spreading grounds in WY 2021-2022. Currently, treated imported water and advanced treated recycled water are injected into the three seawater intrusion barriers. Treated imported water meets all drinking water standards and is thus suitable for

direct injection. For WY 2021-2022, approximately 12,409 AF of treated imported water were injected into the West Coast Basin, Dominguez Gap, and Alamitos Gap Barrier Projects combined. Average water quality data for treated and untreated imported water are presented in **Table 3.3.**

In 2021, the average TDS concentration of untreated Colorado River water was 583 mg/L and the average TDS concentration of untreated water from the State Water Project was 274 mg/L.

In 2021, average concentrations of nitrate (as Nitrogen) were below detection limits in both untreated Colorado River water and untreated water from the State Water Project. Recently and historically, both Colorado River and State Water Project nitrate concentrations have remained below the MCL.

In 2021, the average concentrations of iron were below detection limits in both untreated Colorado River water and untreated water from the State Water Project. Colorado River and State Water Project iron and manganese concentrations have recently and historically been below the SMCL.

The average chloride concentrations in untreated water from the Colorado River and State Water Project have not changed significantly over the past several years. State Water Project and Colorado River chloride concentrations have historically been below the SMCL of 500 mg/L for chloride.

According to the MWD, TCE, PCE, hexavalent chromium, and perchlorate were not detected in water from the Colorado River or State Water Project during calendar year 2021. Both Colorado River and State Water Project TCE, PCE, hexavalent chromium, and perchlorate concentrations have historically been below their respective MCLs.

3.2.2 Quality of Recycled Water

Recycled water is used for groundwater recharge in the WRD Service Area for percolation through the Montebello Forebay Spreading Grounds, which is comprised of the Rio Hondo Coastal Spreading Grounds and the San Gabriel Coastal Spreading Grounds, and for injection into the seawater barriers. In the Montebello Forebay, recycled water is produced by two entities: the Los Angeles County Sanitation Districts (LACSD), and the WRD. Both entities divert their produced water into the Montebello Forebay Spreading Grounds where it percolates into the subsurface to recharge the underlying aquifers. LACSD produces its tertiary-treated recycled water at its Whittier Narrows Water Reclamation Plant (WRP), San Jose Creek East WRP, San Jose Creek West WRP, and Pomona WRP facilities. WRD produces advanced treated recycled water that meets drinking water quality standards and other stringent regulations at its Albert Robles Center for Water Recycling and Environmental Learning (ARC) advanced water treatment facility (AWTF). The effluent from each of these five facilities is carefully controlled and monitored, as required by permits and other regulations, and typically shows little water quality variation over time. Average water quality data for the effluent from the five facilities is shown in **Table 3.3**.

All constituents listed have remained stable over recent WYs. Furthermore, arsenic, TCE, PCE, perchlorate, and hexavalent chromium have either not been detected or have been detected well below their respective MCLs in recycled water from the five facilities. 1,4-Dioxane concentrations in recycled water from the Whittier Narrows, San Jose Creek West, San Jose Creek East and Pomona WRPs, and from the ARC AWTF do not exceed the NL of 1.0 µg/L or the RL of 35 µg/L. N-Nitrosodimethylamine (NDMA) was detected above its NL of 10 nanograms per liter (ng/L) in recycled water from the San Jose Creek West, San Jose Creek East, and Pomona WRPs.

Currently, both treated imported water and advanced treated recycled water produced by the West Basin Municipal Water District (WBMWD) Edward C. Little Water Recycling Facility (ELWRF) are injected at the West Coast Basin Barrier to prevent the intrusion of seawater and replenish the groundwater basin. Treatment processes at the ELWRF include

microfiltration, reverse osmosis, ultraviolet light, advanced oxidation with hydrogen peroxide, and chemical stabilization. The advanced treated recycled water complies with all drinking water standards and thus, is suitable for direct injection. The ELWRF was expanded in September 2013, and it is expected that ultimately advanced treated recycled water will replace nearly all the imported water used for injection at the West Coast Basin Barrier. **Table 3.3** presents average water quality data for the advanced treated recycled water produced by the ELWRF.

The Alamitos Gap Seawater Intrusion Barrier currently receives both treated imported water and advanced treated recycled water produced by WRD's Leo J. Vander Lans Advanced Water Treatment Facility (Vander Lans AWTF) for injection. The Vander Lans AWTF treats the tertiary-treated effluent from the LACSD Long Beach WRP using microfiltration, reverse osmosis, ultraviolet light, and advanced oxidation with hydrogen peroxide. The advanced treated recycled water meets drinking water quality standards and other stringent regulations for direct injection into the aquifers. The Vander Lans AWTF was expanded in 2014 to allow additional capacity and ultimately to replace nearly all the imported water used for injection at the Alamitos Gap Seawater Intrusion Barrier. The facility has been consistently operational during WY 2021-2022 and has provided approximately 60% of barrier demand. The facility is expected to run at near full capacity in the future. **Table 3.3** presents average water quality data for the advanced treated recycled water produced by the Vander Lans AWTF.

The City of Los Angeles Terminal Island Water Reclamation Plant/Advanced Water Treatment Facility (TIWRP) produces advanced treated recycled water using microfiltration, reverse osmosis, ultraviolet light, and advanced oxidation using sodium hypochlorite. This water meets drinking water quality standards and other stringent regulations for direct injection into aquifers. Currently, treated imported water is blended with advanced treated recycled water from the TIWRP for injection at the Dominguez Gap Seawater Intrusion Barrier. Expansion of the TIWRP was completed in December 2016 and included the installation of an advanced oxidation process into the treatment train. In WY 2021-2022 various operational and maintenance issues prevented

TIWRP from providing the optimal volume of recycled water to the barrier. Through September 2022 the TIWRP has delivered approximately 62% of barrier demand. It is anticipated that ultimately the advanced treated recycled water produced at the facility will replace nearly all the imported water used for injection into the Dominguez Gap Seawater Intrusion Barrier. **Table 3.3** presents average water quality data for the advanced treated recycled water produced by the TIWRP.

3.2.3 Quality of Stormwater

Stormwater infiltrates the subsurface to varying degrees throughout the WRD service area. It is also intentionally diverted from the major storm channels and used for groundwater recharge along with imported and recycled water at the Montebello Forebay Spreading Grounds. Routine stormwater quality analyses are typically performed by LACPW and other entities; however, most of the constituents that are usually reported by LACPW were not analyzed during WY 2020-2021, and therefore those results are not available for inclusion in this report. Average stormwater quality data for those constituents that were provided by LACPW for WY 2020-2021 are presented on **Table 3.3**.

3.3 MINERAL CHARACTERISTICS OF GROUNDWATER IN THE CENTRAL BASIN AND WEST COAST BASIN

Major minerals data obtained from the WRD nested monitoring wells were used to characterize groundwater of discrete vertical zones (**Table 3.4**). Research by the USGS led to three distinct groupings of groundwater compositions. Group A groundwater is typically calcium bicarbonate or calcium bicarbonate/sulfate dominant. Group B groundwater has a typically calcium-sodium bicarbonate or sodium bicarbonate character. Group C has a sodium chloride character. Several of the WRD wells yield results that do not fall into one of the three major groups and are thus classified separately as Group D.

Groundwater from Group A likely represents recent recharge water containing a significant percentage of imported water. Group B represents older native groundwater replenished by natural local recharge. Group C represents groundwater impacted by seawater intrusion or connate saline brines. **Table 3.4** lists the groundwater group for each WRD nested monitoring well. Comparison of groundwater groups with well locations indicates that, in general, Group A groundwater is found at and immediately downgradient from the Montebello Forebay Spreading Grounds in all but the deepest zones. Group B groundwater is found farther down the flow path within the Central Basin and inland of the West Coast Basin Seawater Intrusion Barrier. Group C groundwater is generally found near the coastlines or in deeper zones. Several wells, grouped as "Other" on **Table 3.4**, exhibit a chemical character range different from Groups A, B, or C and indicate unique waters not characteristic of the dominant flow systems in the basins.

SECTION 4
SALT AND NUTRIENTS IN GROUNDWATER

In February 2009, the SWRCB adopted Resolution No. 2009-0011, which established a statewide Recycled Water Policy. This Policy encourages increased use of recycled water and local stormwater for groundwater recharge across the State. It also requires local entities to develop a Salt and Nutrient Management Plan (SNMP) for each groundwater basin in California to monitor groundwater quality and any impact due to increased use of recycled water and stormwater for recharge.

A SNMP Workplan was jointly prepared by the CBWCB stakeholders and approved by the Los Angeles Regional Water Quality Control Board in December 2011. The SNMP for the CBWCB was finalized on February 12, 2015 and adopted in July 2015. The full text of the "2015 Salt Nutrient Management Plan – 2015" can be found at *https://www.wrd.org/other-reports.*

The objective of the SNMP is to manage salts and nutrients from all sources "… on a basin-wide or watershed-wide basis in a manner that ensures attainment of water quality objectives and protection of beneficial uses." Future groundwater quality and assimilative capacity were calculated based on predicted salt and nutrient loading through 2025 in the CBWCB. Accordingly, current and proposed projects through 2025 were identified and used to develop strategies to manage salt and nutrient loading. The SNMP included the following:

- Stormwater and Recycled Water Use/Recharge Goals and Objectives,
- Characterization of the Hydrogeologic Conceptual Model/Water Quality,
- Estimation of Current and Future Salt and Nutrient Loading,
- A Basin-Wide Water Quality Monitoring Plan,
- Estimation of Salt and Nutrient Assimilative Capacity,
- An Anti-degradation Analysis,
- Implementation Measures to Manage Salt and Nutrient Loading, and
- California Environmental Quality Act analysis of the SNMP.

WRD's RGWMP was used to develop the SNMP monitoring program. The groundwater data evaluated in the annual RGWMRs provide an annual assessment of salt and nutrients in groundwater. In addition to the water quality maps generated and discussed in Section 3, historical trend graphs at key monitoring well locations, as described in the following sections, were used to assess salt and nutrient concentrations in groundwater.

4.1 SALT AND NUTRIENT MONITORING LOCATIONS

As discussed in the SNMP, TDS, chloride, and nitrate were identified as the most appropriate indicators of salt and nutrients in the CBWCB. These constituents, as well as other constituents of concern identified in the SNMP, are monitored in the WRD nested monitoring wells along with production wells located throughout the CBWCB.

As part of the SNMP monitoring program, 13 key monitoring well locations in the CBWCB were selected to evaluate past and current salt and nutrient concentrations in groundwater with respect to applicable water quality objectives (WQOs). As established in the Basin Plan, the WQO for TDS in the Central Basin CBWCB is 700 mg/L and in the West Coast Basin it is 800 mg/L. The WQO for chloride in the Central Basin is 150 mg/L and 250 mg/L in the West Coast Basin. The MCL/WQO for nitrate (as nitrogen) is 10 mg/L in both the Central Basin and the West Coast Basin.

In accordance with the statewide Recycled Water Policy, the 13 selected nested well locations are in the most critical areas of the basins, based on their proximity to water supply wells and groundwater recharge projects that utilize recycled water, including the seawater intrusion barriers (Alamitos Gap Barrier, Dominguez Gap Barrier, and West Coast Basin Barrier) and the Montebello Forebay Spreading Grounds. There are three nested well locations in the Montebello Forebay, one in the Los Angeles Forebay, four in the CBPA, one in the Whittier Area, and four in the West Coast Basin. Monitoring locations in the Montebello Forebay and Los Angeles Forebay target groundwater where connectivity with adjacent surface waters is possible.

The 13 key nested well locations are shown as a different symbol set on **Figure 1.3**. These locations include 69 individual monitoring zones, screened in specific CBWCB aquifers. The depths and aquifer designation for these key monitoring wells are provided in **Table 1.1**. WRD is the entity, designated by the SWRCB, responsible for collecting TDS, chloride, and nitrate samples (on a semi-annual basis) from these nested wells.

4.2 SALT AND NUTRIENT MONITORING RESULTS AND EVALUATION

Concentrations of salt and nutrients have been and continue to be closely monitored in all WRD nested monitoring wells and purveyors' production wells and results are discussed in **Section 3**. Concentrations of TDS, chloride, and nitrate (as nitrogen) for all WRD nested wells sampled during WY 2021-2022 are shown on maps (**Figures 3.1, 3.7, and 3.9**, respectively) and are summarized along with other monitored constituents identified in **Tables 3.1** and **3.2**. TDS, chloride, and nitrate (as nitrogen) concentrations in production wells, sampled during WYs 2019-2022 are presented on maps (**Figures 3.2, 3.8**, and **3.10,** respectively). Trends for TDS and chloride concentrations at the 13 key well locations discussed above in Section 4.1 are plotted on graphs and compared to SMCLs and WQOs (**Figures 4.1** through **4.13**). Nitrate generally has not been detected in the monitoring wells, or it has been detected only at concentrations significantly below the MCLs and WQOs, and thus, trend graphs for nitrate have not been prepared. However, nitrate continues to be monitored as part of the RGWMP and is reported in **Section 3** of the annual RGWMRs.

For the Montebello Forebay, TDS and chloride concentration trends for the key well locations Rio Hondo #1 (six zones), Pico #2 (six zones), and Norwalk #2 (six zones) are presented on **Figures 4.1** through **4.3**, respectively.

- At Rio Hondo #1, TDS and chloride concentrations have historically been and remain below the WQOs and SMCLs.
- At Pico #2, TDS and chloride concentrations have generally remained below the SMCLs and WQOs, with the exception of a one-time detection in September 2008 of TDS in Zone 2 at a concentration slightly above the WQO (750 mg/L), and a

one-time detection in September 2018 of chloride in Zone 6 at the WQO of 150 mg/L. TDS concentrations in Zone 2 have increased slightly since the fall of 2020, but they remain below the WQO.

- At Norwalk #2, TDS and chloride concentrations have historically been and remain below the WQOs and SMCLs.

For the Los Angeles Forebay, the key well is Huntington Park #1 (four zones). TDS and chloride concentration trend graphs are shown on **Figure 4.4**.

- At Huntington Park #1, the deeper two zones show stable trends for TDS and chloride at concentrations below the WQOs and SMCLs. The shallower two zones indicate a relatively stable trend in chloride concentrations that are below both the WQO and SMCL. TDS concentrations in the shallower two zones have increased slightly since the wells were first installed. Over the past 12 years TDS concentrations in the shallowest zone (Zone 4) are consistently above the WQO of 700 mg/L. TDS concentrations in Zone 3 have fluctuated just above and below the WQO over the past 12 years, however since the spring of 2016 they have been measured at concentrations greater than the WQO. TDS concentrations in both shallow zones remain below the SMCL of 1,000 mg/L.

For the CBPA, key wells include South Gate #1 (five zones), Willowbrook #1 (four zones), Long Beach #6 (six zones), and Seal Beach #1 (seven zones). TDS and chloride trends are shown on **Figures 4.5** through **4.8,** respectively.

- At South Gate #1, the four deeper zones show TDS and chloride concentrations at relatively consistent values below the SMCLs and WQOs. TDS and chloride concentrations in Zone 5 of South Gate #1 have increased slightly since initial sampling but have remained relatively stable over the past 13 years and are below both the WQOs and SMCLs.
- At Willowbrook #1, all four zones show stable trends in TDS and chloride concentrations and are at values well below both the WQOs and SCMLs.
- At Long Beach #6, all six zones show stable chloride trends with concentrations well below both the WQO and SMCL. TDS concentrations in Zones 3, 4, 5 and 6

are stable and below both the WQO and SMCL. In Zone 1, the deepest zone of Long Beach #6, TDS is typically detected close to the WQO of 700 mg/L. TDS concentrations in Zone 2 fluctuate by as much as 50% with historic highs near the WQO; however, over the past seven years TDS concentrations have stabilized somewhat in Zone 2, are below the WQO, and show a generally decreasing trend.

- At Seal Beach #1, the deeper six zones have historically contained TDS and chloride at concentrations below the WQOs and SMCLs; however, chloride concentrations in Zone 5 have increased over the past six years and have been measured at concentrations above the WQO, but below the SMCL, for the past four years. TDS and chloride concentrations in Zone 7 increased for several years after the wells were first installed; however, concentrations of both constituents have since stabilized somewhat. TDS and chloride concentrations in Zone 7 are both at values well above the WQOs and SCMLs and are likely due to the effects of seawater intrusion.

For the Whittier Area, represented by key well Whittier #1 (five zones), TDS and chloride trends are shown on **Figure 4.9**.

- At Whittier #1, TDS concentrations in Zones 4 and 5 have been generally stable since the wells were installed and are below both the WQO and SMCL. TDS concentrations in Zones 1, 2, and 3 have historically exceeded the WQO and SMCL; however, TDS concentrations in Zones 1 and 2 have remained stable, and in Zone 3 after increasing for several years, TDS concentrations have remained relatively stable for the past six years. Chloride concentrations in Zones 4 and 5 have been below both the WQO and SMCL since the wells were installed. Chloride concentrations in Zones 1, 2, and 3 have shown a stable trend since the wells were installed; however, although they have been well below the SCML, they have consistently exceeded the WQO.

For the West Coast Basin, key wells include PM-4 Mariner (four zones), Carson #1 (four zones), Manhattan Beach #1 (seven zones), and Wilmington #2 (five zones). TDS and chloride trends are presented on **Figures 4.10** through **4.13**, respectively.

- At PM-4 Mariner, Zones 1, 3, and 4 show TDS and chloride at relatively consistent concentrations below the WQOs and SMCLs. However, in Zone 2 TDS and chloride concentrations are well above the WQOs and SMCLs and both show generally increasing trends since monitoring began in 1998. These increasing concentration trends are attributed to historical seawater intrusion prior to the construction of the West Coast Basin Seawater Barrier.
- At Carson #1, all four zones contain TDS and chloride concentrations below both the WQOs and SMCLs; here the three deeper zones show relatively stable TDS and chloride concentrations, while concentrations of both constituents in the shallow Zone 4 have decreased from those observed during first few years of monitoring; concentrations of both have been stable for the past 19 years.
- At Manhattan Beach #1, groundwater in this coastal area shows evidence of impact by seawater intrusion. TDS concentrations in five of the seven zones exceed the WQO and SMCL, and in four zones the WQO and SMCL for chloride are exceeded. TDS and chloride concentrations in all seven of the zones at Manhattan Beach #1 appear to be rather stable.
- At Wilmington #2, TDS and chloride concentrations in Zones 1 and 3 have historically been below the WQOs and SMCLs but have increased to values that for the past several years have exceeded the WQOs. In Zones 2 and 5, TDS and chloride concentrations have been consistently above both the WQOs and SMCLs; in Zone 2 they have remained relatively stable, but in Zone 5 they have decreased to values well below those detected during the first years of sampling. In Zone 4, TDS and chloride concentrations initially exceeded both the WQOs and SMCLs, but they have decreased over time to the extent that they have been below both the WQOs and SMCLs for the past several years. Concentration decreases in Zone 4 are likely due to the implementation measures discussed in Section 4.3 below.

4.3 IMPLEMENTATION MEASURES TO MANAGE SALT AND NUTRIENT LOADING

As summarized in the previous section, overall TDS and chloride concentrations are generally stable at most of the 13 key nested monitoring locations in the CBWCB. While a few individual zones show increasing trends, a comparable number show decreasing trends. Notably, TDS and chloride concentrations in the two shallowest zones at nested well location Rio Hondo #1 and the three shallowest zones at Pico #2, each of which is beneath and adjacent to the Montebello Forebay recharge basins, have generally fluctuated within the same concentration range since 1998. At the key well location in the Los Angeles Forebay, Huntington Park #1, the two shallower zones have variable TDS concentrations at and above the WQO, but the two deeper zones do not show increasing TDS levels. In the CBPA, TDS concentrations in the shallowest zone at key well location South Gate #1 fluctuate slightly but remain relatively stable, and chloride concentrations have remained relatively stable over the past 16 years. TDS and chloride concentrations in the four lower zones are stable. Key nested monitoring well locations near the coast, including PM-4 Mariner, Manhattan Beach #1, and Seal Beach #1, have zones that show increasing TDS and chloride concentration trends that can be attributed to historical seawater intrusion. In the relatively isolated Whittier Area, historically high TDS and chloride concentrations in the middle and deep zones are stable and are not expected to fluctuate in response to anticipated management practices.

As discussed in the SNMP, TDS and chloride concentrations in the Central Basin are not expected to exceed WQOs in the future, and current and proposed projects in the basin are not expected to increase salt and nutrient concentrations above the available assimilative capacity. Two notable projects in the Central Basin include the increased use of advanced treated recycled water for injection at the Alamitos Gap Seawater Intrusion Barrier and the increased use of recycled water at the Montebello Forebay Spreading Grounds using a blend of tertiary treated water produced by the LACSD and advanced treated recycled water produced by WRD at its ARC AWTF (formerly known as the Groundwater Reliability Improvement Program (GRIP)).

In the West Coast Basin, average TDS and chloride concentrations can exceed WQOs due to historical seawater intrusion. However, these concentrations are either relatively stable or generally decreasing and are anticipated to achieve WQOs in the future due to implementation measures such as the increased use of advanced treated recycled water for injection at the West Coast Basin and Dominguez Gap Seawater Intrusion Barrier and the continued operation of the desalter wells located in Torrance.

Nitrate concentrations in the CBWCB remain low and are not expected to increase above the MCL or WQO in the future. Overall, the data show that salt and nutrient concentrations in groundwater are stable as a result of past and current groundwater management practices. Based on the existing water quality of the CBWCB and the future groundwater quality as estimated from the SNMP analysis, existing and planned implementation measures appear adequate to manage salt and nutrient loading on a sustainable basis.

SECTION 5
SUMMARY OF FINDINGS

This RGWMR was prepared by WRD to provide a comprehensive review of groundwater conditions in the WRD service area during WY 2021-2022. A summary of findings is presented below.

- Artificial replenishment activities combined with natural replenishment and controlled pumping have ensured a sustainable, reliable supply of groundwater in the WRD service area. Artificial replenishment water sources used by WRD include imported water supplied by MWD member agencies, tertiary-treated recycled water produced by the LACSD, and advanced treated recycled water produced by WBMWD, the City of Los Angeles, and WRD.
- Groundwater levels (heads) are monitored continuously in the WRD service area throughout the year. The WRD nested monitoring wells show clear, significant differences in groundwater elevations between the various aquifers. The water level differences in these nested wells reflect both hydrogeologic and pumping conditions in the WRD service area. Vertical head differences of up to 90 feet occur between zones above and within the producing aquifers. The greatest head differences between aquifers tend to occur in the southern area of the Central Basin (Long Beach) and the inland, eastern areas of the West Coast Basin (Gardena and Carson), while the smallest differences occur in the recharge area of the Montebello Forebay, and the southern area of the West Coast Basin (Torrance), which has merged and unconfined aquifers.
- Hydrographs and groundwater elevations measured in basinwide nested monitoring wells and key production wells in WY 2021-2022 indicate variable changes in groundwater elevations across the CBWCB during WY 2021-2022. In the unconfined Montebello Forebay in the vicinity of the spreading grounds, water levels are more than 11 feet lower than they were in fall 2021. Across the unconfined Los Angeles Forebay, water levels have either decreased or remain relatively unchanged from those measured in fall 2021; in the west they are as much

as three feet lower than, and in the east they are relatively unchanged from, those measured in WY 2020-2021. Water levels in the Whittier Area have either decreased or remain relatively unchanged from those measured in WY 2020-2021; in the west they are as much as seven feet lower than, and in the east they are relatively unchanged from, those measured in fall 2021. In the CBPA, water levels have generally increased nearly everywhere compared to those measured in fall 2021. Water level changes in the CBPA range from decreases west of the Los Angeles Forebay of more than four feet to increases of more than 17 feet in the southernmost portion of the CBPA along the Newport-Inglewood Uplift near the eastern boundary of the District.

- In the West Coast Basin water level changes were somewhat variable in WY 2021-2022. In the northern portion of the basin between the Newport-Inglewood Uplift and the Charnock Fault water levels have increased and are as much as seven feet higher than they were in fall 2021. In the southern portion of the basin near the Newport-Inglewood Uplift and southern coastal area, as well as in the vicinity of the northern portion of the West Coast Barrier Project near the cities of Hermosa Beach-Redondo Beach-El Segundo, water levels have decreased slightly and are between one and five feet lower than they were in fall 2021. In much of the Carson-Torrance-Lawndale and LAX areas, water levels are relatively unchanged from those measured in fall 2021.
- District wide, groundwater levels increased an average of more than one foot in WY 2021-2022. Across much of the northern portion of the Central Basin, water levels decreased; in the Montebello Forebay region water levels decreased an average of more than three feet, in the Los Angeles Forebay region they decreased an average of more than one foot, and in the Whittier Area they decreased by an average of more than two feet. In the CBPA water levels increased by an average of more than four feet. In the West Coast Basin, water levels decreased an average of less than one-half of one foot.
- There was an overall loss in groundwater storage across the District of 20,000 AF in WY 2021-2022, essentially all of which occurred in the Central Basin. In the unconfined Montebello Forebay there was a loss in storage of 18,200 AF, in the

Los Angeles Forebay a loss of 1,900 AF, in the Whittier Area a loss of 900 AF, but in the CBPA there was a gain in storage of 1,000 AF. In the West Coast Basin there was no appreciable change in groundwater storage in WY 2021-2022.

- For the RGWMP assessment of groundwater quality, WRD collected over 600 samples from its nested monitoring wells throughout the WY and obtained water quality data from potable wells in the District from the DDW database. WRD uses 11 chemical compounds to summarize overall water quality across the district although results for over 100 compounds are present in our databases for each sample collected for the RGWMP. A discussion of the 11 constituents used follows:
  - TDS concentrations for wells located in the Central Basin are relatively low, while those in the West Coast Basin are elevated in certain portions, primarily the coastal areas from Redondo Beach to LAX and the Torrance, Inglewood and Dominguez Gap areas. The elevated TDS concentrations (above the SMCL) may be caused by seawater intrusion, connate brines, or perhaps oil field brines.
  - Iron is generally common at low concentrations across the WRD service area. In Central Basin nested wells, iron concentrations above the SMCL are observed in and just downgradient of the Los Angeles and Montebello Forebays, while in production wells iron concentrations above the SMCL extend further downgradient from the Forebays southward into the CBPA. Across the West Coast Basin in both nested and production well sites, iron is present at concentrations above the SMCL at numerous locations.
  - Manganese is very common in groundwater across the CBWCB and was detected at all of the nested monitoring well sites and more than one third of the production well sites. It is present in the Central Basin at concentrations above the SMCL in more than 30% of the nested monitoring wells and about 20% of production wells but was only present above its NL in less than 5% of either type of those wells. Manganese is even more widespread in the West Coast Basin, where it was detected above the SMCL in more than 45% of nested monitoring wells and more than 55% of the production wells. It was detected

above the NL in more than 10% of the nested monitoring wells and was not detected above the NL in any of the production wells in the West Coast Basin.

- Chloride concentrations are low in the Central Basin and in wells within the inland areas of the West Coast Basin. Some coastal areas of the West Coast Basin are impacted by seawater intrusion and thus have high chloride concentrations in groundwater.
- Nitrate concentrations in WRD nested monitoring wells in the CBWCB are generally below the MCL. The few nested wells that have nitrate concentrations approaching or exceeding the MCL tend to be limited to the shallowest zones at a given location and are likely due either to localized surface recharge, or isolated areas of shallow impacts from industrial operations. Nitrate concentrations in CBWCB production wells are below the MCL.
- TCE detections in Central Basin nested monitoring wells are restricted to within and near the Los Angeles Forebay, but in Central Basin production wells elevated TCE concentrations are also observed within the Montebello Forebay and in wells in the vicinity and downgradient of both the Los Angeles and Montebello Forebays. In the West Coast Basin, TCE in nested monitoring wells is observed at a concentration above the MCL in just one individual well zone in the Hawthorne area, and it is not detected in any of the West Coast Basin production wells.
- PCE was detected above the MCL in one of the Central Basin nested monitoring wells located in the Los Angeles Forebay, and detections below the MCL are observed within and near the Los Angeles and Montebello Forebays. Elevated concentrations of PCE in Central Basin production wells are observed in the areas within, between, and downgradient of the Los Angeles and Montebello Forebays. In the West Coast Basin, PCE was not detected in any of the nested monitoring wells or production wells.
- Arsenic is present at low concentrations in groundwater from most of the WRD nested monitoring well sites. With few exceptions, arsenic in nested monitoring wells at concentrations above the MCL is generally restricted to areas within the southeastern portion of the Central Basin and in the Gardena area

of the West Coast Basin. Arsenic is also common in Central Basin production wells; however, it was only detected at concentrations above the MCL in about 4% of the wells tested, and these wells are generally restricted to the southeastern portion of the Central Basin. In the West Coast Basin, Arsenic was not detected at a concentration above the MCL in any of the 28 production wells tested.

- Perchlorate is relatively common at low concentrations in the nested monitoring wells within and downgradient of the Los Angeles and Montebello Forebays in the Central Basin but is rarely detected in West Coast Basin nested wells. Perchlorate in Central Basin production wells is detected within and just east of the Los Angeles Forebay, within the Montebello Forebay, and between the two Forebays. Perchlorate was not detected in any of the 30 West Coast Basin production wells.
- Hexavalent chromium is present in the CBWCB at low concentrations at nearly every nested monitoring well site, but it is only found at concentrations above the historic MCL in two nested monitoring well sites located either in, or just outside of, the Los Angeles Forebay. In production wells, hexavalent chromium is present at concentrations above its historic MCL in a few wells located within and downgradient of the Los Angeles and Montebello Forebays in the Central Basin, and it is not observed in any of the West Coast Basin production wells.
- 1,4-Dioxane is present at concentrations above the NL in Central Basin nested monitoring and production wells within and between both the Los Angeles and Montebello Forebays, as well as south into the CBPA adjacent to the Los Angeles and San Gabriel Rivers. In the West Coast Basin, 1,4-Dioxane was detected above the NL in one of the nested monitoring well sites, but it was not detected in any of the production wells tested.

- The water quality of key constituents in untreated imported water recharged at the Montebello Forebay Spreading Grounds and treated imported water injected at the seawater barriers remains in compliance with regulatory limits. Average TDS, iron, manganese, chloride, nitrate, and arsenic concentrations in imported water used for

recharge do not exceed their respective MCLs. Meanwhile, TCE, PCE, hexavalent chromium, and perchlorate were not detected in the untreated imported water.

- The water quality of key constituents in recycled water used for recharge at the Montebello Forebay Spreading Grounds and injection at the seawater intrusion barriers complies with regulatory limits and is monitored regularly to ensure its safe use.
- A total of 13 WRD nested groundwater monitoring wells across the CBWCB are designated for salt and nutrient (specifically, TDS, chloride, and nitrate) sampling and reporting as part of the SNMP monitoring program. Overall TDS and chloride concentrations are generally stable at most of the 13 key nested monitoring locations in the CBWCB. While a few individual zones show increasing trends, a comparable number show decreasing trends. Nitrate concentrations remain below the MCL at all 13 monitoring locations.
- In the Central Basin, TDS concentrations have been generally stable but exceed the WQO in the two shallowest zones at Huntington Park #1, and they exceed both the WQO and SMCL in the three deepest zones at Whittier #1 and the shallowest zone at Seal Beach #1. Chloride concentrations have also been relatively stable but exceed the WQO in the three deepest zones at Whittier #1, and they exceed both the WQO and SMCL in the shallowest zone at Seal Beach #1. TDS and chloride concentrations have increased in Zone 5 at Seal Beach #1 in recent years, and chloride has been observed at concentrations in excess of the WQO in that zone for the past four years. In each of the remaining six key nested monitoring well sites located in the Central Basin, TDS and chloride concentrations have remained relatively stable within each of the individual monitoring wells at concentrations below both the WQOs and SMCLs.
- In the West Coast Basin, average TDS and chloride concentrations exceed WQOs and SMCLs locally due to historical seawater intrusion. However, these concentrations are in general either relatively stable or are decreasing slightly and are anticipated to achieve WQOs in the future as a result of current groundwater management practices.

As shown by the data presented herein, groundwater in the WRD service area is of generally good quality and is suitable for use by the pumpers in the District, the stakeholders, and the public. Groundwater from localized areas with marginal to poor water quality can still be utilized but may require treatment prior to being used as a potable source.

SECTION 6
FUTURE ACTIVITIES

WRD will continue to update and augment its RGWMP to best serve the needs of the District, the pumpers, and the public. Some of the activities planned for the RGWMP in the current WY 2022-2023 are listed below.

- WRD continues refining the regional understanding of groundwater occurrence, movement, and quality. Water levels will continue to be recorded using automatic dataloggers to monitor groundwater elevation differences throughout the year, and in select wells telemetry systems will be used to transmit water level data to District computers. Conductivity sensors are being utilized at selected nested monitoring wells to track water quality changes and supplement the automated water level data.
- WRD will continue to sample groundwater from nested monitoring wells and analyze the samples for general water quality constituents. The focus will continue on constituents of interest to WRD, the pumpers, and other stakeholders, such as TCE, PCE, manganese, arsenic, perchlorate, hexavalent chromium and 1,4-Dioxane. As regulators consider new water quality standards for chemicals of emerging concern (CECs) that have not been comprehensively monitored in the past, WRD's nested monitoring well network is in good position to screen for emerging CECs in groundwater which may include pesticides, pharmaceuticals and personal care products, oil and gas field indicators, and other CECs.
- WRD will be working on refining the hydrogeologic conceptual model of the CBWCB to improve the framework for understanding the groundwater system and for use as a planning tool. WRD will use data from the RGWMP along with an update to the groundwater model that was developed and published by the USGS in 2021 as tools in its refinement of the conceptual model.
- Consistent with WRD's mission to provide, protect, and preserve safe and sustainable groundwater and as required by the State's Recycled Water Policy, a SNMP is in place and will continue to be implemented. Existing and planned

implementation measures are and will continue to be protective of groundwater quality and its beneficial uses.

- Through the RGWMP, WRD will continue to collect CBWCB groundwater level data, track seasonal and long-term trends and provide the data to the CASGEM program.
- WRD will continue to monitor the quality of replenishment water sources to ensure the CBWCB are being recharged with high-quality water.
- WRD will continue to use the data generated by the RGWMP along with WRD's GIS capabilities to address current and potential water quality issues and groundwater replenishment in its service area.

SECTION 7
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TABLES

TABLE 1.1
CONSTRUCTION INFORMATION FOR WRD NESTED MONITORING WELLS

Well Name	Zone	WRD ID Number	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Aquifer Designation [1]
Bell #1	1	102041	1750	1730	1750	Pico Formation [2]
	2	102042	1215	1195	1215	Sunnyside
	3	102043	985	965	985	Sunnyside
	4	102044	635	615	635	Silverado
	5	102045	440	420	440	Jefferson
	6	102046	270	250	270	Gage
Bell Gardens #1	1	101954	1795	1775	1795	Sunnyside [2]
	2	101955	1410	1390	1410	Sunnyside [2]
	3	101956	1110	1090	1110	Sunnyside
	4	101957	875	855	875	Sunnyside
	5	101958	575	555	575	Silverado
	6	101959	390	370	390	Lynwood
Carson #1	1	100030	1010	990	1010	Silverado
	2	100031	760	740	760	Silverado
	3	100032	480	460	480	Lynwood
	4	100033	270	250	270	Gage [2]
Carson #2	1	101787	1250	1230	1250	Sunnyside [2]
	2	101788	870	850	870	Sunnyside [2]
	3	101789	620	600	620	Silverado
	4	101790	470	450	470	Silverado
	5	101791	250	230	250	Lynwood
Carson #3	1	102075	1800	1600	1620	Pico Formation [2]
	2	102076	1240	1220	1240	Sunnyside [2]
	3	102077	1100	1080	1100	Silverado [2]
	4	102078	890	870	890	Silverado
	5	102079	640	620	640	Silverado
	6	102080	380	360	380	Lynwood
Cerritos #1	1	100870	1215	1155	1175	Sunnyside [2]
	2	100871	1020	1000	1020	Silverado [2]
	3	100872	630	610	630	Lynwood
	4	100873	290	270	290	Gage
	5	100874	200	180	200	Artesia
	6	100875	135	125	135	Artesia
Cerritos #2	1	101781	1470	1350	1370	Sunnyside [2]
	2	101782	935	915	935	Silverado
	3	101783	760	740	760	Lynwood [2]
	4	101784	510	490	510	Hollydale
	5	101785	370	350	370	Gage
	6	101786	170	150	170	Artesia
Cerritos #3	1	103085	2120	2100	2120	Sunnyside
	2	103086	1670	1650	1670	Sunnyside
	3	103087	1395	1375	1395	Sunnyside
	4	103088	1050	1030	1050	Silverado
	5	103089	780	760	780	Hollydale
	6	103090	450	430	450	Hollydale
	7	103091	255	235	255	Gage

1 - Unless otherwise noted, aquifer designations are based on DWR's Bulletin 104.
2 - Aquifer designation is based on WRD's in-house interpretation.

TABLE 1.1
CONSTRUCTION INFORMATION FOR WRD NESTED MONITORING WELLS

Well Name	Zone	WRD ID Number	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Aquifer Designation [1]
Chandler #3B	1	100082	363	341	363	Silverado [2]
Chandler #3A	2	100083	192	165	192	Lynwood [2]
Commerce #1	1	100881	1390	1330	1390	Pico Formation [2]
	2	100882	960	940	960	Sunnyside
	3	100883	780	760	780	Sunnyside [2]
	4	100884	590	570	590	Silverado
	5	100885	345	325	345	Jefferson
	6	100886	225	205	225	Hollydale
Compton #1	1	101809	1410	1370	1390	Sunnyside [2]
	2	101810	1170	1150	1170	Sunnyside [2]
	3	101811	820	800	820	Silverado
	4	101812	480	460	480	Hollydale
	5	101813	325	305	325	Gage
Compton #2	1	101948	1495	1475	1495	Pico Formation [2]
	2	101949	850	830	850	Sunnyside [2]
	3	101950	605	585	605	Silverado
	4	101951	400	380	400	Lynwood [2]
	5	101952	315	295	315	Hollydale [2]
	6	101953	170	150	170	Exposition
Downey #1	1	100010	1190	1170	1190	Sunnyside [2]
	2	100011	960	940	960	Sunnyside [2]
	3	100012	600	580	600	Silverado
	4	100013	390	370	390	Jefferson
	5	100014	270	250	270	Gage
	6	100015	110	90	110	Gaspur
Gardena #1	1	100020	990	970	990	Pico Formation [2]
	2	100021	465	445	465	Silverado
	3	100022	365	345	365	Lynwood [2]
	4	100023	140	120	140	Gage
Gardena #2	1	101804	1335	1275	1335	Pico Formation [2]
	2	101805	790	770	790	Silverado
	3	101806	630	610	630	Silverado
	4	101807	360	340	360	Lynwood
	5	101808	255	235	255	Gardena
Hawthorne #1	1	100887	990	910	950	Pico Formation [2]
	2	100888	730	710	730	Sunnyside [2]
	3	100889	540	520	540	Sunnyside [2]
	4	100890	420	400	420	Silverado
	5	100891	260	240	260	Lynwood
	6	100892	130	110	130	Gage
Huntington Park #1	1	100005	910	890	910	Silverado
	2	100006	710	690	710	Lynwood
	3	100007	440	420	440	Hollydale
	4	100008	295	275	295	Gage
	5	100009	134	114	134	Gaspur

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2 - Aquifer designation is based on WRD's in-house interpretation.

TABLE 1.1
CONSTRUCTION INFORMATION FOR WRD NESTED MONITORING WELLS

Well Name	Zone	WRD ID Number	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Aquifer Designation [1]
Inglewood #1	1	100091	1400	1380	1400	Pico Formation [2]
	2	100092	885	865	885	Pico Formation [2]
	3	100093	450	430	450	Silverado
	4	100094	300	280	300	Lynwood [2]
	5	100095	170	150	170	Gage
Inglewood #2	1	100824	860	800	840	Pico Formation [2]
	2	100825	470	450	470	Silverado [2]
	3	100826	350	330	350	Lynwood [2]
	4	100827	245	225	245	Gage [2]
Inglewood #3	1	102138	1940	1900	1940	Pico Formation [2]
	2	102139	1460	1440	1460	Pico Formation [2]
	3	102140	1275	1255	1275	Pico Formation [2]
	4	102141	910	890	910	Pico Formation [2]
	5	102142	560	540	560	Silverado
	6	102143	390	370	390	Lynwood
	7	102144	265	245	265	Gage
Lakewood #1	1	100024	1009	989	1009	Sunnyside
	2	100025	660	640	660	Lynwood
	3	100026	470	450	470	Hollydale
	4	100027	300	280	300	Gage
	5	100028	160	140	160	Artesia
	6	100029	90	70	90	Bellflower
Lakewood #2	1	102151	2000	1960	2000	Sunnyside [2]
	2	102152	1760	1740	1760	Sunnyside [2]
	3	102153	1320	1300	1320	Sunnyside [2]
	4	102154	1015	995	1015	Silverado
	5	102155	710	690	710	Lynwood
	6	102156	575	555	575	Jefferson
	7	102157	275	255	275	Gage
	8	102158	120	110	120	Artesia
La Mirada #1	1	100876	1150	1130	1150	Sunnyside
	2	100877	985	965	985	Silverado [2]
	3	100878	710	690	710	Lynwood [2]
	4	100879	490	470	490	Jefferson [2]
	5	100880	245	225	245	Gage
Lawndale #1	1	102171	1400	1360	1400	Pico Formation [2]
	2	102172	905	885	905	Sunnyside [2]
	3	102173	635	615	635	Silverado
	4	102174	415	395	415	Silverado
	5	102175	310	290	310	Lynwood
	6	102176	190	170	190	Gardena
Lomita #1	1	100818	1340	1240	1260	Pico Formation [2]
	2	100819	720	700	720	Silverado
	3	100820	570	550	570	Silverado
	4	100821	420	400	420	Lynwood
	5	100822	240	220	240	Gage [2]
	6	100823	120	100	120	Gage [2]

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2 - Aquifer designation is based on WRD's in-house interpretation.

TABLE 1.1
CONSTRUCTION INFORMATION FOR WRD NESTED MONITORING WELLS

Well Name	Zone	WRD ID Number	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Aquifer Designation [1]
Long Beach #1	1	100920	1470	1430	1450	Sunnyside [2]
	2	100921	1250	1230	1250	Sunnyside
	3	100922	990	970	990	Silverado [2]
	4	100923	619	599	619	Lynwood [2]
	5	100924	420	400	420	Jefferson [2]
	6	100925	175	155	175	Artesia
Long Beach #2	1	101740	1090	970	990	Sunnyside
	2	101741	740	720	740	Silverado [2]
	3	101742	470	450	470	Silverado
	4	101743	300	280	300	Lynwood
	5	101744	180	160	180	Gage
	6	101745	115	95	115	Gaspur
Long Beach #3	1	101751	1390	1350	1390	Pico Formation [2]
	2	101752	1017	997	1017	Silverado
	3	101753	690	670	690	Silverado [2]
	4	101754	550	530	550	Silverado [2]
	5	101755	430	410	430	Lynwood
Long Beach #4	1	101759	1380	1200	1220	Pico Formation [2]
	2	101760	820	800	820	Sunnyside [2]
Long Beach #6	1	101792	1530	1490	1510	Pico Formation [2]
	2	101793	950	930	950	Sunnyside
	3	101794	760	740	760	Sunnyside
	4	101795	500	480	500	Silverado
	5	101796	400	380	400	Lynwood
	6	101797	240	220	240	Gage
Long Beach #8	1	101819	1495	1435	1455	Pico Formation [2]
	2	101820	1040	1020	1040	Sunnyside [2]
	3	101821	800	780	800	Silverado [2]
	4	101822	655	635	655	Silverado [2]
	5	101823	435	415	435	Silverado [2]
	6	101824	185	165	185	Lynwood [2]
Los Angeles #1	1	100926	1370	1350	1370	Sunnyside [2]
	2	100927	1100	1080	1100	Sunnyside
	3	100928	940	920	940	Sunnyside
	4	100929	660	640	660	Silverado
	5	100930	370	350	370	Lynwood [2]
Los Angeles #2	1	102003	1370	1330	1370	Pico Formation [2]
	2	102004	730	710	730	Sunnyside
	3	102005	525	505	525	Silverado
	4	102006	430	410	430	Lynwood
	5	102007	265	245	265	Hollydale [2]
	6	102008	155	135	155	Gardena

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2 - Aquifer designation is based on WRD's in-house interpretation.

TABLE 1.1
CONSTRUCTION INFORMATION FOR WRD NESTED MONITORING WELLS

Well Name	Zone	WRD ID Number	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Aquifer Designation [1]
Los Angeles #3	1	102069	1570	1210	1230	Pico Formation [2]
	2	102070	895	875	895	Sunnyside [2]
	3	102071	725	705	725	Sunnyside [2]
	4	102072	570	550	570	Sunnyside
	5	102073	350	330	350	Silverado [2]
	6	102074	210	190	210	Gage [2]
Los Angeles #4	1	102131	1780	1740	1780	Pico Formation [2]
	2	102132	1230	1190	1230	Sunnyside [2]
	3	102133	740	720	740	Sunnyside
	4	102134	510	490	510	Silverado
	5	102135	375	355	375	Lynwood
	6	102136	255	235	255	Gage
Los Angeles #5	1	103029	2000	1960	2000	Pico Formation [2]
	2	103030	1255	1235	1255	Sunnyside [2]
	3	103031	770	750	770	Sunnyside
	4	103032	575	555	575	Sunnyside
	5	103033	450	430	450	Silverado
	6	103034	235	215	235	Lynwood [2]
	7	103035	105	95	105	Exposition
Los Angeles #6	1	103047	600	580	600	Pico Formation [2]
	2	103048	440	420	440	Sunnyside
	3	103049	365	345	365	Silverado
	4	103050	275	255	275	Lynwood
Lynwood #1	1	102211	2900	2880	2900	Pico Formation [2]
	2	102212	2450	2430	2450	Pico Formation [2]
	3	102213	1670	1650	1670	Sunnyside [2]
	4	102214	1465	1445	1465	Sunnyside [2]
	5	102215	1220	1200	1220	Silverado [2]
	6	102216	900	880	900	Silverado [2]
	7	102217	660	640	660	Lynwood
	8	102218	335	315	335	Gardena
	9	102219	180	160	180	Gaspur
Manhattan Beach #1	1	102081	1990	1950	1990	Pico Formation [2]
	2	102082	1590	1570	1590	Pico Formation [2]
	3	102083	1270	1250	1270	Pico Formation [2]
	4	102084	885	865	885	Sunnyside [2]
	5	102085	660	640	660	Sunnyside [2]
	6	102086	340	320	340	Silverado
	7	102087	200	180	200	Gage
Montebello #1	1	101770	980	900	960	Pico Formation [2]
	2	101771	710	690	710	Sunnyside
	3	101772	520	500	520	Sunnyside
	4	101773	390	370	390	Silverado
	5	101774	230	210	230	Lynwood
	6	101775	110	90	110	Gage

1 - Unless otherwise noted, aquifer designations are based on DWR's Bulletin 104.
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TABLE 1.1
CONSTRUCTION INFORMATION FOR WRD NESTED MONITORING WELLS

Well Name	Zone	WRD ID Number	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Aquifer Designation [1]
Montebello #2	1	103080	780	745	780	Pico Formation
	2	103081	435	415	435	Pico Formation
	3	103082	260	250	260	Sunnyside
	4	103083	200	180	200	Sunnyside
	5	103084	115	100	115	Gage
Norwalk #1	1	101814	1420	1400	1420	Sunnyside
	2	101815	1010	990	1010	Silverado
	3	101816	740	720	740	Lynwood
	4	101817	450	430	450	Hollydale
	5	101818	240	220	240	Gage
Norwalk #2	1	101942	1480	1460	1480	Pico Formation [2]
	2	101943	1280	1260	1280	Pico Formation [2]
	3	101944	980	960	980	Sunnyside [2]
	4	101945	820	800	820	Sunnyside [2]
	5	101946	500	480	500	Silverado
	6	101947	256	236	256	Gardena
Paramount #1	1	103093	2100	2080	2100	Pico Formation [2]
	2	103094	1720	1700	1720	Pico Formation [2]
	3	103095	1210	1190	1210	Pico Formation [2]
	4	103096	945	925	945	Sunnyside
	5	103097	640	620	640	Lynwood
	6	103098	440	420	440	Hollydale
	7	103099	235	215	235	Exposition
Pico #1	1	100001	900	860	900	Pico Formation [2]
	2	100002	480	460	480	Silverado
	3	100003	400	380	400	Silverado
	4	100004	190	170	190	Gardena [2]
Pico #2	1	100085	1200	1180	1200	Sunnyside [2]
	2	100086	850	830	850	Sunnyside [2]
	3	100087	580	560	580	Sunnyside
	4	100088	340	320	340	Silverado
	5	100089	255	235	255	Lynwood
	6	100090	120	100	120	Gaspur/Gage [2]
PM-2 Police Station	1	102237	665	645	665	Sunnyside [2]
	2	102238	540	520	540	Silverado
	3	102239	390	370	390	Lynwood/Silverado [2]
	4	102240	260	240	260	Lynwood
PM-3 Madrid	1	100034	685	640	680	Sunnyside [2]
	2	100035	525	480	520	Silverado
	3	100036	285	240	280	Lynwood
	4	100037	190	145	185	Gardena
PM-4 Mariner	1	100038	720	670	710	Sunnyside [2]
	2	100039	550	500	540	Silverado
	3	100040	390	340	380	Lynwood
	4	100041	250	200	240	Gardena

1 - Unless otherwise noted, aquifer designations are based on DWR's Bulletin 104.
2 - Aquifer designation is based on WRD's in-house interpretation.

TABLE 1.1
CONSTRUCTION INFORMATION FOR WRD NESTED MONITORING WELLS

Well Name	Zone	WRD ID Number	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Aquifer Designation [1]
PM-5 Columbia Park	1	102047	1480	1360	1380	Pico Formation [2]
	2	102048	960	940	960	Pico Formation [2]
	3	102049	790	770	790	Sunnyside [2]
	4	102050	600	580	600	Silverado
	5	102051	340	320	340	Lynwood [2]
	6	102052	160	140	160	Gardena
PM-6 Madrona Marsh	1	102053	1235	1195	1235	Pico Formation [2]
	2	102054	925	905	925	Sunnyside [2]
	3	102055	790	770	790	Sunnyside [2]
	4	102056	550	530	550	Silverado
	5	102057	410	390	410	Lynwood
	6	102058	260	240	260	Lynwood
Rio Hondo #1	1	100064	1150	1110	1130	Pico Formation [2]
	2	100065	930	910	930	Sunnyside [2]
	3	100066	730	710	730	Sunnyside
	4	100067	450	430	450	Silverado
	5	100068	300	280	300	Hollydale
	6	100069	160	140	160	Gardena
Seal Beach #1	1	102062	1485	1345	1365	Sunnyside [2]
	2	102063	1180	1160	1180	Sunnyside [2]
	3	102064	1040	1020	1040	Sunnyside [2]
	4	102065	795	775	795	Silverado
	5	102066	625	605	625	Lynwood [2]
	6	102067	235	215	235	Gage
	7	102068	70	60	70	Artesia
South Gate #1	1	100893	1460	1440	1460	Sunnyside [2]
	2	100894	1340	1320	1340	Sunnyside [2]
	3	100895	930	910	930	Silverado [2]
	4	100896	585	565	585	Lynwood
	5	100897	250	220	240	Exposition [2]
South Gate #2	1	102180	1760	1740	1760	Sunnyside [2]
	2	102181	1430	1410	1430	Sunnyside [2]
	3	102182	1082	1062	1082	Sunnyside
	4	102183	690	670	690	Silverado [2]
	5	102184	430	410	430	Hollydale
	6	102185	225	205	225	Gaspur [2]
Westchester #1	1	101776	860	740	760	Pico Formation [2]
	2	101777	580	560	580	Sunnyside [2]
	3	101778	475	455	475	Sunnyside [2]
	4	101779	330	310	330	Silverado
	5	101780	235	215	235	Silverado
Whittier #1	1	101735	1298	1180	1200	Pico Formation [2]
	2	101736	940	920	940	Pico Formation [2]
	3	101737	620	600	620	Sunnyside
	4	101738	470	450	470	Silverado
	5	101739	220	200	220	Jefferson

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TABLE 1.1
CONSTRUCTION INFORMATION FOR WRD NESTED MONITORING WELLS

Well Name	Zone	WRD ID Number	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Aquifer Designation [1]
Whittier #2	1	101936	1390	1370	1390	Pico Formation [2]
	2	101937	1110	1090	1110	Pico Formation [2]
	3	101938	675	655	675	Sunnyside
	4	101939	445	425	445	Silverado
	5	101940	335	315	335	Silverado
	6	101941	170	150	170	Gage [2]
Whittier Narrows #1	1	100046	810	749	769	Sunnyside
	2	100047	810	610	629	Sunnyside
	3	100048	810	463	482.5	Sunnyside
	4	100049	810	393	402	Silverado
	5	100050	810	334	343.5	Silverado
	6	100051	810	273	282.5	Lynwood
	7	100052	810	234	243	Lynwood
	8	100053	810	163	173	Gardena
	9	100054	810	95	104.5	Gaspur
Whittier Narrows #2	1	100055	720	659	678.4	Pico Formation [2]
	2	100056	720	579	598.2	Pico Formation [2]
	3	100057	720	469	488.2	Pico Formation [2]
	4	100058	720	419	428.2	Pico Formation [2]
	5	100059	720	329	338.3	Pico Formation [2]
	6	100060	720	263	273.3	Lynwood
	7	100061	720	214	223.3	Lynwood
	8	100062	720	136	145.3	Gardena [2]
	9	100063	720	91	100.3	Gardena
Willowbrook #1	1	100016	905	885	905	Sunnyside [2]
	2	100017	520	500	520	Silverado
	3	100018	380	360	380	Lynwood
	4	100019	220	200	220	Gage
Wilmington #1	1	100070	1040	915	935	Sunnyside [2]
	2	100071	800	780	800	Silverado
	3	100072	570	550	570	Silverado
	4	100073	245	225	245	Lynwood
	5	100074	140	120	140	Gage
Wilmington #2	1	100075	1030	950	970	Sunnyside [2]
	2	100076	775	755	775	Silverado
	3	100077	560	540	560	Silverado
	4	100078	410	390	410	Lynwood
	5	100079	140	120	140	Gage

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TABLE 1.2
CONSTRUCTION INFORMATION FOR WELLS NOT LISTED IN TABLE 1.1 THAT ARE USED TO PREPARE FIGURES 2.1 AND 2.2

Well Name	Zone	WRD ID Number	Reference Point Elevation (feet msl)	Depth of Well (feet)	Top of Perforation (feet)	Bottom of Perforation (feet)	Date of Measurement	Groundwater Elevation (feet msl)	Aquifer Designation [1]
Hawkins #1	3	102233	147.75	296	286	296	9/22/2022	29.85	Lynwood
Koontz #1	1	102226	135.17	491	481	491	9/22/2022	20.57	Lynwood
LADWP MW-01	2	102251	133.91	580	510	560	9/14/2022	-20.67	Silverado
La Habra Heights #1	1	102164	151.00	570	540	560	9/19/2022	72.04	Sunnyside
LongBeach #7	2	101899	16.35	670	650	670	9/20/2022	-41.61	Silverado
Sepulveda #1	1	201058	90.00	550	370	530	9/23/2022	1.94	Silverado

1 - Aquifer designations are based on DWR's Bulletin 104.

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TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Bell #1									Reference Point Elevation: 149.25
Depth of Screen Interval	1730-1750	1195-1215	965-985	615-635	420-440	250-270			
Aquifer Name [1]	Pico Form. [2]	Sunnyside	Sunnyside	Silverado	Jefferson	Gage			
12/7/2021	-28.58	-37.67	-23.95	-27.74	-18.94	6.97			
3/10/2022	-24.01	-27.65	-18.21	-21.48	-13.65	7.90			
3/15/2022	-24.42	-27.11	-18.30	-21.24	-13.96	7.63			
6/8/2022	-26.30	-32.21	-18.63	-21.93	-14.81	7.07			
8/23/2022	-31.04	-36.37	-22.97	-26.12	-17.97	5.84			
9/22/2022	-25.84	-29.39	-23.45	-26.81	-19.40	5.55			
Bell Gardens #1									Reference Point Elevation: 121.03
Depth of Screen Interval	1775-1795	1390-1410	1090-1110	855-875	555-575	370-390			
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Sunnyside	Sunnyside	Silverado	Lynwood			
10/19/2021	-7.72	-7.69	-4.78	-0.91	3.72	3.04			
12/7/2021	-8.27	-7.86	-4.88	-0.72	4.51	4.38			
3/17/2022	-2.02	-0.50	2.50	5.68	9.25	7.94			
5/23/2022	-0.60	0.22	2.99	5.89	9.24	7.54			
6/7/2022	-0.94	-0.42	2.35	4.91	8.88	7.10			
9/22/2022	-6.11	-6.11	-2.92	0.79	5.10	4.13			
Carson #1									Reference Point Elevation: 26.86
Depth of Screen Interval	990-1010	740-760	460-480	250-270					
Aquifer Name [1]	Silverado	Silverado	Lynwood	Gage [2]					
10/15/2021	-37.49	-36.80	-8.30	-7.09					
11/1/2021	-37.13	-36.38	-8.25	-7.10					
12/3/2021	-37.61	-37.08	-8.40	-7.19					
12/13/2021	-39.35	-38.72	-8.49	-7.25					
2/22/2022	-40.53	-39.75	-8.34	-7.14					
3/17/2022	-42.83	-41.72	-8.46	-7.23					
4/11/2022	-44.49	-43.09	-8.49	-7.19					
4/26/2022	-44.16	-42.91	-8.69	-7.35					
5/23/2022	-42.89	-41.54	-8.60	-7.31					
6/10/2022	-44.42	-43.14	-8.61	-7.34					
7/21/2022	-45.82	-44.43	-9.29	-7.83					
8/18/2022	-47.78	-46.39	-9.74	-8.23					
8/24/2022	-47.03	-45.64	-9.85	-8.25					
9/19/2022	-43.74	-42.44	-9.53	-8.16					
Carson #2									Reference Point Elevation: 43.04
Depth of Screen Interval	1230-1250	850-870	600-620	450-470	230-250				
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Silverado	Silverado	Lynwood				
10/20/2021	-26.26	-21.81	-21.56	-18.64	-16.45				
12/16/2021	-26.67	-23.21	-22.9	-19.48	-17.28				
3/7/2022	-27.68	-22.48	-22.23	-19.24	-17.14				
5/3/2022	-28.20	-22.44	-22.16	-19.26	-17.28				
6/15/2022	-28.24	-22.96	-22.63	-19.66	-17.56				
9/23/2022	-28.77	-22.70	-22.44	-19.54	-17.47				
Carson #3									Reference Point Elevation: 20.18
Depth of Screen Interval	1600-1620	1220-1240	1080-1100	870-890	620-640	360-380			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Silverado [2]	Silverado	Silverado	Lynwood			
10/18/2021	-25.28	-31.37	-30.76	-32.32	-32.24	-10.60			
12/16/2021	-25.37	-31.21	-30.82	-33.18	-33.13	-10.84			
3/7/2022	-25.42	-31.93	-31.84	-34.53	-34.43	-10.90			
4/26/2022	-25.33	-31.84	-30.69	-33.09	-32.55	-10.50			
6/15/2022	-25.52	-31.90	-30.82	-33.82	-33.54	-10.87			
9/7/2022	-25.85	-33.03	-31.71	-34.50	-34.03	-11.18			
9/19/2022	-25.81	-32.74	-31.49	-33.96	-33.53	-11.14			

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2 - Aquifer designation is based on WRD's in-house interpretation.

- Shaded cell indicates the zone and measurement used in Figures 2.1 and 2.2.

TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Cerritos #1									Reference Point Elevation: 43.35
Depth of Screen Interval	1155-1175	1000-1020	610-630	270-290	180-200	125-135			
Aquifer Name [1]	Sunnyside [2]	Silverado [2]	Lynwood	Gage	Artesia	Artesia			
12/7/2021	-40.47	-45.92	-24.46	18.86	20.54	20.63			
3/8/2022	-32.11	-36.41	-17.82	20.91	22.21	22.30			
4/21/2022	-28.50	-30.11	-17.48	20.73	21.83	21.88			
6/13/2022	-36.03	-41.65	-20.99	20.30	21.75	21.83			
9/13/2022	-41.82	-48.41	-27.95	17.61	19.76	19.38			
Cerritos #2									Reference Point Elevation: 76.47
Depth of Screen Interval	1350-1370	915-935	740-760	490-510	350-370	150-170			
Aquifer Name [1]	Sunnyside [2]	Silverado	Lynwood [2]	Hollydale	Gage	Artesia			
12/7/2021	-27.80	-33.99	-19.16	-3.73	16.29	22.22			
3/8/2022	-19.51	-26.30	-14.77	-0.72	17.48	22.85			
4/20/2022	-15.36	-20.63	-12.68	0.01	17.76	23.00			
6/13/2022	-19.53	-30.49	-16.65	-1.82	16.74	22.76			
9/1/2022	-24.15	-33.51	-26.10	-6.48	15.16	21.97			
9/13/2022	-24.16	-33.31	-25.90	-6.33	14.95	21.85			
Cerritos #3									Reference Point Elevation: 64.29
Depth of Screen Interval	2100-2120	1650-1670	1375-1395	1030-1050	760-780	430-450	235-255		
Aquifer Name [1]	Sunnyside	Sunnyside	Sunnyside	Silverado	Hollydale	Hollydale	Gage		
12/6/2021	13.20	-28.64	-21.98	-29.36	-46.23	-22.96	15.52		
2/10/2022	15.70	-21.35	-12.87	-22.30	-40.15	-20.99	16.87		
3/8/2022	16.87	-18.36	-11.51	-21.28	-40.20	-20.85	16.92		
6/13/2022	21.35	-12.38	-8.90	-18.51	-40.48	-22.87	16.60		
7/18/2022	20.40	-17.29	-12.80	-21.46	-44.69	-25.77	16.09		
9/13/2022	17.77	-19.14	-15.83	-22.23	-46.78	-26.95	15.17		
Chandler #3									Reference Point Elevation: 156.01
Depth of Screen Interval	341-363	165-192							
Aquifer Name [1]	Silverado [2]	Lynwood [2]							
3/17/2022	-8.97	-8.90							
4/14/2022	-9.11	-9.00							
6/14/2022	-9.49	-9.37							
9/8/2022	-9.84	-9.77							
9/21/2022	-9.49	-9.40							
Commerce #1									Reference Point Elevation: 159.31
Depth of Screen Interval	1330-1390	940-960	760-780	570-590	325-345	205-225			
Aquifer Name [1]	Pico Form. [2]	Sunnyside	Sunnyside [2]	Silverado	Jefferson	Hollydale			
10/21/2021	22.82	19.39	15.76	-19.84	-18.88	22.54			
12/10/2021	22.53	19.19	15.68	-18.47	-16.17	22.56			
3/8/2022	22.53	21.56	18.33	-9.81	-11.05	22.58			
4/18/2022	22.59	20.76	17.43	-14.58	-14.29	22.08			
6/7/2022	24.35	19.49	16.08	-13.87	-11.09	22.62			
9/30/2022	21.92	17.85	14.41	-18.72	-17.92	21.76			
Compton #1									Reference Point Elevation: 68.84
Depth of Screen Interval	1370-1390	1150-1170	800-820	460-480	305-325				
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Silverado	Hollydale	Gage				
10/20/2021	-63.29	-63.07	-31.12	-31.23	-17.37				
12/15/2021	-61.89	-61.63	-29.14	-28.61	-14.64				
3/17/2022	-47.05	-46.92	-25.19	-25.86	-12.14				
4/4/2022	-39.39	-39.31	-24.77	-17.03	-10.74				
6/14/2022	-49.16	-48.99	-26.16	-28.21	-13.70				
8/23/2022	-56.26	-55.53	-29.72	-30.87	-15.79				
9/22/2022	-56.9	-56.69	-28.43	-30.58	-16.12				

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- Shaded cell indicates the zone and measurement used in Figures 2.1 and 2.2.

TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Compton #2									Reference Point Elevation: 76.97
Depth of Screen Interval	1479-1495	830-850	585-605	380-400	295-315	150-170			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Silverado	Lynwood [2]	Hollydale [2]	Exposition			
12/16/2021	-33.50	-51.53	-45.53	-45.32	-39.39	-33.44			
3/15/2022	-31.79	-48.13	-44.18	-43.98	-37.58	-32.30			
5/20/2022	-45.14	-45.14	-46.67	-46.12	-37.83	-31.85			
6/15/2022	-23.89	-46.15	-44.43	-44.20	-37.93	-32.46			
9/22/2022	-27.62	-48.99	-47.31	-46.33	-38.43	-33.08			
Downey #1									Reference Point Elevation: 99.39
Depth of Screen Interval	1170-1190	940-960	580-600	370-390	250-270	90-110			
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Silverado	Jefferson	Gage	Gaspur			
12/13/2021	-13.20	-10.80	-3.81	-0.94	22.11	25.84			
3/9/2022	-4.61	-3.25	0.44	1.26	22.81	26.04			
4/12/2022	-3.50	-2.33	1.62	2.65	22.75	25.93			
6/13/2022	-6.06	-5.41	-1.69	-0.25	22.43	25.94			
7/25/2022	-9.58	-8.27	-3.85	-2.90	22.10	25.86			
9/23/2022	-9.53	-7.96	-4.55	-3.66	21.63	25.70			
Gardena #1									Reference Point Elevation: 84.23
Depth of Screen Interval	970-990	445-465	345-365	120-140					
Aquifer Name [1]	Pico Form. [2]	Silverado	Lynwood [2]	Gage					
12/15/2021	-29.40	-31.99	-28.35	-2.51					
3/15/2022	-29.40	-34.44	-29.37	-2.30					
4/20/2022	-29.21	-31.44	-27.41	-2.11					
6/15/2022	-28.66	-31.93	-27.58	-2.01					
9/6/2022	-28.81	-31.04	-26.75	-2.05					
9/15/2022	-28.84	-31.18	-26.60	-2.14					
Gardena #2									Reference Point Elevation: 29.45
Depth of Screen Interval	1275-1335	770-790	610-630	340-360	235-255				
Aquifer Name [1]	Pico Form. [2]	Silverado	Silverado	Lynwood	Gardena				
12/17/2021	-26.64	-39.95	-41.40	-10.83	-1.88				
3/16/2022	-27.04	-38.14	-39.24	-11.30	-2.15				
5/2/2022	-26.72	-35.65	-36.74	-10.45	-2.00				
6/8/2022	-26.45	-36.51	-37.49	-10.49	-2.01				
9/9/2022	-27.12	-37.60	-38.75	-11.28	-2.30				
9/19/2022	-27.17	-37.27	-38.43	-11.19	-2.34				
Hawthorne #1									Reference Point Elevation: 88.98
Depth of Screen Interval	910-950	710-730	520-540	400-420	240-260	110-130			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Sunnyside [2]	Silverado	Lynwood	Gage			
10/18/2021	-26.02	1.07	1.44	1.50	3.57	8.59			
12/15/2021	-24.22	1.68	1.98	2.00	3.88	8.38			
3/10/2022	-23.81	1.53	1.90	1.99	3.98	8.78			
4/6/2022	-22.79	1.99	2.32	2.46	4.30	8.83			
6/7/2022	-21.38	-0.22	0.15	0.26	2.94	8.87			
9/15/2022	-21.25	-0.71	-0.37	-0.25	2.55	8.88			
Huntington Park #1									Reference Point Elevation: 179.44
Depth of Screen Interval	890-910	690-710	420-440	275-295	114-134				
Aquifer Name [1]	Silverado	Lynwood	Hollydale	Gage	Gaspur				
10/18/2021	-32.61	-36.60	-22.62	7.46	Dry				
12/13/2021	-32.36	-35.51	-21.94	-7.84	Dry				
3/18/2022	-30.38	-33.49	-19.63	7.39	Dry				
5/19/2022	-31.01	-34.91	-21.62	7.28	Dry				
6/16/2022	-30.87	-34.47	-21.57	7.17	Dry				
9/16/2022	-33.83	-37.50	-23.15	6.28	Dry				
9/22/2022	-33.84	-37.19	-22.25	6.18	Dry				

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TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Inglewood #1									Reference Point Elevation: 112.82
Depth of Screen Interval	1380-1400	865-885	430-450	280-300	150-170				
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Silverado	Lynwood [2]	Gage				
10/18/2021	-25.69	-25.80	-15.75	-0.34	5.85				
12/15/2021	-25.60	-25.48	-15.05	-0.31	5.54				
3/17/2022	-25.09	-24.4	-14.21	-0.10	5.85				
3/24/2022	-25.00	-24.28	-14.12	-0.06	5.89				
6/10/2022	-24.31	-23.8	-13.36	-0.08	5.88				
8/25/2022	-23.96	-23.11	-12.69	-0.15	5.84				
9/15/2022	-25.49	-23.02	-12.46	-0.11	5.93				
Inglewood #2									Reference Point Elevation: 219.82
Depth of Screen Interval	800-840	450-470	330-350	225-245					
Aquifer Name [1]	Pico Form. [2]	Silverado [2]	Lynwood [2]	Gage [2]					
12/17/2021	-23.49	-15.79	-1.66	2.20					
3/14/2022	-24.60	-15.80	-1.61	2.27					
6/10/2022	-25.12	-15.88	-1.50	2.17					
9/14/2022	-26.32	-16.30	-1.62	2.37					
Inglewood #3									Reference Point Elevation: 72.20
Depth of Screen Interval	1900-1940	1440-1460	1255-1275	890-910	540-560	370-390	245-265		
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Pico Form. [2]	Pico Form. [2]	Silverado	Lynwood	Gage		
12/15/2021	-35.61	-26.23	-28.58	-24.76	-24.24	-0.51	6.75		
3/17/2022	-35.65	-25.95	-27.30	-24.02	-23.56	-0.31	7.16		
3/30/2022	-35.65	-25.88	-27.21	-23.68	-23.23	-0.15	7.13		
6/10/2022	-35.40	-25.88	-26.52	-21.92	-21.66	-0.52	7.20		
8/31/2022	-35.77	-25.94	-25.91	-22.08	-21.41	-0.88	7.23		
9/14/2022	-35.77	-25.73	-25.84	-21.33	-21.05	-0.85	7.21		
Lakewood #1									Reference Point Elevation: 53.87 (Zones 5 and 6) and 53.14 (Zones 1, 2, 3 and 4)
Depth of Screen Interval	989-1009	640-660	450-470	280-300	140-160	70-90			
Aquifer Name [1]	Sunnyside	Lynwood	Hollydale	Gage	Artesia	Bellflower			
12/15/2021	-54.72	-36.92	-34.40	-15.75	-0.19	21.14			
3/15/2022	-62.51	-31.59	-28.58	-12.51	1.85	21.72			
3/21/2022	-41.38	-30.54	-27.72	-11.84	2.03	21.70			
6/15/2022	-78.24	-32.55	-30.62	-13.53	0.80	21.29			
9/15/2022	-60.76	-35.43	-33.30	-16.26	-1.80	20.51			
Lakewood #2									Reference Point Elevation: 40.51
Depth of Screen Interval	1960-2000	1740-1760	1300-1320	995-1015	690-710	555-575	255-275	110-120	
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Sunnyside [2]	Silverado	Lynwood	Jefferson	Gage	Artesia	
12/7/2021	-33.08	-44.42	-45.51	-58.16	-24.77	-11.90	16.78	19.06	
3/8/2022	-21.64	-34.81	-35.52	-41.69	-16.08	-5.68	18.13	20.30	
5/24/2022	-15.35	-33.43	-35.94	-49.94	-18.10	-6.77	18.13	20.27	
6/13/2022	-17.56	-35.69	-38.19	-52.07	-18.50	-7.23	17.78	20.00	
9/13/2022	-24.28	-41.82	-44.63	-59.01	-29.47	-13.91	16.25	18.54	
9/29/2022	-25.40	-42.80	-46.52	-60.33	-29.87	-14.36	16.26	18.54	
La Mirada #1									Reference Point Elevation: 78.30
Depth of Screen Interval	1130-1150	965-985	690-710	470-490	225-245				
Aquifer Name [1]	Sunnyside	Silverado [2]	Lynwood [2]	Jefferson [2]	Gage				
12/7/2021	-15.02	-13.35	-27.02	-44.50	-9.22				
3/7/2022	-4.81	-3.74	-18.79	-37.89	-5.23				
5/4/2022	0.75	0.55	-19.64	-41.25	-6.96				
6/9/2022	-2.31	-1.70	-18.30	-41.77	-7.87				
8/23/2022	-8.09	-6.85	-25.55	-48.99	-12.63				
9/13/2022	-9.91	-8.40	-27.04	-46.74	-12.66				

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TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Lawndale #1									Reference Point Elevation: 48.93
Depth of Screen Interval	1360-1400	895-905	615-635	395-415	290-310	170-190			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Silverado	Silverado	Lynwood	Gardena			
10/20/2021	-24.51	-36.84	-1.83	-1.33	-0.07	-2.13			
11/12/2021	-24.57	-36.33	-2.13	-1.68	-0.26	1.02			
12/16/2021	-24.63	-37.35	-0.24	0.45	1.39	2.07			
1/14/2022	-24.39	-37.37	-1.52	-1.08	0.44	1.79			
2/28/2022	-24.37	-43.28	-1.57	-1.06	0.45	-1.13			
3/16/2022	-24.58	-36.90	-1.72	-1.13	0.25	1.69			
4/26/2022	-24.50	-33.63	-1.38	-0.91	0.34	1.28			
4/29/2022	-24.54	-33.69	-1.46	-0.94	0.14	1.67			
5/23/2022	-24.38	-33.08	-1.43	-1.04	0.32	-1.66			
6/14/2022	-24.57	-37.22	-2.17	-1.57	-0.37	-0.13			
7/18/2022	-24.33	-40.37	-2.09	-1.58	-0.27	0.63			
8/18/2022	-24.49	-36.71	-1.52	-1.09	0.18	-1.8			
8/30/2022	-24.62	-35.81	-8.26	-1.86	-0.71	-2.18			
9/12/2022	-24.59	-35.25	-2.53	-2.07	-0.59	-2.22			
Lomita #1									Reference Point Elevation: 79.48
Depth of Screen Interval	1240-1260	700-720	550-570	400-420	220-240	100-120			
Aquifer Name [1]	Pico Form. [2]	Silverado	Silverado	Lynwood	Gage [2]	Gage [2]			
10/19/2021	-18.19	-10.88	-8.39	-10.98	-7.98	-7.89			
12/9/2021	-18.03	-10.83	-8.25	-11.12	-7.85	-7.80			
3/16/2022	-16.02	-10.57	-7.79	-11.12	-7.49	-7.50			
4/19/2022	-16.48	-11.21	-8.07	-11.36	-8.06	not measured			
6/14/2022	-19.28	-12.20	-8.76	-11.57	-8.05	-8.20			
8/30/2022	-19.28	-13.13	-9.07	-12.08	-8.87	not measured			
9/30/2022	-19.74	-12.56	-9.13	-11.75	-8.48	-8.34			
Long Beach #1									Reference Point Elevation: 30.86
Depth of Screen Interval	1430-1450	1230-1250	970-990	599-619	400-420	155-175			
Aquifer Name [1]	Sunnyside [2]	Sunnyside	Silverado [2]	Lynwood [2]	Jefferson [2]	Artesia			
12/17/2021	-46.14	-49.95	-67.36	-34.35	-29.67	-5.20			
3/8/2022	-36.45	-39.22	-47.02	-26.70	-22.85	-2.63			
3/17/2022	-32.00	-34.23	-40.72	-24.14	-20.20	-2.95			
6/14/2022	-29.14	-32.32	-56.80	-28.91	-25.59	-4.42			
9/19/2022	-37.90	-41.23	-59.19	-37.36	-32.43	-8.05			
9/22/2022	-38.10	-41.39	-58.95	-37.74	-32.70	-8.25			
Long Beach #2									Reference Point Elevation: 44.20
Depth of Screen Interval	970-990	720-740	450-470	280-300	160-180	95-115			
Aquifer Name [1]	Sunnyside	Silverado [2]	Silverado	Lynwood	Gage	Gaspur			
10/19/2021	-83.16	-49.78	-43.24	-15.17	-2.85	-0.54			
12/15/2021	-81.63	-48.83	-40.37	-14.84	-2.97	-0.71			
3/17/2022	-55.82	-42.54	-40.97	-13.61	-2.38	-0.25			
4/19/2022	-36.84	-40.65	-41.53	-13.04	-2.03	-0.08			
6/14/2022	-65.36	-41.39	-43.24	-13.64	-2.27	-0.10			
9/21/2022	-74.37	-44.34	-43.03	-14.91	-2.64	-0.61			
Long Beach #3									Reference Point Elevation: 26.67
Depth of Screen Interval	1350-1390	997-1017	670-690	530-550	410-430				
Aquifer Name [1]	Pico Form. [2]	Silverado	Silverado [2]	Silverado [2]	Lynwood				
12/15/2021	-29.48	-42.88	-42.91	-43.31	1.74				
3/16/2022	-29.77	-45.64	-45.67	-46.03	1.86				
5/23/2022	-30.70	-45.77	-45.78	-46.21	1.41				
6/8/2022	-30.70	-47.37	-47.36	-47.85	1.04				
9/6/2022	-31.80	-48.16	-47.98	-48.45	-2.68				
9/30/2022	-31.85	-47.18	-47.14	-47.60	-2.84				

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TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Long Beach #4									Reference Point Elevation: 12.34
Depth of Screen Interval	1200-1220	800-820							
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]							
12/17/2021	-24.78	-7.44							
3/18/2022	-25.71	-7.90							
6/17/2022	-28.10	-9.67							
9/22/2022	-27.87	-9.24							
Long Beach #6									Reference Point Elevation: 34.47
Depth of Screen Interval	1490-1510	930-950	740-760	480-500	380-400	220-240			
Aquifer Name [1]	Pico Form. [2]	Sunnyside	Sunnyside	Silverado	Lynwood	Gage			
10/18/2021	-63.40	-86.16	-89.66	-97.99	-97.88	-37.68			
11/12/2021	-63.99	-87.34	-92.06	-99.28	-100.16	-36.91			
12/17/2021	-64.57	-87.77	-92.21	-99.14	-100.07	-36.38			
1/14/2022	-62.44	-73.65	-74.04	-78.54	-78.49	-34.55			
2/22/2022	-59.40	-78.68	-81.88	-85.57	-85.41	-33.53			
3/6/2022	-56.48	-70.38	-72.99	-71.95	-71.59	-32.45			
3/17/2022	-51.17	-53.20	-53.09	-54.47	-54.42	-30.68			
4/26/2022	-32.97	-34.97	-35.32	-38.13	-38.12	-27.88			
5/23/2022	-38.92	-60.67	-64.21	-73.35	-73.17	-31.17			
6/16/2022	-44.13	-68.10	-71.58	-82.16	-81.98	-32.22			
7/19/2022	-48.96	-72.83	-76.35	-85.13	-84.97	-33.31			
8/15/2022	-51.67	-75.70	-78.97	-85.85	-85.65	-33.56			
8/18/2022	-52.09	-76.01	-79.30	-86.12	-85.98	-33.90			
9/16/2022	-54.42	-78.36	-82.21	-87.67	-87.52	-34.48			
Long Beach #8									Reference Point Elevation: 21.20
Depth of Screen Interval	1435-1455	1020-1040	780-800	635-655	415-435	165-185			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Silverado [2]	Silverado [2]	Silverado [2]	Lynwood [2]			
12/17/2021	-10.25	-24.02	-35.50	-33.15	-33.04	5.11			
3/18/2022	-9.98	-23.89	-37.87	-35.72	-35.23	5.14			
5/6/2022	-10.00	-24.31	-39.58	-37.18	-36.74	5.04			
6/9/2022	-10.00	-24.82	-39.61	-37.27	-36.83	5.06			
9/23/2022	-9.61	-25.36	-39.19	-36.80	-36.39	5.10			
Los Angeles #1									Reference Point Elevation:176.21
Depth of Screen Interval	1350-1370	1080-1100	920-940	640-660	350-370				
Aquifer Name [1]	Sunnyside [2]	Sunnyside	Sunnyside	Silverado	Lynwood [2]				
12/15/2021	-31.38	-24.42	-24.89	-24.30	-15.40				
4/5/2022	-28.13	-23.01	-23.68	-23.19	-14.56				
6/15/2022	-28.56	-23.32	-24.13	-23.89	-15.88				
9/15/2022	-28.62	-25.16	-26.10	-25.72	-16.11				
9/28/2022	-29.07	-25.31	-26.24	-25.74	-16.17				
Los Angeles #2									Reference Point Elevation: 220.33
Depth of Screen Interval	1330-1370	710-730	505-525	410-430	245-265	135-155			
Aquifer Name [1]	Pico Form. [2]	Sunnyside	Silverado	Lynwood	Hollydale [2]	Gardena			
10/18/2021	42.77	-9.50	-9.97	-21.51	-27.16	Dry			
12/6/2021	42.67	-9.03	-9.46	-21.53	-27.49	Dry			
3/16/2022	42.72	-8.16	-8.56	-20.93	-27.18	Dry			
4/7/2022	42.64	-8.59	-9.04	-21.21	-27.44	Dry			
6/15/2022	42.61	-8.34	-8.75	-20.98	-27.24	Dry			
9/7/2022	42.26	-8.58	-8.97	-21.43	-27.70	Dry			
9/14/2022	42.29	-8.52	-8.95	-21.47	-27.94	Dry			
Los Angeles #3									Reference Point Elevation: 145.35
Depth of Screen Interval	1210-1230	875-895	705-725	550-570	330-350	190-210			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Sunnyside [2]	Sunnyside	Silverado [2]	Gage [2]			
12/6/2021	-20.99	-10.14	-16.33	-14.07	-10.99	4.04			
3/17/2022	-20.39	-9.95	-15.98	-14.22	-11.54	3.60			
5/12/2022	-19.46	-10.43	-16.52	-14.62	-12.01	3.13			
6/27/2022	-19.55	-10.75	-17.10	-15.24	-12.20	2.94			
9/14/2022	-19.85	-11.69	-18.43	-16.18	-12.61	2.54			
9/23/2022	-19.83	-11.97	-18.72	-16.16	-12.58	2.58			

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	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Los Angeles #4									Reference Point Elevation: 136.04
Depth of Screen Interval	1740-1780	1190-1230	720-740	490-510	355-375	235-255			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Sunnyside	Silverado	Lynwood	Gage			
12/6/2021	-30.07	-38.22	-36.23	-28.16	-27.92	-17.70			
3/16/2022	-29.50	-34.72	-33.02	-26.16	-25.88	-17.46			
5/4/2022	-27.81	-34.24	-32.62	-26.75	-26.68	-17.84			
6/8/2022	-27.19	-34.15	-33.29	-27.30	-27.18	-18.11			
9/15/2022	-28.06	-38.10	-36.95	-28.97	-28.41	-18.64			
9/22/2022	-28.13	-38.35	-37.00	-28.92	-28.45	-18.61			
Los Angeles #5									Reference Point Elevation: 104.11
Depth of Screen Interval	1960-2000	1235-1255	750-770	555-575	430-450	215-235	95-105		
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Sunnyside	Sunnyside	Silverado	Lynwood [2]	Exposition		
12/6/2021	6.31	6.42	9.47	8.10	4.43	33.01	62.49		
3/14/2022	6.12	6.39	10.74	7.71	4.06	32.73	not measured		
3/15/2022	6.21	6.36	10.90	7.75	4.06	32.76	62.95		
6/15/2022	6.02	5.72	8.49	7.42	3.74	32.59	62.85		
9/12/2022	5.78	5.02	9.67	7.16	4.09	32.40	not measured		
9/13/2022	5.99	4.99	9.75	7.21	4.15	32.38	62.70		
Los Angeles #6									Reference Point Elevation: 213.59
Depth of Screen Interval	580-600	420-440	345-365	255-275					
Aquifer Name [1]	Pico Form. [2]	Sunnyside	Silverado	Lynwood					
11/19/2021	2.42	-3.63	-3.84	-4.37					
12/6/2021	2.40	-3.49	-3.81	-4.33					
3/16/2022	2.50	-3.39	-3.74	-4.26					
4/28/2022	2.54	-3.46	-3.74	-4.42					
6/16/2022	2.50	-3.48	-3.81	-4.36					
9/14/2022	2.52	-3.62	-3.84	-4.49					
Lynwood #1									Reference Point Elevation: 88.86 (Zones 3, 4, 5, 6, 7 and 9) and 89.29 (Zones 1, 2 and 8)
Depth of Screen Interval	2880-2900	2430-2450	1650-1670	1445-1465	1200-1220	880-900	640-660	315-335	160-180
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Sunnyside [2]	Sunnyside [2]	Silverado [2]	Silverado [2]	Lynwood	Gardena	Gaspur
12/15/2021	-27.52	-46.71	-52.87	-47.32	-34.27	-31.36	-32.39	-24.14	32.56
3/18/2022	-26.21	-41.26	-43.39	-38.69	-28.54	-26.85	-27.7	-21.67	32.84
5/10/2022	-23.34	-32.07	-37.38	-33.37	-26.76	-27.35	-28.59	-21.79	32.64
6/14/2022	-22.56	-34.73	-43.09	-38.26	-28.97	-28.59	-29.67	-24.06	32.64
9/14/2022	-23.94	-40.96	-49.60	-44.56	-32.73	-31.07	-32.28	-27.10	32.25
9/27/2022	-24.06	-41.39	-49.87	-44.76	-32.99	-31.05	-32.25	-26.73	32.30
Manhattan Beach #1									Reference Point Elevation: 128.71
Depth of Screen Interval	1950-1990	1570-1590	1250-1270	865-885	640-660	320-340	180-200		
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Pico Form. [2]	Sunnyside [2]	Sunnyside [2]	Silverado	Gage		
10/20/2021	0.87	-1.61	-23.81	3.63	-0.11	8.38	10.21		
12/13/2021	0.90	-1.61	-23.80	3.77	0.22	8.70	10.35		
3/16/2022	1.26	-1.37	-23.53	4.22	0.73	9.12	10.85		
3/22/2022	0.82	-1.63	-23.62	4.08	0.76	9.16	10.80		
6/7/2022	1.09	-1.41	-23.62	3.62	-0.32	8.08	9.87		
7/26/2022	1.07	-1.46	-23.64	3.71	-0.28	8.19	9.96		
9/21/2022	1.34	-1.21	-23.53	3.76	-1.37	7.44	9.61		
Montebello #1									Reference Point Elevation: 193.11
Depth of Screen Interval	900-960	690-710	500-520	370-390	210-230	90-110			
Aquifer Name [1]	Pico Form. [2]	Sunnyside	Sunnyside	Silverado	Lynwood	Gage			
10/20/2021	58.11	53.10	52.54	49.69	46.01	Dry			
12/10/2021	55.96	51.00	50.48	47.79	43.60	Dry			
3/8/2022	60.06	56.36	52.68	52.64	47.51	Dry			
5/10/2022	56.06	51.41	50.75	48.06	45.77	Dry			
6/7/2022	54.77	50.00	49.38	46.91	45.26	Dry			
9/15/2022	49.89	43.18	42.68	40.81	41.22	Dry			

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- Shaded cell indicates the zone and measurement used in Figures 2.1 and 2.2.

TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Montebello #2									Reference Point Elevation: 182.95
Depth of Screen Interval	745-780	415-435	250-260	180-200	100-115				
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Sunnyside	Sunnyside	Gage				
12/13/2021	115.93	101.54	90.00	89.38	102.73				
3/7/2022	116.75	106.37	99.95	99.20	110.37				
4/27/2022	114.66	104.67	97.32	96.81	108.50				
6/6/2022	114.38	103.43	94.94	94.35	106.55				
9/13/2022	112.70	97.18	87.19	86.68	99.79				
9/19/2022	107.79	96.98	86.68	86.00	99.36				
Norwalk #1									Reference Point Elevation: 96.18
Depth of Screen Interval	1400-1420	990-1010	720-740	430-450	220-240				
Aquifer Name [1]	Sunnyside	Silverado	Lynwood	Hollydale	Gage				
12/6/2021	24.33	-25.03	-0.52	-11.33	-8.37				
3/7/2022	27.62	-12.41	5.31	-8.15	-6.62				
4/25/2022	29.40	-5.49	7.91	-6.55	-5.76				
6/15/2022	30.55	-10.89	7.36	-8.36	-6.05				
9/12/2022	27.83	-12.71	3.57	-9.62	-7.44				
Norwalk #2									Reference Point Elevation: 116.73
Depth of Screen Interval	1460-1480	1260-1280	960-980	800-820	480-500	236-256			
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Sunnyside [2]	Sunnyside [2]	Silverado	Gardena			
12/13/2021	1.11	1.18	-7.44	-3.92	5.47	11.77			
3/9/2022	5.70	5.78	1.13	4.47	10.83	15.27			
5/5/2022	9.32	9.40	5.76	7.65	11.11	15.47			
6/13/2022	9.45	9.53	2.23	4.28	8.71	14.38			
9/8/2022	5.32	5.36	-4.16	-0.56	6.56	12.54			
9/22/2022	5.15	4.96	-4.76	-0.80	5.58	12.33			
Paramount #1									Reference Point Elevation: 70.70
Depth of Screen Interval	2080-2100	1700-1720	1190-1210	925-945	620-640	420-440	215-235		
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Pico Form. [2]	Sunnyside	Lynwood	Hollydale	Exposition		
11/24/2021	-21.85	-27.75	-24.15	-13.49	-9.20	19.12	25.87		
12/8/2021	-21.81	-27.56	-23.75	-12.75	-8.26	19.29	25.90		
3/9/2022	-13.82	-21.51	-17.84	-8.73	-5.30	15.91	26.09		
6/8/2022	-10.80	-20.78	-19.50	-10.20	-6.70	19.95	26.08		
8/17/2022	-17.21	-25.18	-23.37	-13.28	-9.43	19.26	25.78		
9/16/2022	-17.47	-24.98	-23.08	-14.39	-10.72	18.96	25.57		
Pico #1									Reference Point Elevation: 182.89
Depth of Screen Interval	860-900	460-480	380-400	170-190					
Aquifer Name [1]	Pico Form. [2]	Silverado	Silverado	Gardena [2]					
12/15/2021	98.38	85.05	84.55	81.32					
3/3/2022	107.51	96.41	95.87	91.85					
3/17/2022	107.20	94.89	94.34	90.88					
6/6/2022	104.06	90.31	89.23	85.21					
8/24/2022	97.62	83.46	82.87	78.92					
9/15/2022	95.60	81.39	81.15	77.23					
Pico #2									Reference Point Elevation: 151.83
Depth of Screen Interval	1180-1200	830-850	560-580	320-340	235-255	100-120			
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Sunnyside	Silverado	Lynwood	Gaspur/Gage [2]			
10/20/2021	42.22	40.92	49.03	68.01	67.24	75.73			
12/15/2021	41.93	43.30	49.72	72.35	73.47	79.84			
3/15/2022	47.99	47.99	57.22	79.51	80.68	86.94			
5/5/2022	46.03	44.93	55.38	79.38	80.48	86.04			
6/15/2022	44.93	44.96	54.04	77.61	78.92	84.90			
8/29/2022	39.03	36.98	46.98	69.98	71.13	77.22			
9/15/2022	38.90	39.64	47.33	68.60	69.58	74.77			

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TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
PM-1 Columbia									Reference Point Elevation: 81.39
Depth of Screen Interval	555-595	460-500	240-280	160-200					
Aquifer Name [1]	Silverado	Silverado	Lynwood	Gardena					
12/13/2021	-0.48	-0.40	not measured	0.59					
3/18/2022	-0.32	-0.17	not measured	1.07					
4/11/2022	-0.61	-0.29	not measured	not measured					
6/15/2022	-0.78	-0.72	not measured	0.48					
8/31/2022	-0.94	-0.70	not measured	not measured					
9/20/2022	-1.13	-0.91	not measured	0.16					
PM-2 Police Station									Reference Point Elevation: 87.43
Depth of Screen Interval	635-655	520-540	370-390	240-260					
Aquifer Name [1]	Sunnyside [2]	Silverado	Silver/Lyn [2]	Lynwood					
12/15/2021	-4.94	-0.21	0.90	1.00					
3/16/2022	-4.43	1.85	1.55	1.65					
3/25/2022	-4.54	1.86	1.42	1.67					
8/29/2022	-5.25	0.60	1.01	1.11					
9/20/2022	-5.41	0.26	0.75	0.86					
PM-3 Madrid									Reference Point Elevation: 73.12
Depth of Screen Interval	640-680	480-520	240-280	145-185					
Aquifer Name [1]	Sunnyside [2]	Silverado	Lynwood	Gardena					
12/13/2021	-4.37	-2.09	-2.08	-2.04					
3/18/2022	-4.19	-1.72	-1.74	-1.75					
3/29/2022	-4.07	-1.74	-1.77	-1.76					
6/6/2022	-4.33	-2.02	-1.94	-1.94					
8/24/2022	-2.75	-2.33	-2.29	-2.31					
9/20/2022	-4.87	-2.52	-2.45	-2.43					
PM-4 Mariner									Reference Point Elevation: 100.38
Depth of Screen Interval	670-710	500-540	340-380	200-240					
Aquifer Name [1]	Sunnyside [2]	Silverado	Lynwood	Gardena					
12/13/2021	0.56	-1.02	2.45	2.51					
3/16/2022	0.46	-0.22	3.16	3.26					
5/15/2022	0.01	-1.41	1.96	2.05					
6/6/2022	-0.21	-1.42	2.15	2.22					
8/28/2022	-0.89	-0.89	2.62	2.65					
9/20/2022	-0.49	-1.35	2.24	2.28					
PM-5 Columbia Park									Reference Point Elevation: 78.57
Depth of Screen Interval	1360-1380	940-960	770-790	580-600	320-340	140-160			
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Sunnyside [2]	Silverado	Lynwood [2]	Gardena			
10/19/2021	-24.15	-30.51	-2.27	-0.54	2.68	2.81			
12/13/2021	-24.29	-30.45	-0.93	0.26	2.97	3.11			
3/16/2022	-24.15	-31.35	-1.89	-0.53	3.48	3.58			
5/3/2022	-24.24	-28.54	-1.92	-0.56	2.64	2.72			
6/6/2022	-24.08	-27.74	-2.10	-1.04	2.30	2.47			
8/19/2022	-24.36	-30.57	-1.71	-0.78	2.92	2.92			
9/20/2022	-24.44	-29.76	-2.55	-1.29	2.23	2.42			
PM-6 Madrona Marsh									Reference Point Elevation: 80.88
Depth of Screen Interval	1195-1235	905-925	770-790	530-550	390-410	240-260			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Sunnyside [2]	Silverado	Lynwood	Lynwood			
12/13/2021	-26.64	-7.17	-6.63	0.59	1.56	1.94			
3/16/2022	-26.98	-6.89	-5.81	1.24	2.38	2.75			
4/8/2022	-26.10	-6.94	-6.28	0.96	3.07	2.57			
6/6/2022	-25.95	-7.27	-6.78	0.42	1.38	1.78			
9/1/2022	-27.69	-7.75	-7.05	0.27	1.37	1.73			
9/20/2022	-27.14	-7.91	-7.26	0.05	0.99	1.40			

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TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Rio Hondo #1									Reference Point Elevation: 146.51
Depth of Screen Interval	1110-1130	910-930	710-730	430-450	280-300	140-160			
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Sunnyside	Silverado	Hollydale	Gardena			
10/20/2021	36.64	34.81	34.07	28.25	34.96	38.95			
12/10/2021	35.79	33.72	32.98	27.41	34.10	38.19			
3/8/2022	42.03	41.41	40.69	36.11	43.43	47.69			
4/28/2022	38.48	38.25	37.71	33.31	41.16	45.92			
6/7/2022	36.89	36.92	36.37	31.19	39.26	44.15			
9/13/2022	31.16	29.96	29.33	26.61	34.56	38.79			
Seal Beach #1									Reference Point Elevation: 9.06
Depth of Screen Interval	1345-1365	1160-1180	1020-1040	775-795	605-625	215-235	60-70		
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Sunnyside [2]	Silverado	Lynwood [2]	Gage	Artesia		
12/17/2021	-44.10	-44.30	-44.18	-57.98	-37.22	0.80	3.04		
3/17/2022	-32.31	-32.46	-32.29	-39.15	-28.18	1.75	2.94		
4/13/2022	-22.46	-22.53	-22.35	-28.63	-23.93	3.98	4.35		
6/16/2022	-27.21	-27.38	-27.25	-47.97	-32.11	1.09	3.45		
8/16/2022	-33.11	-33.33	-33.05	-48.08	-33.89	-1.39	2.62		
9/23/2022	-35.85	-36.05	-35.87	-52.37	-37.41	-2.49	2.08		
South Gate #1									Reference Point Elevation: 102.50
Depth of Screen Interval	1440-1460	1320-1340	910-930	565-585	220-240				
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Silverado [2]	Lynwood	Exposition [2]				
10/19/2021	-16.92	-15.21	-9.55	-11.09	26.69				
12/13/2021	-16.14	-13.86	-6.63	-8.70	26.84				
3/9/2022	-9.93	-8.35	-3.53	-4.55	27.20				
5/16/2022	-9.61	-8.14	-4.11	-6.24	27.17				
6/8/2022	-10.65	-9.52	-5.03	-7.35	26.99				
9/20/2022	-14.51	-12.81	-7.77	-8.74	26.48				
9/22/2022	-14.54	-13.02	-7.98	-10.53	26.40				
South Gate #2									Reference Point Elevation: 120.29
Depth of Screen Interval	1740-1760	1410-1430	1062-1082	670-690	410-430	205-225			
Aquifer Name [1]	Sunnyside [2]	Sunnyside [2]	Sunnyside	Silverado [2]	Hollydale	Gaspur [2]			
10/21/2021	-33.89	-34.41	-35.46	-26.07	32.97	39.3			
11/16/2021	-33.66	-34.04	-34.64	-25.04	32.98	39.42			
12/8/2021	-33.32	-33.63	-34.57	-26.11	33.15	39.41			
3/17/2022	-28.51	-28.51	-31.49	-24.81	33.09	39.18			
5/17/2022	-29.60	-29.97	-32.74	-24.60	32.94	39.11			
6/14/2022	-29.99	-30.32	-33.40	-25.62	32.69	38.92			
9/15/2022	-33.48	-33.58	-34.94	-28.29	32.29	38.66			
Westchester #1									Reference Point Elevation: 126.95
Depth of Screen Interval	740-760	560-580	455-475	310-330	215-235				
Aquifer Name [1]	Pico Form. [2]	Sunnyside [2]	Sunnyside [2]	Silverado	Jefferson				
12/17/2021	0.65	8.55	8.92	9.12	9.30				
3/14/2022	0.79	8.60	9.00	9.23	9.42				
5/19/2022	0.84	8.73	9.20	9.40	9.51				
6/14/2022	0.50	8.70	9.10	9.25	9.44				
9/9/2022	0.53	8.84	9.36	9.50	9.66				
9/21/2022	1.07	9.40	9.65	9.92	10.15				
Whittier #1									Reference Point Elevation: 217.35 (Zones 1, 2, 4 and 5) and 217.81 (Zone 3)
Depth of Screen Interval	1180-1200	920-940	600-620	450-470	200-220				
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Sunnyside	Silverado	Jefferson				
12/6/2021	102.60	102.67	95.19	95.14	194.85				
3/7/2022	102.52	102.53	96.75	95.32	195.36				
4/27/2022	102.63	102.59	96.79	95.47	195.09				
6/15/2022	102.54	102.58	96.78	95.40	194.71				
8/22/2022	102.34	102.43	96.41	95.07	194.19				
9/12/2022	102.38	102.47	96.50	95.05	194.08				

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TABLE 2.1
GROUNDWATER ELEVATIONS, WATER YEAR 2021 - 2022

	ZONE 1	ZONE 2	ZONE 3	ZONE 4	ZONE 5	ZONE 6	ZONE 7	ZONE 8	ZONE 9
Whittier #2									Reference Point Elevation: 167.55
Depth of Screen Interval	1370-1390	1090-1110	655-675	425-445	315-335	150-170			
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Sunnyside	Silverado	Silverado	Gage [2]			
12/6/2021	65.60	66.60	53.97	53.35	86.25	95.83			
3/1/2022	70.20	71.11	59.23	59.91	94.13	100.89			
3/8/2022	70.75	70.70	58.21	58.45	94.15	101.04			
6/6/2022	66.95	67.94	53.60	51.97	91.52	100.27			
9/30/2022	62.36	63.51	49.73	46.17	85.06	94.10			
Whittier Narrows #1									Reference Point Elevation: 214.66
Depth of Screen Interval	749-769	610-629	463-483	393-402	334-344	273-283	234-243	163-173	95-105
Aquifer Name [1]	Sunnyside	Sunnyside	Sunnyside	Silverado	Silverado	Lynwood	Lynwood	Gardena	Gaspur
3/14/2022	160.90	161.76	163.55	168.21	169.17	170.15	not measured	not measured	not measured
3/15/2022	not measured	not measured	not measured	not measured	not measured	not measured	170.49	169.85	170.39
9/15/2022	150.44	151.36	154.36	158.91	159.86	161.09	161.02	160.91	162.42
Whittier Narrows #2									Reference Point Elevation: 209.15
Depth of Screen Interval	659-678	579-598	469-488	419-428	328-338	263-273	214-223	136-145	91-100
Aquifer Name [1]	Pico Form. [2]	Pico Form. [2]	Pico Form. [2]	Pico Form. [2]	Pico Form. [2]	Lynwood	Lynwood	Gardena [2]	Gardena
3/15/2022	-21.97	-21.65	-21.51	not measured	not measured	not measured	not measured	not measured	not measured
3/16/2022	not measured	not measured	not measured	-15.67	85.99	131.73	132.64	134.39	153.98
9/15/2022	-24.10	-23.91	-23.57	-16.46	74.35	118.15	119.39	124.74	148.28
Willowbrook #1									Reference Point Elevation: 98.87
Depth of Screen Interval	885-905	500-520	360-380	200-220					
Aquifer Name [1]	Sunnyside [2]	Silverado	Lynwood	Gage					
12/15/2021	-54.84	-41.05	-45.32	-44.53					
3/17/2022	-50.40	-39.48	-39.54	-38.33					
4/26/2022	-49.59	-39.70	-42.03	-41.05					
6/7/2022	-50.28	-39.97	-42.66	-41.82					
9/2/2022	-55.35	-40.78	-44.73	-43.32					
9/30/2022	-55.34	-41.08	-45.07	-43.66					
Wilmington #1									Reference Point Elevation: 40.74
Depth of Screen Interval	915-935	780-800	550-570	225-245	120-140				
Aquifer Name [1]	Sunnyside [2]	Silverado	Silverado	Lynwood	Gage				
11/18/2021	-36.37	-36.76	-36.83	-9.46	-6.40				
12/15/2021	-38.96	-39.22	-39.41	-9.87	-6.79				
2/14/2022	-40.58	-40.94	-41.03	-9.90	-6.68				
3/15/2022	-40.71	-41.08	-41.11	-10.00	-6.83				
5/9/2022	-41.86	-42.18	-42.19	-9.81	-6.50				
6/14/2022	-42.88	-43.18	-43.16	-10.11	-6.75				
8/8/2022	-44.82	-45.13	-45.05	-11.36	-7.98				
9/20/2022	-40.96	-41.18	-41.18	-10.85	-7.68				
Wilmington #2									Reference Point Elevation: 32.30
Depth of Screen Interval	950-970	755-775	540-560	390-410	120-140				
Aquifer Name [1]	Sunnyside [2]	Silverado	Silverado	Lynwood	Gage				
11/9/2021	-23.04	-18.80	-14.98	-13.99	-0.41				
12/14/2021	-25.11	-20.33	-16.14	-15.06	-0.39				
3/1/2022	-24.96	-20.32	-15.93	-14.84	-0.77				
3/15/2022	-25.81	-20.67	-16.23	-15.09	-0.82				
5/3/2022	-26.57	-21.32	-16.86	-15.74	-0.72				
6/14/2022	-27.06	-21.51	-16.92	-15.76	-0.84				
8/9/2022	-28.45	-22.70	-18.13	-16.99	-1.09				
9/20/2022	-26.25	-21.15	-17.01	-16.01	-1.19				

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TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Bell #1											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				3/15/2022	8/23/2022	3/15/2022	8/23/2022	3/15/2022	8/23/2022	3/15/2022	8/23/2022	3/15/2022	8/23/2022	3/15/2022	8/23/2022
General Minerals															
Alkalinity	mg/l			620	610	170	170	160	160	180	180	180	180	280	280
Anion Sum	meq/l			18	18	5.8	5.7	5.4	5.4	6	6	7.8	7.8	12	12
Bicarbonate as HCO3	mg/l			750	730	210	200	200	200	220	220	220	220	340	350
Boron	mg/l	1	N	**1.6**	**1.6**	0.14	0.14	0.13	0.13	0.15	0.15	0.14	0.14	0.17	0.17
Bromide	ug/l			1.2	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			14.5	14	50.4	51.4	45	44.9	56.3	57.3	74.9	74.8	125	126
Carbon Dioxide	mg/l			546	540	151	148	146	144	160	158	165	164	259	258
Carbonate as CO3	mg/l			ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			17	17	5.5	5.5	5.2	5.1	5.7	5.8	7.5	7.4	12	12
Chloride	mg/l	500	S	190	200	24	24	31	31	30	29	57	55	100	100
Fluoride	mg/l	2	P	0.33	0.32	0.2	0.2	0.35	0.35	0.37	0.37	0.33	0.33	0.32	0.32
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			310	280	23	20	30	28	28	24	1.9	1.7	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	10	9	5.9	5.4
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	2.3	2	1.3	1.2
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			6.9	7.3	2.7	2.7	3.6	3.6	3.4	3.4	3	3	3	3.1
Sodium, Total	mg/l			360	360	48	47	47	45	41	41	50	49	61	60
Sulfate	mg/l	500	S	ND	ND	81	81	60	60	77	78	120	120	160	160
Total Dissolved Solid (TDS)	mg/l	1000	S	1000	1000	340	320	300	280	340	320	440	470	690	730
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	2.3	2	1.3	1.2
General Physical Properties															
Apparent Color	ACU	15	S	**200**	**200**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			60.7	59	166	169	154	153	194	197	261	260	445	448
Lab pH	Units			8.17	8.31	8	8.16	7.92	8.1	7.9	8.06	7.86	7.99	7.71	7.84
Langelier Index - 25 degree	None			0.572	0.689	0.501	0.675	0.357	0.542	0.474	0.647	0.534	0.656	0.749	0.876
Odor	TON	3	S	ND	**4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	**1700**	**1800**	480	560	460	540	490	590	650	770	970	1100
Turbidity	NTU	5	S	0.4	0.1	ND	0.1	ND	ND	0.15	0.1	0.2	ND	0.8	0.45
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	0.4	ND	ND	ND	ND	0.91	0.95	2.9	3.1	1.2	1.3
Barium, Total	ug/l	1000	P	19	20	36	38	36	37	78	79	230	240	140	140
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.7	0.74	ND	ND	ND	ND	ND	ND	1.5	1.8	4	4.3
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	0.19	ND	0.056	ND	0.16	ND	0.024	1.6	1.9	4.4	4.5
Copper, Total	ug/l	1300	P	0.58	0.86	ND	ND	ND	ND	ND	ND	ND	0.53	1	0.88
Iron, Total	mg/l	0.3	S	0.1	0.09	ND	ND	ND	ND	ND	0.087	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			5.94	5.82	9.8	9.96	10.1	10	12.8	13	18.1	17.9	32.2	32.3
Manganese, Total	ug/l	50	S	28	30	**72**	**75**	50	**51**	**69**	**71**	2.1	1.9	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	4.5	4.7	4.3	4.5
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1	0.85
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	2.1	1.8	**46**	**37**
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	0.66	0.47	0.15	0.19
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	2.3	1.9	1.5	1.4
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			13	12	0.48	0.51	0.45	0.56	0.3	0.4	ND	ND	0.49	0.45

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Bell Gardens #1					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				5/23/2022	5/23/2022	5/23/2022	5/23/2022	5/23/2022	5/23/2022
General Minerals									
Alkalinity	mg/l			170	160	140	110	130	140
Anion Sum	meq/l			7.5	5.5	6.9	5.2	5.9	6.5
Bicarbonate as HCO3	mg/l			200	200	170	140	160	170
Boron	mg/l	1	N	0.054	0.12	0.17	0.13	0.14	0.14
Bromide	ug/l			ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			94.7	44.1	67.6	46.1	55.6	64.7
Carbon Dioxide	mg/l			151	147	125	104	130	129
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			7	5.2	6.5	4.9	5.6	6.2
Chloride	mg/l	500	S	54	38	68	46	53	67
Fluoride	mg/l	2	P	0.17	0.24	0.28	0.36	0.19	0.28
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			5.4	9.5	ND	ND	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	11	10	13	14
Nitrate as Nitrogen	mg/l	10	P	ND	ND	2.5	2.3	2.8	3.1
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			2.4	2.7	3.6	3.3	3.3	3.7
Sodium, Total	mg/l			27	51	48	41	42	43
Sulfate	mg/l	500	S	130	54	98	68	71	81
Total Dissolved Solid (TDS)	mg/l	1000	S	450	300	410	310	350	390
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	2.5	2.3	2.8	3.1
General Physical Properties									
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			289	144	215	149	183	211
Lab pH	Units			7.77	7.92	7.67	7.66	7.36	7.52
Langelier Index - 25 degree	None			0.519	0.348	0.197	-0.058	-0.215	0.033
Odor	TON	3	S	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	690	520	660	500	560	640
Turbidity	NTU	5	S	ND	ND	ND	ND	ND	ND
Metals									
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	3.6	0.4	2.5	2.3	0.93	1.6
Barium, Total	ug/l	1000	P	100	74	110	52	63	61
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	0.58	0.64	0.77	0.62
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.09	0.082	0.69	0.72	0.78	0.69
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	0.55	ND
Iron, Total	mg/l	0.3	S	0.04	ND	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			12.8	8.31	11.3	8.22	10.8	12.1
Manganese, Total	ug/l	50	S	27	40	ND	ND	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	0.05	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	0.51	1	2.2	1.7
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	1
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	0.9	1.5	2.6
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	**3.9**	0.54	**1.2**	0.23	0.37	0.73
Perchlorate	ug/l	6	P	ND	ND	0.53	0.46	0.47	0.4
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			ND	0.45	0.69	0.76	0.32	0.92

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Cerritos #1					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				4/21/2022	4/21/2022	4/21/2022	4/21/2022	4/21/2022	4/21/2022
General Minerals									
Alkalinity	mg/l			170	170	170	180	180	190
Anion Sum	meq/l			4.9	4.4	5.4	5.1	4.7	4.7
Bicarbonate as HCO3	mg/l			200	200	210	220	220	230
Boron	mg/l	1	N	0.09	0.059	0.091	0.089	0.089	0.082
Bromide	ug/l			0.045	0.039	0.06	0.044	ND	ND
Calcium, Total	mg/l			36.4	36.6	41.5	45.6	39.1	45.3
Carbon Dioxide	mg/l			148	148	155	165	165	173
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			4.7	4.1	5.1	4.9	4.5	4.5
Chloride	mg/l	500	S	16	13	21	16	12	11
Fluoride	mg/l	2	P	0.24	0.3	0.36	0.48	0.41	0.29
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			10	17	27	18	14	85
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			2.4	2.3	2.3	2.2	2.1	2.2
Sodium, Total	mg/l			56	41	55	38	40	34
Sulfate	mg/l	500	S	54	33	64	47	32	27
Total Dissolved Solid (TDS)	mg/l	1000	S	280	240	280	260	250	240
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
General Physical Properties									
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	3
Hardness (Total, as CaCO3)	mg/l			111	115	130	157	137	150
Lab pH	Units			8.11	8.05	7.99	7.9	7.92	7.9
Langelier Index - 25 degree	None			0.487	0.442	0.424	0.406	0.362	0.433
Odor	TON	3	S	1	1	1	2	**4**	**4**
Specific Conductance	umho/cm	1600	S	440	390	480	450	430	430
Turbidity	NTU	5	S	0.05	0.05	0.05	0.15	0.1	0.15
Metals									
Aluminum, Total	ug/l	1000	P	4.5	ND	ND	4.5	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	0.094	ND	ND	ND
Arsenic, Total	ug/l	10	P	**15**	**11**	**19**	5.3	9.8	**36**
Barium, Total	ug/l	1000	P	53	110	130	65	87	100
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.11	0.13	0.099	0.11	0.1	0.14
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.046	0.044	0.036	0.014	0.058	0.051
Copper, Total	ug/l	1300	P	0.24	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.0084	0.024	0.036	0.089	0.067	0.098
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			4.89	5.8	6.41	10.5	9.52	8.86
Manganese, Total	ug/l	50	S	28	37	48	**84**	**120**	**150**
Mercury	ug/l	2	P	ND	ND	0.017	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	0.014	0.02	0.014	0.013	0.014	0.014
Total Organic Carbon	mg/l			0.23	0.43	0.29	0.37	0.37	0.41

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Cerritos #2											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				4/20/2022	9/1/2022	4/20/2022	9/1/2022	4/20/2022	9/1/2022	4/20/2022	9/1/2022	4/20/2022	9/1/2022	4/20/2022	9/1/2022
General Minerals															
Alkalinity	mg/l			150	150	170	170	170	160	190	180	190	180	350	340
Anion Sum	meq/l			3.7	3.7	8.3	8.2	3.9	3.8	4.3	4.2	4.3	4.2	12	12
Bicarbonate as HCO3	mg/l			180	180	210	200	210	200	230	220	230	220	430	410
Boron	mg/l	1	N	0.058	0.056	0.17	0.17	0.064	0.063	0.079	0.077	0.076	0.075	0.1	0.1
Bromide	ug/l			ND	ND	0.1	ND	ND	ND	ND	ND	ND	ND	0.19	ND
Calcium, Total	mg/l			42.6	42.3	84.5	84	45.2	45.6	52.3	51.7	50.7	51.3	144	146
Carbon Dioxide	mg/l			137	136	156	149	151	144	167	160	167	160	323	307
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			3.7	3.7	7.8	7.8	3.8	3.8	4.3	4.2	4.1	4.1	12	12
Chloride	mg/l	500	S	6.6	6.6	80	79	5.9	5.8	6.8	6.7	6.6	6.5	77	79
Fluoride	mg/l	2	P	0.25	0.25	0.33	0.34	0.25	0.26	0.36	0.37	0.3	0.31	0.3	0.3
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			1.4	1.4	5.2	5.4	4	3.8	4.1	4.8	5.4	4.8	14	15
Nitrate (as NO3)	mg/l	45	P	0.23	ND	13	13	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	0.053	ND	3	3	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3	2.8	4.6	4.4	2.6	2.6	2.9	2.7	2.9	2.8	4.5	4.5
Sodium, Total	mg/l			25	24	50	51	22	22	21	20	21	21	46	47
Sulfate	mg/l	500	S	22	23	110	120	17	18	19	19	17	18	160	160
Total Dissolved Solid (TDS)	mg/l	1000	S	200	210	440	500	190	220	210	250	200	230	660	740
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	0.053	ND	3	3	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.5	5
Hardness (Total, as CaCO3)	mg/l			128	127	276	273	138	138	166	162	155	157	478	482
Lab pH	Units			7.84	7.96	7.73	7.88	8	8.15	7.94	8.1	7.94	8.1	7.61	7.87
Langelier Index - 25 degree	None			0.258	0.371	0.431	0.565	0.502	0.618	0.546	0.663	0.536	0.667	0.813	1.05
Odor	TON	3	S	1	ND	1	ND	**4**	ND	2	ND	2	ND	2	ND
Specific Conductance	umho/cm	1600	S	370	360	820	820	380	380	420	430	420	420	1200	1200
Turbidity	NTU	5	S	ND	ND	ND	0.1	0.05	0.1	ND	0.1	ND	0.2	1.6	2.3
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	0.12	ND	0.13	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	2.2	2.3	1.9	1.9	3.1	3.1	7.1	7	**16**	**16**	3.7	3.7
Barium, Total	ug/l	1000	P	110	110	120	120	120	120	160	160	180	170	130	130
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.37	0.38	0.73	0.73	0.14	ND	0.13	ND	0.089	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.27	0.37	0.76	0.8	0.056	0.1	0.044	0.074	0.036	0.072	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	0.26	0.53	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.0062	ND	ND	ND	0.023	ND	0.042	0.041	0.079	0.077	**0.38**	**0.39**
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	0.091	ND	ND	ND
Magnesium, Total	mg/l			5.34	5.13	15.8	15.3	5.98	5.82	8.47	8.11	7.02	6.88	28.6	28.2
Manganese, Total	ug/l	50	S	5.6	5.5	1.4	1.3	42	41	**93**	**95**	**110**	**110**	**270**	**280**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	1	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	0.12	ND	0.08	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	**2.5**	**2.6**	ND	ND	ND	ND	ND	ND	0.037	ND
Perchlorate	ug/l	6	P	ND	ND	0.61	0.62	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	0.02	ND	0.021	ND	0.017	ND	0.015	ND	0.021	ND	0.021	ND
Total Organic Carbon	mg/l			0.24	ND	0.52	0.51	0.24	ND	0.26	0.33	0.38	0.33	1.1	0.94

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Cerritos #3													
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6		Zone 7	
				2/10/2022	7/18/2022	2/10/2022	7/18/2022	2/10/2022	7/18/2022	2/11/2022	7/18/2022	2/10/2022	7/18/2022	2/11/2022	7/18/2022	2/11/2022	7/18/2022
General Minerals																	
Alkalinity	mg/l			230	230	170	160	140	140	230	220	180	160	230	220	180	180
Anion Sum	meq/l			7.3	7.1	4	3.9	5.6	5.6	7.1	6.5	4.9	4.5	7.2	7.1	6.1	5.9
Bicarbonate as HCO3	mg/l			290	270	200	180	170	160	280	250	220	200	280	260	220	220
Boron	mg/l	1	N	0.25	0.25	0.12	0.12	0.11	0.11	0.24	0.22	0.12	0.11	0.24	0.23	0.085	0.084
Bromide	ug/l			0.21	ND	0.068	ND	0.094	ND	0.2	ND	0.095	ND	0.21	ND	0.13	ND
Calcium, Total	mg/l			11.9	11.9	9.64	9.32	13.8	14	12	10.6	19.7	19.1	12.6	14.5	53.6	53.4
Carbon Dioxide	mg/l			ND	198	ND	143	ND	123	ND	190	ND	143	ND	194	5.79	158
Carbonate as CO3	mg/l			ND	ND	4.2	13	2.4	12	ND	12	ND	ND	ND	9.3	ND	ND
Cation Sum	meq/l			6.6	6.7	3.9	3.8	5.2	5.3	6.6	6.2	4.6	4.4	6.6	6.6	5.9	5.7
Chloride	mg/l	500	S	60	60	20	20	30	30	56	47	21	19	58	56	41	40
Fluoride	mg/l	2	P	0.22	0.23	0.55	0.54	0.58	0.56	0.25	0.29	0.21	0.21	0.22	0.23	0.31	0.31
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			79	62	23	14	37	27	77	48	49	36	81	51	28	21
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			1.6	1.8	1.5	1.5	1.8	1.9	2	2	3.5	4.3	1.8	2.1	4.1	4
Sodium, Total	mg/l			130	130	75	74	100	100	130	120	75	70	130	130	56	53
Sulfate	mg/l	500	S	43	43	1.7	1.3	89	89	42	38	32	34	45	51	60	57
Total Dissolved Solid (TDS)	mg/l	1000	S	430	400	250	220	360	330	430	370	310	260	430	400	360	330
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties																	
Apparent Color	ACU	15	S	5	5	**25**	**30**	4	4	7.5	5	7.5	5	5	5	4	ND
Hardness (Total, as CaCO3)	mg/l			40.3	39.6	27.6	26.6	38.1	38.4	39.9	34.8	62.4	63.5	42.2	47.4	169	166
Lab pH	Units			8.25	8.43	8.34	8.59	8.31	8.52	8.18	8.42	8.13	8.19	8.2	8.39	7.8	8.04
Langelier Index - 25 degree	None			0.232	0.419	0.148	0.366	0.158	0.381	0.166	0.347	0.256	0.266	0.207	0.445	0.348	0.594
Odor	TON	3	S	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1	ND
Specific Conductance	umho/cm	1600	S	690	670	380	370	540	540	670	610	460	430	700	670	570	560
Turbidity	NTU	5	S	0.1	ND	0.25	0.15	0.05	ND	1	2	**18**	3.1	0.95	0.8	1.9	1
Metals																	
Aluminum, Total	ug/l	1000	P	10	ND	17	ND	10	ND	9	ND	300	ND	9	ND	8.5	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	0.16	ND	0.093	ND	0.15	ND
Arsenic, Total	ug/l	10	P	ND	ND	0.56	0.63	**11**	10	1.8	1.8	**13**	**12**	5	7.6	**31**	**25**
Barium, Total	ug/l	1000	P	9	9.5	3.5	4.2	21	22	13	13	33	36	14	17	34	34
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	0.043	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	0.13	ND	ND	ND	0.17	ND	0.26	ND	0.12	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.12	ND	0.11	ND	0.033	ND	0.12	ND	0.021	ND	0.027	ND	0.0097	ND
Copper, Total	ug/l	1300	P	ND	0.66	ND	ND	ND	ND	ND	ND	1.9	ND	ND	ND	0.3	ND
Iron, Total	mg/l	0.3	S	0.012	ND	ND	ND	ND	ND	0.0058	ND	0.15	ND	0.0091	ND	0.007	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	0.3	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			2.55	2.41	0.865	0.808	0.907	0.843	2.41	2.03	3.21	3.83	2.58	2.73	8.47	8.02
Manganese, Total	ug/l	50	S	3.6	3.7	4.5	4.8	5.8	6.6	17	15	**60**	**96**	20	30	**60**	**66**
Mercury	ug/l	2	P	0.021	ND	0.022	ND	ND	ND	ND	ND	ND	ND	0.052	ND	0.026	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	0.45	ND	0.17	ND	0.17	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	7.3	ND	ND	ND
Volatile Organic Compounds																	
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l				ND		ND		ND		ND		ND		ND		ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N	0.66		0.64		0.49		0.53		0.47		0.51		0.5	
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others																	
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	0.92	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	0.017	ND	0.02	ND	0.015	ND	0.02	ND	ND	ND	0.02	ND	0.017	ND
Total Organic Carbon	mg/l			1.1	1.1	1.9	1.9	0.6	0.6	1.2	1.3	1	1.2	1.1	1.5	0.7	0.6

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Commerce #1					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				8/29/2022	4/18/2022	4/18/2022	4/18/2022	4/18/2022	4/18/2022
General Minerals									
Alkalinity	mg/l			470	320	250	200	190	220
Anion Sum	meq/l			250	11	8.7	8.5	11	9.5
Bicarbonate as HCO3	mg/l			570	390	310	240	230	260
Boron	mg/l	1	N	**6.6**	0.7	0.25	0.24	0.26	0.13
Bromide	ug/l			ND	0.78	ND	ND	0.76	ND
Calcium, Total	mg/l			170	43.8	56.9	42.6	59.3	88.6
Carbon Dioxide	mg/l			423	284	226	177	170	196
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			220	10	8.3	7.8	11	9.1
Chloride	mg/l	500	S	**8500**	160	120	86	200	100
Fluoride	mg/l	2	P	ND	0.36	0.3	0.44	0.32	0.35
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			9500	240	160	55	130	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	20	42
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	4.5	9.4
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			89	6.4	4.1	3.9	3.5	2.5
Sodium, Total	mg/l			4500	150	86	95	140	54
Sulfate	mg/l	500	S	3.3	1.6	18	100	65	79
Total Dissolved Solid (TDS)	mg/l	1000	S	**14000**	610	460	460	630	550
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	4.5	9.4
General Physical Properties									
Apparent Color	ACU	15	S	**62**	**30**	3	3	3	ND
Hardness (Total, as CaCO3)	mg/l			1000	191	220	178	223	332
Lab pH	Units			7.86	8	7.99	7.95	7.83	7.75
Langelier Index - 25 degree	None			0.863	0.656	0.682	0.42	0.387	0.561
Odor	TON	3	S	**4**	2	**8**	ND	**4**	ND
Specific Conductance	umho/cm	1600	S	**23000**	1100	850	810	1100	920
Turbidity	NTU	5	S	**11**	ND	ND	ND	0.1	0.2
Metals									
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	3.7	ND	ND	ND	1.2	0.46
Barium, Total	ug/l	1000	P	670	67	86	220	66	81
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.53	0.29	ND	ND	6.3	11
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	0.34	0.097	0.053	7.1	**12**
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	**1**	ND	ND	0.083	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			140	19.8	19.1	17.3	18.2	27
Manganese, Total	ug/l	50	S	**110**	7.9	47	**58**	**73**	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	0.78	0.82
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	0.68	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	**0.55**	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	1.7	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	0.53	1.4
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	**5.2**	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	0.13	ND	ND	**5.3**	**1.2**	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	2.5	4.4
Surfactants	mg/l	0.5	S	0.068	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			40	5	1.5	0.87	1.2	0.44

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Compton #1							
				Zone 1		Zone 2		Zone 3		Zone 4	
				4/4/2022	8/23/2022	4/4/2022	8/23/2022	4/4/2022	8/23/2022	4/4/2022	8/23/2022
General Minerals											
Alkalinity	mg/l			120	120	150	150	160	160	180	170
Anion Sum	meq/l			4.4	4.4	4.8	4.8	5.3	5.3	5.8	5.8
Bicarbonate as HCO3	mg/l			150	140	180	180	200	200	210	210
Boron	mg/l	1	N	0.15	0.15	0.1	0.1	0.11	0.11	0.09	0.094
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			21.4	21.9	36.5	37	47.7	49	60.4	61.6
Carbon Dioxide	mg/l			109	106	129	128	147	142	157	156
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			3.9	4.1	4.4	4.5	4.8	5	5.4	5.5
Chloride	mg/l	500	S	21	21	24	24	26	26	23	23
Fluoride	mg/l	2	P	0.26	0.27	0.3	0.31	0.25	0.27	0.23	0.24
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			23	21	26	24	34	29	26	21
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			1.6	1.8	1.7	1.9	2.6	2.8	2.5	2.7
Sodium, Total	mg/l			62	64	52	53	40	41	42	43
Sulfate	mg/l	500	S	64	66	57	58	62	63	76	77
Total Dissolved Solid (TDS)	mg/l	1000	S	260	250	280	280	310	310	340	320
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties											
Apparent Color	ACU	15	S	12	12	4	5	4	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			60.3	62	103	105	153	158	176	180
Lab pH	Units			8.25	8.34	8.23	8.29	8.14	8.18	8.05	8.06
Langelier Index - 25 degree	None			0.25	0.353	0.553	0.619	0.599	0.65	0.654	0.654
Odor	TON	3	S	ND	ND	ND	2	ND	2	ND	2
Specific Conductance	µmho/cn	1600	S	460	430	490	460	540	500	580	530
Turbidity	NTU	5	S	ND	ND	ND	0.1	ND	0.1	0.15	0.4
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND	ND	**15**	**16**
Barium, Total	ug/l	1000	P	7.4	7.5	11	11	62	66	160	170
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.45	ND	ND	ND	ND	ND	ND	0.22
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.16	0.1	0.087	0.079	0.057	ND	0.044	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	ND	ND	ND	ND	ND	ND	0.07	0.071
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			1.65	1.75	2.96	3.1	8.15	8.63	6.02	6.37
Manganese, Total	ug/l	50	S	7.7	7.9	16	16	48	48	**76**	**76**
Mercury	ug/l	2	P	ND	0.084	ND	0.068	ND	0.087	ND	0.09
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			1.3	1.2	0.86	0.79	0.62	0.55	0.35	0.33

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Compton #2					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				5/20/2022	5/20/2022	5/20/2022	5/20/2022	5/20/2022	5/20/2022
General Minerals									
Alkalinity	mg/l			480	280	170	190	190	190
Anion Sum	meq/l			10	6.1	5.1	6.6	6.6	8.3
Bicarbonate as HCO3	mg/l			580	350	200	230	230	230
Boron	mg/l	1	N	0.67	0.19	0.11	0.13	0.13	0.17
Bromide	ug/l			ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			11.5	26.4	43.7	69.1	65.4	83
Carbon Dioxide	mg/l			421	255	148	168	172	180
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			9.4	5.8	4.8	6.3	6.2	7.9
Chloride	mg/l	500	S	16	14	21	35	35	70
Fluoride	mg/l	2	P	0.36	0.23	0.2	0.22	0.28	0.36
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			43	13	19	22	20	1.1
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	5.8
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	1.3
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.4	4.7	2.6	2.7	4	4.2
Sodium, Total	mg/l			200	91	46	41	41	50
Sulfate	mg/l	500	S	ND	ND	58	88	85	120
Total Dissolved Solid (TDS)	mg/l	1000	S	570	330	290	370	380	480
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	1.3
General Physical Properties									
Apparent Color	ACU	15	S	**100**	**20**	3	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			36.8	86.1	134	220	219	280
Lab pH	Units			8.2	8.01	8.03	7.9	7.94	7.54
Langelier Index - 25 degree	None			0.458	0.45	0.483	0.579	0.592	0.273
Odor	TON	3	S	2	2	2	ND	ND	ND
Specific Conductance	umho/cm	1600	S	920	570	490	620	620	800
Turbidity	NTU	5	S	1.8	0.25	0.1	0.15	0.9	0.4
Metals									
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	23	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	1.1	0.47	ND	0.88	1.2	3.5
Barium, Total	ug/l	1000	P	13	17	31	38	93	90
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.27	ND	ND	ND	ND	1.1
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.25	0.1	0.077	0.081	0.1	0.64
Copper, Total	ug/l	1300	P	ND	1	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.043	0.053	ND	0.036	0.055	ND
Lead, Total	ug/l	15	P	ND	ND	0.25	ND	ND	ND
Magnesium, Total	mg/l			1.96	4.92	6.17	11.6	13.4	17.6
Manganese, Total	ug/l	50	S	12	33	28	49	**110**	21
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	4.6
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	0.68
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			14	3.3	0.77	0.48	0.55	0.48

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Downey #1											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				4/12/2022	7/25/2022	4/12/2022	7/25/2022	4/12/2022	7/25/2022	4/12/2022	7/25/2022	4/12/2022	7/25/2022	4/12/2022	7/25/2022
General Minerals															
Alkalinity	mg/l			170	180	160	170	190	200	200	210	230	240	410	450
Anion Sum	meq/l			3.9	4.1	6.5	6.6	8.6	8.8	9.3	9.4	8.9	8.5	18	20
Bicarbonate as HCO3	mg/l			200	210	200	210	230	250	250	250	280	290	500	550
Boron	mg/l	1	N	0.06	0.059	0.066	0.064	0.12	0.11	0.19	0.18	0.095	0.093	0.25	0.25
Bromide	ug/l			ND	0.025	ND	0.085	ND	0.12	ND	0.14	ND	0.14	ND	0.4
Calcium, Total	mg/l			41.2	40.5	79.2	77	99.5	98.6	96.1	94.2	107	100	204	201
Carbon Dioxide	mg/l			151	157	148	153	174	184	188	190	214	215	391	419
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			3.7	3.6	6.2	6	8.2	8	8.9	8.7	8.4	7.8	18	18
Chloride	mg/l	500	S	5.6	5.7	40	40	76	75	83	83	58	51	140	150
Fluoride	mg/l	2	P	0.28	0.3	0.26	0.26	0.3	0.3	0.34	0.37	0.34	0.37	0.28	0.29
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			ND	ND	ND	ND	ND	ND	3.9	3	5.8	4.3	3.6	2.6
Nitrate (as NO3)	mg/l	45	P	ND	0.3	10	10	17	16	8	7.9	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	0.068	2.3	2.3	3.8	3.7	1.8	1.8	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.2	2.8	4	3.5	4.2	3.8	5	4.5	4.4	3.9	7.7	7.1
Sodium, Total	mg/l			25	24	26	25	38	37	56	54	29	28	100	100
Sulfate	mg/l	500	S	19	20	91	91	110	110	130	140	120	110	290	320
Total Dissolved Solid (TDS)	mg/l	1000	S	200	210	370	390	490	510	530	560	500	490	**1100**	**1200**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	0.068	2.3	2.3	3.8	3.7	1.8	1.8	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			126	124	249	240	322	316	319	310	351	324	677	662
Lab pH	Units			7.83	8.06	7.91	7.95	7.77	7.83	7.63	7.7	7.71	7.82	7.48	7.57
Langelier Index - 25 degree	None			0.288	0.531	0.573	0.622	0.58	0.654	0.439	0.515	0.632	0.733	0.839	0.952
Odor	TON	3	S	ND	1	ND	1	ND	1	ND	1	ND	1	ND	1
Specific Conductance	umho/cm	1600	S	340	340	580	570	780	780	860	860	800	740	**1800**	1600
Turbidity	NTU	5	S	0.1	0.15	0.1	0.15	0.1	0.15	0.1	0.15	1.2	0.9	0.1	0.15
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	0.23	ND	0.13	ND	0.11	ND	0.16	ND	ND	ND	0.12
Arsenic, Total	ug/l	10	P	2.8	2.9	2.2	2.2	2.7	2.9	1.8	1.9	4.3	4	2.5	2.5
Barium, Total	ug/l	1000	P	97	98	160	160	120	120	81	80	250	230	80	78
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	3.9	3.9	2	1.9	1.2	1.2	0.39	0.35	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	3.8	4.3	1.9	2.1	1.3	1.4	0.37	0.38	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	ND	0.69	0.55	1.1	ND	0.96	ND	1.1	ND	ND	0.56	0.9
Iron, Total	mg/l	0.3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0079	ND	0.016
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			5.72	5.47	12.3	11.6	17.8	16.9	19.1	18.1	20.1	18	40.6	38.7
Manganese, Total	ug/l	50	S	ND	0.12	ND	ND	ND	ND	1.3	0.99	**120**	**110**	**160**	**160**
Mercury	ug/l	2	P	ND	ND	ND	0.065	ND	0.073	ND	0.063	ND	0.044	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	0.18	ND	0.45	ND	0.98	ND	0.37	ND	0.27
Selenium, Total	ug/l	50	P	0.56	0.56	1	0.97	0.77	0.75	ND	0.38	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.3	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	0.23	ND	0.26	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	0.19	ND	ND	ND	ND	ND	0.28	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	**4.2**	**5.6**	**6.9**	**9.5**	**2.5**	**2.9**	**1.4**	**1.7**	1	**1.2**
Perchlorate	ug/l	6	P	ND	ND	2.4	ND	1.4	ND	0.29	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	0.014	ND	0.029	ND	0.018	ND	0.022	ND	0.015	ND	0.017
Total Organic Carbon	mg/l			ND	ND	ND	0.31	0.37	0.39	0.72	0.57	0.44	0.45	0.98	0.98

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Huntington Park #1							
				Zone 1		Zone 2		Zone 3		Zone 4	
				5/19/2022	9/16/2022	5/19/2022	9/16/2022	5/19/2022	9/16/2022	5/19/2022	9/16/2022
General Minerals											
Alkalinity	mg/l			180	180	190	180	250	250	380	370
Anion Sum	meq/l			6.4	6.5	6.7	6.7	12	12	14	14
Bicarbonate as HCO3	mg/l			220	220	230	220	310	300	460	450
Boron	mg/l	1	N	0.14	0.14	0.15	0.14	0.21	0.2	0.2	0.19
Bromide	ug/l			ND	ND	ND	ND	ND	ND	1.9	2
Calcium, Total	mg/l			64.4	64.8	67.4	67.7	129	129	155	153
Carbon Dioxide	mg/l			174	165	173	165	235	224	359	334
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			6.2	6.3	6.5	6.6	12	12	14	14
Chloride	mg/l	500	S	25	25	31	31	100	100	90	92
Fluoride	mg/l	2	P	0.44	0.44	0.37	0.37	0.3	0.3	0.29	0.3
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			30	37	ND	ND	30	35	9.9	10
Nitrate (as NO3)	mg/l	45	P	ND	ND	2.7	2.7	2.7	3.4	27	28
Nitrate as Nitrogen	mg/l	10	P	ND	ND	0.62	0.61	0.61	0.76	6.1	6.3
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.5	3.5	3.7	3.6	4.8	4.7	5.7	5.5
Sodium, Total	mg/l			38	40	40	41	59	60	62	63
Sulfate	mg/l	500	S	95	99	97	100	180	190	170	180
Total Dissolved Solid (TDS)	mg/l	1000	S	370	380	370	390	730	740	820	830
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	0.62	0.61	0.61	0.76	6.1	6.3
General Physical Properties											
Apparent Color	ACU	15	S	5	5	ND	ND	3	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			222	222	234	233	445	440	548	538
Lab pH	Units			7.44	7.9	7.68	7.97	7.61	7.92	7.44	7.82
Langelier Index - 25 degree	None			0.065	0.525	0.348	0.611	0.607	0.915	0.685	1.05
Odor	TON	3	S	ND	ND	ND	ND	**10**	**4**	**10**	ND
Specific Conductance	umho/cn	1600	S	600	590	630	620	1100	1100	1300	1300
Turbidity	NTU	5	S	1.3	1.1	0.1	0.15	0.1	0.1	0.1	0.35
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.81	0.74	0.66	0.66	0.48	0.45	0.57	0.47
Barium, Total	ug/l	1000	P	63	64	79	79	99	98	93	90
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	0.97	0.89	ND	ND	5.4	5.8
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	0.031	1.2	0.97	0.16	0.1	5.9	6.4
Copper, Total	ug/l	1300	P	ND	ND	0.5	23	0.55	1.3	0.68	1.3
Iron, Total	mg/l	0.3	S	0.28	0.29	ND	ND	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			15	14.8	15.8	15.6	29.5	28.9	39	37.8
Manganese, Total	ug/l	50	S	47	46	1.3	ND	7.1	7.2	7.4	7.3
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	3.6	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	1.9	1.9	ND	ND	3.4	3.3
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	1.8	1.4	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	**6.6**	**4.8**	**12**	**9.5**
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	1.6	1.2	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	53	48
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	0.72	0.7	1.5	1.6
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	0.75	0.76
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	**20**	**16**	**9.1**	**9.2**
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	0.2	0.14	0.35	0.37
Perchlorate	ug/l	6	P	ND	ND	ND	ND	0.67	0.69	5	5.3
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	0.34	0.31	ND	ND
Total Organic Carbon	mg/l			ND	0.33	ND	0.3	6.4	5.8	0.83	0.66

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Lakewood #1					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				3/21/2022	3/21/2022	3/21/2022	3/21/2022	3/21/2022	3/21/2022
General Minerals									
Alkalinity	mg/l			99	150	160	170	180	200
Anion Sum	meq/l			2.9	3.7	3.8	4.6	4.4	9.7
Bicarbonate as HCO3	mg/l			110	190	200	210	220	250
Boron	mg/l	1	N	0.058	0.058	0.07	0.073	0.091	0.085
Bromide	ug/l			0.11	0.032	0.043	0.14	0.054	0.76
Calcium, Total	mg/l			10.8	39.1	40.5	50.3	50.3	125
Carbon Dioxide	mg/l			86.5	136	145	156	164	182
Carbonate as CO3	mg/l			5.5	ND	ND	ND	ND	ND
Cation Sum	meq/l			3	3.7	3.8	4.6	4.4	9.3
Chloride	mg/l	500	S	22	7.9	9.8	30	13	160
Fluoride	mg/l	2	P	0.4	0.22	0.28	0.28	0.44	0.17
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			36	7.8	13	32	15	87
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			0.94	2.1	2.4	4.4	2.7	4.6
Sodium, Total	mg/l			55	31	31	35	25	45
Sulfate	mg/l	500	S	16	19	14	14	15	54
Total Dissolved Solid (TDS)	mg/l	1000	S	170	200	210	250	220	580
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
General Physical Properties									
Apparent Color	ACU	15	S	10	ND	3	3	3	ND
Hardness (Total, as CaCO3)	mg/l			28.5	114	120	150	162	362
Lab pH	Units			8.42	8.12	8.1	8.08	8	7.9
Langelier Index - 25 degree	None			0.071	0.5	0.52	0.607	0.562	0.813
Odor	TON	3	S	1	1	1	1	1	1
Specific Conductance	umho/cm	1600	S	260	300	320	390	360	840
Turbidity	NTU	5	S	0.15	0.15	0.25	0.35	0.15	0.5
Metals									
Aluminum, Total	ug/l	1000	P	11	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	**13**	**15**	1.9	8.4	3.3	**26**
Barium, Total	ug/l	1000	P	16	27	33	180	110	370
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.094	ND	ND	0.099	ND	0.093
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.095	0.03	0.038	0.029	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	0.58	ND
Iron, Total	mg/l	0.3	S	ND	0.013	0.022	0.047	0.11	0.17
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			0.373	3.89	4.68	5.9	8.84	12.3
Manganese, Total	ug/l	50	S	4.1	20	26	**73**	**58**	**310**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	0.075
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	0.016	0.018	ND	0.019	ND	0.062
Total Organic Carbon	mg/l			0.66	0.21	0.29	0.5	0.25	0.84

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Lakewood #2															
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6		Zone 7		Zone 8	
				5/24/2022	9/29/2022	5/24/2022	9/29/2022	5/24/2022	9/29/2022	5/24/2022	9/29/2022	5/24/2022	9/29/2022	5/24/2022	9/29/2022	5/24/2022	9/29/2022	5/24/2022	9/29/2022
General Minerals																			
Alkalinity	mg/l			110	110	140	140	140	130	190	180	170	170	190	190	180	180	210	210
Anion Sum	meq/l			3.6	3.6	3.2	3.2	3.1	3	5.1	5	4	4	4.2	4.1	4.2	4.1	4.6	4.5
Bicarbonate as HCO3	mg/l			120	120	170	170	170	160	230	220	210	210	230	230	220	220	260	250
Boron	mg/l	1	N	0.06	0.06	0.052	0.054	0.048	0.048	0.071	0.071	0.058	0.059	0.065	0.066	0.065	0.065	0.079	0.079
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			12.1	12.3	26	27	25.1	26.2	62.2	64.9	43.6	46	48.4	50.3	52.9	54.1	57.4	58.7
Carbon Dioxide	mg/l			93.3	91.1	122	120	121	117	167	161	156	152	171	165	164	157	194	185
Carbonate as CO3	mg/l			6.8	8.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			3.2	3.4	3	3.2	2.9	3.1	4.8	5.1	3.9	4.1	4	4.1	4	4.1	4.5	4.6
Chloride	mg/l	500	S	14	14	6.2	6.2	5.9	5.9	14	14	6.3	6.3	5.8	5.8	6.1	6.1	7.5	7.5
Fluoride	mg/l	2	P	0.38	0.38	0.29	0.29	0.26	0.26	0.38	0.38	0.24	0.25	0.3	0.3	0.2	0.2	0.32	0.32
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			13	16	7.3	8.5	8.2	9.3	ND	ND	4.1	5	4	4.9	5.7	7.1	17	19
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	1.1	1.1	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	0.24	0.26	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			1.1	1	2.3	2.2	1.8	1.7	3.2	3.3	2.6	2.6	2.9	2.9	2.5	2.4	2.9	2.8
Sodium, Total	mg/l			60	62	32	34	33	35	21	22	29	29	22	23	23	23	23	24
Sulfate	mg/l	500	S	49	51	14	15	7	7	44	45	18	19	8.8	8.7	16	16	6.7	6.7
Total Dissolved Solid (TDS)	mg/l	1000	S	220	220	190	190	180	180	290	280	240	220	230	230	240	220	260	240
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	0.24	0.26	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties																			
Apparent Color	ACU	15	S	5	5	3	ND	4	5	ND	ND	ND	ND	ND	4	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			30.2	30.6	79.3	82.1	71.6	74.7	193	201	130	137	149	154	147	150	172	176
Lab pH	Units			8.54	8.62	8.14	8.33	8.2	8.41	7.88	8.17	7.97	8.22	7.9	8.24	7.92	8.2	7.84	8.12
Langelier Index - 25 degree	None			0.266	0.353	0.317	0.522	0.365	0.56	0.535	0.822	0.438	0.717	0.465	0.821	0.497	0.793	0.513	0.809
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	360	350	310	300	290	570	470	460	380	380	390	380	390	380	430	420
Turbidity	NTU	5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND
Metals																			
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	**13**	**14**	ND	ND	1.6	1.7	3.1	3.3	**20**	**20**	7.9	6.9	**40**	**40**	**40**	**40**
Barium, Total	ug/l	1000	P	15	15	7.4	7.6	9.3	9.7	100	110	120	120	67	72	140	140	120	120
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	0.6	0.57	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.11	0.12	0.084	0.025	0.091	0.024	0.54	0.54	0.055	0.073	0.049	ND	0.068	ND	0.049	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	ND	ND	ND	ND	ND	ND	ND	ND	0.039	0.061	0.057	0.06	0.077	0.078	0.073	0.075
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			ND	ND	3.47	3.58	2.17	2.26	9.25	9.57	5.12	5.33	6.82	6.96	3.68	3.71	6.98	7.05
Manganese, Total	ug/l	50	S	4.6	4.8	13	14	15	16	ND	ND	**99**	**100**	**160**	**170**	**110**	**110**	**190**	**200**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	0.64	0.68	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds																			
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N																
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others																			
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	0.2	0.22	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	0.44	0.49	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.84	0.49	0.54	0.46	0.74	0.64	0.36	ND	0.39	0.31	0.44	0.46	0.98	0.48	0.49	0.36

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	La Mirada #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				5/4/2022	8/23/2022	5/4/2022	8/23/2022	5/4/2022	8/23/2022	5/4/2022	8/23/2022	5/4/2022	8/23/2022
General Minerals													
Alkalinity	mg/l			150	150	140	140	180	180	200	200	180	180
Anion Sum	meq/l			6.1	6	4.4	4.3	5.7	5.6	8.7	8.5	9.8	14
Bicarbonate as HCO3	mg/l			190	180	170	160	220	220	240	240	220	230
Boron	mg/l	1	N	0.14	0.15	0.1	0.1	0.15	0.15	0.14	0.14	0.15	0.16
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			15.4	15.5	9.95	9.69	20.7	19.2	61.6	58.1	61	103
Carbon Dioxide	mg/l			137	132	125	123	165	163	183	180	164	168
Carbonate as CO3	mg/l			ND	ND	ND	7	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.7	5.8	4.1	4.1	5.4	5.3	8.3	8.1	9	13
Chloride	mg/l	500	S	29	29	16	16	21	20	84	78	130	250
Fluoride	mg/l	2	P	0.75	0.73	0.49	0.51	0.74	0.68	0.44	0.44	0.44	0.3
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			26	26	8.3	7.9	23	21	36	34	14	3.2
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	1.9	1.5	29	**68**
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	0.43	0.34	6.5	**15**
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			2.4	2.6	1.8	2	2.7	2.8	3.5	3.6	3.5	4.7
Sodium, Total	mg/l			110	110	80	79	87	88	78	78	95	110
Sulfate	mg/l	500	S	110	100	52	51	68	65	110	110	110	110
Total Dissolved Solid (TDS)	mg/l	1000	S	340	360	240	240	320	320	480	470	540	840
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	0.43	0.34	6.5	**15**
General Physical Properties													
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	4	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			52.5	53.2	30.4	29.8	77.2	71.7	242	231	238	409
Lab pH	Units			8.04	8.3	8.19	8.43	7.93	8.19	7.7	7.94	7.67	7.8
Langelier Index - 25 degree	None			-0.028	0.228	-0.069	0.159	0.075	0.302	0.326	0.542	0.233	0.54
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	600	630	440	450	550	560	840	860	960	1500
Turbidity	NTU	5	S	ND	0.1	ND	ND	ND	ND	ND	ND	ND	ND
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	5.3	5.8	7.6	7.9	5.2	5.5	3.3	3.7	1.7	1.4
Barium, Total	ug/l	1000	P	52	56	26	28	43	43	61	60	60	110
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.94
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.12	0.21	0.068	0.13	0.076	0.19	0.078	0.16	0.2	0.84
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	0.73	0.62	0.51	ND	ND	0.57
Iron, Total	mg/l	0.3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			3.4	3.51	1.34	1.35	6.21	5.8	21.3	21	20.8	37.1
Manganese, Total	ug/l	50	S	11	11	2.9	2.8	17	16	18	25	20	36
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	0.057	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	0.94	0.46	7.3	6.9	4.2	8.9
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	1.9	4.9
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.35	0.42	ND	0.3	0.57	0.53	0.36	0.37	0.37	0.55

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Long Beach #1											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				3/8/2022	9/19/2022	3/8/2022	9/19/2022	3/8/2022	9/19/2022	3/8/2022	9/19/2022	3/8/2022	9/19/2022	3/8/2022	9/19/2022
General Minerals															
Alkalinity	mg/l			170	170	160	150	120	120	130	130	130	130	260	250
Anion Sum	meq/l			3.9	3.9	3.6	3.6	3.1	3.1	3.8	3.8	12	12	18	18
Bicarbonate as HCO3	mg/l			180	170	170	160	140	120	160	150	160	160	310	310
Boron	mg/l	1	N	0.17	0.18	0.16	0.17	0.086	0.088	0.058	0.061	0.15	0.16	0.12	0.13
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			5.05	3.23	2.44	2.52	5.14	5.18	21.5	22	47.6	47.7	182	186
Carbon Dioxide	mg/l			144	140	135	129	105	101	117	113	120	118	236	226
Carbonate as CO3	mg/l			19	27	20	26	10	19	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			3.6	3.6	3.3	3.3	2.9	2.8	3.5	3.5	11	11	17	17
Chloride	mg/l	500	S	18	19	16	16	13	13	13	13	150	150	220	220
Fluoride	mg/l	2	P	0.51	0.53	0.53	0.54	0.6	0.61	0.36	0.36	0.27	0.28	0.22	0.21
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			26	28	17	18	6.1	6.2	4.5	4.6	8.3	9.6	40	44
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			0.71	0.76	ND	0.56	0.52	0.63	1.2	1.3	3	3.2	4.4	4.8
Sodium, Total	mg/l			77	78	73	72	60	58	52	51	180	170	110	110
Sulfate	mg/l	500	S	1.3	ND	ND	ND	15	16	38	39	230	230	310	310
Total Dissolved Solid (TDS)	mg/l	1000	S	240	240	230	220	200	190	230	220	720	710	**1100**	**1100**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	**100**	**100**	**80**	**75**	**35**	**30**	5	4	4	3	5	3
Hardness (Total, as CaCO3)	mg/l			12.6	8.07	6.09	6.3	12.8	12.9	61	62.7	146	147	584	598
Lab pH	Units			8.75	8.95	8.69	9.03	8.56	8.89	8.14	8.38	8.01	8.16	7.72	7.85
Langelier Index - 25 degree	None			0.277	0.28	-0.121	0.203	-0.04	0.292	0.187	0.44	0.291	0.443	0.832	0.954
Odor	TON	3	S	ND	2	ND	ND	ND	**4**	ND	ND	ND	2	ND	2
Specific Conductance	umho/cm	1600	S	370	370	340	340	310	300	370	360	1200	1200	**1800**	**1800**
Turbidity	NTU	5	S	ND	0.15	ND	0.3	ND	0.25	0.2	0.2	0.35	0.35	0.4	0.55
Metals															
Aluminum, Total	ug/l	1000	P	28	31	26	26	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND	ND	0.44	ND	0.79	0.7	7.3	7
Barium, Total	ug/l	1000	P	3.5	2.9	2	2	1.5	1.4	8.1	8.7	42	41	180	180
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.6	0.67	0.36	0.34	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.047	0.2	0.12	0.27	0.2	0.22	ND	0.19	ND	0.043	ND	ND
Copper, Total	ug/l	1300	P	0.57	0.78	ND	0.51	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	ND	0.03	ND	ND	ND	0.032	ND	ND	ND	0.03	0.18	0.19
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			ND	ND	ND	ND	ND	ND	1.8	1.89	6.62	6.69	31.6	32.5
Manganese, Total	ug/l	50	S	5.6	4.1	1.3	1.2	2.8	2.5	23	18	**51**	**52**	**410**	**420**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	0.088	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	0.72	ND	0.98	ND	1	ND	0.95	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.08	0.1
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			3.6	3.7	2.3	2.6	1.4	1.5	0.42	0.52	1.2	1.3	1.2	1.3

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Long Beach #2					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				4/19/2022	4/19/2022	4/19/2022	4/19/2022	4/19/2022	4/19/2022
General Minerals									
Alkalinity	mg/l			310	190	160	160	290	310
Anion Sum	meq/l			7	4.5	3.9	7.1	15	19
Bicarbonate as HCO3	mg/l			380	240	190	190	360	380
Boron	mg/l	1	N	0.52	0.2	0.15	0.1	0.29	0.23
Bromide	ug/l			ND	ND	ND	ND	0.74	0.76
Calcium, Total	mg/l			6.96	15.3	13.4	64.8	166	224
Carbon Dioxide	mg/l			277	171	140	140	268	296
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			6.7	4.4	3.8	7	15	19
Chloride	mg/l	500	S	24	22	25	70	130	160
Fluoride	mg/l	2	P	0.53	0.38	0.44	0.23	0.15	0.21
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			62	36	35	39	28	34
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3	2	1.5	3.9	5.8	6.4
Sodium, Total	mg/l			140	79	69	71	110	99
Sulfate	mg/l	500	S	ND	ND	ND	93	290	380
Total Dissolved Solid (TDS)	mg/l	1000	S	390	250	200	400	930	**1100**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
General Physical Properties									
Apparent Color	ACU	15	S	**220**	**40**	**25**	3	5	5
Hardness (Total, as CaCO3)	mg/l			23.5	45.1	38.4	190	524	706
Lab pH	Units			8.3	8.19	8.31	8.07	7.69	7.48
Langelier Index - 25 degree	None			0.188	0.248	0.252	0.639	0.831	0.759
Odor	TON	3	S	**4**	ND	ND	ND	**4**	**4**
Specific Conductance	umho/cm	1600	S	650	420	360	680	1600	630
Turbidity	NTU	5	S	0.15	ND	ND	ND	1.4	1.3
Metals									
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	0.72	4.1	5.3
Barium, Total	ug/l	1000	P	6.1	9.9	5.6	42	59	78
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.6	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.17	0.048	0.15	0.021	ND	ND
Copper, Total	ug/l	1300	P	1.4	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.08	ND	ND	0.034	0.23	0.25
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			1.48	1.68	1.21	6.98	26.4	35.4
Manganese, Total	ug/l	50	S	13	17	7.9	30	**180**	**410**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	1	**5.4**
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	1.9
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	5.1	**12**
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	11	11
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	1.3
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	0.58
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	**3.5**	**11**
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	0.067	0.054
Total Organic Carbon	mg/l			8	4	3.1	1.7	1.4	1.3

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Long Beach #6											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				3/7/2022	8/15/2022	3/7/2022	8/15/2022	3/7/2022	8/15/2022	3/7/2022	8/15/2022	3/7/2022	8/15/2022	3/7/2022	8/15/2022
General Minerals															
Alkalinity	mg/l			560	550	340	380	170	170	130	130	120	120	130	130
Anion Sum	meq/l			12	12	7.5	8.2	4.1	4	3.3	3.3	3.3	3.2	5.1	5
Bicarbonate as HCO3	mg/l			660	640	400	440	200	190	150	140	150	130	160	160
Boron	mg/l	1	N	**1.1**	**1.1**	0.58	0.68	0.24	0.24	0.091	0.11	0.082	0.081	0.049	0.05
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			8.21	7.91	5.9	6.54	5.58	5.41	10	9.76	12.1	12	51.7	51
Carbon Dioxide	mg/l			489	482	302	333	152	147	114	113	107	104	120	117
Carbonate as CO3	mg/l			18	25	13	22	14	19	ND	13	ND	9.9	ND	ND
Cation Sum	meq/l			11	11	7.2	7.7	3.7	3.6	3.1	3.1	3.1	3	4.8	4.7
Chloride	mg/l	500	S	21	21	21	21	19	19	14	14	19	18	69	69
Fluoride	mg/l	2	P	0.63	0.64	0.6	0.59	0.56	0.57	0.54	0.54	0.47	0.46	0.2	0.2
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	140	ND
Iodide	ug/l			69	75	52	50	28	23	10	8.5	23	18	76	10
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			2.1	2	1.3	1.4	0.63	0.63	0.98	1	1.1	1.1	2.2	2.2
Sodium, Total	mg/l			250	240	160	170	79	77	59	59	55	53	41	40
Sulfate	mg/l	500	S	ND	ND	ND	ND	ND	ND	13	14	14	15	21	21
Total Dissolved Solid (TDS)	mg/l	1000	S	690	690	450	460	260	230	210	200	200	190	300	280
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	**350**	**250**	**150**	**200**	**150**	**120**	**40**	**40**	**25**	**20**	3	ND
Hardness (Total, as CaCO3)	mg/l			26.7	25.9	18.2	20.4	13.9	13.5	27.4	26.9	33.1	33	148	147
Lab pH	Units			8.42	8.46	8.41	8.5	8.52	8.78	8.35	8.63	8.27	8.56	8.02	8.16
Langelier Index - 25 degree	None			0.576	0.592	0.252	0.432	0.086	0.34	0.071	0.342	0.043	0.332	0.427	0.566
Odor	TON	3	S	ND	**8**	ND	**8**	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	910	1000	590	720	330	360	280	320	280	300	450	480
Turbidity	NTU	5	S	0.9	0.3	0.2	0.2	0.2	0.15	0.2	0.2	0.1	0.2	0.1	0.1
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	2.6	2.4	0.62	0.56	ND	ND	ND	ND	ND	ND	2.1	2
Barium, Total	ug/l	1000	P	6.5	6.4	6	6.7	4.1	4	6.6	6.8	2.2	2.3	22	22
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.42	0.46	0.53	0.52	0.52	0.53	0.21	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.11	0.23	0.059	0.19	0.026	0.17	ND	0.25	0.045	0.15	ND	0.056
Copper, Total	ug/l	1300	P	0.74	0.56	0.83	0.81	1	0.73	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.079	0.072	0.065	0.07	0.034	0.03	ND	ND	ND	ND	0.057	0.056
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			1.51	1.5	0.836	0.986	ND	ND	0.569	0.61	0.726	0.733	4.69	4.74
Manganese, Total	ug/l	50	S	14	13	12	13	3.6	3.4	15	16	4.7	4.6	**61**	**58**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	0.057	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			17	17	10	13	4	5.4	1.5	2.4	1.2	1.5	0.79	0.84

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Los Angeles #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				4/5/2022	9/28/2022	4/5/2022	9/28/2022	4/5/2022	9/28/2022	4/5/2022	9/28/2022	4/5/2022	9/28/2022
General Minerals													
Alkalinity	mg/l			190	180	190	180	190	180	200	200	230	220
Anion Sum	meq/l			6.1	5.9	6.2	6.3	6.4	6.2	7.6	7.6	11	11
Bicarbonate as HCO3	mg/l			230	220	230	230	230	230	250	240	280	270
Boron	mg/l	1	N	0.15	0.14	0.14	0.15	0.15	0.14	0.15	0.15	0.19	0.19
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			53.7	53.7	60.5	62.1	58.9	60.1	74	74.9	104	106
Carbon Dioxide	mg/l			168	161	170	166	172	167	184	180	205	198
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.6	5.5	5.9	6	5.8	5.8	7.2	7.1	9.8	9.9
Chloride	mg/l	500	S	25	24	24	25	25	24	38	38	79	79
Fluoride	mg/l	2	P	0.26	0.26	0.43	0.37	0.37	0.42	0.4	0.4	0.38	0.37
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			21	21	18	ND	ND	19	14	16	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	12	11	**61**	**58**
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	2.8	2.5	**14**	**13**
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			4	4	3.5	3.4	3.3	3.4	4	4	4.6	4.6
Sodium, Total	mg/l			42	41	38	38	37	36	44	43	54	54
Sulfate	mg/l	500	S	77	78	86	91	89	89	110	110	140	140
Total Dissolved Solid (TDS)	mg/l	1000	S	350	340	350	350	360	350	430	440	620	620
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	2.8	2.5	**14**	**13**
General Physical Properties													
Apparent Color	ACU	15	S	ND	ND	3	ND	ND	ND	ND	ND	4	3
Hardness (Total, as CaCO3)	mg/l			182	179	209	214	205	206	259	260	368	370
Lab pH	Units			7.97	8.12	7.82	7.95	7.81	7.92	7.81	7.92	7.79	7.93
Langelier Index - 25 degree	None			0.544	0.673	0.446	0.564	0.422	0.52	0.527	0.639	0.676	0.805
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	600	550	620	580	630	550	760	680	1100	970
Turbidity	NTU	5	S	ND	ND	0.75	ND	ND	0.45	ND	ND	ND	ND
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	0.62	0.6	ND	1.1	1.2	0.6	0.68
Barium, Total	ug/l	1000	P	29	28	51	77	74	50	95	93	150	140
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	0.39	0.33	ND	45	44	**260**	**250**
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.077	0.09	0.03	0.35	0.33	0.04	**49**	**46**	**290**	**280**
Copper, Total	ug/l	1300	P	0.84	ND	ND	0.61	0.56	ND	0.62	0.56	0.74	0.75
Iron, Total	mg/l	0.3	S	ND	ND	0.19	ND	ND	0.15	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			11.6	11	14.1	14.4	14.1	13.5	18	17.6	26.2	25.8
Manganese, Total	ug/l	50	S	14	20	**51**	6.9	6.4	**57**	3.1	3.1	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	0.6	0.54	ND	0.68	0.7	3.5	3.5
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	0.93	0.62	ND	ND	ND	ND	0.66	0.56	ND	2.5
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	2.4	1.1	ND	ND	ND	ND	**6.6**	**5.7**	ND	**34**
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	0.19	0.2	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	0.64	0.54	3.2	2.8
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.42	0.45	ND	ND	ND	ND	0.43	0.41	0.43	0.49

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Los Angeles #2							
				Zone 2		Zone 3		Zone 4		Zone 5	
				4/7/2022	9/7/2022	4/7/2022	9/7/2022	4/7/2022	9/7/2022	4/7/2022	9/7/2022
General Minerals											
Alkalinity	mg/l			320	310	320	320	350	340	310	310
Anion Sum	meq/l			19	19	19	19	19	19	24	23
Bicarbonate as HCO3	mg/l			390	380	390	390	420	410	380	380
Boron	mg/l	1	N	0.25	0.24	0.23	0.23	0.28	0.28	0.42	0.42
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			195	197	193	194	185	185	215	218
Carbon Dioxide	mg/l			308	295	317	303	345	323	312	287
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			19	19	18	18	19	19	22	22
Chloride	mg/l	500	S	250	250	260	260	220	220	160	160
Fluoride	mg/l	2	P	ND	ND	0.26	0.25	0.28	0.27	0.26	0.24
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			68	62	59	52	65	59	33	38
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			12	11	8.2	7.7	8.8	8.3	11	11
Sodium, Total	mg/l			100	99	100	99	120	120	150	150
Sulfate	mg/l	500	S	270	270	250	250	280	290	**640**	**590**
Total Dissolved Solid (TDS)	mg/l	1000	S	**1200**	**1200**	**1100**	**1100**	**1200**	**1100**	**1500**	**1500**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties											
Apparent Color	ACU	15	S	4	ND	15	4	**20**	15	ND	3
Hardness (Total, as CaCO3)	mg/l			699	711	682	688	653	657	778	793
Lab pH	Units			7.4	7.52	7.25	7.4	7.23	7.4	7.2	7.64
Langelier Index - 25 degree	None			0.621	0.731	0.478	0.63	0.467	0.636	0.418	0.864
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cn	1600	S	**2000**	**2100**	**2000**	**2100**	**2000**	**2100**	**2300**	**2400**
Turbidity	NTU	5	S	1	1	**8.6**	**5.1**	**12**	**11**	3.3	3
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	**19**	**28**
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND	ND	2.7	3.7
Barium, Total	ug/l	1000	P	85	86	120	130	88	89	50	54
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	0.27	0.87
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	0.032
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	0.89	1.1
Iron, Total	mg/l	0.3	S	0.19	0.19	**1.1**	**1.1**	**1.2**	**1.3**	0.11	0.14
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			51.5	52.9	48.5	49.5	46.2	47	58.4	60.4
Manganese, Total	ug/l	50	S	**370**	**370**	**180**	**180**	**100**	**99**	**530**	**630**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	2.5	3.2
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	210	460
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	0.52
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	3.1	7.4	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	0.11	0.14	**1.4**	**2.2**	0.52	0.64
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.75	0.79	0.77	0.7	0.8	0.71	1.4	1.7

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Los Angeles #3											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				5/12/2022	9/23/2022	5/12/2022	9/23/2022	5/12/2022	9/23/2022	5/12/2022	9/23/2022	5/12/2022	9/23/2022	5/12/2022	9/23/2022
General Minerals															
Alkalinity	mg/l			240	250	180	180	190	190	200	190	210	200	260	250
Anion Sum	meq/l			6.5	6.6	6.2	6.2	6.2	6.2	6.9	6.9	9.2	9.1	13	13
Bicarbonate as HCO3	mg/l			290	300	220	220	230	230	240	240	260	250	310	310
Boron	mg/l	1	N	0.36	0.35	0.14	0.14	0.15	0.15	0.15	0.15	0.19	0.19	0.2	0.21
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.51
Calcium, Total	mg/l			16.3	15.6	59.6	57.6	59.8	58.8	66.1	66	90.6	87.2	140	139
Carbon Dioxide	mg/l			217	217	166	162	172	167	178	173	192	183	235	227
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			6.2	6.1	5.9	5.8	5.9	5.8	6.4	6.4	8.6	8.4	12	12
Chloride	mg/l	500	S	41	41	29	32	24	24	42	43	63	63	130	130
Fluoride	mg/l	2	P	0.28	0.28	0.3	0.29	0.42	0.42	0.4	0.39	0.3	0.3	0.31	0.3
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			51	64	30	39	21	25	33	37	ND	ND	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	41	41	30	30
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	9.2	9.2	6.7	6.8
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			4.9	4.7	3.9	3.8	4	4	4.3	4.4	4.6	4.5	4.8	4.9
Sodium, Total	mg/l			110	110	40	39	39	39	42	42	52	51	60	61
Sulfate	mg/l	500	S	26	26	78	77	83	84	84	86	120	120	200	200
Total Dissolved Solid (TDS)	mg/l	1000	S	380	380	350	350	350	360	400	390	550	550	800	780
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	9.2	9.2	6.7	6.8
General Physical Properties															
Apparent Color	ACU	15	S	15	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			63.7	61.7	204	199	204	201	225	225	314	304	479	481
Lab pH	Units			7.81	8.31	7.94	8.08	7.85	8.01	7.84	8.02	7.73	7.98	7.73	7.96
Langelier Index - 25 degree	None			-0.039	0.458	0.536	0.661	0.471	0.621	0.515	0.674	0.53	0.742	0.769	0.981
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	610	630	560	580	560	580	620	650	840	870	1200	1200
Turbidity	NTU	5	S	ND	ND	0.1	0.15	ND	0.1	0.15	0.15	0.15	0.1	ND	0.15
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	0.84	0.83	ND	ND	0.56	0.58	ND	ND
Barium, Total	ug/l	1000	P	10	9.7	21	21	45	46	73	73	130	130	140	130
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	1.9	1.9	5.1	5.3
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.033	0.11	ND	ND	ND	0.046	ND	0.025	2.1	2.2	6	5.6
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.75	0.5	0.63
Iron, Total	mg/l	0.3	S	ND	ND	0.037	0.044	ND	ND	0.061	0.065	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			5.62	5.5	13.5	13.3	13.3	13.3	14.5	14.7	21.2	20.8	31.7	32.3
Manganese, Total	ug/l	50	S	24	24	**83**	**81**	46	44	41	43	ND	ND	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	1.6	1.6	9.1	9.7
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	4.7
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	0.81	0.73	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	**5.7**	4.2	1.3	1.1
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	0.2	0.22	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	1.4	1.4	0.91	0.95
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			1.6	1.7	0.35	ND	ND	ND	0.34	ND	0.42	0.36	0.63	0.4

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Los Angeles #4											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				5/4/2022	9/22/2022	5/4/2022	9/22/2022	5/4/2022	9/22/2022	5/4/2022	9/22/2022	5/4/2022	9/22/2022	5/4/2022	9/22/2022
General Minerals															
Alkalinity	mg/l			1600	1600	450	450	180	180	180	180	180	180	160	160
Anion Sum	meq/l			33	33	9.3	9.3	5.9	5.9	6	5.9	5.9	5.9	6.8	6.9
Bicarbonate as HCO3	mg/l			2000	1900	550	550	220	210	220	220	220	210	200	190
Boron	mg/l	1	N	**5.3**	**6**	0.49	0.52	0.12	0.13	0.12	0.13	0.12	0.13	0.14	0.15
Bromide	ug/l			0.55	0.57	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			11.5	12.2	17.5	17.4	55.2	55.6	57	57.5	56.6	57.9	63.5	65.1
Carbon Dioxide	mg/l			1430	1420	411	402	161	156	165	161	160	157	150	141
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			29	32	8.4	8.4	5.4	5.5	5.6	5.7	5.4	5.6	6.3	6.5
Chloride	mg/l	500	S	37	37	8.6	8.6	22	22	23	23	23	23	60	68
Fluoride	mg/l	2	P	0.29	0.28	0.23	0.23	0.26	0.26	0.34	0.35	0.31	0.32	0.14	0.13
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			150	150	14	15	19	19	25	27	19	19	5.4	5.6
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.3	9.6
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	2.2
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			17	19	12	12	3.1	3.2	3.7	3.8	3.6	3.7	3.4	3.6
Sodium, Total	mg/l			630	700	150	150	39	40	38	39	36	38	49	51
Sulfate	mg/l	500	S	ND	ND	ND	ND	82	82	81	82	83	83	84	82
Total Dissolved Solid (TDS)	mg/l	1000	S	**2000**	**2000**	490	510	320	330	320	320	330	340	380	400
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	2.2
General Physical Properties															
Apparent Color	ACU	15	S	**1100**	**1200**	**75**	**25**	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			53.2	55.9	73.9	73.1	183	184	194	195	189	193	204	208
Lab pH	Units			7.98	8.21	7.86	8.14	7.87	8.11	7.69	7.99	7.81	8.06	7.7	7.97
Langelier Index - 25 degree	None			0.596	0.851	0.289	0.562	0.441	0.681	0.275	0.579	0.389	0.646	0.265	0.541
Odor	TON	3	S	2	**4**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	**2900**	**2900**	830	860	530	550	540	560	530	550	640	670
Turbidity	NTU	5	S	ND	ND	0.8	1.9	ND	ND	ND	ND	0.5	0.3	0.15	0.1
Metals															
Aluminum, Total	ug/l	1000	P	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	1.8	2.1	5.8	5.7	ND	ND	1.9	1.8	1.1	1.3	1.5	1.4
Barium, Total	ug/l	1000	P	33	35	35	34	16	16	68	66	59	58	67	67
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	2.3	2.7	0.21	0.26	ND	ND	ND	ND	ND	ND	0.59	0.58
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.034	ND	0.097	0.039	0.12	0.058	0.086	0.023	0.054	0.023	0.71	0.64
Copper, Total	ug/l	1300	P	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.75
Iron, Total	mg/l	0.3	S	**0.58**	**0.62**	0.13	0.13	ND	ND	ND	ND	0.061	0.059	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			5.94	6.19	7.35	7.22	11	10.9	12.6	12.5	11.6	11.7	11	11.1
Manganese, Total	ug/l	50	S	15	17	47	47	39	39	47	48	**66**	**67**	**80**	**77**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	0.45	ND	ND	ND	ND	ND	ND	ND	ND	0.9	0.73
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.1
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			95	130	6.8	6.7	0.44	0.38	ND	ND	ND	ND	ND	ND

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Los Angeles #5											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				3/15/2022	9/13/2022	3/14/2022	9/12/2022	3/14/2022	9/12/2022	3/14/2022	9/12/2022	3/14/2022	9/12/2022	3/14/2022	9/12/2022
General Minerals															
Alkalinity	mg/l			880	860	970	930	170	170	250	250	250	240	200	190
Anion Sum	meq/l			120	120	35	35	5.7	5.6	11	11	9.1	9.1	7.4	7.3
Bicarbonate as HCO3	mg/l			1100	1100	1200	1100	210	200	310	300	300	300	240	230
Boron	mg/l	1	N	**7.2**	**7.5**	**2.7**	**2.8**	0.13	0.13	0.33	0.36	0.15	0.16	0.14	0.15
Bromide	ug/l			28	50	3.9	4.6	ND	ND	1.2	1.4	0.73	0.77	ND	ND
Calcium, Total	mg/l			41.2	41.1	21.6	20.8	52.1	51.5	107	107	87.8	87.5	73.2	72.2
Carbon Dioxide	mg/l			793	778	859	831	156	149	228	228	222	220	177	172
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			110	110	31	32	5.4	5.3	11	11	8.5	8.4	7.1	6.9
Chloride	mg/l	500	S	**3600**	**3700**	**560**	**580**	23	23	210	210	130	140	36	37
Fluoride	mg/l	2	P	ND	ND	0.17	ND	0.23	0.23	0.22	0.21	0.27	0.27	0.35	0.35
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			9200	13000	1200	1200	21	21	330	360	160	160	28	30
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			49	62	20	24	3.5	3.7	5.7	6.2	4.7	5	3.3	3.5
Sodium, Total	mg/l			2400	2300	660	680	44	42	68	68	54	52	47	44
Sulfate	mg/l	500	S	ND	ND	ND	ND	75	77	6.5	3.8	17	17	120	120
Total Dissolved Solid (TDS)	mg/l	1000	S	**6700**	**6900**	**2000**	**2000**	340	330	690	670	510	520	440	420
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	**100**	**120**	**200**	**250**	3	3	**50**	5	4	3	ND	ND
Hardness (Total, as CaCO3)	mg/l			293	292	108	106	171	169	370	373	303	303	247	244
Lab pH	Units			7.84	7.9	8.14	8.07	7.97	8	7.85	7.66	7.93	7.84	7.9	7.75
Langelier Index - 25 degree	None			0.567	0.612	0.812	0.707	0.486	0.513	0.772	0.586	0.8	0.689	0.609	0.436
Odor	TON	3	S	ND	**4**	ND	ND	ND	**10**	ND	**4**	ND	2	ND	ND
Specific Conductance	umho/cm	1600	S	**11000**	**12000**	**3300**	**3300**	470	480	970	1000	770	820	600	630
Turbidity	NTU	5	S	0.2	0.2	0.3	0.15	0.1	0.15	0.85	1.1	0.4	0.45	0.15	0.15
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.45	ND	ND	ND	ND	ND	0.9	0.82	0.45	0.5	0.44	0.44
Barium, Total	ug/l	1000	P	65	63	28	28	24	25	93	99	93	90	62	60
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.32	0.42	1	1.1	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND	5.4	ND	ND	ND
Iron, Total	mg/l	0.3	S	**0.33**	**0.34**	0.22	0.22	0.03	0.031	**0.33**	**0.35**	0.18	0.19	ND	ND
Lead, Total	ug/l	15	P	0.52	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			46.2	45.9	13.2	13.2	9.87	9.86	25.3	25.8	20.3	20.5	15.7	15.6
Manganese, Total	ug/l	50	S	32	31	44	41	38	36	**140**	**140**	**150**	**160**	32	31
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	0.051	0.057	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			35	38	26	26	0.6	0.67	0.71	0.91	0.51	0.63	ND	ND

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Los Angeles #6							
				Zone 1		Zone 2		Zone 3		Zone 4	
				4/28/2022	9/14/2022	4/28/2022	9/14/2022	4/28/2022	9/14/2022	4/28/2022	9/14/2022
General Minerals											
Alkalinity	mg/l			270	300	270	220	290	280	250	250
Anion Sum	meq/l			14	14	9.6	8.6	15	15	11	12
Bicarbonate as HCO3	mg/l			330	370	330	270	360	340	300	310
Boron	mg/l	1	N	0.44	0.43	0.27	0.27	0.38	0.38	0.24	0.24
Bromide	ug/l			1.9	2.2	0.7	0.81	1.9	2.3	ND	0.53
Calcium, Total	mg/l			11.2	11	43.3	43	71.8	71.4	106	105
Carbon Dioxide	mg/l			244	269	242	195	270	252	235	233
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			13	13	8.1	8	14	14	11	11
Chloride	mg/l	500	S	290	290	130	130	310	320	120	120
Fluoride	mg/l	2	P	ND	0.2	0.23	0.23	ND	ND	0.36	0.36
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			740	770	270	230	970	880	81	69
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			18	17	8.5	8.1	12	12	6	5.6
Sodium, Total	mg/l			270	270	110	110	200	200	74	74
Sulfate	mg/l	500	S	ND	ND	27	28	1.3	ND	150	150
Total Dissolved Solid (TDS)	mg/l	1000	S	790	800	460	480	800	820	640	660
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties											
Apparent Color	ACU	15	S	**22**	**25**	5	ND	10	7.5	ND	ND
Hardness (Total, as CaCO3)	mg/l			54.3	53	156	154	251	248	371	366
Lab pH	Units			8.01	8.2	7.87	8.07	7.7	8	7.4	7.73
Langelier Index - 25 degree	None			-0.031	0.195	0.477	0.58	0.496	0.775	0.327	0.65
Odor	TON	3	S	ND	ND	ND	ND	ND	2	ND	ND
Specific Conductance	umho/cn	1600	S	1500	1600	820	880	1600	**1700**	1000	1100
Turbidity	NTU	5	S	0.35	0.2	ND	0.1	0.15	0.15	0.2	0.35
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.42	ND	ND	ND	ND	ND	1.4	1.3
Barium, Total	ug/l	1000	P	29	28	37	35	82	79	82	74
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.21	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	0.56	0.57	ND	ND	ND	ND	5.1	ND
Iron, Total	mg/l	0.3	S	0.05	0.052	ND	ND	0.079	0.077	0.097	0.11
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			6.38	6.2	11.5	11.2	17.3	17	26	25.3
Manganese, Total	ug/l	50	S	26	26	47	48	**72**	**74**	**120**	**110**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	4.2	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	**17**	**11**
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	**9.6**	**7.9**
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	0.11	0.16
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			2.3	2.2	1	1	2.1	2	0.61	0.56

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Lynwood #1																	
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6		Zone 7		Zone 8		Zone 9	
				5/10/2022	9/26/2022	5/10/2022	9/26/2022	5/11/2022	9/27/2022	5/11/2022	9/27/2022	5/11/2022	9/27/2022	5/11/2022	9/27/2022	5/11/2022	9/27/2022	5/10/2022	9/26/2022	5/11/2022	9/27/2022
General Minerals																					
Alkalinity	mg/l			570	570	140	140	120	120	140	140	160	160	170	160	180	180	190	190	310	300
Anion Sum	meq/l			12	12	4.4	4.4	4.7	4.7	5.2	5.2	4.9	4.8	5.6	5.5	5.9	5.8	7.7	7.9	17	18
Bicarbonate as HCO3	mg/l			700	670	150	150	140	140	170	170	200	190	200	200	220	220	230	230	370	370
Boron	mg/l	1	N	**1.4**	**1.3**	0.18	0.17	0.11	0.1	0.09	0.086	0.089	0.086	0.13	0.12	0.12	0.12	0.13	0.13	0.18	0.17
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53
Calcium, Total	mg/l			9.98	9.57	5.6	5.48	39.2	38.5	46.9	45.4	43.9	43.4	53.5	51.7	58.7	57.1	77.2	79.6	212	200
Carbon Dioxide	mg/l			505	503	120	117	104	104	125	121	144	140	150	146	164	158	173	171	289	273
Carbonate as CO3	mg/l			ND	19	13	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			11	10	3.9	3.8	4.3	4.2	4.9	4.8	4.5	4.4	5.2	5	5.6	5.4	7	7.1	18	17
Chloride	mg/l	500	S	12	12	23	23	23	23	23	23	21	22	22	23	24	23	52	56	170	170
Fluoride	mg/l	2	P	0.47	0.48	0.36	0.38	0.28	0.27	0.24	0.24	0.25	0.24	0.33	0.32	0.3	0.29	0.36	0.36	0.26	0.26
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			32	30	27	33	18	21	20	22	21	23	20	22	18	21	ND	ND	110	150
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6	7.2	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	1.6	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.2	2.9	0.79	0.6	1.4	1.2	2	1.7	2.2	2	3.6	3.3	3.1	2.9	3.6	3.4	5.7	5.2
Sodium, Total	mg/l			230	220	83	80	43	42	48	46	47	46	36	35	38	37	40	40	73	70
Sulfate	mg/l	500	S	ND	ND	46	47	81	82	85	86	50	51	75	77	77	78	110	120	270	360
Total Dissolved Solid (TDS)	mg/l	1000	S	470	680	680	240	260	270	290	300	260	270	320	310	340	340	440	450	**1100**	**1100**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	1.6	ND	ND
General Physical Properties																					
Apparent Color	ACU	15	S	**200**	**200**	**50**	**38**	3	3	3	3	ND	ND	ND	ND	ND	ND	ND	ND	5	7.5
Hardness (Total, as CaCO3)	mg/l			33.2	31.6	14	13.7	120	117	141	135	121	119	179	171	193	187	260	266	718	673
Lab pH	Units			8.28	8.33	8.6	8.77	8.1	8.23	8.06	8.19	8.08	8.23	7.98	8.15	7.94	8.15	7.8	7.88	7.48	7.84
Langelier Index - 25 degree	None			0.571	0.562	-0.012	0.248	0.364	0.482	0.46	0.572	0.518	0.659	0.513	0.644	0.532	0.73	0.51	0.601	0.735	1.06
Odor	TON	3	S	**17**	**4**	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	1000	1100	410	420	440	440	480	480	450	450	500	510	520	540	670	720	**1800**	1600
Turbidity	NTU	5	S	1.7	0.3	0.1	0.25	ND	0.1	ND	0.15	ND	0.1	ND	ND	ND	ND	ND	0.1	1.9	1.7
Metals																					
Aluminum, Total	ug/l	1000	P	ND	ND	22	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	**230**	**220**	0.76	0.79	ND	ND	0.41	0.43	4.6	4.7	0.8	0.8	1.5	1.2	1.7	1.6	7.3	7.3
Barium, Total	ug/l	1000	P	15	14	2	2	4.6	4.4	160	160	110	110	46	45	110	110	110	120	130	130
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.5	0.5	0.31	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.65	0.7	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.25	0.2	0.25	0.04	0.025	0.026	0.04	ND	ND	ND	ND	ND	ND	ND	0.63	0.65	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	0.74	0.71	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.068	0.062	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.042	0.037	ND	ND	**0.37**	**0.35**
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			2	1.87	ND	ND	5.36	5.03	5.74	5.37	2.74	2.49	10.9	10.2	11.4	10.7	16.3	16.3	45.6	42.2
Manganese, Total	ug/l	50	S	12	12	2.9	2.9	15	15	30	32	27	27	**60**	**61**	**85**	**85**	1.1	1.3	**250**	**260**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.89	1	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds																					
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N																		
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.1	2.9	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others																					
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.9**	**2.6**	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.35	0.41	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			12	13	1.5	1.9	0.5	0.55	0.49	0.45	ND	ND	0.45	0.39	0.37	0.34	0.36	ND	1.2	1.2

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Montebello #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				5/10/2022	9/15/2022	5/10/2022	9/15/2022	5/10/2022	9/15/2022	5/10/2022	9/15/2022	5/10/2022	9/15/2022
General Minerals													
Alkalinity	mg/l			910	890	580	570	190	190	190	180	200	200
Anion Sum	meq/l			38	38	15	15	8.2	8.2	8.6	8.6	8.1	8.2
Bicarbonate as HCO3	mg/l			1100	1100	710	690	230	230	230	220	240	240
Boron	mg/l	1	N	**6.5**	**6.3**	**2.3**	**2.2**	0.16	0.16	0.14	0.13	0.2	0.19
Bromide	ug/l			3.6	3.9	0.68	0.76	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			13.6	13.4	18.2	17.8	93.6	90.9	95.7	91.9	76.6	76.8
Carbon Dioxide	mg/l			803	782	514	502	171	166	170	163	183	177
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			34	35	14	14	8.1	7.9	8.6	8.3	7.8	7.8
Chloride	mg/l	500	S	**710**	**710**	130	130	64	66	70	71	70	72
Fluoride	mg/l	2	P	ND	ND	0.27	0.27	0.15	0.16	0.19	0.19	0.31	0.31
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			720	960	160	170	27	29	36	39	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	16	17
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	3.7	3.8
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			13	11	7.6	6.8	4.3	4	4.4	4.1	3.9	3.6
Sodium, Total	mg/l			740	760	280	280	49	49	56	57	62	62
Sulfate	mg/l	500	S	ND	ND	ND	ND	120	130	140	140	91	94
Total Dissolved Solid (TDS)	mg/l	1000	S	**2200**	**2100**	720	870	490	480	500	510	460	460
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	3.7	3.8
General Physical Properties													
Apparent Color	ACU	15	S	**400**	**250**	**200**	**180**	3	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			58.3	56.7	76	73.4	296	285	301	287	253	252
Lab pH	Units			8.27	8.3	8.19	8.25	7.89	8.07	7.87	8.04	7.56	7.8
Langelier Index - 25 degree	None			0.698	0.719	0.703	0.722	0.673	0.842	0.66	0.787	0.285	0.526
Odor	TON	3	S	**12**	2	**4**	ND	**4**	ND	2	ND	ND	ND
Specific Conductance	umho/cm	1600	S	920	**3800**	480	1400	740	760	780	810	740	760
Turbidity	NTU	5	S	ND	0.2	ND	0.15	0.1	0.2	ND	0.15	ND	0.2
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	3.2	3.2	ND	ND	ND	ND	1.8	1.9	1.5	1.4
Barium, Total	ug/l	1000	P	39	38	25	24	44	42	92	89	60	60
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	1.6	1.5	0.8	0.85	ND	ND	ND	ND	ND	0.29
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	0.18	0.13	0.075	0.032	0.14	0.04	0.084	0.16	0.25
Copper, Total	ug/l	1300	P	1.3	0.84	0.79	0.73	ND	ND	ND	ND	0.59	ND
Iron, Total	mg/l	0.3	S	0.15	0.14	0.21	0.2	ND	ND	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			5.93	5.66	7.43	7.02	15.1	14.1	15	14	15	14.5
Manganese, Total	ug/l	50	S	7.9	7.9	27	28	**79**	**80**	**53**	**52**	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	2.2	2.5
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	0.61	ND	0.97	ND	0.95	ND	0.55	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	**7.9**	**8.2**	**5**	**5.9**	0.7	0.74
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	0.65	0.71
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			25	27	19	18	1	0.95	0.61	0.64	0.47	0.51

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Montebello #2									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				4/27/2022	9/13/2022	4/27/2022	9/13/2022	4/27/2022	9/13/2022	4/27/2022	9/13/2022	4/27/2022	9/13/2022
General Minerals													
Alkalinity	mg/l			580	1100	280	300	230	230	170	160	140	130
Anion Sum	meq/l			25	36	7.4	7.3	7.3	7.1	6.5	6.1	5.5	5.3
Bicarbonate as HCO3	mg/l			700	1400	340	370	280	270	210	200	170	160
Boron	mg/l	1	N	**7.9**	**7.6**	0.55	0.71	0.27	0.26	0.18	0.16	0.16	0.14
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			11.4	10.4	30.1	23.1	48	46.2	61.1	55.7	45.6	42
Carbon Dioxide	mg/l			514	995	251	273	209	202	156	148	130	124
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			34	33	7.3	6.9	7.2	6.7	6.4	5.7	5.4	4.9
Chloride	mg/l	500	S	470	470	57	42	75	72	48	43	41	38
Fluoride	mg/l	2	P	0.5	0.5	0.3	0.3	0.32	0.32	0.45	0.45	0.38	0.39
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			220	210	52	30	81	72	4.3	3.6	3.1	2.1
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	15	15	13	14
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	3.4	3.4	3	3.2
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			17	18	9.5	8.4	6.2	5.1	3.3	2.7	3.8	3.2
Sodium, Total	mg/l			750	710	100	110	77	71	52	46	50	46
Sulfate	mg/l	500	S	ND	ND	7.4	2.8	25	25	70	68	62	60
Total Dissolved Solid (TDS)	mg/l	1000	S	**2000**	**2000**	660	400	380	380	350	350	300	310
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	3.4	3.4	3	3.2
General Physical Properties													
Apparent Color	ACU	15	S	**250**	**350**	10	**30**	4	4	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			63	57.6	124	95.2	184	176	202	184	154	142
Lab pH	Units			8.08	8.22	7.98	8.06	7.9	7.96	7.61	7.78	7.5	7.68
Langelier Index - 25 degree	None			0.251	0.629	0.406	0.454	0.501	0.544	0.193	0.296	-0.155	-0.006
Odor	TON	3	S	**4**	2	ND	**4**	ND	**4**	ND	ND	2	ND
Specific Conductance	umho/cm	1600	S	**3500**	**3400**	670	670	670	670	600	580	520	500
Turbidity	NTU	5	S	0.45	0.3	0.8	0.8	0.2	0.1	ND	ND	0.1	0.1
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	1	0.78	0.63	0.5	1.4	1.1	2.2	2	2	1.9
Barium, Total	ug/l	1000	P	60	56	44	35	59	55	73	68	55	55
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.89	0.85	0.22	ND	0.37	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.11	0.074	0.029	ND	ND	ND	0.076	0.068	0.028	ND
Copper, Total	ug/l	1300	P	0.94	0.71	ND	0.58	ND	ND	ND	0.53	0.71	0.75
Iron, Total	mg/l	0.3	S	0.16	0.18	0.081	0.086	0.089	0.074	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			8.4	7.71	11.8	9.13	15.6	14.7	12	10.8	9.77	8.93
Manganese, Total	ug/l	50	S	**52**	**51**	**130**	**110**	**190**	**210**	33	28	**120**	**98**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	2	ND	2	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.47
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	0.27	0.26	0.16	0.19
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.24
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			34	32	4.4	4.8	1.9	1.8	0.9	1.1	1.1	1

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Norwalk #1				
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
				4/25/2022	4/25/2022	4/25/2022	4/25/2022	4/25/2022
General Minerals								
Alkalinity	mg/l			290	180	150	130	200
Anion Sum	meq/l			8.1	5.4	6.1	3.6	7.8
Bicarbonate as HCO3	mg/l			360	220	180	160	240
Boron	mg/l	1	N	0.38	0.19	0.071	0.052	0.077
Bromide	ug/l			0.25	0.22	0.38	0.12	0.41
Calcium, Total	mg/l			11	9.13	39.9	28.8	65.2
Carbon Dioxide	mg/l			262	160	136	119	184
Carbonate as CO3	mg/l			ND	4.7	ND	ND	ND
Cation Sum	meq/l			7.6	4.9	5.7	3.5	7.2
Chloride	mg/l	500	S	69	61	93	29	130
Fluoride	mg/l	2	P	0.44	0.54	0.19	0.27	0.27
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND
Iodide	ug/l			70	88	100	31	79
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND
Potassium, Total	mg/l			2.7	1.5	2.9	1.8	3.6
Sodium, Total	mg/l			150	99	76	35	60
Sulfate	mg/l	500	S	13	ND	20	6.3	5.4
Total Dissolved Solid (TDS)	mg/l	1000	S	440	290	320	190	420
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND
General Physical Properties								
Apparent Color	ACU	15	S	**22**	**30**	ND	3	5
Hardness (Total, as CaCO3)	mg/l			49.4	27.8	115	94.4	224
Lab pH	Units			8.04	8.35	7.93	7.94	7.64
Langelier Index - 25 degree	None			0.087	0.147	0.281	0.129	0.304
Odor	TON	3	S	**32**	**4**	**4**	1	**4**
Specific Conductance	umho/cm	1600	S	770	510	590	350	760
Turbidity	NTU	5	S	ND	0.05	0.05	0.3	2
Metals								
Aluminum, Total	ug/l	1000	P	18	9	ND	ND	4.5
Antimony, Total	ug/l	6	P	ND	ND	0.16	ND	ND
Arsenic, Total	ug/l	10	P	ND	0.15	5.5	**15**	9.6
Barium, Total	ug/l	1000	P	10	7.3	150	120	310
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.28	0.2	0.13	0.19	0.22
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.32	0.15	0.017	0.066	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.0051	0.011	0.041	0.031	0.12
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			5.31	1.21	3.8	5.46	14.9
Manganese, Total	ug/l	50	S	2.5	7.6	29	40	**130**
Mercury	ug/l	2	P	ND	ND	0.024	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	0.33
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND
Volatile Organic Compounds								
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	3.7
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	0.34
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND
TBA	ug/l	12	N					
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND
Others								
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	0.044
Perchlorate	ug/l	6	P	ND	ND	ND	0.08	ND
Surfactants	mg/l	0.5	S	0.023	0.021	ND	0.021	0.057
Total Organic Carbon	mg/l			2.2	3.3	0.76	0.59	1.7

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Norwalk #2											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				5/5/2022	9/8/2022	5/5/2022	9/8/2022	5/5/2022	9/8/2022	5/5/2022	9/8/2022	5/5/2022	9/8/2022	5/5/2022	9/8/2022
General Minerals															
Alkalinity	mg/l			170	190	190	190	150	150	170	160	160	150	180	170
Anion Sum	meq/l			8	7.3	5.3	5.4	4.5	4.4	6.2	6.1	7.8	7.7	7.7	7.6
Bicarbonate as HCO3	mg/l			210	230	230	230	190	180	200	200	190	190	210	210
Boron	mg/l	1	N	0.2	0.26	0.23	0.24	0.038	0.044	0.055	0.061	0.13	0.15	0.16	0.17
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			65.6	30.4	14.1	14	45.6	45.2	69.4	68.3	77.9	76.2	70.2	69.4
Carbon Dioxide	mg/l			159	167	169	166	136	131	153	145	146	139	164	157
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			7.4	6.8	4.9	5	4.2	4.3	5.8	5.7	7.1	7.2	7	7
Chloride	mg/l	500	S	79	71	40	42	17	17	34	34	75	75	65	63
Fluoride	mg/l	2	P	0.26	0.31	0.41	0.38	0.18	0.16	0.25	0.23	0.24	0.22	0.35	0.32
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			31	72	40	46	7.7	6.9	ND	ND	5.7	5	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	6.9	7.1	10	11	11	11
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	1.6	1.6	2.3	2.4	2.4	2.5
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			4.1	4.6	2.9	2.9	2.8	2.9	3.5	3.6	4.2	4.4	3.9	4.1
Sodium, Total	mg/l			68	110	90	92	33	34	29	30	43	46	51	52
Sulfate	mg/l	500	S	110	73	18	18	47	47	83	84	110	110	100	100
Total Dissolved Solid (TDS)	mg/l	1000	S	470	400	300	290	250	250	360	350	460	450	450	430
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	1.6	1.6	2.3	2.4	2.4	2.5
General Physical Properties															
Apparent Color	ACU	15	S	ND	5	10	10	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			218	100	45.9	45.7	136	134	221	217	258	252	235	232
Lab pH	Units			7.72	8.11	8.18	8.35	8	8.2	7.74	8.06	7.69	7.98	7.57	7.91
Langelier Index - 25 degree	None			0.305	0.424	0.187	0.356	0.43	0.625	0.375	0.664	0.325	0.579	0.214	0.528
Odor	TON	3	S	ND	ND	ND	ND	ND	**4**	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	750	710	500	520	410	420	550	550	710	740	700	710
Turbidity	NTU	5	S	ND	0.2	0.1	ND	0.1	0.15	0.1	0.2	ND	ND	ND	ND
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	1.6	2.4	ND	ND	ND	ND	1.7	1.8	2	2	1.3	1.2
Barium, Total	ug/l	1000	P	58	37	13	13	32	32	160	150	69	66	49	50
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	3.2	3.2	0.77	0.84	1.2	1.1
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.034	0.086	0.14	0.12	0.061	0.097	3.2	3.5	0.79	0.85	1	1.2
Copper, Total	ug/l	1300	P	0.69	1	ND	ND	ND	ND	ND	ND	ND	ND	0.53	0.59
Iron, Total	mg/l	0.3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			13.1	5.95	2.62	2.6	5.27	5.22	11.6	11.4	15.4	15.1	14.5	14.3
Manganese, Total	ug/l	50	S	12	8.3	19	18	22	20	ND	ND	2.5	9.4	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	0.061	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	0.99	0.93	1.2	1	2.6	2.5
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	0.97	0.83	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	**1.5**	0.14	ND	ND	ND	ND	0.87	**1.3**	**3.1**	**3.8**	0.3	0.32
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	1.9	2	0.6	0.69	0.74	0.8
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.93	1.4	1.4	1.2	0.42	0.39	ND	ND	0.47	0.41	0.4	0.39

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Paramount #1												
				Zone 1	Zone 2		Zone 3		Zone 4		Zone 5		Zone 6		Zone 7	
				8/17/2022	3/9/2022	8/17/2022	3/10/2022	8/17/2022	3/10/2022	8/17/2022	3/9/2022	8/17/2022	3/9/2022	8/17/2022	3/10/2022	8/17/2022
General Minerals																
Alkalinity	mg/l			120	150	150	180	170	200	190	220	210	180	180	300	290
Anion Sum	meq/l			3.2	3.5	3.5	5.2	5	6.3	6.2	8	8	4.2	4.2	10	9.6
Bicarbonate as HCO3	mg/l			150	180	180	220	210	240	230	260	260	230	220	360	350
Boron	mg/l	1	N	0.047	0.055	0.053	0.089	0.086	0.12	0.12	0.14	0.13	0.08	0.079	0.092	0.087
Bromide	ug/l			ND	ND	ND	0.099	ND	0.072	ND	ND	ND	ND	ND	0.16	ND
Calcium, Total	mg/l			21.8	33.1	34.3	43.6	45.6	46.9	47.8	81	84.4	48.4	50.6	97.3	102
Carbon Dioxide	mg/l			108	3.57	131	161	155	176	172	11.1	191	4.68	163	270	261
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			3	3.5	3.4	5.1	4.8	6.1	5.8	7.9	7.6	4.1	4.1	9.6	9.2
Chloride	mg/l	500	S	12	6.9	6.8	23	22	31	30	52	53	7.2	7.1	60	55
Fluoride	mg/l	2	P	0.31	0.26	0.26	0.31	0.29	0.43	0.41	0.34	0.31	0.29	0.29	0.4	0.38
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			14	6.4	4.8	24	19	14	11	3.7	2.6	6.9	5.6	15	12
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	0.071	ND	2.2	2.1	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	**16**	ND	0.49	0.46	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			1.7	2.5	2.4	3.2	3.3	3.5	3.6	4.1	4	2.7	2.7	4.7	4.6
Sodium, Total	mg/l			40	33	29	56	47	66	59	55	46	27	24	75	60
Sulfate	mg/l	500	S	18	18	18	45	43	73	70	110	110	15	15	110	110
Total Dissolved Solid (TDS)	mg/l	1000	S	190	240	200	310	290	360	360	490	720	260	560	570	550
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	0.49	0.46	ND	ND	ND	ND
General Physical Properties																
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3	3
Hardness (Total, as CaCO3)	mg/l			61.5	99.3	102	126	132	155	158	268	276	144	150	313	325
Lab pH	Units			8.33	7.99	8.22	7.96	8.13	7.92	8.09	7.64	7.97	7.82	8.14	7.82	8
Langelier Index - 25 degree	None			0.362	0.284	0.543	0.431	0.601	0.455	0.611	0.424	0.708	0.352	0.617	0.802	0.991
Odor	TON	3	S	**4**	ND	**4**	1	**4**	1	**4**	ND	ND	ND	**4**	1	**4**
Specific Conductance	umho/cm	1600	S	310	330	330	480	470	600	580	750	750	390	400	910	870
Turbidity	NTU	5	S	0.2	ND	0.1	0.05	0.15	0.05	0.15	ND	0.2	ND	0.15	0.15	0.4
Metals																
Aluminum, Total	ug/l	1000	P	ND	ND	ND	6.1	ND	4.6	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	0.21	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	7.8	9.2	9.7	**43**	**37**	5.6	5.4	6.2	5.5	**130**	**100**	9.8	9.9
Barium, Total	ug/l	1000	P	49	64	59	140	120	87	78	120	130	120	130	110	100
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	0.1	ND	0.1	ND	0.24	0.21	ND	ND	0.099	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.11	0.024	0.042	0.044	0.033	0.021	0.063	0.13	0.16	0.034	0.041	0.0079	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	ND	ND	0.035	0.034	0.042	0.0065	ND	ND	ND	ND	ND	0.15	0.16
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	0.26	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			1.73	4.03	3.87	4.2	4.53	9.32	9.42	15.8	16	5.57	5.62	17.1	17.3
Manganese, Total	ug/l	50	S	16	31	34	48	**63**	24	29	**94**	**92**	**76**	**79**	**140**	**150**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	0.19	ND	0.16	ND	ND	ND	ND	ND	0.41	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	0.36	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds																
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N		ND		ND		ND		ND		ND		ND	
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others																
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	0.06	ND	**2.5**	**2.8**	ND	ND	0.076	0.081
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	0.077	ND	0.11	0.11	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	0.018	ND	0.021	ND	ND	ND	ND	ND	0.023	ND
Total Organic Carbon	mg/l			0.81	0.73	0.51	1.7	0.78	1.3	0.98	0.83	0.75	0.61	0.48	4.6	3

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Pico #1						
				Zone 1	Zone 2		Zone 3		Zone 4	
				3/3/2022	3/3/2022	8/24/2022	3/3/2022	8/24/2022	3/3/2022	8/24/2022
General Minerals										
Alkalinity	mg/l			290	160	160	200	190	240	240
Anion Sum	meq/l			6	4.6	4.5	9.1	9.1	11	11
Bicarbonate as HCO3	mg/l			360	190	190	240	230	290	290
Boron	mg/l	1	N	0.61	0.069	0.071	0.11	0.11	0.25	0.26
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			8.38	54.9	53.7	109	111	107	106
Carbon Dioxide	mg/l			264	149	140	193	175	245	221
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.6	4.4	4.3	8.5	8.7	11	11
Chloride	mg/l	500	S	3.3	13	11	74	79	110	110
Fluoride	mg/l	2	P	0.22	0.25	0.26	0.27	0.28	0.23	0.23
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			5.8	2.6	2.5	7.5	6.9	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	19	19
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	4.2	4.3
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.6	2.6	2.7	4	4.2	5.6	6.1
Sodium, Total	mg/l			110	20	20	35	35	91	91
Sulfate	mg/l	500	S	ND	52	49	140	140	150	150
Total Dissolved Solid (TDS)	mg/l	1000	S	360	280	280	550	570	680	660
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	4.2	4.3
General Physical Properties										
Apparent Color	ACU	15	S	**35**	5	4	5	12	ND	ND
Hardness (Total, as CaCO3)	mg/l			32.9	176	172	346	352	347	346
Lab pH	Units			7.98	7.51	7.94	7.33	7.79	7.16	7.66
Langelier Index - 25 degree	None			-0.071	0.04	0.46	0.19	0.631	0.067	0.566
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	490	380	410	730	820	920	1100
Turbidity	NTU	5	S	0.65	1	0.7	3.1	3.2	ND	0.2
Metals										
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	4.5	0.49	0.51	0.57	0.52	2.3	2.4
Barium, Total	ug/l	1000	P	16	70	69	74	74	71	73
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	0.82	0.85
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.039	ND	ND	ND	ND	0.76	0.73
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	1.2
Iron, Total	mg/l	0.3	S	0.083	0.26	0.24	**0.45**	**0.46**	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			2.91	9.38	9.12	17.8	18.1	19.7	19.7
Manganese, Total	ug/l	50	S	31	19	19	16	15	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	2.9	2.9
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds										
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N							
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND
Others										
1,4-Dioxane	ug/l	1	N	ND	0.19	0.16	0.6	0.56	0.33	0.31
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	0.86	0.93
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			2.6	ND	ND	0.51	0.36	0.41	0.43

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Pico #2											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				5/5/2022	8/29/2022	5/5/2022	8/29/2022	5/5/2022	8/29/2022	5/5/2022	8/29/2022	5/5/2022	8/29/2022	5/5/2022	8/29/2022
General Minerals															
Alkalinity	mg/l			210	200	200	200	190	190	140	130	120	120	130	130
Anion Sum	meq/l			9.1	8.9	10	10	9.2	9.1	8.1	7.5	7.6	7.6	8.6	8.2
Bicarbonate as HCO3	mg/l			250	240	250	240	230	230	170	160	150	150	160	160
Boron	mg/l	1	N	0.057	0.059	0.15	0.16	0.16	0.16	0.21	0.19	0.19	0.19	0.21	0.26
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			116	118	116	121	101	102	60.3	60	46.8	49.9	59.2	52.7
Carbon Dioxide	mg/l			193	185	192	184	179	175	137	126	123	121	139	134
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			8.6	8.8	9.5	9.9	8.6	8.8	7.4	7.1	6.8	7.1	7.9	7.7
Chloride	mg/l	500	S	69	67	110	110	91	90	110	98	110	110	120	110
Fluoride	mg/l	2	P	0.2	0.2	0.23	0.22	0.28	0.27	0.29	0.28	0.28	0.27	0.21	0.22
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (as NO3)	mg/l	45	P	15	15	16	16	18	17	20	16	21	18	18	20
Nitrate as Nitrogen	mg/l	10	P	3.4	3.3	3.7	3.5	4	3.9	4.6	3.7	4.7	4.1	4.1	4.5
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.9	4.1	4.2	4.5	4.6	4.7	4.6	4.9	5.1	5.4	9.7	10
Sodium, Total	mg/l			24	25	39	42	43	45	74	69	74	77	75	83
Sulfate	mg/l	500	S	130	130	140	140	120	120	94	87	86	89	110	100
Total Dissolved Solid (TDS)	mg/l	1000	S	550	590	610	680	530	560	460	470	430	540	510	480
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	3.4	3.3	3.7	3.5	4	3.9	4.6	3.7	4.7	4.1	4.1	4.5
General Physical Properties															
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			373	380	386	400	332	336	203	202	171	183	218	193
Lab pH	Units			7.53	7.65	7.5	7.62	7.55	7.66	7.35	7.45	7.19	7.28	7	7.14
Langelier Index - 25 degree	None			0.438	0.536	0.375	0.501	0.358	0.466	-0.184	-0.12	-0.514	-0.42	-0.584	-0.489
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	840	870	960	1000	870	900	800	790	760	800	860	850
Turbidity	NTU	5	S	ND	0.1	ND	0.1	ND	0.15	0.2	0.15	ND	ND	0.2	0.2
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53
Arsenic, Total	ug/l	10	P	1.4	1.3	1.9	1.9	1.6	1.5	2.4	2.2	0.77	0.74	6.1	6.4
Barium, Total	ug/l	1000	P	100	100	94	97	88	89	63	65	86	89	190	170
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	1.1	1.2	0.89	1	1.4	1.5	0.63	0.64	0.6	0.6	0.29	0.42
Hexavalent Chromium (Cr VI)	ug/l	10	P	1.2	1.3	0.98	1	1.4	1.6	0.67	0.72	0.61	0.65	0.29	0.56
Copper, Total	ug/l	1300	P	0.84	1.2	0.8	1.1	0.66	0.89	0.96	1.3	1.2	1.5	3.9	3
Iron, Total	mg/l	0.3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			20.5	20.9	23	24	19.7	20	12.7	12.7	13.2	14.2	17.1	15
Manganese, Total	ug/l	50	S	ND	ND	3.1	ND	ND	ND	ND	ND	40	44	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	0.055	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	2	ND	2	2.6	6.9	6
Selenium, Total	ug/l	50	P	1.1	1.1	1.2	1.2	0.99	0.96	0.81	0.95	2	1.4	ND	0.73
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	0.51	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	0.85	0.65	0.76	0.59	1.8	1.7	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	2	1.5	1.9	1.6	7	4.3	0.77	ND	14	6.7
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	**2.7**	**2.8**	0.73	0.93	**1.6**	**1.7**	0.49	0.58	0.49	0.68	0.91	0.49
Perchlorate	ug/l	6	P	1.3	1.4	0.49	0.5	0.82	0.79	0.28	0.45	0.46	0.61	0.23	0.48
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.47	0.34	0.58	0.45	0.36	0.35	0.58	0.54	0.61	0.63	1.2	0.97

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Rio Hondo #1											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				4/28/2022	9/13/2022	4/28/2022	9/13/2022	4/28/2022	9/13/2022	4/28/2022	9/13/2022	4/28/2022	9/13/2022	4/28/2022	9/13/2022
General Minerals															
Alkalinity	mg/l			160	140	180	160	200	190	120	110	120	110	130	120
Anion Sum	meq/l			4.7	4.5	7.1	6.9	8.8	8.7	4.8	4.6	5	5	6	6.3
Bicarbonate as HCO3	mg/l			190	180	220	200	250	230	140	130	140	130	150	140
Boron	mg/l	1	N	0.067	0.068	0.055	0.056	0.16	0.16	0.14	0.14	0.14	0.14	0.12	0.13
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			39.5	40.4	85	85.5	93.3	94.6	36.4	36.2	37.3	40.2	46.2	51.4
Carbon Dioxide	mg/l			140	129	165	148	188	171	111	97.9	114	101	129	114
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			4.3	4.4	6.6	6.6	8.2	8.2	4.3	4.3	4.4	4.6	5.3	5.8
Chloride	mg/l	500	S	19	19	44	45	79	80	32	32	41	47	68	76
Fluoride	mg/l	2	P	0.23	0.23	0.2	0.19	0.26	0.25	0.32	0.32	0.28	0.27	0.27	0.27
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			23	22	5.3	5	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	11	11	6.9	7.3	9.7	11	14	16
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	2.4	2.5	1.6	1.7	2.2	2.5	3.1	3.5
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3	2.7	3.5	3.2	4.3	4.1	3.1	2.8	3.2	3.1	4.2	4.2
Sodium, Total	mg/l			37	37	24	23	47	47	43	42	42	43	45	46
Sulfate	mg/l	500	S	50	52	110	110	110	120	67	67	63	63	63	72
Total Dissolved Solid (TDS)	mg/l	1000	S	260	260	410	420	490	500	260	270	250	290	310	360
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	2.4	2.5	1.6	1.7	2.2	2.5	3.1	3.5
General Physical Properties															
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			130	133	272	274	300	304	119	119	125	134	164	183
Lab pH	Units			7.91	8.11	7.67	7.9	7.59	7.85	7.5	7.73	7.37	7.54	7.13	7.41
Langelier Index - 25 degree	None			0.303	0.454	0.406	0.585	0.394	0.635	-0.267	-0.081	-0.384	-0.231	-0.514	-0.236
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	420	420	630	630	790	800	440	440	460	470	560	590
Turbidity	NTU	5	S	0.15	0.2	0.15	0.15	ND	0.1	ND	ND	0.1	0.45	0.2	0.25
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	0.7	0.69	1.9	1.9	2.6	2.6	1.6	1.5	0.95	0.87
Barium, Total	ug/l	1000	P	19	18	49	48	120	120	49	48	52	54	100	110
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	0.22	0.53	ND	0.64	0.65	0.85	0.86	0.83	0.85	0.68	0.72
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.065	0.16	0.036	0.07	0.67	0.79	0.8	0.99	0.84	0.95	0.7	0.78
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	0.52	0.63	ND	ND	ND	0.54	0.61	0.72
Iron, Total	mg/l	0.3	S	ND	ND	0.073	0.067	ND	ND	ND	ND	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			7.63	7.84	14.6	14.7	16.2	16.5	6.88	6.87	7.67	8.27	11.9	13.2
Manganese, Total	ug/l	50	S	25	24	27	27	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	0.74	0.7	0.69	0.71	1	0.96	1.1	1.1
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	0.53	ND	0.5	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	0.7	0.95	1.9	3.4	10	9.6
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	**4.5**	**6.3**	**1.1**	**1.3**	0.15	0.18	0.18	0.24	0.26	0.36
Perchlorate	ug/l	6	P	ND	ND	ND	ND	0.37	0.27	0.43	0.32	0.51	0.4	0.6	0.54
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.37	0.35	0.33	ND	0.42	0.31	0.36	0.31	0.33	ND	0.37	0.36

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Seal Beach #1													
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6		Zone 7	
				4/13/2022	8/16/2022	4/13/2022	8/16/2022	4/13/2022	8/16/2022	4/13/2022	8/16/2022	4/13/2022	8/16/2022	4/13/2022	8/16/2022	4/13/2022	8/16/2022
General Minerals																	
Alkalinity	mg/l			240	240	170	160	160	150	190	180	72	68	130	120	230	210
Anion Sum	meq/l			5.4	5.3	3.8	3.7	3.8	3.5	4.3	4.2	10	10	8.8	9	31	34
Bicarbonate as HCO3	mg/l			290	270	180	170	170	160	230	210	88	83	150	140	280	250
Boron	mg/l	1	N	0.25	0.24	0.15	0.15	0.2	0.19	0.24	0.22	0.061	0.06	0.17	0.16	0.17	0.16
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	0.57	ND	ND	ND	2.2	ND
Calcium, Total	mg/l			5.9	5.67	3.7	3.67	3.69	3.64	5.8	5.43	64.3	68	79.1	81.7	301	289
Carbon Dioxide	mg/l			210	206	145	139	141	132	163	159	64.3	60.7	112	105	210	186
Carbonate as CO3	mg/l			ND	18	24	23	22	22	ND	14	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.1	4.8	3.5	3.4	3.4	3.3	4.1	3.8	9.5	9.9	8.3	8.4	32	31
Chloride	mg/l	500	S	19	19	16	16	15	15	19	19	270	290	90	99	**770**	**900**
Fluoride	mg/l	2	P	0.34	0.34	0.45	0.46	0.52	0.52	0.68	0.7	0.21	0.2	0.26	0.27	0.25	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			46	38	20	17	15	13	28	22	6.3	5.2	7.7	6.3	130	110
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			1.2	0.75	0.91	0.58	0.84	0.53	1	0.8	2.9	2.7	2.9	2.7	8.3	7.6
Sodium, Total	mg/l			110	100	76	74	72	70	86	81	140	140	72	72	260	250
Sulfate	mg/l	500	S	ND	ND	ND	ND	ND	ND	ND	ND	44	42	180	180	240	240
Total Dissolved Solid (TDS)	mg/l	1000	S	360	320	300	220	230	220	260	260	670	670	520	550	**2500**	**2000**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties																	
Apparent Color	ACU	15	S	**250**	**250**	**75**	**75**	**75**	**50**	**150**	**150**	ND	ND	ND	ND	3	3
Hardness (Total, as CaCO3)	mg/l			14.7	14.2	9.24	9.17	9.22	9.1	17.1	15.7	176	185	254	260	1020	973
Lab pH	Units			8.56	8.66	8.79	8.9	8.79	8.88	8.5	8.6	8.02	8.06	7.96	8.08	7.6	7.86
Langelier Index - 25 degree	None			0.272	0.364	0.163	0.267	0.157	0.215	0.132	0.179	0.184	0.223	0.498	0.591	0.758	0.994
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4**	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	490	480	350	340	340	330	400	380	1100	1100	850	840	**3700**	**3500**
Turbidity	NTU	5	S	0.15	0.15	0.1	0.15	ND	0.1	0.35	0.3	0.5	1.3	ND	ND	0.75	0.85
Metals																	
Aluminum, Total	ug/l	1000	P	30	31	33	33	26	28	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.62	0.61	ND	ND	ND	ND	0.48	0.49	0.42	0.41	0.45	0.46	2.2	2.1
Barium, Total	ug/l	1000	P	8.6	7.8	3.9	3.9	3.5	3.4	4.8	4.7	65	67	130	140	94	92
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.89	0.88	0.54	0.56	0.38	0.39	0.89	0.88	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.24	0.26	0.19	0.27	0.16	0.26	0.14	0.25	ND	0.092	ND	0.025	ND	ND
Copper, Total	ug/l	1300	P	0.79	0.83	0.52	0.6	ND	ND	0.72	0.68	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.045	0.04	ND	ND	ND	ND	0.04	0.034	ND	ND	0.035	0.037	0.23	0.2
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			ND	ND	ND	ND	ND	ND	0.633	0.523	3.71	3.72	13.7	13.7	63.9	60.9
Manganese, Total	ug/l	50	S	6.3	6	3.5	3.5	2.2	2.2	7.4	7.2	24	24	**110**	**120**	**690**	**670**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds																	
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N														
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others																	
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			9.2	12	3.9	3.9	3	3.4	5.1	5.3	0.41	0.49	1.2	1.2	0.81	0.84

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	South Gate #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				5/16/2022	9/20/2022	5/16/2022	9/20/2022	5/16/2022	9/20/2022	5/16/2022	9/20/2022	5/16/2022	9/20/2022
General Minerals													
Alkalinity	mg/l			170	170	160	140	140	150	180	180	220	210
Anion Sum	meq/l			5.3	5.3	6.8	6.6	6.6	6.8	8.1	8.2	9.7	9.6
Bicarbonate as HCO3	mg/l			210	210	190	170	170	190	230	230	260	260
Boron	mg/l	1	N	0.12	0.11	0.13	0.14	0.15	0.12	0.17	0.17	0.14	0.14
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			51	50.7	72.1	66.4	65.4	72.8	83.2	84.6	97.2	97.3
Carbon Dioxide	mg/l			155	149	144	124	130	138	172	167	200	192
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.2	5.2	6.6	6.3	6.3	6.6	7.8	7.9	9.3	9.2
Chloride	mg/l	500	S	22	23	50	56	56	51	64	65	100	100
Fluoride	mg/l	2	P	0.27	0.27	0.34	0.28	0.27	0.34	0.33	0.33	0.37	0.38
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			17	19	ND	7.3	6.6	ND	ND	ND	74	86
Nitrate (as NO3)	mg/l	45	P	ND	ND	9.6	10	9.7	9.9	7.6	7.8	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	2.2	2.3	2.2	2.2	1.7	1.8	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			2.6	2.6	3.1	3.4	3.4	3	3.7	3.6	3.3	3.2
Sodium, Total	mg/l			46	44	40	46	46	40	53	52	52	52
Sulfate	mg/l	500	S	58	59	100	99	98	100	120	120	120	120
Total Dissolved Solid (TDS)	mg/l	1000	S	290	300	390	400	380	400	480	480	560	540
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	2.2	2.3	2.2	2.2	1.7	1.8	ND	ND
General Physical Properties													
Apparent Color	ACU	15	S	ND	ND	ND	ND	ND	ND	ND	ND	3	ND
Hardness (Total, as CaCO3)	mg/l			160	158	239	213	211	240	273	275	345	342
Lab pH	Units			7.91	8.19	7.72	7.91	7.72	7.94	7.57	7.87	7.65	7.91
Langelier Index - 25 degree	None			0.431	0.704	0.338	0.431	0.24	0.531	0.281	0.588	0.499	0.743
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	480	500	630	630	620	640	740	770	890	900
Turbidity	NTU	5	S	ND	0.15	ND	ND	0.2	ND	ND	ND	0.25	0.3
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	2	1.9	2.6	2.6	2.5	2.7	1.8	1.7	2	2
Barium, Total	ug/l	1000	P	130	130	140	85	86	140	77	77	230	220
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	0.78	ND	ND	0.75	0.66	0.6	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	0.81	ND	ND	0.77	0.6	0.59	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	0.61	0.5	ND	ND
Iron, Total	mg/l	0.3	S	0.035	0.033	ND	ND	ND	ND	ND	ND	0.12	0.12
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			7.83	7.64	14.4	11.4	11.5	14.2	15.8	15.6	24.7	24.1
Manganese, Total	ug/l	50	S	42	43	3.6	3.3	3.4	2.1	ND	3.6	**130**	**120**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	0.067	ND	0.05
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	0.98	0.72	0.71	0.85	1.3	1.2	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	0.67	0.5	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	3.7	4.2	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	1.5	1.6	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	**3.3**	**1.5**	**1.5**	**3.3**	**1.7**	**1.7**	0.077	0.085
Perchlorate	ug/l	6	P	ND	ND	1.4	0.58	0.59	1.4	0.37	0.38	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.37	0.31	ND	0.35	0.51	0.3	0.49	0.31	1	0.97

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	South Gate #2											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				5/17/2022	9/15/2022	5/17/2022	9/15/2022	5/17/2022	9/15/2022	5/17/2022	9/15/2022	5/17/2022	9/15/2022	5/17/2022	9/15/2022
General Minerals															
Alkalinity	mg/l			180	170	180	180	180	170	180	170	180	170	200	200
Anion Sum	meq/l			5.9	5.8	6	6	5.8	5.8	6.6	6.6	5.9	5.9	6.5	6.4
Bicarbonate as HCO3	mg/l			220	210	220	220	220	210	210	210	220	210	250	240
Boron	mg/l	1	N	0.13	0.13	0.13	0.13	0.11	0.1	0.14	0.14	0.14	0.13	0.15	0.15
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			59.1	58.5	60.3	59.9	60.1	59	64.2	65.5	58.3	58.1	63.7	64.4
Carbon Dioxide	mg/l			160	153	166	160	158	152	159	156	159	153	184	178
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.7	5.7	5.8	5.8	5.6	5.5	6.2	6.4	5.7	5.7	6.1	6.2
Chloride	mg/l	500	S	22	22	22	22	22	22	36	36	23	23	25	25
Fluoride	mg/l	2	P	0.36	0.37	0.34	0.35	0.22	0.23	0.39	0.4	0.38	0.39	0.44	0.44
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			19	20	16	18	20	23	ND	ND	17	19	11	13
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	3	3	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	0.67	0.68	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.5	3.4	3.7	3.5	2.2	2.1	3.5	3.5	3.3	3.2	2.9	2.9
Sodium, Total	mg/l			37	38	39	40	42	41	39	40	40	40	40	41
Sulfate	mg/l	500	S	82	84	81	83	79	81	97	100	83	85	83	84
Total Dissolved Solid (TDS)	mg/l	1000	S	350	350	350	340	340	330	390	380	330	330	370	370
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	0.67	0.68	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	ND	ND	3	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			199	197	201	200	187	184	222	226	193	192	218	220
Lab pH	Units			7.92	8.11	7.93	8.08	8.03	8.18	7.81	7.96	7.91	8.07	7.8	7.9
Langelier Index - 25 degree	None			0.513	0.673	0.531	0.681	0.632	0.752	0.429	0.565	0.502	0.635	0.466	0.571
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	540	540	550	550	530	540	610	620	540	550	590	590
Turbidity	NTU	5	S	0.15	0.2	0.25	0.3	0.15	0.15	0.25	0.15	0.2	0.25	0.15	0.2
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	2	2	2.2	1.9	0.82	0.89	0.79	0.83	0.74	0.8
Barium, Total	ug/l	1000	P	60	59	70	70	100	99	80	81	100	100	97	98
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	2.2	2.2	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	0.021	ND	0.062	ND	2.4	2.3	0.057	ND	0.056	0.12
Copper, Total	ug/l	1300	P	ND	ND	0.86	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.05	0.053	0.13	0.12	0.038	0.05	ND	ND	ND	ND	0.038	0.038
Lead, Total	ug/l	15	P	ND	ND	0.39	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			12.6	12.5	12.3	12.2	9	8.81	15	15.3	11.5	11.5	14.3	14.4
Manganese, Total	ug/l	50	S	**62**	**60**	39	39	**97**	**95**	4.4	3.8	22	21	**64**	**70**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	2.4	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	2	2.1	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.68
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	0.32	0.35	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			ND	0.31	0.35	ND	ND	0.32	ND	ND	ND	ND	ND	ND

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Whittier #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				4/27/2022	8/22/2022	4/27/2022	8/22/2022	4/27/2022	8/22/2022	4/27/2022	8/22/2022	4/27/2022	8/22/2022
General Minerals													
Alkalinity	mg/l			280	270	290	290	300	300	270	270	240	240
Anion Sum	meq/l			43	42	41	40	35	34	12	12	12	12
Bicarbonate as HCO3	mg/l			340	330	360	360	370	370	330	320	300	290
Boron	mg/l	1	N	0.9	0.9	1	0.96	0.76	0.78	0.21	0.2	0.17	0.16
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			198	189	191	180	183	181	83.1	80.4	85	80.4
Carbon Dioxide	mg/l			259	254	274	273	281	279	249	247	226	223
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			41	40	39	37	32	32	12	12	12	11
Chloride	mg/l	500	S	300	290	260	250	230	220	83	82	91	90
Fluoride	mg/l	2	P	ND	ND	ND	ND	ND	ND	0.17	0.17	0.28	0.29
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			160	130	150	120	120	100	92	77	1.7	1.5
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	19	19	25	25
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	4.2	4.2	5.6	5.7
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			15	16	14	14	10	11	5	5.2	4.2	4.3
Sodium, Total	mg/l			450	440	430	410	320	320	110	100	91	87
Sulfate	mg/l	500	S	**1400**	**1400**	**1300**	**1300**	**1100**	**1000**	190	190	180	180
Total Dissolved Solid (TDS)	mg/l	1000	S	**2700**	**2800**	**2600**	**2600**	**2200**	**2100**	690	700	670	680
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	4.2	4.2	5.6	5.7
General Physical Properties													
Apparent Color	ACU	15	S	15	15	12	**20**	10	10	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			1040	1020	1000	963	879	885	355	349	377	362
Lab pH	Units			7.51	7.57	7.56	7.58	7.59	7.65	7.58	7.61	7.58	7.63
Langelier Index - 25 degree	None			0.559	0.577	0.615	0.609	0.667	0.729	0.426	0.44	0.388	0.412
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	**4000**	**3900**	**3800**	**3800**	**3200**	**3000**	1100	1100	1000	1100
Turbidity	NTU	5	S	2.3	3.1	1.5	1.9	1.1	1.3	ND	ND	ND	ND
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND	ND	1.4	1.4	0.84	0.76
Barium, Total	ug/l	1000	P	17	18	18	17	24	25	31	34	27	27
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	0.32	ND	ND	ND	3.6	3.7
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	3.9	4
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	**0.59**	**0.59**	**0.46**	**0.46**	**0.37**	**0.38**	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			134	133	128	125	102	105	35.9	36	40	39.2
Manganese, Total	ug/l	50	S	**51**	50	**69**	**64**	**77**	**75**	27	25	2.4	2.5
Mercury	ug/l	2	P	ND	0.072	ND	0.05	ND	0.06	ND	0.066	ND	0.074
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	11	11	17	16
Silver, Total	ug/l	100	S	0.25	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	1.1	1.2	2.2	2.2
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			2	1.7	2.4	2	1.9	1.7	ND	ND	ND	ND

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Whittier #2					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				3/1/2022	3/1/2022	3/1/2022	3/1/2022	3/1/2022	3/1/2022
General Minerals									
Alkalinity	mg/l			240	160	220	420	240	370
Anion Sum	meq/l			12	4.3	13	27	12	17
Bicarbonate as HCO3	mg/l			300	190	270	510	300	450
Boron	mg/l	1	N	0.71	0.21	0.25	0.83	0.2	0.37
Bromide	ug/l			0.91	ND	0.52	0.77	ND	ND
Calcium, Total	mg/l			38.2	23.8	88.3	125	120	157
Carbon Dioxide	mg/l			221	143	198	387	220	336
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			12	4.2	13	27	12	17
Chloride	mg/l	500	S	180	23	130	220	120	120
Fluoride	mg/l	2	P	0.37	0.3	0.27	0.46	0.24	0.26
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			120	25	19	110	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	3.1	12	23	32
Nitrate as Nitrogen	mg/l	10	P	ND	ND	0.71	2.8	5.3	7.3
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.5	2.4	4.3	4.7	4.9	5.3
Sodium, Total	mg/l			190	61	120	320	80	140
Sulfate	mg/l	500	S	110	22	240	**600**	170	290
Total Dissolved Solid (TDS)	mg/l	1000	S	710	260	800	**1700**	740	**1100**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	0.71	2.8	5.3	7.3
General Physical Properties									
Apparent Color	ACU	15	S	**30**	3	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			176	75.5	370	657	397	550
Lab pH	Units			7.8	7.94	7.83	7.65	7.81	7.68
Langelier Index - 25 degree	None			0.254	0.112	0.596	0.746	0.756	0.881
Odor	TON	3	S	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	1200	420	1200	**2800**	1200	**1800**
Turbidity	NTU	5	S	3.3	ND	ND	ND	0.15	0.1
Metals									
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	3.5	ND	1.2	0.47	1	1.2
Barium, Total	ug/l	1000	P	18	24	49	13	71	29
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	3.1	ND	2.3	4.4
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	3.2	ND	2.1	4.7
Copper, Total	ug/l	1300	P	ND	0.63	0.96	2.2	1.1	1.9
Iron, Total	mg/l	0.3	S	**1.2**	ND	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			19.5	3.92	36.4	83.7	23.5	38.3
Manganese, Total	ug/l	50	S	**120**	36	41	**120**	ND	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	4.3	0.86	1.5
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	0.56
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	0.64
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	ND	ND	0.58	ND	**3.3**	0.51
Perchlorate	ug/l	6	P	ND	ND	1.4	1.6	2	2.2
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.79	0.36	0.4	0.56	0.44	0.5

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Whittier Narrows #1								
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Zone 8	Zone 9
				3/14/2022	3/14/2022	3/14/2022	3/14/2022	3/14/2022	3/14/2022	3/15/2022	3/15/2022	3/15/2022
General Minerals												
Alkalinity	mg/l			100	110	150	170	160	180	150	180	170
Anion Sum	meq/l			19	3.3	8	8.6	9.2	8.6	7.4	8.4	9.6
Bicarbonate as HCO3	mg/l			120	140	180	200	200	220	180	210	210
Boron	mg/l	1	N	**1.4**	0.15	0.099	0.18	0.18	0.23	0.22	0.2	0.24
Bromide	ug/l			5.5	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			61.3	9.66	96.6	91.2	97.5	65.9	46.9	64.5	65.9
Carbon Dioxide	mg/l			113	104	135	150	148	159	134	157	157
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			19	3.1	7.3	8.1	8.6	8	7	8	9.2
Chloride	mg/l	500	S	**620**	26	95	100	120	110	88	93	120
Fluoride	mg/l	2	P	0.79	0.35	0.2	0.19	0.2	0.23	0.23	0.24	0.3
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			1200	32	ND	6.7	8.6	10	6.5	5.6	9.5
Nitrate (as NO3)	mg/l	45	P	ND	ND	7.4	5.6	9.8	ND	1.5	15	19
Nitrate as Nitrogen	mg/l	10	P	ND	ND	1.7	1.3	2.2	ND	0.34	3.3	4.3
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	0.96	ND	0.35	0.2	ND
Potassium, Total	mg/l			4.3	1.6	3.1	4.5	4.9	5.3	5.1	5.1	8.8
Sodium, Total	mg/l			330	58	38	59	57	84	85	86	98
Sulfate	mg/l	500	S	1.2	14	110	110	120	97	89	98	120
Total Dissolved Solid (TDS)	mg/l	1000	S	**1300**	200	480	520	550	510	440	520	590
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	1.7	1.3	3.2	ND	0.69	3.5	4.3
General Physical Properties												
Apparent Color	ACU	15	S	10	ND	ND	ND	ND	ND	ND	ND	4
Hardness (Total, as CaCO3)	mg/l			204	24.1	280	271	299	211	161	208	235
Lab pH	Units			6.93	7.85	7.72	7.86	7.89	8.03	8.01	7.96	7.88
Langelier Index - 25 degree	None			-0.868	-0.511	0.416	0.577	0.604	0.632	0.401	0.551	0.442
Odor	TON	3	S	**4**	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	**2300**	290	670	730	770	730	660	740	840
Turbidity	NTU	5	S	**28**	0.35	0.7	0.4	0.6	0.35	0.35	0.35	0.3
Metals												
Aluminum, Total	ug/l	1000	P	27	ND	40	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	4.3	2.2	0.99	1.4	1.3	1.8	1.9	1.2	0.58
Barium, Total	ug/l	1000	P	450	23	160	120	210	87	74	68	93
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	0.38	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	2.9	2.1	5.8	4.8	2.9	6.6	4.3	5.9	9.3
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	0.042	0.74	0.024	0.026	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	0.65	ND	ND	ND	1.2	0.95	1.2	1.7	6.3
Iron, Total	mg/l	0.3	S	**9.5**	0.062	0.16	0.04	0.033	0.049	0.035	0.047	0.065
Lead, Total	ug/l	15	P	0.37	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			12.3	ND	9.35	10.6	13.4	11.2	10.5	11.3	17
Manganese, Total	ug/l	50	S	**630**	13	3.1	13	34	13	6	24	**420**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	3.8	ND	6.4	6.6	28	16	8.2	29	21
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	420	29	20	23	29	23	13	20	31
Volatile Organic Compounds												
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N									
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others												
1,4-Dioxane	ug/l	1	N	0.14	ND	0.61	0.71	0.48	0.45	0.44	0.45	0.63
Perchlorate	ug/l	6	P	ND	ND	0.18	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	0.051	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			13	0.5	0.48	0.75	0.72	0.98	1	1.1	1.5

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.1
CENTRAL BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Willowbrook #1							
				Zone 1		Zone 2		Zone 3		Zone 4	
				4/26/2022	9/2/2022	4/26/2022	9/2/2022	4/26/2022	9/2/2022	4/26/2022	9/2/2022
General Minerals											
Alkalinity	mg/l			240	230	200	200	190	180	200	190
Anion Sum	meq/l			5.6	5.5	5.1	5	6.1	6	6.3	6.2
Bicarbonate as HCO3	mg/l			290	280	250	240	230	220	240	240
Boron	mg/l	1	N	0.16	0.16	0.12	0.12	0.13	0.13	0.13	0.13
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			38.5	37.2	48.5	49.2	59.8	59.2	61.2	61
Carbon Dioxide	mg/l			213	207	179	173	166	161	179	172
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.3	5.4	4.9	4.9	5.8	5.7	5.9	5.9
Chloride	mg/l	500	S	20	19	22	22	24	24	34	34
Fluoride	mg/l	2	P	0.28	0.25	0.28	0.25	0.37	0.35	0.32	0.32
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			23	22	22	19	22	20	39	34
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			4.3	4.4	2.6	2.6	3.7	3.5	3.2	3.1
Sodium, Total	mg/l			61	64	39	39	40	39	45	44
Sulfate	mg/l	500	S	15	11	23	22	82	82	64	64
Total Dissolved Solid (TDS)	mg/l	1000	S	300	310	270	270	320	330	360	360
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties											
Apparent Color	ACU	15	S	7.5	7.5	ND	ND	ND	ND	3	ND
Hardness (Total, as CaCO3)	mg/l			128	122	156	157	201	198	196	194
Lab pH	Units			8.08	8.18	8.1	8.18	7.95	8.05	7.97	8.09
Langelier Index - 25 degree	None			0.625	0.688	0.675	0.761	0.579	0.648	0.621	0.717
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	µmho/cn	1600	S	510	520	470	480	550	570	580	580
Turbidity	NTU	5	S	3.1	1	ND	0.1	0.2	0.15	**5.3**	**6**
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	4.1	3.7	ND	ND	3.1	3	5	5.4
Barium, Total	ug/l	1000	P	46	43	53	52	80	78	150	140
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	0.53	0.57
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.078	0.093	0.028	0.12	0.025	0.036	0.021	0.15
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.069	0.065	ND	ND	0.077	0.085	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			7.64	7.17	8.54	8.41	12.6	12.2	10.5	10.2
Manganese, Total	ug/l	50	S	**55**	50	46	45	31	28	**98**	**95**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			1.4	1.4	0.48	0.44	0.39	0.33	0.3	ND

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL.(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Carson #1							
				Zone 1		Zone 2		Zone 3		Zone 4	
				4/11/2022	8/24/2022	4/11/2022	8/24/2022	4/11/2022	8/24/2022	4/11/2022	8/24/2022
General Minerals											
Alkalinity	mg/l			160	150	190	180	180	170	200	190
Anion Sum	meq/l			3.8	3.6	4.4	4.2	5.7	5.4	7.2	7
Bicarbonate as HCO3	mg/l			190	180	230	210	220	210	250	230
Boron	mg/l	1	N	0.097	0.096	0.11	0.11	0.11	0.11	0.13	0.13
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			20.8	20.9	33.3	34.1	46.1	46.6	56.6	58.6
Carbon Dioxide	mg/l			139	132	167	155	162	149	184	172
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			3.5	3.4	4	4.1	5.3	5.3	6.6	6.8
Chloride	mg/l	500	S	23	22	23	22	25	24	54	54
Fluoride	mg/l	2	P	0.22	0.22	0.18	0.18	0.26	0.26	0.34	0.34
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			22	22	22	21	25	24	60	56
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3	3.1	2.6	2.7	3.3	3.3	4	4.2
Sodium, Total	mg/l			47	46	40	40	44	44	55	56
Sulfate	mg/l	500	S	ND	ND	ND	ND	67	66	79	79
Total Dissolved Solid (TDS)	mg/l	1000	S	200	210	220	230	310	330	390	400
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties											
Apparent Color	ACU	15	S	5	4	3	3	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			67.9	68.1	111	113	167	168	205	211
Lab pH	Units			8.17	8.29	8.11	8.26	8.01	8.2	7.8	8.03
Langelier Index - 25 degree	None			0.304	0.394	0.516	0.649	0.506	0.669	0.41	0.63
Odor	TON	3	S	ND	ND	ND	**4**	ND	ND	ND	**4**
Specific Conductance	umho/cm	1600	S	320	340	380	390	490	500	630	660
Turbidity	NTU	5	S	0.15	0.1	ND	0.15	ND	ND	0.35	0.2
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.64	0.58	ND	ND	ND	ND	0.52	0.63
Barium, Total	ug/l	1000	P	15	14	37	38	69	68	180	180
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.063	0.16	0.03	0.25	0.028	0.23	ND	0.076
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	ND	ND	ND	ND	ND	ND	0.088	0.099
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			3.86	3.85	6.69	6.82	12.5	12.6	15.4	15.7
Manganese, Total	ug/l	50	S	18	19	13	13	29	29	**100**	**110**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.79	0.91	0.5	0.45	0.44	0.39	0.53	0.54

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Carson #2				
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
				5/3/2022	5/3/2022	5/3/2022	5/3/2022	5/3/2022
General Minerals								
Alkalinity	mg/l			170	200	180	210	180
Anion Sum	meq/l			4	4.6	4.9	5	4.8
Bicarbonate as HCO3	mg/l			210	240	220	260	220
Boron	mg/l	1	N	0.14	0.14	0.13	0.12	0.12
Bromide	ug/l			ND	ND	ND	ND	ND
Calcium, Total	mg/l			2.32	16	32.9	41	44.3
Carbon Dioxide	mg/l			147	173	160	189	161
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND
Cation Sum	meq/l			3.8	4.5	4.9	5	4.8
Chloride	mg/l	500	S	20	23	24	28	23
Fluoride	mg/l	2	P	0.29	0.22	0.27	0.17	0.25
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND
Iodide	ug/l			23	21	22	25	20
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND
Potassium, Total	mg/l			2	5	4.9	4.4	3.5
Sodium, Total	mg/l			82	72	52	42	39
Sulfate	mg/l	500	S	ND	0.87	29	ND	27
Total Dissolved Solid (TDS)	mg/l	1000	S	230	240	270	260	260
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND
General Physical Properties								
Apparent Color	ACU	15	S	**40**	7.5	4	4	ND
Hardness (Total, as CaCO3)	mg/l			5.79	62.3	125	155	150
Lab pH	Units			8.66	8.29	8.16	8.04	8.02
Langelier Index - 25 degree	None			-0.146	0.392	0.521	0.567	0.513
Odor	TON	3	S	ND	ND	ND	2	ND
Specific Conductance	umho/cm	1600	S	370	420	460	460	440
Turbidity	NTU	5	S	ND	ND	ND	ND	ND
Metals								
Aluminum, Total	ug/l	1000	P	21	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND
Barium, Total	ug/l	1000	P	1.4	7.9	16	20	26
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.16	0.069	0.051	0.084	0.056
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	ND	ND	ND	ND	0.056
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			ND	5.44	10.5	12.9	9.56
Manganese, Total	ug/l	50	S	2.4	8.2	13	9.5	43
Mercury	ug/l	2	P	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND
Volatile Organic Compounds								
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND
TBA	ug/l	12	N	ND	ND	ND	ND	ND
Tetrachloroethylene (PCE)	ug/l	5	P	2	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	0.5	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND
Others								
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			1.4	0.83	0.6	1.2	0.34

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Carson #3											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				4/26/2022	9/7/2022	4/26/2022	9/7/2022	4/26/2022	9/7/2022	4/26/2022	9/7/2022	4/26/2022	9/7/2022	4/26/2022	9/7/2022
General Minerals															
Alkalinity	mg/l			360	350	160	150	170	160	170	160	180	170	180	170
Anion Sum	meq/l			7.6	7.5	4	3.9	4	3.9	4	3.9	4.3	4.2	5.4	5.3
Bicarbonate as HCO3	mg/l			440	420	190	180	200	190	210	200	220	210	220	210
Boron	mg/l	1	N	0.68	0.65	0.11	0.11	0.11	0.11	0.097	0.092	0.12	0.11	0.13	0.12
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			8.42	8.16	20.2	19.2	17.5	16.7	25.8	24.6	32.5	30.9	49	46.7
Carbon Dioxide	mg/l			320	312	140	133	148	142	151	145	160	154	162	155
Carbonate as CO3	mg/l			ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			7.5	7	3.8	3.6	3.8	3.6	3.9	3.7	4.2	4	5.3	5
Chloride	mg/l	500	S	13	13	22	21	22	22	22	22	23	23	23	23
Fluoride	mg/l	2	P	0.48	0.47	0.21	0.2	0.25	0.25	0.22	0.22	0.22	0.22	0.31	0.3
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			110	92	23	21	27	21	24	20	25	21	21	19
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			3.2	2.8	3.4	3.1	3.6	3.2	4.1	3.7	3.2	2.9	3.7	3.5
Sodium, Total	mg/l			160	150	55	52	61	56	46	43	42	39	40	38
Sulfate	mg/l	500	S	ND	ND	11	11	ND	ND	ND	ND	0.53	0.74	55	56
Total Dissolved Solid (TDS)	mg/l	1000	S	470	440	200	220	190	220	200	180	210	220	290	300
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	**100**	**100**	4	5	7.5	7.5	4	3	3	ND	3	ND
Hardness (Total, as CaCO3)	mg/l			30.3	29.2	65.5	62.4	56.3	53.5	91.2	86.6	115	109	172	164
Lab pH	Units			8.23	8.37	8.16	8.33	8.15	8.31	8.09	8.28	8.07	8.25	7.96	8.15
Langelier Index - 25 degree	None			0.248	0.368	0.281	0.393	0.239	0.341	0.344	0.494	0.445	0.575	0.488	0.629
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	**4**	ND	ND	2	**4**
Specific Conductance	umho/cm	1600	S	680	740	370	380	370	370	370	380	400	400	500	500
Turbidity	NTU	5	S	ND	ND	ND	0.1	0.1	ND	0.1	ND	ND	ND	0.2	0.15
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	0.7	0.77	0.55	0.55	ND	ND	1.7	1.8
Barium, Total	ug/l	1000	P	7.1	6.7	16	16	20	19	24	24	28	28	64	65
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.66	0.62	ND	ND	0.25	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.1	0.25	0.093	0.14	0.044	0.24	0.029	0.093	ND	0.097	ND	0.14
Copper, Total	ug/l	1300	P	0.72	0.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.042	0.044	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.033
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			2.24	2.14	3.68	3.49	3.04	2.86	6.5	6.12	8.2	7.74	12	11.4
Manganese, Total	ug/l	50	S	15	14	15	15	35	35	48	49	24	24	**53**	**53**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			13	12	0.92	0.76	1.1	1	1.2	0.72	0.52	0.53	ND	0.3

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Chandler #3			
				Zone 1		Zone 2	
				4/14/2022	9/8/2022	4/14/2022	9/8/2022
General Minerals							
Alkalinity	mg/l			370	360	370	360
Anion Sum	meq/l			13	13	16	16
Bicarbonate as HCO3	mg/l			450	440	460	440
Boron	mg/l	1	N	0.21	0.2	0.27	0.26
Bromide	ug/l			ND	ND	ND	ND
Calcium, Total	mg/l			96.9	95.3	146	156
Carbon Dioxide	mg/l			341	325	372	341
Carbonate as CO3	mg/l			ND	ND	ND	ND
Cation Sum	meq/l			12	12	16	16
Chloride	mg/l	500	S	150	150	240	220
Fluoride	mg/l	2	P	0.19	0.19	0.14	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND
Iodide	ug/l			76	68	13	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	**52**	**57**
Nitrate as Nitrogen	mg/l	10	P	ND	ND	**12**	**13**
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND
Potassium, Total	mg/l			5.2	4.5	5.2	4.8
Sodium, Total	mg/l			120	110	110	110
Sulfate	mg/l	500	S	45	48	55	59
Total Dissolved Solid (TDS)	mg/l	1000	S	670	700	910	**1100**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	**12**	**13**
General Physical Properties							
Apparent Color	ACU	15	S	3	5	ND	ND
Hardness (Total, as CaCO3)	mg/l			355	346	544	574
Lab pH	Units			7.61	7.9	7.23	7.49
Langelier Index - 25 degree	None			0.663	0.929	0.424	0.676
Odor	TON	3	S	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	1200	1200	**1700**	**1700**
Turbidity	NTU	5	S	0.85	0.95	0.5	0.3
Metals							
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	2.8	2.4	1.6	1.5
Barium, Total	ug/l	1000	P	28	27	140	150
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	1.4	1.7
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	1.8
Copper, Total	ug/l	1300	P	ND	ND	0.71	0.7
Iron, Total	mg/l	0.3	S	0.23	0.21	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND
Magnesium, Total	mg/l			27.4	26.1	43.3	44.8
Manganese, Total	ug/l	50	S	**76**	**74**	9.6	9.1
Mercury	ug/l	2	P	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	**120**	**160**
Selenium, Total	ug/l	50	P	ND	ND	13	14
Silver, Total	ug/l	100	S	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND
Volatile Organic Compounds							
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	0.54	ND	0.53
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND
TBA	ug/l	12	N				
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND
Others							
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	2.6	3.5
Surfactants	mg/l	0.5	S	ND	ND	ND	ND
Total Organic Carbon	mg/l			1.3	1.3	0.76	0.65

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Gardena #1							
				Zone 1		Zone 2		Zone 3		Zone 4	
				4/20/2022	9/6/2022	4/20/2022	9/6/2022	4/20/2022	9/6/2022	4/20/2022	9/6/2022
General Minerals											
Alkalinity	mg/l			280	270	190	190	170	170	250	250
Anion Sum	meq/l			6.1	6	5.2	5.1	5.6	5.5	31	34
Bicarbonate as HCO3	mg/l			340	330	240	230	210	200	300	300
Boron	mg/l	1	N	0.33	0.34	0.13	0.13	0.12	0.12	0.14	0.14
Bromide	ug/l			0.12	ND	0.11	ND	0.097	ND	ND	ND
Calcium, Total	mg/l			12.9	13.4	45.6	46.7	50	51.6	332	327
Carbon Dioxide	mg/l			248	238	174	169	155	148	255	230
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.4	5.5	5	5.2	5.2	5.3	31	30
Chloride	mg/l	500	S	20	20	35	37	24	24	**810**	**890**
Fluoride	mg/l	2	P	0.17	0.17	0.37	0.38	0.35	0.36	0.12	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			33	27	26	24	25	23	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	**100**	**120**
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	**23**	**27**
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			11	12	3.7	3.6	3.3	3.2	8.1	7.9
Sodium, Total	mg/l			89	92	42	44	39	40	130	130
Sulfate	mg/l	500	S	0.26	ND	16	13	70	70	82	78
Total Dissolved Solid (TDS)	mg/l	1000	S	300	350	280	310	300	340	**2200**	**2800**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	**23**	**27**
General Physical Properties											
Apparent Color	ACU	15	S	**22**	**20**	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			60.3	61.6	154	157	170	174	1270	1240
Lab pH	Units			8.07	8.24	7.91	8.09	7.89	8.08	7.11	7.53
Langelier Index - 25 degree	None			0.207	0.363	0.433	0.614	0.399	0.591	0.366	0.742
Odor	TON	3	S	2	ND	**8**	**4**	1	ND	1	ND
Specific Conductance	umho/cm	1600	S	560	600	500	530	500	550	**3600**	**3800**
Turbidity	NTU	5	S	1	2.2	0.65	1.2	0.2	2.9	0.45	4.8
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	0.12	ND
Arsenic, Total	ug/l	10	P	**15**	**15**	ND	ND	0.14	ND	0.2	ND
Barium, Total	ug/l	1000	P	15	15	40	40	38	41	430	410
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.23	0.26	0.15	ND	0.16	ND	8.1	8.3
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.0087	0.085	0.065	0.065	ND	0.05	8.8	9.4
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	2.2	0.25	ND
Iron, Total	mg/l	0.3	S	0.15	0.15	0.016	ND	0.057	0.066	0.0069	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			6.8	6.84	9.87	9.8	11	11	107	102
Manganese, Total	ug/l	50	S	39	39	36	38	50	**52**	0.54	ND
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	0.27	ND	ND	ND	0.19	ND	1.5	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	2.3	2.3
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	0.29	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	0.27	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	0.59	0.53
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	0.07	0.084
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	**8.4**	**7.4**
Surfactants	mg/l	0.5	S	0.036	ND	0.017	ND	0.016	ND	0.019	ND
Total Organic Carbon	mg/l			2.3	2.1	0.76	0.49	0.47	0.33	1.1	0.92

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Gardena #2									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				5/2/2022	9/9/2022	5/2/2022	9/9/2022	5/2/2022	9/9/2022	5/2/2022	9/9/2022	5/2/2022	9/9/2022
General Minerals													
Alkalinity	mg/l			290	290	180	180	180	180	180	170	190	200
Anion Sum	meq/l			6.3	6.1	5.7	5.7	5.6	5.6	4.2	4.1	5.5	5.5
Bicarbonate as HCO3	mg/l			360	340	220	210	220	210	210	210	240	240
Boron	mg/l	1	N	0.32	0.31	0.16	0.15	0.14	0.13	0.1	0.1	0.13	0.13
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			16	15.4	42.4	41.4	50.5	48.7	30.3	28.9	50.8	50
Carbon Dioxide	mg/l			259	252	162	156	163	156	158	152	174	173
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.8	5.8	5.5	5.4	5.4	5.3	4.1	3.9	5.4	5.3
Chloride	mg/l	500	S	15	15	24	24	24	24	23	23	55	56
Fluoride	mg/l	2	P	0.22	0.21	0.24	0.23	0.34	0.32	0.25	0.24	0.26	0.25
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			27	28	23	19	20	20	22	21	21	23
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			6.1	6	6.5	6.4	4.2	4.2	3.5	3.4	3.3	3.4
Sodium, Total	mg/l			100	100	49	48	43	42	40	40	43	43
Sulfate	mg/l	500	S	ND	ND	70	72	62	65	ND	ND	1.1	1.8
Total Dissolved Solid (TDS)	mg/l	1000	S	360	330	320	330	320	310	220	220	300	280
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties													
Apparent Color	ACU	15	S	**25**	**20**	ND	3	ND	3	7.5	3	4	3
Hardness (Total, as CaCO3)	mg/l			64.2	62.6	161	159	174	169	111	107	170	169
Lab pH	Units			8.12	8.33	7.91	8.12	7.9	8.1	7.91	8.12	7.96	8.16
Langelier Index - 25 degree	None			0.349	0.55	0.367	0.563	0.433	0.619	0.252	0.416	0.524	0.745
Odor	TON	3	S	ND	ND	ND	**4**	ND	ND	2	ND	**4**	**10**
Specific Conductance	umho/cn	1600	S	560	600	550	570	510	550	400	420	540	560
Turbidity	NTU	5	S	0.1	0.5	ND	ND	ND	0.1	ND	0.1	ND	0.1
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND	ND	0.43	ND	ND	ND
Barium, Total	ug/l	1000	P	20	21	19	19	21	21	35	35	95	99
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	0.55	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.081	0.17	0.043	0.12	0.059	0.12	0.041	0.12	0.028	0.04
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.031	0.03	0.038	0.035	0.041	0.036	0.075	0.07	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			5.9	5.83	13.5	13.5	11.7	11.5	8.55	8.35	10.6	10.6
Manganese, Total	ug/l	50	S	25	26	26	26	33	33	45	46	43	42
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	0.63	ND	ND	ND	ND	ND	ND	ND	0.67
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			3.2	2.9	0.59	0.43	0.51	0.33	0.72	0.52	0.44	0.32

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Hawthorne #1					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				4/6/2022	4/6/2022	4/6/2022	4/6/2022	4/6/2022	4/6/2022
General Minerals									
Alkalinity	mg/l			700	670	420	330	200	310
Anion Sum	meq/l			15	15	10	7.9	13	23
Bicarbonate as HCO3	mg/l			850	810	520	400	250	380
Boron	mg/l	1	N	**1.4**	1	0.51	0.4	0.12	0.22
Bromide	ug/l			ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			14.8	21.7	35	32.4	111	186
Carbon Dioxide	mg/l			623	589	379	292	184	291
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			14	14	9.5	7.5	12	22
Chloride	mg/l	500	S	51	57	59	48	270	380
Fluoride	mg/l	2	P	ND	0.19	0.19	0.34	0.26	0.22
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			59	90	66	45	47	80
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			24	17	15	10	8.2	7
Sodium, Total	mg/l			270	270	130	100	76	190
Sulfate	mg/l	500	S	ND	5.4	ND	ND	42	270
Total Dissolved Solid (TDS)	mg/l	1000	S	880	820	550	420	740	**1300**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
General Physical Properties									
Apparent Color	ACU	15	S	**200**	**250**	**35**	**20**	3	3
Hardness (Total, as CaCO3)	mg/l			86.8	102	180	140	426	677
Lab pH	Units			8.1	8.21	8.07	8.05	7.92	7.55
Langelier Index - 25 degree	None			0.58	0.846	0.757	0.627	0.753	0.725
Odor	TON	3	S	ND	2	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	1500	1400	940	750	1400	**2400**
Turbidity	NTU	5	S	ND	1.5	ND	0.3	ND	0.45
Metals									
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	0.51	ND	ND	ND	1.4
Barium, Total	ug/l	1000	P	32	35	34	29	120	53
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.67	1.6	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.13	0.2	0.084	0.12	ND	ND
Copper, Total	ug/l	1300	P	1	1.4	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.15	0.15	0.17	0.078	0.034	0.11
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			12.1	11.6	22.6	14.4	36	51.7
Manganese, Total	ug/l	50	S	13	**57**	**57**	32	**99**	**570**
Mercury	ug/l	2	P	ND	ND	ND	0.055	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	0.56
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	2.8
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	1.2
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	**160**
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	2.3
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	**15**
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	0.45
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	0.69
Surfactants	mg/l	0.5	S	0.05	ND	0.054	ND	ND	0.054
Total Organic Carbon	mg/l			8.6	9.5	3.9	2.7	1.5	1.9

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Inglewood #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				3/24/2022	8/25/2022	3/24/2022	8/25/2022	3/24/2022	8/25/2022	3/24/2022	8/25/2022	3/24/2022	8/25/2022
General Minerals													
Alkalinity	mg/l			1500	1400	860	870	350	350	240	240	260	270
Anion Sum	meq/l			78	72	29	28	24	23	16	16	24	24
Bicarbonate as HCO3	mg/l			1800	1700	1100	1100	430	420	300	300	320	340
Boron	mg/l	1	N	**10**	**9.5**	**2.2**	**2.1**	0.49	0.5	0.2	0.2	0.23	0.48
Bromide	ug/l			16	15	ND	ND	3.7	3.7	1.1	1.2	ND	ND
Calcium, Total	mg/l			37.5	38.3	50.2	48.6	161	154	129	125	197	151
Carbon Dioxide	mg/l			1350	1240	775	776	319	315	222	220	248	253
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			72	66	27	27	23	22	16	15	22	21
Chloride	mg/l	500	S	**1700**	**1600**	410	370	460	450	310	320	**540**	**540**
Fluoride	mg/l	2	P	ND	ND	ND	ND	ND	ND	0.32	0.33	ND	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			5000	4700	450	360	860	850	79	92	ND	ND
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	**47**	**56**
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	**11**	**13**
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			48	50	22	23	9.9	10	11	11	9.8	9.8
Sodium, Total	mg/l			1500	1400	520	500	210	200	100	100	150	200
Sulfate	mg/l	500	S	ND	14	ND	ND	180	180	120	120	130	130
Total Dissolved Solid (TDS)	mg/l	1000	S	**4200**	**4000**	**1600**	**1600**	**1300**	**1400**	960	1000	**1500**	**1600**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	**11**	**13**
General Physical Properties													
Apparent Color	ACU	15	S	**350**	**350**	**200**	**200**	15	10	7.5	7.5	ND	ND
Hardness (Total, as CaCO3)	mg/l			219	215	218	209	659	633	536	518	784	619
Lab pH	Units			7.97	8.1	7.95	8.02	7.73	7.86	7.78	7.9	7.52	7.67
Langelier Index - 25 degree	None			0.956	1.07	0.969	1.03	0.895	0.995	0.725	0.826	0.623	0.665
Odor	TON	3	S	**4**	**8**	2	**4**	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cn	1600	S	**6900**	**6900**	**2900**	**2800**	**2500**	**2600**	**1700**	**1700**	**2500**	**2700**
Turbidity	NTU	5	S	ND	0.15	1.1	2.5	2.8	2.5	1.6	1.7	0.1	ND
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.51	0.48	8.2	7.7	ND	ND	ND	ND	0.45	ND
Barium, Total	ug/l	1000	P	150	120	98	89	60	54	140	130	150	54
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	1	0.9	0.81	0.79	ND	ND	ND	ND	0.22	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	0.071	ND	ND	ND	ND	ND	0.34	0.15
Copper, Total	ug/l	1300	P	ND	ND	0.69	ND	ND	ND	ND	ND	1.1	ND
Iron, Total	mg/l	0.3	S	**1.3**	**0.87**	**1**	**1.1**	**0.58**	**0.56**	**0.43**	**0.42**	ND	**0.55**
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			30.5	29	22.5	21.4	62.5	60.1	51.9	50.3	70.9	58.8
Manganese, Total	ug/l	50	S	31	32	**63**	**53**	**410**	**380**	**250**	**240**	2.7	**370**
Mercury	ug/l	2	P	ND	ND	0.051	ND	ND	ND	0.057	ND	0.058	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	0.7	0.42	ND	ND	ND	ND	ND	ND	5.4	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.67
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.59
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	1.6	2.6
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	0.75	1	0.11	0.18
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	3.1	3.3
Surfactants	mg/l	0.5	S	0.064	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			72	66	17	15	1.8	1.7	1.3	0.82	0.78	0.64

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Inglewood #3													
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6		Zone 7	
				3/30/2022	8/31/2022	3/30/2022	8/31/2022	3/30/2022	8/31/2022	3/30/2022	8/31/2022	3/30/2022	8/31/2022	3/30/2022	8/31/2022	3/30/2022	8/31/2022
General Minerals																	
Alkalinity	mg/l			710	690	1100	1100	570	550	800	780	460	450	210	200	240	230
Anion Sum	meq/l			48	47	24	24	12	11	17	16	12	12	8.3	8.2	18	18
Bicarbonate as HCO3	mg/l			870	840	1400	1300	690	660	970	950	560	540	260	250	290	280
Boron	mg/l	1	N	**4.2**	**4**	**5.2**	**5.1**	**1.2**	**1.1**	**2.1**	**2.1**	0.59	0.6	0.12	0.12	0.11	0.11
Bromide	ug/l			7.9	11	ND	1.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			19.7	18.9	11.1	11	5.69	5.64	14.6	14.9	53.2	53.5	69.7	68.5	173	169
Carbon Dioxide	mg/l			640	613	1010	977	504	483	717	690	418	398	191	180	222	207
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	7.2	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			43	43	22	23	11	11	15	16	11	11	7.9	7.7	17	17
Chloride	mg/l	500	S	**1200**	**1200**	57	58	16	17	28	30	98	96	140	140	450	440
Fluoride	mg/l	2	P	ND	ND	ND	0.4	ND	0.19	ND	0.17	0.21	0.21	0.26	0.27	ND	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			2700	2300	520	500	40	36	50	46	130	120	33	29	61	52
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			25	25	17	18	8.6	8.8	20	21	12	13	7.3	7.3	7.7	7.9
Sodium, Total	mg/l			940	930	480	500	240	230	310	320	150	160	57	56	90	89
Sulfate	mg/l	500	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	9.3	47	45
Total Dissolved Solid (TDS)	mg/l	1000	S	**2600**	**2700**	**1500**	**1600**	670	710	960	990	640	660	460	490	**1100**	**1100**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties																	
Apparent Color	ACU	15	S	**200**	**200**	**1600**	**1200**	**300**	**350**	**600**	**750**	**25**	**35**	3	4	4	ND
Hardness (Total, as CaCO3)	mg/l			92.2	87.4	53.4	52.3	26.6	25.9	76.2	76.6	204	202	262	255	642	624
Lab pH	Units			7.92	8.15	8.09	8.27	8.16	8.33	7.93	8.2	7.75	8.07	7.78	8.04	7.61	7.92
Langelier Index - 25 degree	None			0.377	0.57	0.57	0.736	0.169	0.312	0.452	0.715	0.643	0.951	0.485	0.709	0.665	0.946
Odor	TON	3	S	**10**	ND	**10**	**4**	ND	ND	**10**	ND	ND	ND	ND	ND	**20**	**8**
Specific Conductance	umho/cm	1600	S	**5200**	**4900**	**2300**	**2200**	1100	1100	1600	1600	1200	1100	890	830	**2000**	**2000**
Turbidity	NTU	5	S	0.1	0.6	ND	1	0.15	0.2	0.1	0.3	ND	0.15	ND	0.15	0.4	0.45
Metals																	
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	33	ND	35	34	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	1.2	1.3	0.96	0.91	1.6	1.5	2.6	2.7	ND	ND	0.51	0.5	1.6	1.2
Barium, Total	ug/l	1000	P	62	59	25	26	14	13	43	44	58	58	77	76	260	260
Beryllium, Total	ug/l	4	P	ND	ND	0.12	0.1	ND	ND	ND	0.14	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.49	0.44	5.5	5.4	1.5	1.6	3	2.5	0.34	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	0.23	ND	0.22	ND	0.26	ND	ND	ND	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	0.55	ND	4.3	3.4	1.7	1.5	2.1	1.8	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.21	0.2	**0.47**	**0.45**	0.14	0.14	**0.36**	**0.35**	0.15	0.15	0.03	ND	0.13	0.16
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	0.2	0.21	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			10.5	9.77	6.21	6.01	3	2.88	9.68	9.58	17.2	16.7	21.3	20.5	51.1	49
Manganese, Total	ug/l	50	S	**56**	**54**	22	22	22	21	40	38	**58**	**57**	**120**	**120**	**320**	**290**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	2.5	2.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	0.52	0.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds																	
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	1.7
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**42**	**39**
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N														
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.5	8.5
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**0.81**	**0.62**
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others																	
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	0.054	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.057	ND	0.22	0.23
Total Organic Carbon	mg/l			22	20	67	63	6.3	6.7	12	14	3.4	3.5	1.5	1.3	4.8	4.6

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Lawndale #1											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				4/29/2022	8/30/2022	4/29/2022	8/30/2022	4/29/2022	8/30/2022	4/29/2022	8/30/2022	4/29/2022	8/30/2022	4/29/2022	8/30/2022
General Minerals															
Alkalinity	mg/l			470	460	610	600	250	240	200	200	190	190	300	270
Anion Sum	meq/l			9.9	9.7	13	13	5.7	5.6	7.1	7	7.3	7.2	26	28
Bicarbonate as HCO3	mg/l			570	550	750	720	300	290	240	240	240	230	360	330
Boron	mg/l	1	N	0.85	0.87	**1.1**	**1.1**	0.18	0.2	0.12	0.12	0.1	0.11	0.28	0.27
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			11.1	11	4.57	4.71	17.8	18.6	58.6	59.6	55.4	56.5	231	224
Carbon Dioxide	mg/l			416	405	545	530	220	210	180	174	175	169	288	251
Carbonate as CO3	mg/l			ND	9.3	ND	9.5	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			9.2	9.3	12	12	5.3	5.5	6.7	6.8	6.8	6.9	26	25
Chloride	mg/l	500	S	17	17	35	35	28	27	69	68	72	73	**590**	**640**
Fluoride	mg/l	2	P	0.37	0.38	0.24	0.23	0.3	0.29	0.33	0.33	0.37	0.36	0.17	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			120	120	68	64	37	29	34	28	32	25	7.3	6.6
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	18
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0043	4.1
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			6.6	6.6	11	11	9.4	10	4.6	4.6	5.6	5.6	11	10
Sodium, Total	mg/l			190	190	260	270	77	81	49	50	56	58	210	200
Sulfate	mg/l	500	S	ND	ND	0.75	ND	0.71	0.74	57	57	63	64	160	180
Total Dissolved Solid (TDS)	mg/l	1000	S	550	580	740	770	300	330	360	410	380	430	**1600**	**1900**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4300**	4.1
General Physical Properties															
Apparent Color	ACU	15	S	**100**	**88**	**200**	**200**	7.5	5	ND	ND	ND	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			41.3	41.5	25.8	26.6	85.2	89.3	221	225	209	214	821	800
Lab pH	Units			8.15	8.36	8.15	8.35	8.06	8.24	7.89	8.11	7.93	8.14	7.33	7.72
Langelier Index - 25 degree	None			0.387	0.577	0.081	0.282	0.288	0.46	0.522	0.737	0.51	0.716	0.555	0.861
Odor	TON	3	S	**4**	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	870	920	1200	1200	510	540	650	710	670	1200	**2900**	**3000**
Turbidity	NTU	5	S	0.1	0.2	0.15	0.25	0.1	0.25	0.1	0.2	0.1	0.15	0.15	0.1
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.59	0.58	1.1	1.1	ND	ND	1.2	1.2	0.4	0.42	1.1	1.1
Barium, Total	ug/l	1000	P	13	12	12	12	15	16	39	39	100	100	120	110
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.27	0.27	0.64	0.7	ND	ND	ND	ND	ND	ND	0.6	0.51
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.15	0.048	0.094	0.077	0.051	ND	0.024	ND	0.034	ND	0.62	0.35
Copper, Total	ug/l	1300	P	ND	ND	1	1	ND	ND	ND	ND	ND	ND	0.61	ND
Iron, Total	mg/l	0.3	S	0.067	0.069	0.1	0.11	0.046	0.047	0.078	0.079	0.046	0.046	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			3.32	3.38	3.48	3.6	9.93	10.4	18.2	18.6	17.2	17.7	59.2	58.4
Manganese, Total	ug/l	50	S	14	14	30	29	43	43	**69**	**67**	**75**	**75**	36	30
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.9	1.9
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.63
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.53
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.2**	**1.1**
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	3.3
Surfactants	mg/l	0.5	S	ND	0.067	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			12	11	7.4	6.6	1.5	1.5	0.57	0.4	0.57	0.53	1.7	0.77

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Lomita #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				4/19/2022	8/30/2022	4/19/2022	8/30/2022	4/19/2022	8/30/2022	4/19/2022	8/30/2022	4/19/2022	8/30/2022
General Minerals													
Alkalinity	mg/l			280	270	270	260	290	280	250	250	280	280
Anion Sum	meq/l			29	29	28	27	18	19	17	19	33	36
Bicarbonate as HCO3	mg/l			340	330	320	310	360	340	300	300	350	340
Boron	mg/l	1	N	0.54	0.55	0.46	0.56	0.51	0.58	0.78	0.61	0.5	0.81
Bromide	ug/l			7	7.1	6.7	6.6	3.1	3.5	3.6	4.2	7.9	9.5
Calcium, Total	mg/l			225	217	210	197	108	121	278	148	126	278
Carbon Dioxide	mg/l			255	251	245	234	268	253	222	223	263	257
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			27	27	26	25	17	18	33	19	17	33
Chloride	mg/l	500	S	**840**	**810**	**780**	**750**	400	440	440	490	**940**	**1100**
Fluoride	mg/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			1800	1600	1600	1400	700	790	850	950	2300	2100
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			20	19	19	18	13	13	22	14	13	22
Sodium, Total	mg/l			230	230	220	230	200	210	280	190	170	290
Sulfate	mg/l	500	S	7.7	20	23	22	38	54	5.5	6.9	24	26
Total Dissolved Solid (TDS)	mg/l	1000	S	**1900**	**2300**	**1700**	**2200**	1000	**1200**	1000	**1600**	**2000**	**2900**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties													
Apparent Color	ACU	15	S	5	**18**	10	10	12	10	15	**18**	3	4
Hardness (Total, as CaCO3)	mg/l			832	801	775	726	402	449	1020	541	462	1020
Lab pH	Units			7.68	7.7	7.64	7.82	7.72	7.82	7.82	7.89	7.6	7.74
Langelier Index - 25 degree	None			0.838	0.798	0.769	0.866	0.665	0.775	1.11	0.842	0.499	0.925
Odor	TON	3	S	**12**	**8**	**8**	**4**	2	**8**	2	**8**	2	**8**
Specific Conductance	umho/cn	1600	S	**3300**	**3200**	**3100**	**3100**	**1900**	**2100**	**1900**	**2300**	**4000**	**4000**
Turbidity	NTU	5	S	**30**	**28**	0.6	0.85	0.7	1	0.25	0.45	0.5	1.3
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	55
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.43	0.51	ND	ND	0.81	0.8	ND	ND	ND	ND
Barium, Total	ug/l	1000	P	150	140	130	120	65	75	180	91	78	170
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.29	0.45	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	**0.4**	**0.46**	0.066	0.061	0.035	0.039	0.17	0.18	0.13	0.17
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			65.7	63.1	60.8	56.6	32.3	35.8	78.6	41.4	35.7	78.3
Manganese, Total	ug/l	50	S	**480**	**450**	**450**	**380**	**84**	**86**	**530**	**260**	**230**	**520**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	0.53	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	0.12	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	0.061	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			2.1	2	2	1.9	2.5	2.1	2.2	2	2	1.8

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Long Beach #3									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				5/23/2022	9/6/2022	5/23/2022	9/6/2022	5/23/2022	9/6/2022	5/23/2022	9/6/2022	5/23/2022	9/6/2022
General Minerals													
Alkalinity	mg/l			380	370	140	140	160	150	130	120	160	150
Anion Sum	meq/l			8.2	8	3.9	3.8	4.1	4	24	30	23	26
Bicarbonate as HCO3	mg/l			470	450	170	160	200	190	160	150	190	190
Boron	mg/l	1	N	0.37	0.37	0.13	0.13	0.13	0.12	0.11	0.11	0.11	0.11
Bromide	ug/l			ND	ND	ND	ND	ND	ND	7	6.6	5.5	5.3
Calcium, Total	mg/l			11.6	11.2	17.3	16.6	19.9	19.2	286	286	260	244
Carbon Dioxide	mg/l			338	325	125	120	144	137	120	112	144	136
Carbonate as CO3	mg/l			ND	5.5	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			7.7	7.6	3.8	3.7	3.9	3.8	28	28	25	23
Chloride	mg/l	500	S	20	20	21	21	31	30	**690**	**930**	**640**	**740**
Fluoride	mg/l	2	P	0.44	0.43	0.32	0.31	0.28	0.27	0.12	ND	0.14	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			40	51	20	25	36	43	1500	1700	1200	1500
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			4.2	4	2.5	2.1	2.7	2.5	17	17	12	11
Sodium, Total	mg/l			150	150	60	59	58	57	150	160	150	140
Sulfate	mg/l	500	S	ND	ND	23	23	ND	ND	79	72	87	77
Total Dissolved Solid (TDS)	mg/l	1000	S	450	470	230	250	230	250	**2500**	**2900**	**2300**	**2200**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties													
Apparent Color	ACU	15	S	**80**	**50**	10	12	15	**20**	4	4	3	3
Hardness (Total, as CaCO3)	mg/l			42.6	41.5	54.5	52.3	63	60.6	1030	1030	898	846
Lab pH	Units			8.25	8.44	8.23	8.38	8.09	8.28	7.6	7.86	7.69	7.94
Langelier Index - 25 degree	None			0.435	0.593	0.215	0.34	0.194	0.333	0.495	0.689	0.639	0.84
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	**8**	ND	ND	ND
Specific Conductance	umho/cm	1600	S	750	780	380	400	390	410	**3200**	**3600**	**2900**	**2900**
Turbidity	NTU	5	S	ND	0.25	ND	0.15	ND	0.15	0.3	0.75	0.1	0.65
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND	ND	0.48	0.45	0.73	0.74
Barium, Total	ug/l	1000	P	9	9.3	14	14	7.8	7.5	92	93	110	110
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.28	0.23	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.11	0.17	0.07	0.11	0.084	0.13	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.049	0.034	ND	ND	0.036	0.031	0.22	0.21	0.21	0.19
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			3.33	3.26	2.74	2.62	3.23	3.1	76.8	75.9	60.2	57.3
Manganese, Total	ug/l	50	S	11	11	7.3	7.1	9.5	9	**230**	**240**	**260**	**260**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N	ND	ND	ND	ND	ND	ND	3.4	10	3.2	8.2
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			7.3	6.6	1.3	1.3	2.2	2.1	1.3	1.3	1.3	1.2

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Long Beach #8					
				Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
				5/6/2022	5/6/2022	5/6/2022	5/6/2022	5/6/2022	5/6/2022
General Minerals									
Alkalinity	mg/l			540	460	630	410	310	210
Anion Sum	meq/l			11	10	15	25	20	19
Bicarbonate as HCO3	mg/l			660	570	770	490	380	250
Boron	mg/l	1	N	**1.2**	0.76	**1.3**	**1.1**	0.6	0.2
Bromide	ug/l			ND	ND	ND	3.9	3.1	ND
Calcium, Total	mg/l			8.06	9.77	10.8	48.3	65.4	113
Carbon Dioxide	mg/l			475	410	557	366	281	195
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			11	9.6	14	22	18	18
Chloride	mg/l	500	S	24	37	95	**620**	500	**520**
Fluoride	mg/l	2	P	0.72	0.72	0.52	ND	ND	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND
Iodide	ug/l			89	94	110	930	700	62
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			2	4.3	8.7	15	12	8
Sodium, Total	mg/l			240	200	290	380	270	210
Sulfate	mg/l	500	S	ND	ND	ND	ND	ND	22
Total Dissolved Solid (TDS)	mg/l	1000	S	690	600	860	**1400**	1000	**1100**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND
General Physical Properties									
Apparent Color	ACU	15	S	**500**	**250**	**310**	**50**	**38**	12
Hardness (Total, as CaCO3)	mg/l			28.6	37.2	47.1	256	277	427
Lab pH	Units			8.32	8.21	8.22	7.89	7.88	7.51
Langelier Index - 25 degree	None			0.452	0.373	0.52	0.59	0.636	0.322
Odor	TON	3	S	**4**	ND	2	**4**	**4**	**4**
Specific Conductance	umho/cm	1600	S	990	900	1400	**2500**	**2000**	**1900**
Turbidity	NTU	5	S	0.15	0.3	0.3	0.15	0.7	4.9
Metals									
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	1.3	0.8	0.98	ND	0.57	0.42
Barium, Total	ug/l	1000	P	9.7	9.6	13	21	21	120
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	1.1	1.1	1.4	0.32	0.31	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.2	0.14	0.16	ND	ND	ND
Copper, Total	ug/l	1300	P	3.4	1.8	0.72	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.19	0.16	0.21	0.17	0.24	**0.72**
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			2.05	3.1	4.89	32.8	27.5	35.2
Manganese, Total	ug/l	50	S	17	24	21	13	46	**320**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds									
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N						
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND
Others									
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	0.051	ND	ND
Total Organic Carbon	mg/l			15	18	26	21	15	1.4

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. **(P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed**

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Manhattan Beach #1													
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6		Zone 7	
				3/23/2022	7/27/2022	3/22/2022	7/26/2022	3/23/2022	7/27/2022	3/22/2022	7/26/2022	3/22/2022	7/26/2022	3/22/2022	7/26/2022	3/22/2022	7/26/2022
General Minerals																	
Alkalinity	mg/l			590	590	460	470	950	960	500	510	130	140	170	170	160	170
Anion Sum	meq/l			130	130	42	49	23	23	11	11	280	430	140	140	12	11
Bicarbonate as HCO3	mg/l			720	310	560	570	1200	1200	600	630	160	310	200	200	190	210
Boron	mg/l	1	N	**14**	**15**	**6.5**	**6.6**	**3.5**	**3.6**	0.41	0.41	0.54	0.53	0.13	0.1	0.19	0.19
Bromide	ug/l			19	22	9.4	7.9	2.2	2.1	ND	ND	40	ND	13	ND	ND	ND
Calcium, Total	mg/l			48.4	48.1	32.9	32.4	15.5	16.1	26.6	26.4	1870	1880	921	921	57.5	59.4
Carbon Dioxide	mg/l			548	526	409	418	854	854	443	456	142	140	161	159	142	155
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			120	120	47	44	21	20	11	10	380	380	130	130	11	11
Chloride	mg/l	500	S	**4100**	**4000**	**1200**	**1400**	130	130	39	39	**8900**	**14000**	**4400**	**4400**	140	130
Fluoride	mg/l	2	P	ND	ND	0.49	ND	0.3	0.3	0.18	0.18	ND	ND	0.1	ND	0.12	ND
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			6000	4800	2400	2200	770	600	110	95	150	130	26	21	33	32
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	13
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	3
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			25	35	19	23	27	32	11	11	140	180	45	56	5.9	6
Sodium, Total	mg/l			2700	2600	1000	940	420	410	200	180	4800	4700	1500	1400	170	150
Sulfate	mg/l	500	S	ND	ND	ND	ND	ND	0.55	ND	ND	**1100**	**1800**	**580**	**560**	200	200
Total Dissolved Solid (TDS)	mg/l	1000	S	**7200**	**7600**	**2700**	**2700**	**1300**	**1300**	600	590	**23000**	**26000**	**7500**	**8700**	700	690
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.4	**3100**
General Physical Properties																	
Apparent Color	ACU	15	S	**100**	**110**	**100**	**120**	**350**	**350**	**30**	**40**	4	4	ND	**35**	ND	ND
Hardness (Total, as CaCO3)	mg/l			257	257	131	131	85	89.5	108	107	8620	8630	3350	3310	198	205
Lab pH	Units			7.65	8.03	7.98	8.05	7.93	8.18	8.03	8.11	7.04	7.18	7.4	7.46	8.04	8.04
Langelier Index - 25 degree	None			0.264	0.634	0.465	0.537	0.512	0.782	0.665	0.752	0.547	0.74	0.748	0.791	0.497	0.539
Odor	TON	3	S	**10**	**10**	**20**	**5**	**10**	**10**	2	ND	2	2	ND	2	ND	ND
Specific Conductance	umho/cn	1600	S	**13000**	**12000**	**4600**	**4400**	**2100**	**2100**	870	980	**33000**	**33000**	**12000**	**12000**	1000	1100
Turbidity	NTU	5	S	ND	0.2	ND	0.1	ND	0.1	ND	0.15	**65**	**30**	**16**	**11**	ND	0.1
Metals																	
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	1.6	1.5	0.53	0.42	0.58	0.6	0.61	0.54	0.78	0.53	0.53	0.52	4.7	4.3
Barium, Total	ug/l	1000	P	700	720	200	200	94	94	40	40	190	190	220	220	35	38
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	**6.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.37	0.39	0.25	0.25	1.8	1.7	0.24	3.1	0.23	0.24	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	ND	ND	0.024	ND	ND	ND	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	**0.47**	**0.49**	0.16	0.16	0.19	0.21	0.082	0.13	**4.4**	**4**	**1.8**	**1.7**	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	0.31	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			33	33.2	11.9	12.2	11.3	12	10	9.91	958	957	254	246	13.3	13.8
Manganese, Total	ug/l	50	S	44	47	40	39	42	41	**58**	**57**	**850**	**810**	**980**	**960**	**110**	**120**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	**120**	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.4	1.9
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds																	
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N														
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others																	
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.67	ND
Surfactants	mg/l	0.5	S	0.068	0.091	0.065	0.061	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			23	24	26	27	36	38	4.5	4.7	1.5	1.4	0.59	0.55	0.86	0.97

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	PM-2 Police Station							
				Zone 1		Zone 2		Zone 3		Zone 4	
				3/25/2022	8/29/2022	3/25/2022	8/29/2022	3/25/2022	8/29/2022	3/25/2022	8/29/2022
General Minerals											
Alkalinity	mg/l			120	120	150	160	130	130	160	160
Anion Sum	meq/l			200	200	45	42	14	13	12	11
Bicarbonate as HCO3	mg/l			150	150	180	190	160	160	190	190
Boron	mg/l	1	N	0.15	0.16	0.2	0.23	0.3	0.29	0.31	0.29
Bromide	ug/l			19	59	3.9	4.2	0.61	0.6	0.79	0.66
Calcium, Total	mg/l			1120	1150	351	397	92.9	91.4	64.3	62.7
Carbon Dioxide	mg/l			116	114	135	151	120	120	141	140
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			180	190	40	43	14	14	11	11
Chloride	mg/l	500	S	**6400**	**6700**	**1400**	**1300**	250	230	170	160
Fluoride	mg/l	2	P	ND	ND	0.5	0.5	0.3	0.3	0.31	0.28
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			73	82	95	120	14	18	82	96
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			100	120	20	22	9.5	9.8	7.9	8.3
Sodium, Total	mg/l			1800	1800	270	270	160	150	140	140
Sulfate	mg/l	500	S	**640**	**640**	60	58	200	200	180	180
Total Dissolved Solid (TDS)	mg/l	1000	S	**13000**	**14000**	**3000**	**2700**	860	880	700	700
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties											
Apparent Color	ACU	15	S	7.5	7.5	3	**35**	3	ND	3	ND
Hardness (Total, as CaCO3)	mg/l			5080	5220	1380	1540	348	346	243	240
Lab pH	Units			7.43	7.45	7.64	7.44	7.96	7.86	8.02	7.98
Langelier Index - 25 degree	None			0.662	0.691	0.65	0.548	0.51	0.4	0.525	0.474
Odor	TON	3	S	ND	ND	2	**10**	ND	**4**	ND	**4**
Specific Conductance	umho/cm	1600	S	**17000**	**18000**	**4800**	**5300**	1600	1600	1200	1200
Turbidity	NTU	5	S	1.5	2.3	**6.4**	**12**	ND	0.25	ND	0.15
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	3.5	3.3	1.4	1.3	0.93	0.85
Barium, Total	ug/l	1000	P	270	250	320	310	40	39	38	36
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	1.2	ND	ND	ND	0.67	ND	ND	ND
Iron, Total	mg/l	0.3	S	**0.33**	**0.33**	**1.1**	**1.2**	ND	ND	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			553	570	122	132	28.2	28.7	20	20.2
Manganese, Total	ug/l	50	S	**400**	**350**	**470**	**410**	**140**	**140**	**57**	**57**
Mercury	ug/l	2	P	ND	ND	0.062	ND	0.05	ND	0.061	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			0.92	0.93	1.8	1	1.4	1.4	1.2	1.2

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	PM-3 Madrid							
				Zone 1		Zone 2		Zone 3		Zone 4	
				3/29/2022	8/24/2022	3/29/2022	8/24/2022	3/29/2022	8/24/2022	3/29/2022	8/24/2022
General Minerals											
Alkalinity	mg/l			320	320	190	190	190	190	190	190
Anion Sum	meq/l			7.2	7.1	10	9.6	13	13	15	15
Bicarbonate as HCO3	mg/l			390	380	230	230	230	230	230	230
Boron	mg/l	1	N	0.35	0.35	0.17	0.16	0.23	0.23	0.39	0.4
Bromide	ug/l			ND	ND	ND	ND	1.6	1.8	1.7	1.7
Calcium, Total	mg/l			11.5	12	80.7	84.3	107	113	108	112
Carbon Dioxide	mg/l			285	279	173	171	174	169	170	170
Carbonate as CO3	mg/l			ND	5.6	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			6.6	6.7	9.2	9.5	13	13	14	15
Chloride	mg/l	500	S	26	27	220	210	300	310	320	330
Fluoride	mg/l	2	P	0.26	0.27	0.26	0.26	0.27	0.27	0.28	0.29
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			32	30	120	110	250	250	260	230
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			13	14	5.1	5.5	6.8	7.3	7.2	8
Sodium, Total	mg/l			110	120	73	73	110	110	140	140
Sulfate	mg/l	500	S	ND	ND	3	ND	40	48	95	100
Total Dissolved Solid (TDS)	mg/l	1000	S	380	400	570	640	830	960	900	980
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties											
Apparent Color	ACU	15	S	**30**	**35**	5	5	3	3	10	15
Hardness (Total, as CaCO3)	mg/l			64.2	66.5	296	309	395	416	398	413
Lab pH	Units			8.26	8.35	7.87	7.97	7.84	7.93	7.73	7.83
Langelier Index - 25 degree	None			0.383	0.486	0.572	0.678	0.621	0.716	0.505	0.61
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	700	680	1100	1000	1500	1600	**1800**	**1700**
Turbidity	NTU	5	S	0.1	0.1	0.55	0.5	0.45	0.55	3.6	3.8
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND	ND	8.3	8.4
Barium, Total	ug/l	1000	P	19	18	32	31	79	83	78	79
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.22	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.11	0.023	ND	ND	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.037	0.045	0.21	0.24	0.11	0.11	**0.58**	**0.56**
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			8.6	8.88	22.9	24	30.8	32.5	31	32.4
Manganese, Total	ug/l	50	S	21	20	**55**	**52**	**64**	**66**	**360**	**380**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	2.3	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	1.3	1.2	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	0.5	0.5	1.5	1.3
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	0.73	0.7
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	0.15	0.21
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			3	2.4	0.9	0.64	1	0.86	1.2	0.98

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	PM-4 Mariner							
				Zone 1		Zone 2		Zone 3		Zone 4	
				5/15/2022	8/28/2022	5/15/2022	8/28/2022	5/15/2022	8/28/2022	5/15/2022	8/28/2022
General Minerals											
Alkalinity	mg/l			270	260	160	150	150	160	220	220
Anion Sum	meq/l			6.2	6.1	220	240	9.2	9.4	12	12
Bicarbonate as HCO3	mg/l			320	320	190	190	190	190	270	260
Boron	mg/l	1	N	0.17	0.17	0.23	0.23	0.25	0.24	0.23	0.23
Bromide	ug/l			ND	ND	20	ND	ND	ND	ND	ND
Calcium, Total	mg/l			27	27.4	1460	1430	45.7	45.1	75.7	76.6
Carbon Dioxide	mg/l			238	232	159	148	137	139	198	193
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			5.7	5.9	220	220	8.8	8.8	11	11
Chloride	mg/l	500	S	30	30	**7400**	**7600**	95	98	140	140
Fluoride	mg/l	2	P	0.3	0.3	ND	ND	0.38	0.38	0.21	0.21
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			41	53	46	53	20	24	42	45
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			7.8	8.1	88	91	6.4	6.7	7.3	7.6
Sodium, Total	mg/l			75	76	2400	2400	120	120	120	120
Sulfate	mg/l	500	S	ND	ND	**590**	**990**	170	170	160	160
Total Dissolved Solid (TDS)	mg/l	1000	S	340	340	**15000**	**19000**	550	560	660	690
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties											
Apparent Color	ACU	15	S	7.5	7.5	4	5	10	7.5	4	4
Hardness (Total, as CaCO3)	mg/l			113	117	5600	5510	163	163	270	275
Lab pH	Units			7.98	8.05	7.18	7.38	8.17	8.2	8	8.04
Langelier Index - 25 degree	None			0.411	0.471	0.648	0.815	0.526	0.576	0.721	0.761
Odor	TON	3	S	ND	ND	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	560	570	**20000**	**21000**	880	950	1100	1100
Turbidity	NTU	5	S	ND	ND	1.1	1.3	0.3	0.3	0.2	0.2
Metals											
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Barium, Total	ug/l	1000	P	21	19	210	210	74	73	60	58
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	0.034	ND	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.057	0.06	0.19	0.2	ND	ND	0.13	0.14
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			11.2	11.7	473	468	11.9	12.2	19.6	20.5
Manganese, Total	ug/l	50	S	30	28	**870**	**870**	33	34	**74**	**74**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds											
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N								
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND
Others											
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	0.11	0.13	0.15
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			1.6	1.5	0.98	0.96	1.5	1.3	1	0.93

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	PM-5 Columbia Park											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				5/3/2022	8/19/2022	5/3/2022	8/19/2022	5/3/2022	8/19/2022	5/3/2022	8/19/2022	5/3/2022	8/19/2022	5/3/2022	8/19/2022
General Minerals															
Alkalinity	mg/l			700	700	910	910	430	420	300	300	190	190	220	210
Anion Sum	meq/l			17	17	19	19	9.5	9.3	7.1	6.9	36	36	13	13
Bicarbonate as HCO3	mg/l			850	860	1100	1100	520	500	370	360	230	230	260	260
Boron	mg/l	1	N	**2.4**	**2.4**	**1.8**	**1.9**	0.36	0.36	0.18	0.18	0.19	0.19	0.21	0.2
Bromide	ug/l			1.5	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			12.8	12.7	6.99	7.2	13.6	13.6	26.1	26.2	255	267	88.7	87.3
Carbon Dioxide	mg/l			621	621	812	804	379	370	272	264	177	172	194	189
Carbonate as CO3	mg/l			ND	ND	ND	5.6	ND	6.8	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			15	16	17	18	8.9	8.9	6.5	6.6	31	32	12	12
Chloride	mg/l	500	S	110	100	17	17	33	32	35	34	**810**	**820**	160	160
Fluoride	mg/l	2	P	0.55	0.54	0.26	0.26	0.24	0.24	0.27	0.28	ND	ND	0.29	0.29
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			490	540	59	66	85	98	47	52	14	16	55	56
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			15	15	13	13	17	16	12	12	13	13	7.1	6.7
Sodium, Total	mg/l			310	320	370	390	170	170	90	91	290	300	130	130
Sulfate	mg/l	500	S	ND	ND	ND	ND	ND	ND	ND	ND	450	440	180	190
Total Dissolved Solid (TDS)	mg/l	1000	S	980	1000	**1100**	**1100**	500	520	360	390	**2000**	**2200**	740	740
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	**250**	**300**	**620**	**620**	**100**	**60**	**22**	**20**	5	ND	ND	ND
Hardness (Total, as CaCO3)	mg/l			55.2	55.4	37.8	39.4	62.7	63.3	115	117	895	941	303	300
Lab pH	Units			8.07	8.22	8.16	8.31	8.21	8.34	8.03	8.21	7.59	7.87	7.94	8.14
Langelier Index - 25 degree	None			0.474	0.617	0.399	0.562	0.507	0.622	0.487	0.66	0.627	0.912	0.717	0.889
Odor	TON	3	S	ND	**10**	ND	ND	ND	ND	2	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	1600	**1700**	**1700**	**1800**	880	900	660	680	**3800**	**4000**	1300	1300
Turbidity	NTU	5	S	ND	0.1	ND	0.35	ND	0.3	ND	0.1	0.15	0.25	ND	0.3
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	0.51	0.56	3.1	3.3	0.73	0.73	0.58	0.64	1	0.89	ND	ND
Barium, Total	ug/l	1000	P	89	89	21	22	26	26	22	22	92	97	160	160
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	0.76	0.88	2.6	2.9	0.4	0.43	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.14	0.19	0.13	0.17	0.077	0.13	0.057	0.062	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	0.76	0.57	2.6	2.9	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.19	0.18	0.28	0.29	0.048	0.048	0.039	0.036	0.092	0.096	ND	ND
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			5.64	5.75	4.93	5.2	6.95	7.13	12.2	12.5	63	66.9	19.8	19.9
Manganese, Total	ug/l	50	S	43	43	26	27	35	36	26	25	**250**	**240**	**120**	**120**
Mercury	ug/l	2	P	ND	ND	ND	0.058	ND	ND	ND	0.067	ND	0.058	ND	0.079
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	0.54	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.076	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	0.056	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			29	35	20	25	5.7	7	3	3.5	1.8	2.1	1.3	1.3

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	PM-6 Madrona Marsh											
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5		Zone 6	
				4/8/2022	9/1/2022	4/8/2022	9/1/2022	4/8/2022	9/1/2022	4/8/2022	9/1/2022	4/8/2022	9/1/2022	4/8/2022	9/1/2022
General Minerals															
Alkalinity	mg/l			430	420	130	120	150	140	240	230	160	160	160	150
Anion Sum	meq/l			65	63	90	92	210	220	7.3	7.2	47	45	9	9.1
Bicarbonate as HCO3	mg/l			530	510	150	150	180	170	290	280	200	190	190	190
Boron	mg/l	1	N	0.72	0.75	0.56	0.56	0.23	0.23	0.24	0.24	0.38	0.37	0.18	0.18
Bromide	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			270	261	220	216	1170	1170	21.9	21.9	205	195	56	55.1
Carbon Dioxide	mg/l			392	374	114	110	141	129	211	205	150	146	140	137
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	6.9	ND	ND	ND	ND	ND
Cation Sum	meq/l			58	59	81	83	200	200	6.9	6.8	42	41	8.7	8.6
Chloride	mg/l	500	S	**2000**	**1900**	**3100**	**3200**	**7400**	**7500**	88	89	**1200**	**1200**	130	130
Fluoride	mg/l	2	P	ND	ND	ND	ND	ND	ND	0.46	0.44	ND	ND	0.25	0.24
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			140	110	530	480	200	190	63	52	57	53	35	36
Nitrate (as NO3)	mg/l	45	P	**74**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	**17**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			37	44	57	71	110	140	7.1	6.6	20	23	6.2	5.7
Sodium, Total	mg/l			640	670	1400	1400	1700	1800	100	100	590	600	100	100
Sulfate	mg/l	500	S	ND	ND	ND	ND	74	86	ND	ND	400	390	110	120
Total Dissolved Solid (TDS)	mg/l	1000	S	**3700**	**3800**	**5100**	**5700**	**11000**	**15000**	390	390	**2700**	**2600**	510	530
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	**17**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties															
Apparent Color	ACU	15	S	**220**	**250**	5	5	7.5	10	10	**20**	15	**20**	5	5
Hardness (Total, as CaCO3)	mg/l			1470	1430	987	969	6020	6000	110	110	786	746	203	199
Lab pH	Units			7.86	7.99	7.79	7.88	7.48	7.5	8.36	8.22	7.8	7.67	8.04	7.95
Langelier Index - 25 degree	None			1.18	1.28	0.453	0.484	0.838	0.814	0.635	0.477	0.621	0.475	0.521	0.392
Odor	TON	3	S	2	**10**	ND	ND	**50**	**16**	ND	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	**5600**	**6300**	**8200**	**9300**	**18000**	**20000**	700	740	**4800**	**5000**	900	960
Turbidity	NTU	5	S	2.6	**5.8**	0.4	0.25	0.2	0.35	0.6	0.75	2.5	2.9	0.2	0.25
Metals															
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	0.42	ND	ND	ND	2	2	1.8	1.8
Barium, Total	ug/l	1000	P	770	740	630	610	**2900**	**2600**	26	26	120	110	16	16
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	1	1.1	ND	ND	0.4	ND	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	0.08	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	1.1	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.042	0.045	0.14	0.13	0.074	0.065	0.088	0.091	**0.6**	**0.58**	0.19	0.2
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			194	188	106	104	750	746	13.5	13.3	66.4	62.8	15.5	15
Manganese, Total	ug/l	50	S	8.2	7.1	**170**	**170**	**68**	**65**	**58**	**59**	**450**	**440**	**73**	**72**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds															
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	1.2	ND	0.58	ND	ND	ND	0.57	ND	0.82	ND	0.91
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N												
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others															
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	0.052	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			5.1	8.5	2.3	2	2.1	1.7	2	1.8	2.3	2.1	1.5	1.3

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Westchester #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				5/19/2022	9/9/2022	5/19/2022	9/9/2022	5/19/2022	9/9/2022	5/19/2022	9/9/2022	5/19/2022	9/9/2022
General Minerals													
Alkalinity	mg/l			780	780	540	530	430	430	350	340	280	280
Anion Sum	meq/l			19	20	13	13	11	11	11	11	9.5	9.4
Bicarbonate as HCO3	mg/l			950	960	650	650	530	530	420	410	350	340
Boron	mg/l	1	N	**1.7**	**1.7**	0.79	0.82	0.39	0.4	0.24	0.24	0.23	0.23
Bromide	ug/l			0.72	0.7	ND	ND	ND	ND	ND	ND	ND	ND
Calcium, Total	mg/l			49.9	44	31.2	30.4	58.5	52.7	71.9	68.6	63.2	60.3
Carbon Dioxide	mg/l			693	695	479	471	389	386	313	302	256	246
Carbonate as CO3	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cation Sum	meq/l			19	19	12	12	11	10	10	10	9	8.8
Chloride	mg/l	500	S	120	130	76	77	68	69	70	71	72	72
Fluoride	mg/l	2	P	0.23	0.21	0.22	0.21	0.22	0.22	0.24	0.23	0.29	0.28
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Iodide	ug/l			27	190	78	100	61	79	56	61	48	53
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			19	19	17	18	12	12	10	10	7.8	7.8
Sodium, Total	mg/l			330	330	200	210	130	130	94	94	85	85
Sulfate	mg/l	500	S	19	15	ND	ND	19	13	84	85	88	90
Total Dissolved Solid (TDS)	mg/l	1000	S	**1100**	**1100**	720	710	580	580	580	560	520	500
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties													
Apparent Color	ACU	15	S	**400**	**400**	**50**	**50**	**20**	**20**	5	7.5	7.5	7.5
Hardness (Total, as CaCO3)	mg/l			208	186	148	146	244	223	296	285	256	247
Lab pH	Units			8.03	8.16	8.05	8.2	7.96	8.12	7.91	8.05	7.9	8.04
Langelier Index - 25 degree	None			1.06	1.13	0.766	0.898	0.875	0.989	0.825	0.936	0.674	0.798
Odor	TON	3	S	2	**4**	ND	**4**	2	ND	ND	ND	ND	ND
Specific Conductance	umho/cm	1600	S	**1900**	**1800**	1200	1100	1000	910	970	880	880	800
Turbidity	NTU	5	S	0.2	0.15	0.95	0.1	0.4	0.25	0.3	0.25	0.55	0.45
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic, Total	ug/l	10	P	ND	ND	ND	ND	0.79	0.66	ND	ND	0.44	0.48
Barium, Total	ug/l	1000	P	100	110	110	110	70	69	76	77	66	67
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	0.71	ND	ND	ND	ND	ND
Chromium, Total	ug/l	50	P	1.9	1.8	0.22	0.23	ND	ND	ND	ND	ND	ND
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.21	0.35	0.066	0.086	ND	ND	ND	ND	ND	ND
Copper, Total	ug/l	1300	P	0.87	0.73	ND	0.74	ND	ND	ND	ND	ND	ND
Iron, Total	mg/l	0.3	S	0.18	0.16	0.13	0.12	0.25	0.23	0.15	0.14	0.27	0.27
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Magnesium, Total	mg/l			20.2	18.5	17	17.1	23.9	22.3	28.1	27.6	23.8	23.3
Manganese, Total	ug/l	50	S	**82**	**76**	44	45	**140**	**130**	**120**	**120**	**120**	**120**
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium, Total	ug/l	50	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver, Total	ug/l	100	S	ND	ND	ND	0.47	ND	ND	ND	ND	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TBA	ug/l	12	N										
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes (Total)	ug/l	1750	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Others													
1,4-Dioxane	ug/l	1	N	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Perchlorate	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Surfactants	mg/l	0.5	S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Total Organic Carbon	mg/l			19	24	6.8	7.2	3	3.1	1.7	1.5	1.4	1.4

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Wilmington #1									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				2/14/2022	8/8/2022	2/14/2022	8/8/2022	2/14/2022	8/8/2022	2/14/2022	8/8/2022	2/14/2022	8/8/2022
General Minerals													
Alkalinity	mg/l			130	130	160	160	160	160	140	140	160	170
Anion Sum	meq/l			15	15	26	3.8	28		15	19	15	
Bicarbonate as HCO3	mg/l			160	130	200	160	190	160	170	140	190	170
Boron	mg/l	1	N	0.25	0.25	0.24	0.25	0.3	0.29	0.22	0.22	0.21	0.22
Bromide	ug/l			2600	2700	3100	3100	3700	3500	950	1500	1000	1200
Calcium, Total	mg/l			86	---	180	180	150	150	62	97	96	100
Carbon Dioxide	mg/l			2.1	---	4.1	---	9.8	---	2.2	---	ND	---
Carbonate as CO3	mg/l			ND	ND	ND	---	ND	ND	ND	ND	2.5	ND
Cation Sum	meq/l			13	14	23	23	27	---	13	18	14	---
Chloride	mg/l	500	S	430	450	**720**	16	**830**	**750**	310	460	300	320
Fluoride	mg/l	2	P	0.12	0.13	0.062	0.065	0.07	---	0.16	0.15	0.14	---
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	---	ND	ND	ND	ND	ND	ND
Iodide	ug/l			710	---	380	480	520	---	22	---	82	---
Nitrate (as NO3)	mg/l	45	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			10	11	9.4	9.1	10	9.5	6.3	8	7.6	8.2
Sodium, Total	mg/l			150	160	230	220	370	300	190	230	150	170
Sulfate	mg/l	500	S	ND	4.1	100	5.4	56	62	150	160	170	160
Total Dissolved Solid (TDS)	mg/l	1000	S	890	**1100**	**1600**	**1700**	**1700**	**1700**	840	**1100**	860	900
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
General Physical Properties													
Apparent Color	ACU	15	S	ND	5	5	5	10	10	10	10	5	10
Hardness (Total, as CaCO3)	mg/l			330	370	650	640	530	---	240	---	370	---
Lab pH	Units			8.1	---	7.9	---	7.5	---	8.1	---	8.3	---
Langelier Index - 25 degree	None			---	---	---	---	---	---	---	---	---	---
Odor	TON	3	S	**17**	1	**17**	1	**200**	1	**4**	1	**17**	1
Specific Conductance	umho/cm	1600	S	1500	1600	**2600**	**2500**	**2900**	**2700**	1500	**2000**	1500	1600
Turbidity	NTU	5	S	0.13	0.15	0.26	0.2	ND	0.3	ND	0.15	0.24	4.8
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Arsenic, Total	ug/l	10	P	ND	ND	ND	1	ND	---	ND	ND	ND	---
Barium, Total	ug/l	1000	P	17	19	13	12	23	---	28	39	100	---
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Chromium, Total	ug/l	50	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Hexavalent Chromium (Cr VI)	ug/l	10	P	ND	---	ND	ND	0.037	0.043	ND	---	0.047	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Iron, Total	mg/l	0.3	S	0.015	0.017	0.047	0.046	ND	ND	0.012	0.016	0.083	0.27
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Magnesium, Total	mg/l			28	31	49	47	38	---	22	35	32	35
Manganese, Total	ug/l	50	S	35	36	22	22	5.3	---	11	16	**83**	---
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Selenium, Total	ug/l	50	P	ND	ND	ND	5.7	ND	---	ND	ND	ND	---
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	---	ND	ND	ND	---
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	---	ND		ND	ND	ND	---
Benzene	ug/l	1	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Chlorobenzene	ug/l	70	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	---	ND	ND	ND	ND	ND	---
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Di-Isopropyl Ether	ug/l			6.2	7.3	19	---	13	20	ND	ND	3.5	---
Ethylbenzene	ug/l	300	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	---	ND	ND	ND	ND	ND	---
Freon 11	ug/l	150	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Freon 113	ug/l	1200	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Methylene Chloride	ug/l	5	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
MTBE	ug/l	13	P	ND	ND	ND	---	ND	ND	3.6	**15**	**26**	---
Styrene	ug/l	100	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	---	ND	ND	ND	ND	ND	---
TBA	ug/l	12	N	**120**	---	**120**	---	**84**	---	**19**	---	**61**	---
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Toluene	ug/l	150	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	---	ND	---	ND	---	ND	---
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	---	ND	ND	ND	ND	ND	---
Xylenes (Total)	ug/l	1750	P	ND	---	ND	---	ND	---	ND	---	ND	---
Others													
1,4-Dioxane	ug/l	1	N	ND	---	ND	ND	ND	---	ND	---	ND	---
Perchlorate	ug/l	6	P	ND	---	ND	ND	ND	---	ND	---	ND	---
Surfactants	mg/l	0.5	S	**0.65**	---	**0.66**	---	**0.51**	---	0.2	---	**0.64**	---
Total Organic Carbon	mg/l			3	1.1	3.9	1.1	4.2	1.2	2.1	0.73	3.8	1.6

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

TABLE 3.2
WEST COAST BASIN WATER QUALITY RESULTS
REGIONAL GROUNDWATER MONITORING - WATER YEAR 2021-2022

Constituents	Units	MCL	MCL Type	Wilmington #2									
				Zone 1		Zone 2		Zone 3		Zone 4		Zone 5	
				3/1/2022	8/9/2022	3/1/2022	8/9/2022	3/1/2022	8/9/2022	3/1/2022	8/9/2022	3/1/2022	8/9/2022
General Minerals													
Alkalinity	mg/l			240	210	430	440	140	140	270	230	160	160
Anion Sum	meq/l			18	20	26	27	16	17	11	10	67	---
Bicarbonate as HCO3	mg/l			290	210	520	390	170	140	330	220	200	160
Boron	mg/l	1	N	0.55	0.57	**1.6**	**1.6**	0.18	0.19	0.64	0.61	0.52	0.51
Bromide	ug/l			1900	2100	4800	5500	3500	3600	1300	1200	6500	6400
Calcium, Total	mg/l			10	12	26	27	88	92	20	18	200	---
Carbon Dioxide	mg/l			ND	---	4.3	---	2.2	---	2.2	---	4.1	---
Carbonate as CO3	mg/l			4.7	8.1	6.7	47	ND	ND	5.4	---	ND	---
Cation Sum	meq/l			16	18	23	25	15	16	10	9.5	62	---
Chloride	mg/l	500	S	480	**550**	**630**	**650**	490	**510**	180	190	**2000**	**2100**
Fluoride	mg/l	2	P	0.53	0.55	0.48	0.44	0.15	0.15	0.72	0.72	0.21	---
Hydroxide as OH, Calculated	mg/l			ND	ND	ND	ND	ND	ND	ND	---	ND	---
Iodide	ug/l			150	---	1600	200	1200	1400	380	---	57	---
Nitrate (as NO3)	mg/l	45	P	ND	ND	3.7	ND	2.7	ND	ND	ND	ND	ND
Nitrate as Nitrogen	mg/l	10	P	ND	ND	0.83	ND	0.6	ND	ND	ND	ND	ND
Nitrite, as Nitrogen	mg/l	1	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Potassium, Total	mg/l			11	10	14	13	10	11	5.7	5.3	19	---
Sodium, Total	mg/l			340	380	460	490	180	190	190	180	1000	---
Sulfate	mg/l	500	S	ND	ND	ND	ND	ND	ND	ND	ND	330	340
Total Dissolved Solid (TDS)	mg/l	1000	S	1000	**1100**	**1400**	**1500**	930	990	600	590	**3800**	**3400**
Nitrate + Nitrite, as Nitrogen	mg/l	10	P	ND	ND	0.83	ND	0.6	ND	ND	ND	ND	---
General Physical Properties													
Apparent Color	ACU	15	S	ND	10	**100**	**20**	10	10	**100**	**20**	15	**20**
Hardness (Total, as CaCO3)	mg/l			59	69	150	150	360	370	85	---	900	---
Lab pH	Units			8.4	---	8.3	---	8.1	---	8.4	---	7.9	---
Langelier Index - 25 degree	None			---	---	---	---	---	---	---	---	---	---
Odor	TON	3	S	ND	1	ND	2	ND	ND	**17**	2	**17**	2
Specific Conductance	umho/cn	1600	S	**1900**	**2100**	**2600**	**2900**	**1800**	**1800**	1100	1100	**6600**	**6800**
Turbidity	NTU	5	S	0.15	0.75	0.11	0.25	0.12	0.1	0.32	0.35	0.2	0.1
Metals													
Aluminum, Total	ug/l	1000	P	ND	ND	ND	ND	ND	ND	ND	---	ND	ND
Antimony, Total	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Arsenic, Total	ug/l	10	P	ND	ND	1.3	3.6	1	ND	ND	---	1.7	---
Barium, Total	ug/l	1000	P	8.4	9.0	42	50	25	27	14	---	64	---
Beryllium, Total	ug/l	4	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Cadmium, Total	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Chromium, Total	ug/l	50	P	ND	ND	1.2	ND	ND	ND	ND	---	ND	---
Hexavalent Chromium (Cr VI)	ug/l	10	P	0.11	0.037	0.16	0.084	ND	ND	0.22	---	ND	ND
Copper, Total	ug/l	1300	P	ND	ND	ND	ND	ND	ND	ND	---	ND	ND
Iron, Total	mg/l	0.3	S	0.018	ND	0.049	0.043	0.039	0.04	0.019	0.019	ND	0.013
Lead, Total	ug/l	15	P	ND	ND	ND	ND	ND	ND	ND	---	ND	ND
Magnesium, Total	mg/l			8.3	9.6	20	21	33	---	8.6	8.1	97	---
Manganese, Total	ug/l	50	S	4.9	5.0	7.4	8.4	14	15	5.5	---	46	43
Mercury	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Nickel, Total	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Selenium, Total	ug/l	50	P	ND	ND	6.7	16	5.3	ND	ND	---	8.5	---
Silver, Total	ug/l	100	S	ND	ND	ND	ND	ND	ND	ND	---	ND	ND
Thallium, Total	ug/l	2	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Zinc, Total	ug/l	5000	S	ND	ND	ND	ND	ND	ND	ND	---	ND	ND
Volatile Organic Compounds													
1,1-Dichloroethane	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
1,1-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
1,2-Dichloroethane	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Benzene	ug/l	1	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Carbon Tetrachloride	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Chlorobenzene	ug/l	70	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Chloromethane (Methyl Chloride)	ug/l			ND	ND	ND	ND	ND	ND	ND	---	ND	---
cis-1,2-Dichloroethylene	ug/l	6	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Di-Isopropyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	---	ND	---
Ethylbenzene	ug/l	300	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Ethyl Tert Butyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	---	ND	---
Freon 11	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Freon 113	ug/l	1200	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Methylene Chloride	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
MTBE	ug/l	13	P	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ug/l	100	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Tert Amyl Methyl Ether	ug/l			ND	ND	ND	ND	ND	ND	ND	---	ND	---
TBA	ug/l	12	N	2	---	ND	3	ND	ND	ND	---	ND	---
Tetrachloroethylene (PCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Toluene	ug/l	150	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Total Trihalomethanes	ug/l	80	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
trans-1,2-Dichloroethylene	ug/l	10	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Trichloroethylene (TCE)	ug/l	5	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Vinyl chloride (VC)	ug/l	0.5	P	ND	ND	ND	ND	ND	ND	ND	---	ND	---
Xylenes (Total)	ug/l	1750	P	ND	---	ND	---	ND	ND	ND	---	ND	---
Others													
1,4-Dioxane	ug/l	1	N	ND	---	ND	ND	ND	ND	ND	---	ND	---
Perchlorate	ug/l	6	P	ND	---	ND	ND	ND	ND	ND	---	ND	
Surfactants	mg/l	0.5	S	ND	---	ND	---	ND	---	ND	---	0.18	---
Total Organic Carbon	mg/l			3.6	1.7	16	4.5	1.8	0.709	7.9	4.9	1.1	0.72

MCL: Maximum Contaminant Level, bold value indicates concentration exceeds MCL. (P) Primary MCL (S) Secondary MCL (N) Notification Level (ND) Not Detected (---) Not Analyzed

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TABLE 3.3
QUALITY OF REPLENISHMENT WATER

Constituent	Units	Regulatory Limit	IMPORTED WATER			RECYCLED WATER								LOCAL WATER
			Treated Blend of Colorado River & State Water Project [A]	Untreated Colorado River [B]	Untreated State Water Project [C]	WBMWD ELWRF [D]	LADWP TIWRP [E]	WRD LVL AWTF [F]	WRD ARC AWTF [G]	SDLAC Pomona WRP [H]	SDLAC San Jose Creek East WRP [H]	SDLAC San Jose Creek West WRP [H]	SDLAC Whittier Narrows WRP [H]	Stormwater [I]
			2021	2021	2021	2021	2021	2022	2022	2021-2022	2021-2022	2021-2022	2021-2022	2020-2021
Arsenic	µg/L	MCL = 10	ND/ ND	2.1	2.0	0.16	1.2	ND	ND	0.88	1.3	ND	ND	NA
Chloride	mg/L	SMCL = 500	99 [J] / 72 [J]	94 [J]	64 [J]	11.3	135 [K]	48	7.4	141	156	131	119	NA
Hexavalent Chromium	µg/L	MCL = 10	ND / ND	ND	ND	0.30	ND	0.37	0.06	0.16	0.22	0.15	0.11	NA
Iron	µg/L	SMCL = 300	ND / ND	ND	ND	4.8	8.1	ND	0.02	24.3	40	32	35.7	NA
Manganese	µg/L	SMCL = 50	ND / ND	ND	ND	0.13	3.0	2.8	0.81	4.2	5.9	18.1	3.5	NA
Nitrate (as N)	mg/L	MCL = 10	ND / ND	ND	ND	0.29	1.0	2.4	0.59	6.3	5.1	5.9	6.3	NA
Perchlorate	µg/L	MCL = 6	ND / ND	ND	ND	ND	ND	ND	ND	0.44	0.28	0.40	0.27	NA
Tetrachloroethylene (PCE)	µg/L	MCL = 5	ND / ND	ND	ND	ND	ND	ND	ND	ND	ND	0.40	ND	NA
Trichloroethylene (TCE)	µg/L	MCL = 5	ND / ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Total Dissolved Solids (TDS)	mg/L	SMCL = 1,000	598 [J] / 326 [J]	583 [J]	274 [J]	108	394 [K]	157	70	609	691	620	624	NA
Alkalinity	mg/L	None	125 [J] / 87 [J]	132 [J]	79 [J]	58	NA	NA	NA	156	177	180	165	NA
Boron	µg/L	NL = 1,000	130/180	130	190	230	556 [K]	300	250	320	360	360	300	NA
Chromium, Total	µg/L	MCL = 50	ND / ND	ND	ND	0.31	0.32	ND	ND	1.6	0.82	1.0	0.88	NA
Copper, Total	µg/L	SMCL = 1,000	ND / ND	ND	ND	10.7	3.6	ND	ND	3.8	3.6	4.7	3.4	14
1,4-Dioxane	µg/L	NL = 1	NA	NA	NA	0.02	ND	0.17	ND	0.84	1.0	0.76	0.78	NA
Hardness	mg/L	None	275 [J] / 112 [J]	274 [J]	85 [J]	69	106	44	32	218	226	220	225	578
Lead, Total	µg/L	AL = 15	ND / ND	ND	ND	0.08	0.18	NA	ND	0.22	0.16	0.02	0.17	4.2
Methyl tertiary butyl ether (MTBE)	µg/L	SMCL = 5	ND / ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA
Nitrite (as N)	mg/L	MCL = 1	ND / ND	ND	ND	0.07	0.004	0.30	ND	0.10	ND	0.14	0.16	NA
n-Nitrosodimethylamine (NDMA)	ng/L	NL = 10	ND / 2.6	NA	NA	5.6	1.1	0.70	ND	36	62	18	7.0	NA
pH	pH Units	None	8.1 / 8.4	8.3	8.6	7.4	8.0	8.6	7.7	7.4	7.4	7.2	7.4	NA
Selenium	µg/L	MCL = 50	ND / ND	ND	ND	ND	0.33	ND	ND	ND	ND	ND	ND	NA
Specific Conductance	µS/cm	SMCL = 1,600	969 [J] / 564 [J]	940 [J]	480 [J]	56	541	303	38	816	974	850	875	NA
Sulfate	mg/L	SMCL = 500	216 [J] / 71 [J]	208 [J]	54 [J]	5.4	28.3 [K]	0.57	3.4	84	123	109	128	NA
Total Organic Carbon (TOC)	mg/L	None [L]	2.8 / 2.0	2.96 [J]	2.76 [J]	0.35	0.32	0.37	0.16	6.7	6.2	6.1	5.7	NA
Turbidity	NTU	SMCL = 5	0.04 [J] / 0.04 [J]	2.6 [J]	1.33 [J]	0.04	0.04	0.17	0.03	0.20	0.50	0.50	0.10	NA

See footnotes on following page.

TABLE 3.3
QUALITY OF REPLENISHMENT WATER

Notes:

A = Used at the seawater intrusion barriers: generally, Diemer Plant effluent / Jensen Plant effluent (Data Source #1).

B = Used at the Montebello Forebay spreading grounds (Lake Mathews) (Data Source #1).

C = Used at the Montebello Forebay spreading grounds (Silverwood Lake) (Data Source #1).

D = Effluent of Edward C. Little Water Recycling Facility (ELWRF) before blending with treated water from Colorado River/State Water Project; used at the West Coast Basin Seawater Intrusion Barrier (Data Source #4).

E = Effluent of Terminal Island Water Reclamation Plant/Advanced Water Treatment Facilities (TIWRP) before blending with treated water from Colorado River/State Water Project; used at the Dominguez Gap Seawater Intrusion Barrier. Estimated values used where reported as "detected, but not quantified" [DNQ] (Data Source #6).

F = Effluent of Leo J. Vander Lans Advanced Water Treatment Facility (LVL AWTF) before blending with treated water from Colorado River/State Water Project; used at the Alamitos Gap Seawater Intrusion Barrier (Data Source #7).

G = Effluent of Albert Robles Center for Water Recycling and Environmental Learning Advanced Water Treatment Facility (ARC AWTF); used at the Montebello Forebay spreading grounds (Data Source #8).

H = Effluent of water reclamation plants (WRPs); used at the Montebello Forebay spreading grounds (Data Source #3).

I = Average concentration of water samples collected from LACDPW San Gabriel River Monitoring Station S14 from July 2020 through June 2021 (four storm events total) (Data Source #5).

J = Average concentration for Water Year October 2021 through September 2022 (Data Source #2).

K = Average concentration in blended water (treatment plant effluent & treated water from Colorado River/State Water Project), which is delivered to the Dominguez Gap Seawater Intrusion Barrier (Data Source #6).

L = California's 2014 Groundwater Replenishment Using Recycled Water Regulations specify the following TOC limits for groundwater replenishment projects:

- For surface spreading (surface application), TOC limit = 0.5 mg/L divided by the 120-month running monthly average recycled water contribution (e.g., the TOC limit for a 100% recycled water project would be 0.5 mg/L.) For compliance determination, TOC may be monitored in one of the following: 1) undiluted recycled municipal wastewater prior to application or within the zone of percolation; 2) diluted percolated recycled municipal wastewater, with the value amended to negate the effect of the diluent water; or 3) undiluted recycled municipal wastewater prior to application, with the value amended using a soil-aquifer treatment factor approved by the Division of Drinking Water.
- For injection (subsurface application), TOC limit = 0.5 mg/L. For compliance determination, TOC is monitored in the applied recycled municipal wastewater.

NA = Not Available/Analyzed
ND = Not Detected
NS = Not sampled due to plant shutdown
mg/L = milligrams per liter
µg/L = micrograms per liter
µS/cm = microSiemen per centimeter

NTU = Nephelometric Turbidity Units
MCL = Maximum Contaminant Level
SMCL = Secondary Maximum Contaminant Level
AL = Action Level
NL = Notification Level
WRP = Water Reclamation Plant

LACDPW = Los Angeles County Department of Public Works
LADWP = Los Angeles Department of Water and Power
MWD = Metropolitan Water District of Southern California
SDLAC = County Sanitation Districts of Los Angeles County
WBMWD = West Basin Municipal Water District
WRD = Water Replenishment District of Southern California

Sources of Data:

(1) 2021 Water Quality Report to MWD Member Agencies (Metropolitan Water District of Southern California, March 2022)

(2) Table D, Monthly Analyses of the District Water Supplies (Metropolitan Water District of Southern California, October 2021 - September 2022)

(3) October 2021 - September 2022 Annual Monitoring Report, Montebello Forebay Groundwater Recharge (County Sanitation Districts of Los Angeles County [SDLAC], December 15, 2022)

(4) Annual West Coast Basin Barrier Project Monitoring Report for 2021, Edward C. Little Water Recycling Facility (West Basin Municipal Water District [WBMWD], March 31, 2022)

(5) Annual stormwater monitoring data provided by Los Angeles County (Los Angeles County Department of Public Works [LACDPW])

(6) Annual Monitoring Report - January-December 2021, Harbor Water Recycling/Dominguez Gap Barrier Project (City of Los Angeles, Bureau of Sanitation)

(7) 2022 Preliminary Annual Summary Data for Alamitos Barrier Recycled Water Project, Leo J. Vander Lans Water Treatment Facility.

(8) 2022 Preliminary Annual Summary Data for Albert Robles Center for Water Recycling and Environmental Learning Advanced Water Treatment Facility (ARC-AWTF).

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TABLE 3.4
MAJOR MINERAL WATER QUALITY GROUPS

NESTED MONITORING WELL LOCATIONS	GROUP A ZONES Generally Calcium Bicarbonate or Calcium Bicarbonate/Sulfate Dominant	GROUP B ZONES Generally Calcium-Sodium-Bicarbonate or Sodium-Bicarbonate Dominant	GROUP C ZONES Generally Sodium-Chloride Dominant	GROUP D ZONES Generally Different Than Groups A, B, and C
CENTRAL BASIN				
Bell #1	2, 3, 4, 5, 6	1		
Bell Gardens #1	1, 2, 3, 4, 5, 6			
Cerritos #1	4, 5, 6	1, 2, 3		
Cerritos #2	1, 2, 3, 4, 5, 6			
Cerritos #3		1, 2, 4, 5, 6		3, 7
Commerce #1	3, 4, 5, 6		1	2
Compton #1	2, 3, 4, 5	1		
Compton #2	2, 3, 4, 5	1		6
Downey #1	1, 2, 3, 4, 5, 6			
Huntington Park #1	1, 2, 3, 4			
Inglewood #2		1, 2, 3		
Lakewood #1	2, 3, 4, 5, 6	1		
Lakewood #2		1, 2, 3, 4, 5, 6, 7, 8		
La Mirada #1	4, 5	1, 2, 3		
Long Beach #1	4	1, 2, 3, 5		6
Long Beach #2	4, 5, 6	1, 2, 3		
Long Beach #6	6	1, 2, 3, 4, 5		
Los Angeles #1	1, 2, 3, 4, 5			
Los Angeles #2	2, 3, 4			
Los Angeles #3	2, 3, 4, 5, 6	1		
Los Angeles #4	3, 4, 5, 6	1, 2		
Los Angeles #5			1, 2	3, 4, 5, 6
Los Angeles #6		2	1, 3	4
Lynwood #1	3, 4, 5, 6, 7, 8, 9	1, 2		
Montebello #1	3, 4, 5	2		1
Montebello #2		1		2, 3, 4, 5
Norwalk #1	4, 5	1, 2, 3		
Norwalk #2	3, 4, 5, 6	1, 2		
Paramount #1				1, 2, 3, 4, 5, 6, 7
Pico #1	2, 3, 4	1		
Pico #2	1, 2, 3, 4, 5, 6			
Rio Hondo #1	1, 2, 3, 4, 5, 6			
Seal Beach #1	6	1, 2, 3, 4, 5		7
South Gate #1	1, 2, 3, 4, 5			
Willowbrook #1	2, 3, 4	1		
Whittier #1	3, 4, 5		1, 2	
Whittier #2	1, 3, 4, 5, 6	2		
Whittier Narrows #1	3, 4, 5, 6, 7, 8, 9	2	1	
WEST COAST BASIN				
Carson #1	3, 4	1, 2		
Carson #2	1, 2, 3, 4, 5			
Carson #3	5, 6	1, 2, 3, 4		
Chandler #3	2	1		
Gardena #1	2, 3	1	4	
Gardena #2	2, 3, 4, 5	1		
Hawthorne #1	5, 6	1, 2, 3, 4		
Inglewood #1	3, 4, 5			1
Inglewood #3		1, 2, 3, 4, 5	6, 7	
Lawndale #1	4, 5	1, 2, 3		6
Lomita #1	2, 3, 4, 5			1
Long Beach #3		1, 2, 3	4, 5	
Long Beach #8		1, 2, 3	6	4, 5
Manhattan Beach #1		3	5,6	7
PM-2 Police Station			1,2,4	3
PM-3 Madrid	3, 4	1, 2		
PM-4 Mariner	4	1	2	3
PM-5 Columbia Park	6	1, 2, 3, 4	5	
PM-6 Madrona Marsh	6	2, 4	3, 5	1
Westchester #1		1, 2, 3, 4, 5		
Wilmington #1			1, 2, 3, 4, 5	
Wilmington #2		1	2, 3, 4, 5	

Note - Values shown above represent the various zones at each nested well location classified by major mineral water quality group.

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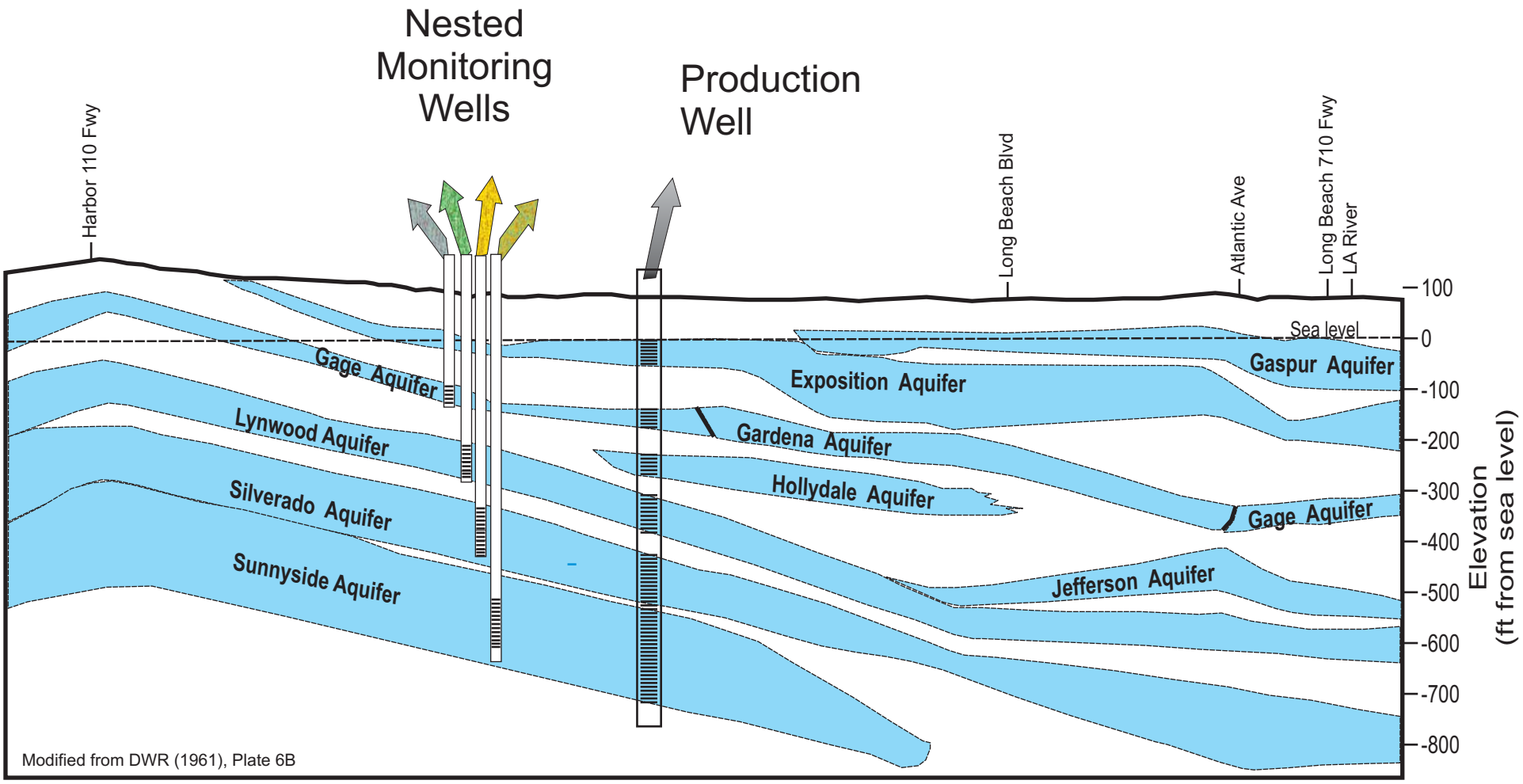
FIGURES

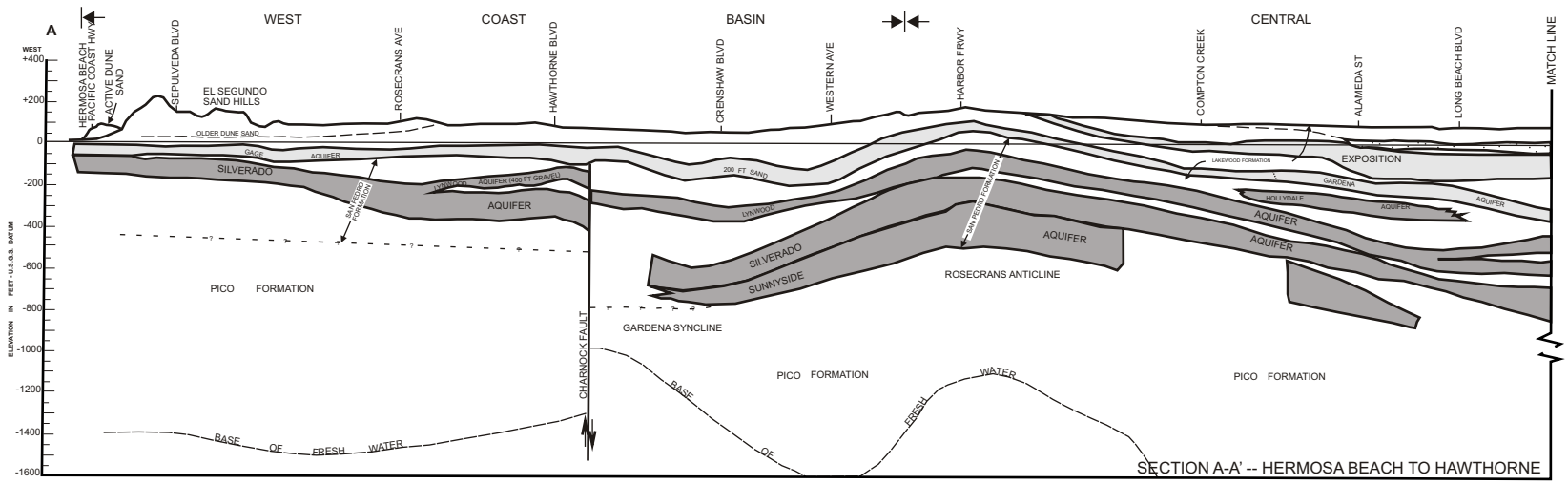

Figure 1.1
Water Replenishment District Service Area
4040 Paramount Blvd
Lakewood, CA 90712
(562) 275-4300
www.wrd.org
WRD
WATER REPLENISHMENT DISTRICT
Los Angeles Forebay
Montebello Forebay
Whittier Area
Central
West
Coast
Basin
Basin
Non-Pressure Area
Non-Pressure Area
Pressure Area
Inglewood
Charnock Fault
Newport
Ballona Creek
Marina del Rey
Pacific Ocean
Dominguez Channel
Compton Creek
Los Angeles River
San Gabriel River
Rio Hondo
Arroyo Seco
Alhambra Wash
Eaton Wash
Big Dalton Wash
Walnut Creek
San Gabriel River
San Jose Creek
Mirada Creek
La Canada Verde Creek
Brea Creek
Carbon Creek
Uplift
Long Beach Harbor
Los Angeles Harbor
San Pedro Bay
Dominguez Gap Barrier Project
West Coast Barrier Project
Alamitos Gap Barrier Project
Rio Hondo Coastal Spreading Grounds
San Gabriel Coastal Spreading Grounds
Dominguez Gap Spreading Grounds
Elysian Hills
Repetto Hills
Merced Hills
Baldwin Hills
Dominguez Hills
Signal Hills
Palos Verdes Hills
Puente Hills
Bixby Ranch Hill
Landing Hill
SANTA MONICA
BEVERLY HILLS
WEST HOLLYWOOD
CULVER CITY
LOS ANGELES
INGLEWOOD
HAWTHORNE
GARDENA
EL SEGUNDO
MANHATTAN BEACH
HERMOSA BEACH
REDONDO BEACH
TORRANCE
LAWNDALE
CARSON
LOMITA
PALOS VERDES ESTATES
ROLLING HILLS ESTATES
RANCHO PALOS VERDES
ALHAMBRA
ROSEMEAD
EL MONTE
IRWINDALE
WEST COVINA
MONTEREY PARK
SOUTH EL MONTE
LA PUENTE
WALNUT
MONTEBELLO
COMMERCE
VERNON
HUNTINGTON PARK
MAYWOOD
BELL
CUDAHY
BELL GARDENS
PICO RIVERA
WHITTIER
LA HABRA HEIGHTS
CITY OF INDUSTRY
DIAMOND BAR
SOUTH GATE
LYNWOOD
DOWNEY
SANTA FE SPRINGS
NORWALK
PARAMOUNT
COMPTON
BELLFLOWER
ARTESIA
CERRITOS
LA MIRADA
BUENA PARK
LAKEWOOD
LA PALMA
HAWAIIAN GARDENS
CYPRESS
LONG BEACH
SIGNAL HILL
STANTON
LOS ALAMITOS
WESTMINSTER
SEAL BEACH
HUNTINGTON BEACH
COSTA MESA
Olympic Blvd
Jefferson Blvd
Venice Blvd
Wilshire Blvd
Sepulveda Blvd
Vernon Ave
Slauson Ave
Whittier Blvd
Telegraph Rd
Imperial Hwy
Manchester Blvd
Rosecrans Ave
El Segundo Blvd
Del Amo Blvd
Torrance Blvd
Sepulveda Blvd
Pacific Coast Hwy
Ocean Blvd
Willow St
Tesia Blvd
Firestone Blvd
Mulberry Dr
Carmenita Rd
Pioneer Blvd
Lakewood Blvd
Long Beach Blvd
Cherry Ave
Atlantic Ave
Alameda St
Crenshaw Blvd
La Brea Ave
Hawthorne Blvd
Western Ave
Vermont Ave
Rosemead Blvd
La Mirada Blvd
Garfield Ave
0 1 2 3 4 5
Miles
N

FIGURE 1.2
NESTED WELLS vs. PRODUCTION WELLS
FOR AQUIFER-SPECIFIC DATA

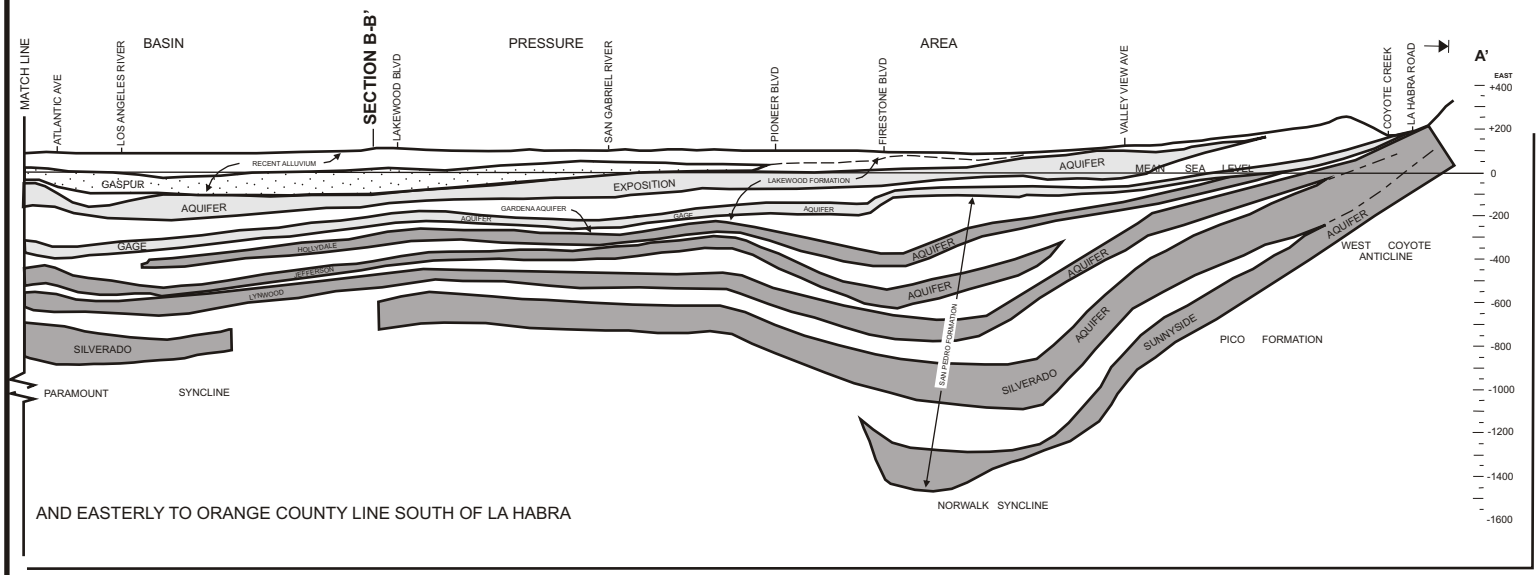


Production wells are typically perforated across multiple aquifers producing an average water quality. Nested monitoring wells are screened in a portion of a specific aquifer, providing water quality and water level information for the specific zone.


LosAngeles 6
LosAngeles 5
Los Angeles 3
Los Angeles 2
Commerce 1
Montebello 2
Whittier Narrows 1
Whittier Narrows 2
Montebello 1
Los Angeles 1
Huntington Park 1
Bell 1
LADWP MW-01
Rio Hondo 1
Pico 1
Pico 2
Whittier 2
Inglewood 1
Los Angeles 4
Bell Gardens 1
Hawkins 1
Westchester 1
SouthGate 2
South Gate 1
Norwalk 2
Whittier 1
Inglewood 3
Lynwood 1
Koontz 1
La Habra Heights 1
Hawthorne 1
Willowbrook 1
Downey 1
Norwalk 1
Gardena 1
Compton 2
Compton 1
Paramount 1
Cerritos 2
Cerritos 3
La Mirada 1
Lawndale 1
Manhattan Beach 1
Gardena 2
PM-5 Columbia Park
Carson 3
Lakewood 1
Cerritos 1
PM-4 Mariner
PM-2 Police Station 2
PM-3 Madrid
Carson 1
Long Beach 2
Lakewood 2
Sepulveda 1
PM-6 Madrona Marsh
Carson 2
Long Beach 3
Long Beach 6
Lomita 1
Wilmington 1
Long Beach 7
Long Beach 1
Chandler 3
Wilmington 2
Long Beach 8
Long Beach 4
Seal Beach 1
A
A'
B
B'
Marina del Rey
Ballona Creek
Pacific Ocean
Newport
Charnock
Fault
Dominguez
Inglewood
Channel
Compton Creek
Los Angeles River
Rio Hondo
Arroyo Seco
Alhambra Wash
Eaton Wash
Big Dalton Wash
Walnut Creek
San Gabriel River
San Jose Creek
La Mirada Creek
La Canada Verdugo
Brea Creek
Carbon Creek
Uplift
101
5
10
405
110
105
710
91
605
60
57
22
2
N
0 1 2 3 4 5
Miles
WRD
WATER REPLENISHMENT DISTRICT
Figure 1.3
Monitoring Well Locations
Legend
WRD Key Nested Monitoring Well*
WRD Nested Monitoring Well
Other Monitoring Well with Groundwater Elevation (feet mean sea level)
A A' Location of Cross Section (Figure 1.4)
B B' Location of Cross Section (Figure 1.5)
*WRD Key Monitoring Wells used for Hydrograph Figures (Section 2) and for Salt and Nutrient Monitoring (Section 4).
Central Basin Sub-Area Boundary
Seawater Intrusion Barrier
WRD Service Area Boundary
(See Figure 1.1 for Detail)



SECTION A-A' -- HERMOSA BEACH TO HAWTHORNE



AND EASTERLY TO ORANGE COUNTY LINE SOUTH OF LA HABRA

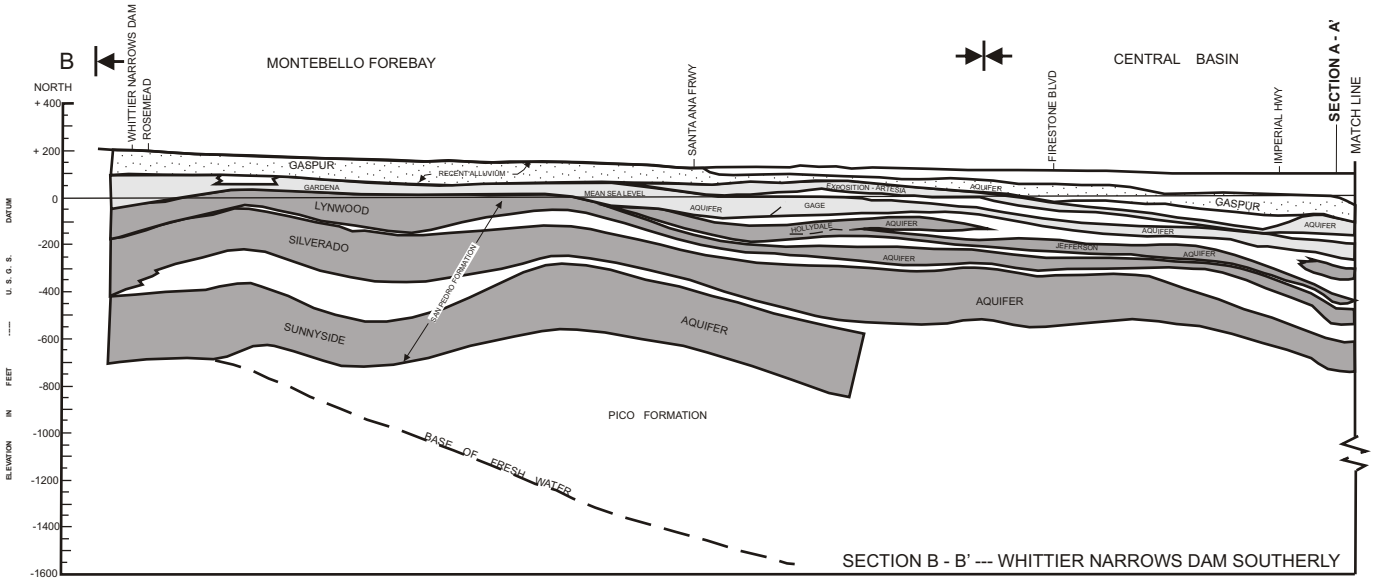
LEGEND

- AQUICLUDES AND DEEPER UNDIFFERENTIATED FORMATIONS
- AQUIFERS IN RECENT ALLUVIUM (INCLUDES THE GASPUR AND BALLONA AQUIFERS)
- AQUIFERS IN LAKEWOOD FORMATION (INCLUDES THE ARTESIA, EXPOSITION, GAGE, AND GARDENA AQUIFERS)
- AQUIFERS IN THE SAN PEDRO FORMATION (INCLUDES THE HOLLYDALE, JEFFERSON, LYNWOOD, SILVERADO AND SUNNYSIDE AQUIFERS)

IDEALIZED GEOLOGIC CROSS SECTION AA'

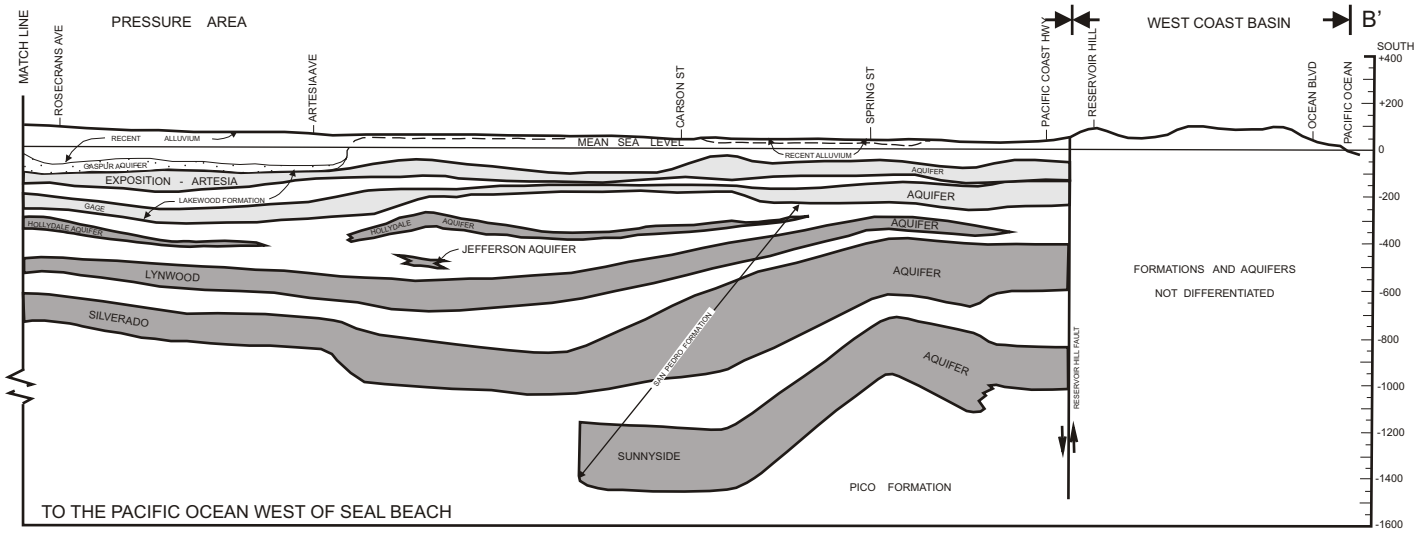
Adapted from
CDWR Bull. 104 App. B

FIGURE 1.4



LEGEND

- AQUICLUDES AND DEEPER UNDIFFERENTIATED FORMATIONS
- AQUIFERS IN RECENT ALLUVIUM (INCLUDES THE GASPUR AND BALLONA AQUIFERS)
- AQUIFERS IN LAKEWOOD FORMATION (INCLUDES THE ARTESIA, EXPOSITION, GAGE, AND GARDENA AQUIFERS)
- AQUIFERS IN THE SAN PEDRO FORMATIO (INCLUDES THE HOLLYDALE, JEFFERSON, LYNWOOD, SILVERADO AND SUNNYSIDE AQUIFERS)



IDEALIZED GEOLOGIC CROSS SECTION BB'

Adapted from
CDWR Bull. 104 App. B

FIGURE 1.5

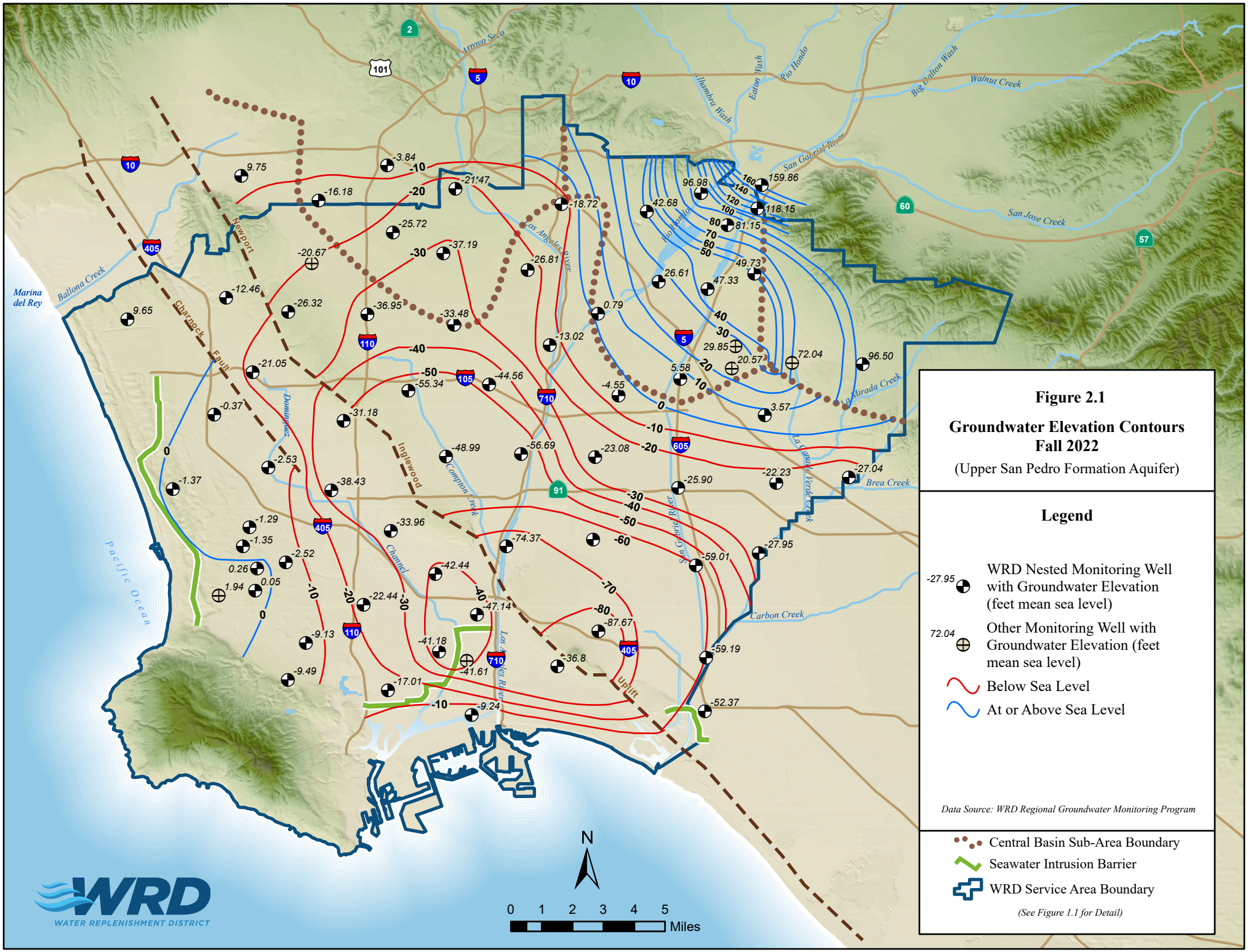


Figure 2.1
Groundwater Elevation Contours
Fall 2022
(Upper San Pedro Formation Aquifer)
Legend
-27.95 WRD Nested Monitoring Well with Groundwater Elevation (feet mean sea level)
72.04 Other Monitoring Well with Groundwater Elevation (feet mean sea level)
Below Sea Level
At or Above Sea Level
Data Source: WRD Regional Groundwater Monitoring Program
Central Basin Sub-Area Boundary
Seawater Intrusion Barrier
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 Miles
WRD
WATER REPLENISHMENT DISTRICT
Pacific Ocean
Marina del Rey
Ballona Creek
Newport
Charnock Fault
Inglewood
Dominguez
Compton Creek
Los Angeles River
Uplift
San Gabriel River
La Mirada Creek
La Canada Verdugo Creek
Brea Creek
Carbon Creek
San Jose Creek
Walnut Creek
Big Dalton Wash
Eaton Wash
Rio Hondo
Alhambra Wash
Arroyo Seco
Los Angeles River
Channel

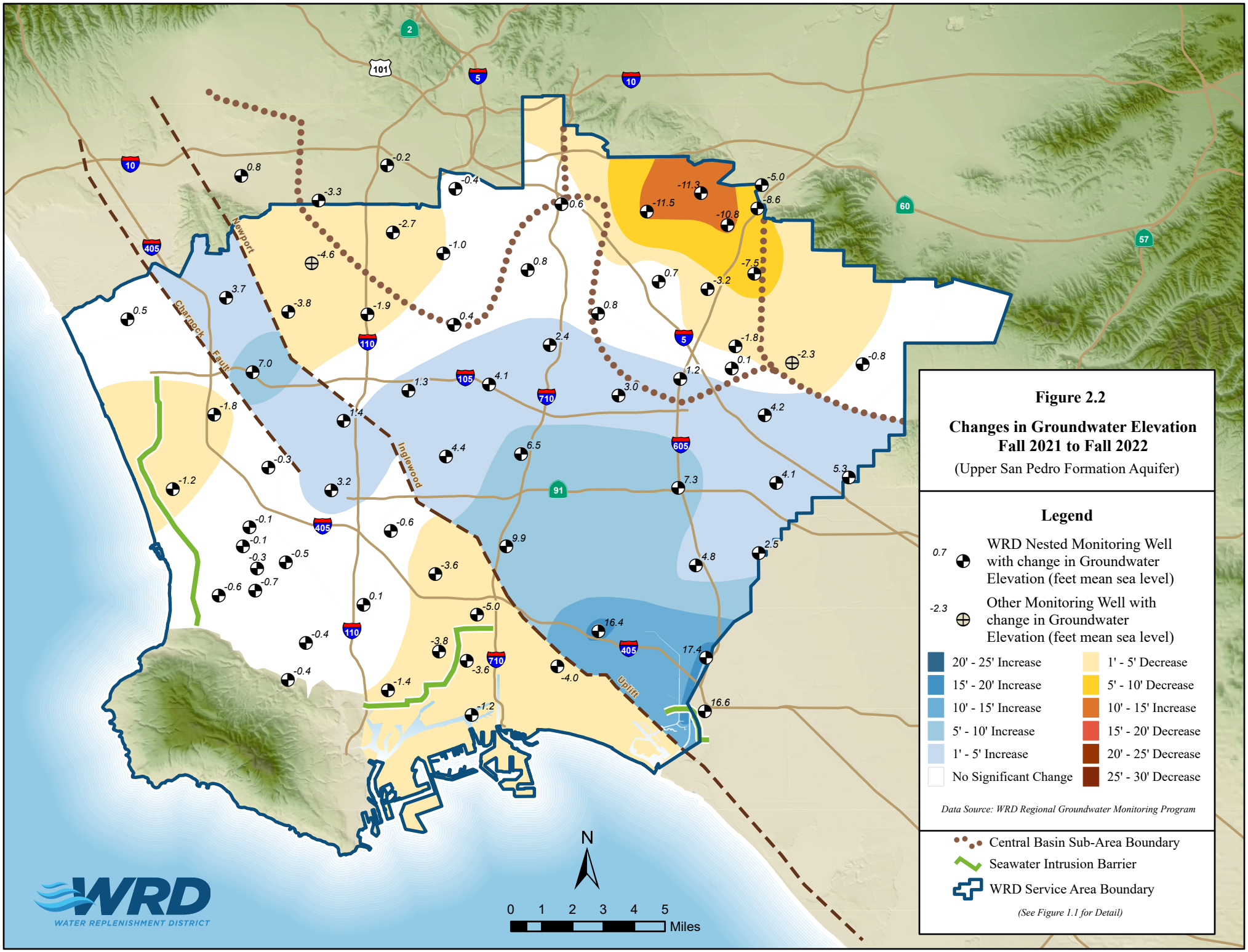


Figure 2.2
Changes in Groundwater Elevation
Fall 2021 to Fall 2022
(Upper San Pedro Formation Aquifer)
Legend
0.7 WRD Nested Monitoring Well with change in Groundwater Elevation (feet mean sea level)
-2.3 Other Monitoring Well with change in Groundwater Elevation (feet mean sea level)
20' - 25' Increase
15' - 20' Increase
10' - 15' Increase
5' - 10' Increase
1' - 5' Increase
No Significant Change
1' - 5' Decrease
5' - 10' Decrease
10' - 15' Increase
15' - 20' Decrease
20' - 25' Decrease
25' - 30' Decrease
Data Source: WRD Regional Groundwater Monitoring Program
Central Basin Sub-Area Boundary
Seawater Intrusion Barrier
WRD Service Area Boundary
(See Figure 1.1 for Detail)
Newport
Charnock Fault
Inglewood
Uplift
N
0 1 2 3 4 5
Miles
WRD
WATER REPLENISHMENT DISTRICT

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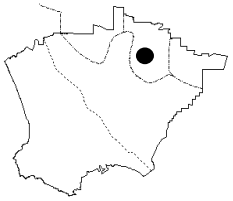
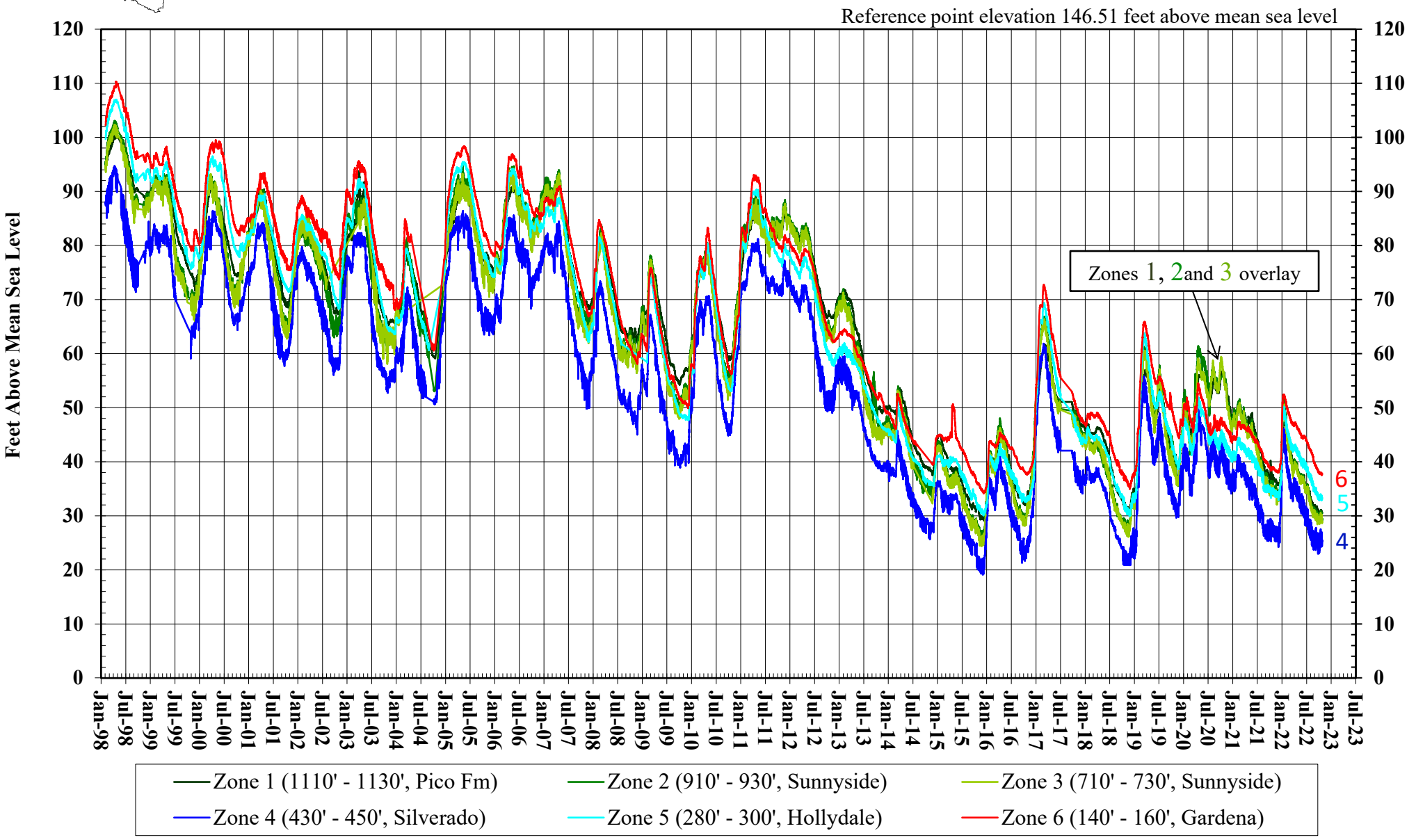


FIGURE 2.3
WATER LEVELS IN WRD KEY NESTED MONITORING WELL RIO HONDO #1



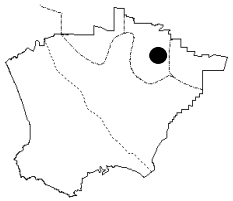
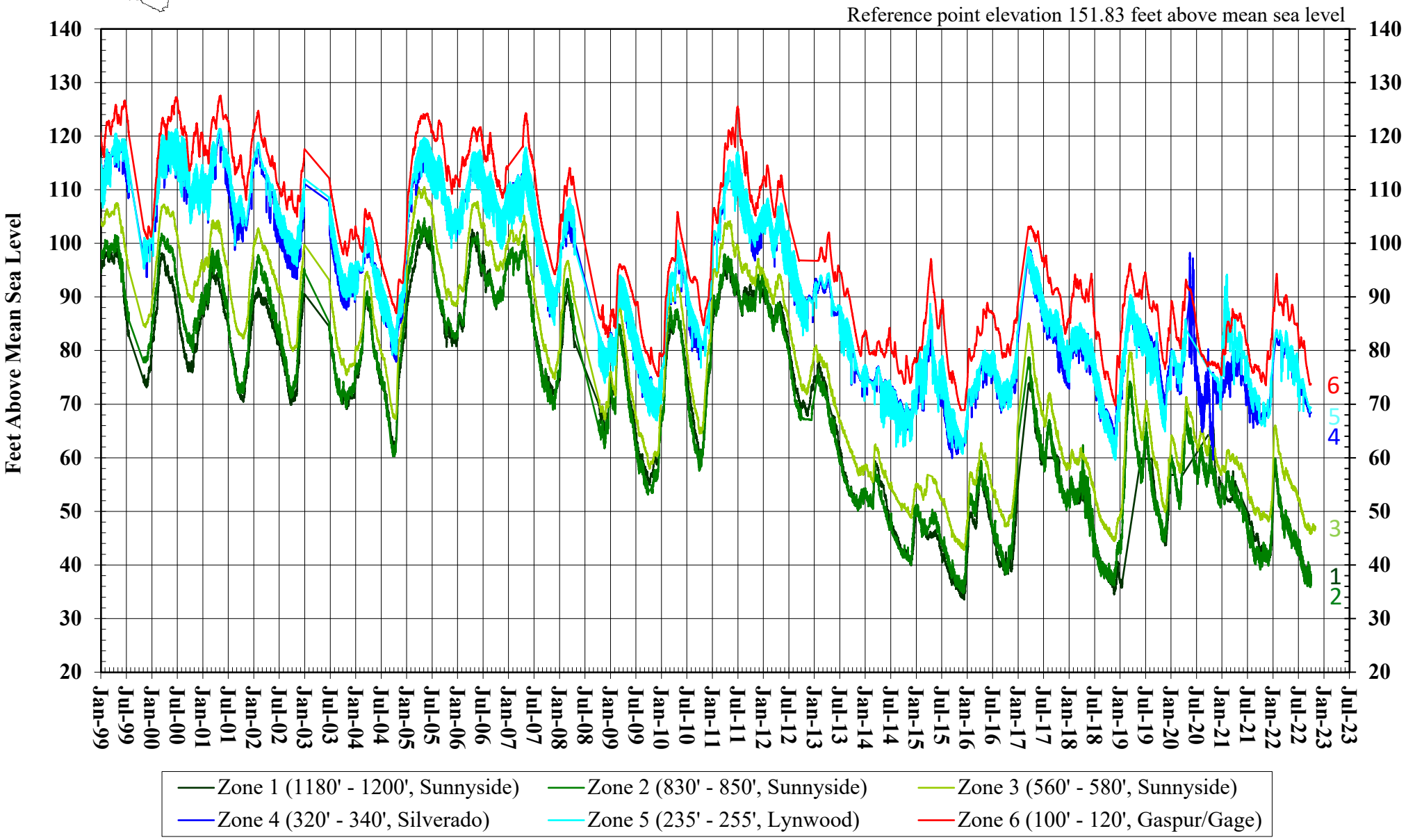


FIGURE 2.4
WATER LEVELS IN WRD KEY NESTED MONITORING WELL PICO #2



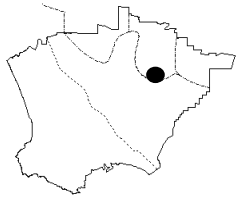


FIGURE 2.5
WATER LEVELS IN WRD KEY NESTED MONITORING WELL NORWALK #2

Reference point elevation 116.73 feet above mean sea level

Feet Above Mean Sea Level

80 70 60 50 40 30 20 10 0 -10 -20 -30

Jan-05 Jul-05 Jan-06 Jul-06 Jan-07 Jul-07 Jan-08 Jul-08 Jan-09 Jul-09 Jan-10 Jul-10 Jan-11 Jul-11 Jan-12 Jul-12 Jan-13 Jul-13 Jan-14 Jul-14 Jan-15 Jul-15 Jan-16 Jul-16 Jan-17 Jul-17 Jan-18 Jul-18 Jan-19 Jul-19 Jan-20 Jul-20 Jan-21 Jul-21 Jan-22 Jul-22 Jan-23 Jul-23

6
5
4
3

Zones 1 and 2 overlay

Zone 1 (1460 - 1480', Pico Fm)
Zone 2 (1260 - 1280', Pico Fm)
Zone 3 (960 - 980', Sunnyside)
Zone 4 (800 - 820', Sunnyside)
Zone 5 (480 - 500', Silverado)
Zone 6 (236 - 256', Gardena)

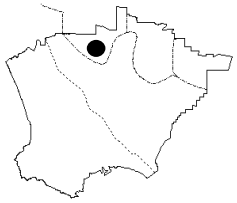
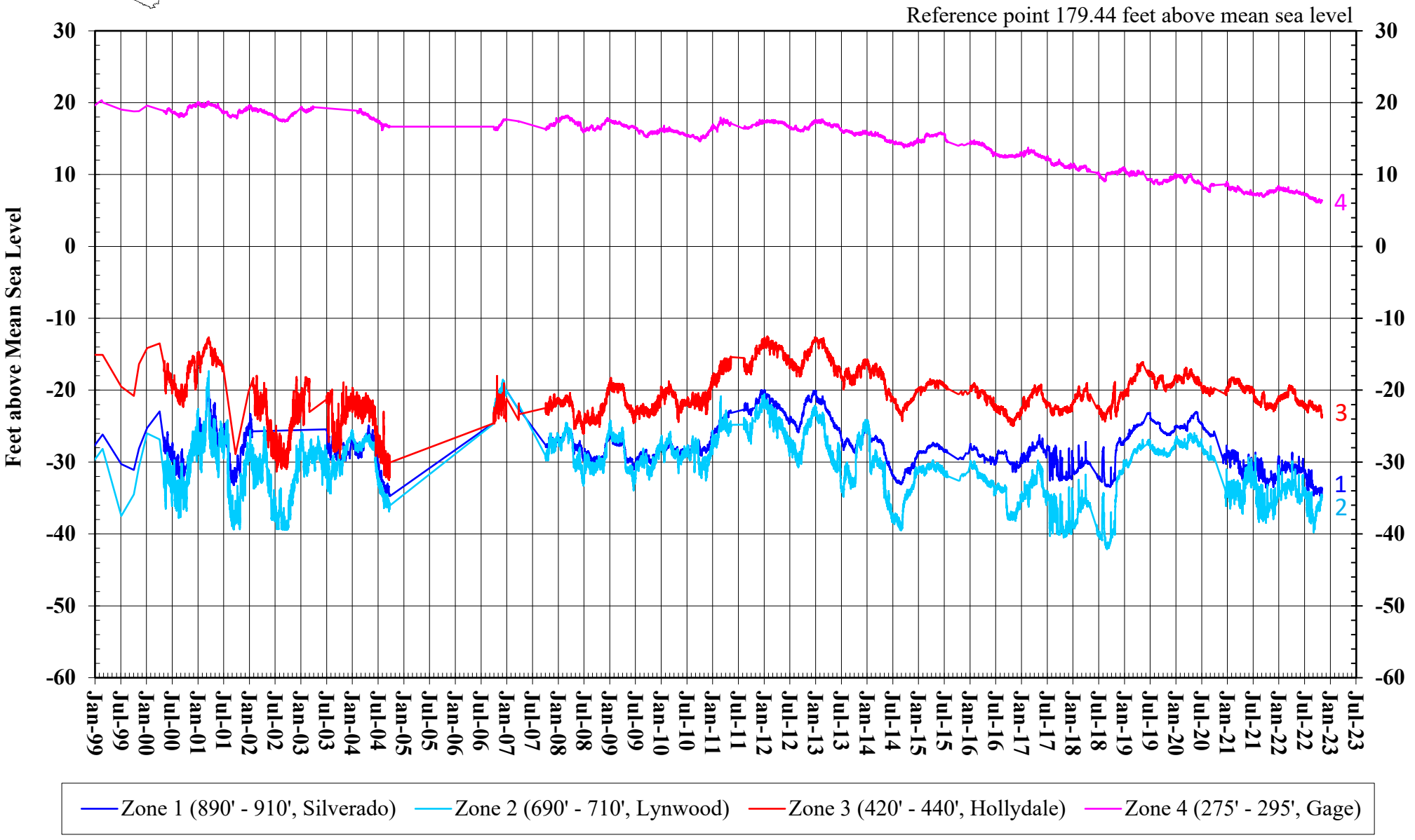


FIGURE 2.6
WATER LEVELS IN WRD KEY NESTED MONITORING WELL HUNTINGTON PARK #1



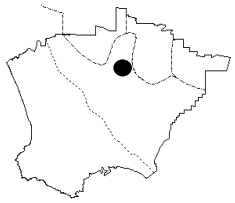


FIGURE 2.7
WATER LEVELS IN WRD KEY NESTED MONITORING WELL SOUTH GATE #1

Reference point elevation 102.50 feet above mean sea level

Feet Above Mean Sea Level

60 50 40 30 20 10 0 -10 -20 -30 -40

Jan-99 Jul-99 Jan-00 Jul-00 Jan-01 Jul-01 Jan-02 Jul-02 Jan-03 Jul-03 Jan-04 Jul-04 Jan-05 Jul-05 Jan-06 Jul-06 Jan-07 Jul-07 Jan-08 Jul-08 Jan-09 Jul-09 Jan-10 Jul-10 Jan-11 Jul-11 Jan-12 Jul-12 Jan-13 Jul-13 Jan-14 Jul-14 Jan-15 Jul-15 Jan-16 Jul-16 Jan-17 Jul-17 Jan-18 Jul-18 Jan-19 Jul-19 Jan-20 Jul-20 Jan-21 Jul-21 Jan-22 Jul-22 Jan-23 Jul-23

5 3 4 2 1

Zone 1 (1440' - 1460', Sunnyside)
Zone 2 (1320' - 1340', Sunnyside)
Zone 3 (910' - 930', Silverado)
Zone 4 (565' - 585', Lynwood)
Zone 5 (220' - 240', Exposition)

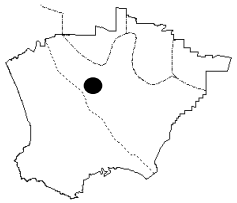
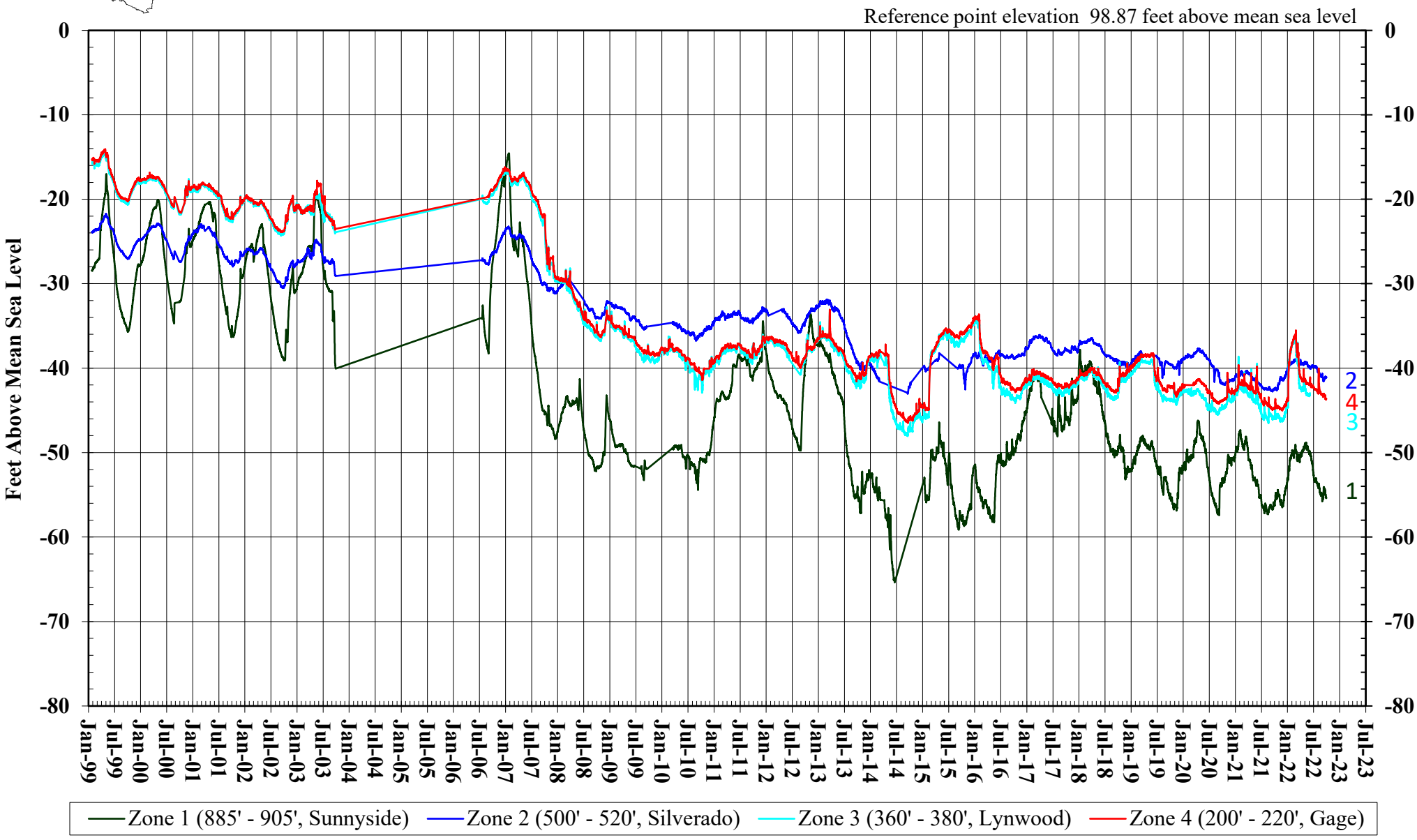


FIGURE 2.8
WATER LEVELS IN WRD KEY NESTED MONITORING WELL WILLOWBROOK #1



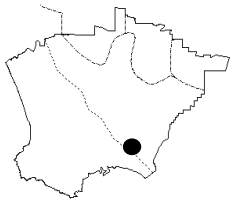


FIGURE 2.9
WATER LEVELS IN WRD KEY NESTED MONITORING WELL LONG BEACH #6

Reference point 34.47 feet above mean sea level

Feet above Mean Sea Level

20 10 0 -10 -20 -30 -40 -50 -60 -70 -80 -90 -100 -110 -120 -130 -140

Jan-02 Jul-02 Jan-03 Jul-03 Jan-04 Jul-04 Jan-05 Jul-05 Jan-06 Jul-06 Jan-07 Jul-07 Jan-08 Jul-08 Jan-09 Jul-09 Jan-10 Jul-10 Jan-11 Jul-11 Jan-12 Jul-12 Jan-13 Jul-13 Jan-14 Jul-14 Jan-15 Jul-15 Jan-16 Jul-16 Jan-17 Jul-17 Jan-18 Jul-18 Jan-19 Jul-19 Jan-20 Jul-20 Jan-21 Jul-21 Jan-22 Jul-22 Jan-23 Jul-23

6
1
2
3

Zones 4 and 5 overlay

Zone 1 (1490' - 1510', Pico Formation)
Zone 2 (930' - 950', Sunnyside)
Zone 3 (740' - 760', Sunnyside)
Zone 4 (480' - 500', Silverado)
Zone 5 (380' - 400', Lynwood)
Zone 6 (220' - 240', Gage)

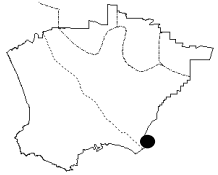
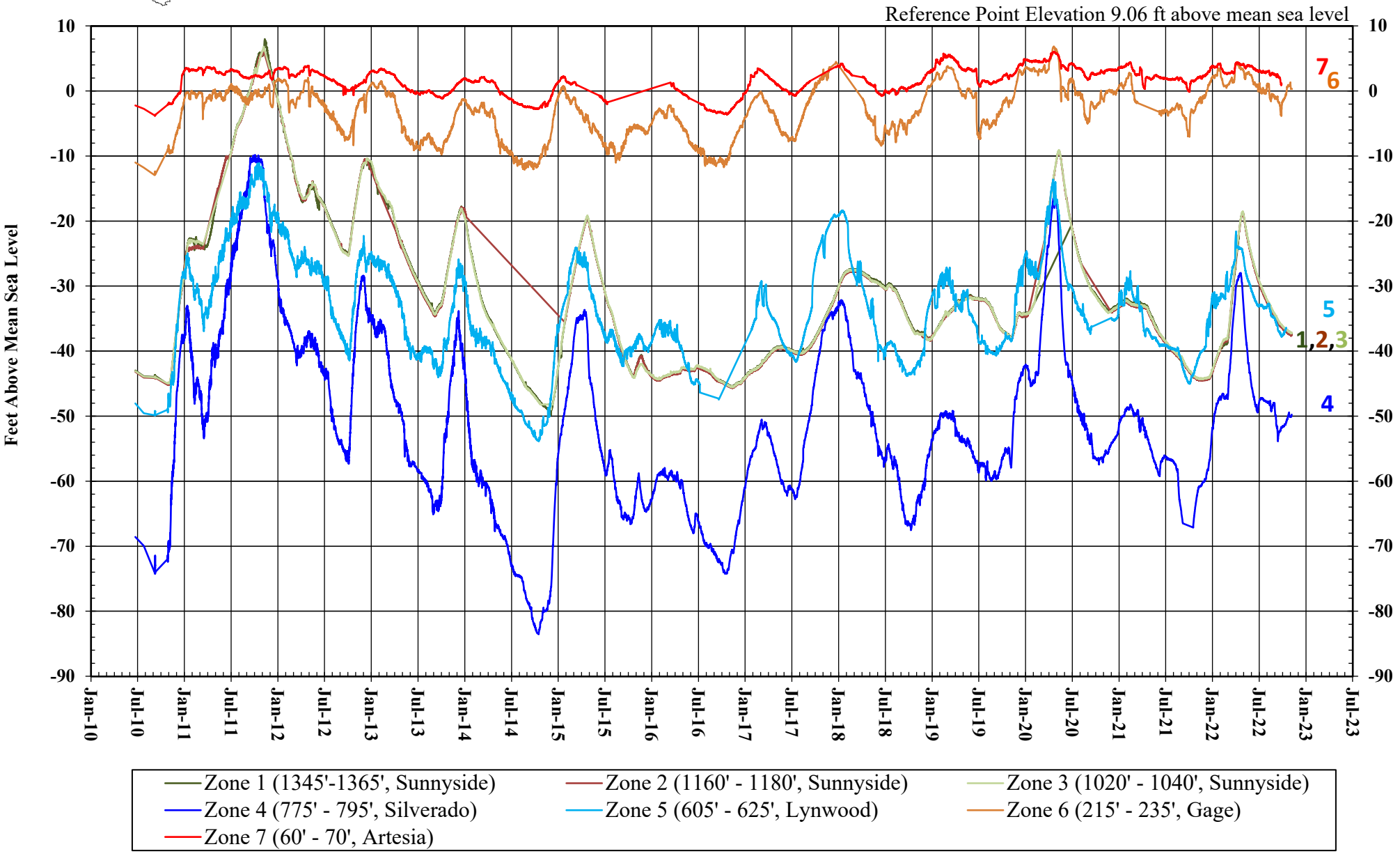


FIGURE 2.10
WATER LEVELS IN WRD KEY NESTED MONITORING WELL SEAL BEACH #1



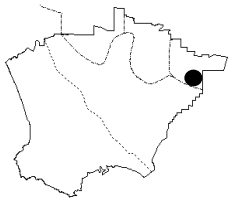


FIGURE 2.11
WATER LEVELS IN WRD KEY NESTED MONITORING WELL WHITTIER #1

Reference point elevations 217.35 (Zones 1, 2, 4 and 5) and 217.81 (Zone 3) feet above mean sea level

Feet Above Mean Sea Level

220 200 180 160 140 120 100 80 60 40 20 0

Zones 1 and 2 overlay

5

3
4

Jan-00 Jul-00 Jan-01 Jul-01 Jan-02 Jul-02 Jan-03 Jul-03 Jan-04 Jul-04 Jan-05 Jul-05 Jan-06 Jul-06 Jan-07 Jul-07 Jan-08 Jul-08 Jan-09 Jul-09 Jan-10 Jul-10 Jan-11 Jul-11 Jan-12 Jul-12 Jan-13 Jul-13 Jan-14 Jul-14 Jan-15 Jul-15 Jan-16 Jul-16 Jan-17 Jul-17 Jan-18 Jul-18 Jan-19 Jul-19 Jan-20 Jul-20 Jan-21 Jul-21 Jan-22 Jul-22 Jan-23 Jul-23

Zone 1 (1180' - 1200', Pico Fm)
Zone 2 (920' - 940', Pico Fm)
Zone 3 (600' - 620', Sunnyside)
Zone 4 (450' - 470', Silverado)
Zone 5 (200' - 220', Jefferson)

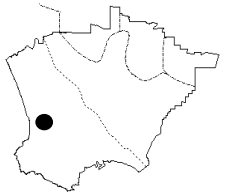
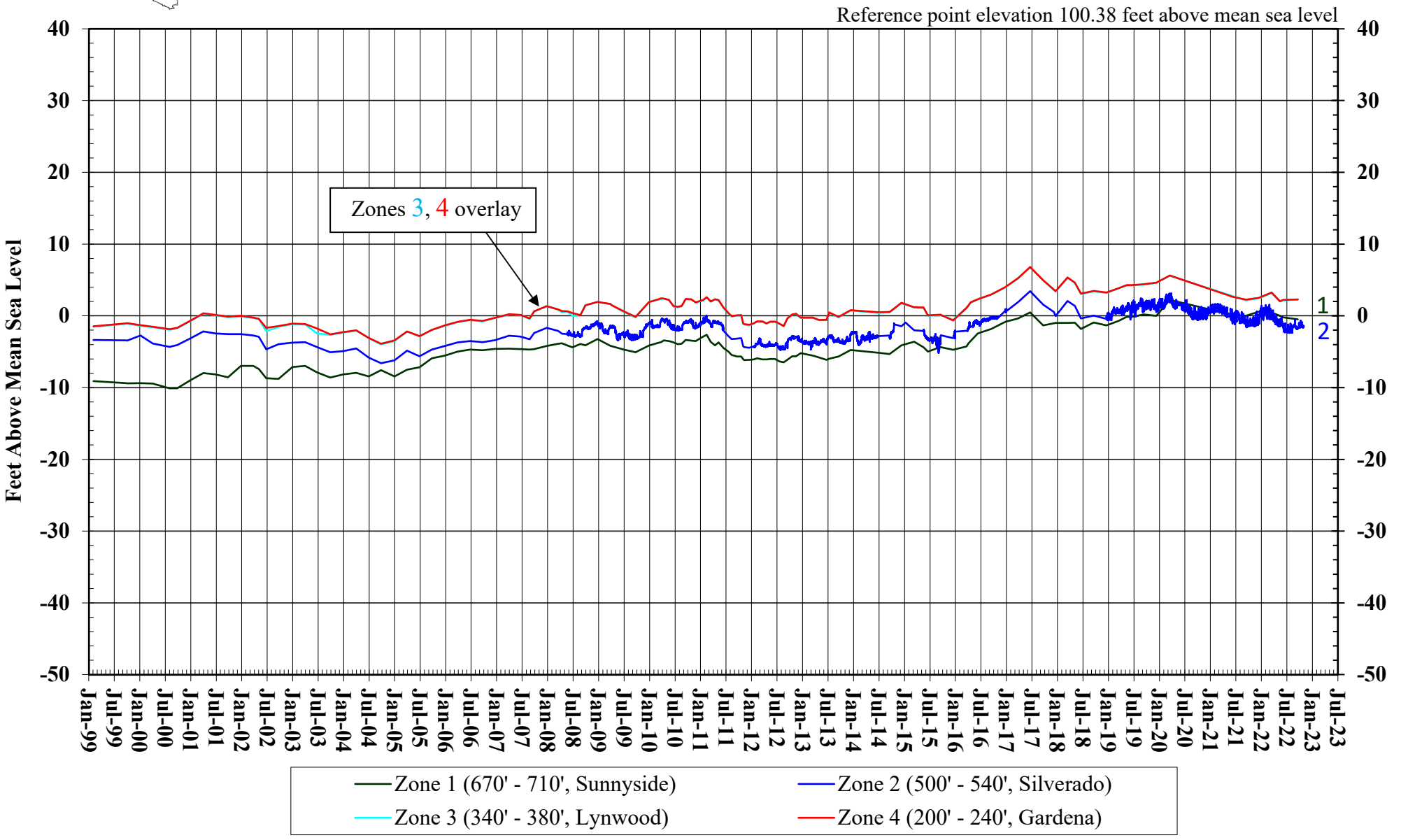


FIGURE 2.12
WATER LEVELS IN WRD KEY NESTED MONITORING WELL PM-4 MARINER



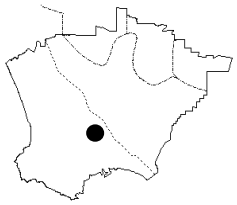
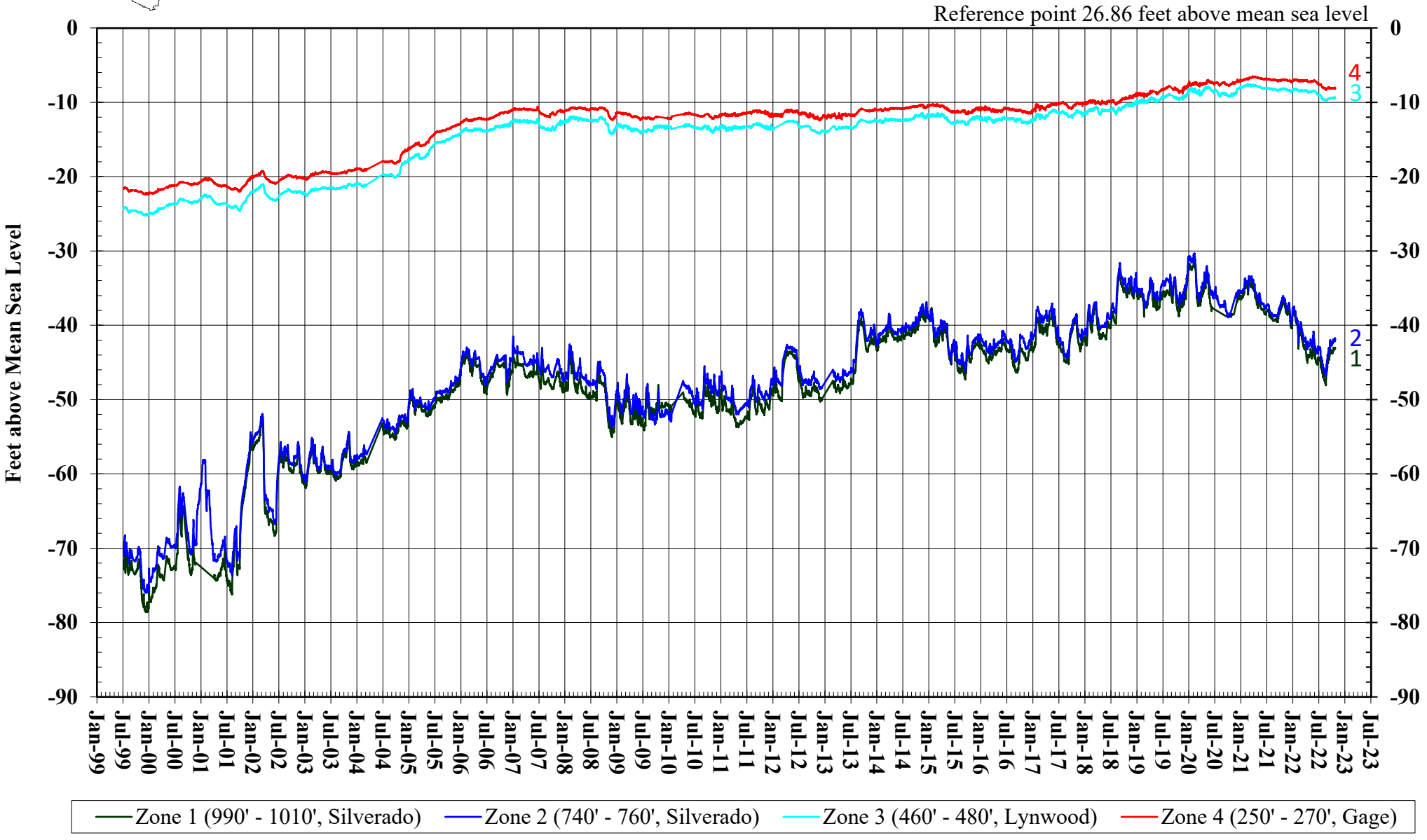


FIGURE 2.13
WATER LEVELS IN WRD KEY NESTED MONITORING WELL CARSON #1



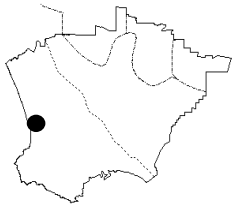


FIGURE 2.14
WATER LEVELS IN WRD KEY NESTED MONITORING WELL MANHATTAN BEACH #1

Reference point elevation 128.71 feet above mean sea level

Feet above Mean Sea Level

30 20 10 0 -10 -20 -30 -40 -50

Jan-11 Jul-11 Jan-12 Jul-12 Jan-13 Jul-13 Jan-14 Jul-14 Jan-15 Jul-15 Jan-16 Jul-16 Jan-17 Jul-17 Jan-18 Jul-18 Jan-19 Jul-19 Jan-20 Jul-20 Jan-21 Jul-21 Jan-22 Jul-22 Jan-23 Jul-23

7 6 4 1 5 2 3

Zone 1 (1950-1990', Pico Fm)
Zone 2 (1570-1590', Pico Fm)
Zone 3 (1250-1270', Pico Fm)
Zone 4 (865-885', Sunnyside)
Zone 5 (640-660', Sunnyside)
Zone 6 (320-340', Silverado)
Zone 7 (180-200', Gage)

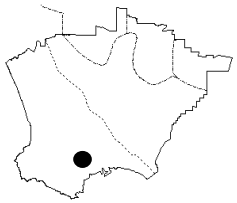
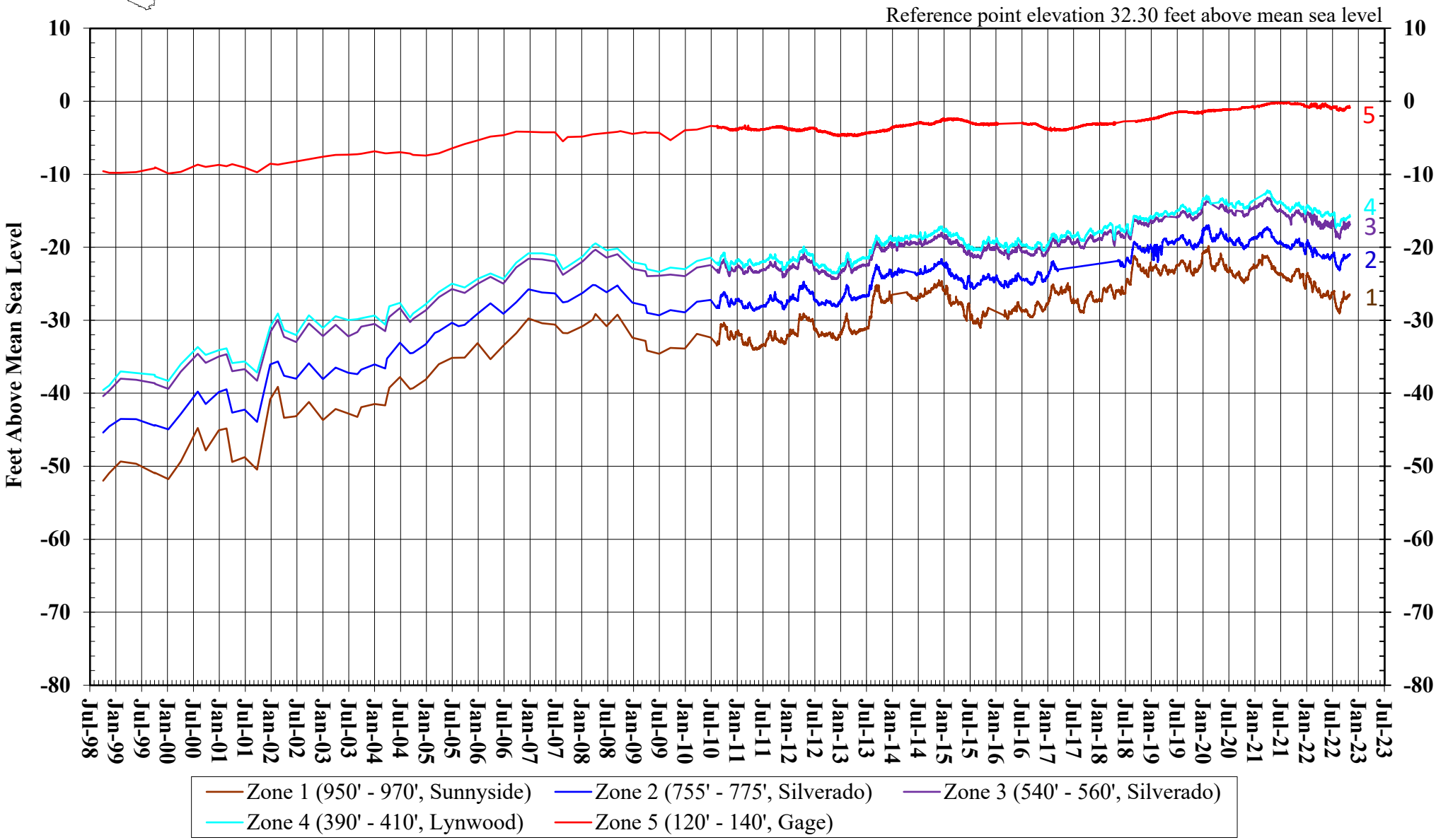


FIGURE 2.15
WATER LEVELS IN WRD KEY NESTED MONITORING WELL WILMINGTON #2



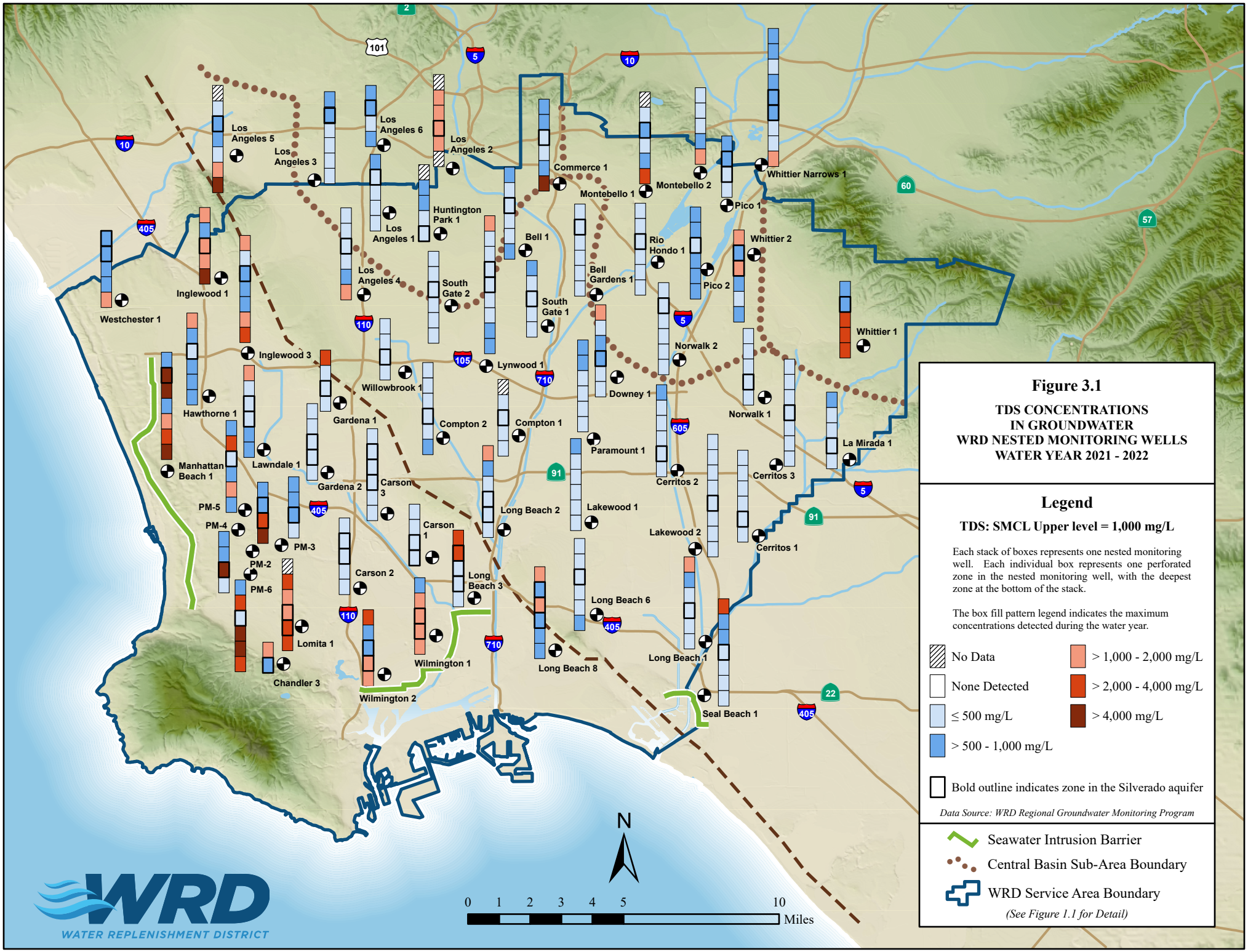


Figure 3.1

TDS CONCENTRATIONS IN GROUNDWATER WRD NESTED MONITORING WELLS WATER YEAR 2021 - 2022

Legend

TDS: SMCL Upper level = 1,000 mg/L

Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.

The box fill pattern legend indicates the maximum concentrations detected during the water year.

- No Data
- None Detected
- ≤ 500 mg/L
- > 500 - 1,000 mg/L
- > 1,000 - 2,000 mg/L
- > 2,000 - 4,000 mg/L
- > 4,000 mg/L

Bold outline indicates zone in the Silverado aquifer

Data Source: WRD Regional Groundwater Monitoring Program

- Seawater Intrusion Barrier
- Central Basin Sub-Area Boundary
- WRD Service Area Boundary

(See Figure 1.1 for Detail)

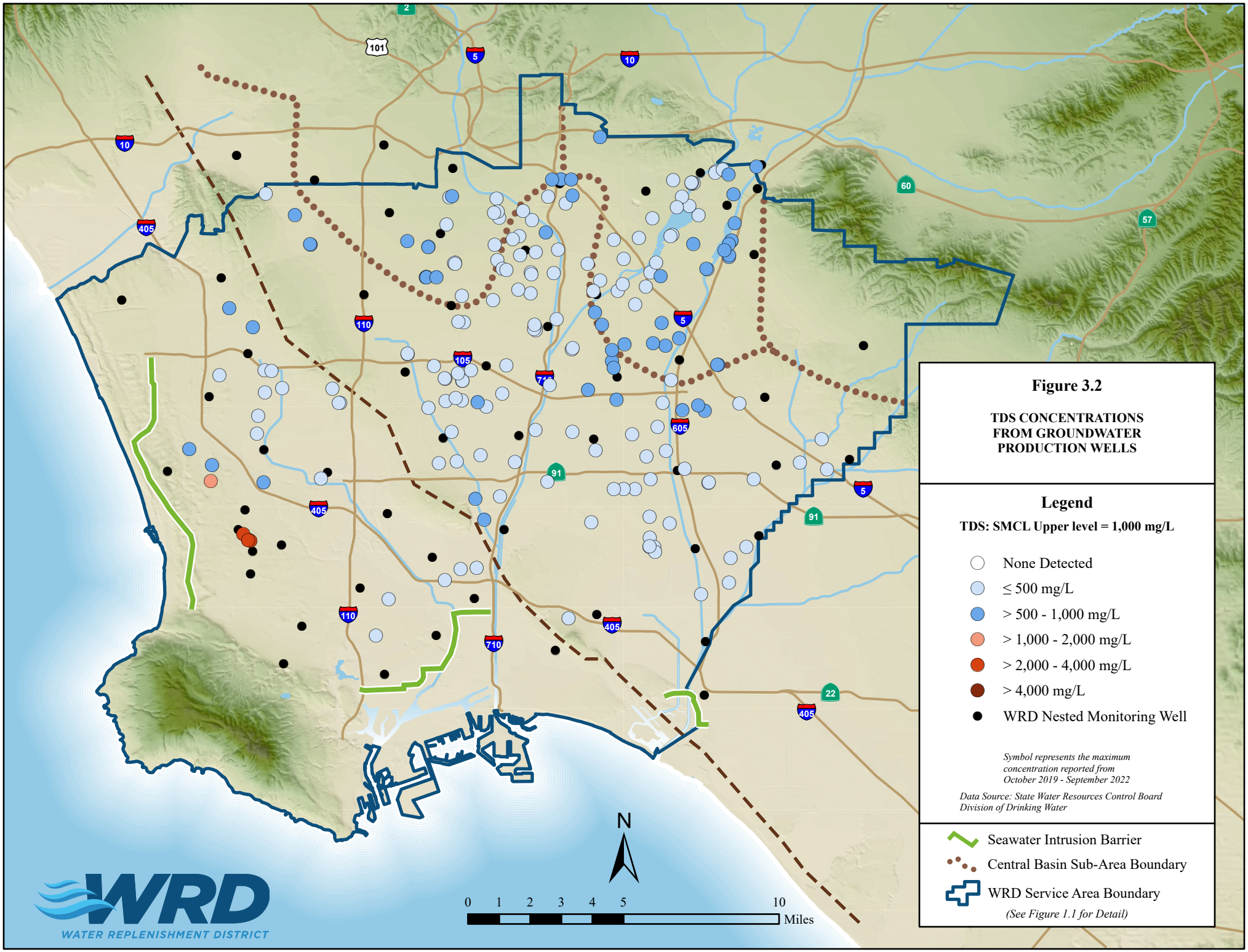


Figure 3.2
TDS CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
TDS: SMCL Upper level = 1,000 mg/L
None Detected
≤ 500 mg/L
> 500 - 1,000 mg/L
> 1,000 - 2,000 mg/L
> 2,000 - 4,000 mg/L
> 4,000 mg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT

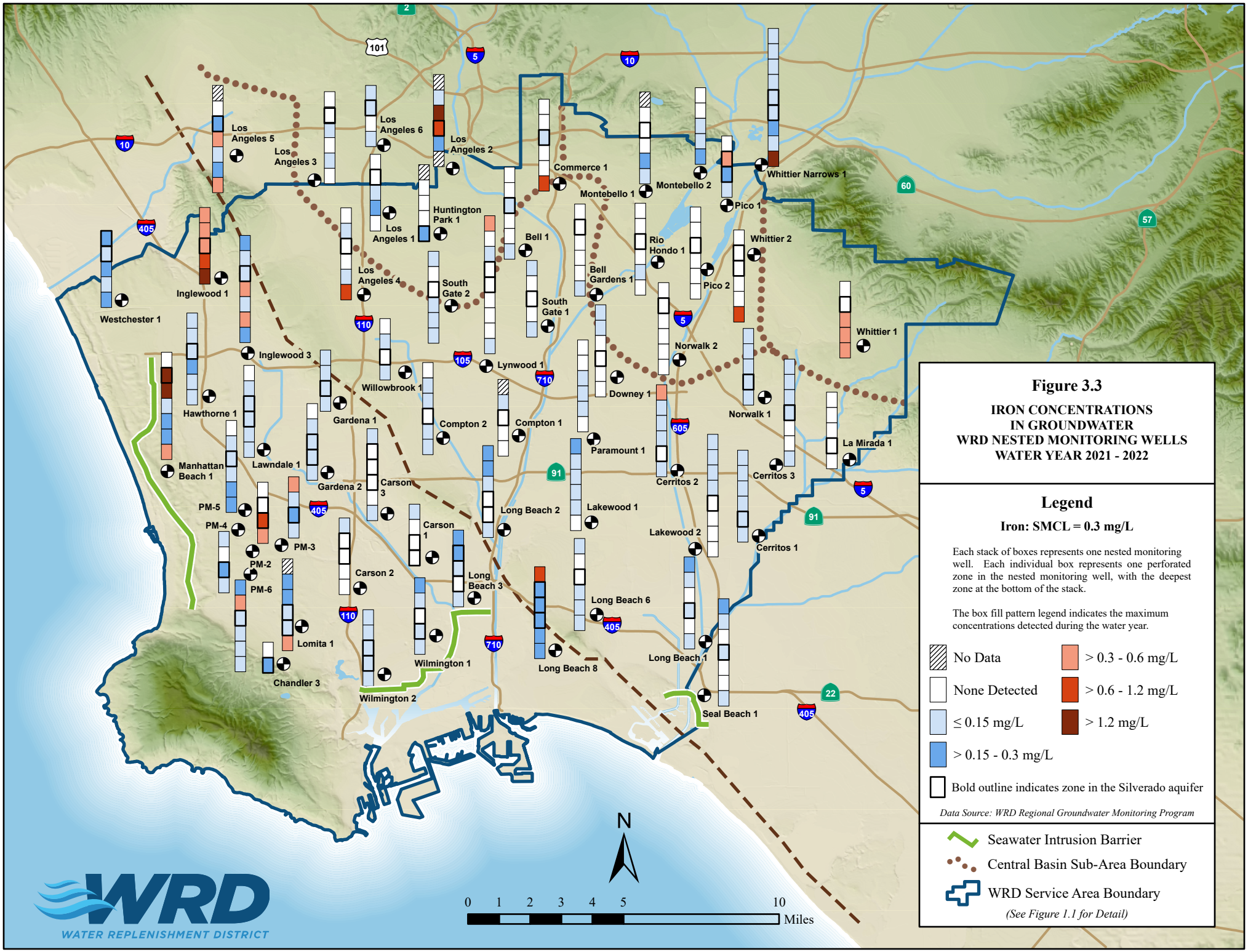


Figure 3.3
IRON CONCENTRATIONS
IN GROUNDWATER
WRD NESTED MONITORING WELLS
WATER YEAR 2021 - 2022
Legend
Iron: SMCL = 0.3 mg/L
Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.
The box fill pattern legend indicates the maximum concentrations detected during the water year.
No Data
None Detected
≤ 0.15 mg/L
> 0.15 - 0.3 mg/L
> 0.3 - 0.6 mg/L
> 0.6 - 1.2 mg/L
> 1.2 mg/L
Bold outline indicates zone in the Silverado aquifer
Data Source: WRD Regional Groundwater Monitoring Program
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT
Los Angeles 5
Los Angeles 3
Los Angeles 6
Los Angeles 2
Los Angeles 1
Los Angeles 4
Huntington Park 1
Commerce 1
Montebello 1
Montebello 2
Whittier Narrows 1
Pico 1
Whittier 2
Rio Hondo 1
Pico 2
Bell 1
Bell Gardens 1
South Gate 2
South Gate 1
Inglewood 1
Westchester 1
Inglewood 3
Willowbrook 1
Lynwood 1
Norwalk 2
Whittier 1
Hawthorne 1
Gardena 1
Compton 2
Compton 1
Downey 1
Norwalk 1
La Mirada 1
Manhattan Beach 1
Lawndale 1
Gardena 2
Carson 3
Paramount 1
Cerritos 2
Cerritos 3
PM-5
PM-4
PM-3
PM-2
PM-6
Carson 1
Long Beach 2
Lakewood 1
Lakewood 2
Cerritos 1
Carson 2
Long Beach 3
Long Beach 6
Lomita 1
Wilmington 1
Long Beach 8
Long Beach 1
Chandler 3
Wilmington 2
Seal Beach 1

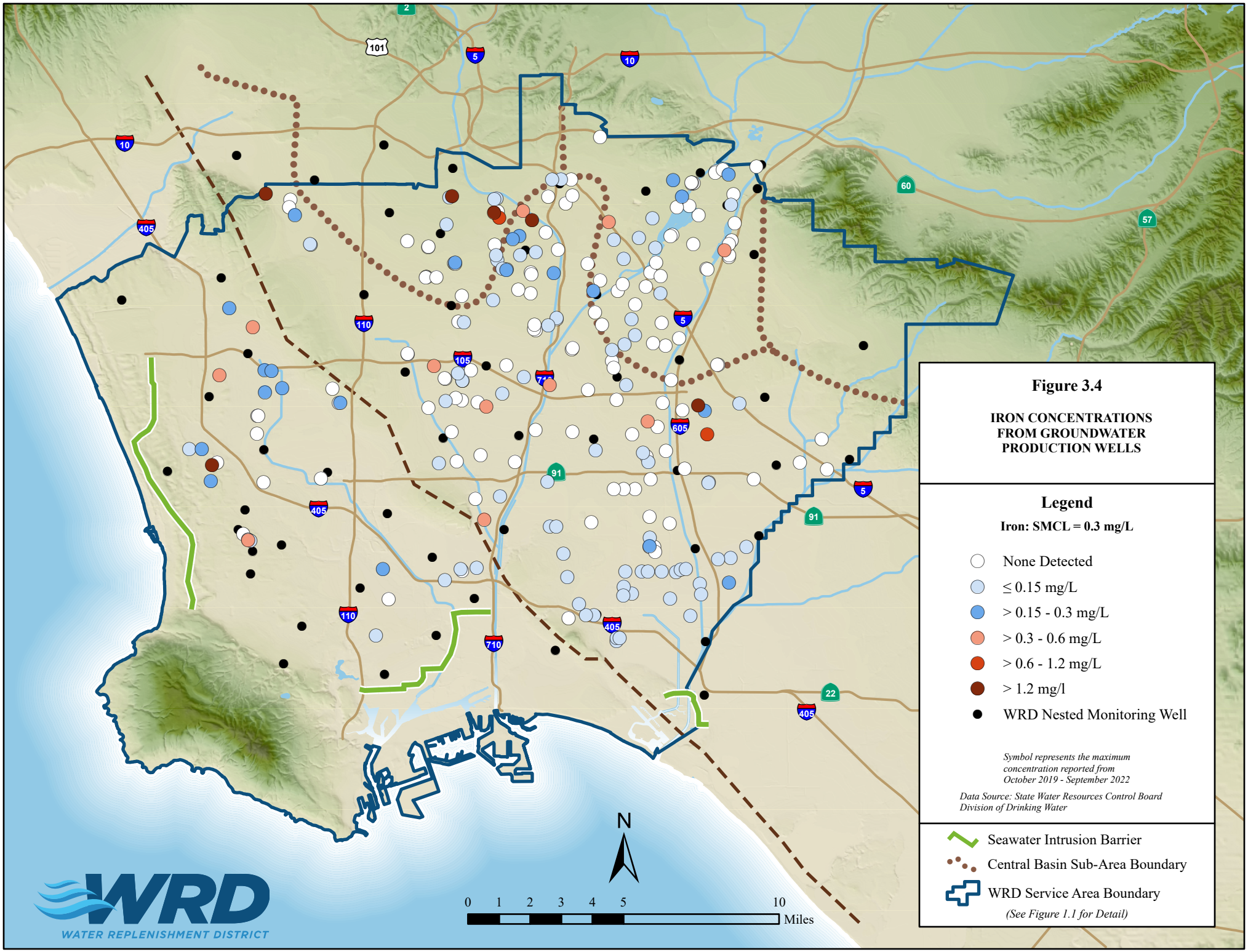


Figure 3.4
IRON CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
Iron: SMCL = 0.3 mg/L
None Detected
≤ 0.15 mg/L
> 0.15 - 0.3 mg/L
> 0.3 - 0.6 mg/L
> 0.6 - 1.2 mg/L
> 1.2 mg/l
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT

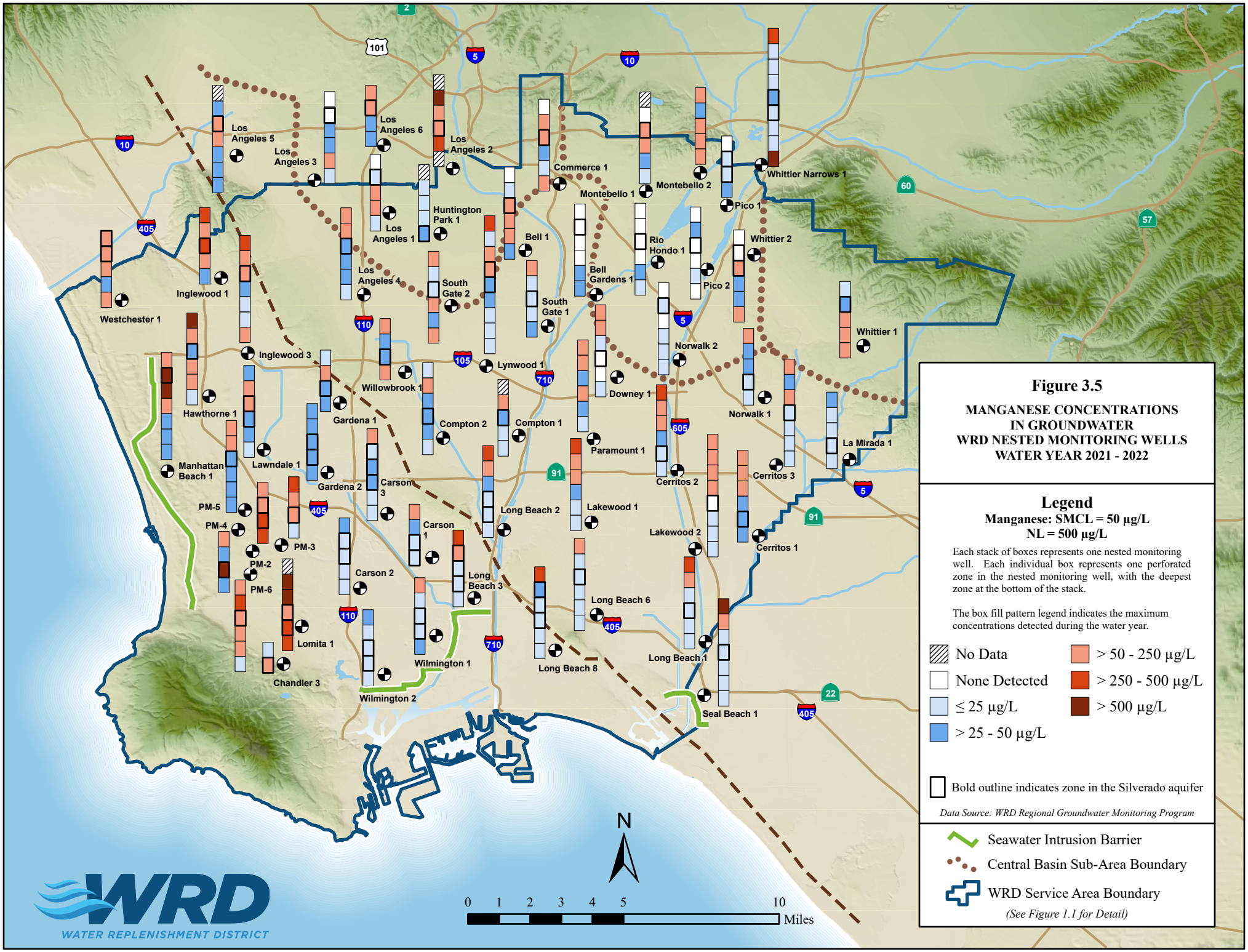


Figure 3.5

MANGANESE CONCENTRATIONS IN GROUNDWATER WRD NESTED MONITORING WELLS WATER YEAR 2021 - 2022

Legend

Manganese: SMCL = 50 µg/L
NL = 500 µg/L

Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.

The box fill pattern legend indicates the maximum concentrations detected during the water year.

- No Data
- None Detected
- ≤ 25 µg/L
- > 25 - 50 µg/L
- > 50 - 250 µg/L
- > 250 - 500 µg/L
- > 500 µg/L

Bold outline indicates zone in the Silverado aquifer

Data Source: WRD Regional Groundwater Monitoring Program

- Seawater Intrusion Barrier
- Central Basin Sub-Area Boundary
- WRD Service Area Boundary

(See Figure 1.1 for Detail)

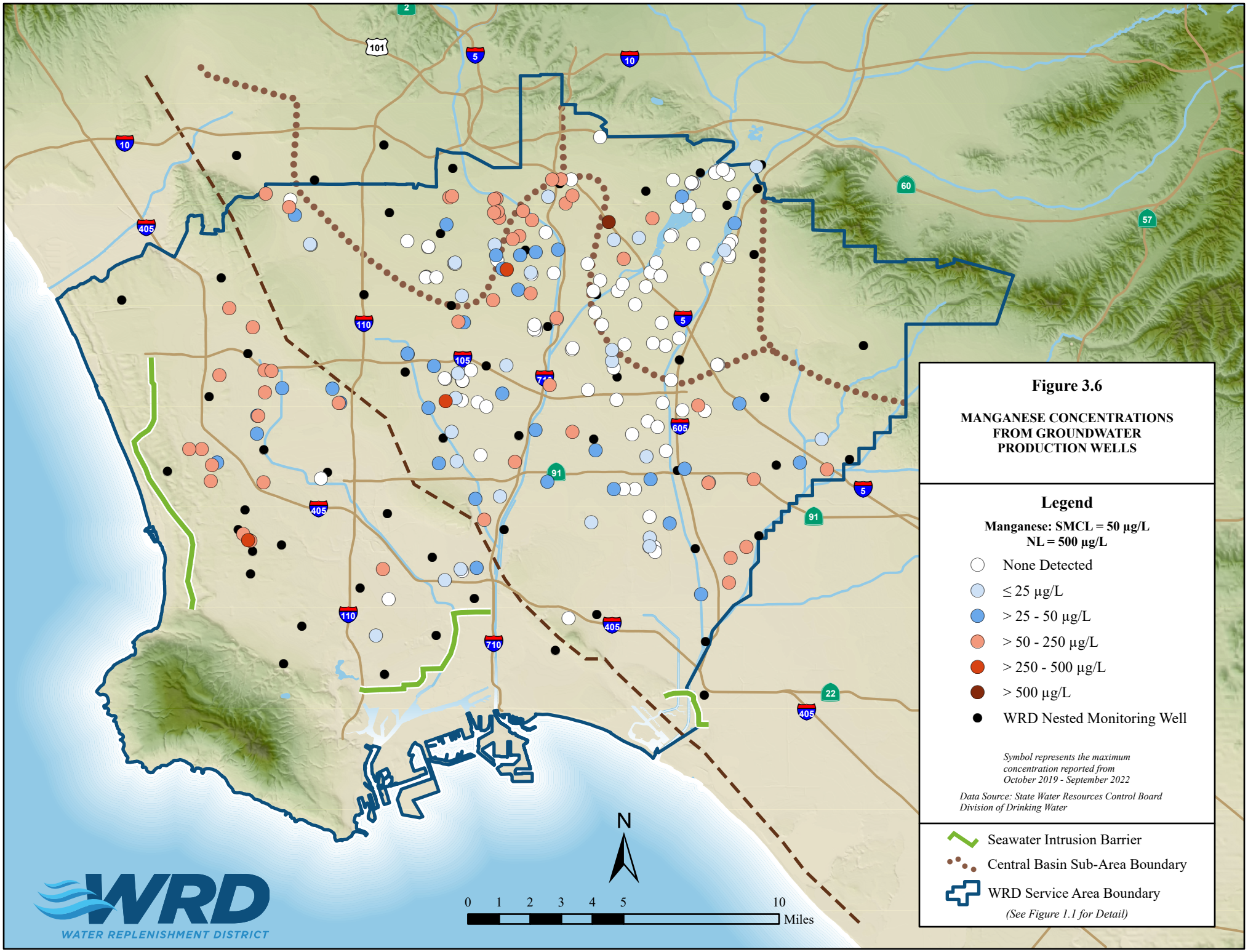


Figure 3.6
MANGANESE CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
Manganese: SMCL = 50 µg/L
NL = 500 µg/L
None Detected
≤ 25 µg/L
> 25 - 50 µg/L
> 50 - 250 µg/L
> 250 - 500 µg/L
> 500 µg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT

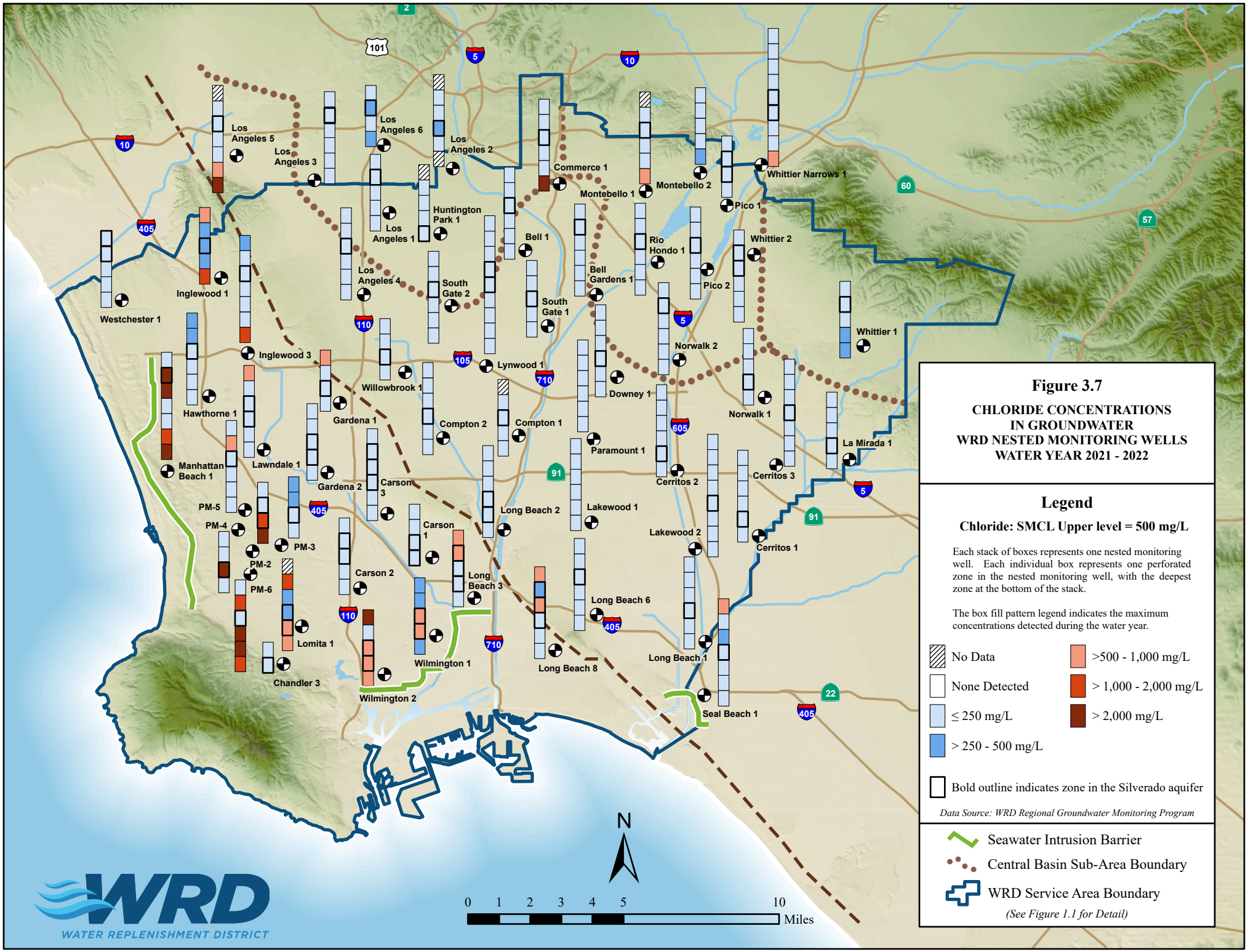


Figure 3.7

CHLORIDE CONCENTRATIONS IN GROUNDWATER WRD NESTED MONITORING WELLS WATER YEAR 2021 - 2022

Legend

Chloride: SMCL Upper level = 500 mg/L

Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.

The box fill pattern legend indicates the maximum concentrations detected during the water year.

- No Data
- None Detected
- ≤ 250 mg/L
- > 250 - 500 mg/L
- >500 - 1,000 mg/L
- > 1,000 - 2,000 mg/L
- > 2,000 mg/L

Bold outline indicates zone in the Silverado aquifer

Data Source: WRD Regional Groundwater Monitoring Program

- Seawater Intrusion Barrier
- Central Basin Sub-Area Boundary
- WRD Service Area Boundary

(See Figure 1.1 for Detail)

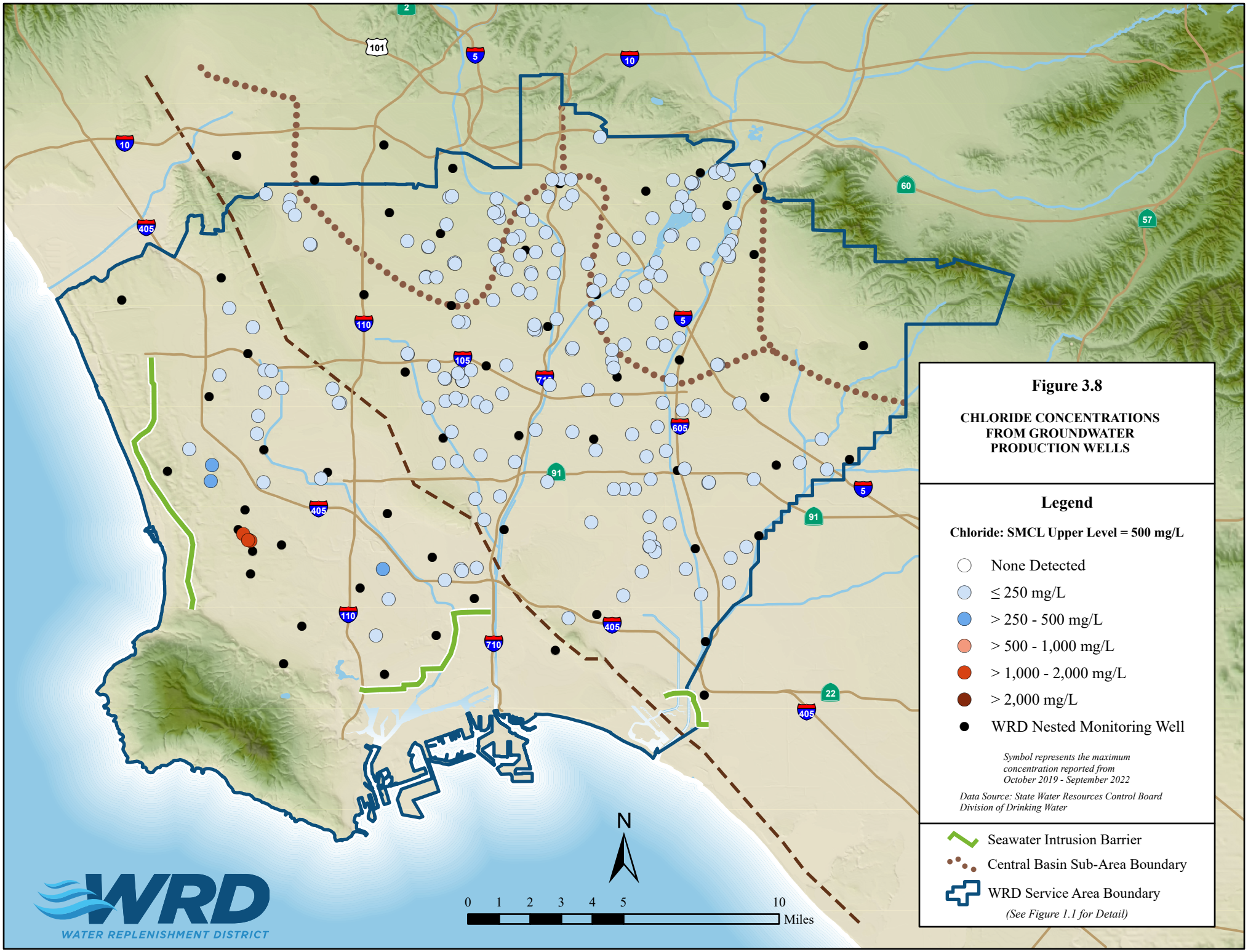
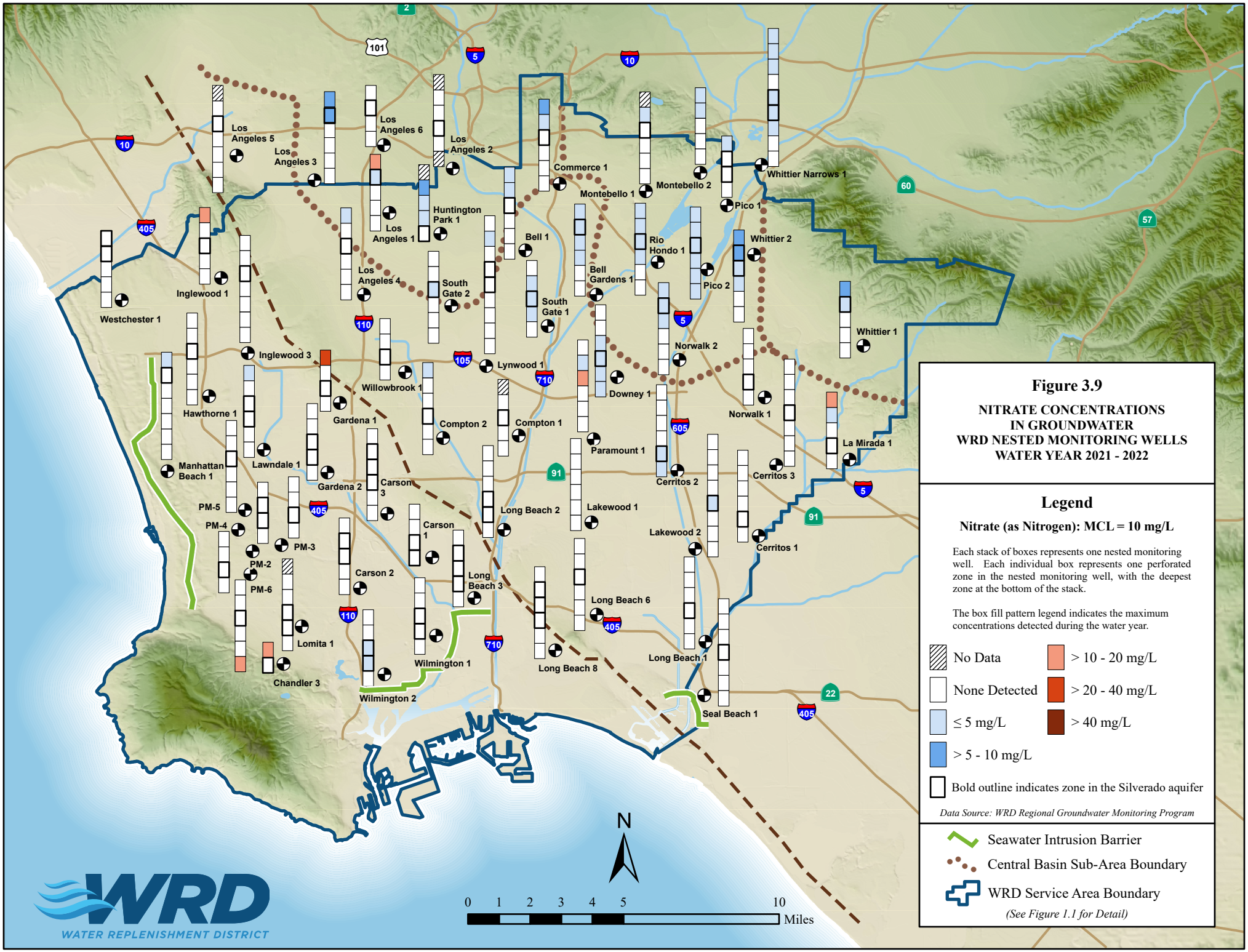


Figure 3.8
CHLORIDE CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
Chloride: SMCL Upper Level = 500 mg/L
None Detected
≤ 250 mg/L
> 250 - 500 mg/L
> 500 - 1,000 mg/L
> 1,000 - 2,000 mg/L
> 2,000 mg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT


Los Angeles 5
Los Angeles 3
Los Angeles 6
Los Angeles 2
Huntington Park 1
Los Angeles 1
Commerce 1
Montebello 1
Montebello 2
Whittier Narrows 1
Pico 1
Whittier 2
Rio Hondo 1
Pico 2
Bell 1
Bell Gardens 1
Los Angeles 4
South Gate 2
South Gate 1
Inglewood 1
Westchester 1
Inglewood 3
Lynwood 1
Norwalk 2
Whittier 1
Willowbrook 1
Downey 1
Norwalk 1
Hawthorne 1
Gardena 1
Compton 2
Compton 1
Paramount 1
La Mirada 1
Manhattan Beach 1
Lawndale 1
Gardena 2
Carson 3
Cerritos 2
Cerritos 3
PM-5
PM-4
PM-3
PM-2
PM-6
Long Beach 2
Lakewood 1
Lakewood 2
Cerritos 1
Carson 1
Carson 2
Long Beach 3
Long Beach 6
Lomita 1
Chandler 3
Wilmington 1
Wilmington 2
Long Beach 8
Long Beach 1
Seal Beach 1
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT
Figure 3.9
NITRATE CONCENTRATIONS
IN GROUNDWATER
WRD NESTED MONITORING WELLS
WATER YEAR 2021 - 2022
Legend
Nitrate (as Nitrogen): MCL = 10 mg/L
Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.
The box fill pattern legend indicates the maximum concentrations detected during the water year.
No Data
None Detected
≤ 5 mg/L
> 5 - 10 mg/L
> 10 - 20 mg/L
> 20 - 40 mg/L
> 40 mg/L
Bold outline indicates zone in the Silverado aquifer
Data Source: WRD Regional Groundwater Monitoring Program
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)

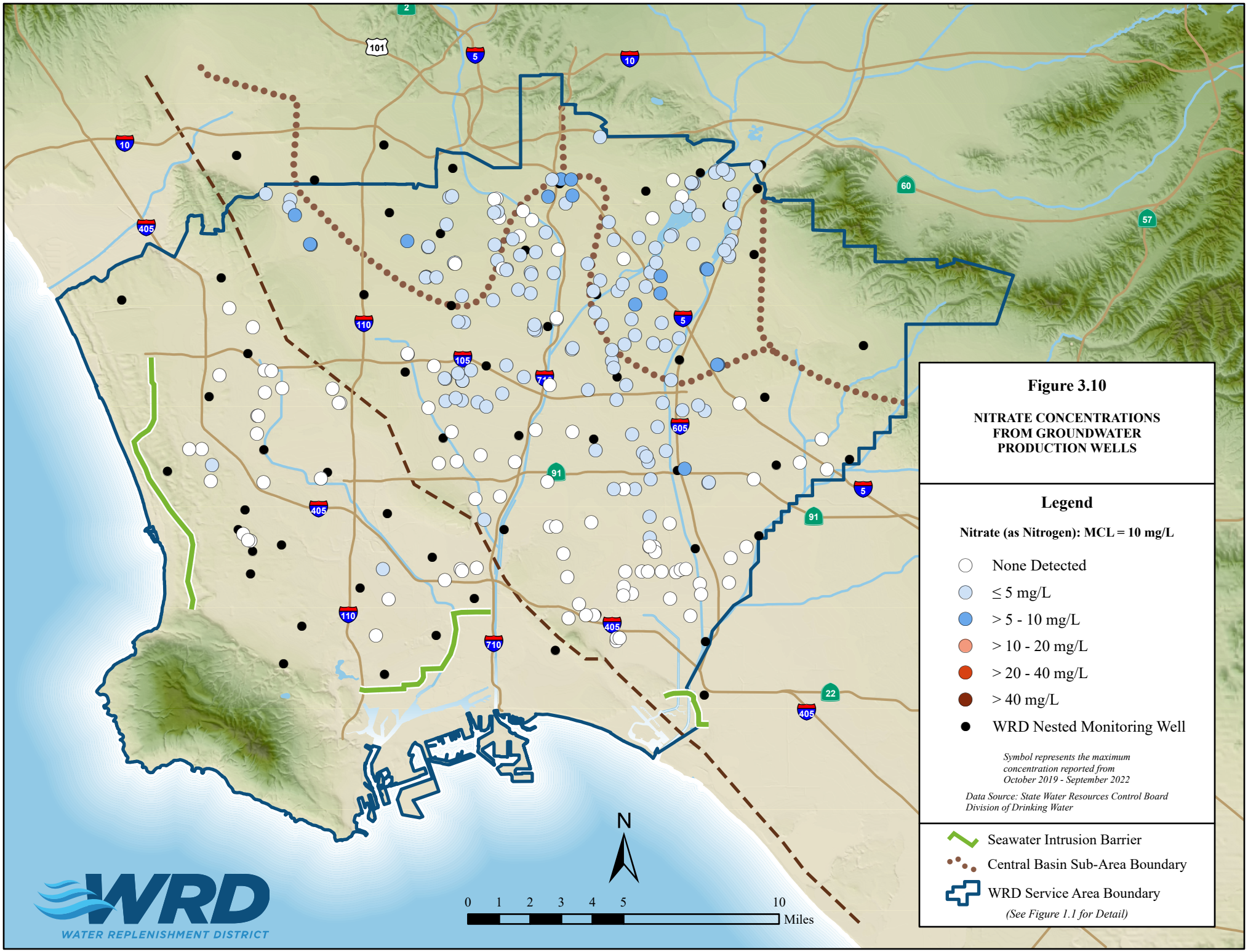
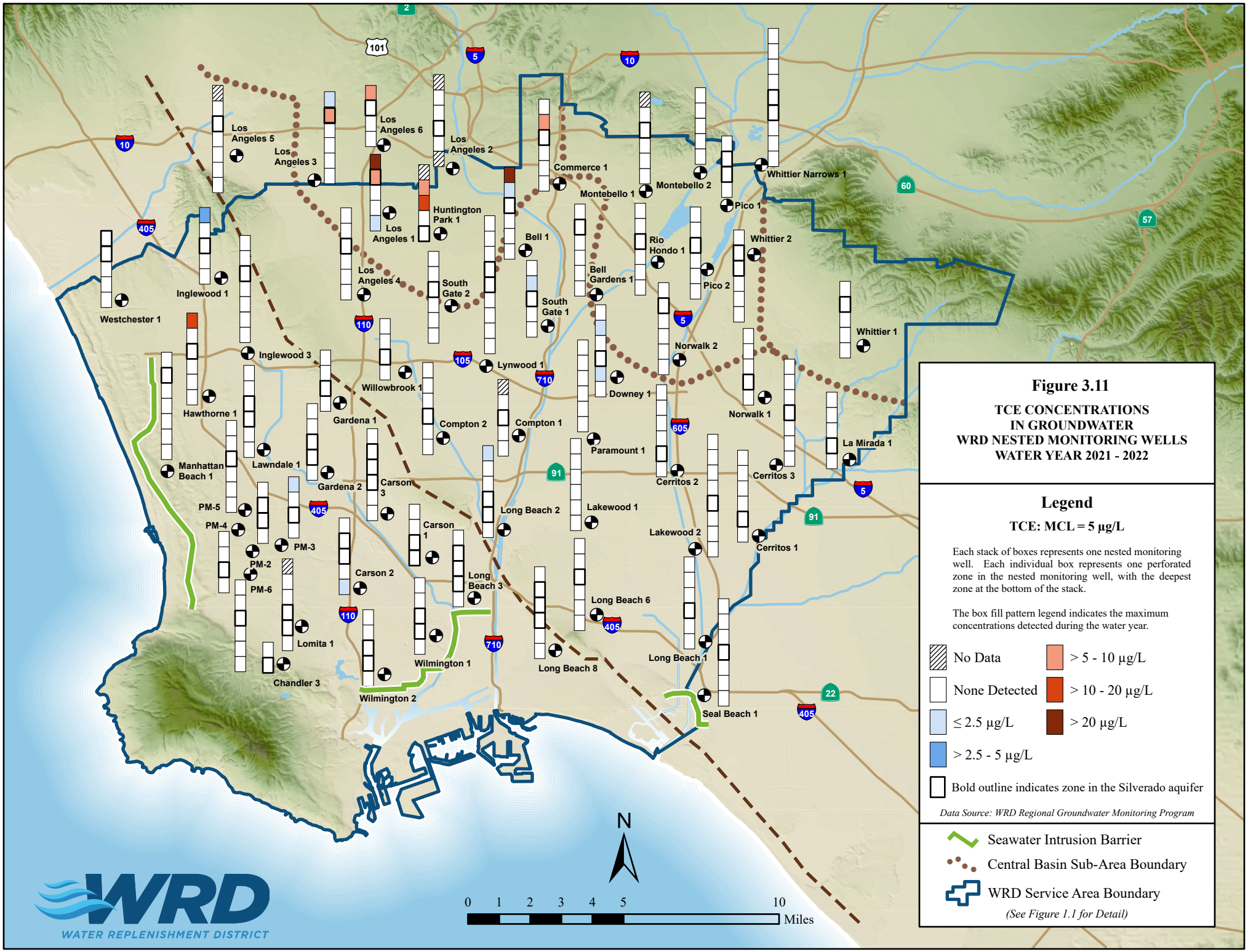


Figure 3.10
NITRATE CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
Nitrate (as Nitrogen): MCL = 10 mg/L
None Detected
≤ 5 mg/L
> 5 - 10 mg/L
> 10 - 20 mg/L
> 20 - 40 mg/L
> 40 mg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT


Los Angeles 5
Los Angeles 3
Los Angeles 6
Los Angeles 2
Huntington Park 1
Los Angeles 1
Commerce 1
Montebello 1
Montebello 2
Whittier Narrows 1
Pico 1
Whittier 2
Rio Hondo 1
Pico 2
Bell 1
Bell Gardens 1
Los Angeles 4
South Gate 2
South Gate 1
Inglewood 1
Westchester 1
Inglewood 3
Lynwood 1
Norwalk 2
Whittier 1
Willowbrook 1
Downey 1
Hawthorne 1
Gardena 1
Compton 2
Compton 1
Norwalk 1
La Mirada 1
Paramount 1
Manhattan Beach 1
Lawndale 1
Gardena 2
Carson 3
Cerritos 2
Cerritos 3
PM-5
PM-4
PM-3
PM-2
PM-6
Carson 1
Long Beach 2
Lakewood 1
Lakewood 2
Cerritos 1
Carson 2
Long Beach 3
Long Beach 6
Lomita 1
Wilmington 1
Long Beach 8
Long Beach 1
Chandler 3
Wilmington 2
Seal Beach 1
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT
Figure 3.11
TCE CONCENTRATIONS
IN GROUNDWATER
WRD NESTED MONITORING WELLS
WATER YEAR 2021 - 2022
Legend
TCE: MCL = 5 µg/L
Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.
The box fill pattern legend indicates the maximum concentrations detected during the water year.
No Data
None Detected
≤ 2.5 µg/L
> 2.5 - 5 µg/L
> 5 - 10 µg/L
> 10 - 20 µg/L
> 20 µg/L
Bold outline indicates zone in the Silverado aquifer
Data Source: WRD Regional Groundwater Monitoring Program
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)

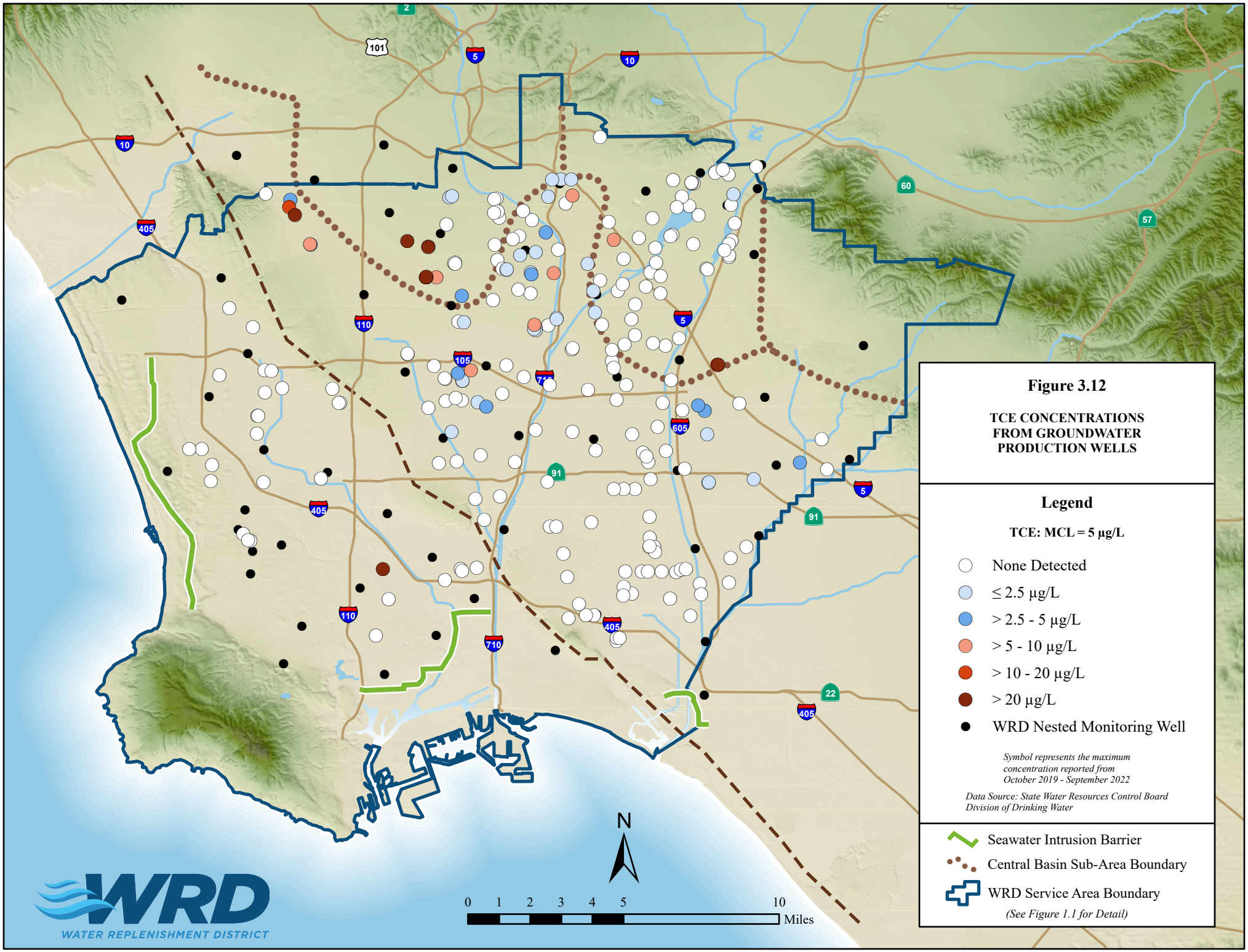


Figure 3.12
TCE CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
TCE: MCL = 5 µg/L
None Detected
≤ 2.5 µg/L
> 2.5 - 5 µg/L
> 5 - 10 µg/L
> 10 - 20 µg/L
> 20 µg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT

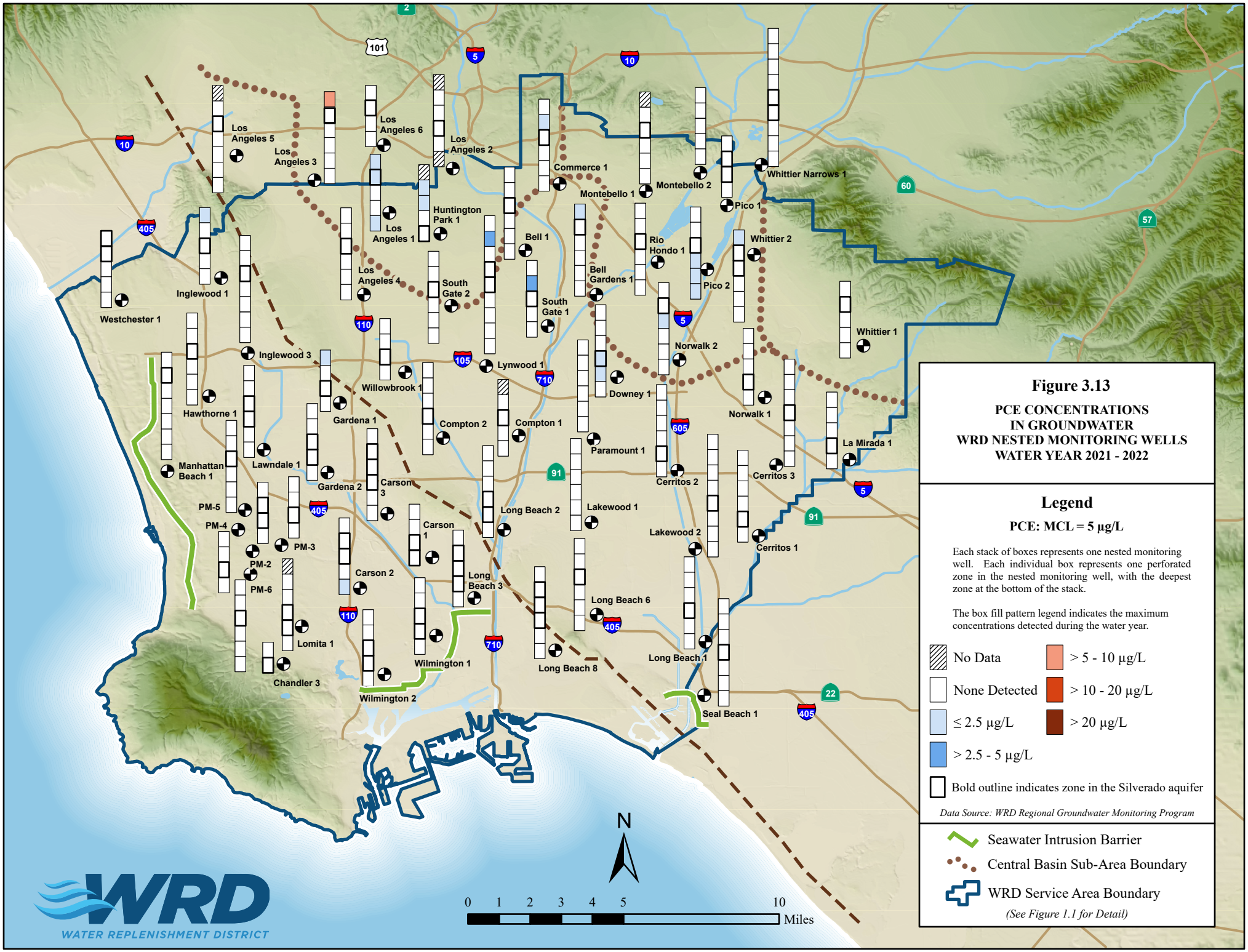


Figure 3.13

PCE CONCENTRATIONS IN GROUNDWATER WRD NESTED MONITORING WELLS WATER YEAR 2021 - 2022

Legend

PCE: MCL = 5 µg/L

Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.

The box fill pattern legend indicates the maximum concentrations detected during the water year.

- No Data
- None Detected
- ≤ 2.5 µg/L
- > 2.5 - 5 µg/L
- > 5 - 10 µg/L
- > 10 - 20 µg/L
- > 20 µg/L

Bold outline indicates zone in the Silverado aquifer

Data Source: WRD Regional Groundwater Monitoring Program

- Seawater Intrusion Barrier
- Central Basin Sub-Area Boundary
- WRD Service Area Boundary

(See Figure 1.1 for Detail)

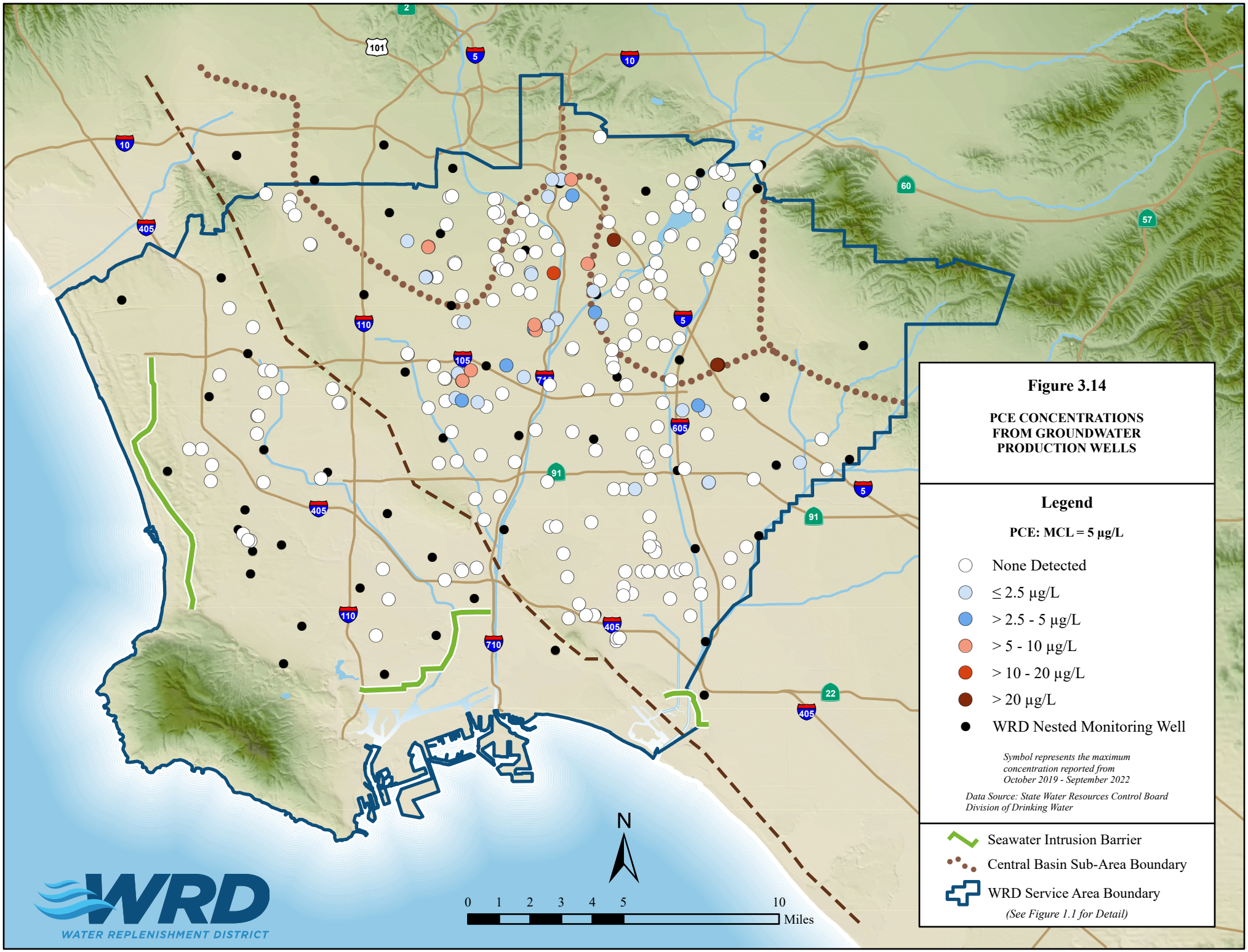
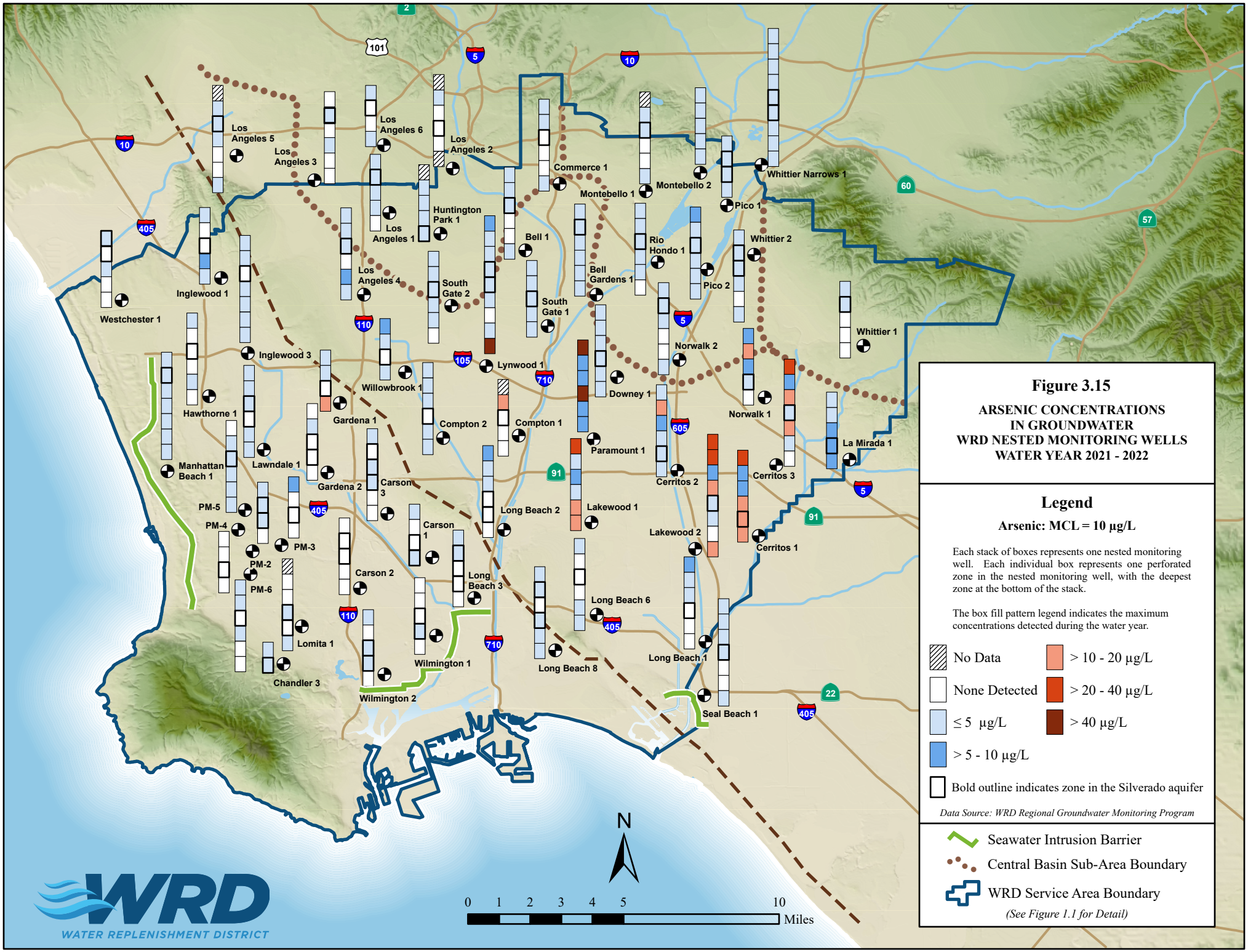


Figure 3.14
PCE CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
PCE: MCL = 5 µg/L
None Detected
≤ 2.5 µg/L
> 2.5 - 5 µg/L
> 5 - 10 µg/L
> 10 - 20 µg/L
> 20 µg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT


Los Angeles 5
Los Angeles 3
Los Angeles 6
Los Angeles 2
Huntington Park 1
Los Angeles 1
Commerce 1
Montebello 1
Montebello 2
Whittier Narrows 1
Pico 1
Whittier 2
Rio Hondo 1
Pico 2
Bell 1
Bell Gardens 1
Los Angeles 4
South Gate 2
South Gate 1
Inglewood 1
Westchester 1
Inglewood 3
Lynwood 1
Norwalk 2
Whittier 1
Willowbrook 1
Downey 1
Hawthorne 1
Gardena 1
Compton 2
Compton 1
Norwalk 1
La Mirada 1
Paramount 1
Manhattan Beach 1
Lawndale 1
Gardena 2
Carson 3
Cerritos 2
Cerritos 3
PM-5
PM-4
PM-3
Long Beach 2
Lakewood 1
Carson 1
Lakewood 2
Cerritos 1
PM-2
PM-6
Carson 2
Long Beach 3
Long Beach 6
Lomita 1
Wilmington 1
Long Beach 1
Chandler 3
Long Beach 8
Wilmington 2
Seal Beach 1
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT
Figure 3.15
ARSENIC CONCENTRATIONS
IN GROUNDWATER
WRD NESTED MONITORING WELLS
WATER YEAR 2021 - 2022
Legend
Arsenic: MCL = 10 µg/L
Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.
The box fill pattern legend indicates the maximum concentrations detected during the water year.
No Data
None Detected
≤ 5 µg/L
> 5 - 10 µg/L
> 10 - 20 µg/L
> 20 - 40 µg/L
> 40 µg/L
Bold outline indicates zone in the Silverado aquifer
Data Source: WRD Regional Groundwater Monitoring Program
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)

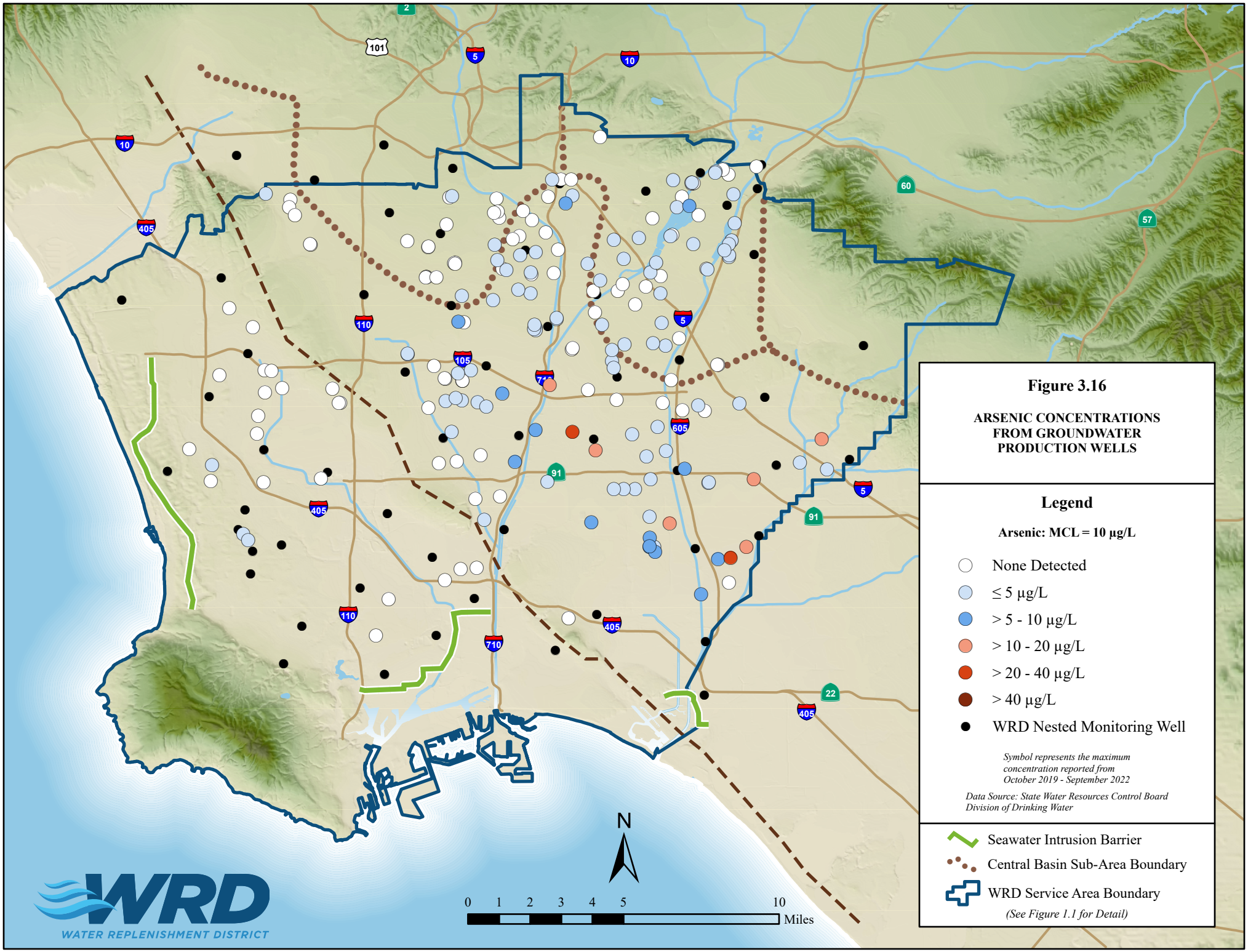


Figure 3.16
ARSENIC CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
Arsenic: MCL = 10 µg/L
None Detected
≤ 5 µg/L
> 5 - 10 µg/L
> 10 - 20 µg/L
> 20 - 40 µg/L
> 40 µg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT

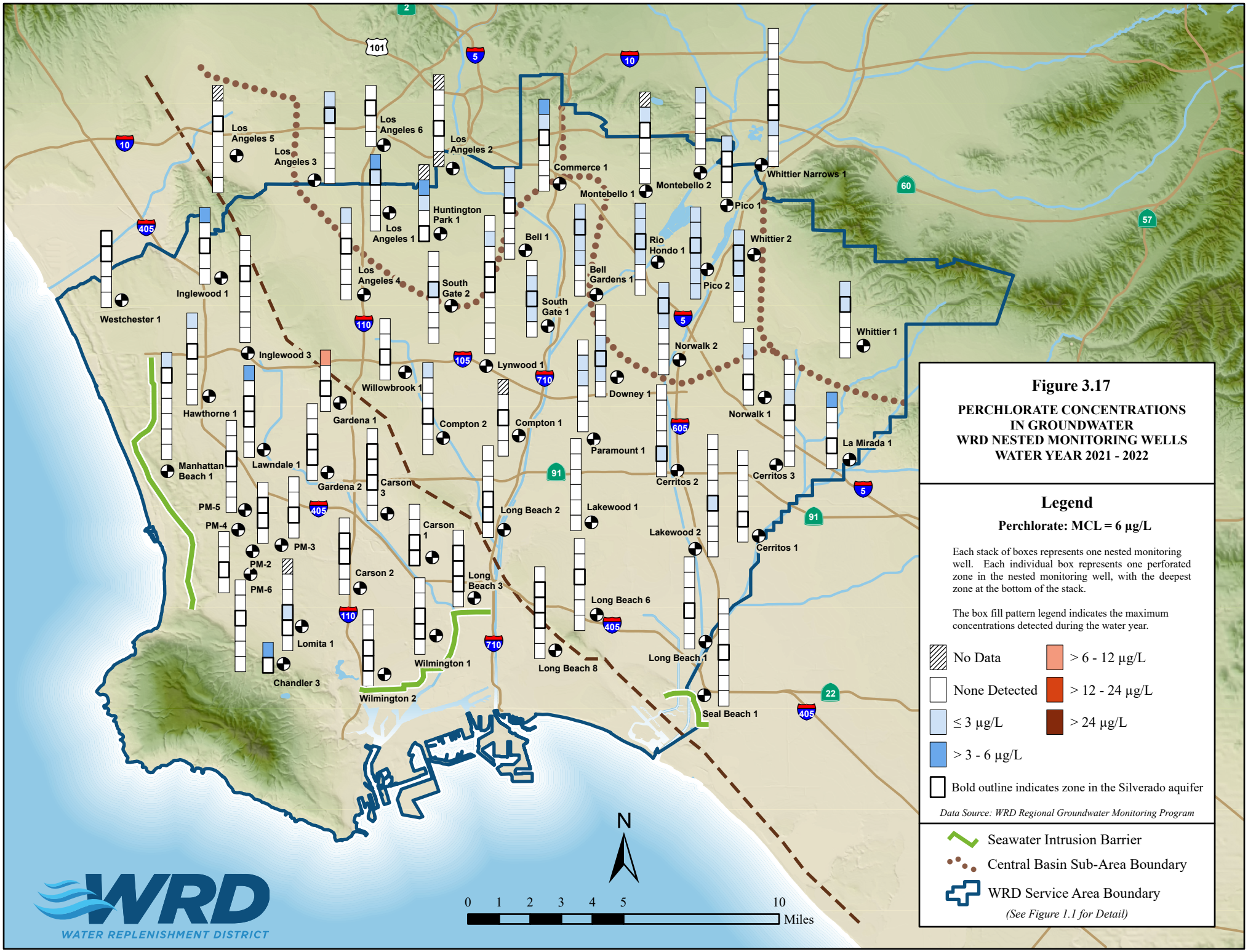


Figure 3.17

PERCHLORATE CONCENTRATIONS IN GROUNDWATER
WRD NESTED MONITORING WELLS
WATER YEAR 2021 - 2022

Legend

Perchlorate: MCL = 6 µg/L

Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.

The box fill pattern legend indicates the maximum concentrations detected during the water year.

- No Data
- None Detected
- ≤ 3 µg/L
- > 3 - 6 µg/L
- > 6 - 12 µg/L
- > 12 - 24 µg/L
- > 24 µg/L

Bold outline indicates zone in the Silverado aquifer

Data Source: WRD Regional Groundwater Monitoring Program

- Seawater Intrusion Barrier
- Central Basin Sub-Area Boundary
- WRD Service Area Boundary

(See Figure 1.1 for Detail)

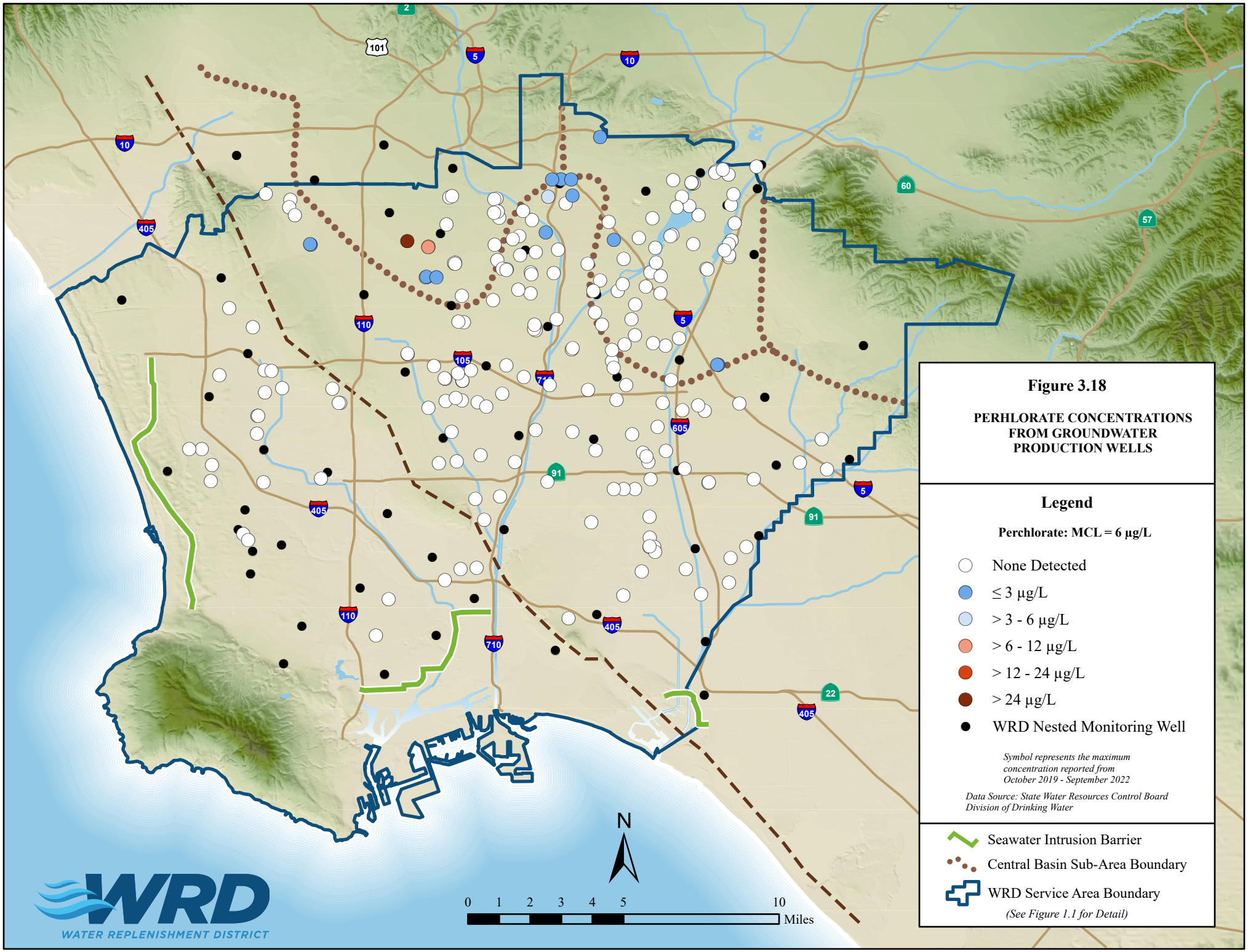
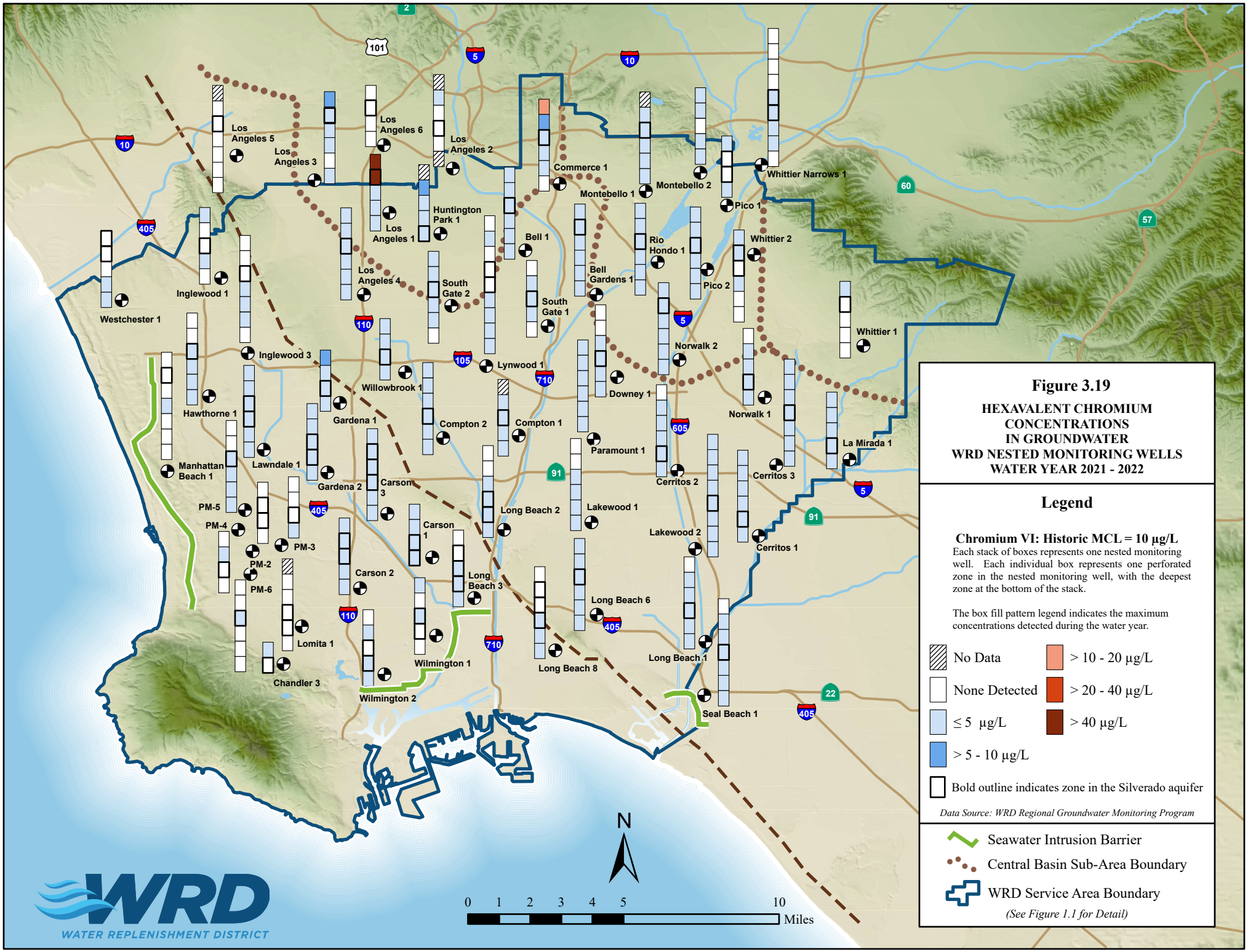


Figure 3.18
PERHLORATE CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
Perchlorate: MCL = 6 µg/L
None Detected
≤ 3 µg/L
> 3 - 6 µg/L
> 6 - 12 µg/L
> 12 - 24 µg/L
> 24 µg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT


Los Angeles 5
Los Angeles 3
Los Angeles 6
Los Angeles 2
Los Angeles 1
Huntington Park 1
Commerce 1
Montebello 1
Montebello 2
Whittier Narrows 1
Pico 1
Whittier 2
Rio Hondo 1
Pico 2
Bell 1
Bell Gardens 1
Los Angeles 4
South Gate 2
South Gate 1
Westchester 1
Inglewood 1
Inglewood 3
Lynwood 1
Willowbrook 1
Downey 1
Norwalk 2
Norwalk 1
Whittier 1
Hawthorne 1
Gardena 1
Compton 2
Compton 1
Paramount 1
La Mirada 1
Manhattan Beach 1
Lawndale 1
Gardena 2
Carson 3
Cerritos 2
Cerritos 3
PM-5
PM-4
PM-3
PM-2
PM-6
Carson 1
Long Beach 2
Lakewood 1
Lakewood 2
Cerritos 1
Carson 2
Long Beach 3
Long Beach 6
Lomita 1
Wilmington 1
Long Beach 8
Long Beach 1
Chandler 3
Wilmington 2
Seal Beach 1
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT
Figure 3.19
HEXAVALENT CHROMIUM CONCENTRATIONS IN GROUNDWATER WRD NESTED MONITORING WELLS WATER YEAR 2021 - 2022
Legend
Chromium VI: Historic MCL = 10 µg/L
Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.
The box fill pattern legend indicates the maximum concentrations detected during the water year.
No Data
None Detected
≤ 5 µg/L
> 5 - 10 µg/L
> 10 - 20 µg/L
> 20 - 40 µg/L
> 40 µg/L
Bold outline indicates zone in the Silverado aquifer
Data Source: WRD Regional Groundwater Monitoring Program
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)

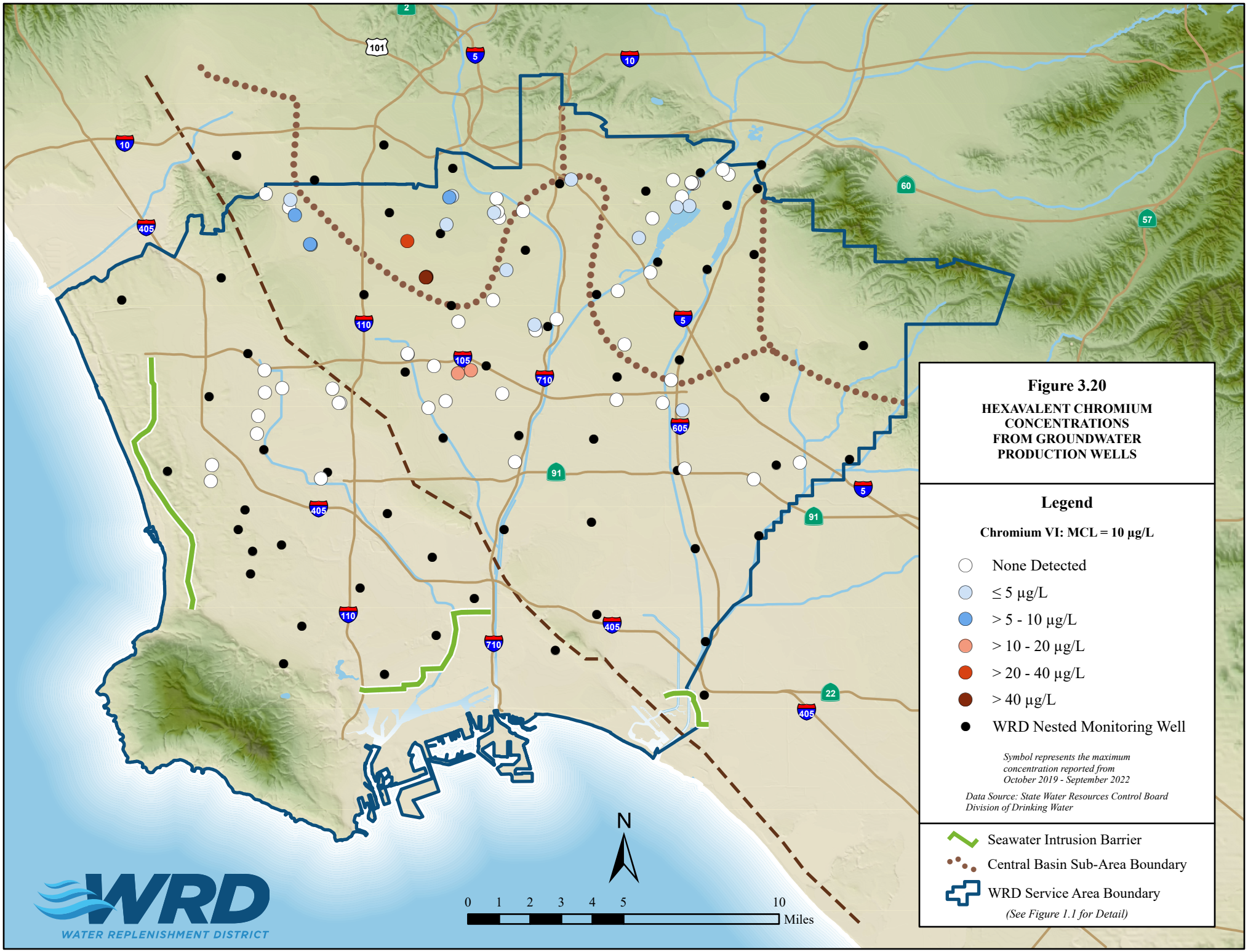


Figure 3.20
HEXAVALENT CHROMIUM CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
Chromium VI: MCL = 10 µg/L
None Detected
≤ 5 µg/L
> 5 - 10 µg/L
> 10 - 20 µg/L
> 20 - 40 µg/L
> 40 µg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT

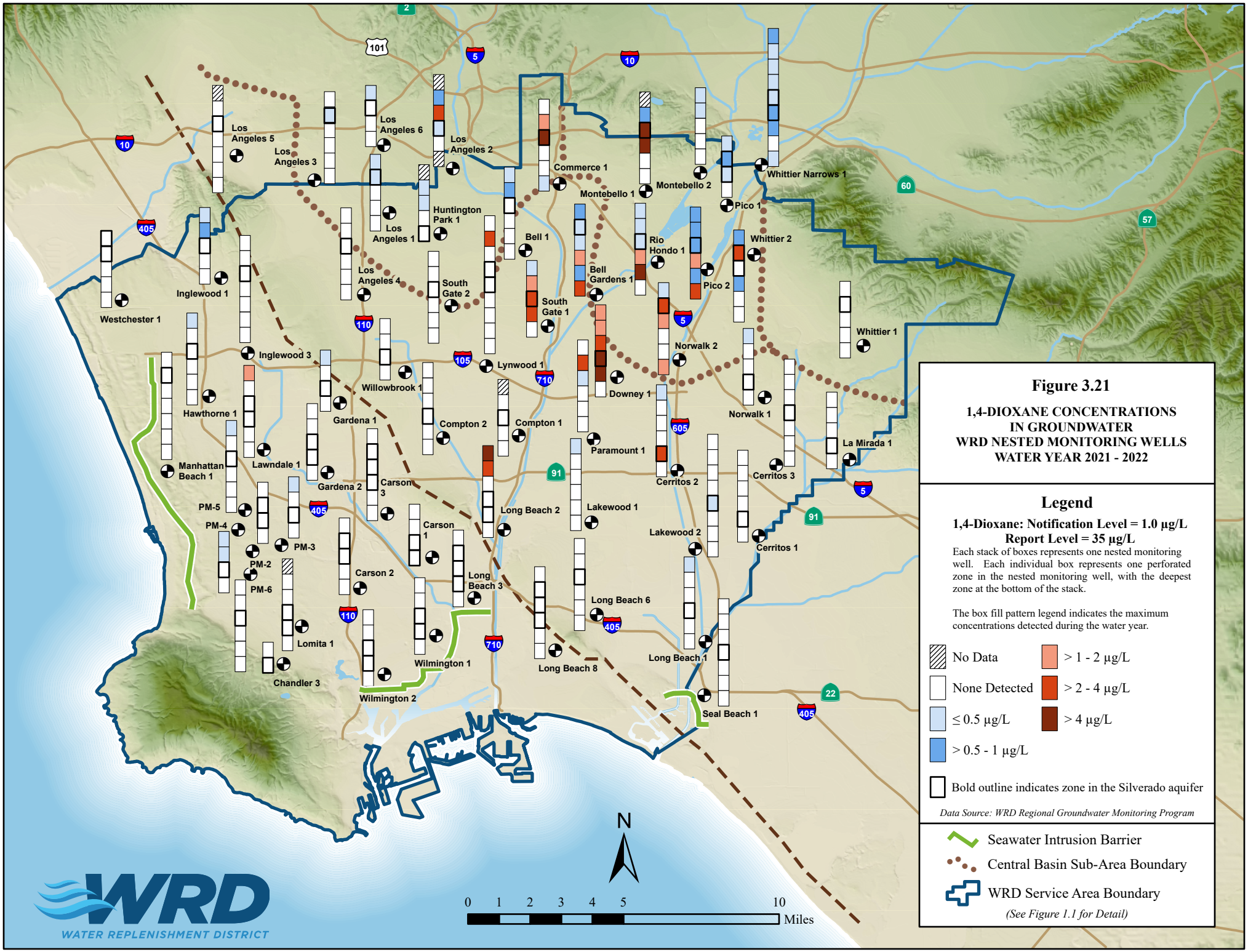


Figure 3.21

1,4-DIOXANE CONCENTRATIONS IN GROUNDWATER WRD NESTED MONITORING WELLS WATER YEAR 2021 - 2022

Legend

1,4-Dioxane: Notification Level = 1.0 µg/L
Report Level = 35 µg/L

Each stack of boxes represents one nested monitoring well. Each individual box represents one perforated zone in the nested monitoring well, with the deepest zone at the bottom of the stack.

The box fill pattern legend indicates the maximum concentrations detected during the water year.

- No Data
- None Detected
- ≤ 0.5 µg/L
- > 0.5 - 1 µg/L
- > 1 - 2 µg/L
- > 2 - 4 µg/L
- > 4 µg/L

Bold outline indicates zone in the Silverado aquifer

Data Source: WRD Regional Groundwater Monitoring Program

- Seawater Intrusion Barrier
- Central Basin Sub-Area Boundary
- WRD Service Area Boundary

(See Figure 1.1 for Detail)

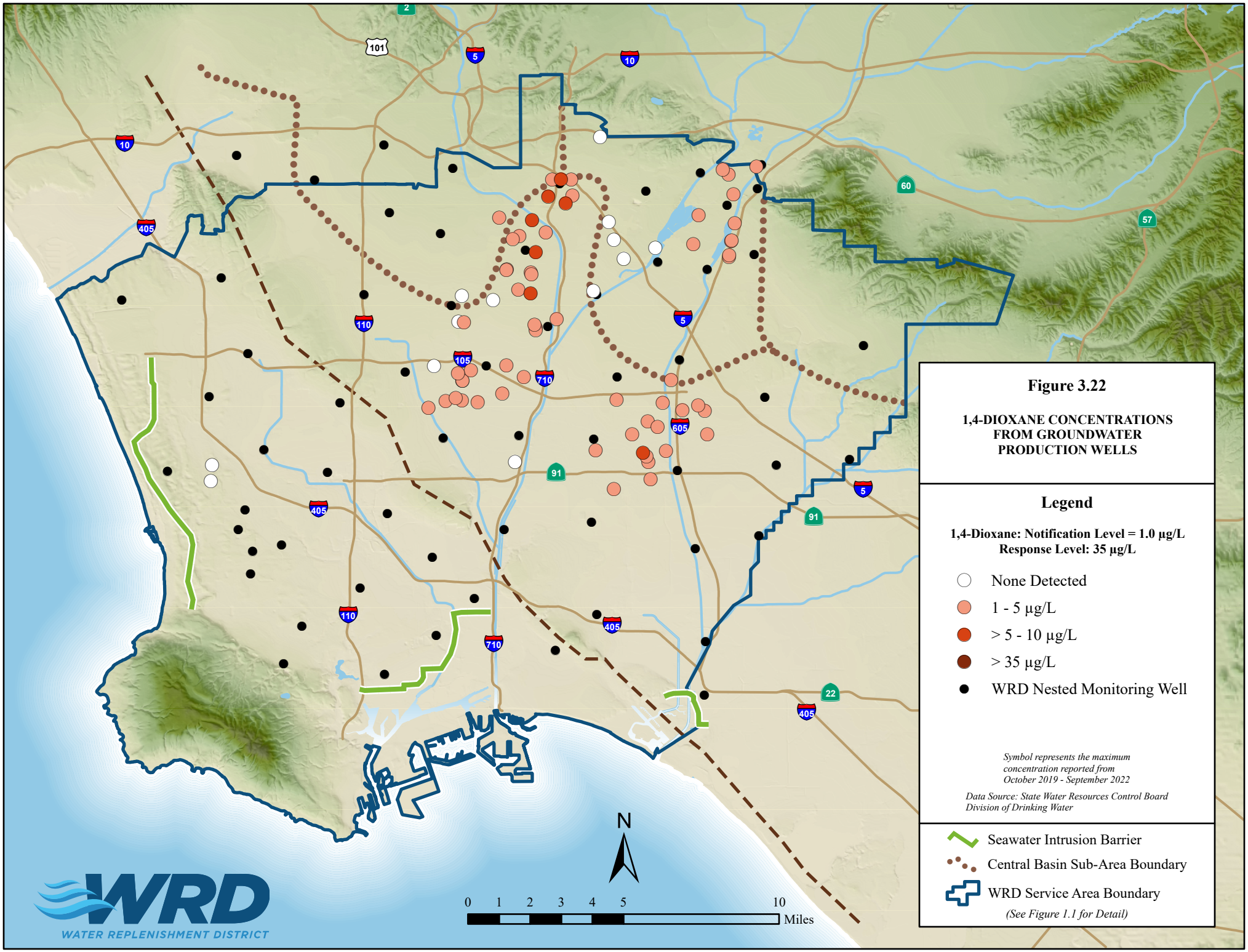


Figure 3.22
1,4-DIOXANE CONCENTRATIONS FROM GROUNDWATER PRODUCTION WELLS
Legend
1,4-Dioxane: Notification Level = 1.0 µg/L
Response Level: 35 µg/L
None Detected
1 - 5 µg/L
> 5 - 10 µg/L
> 35 µg/L
WRD Nested Monitoring Well
Symbol represents the maximum concentration reported from October 2019 - September 2022
Data Source: State Water Resources Control Board Division of Drinking Water
Seawater Intrusion Barrier
Central Basin Sub-Area Boundary
WRD Service Area Boundary
(See Figure 1.1 for Detail)
N
0 1 2 3 4 5 10
Miles
WRD
WATER REPLENISHMENT DISTRICT

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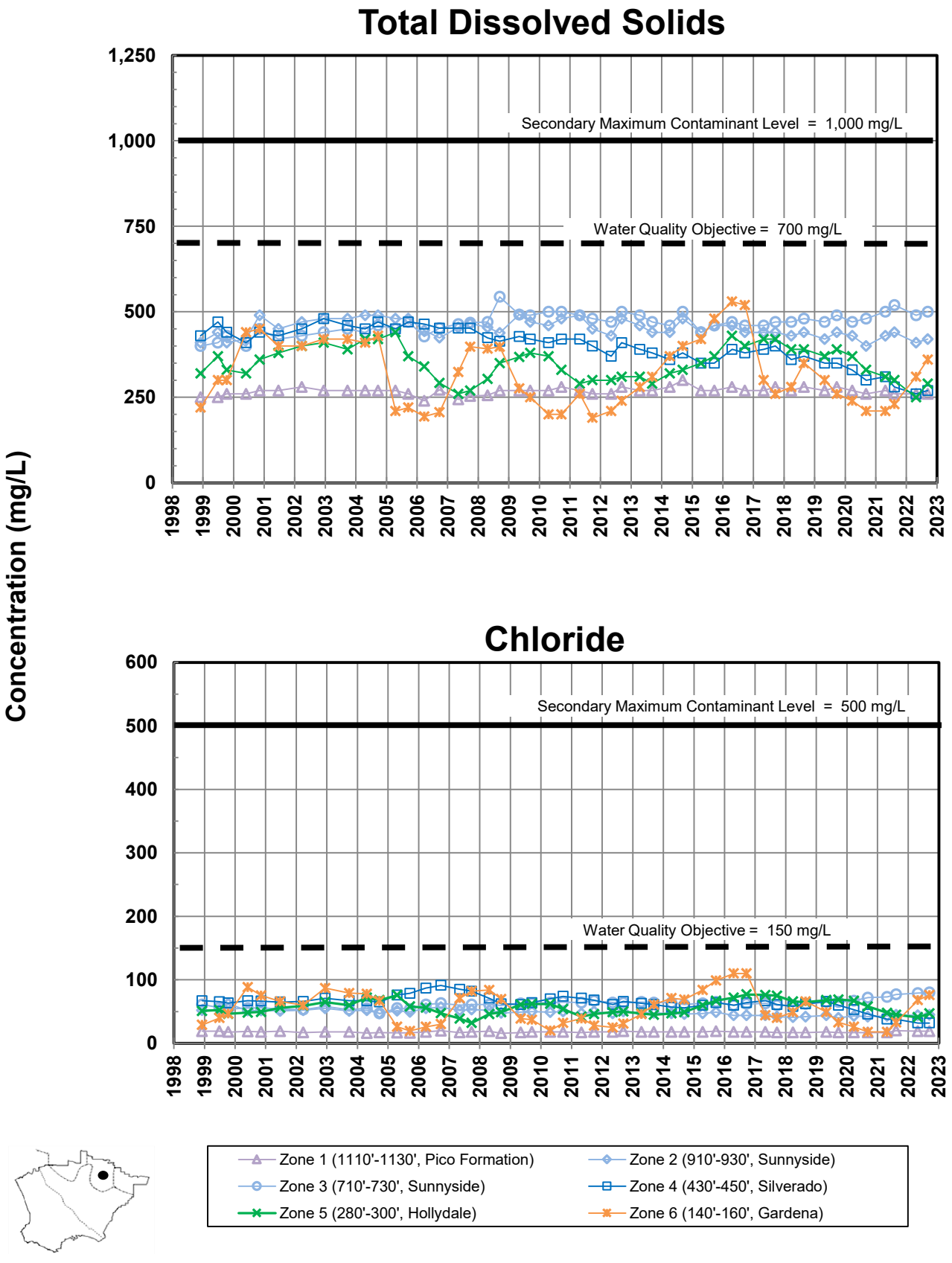
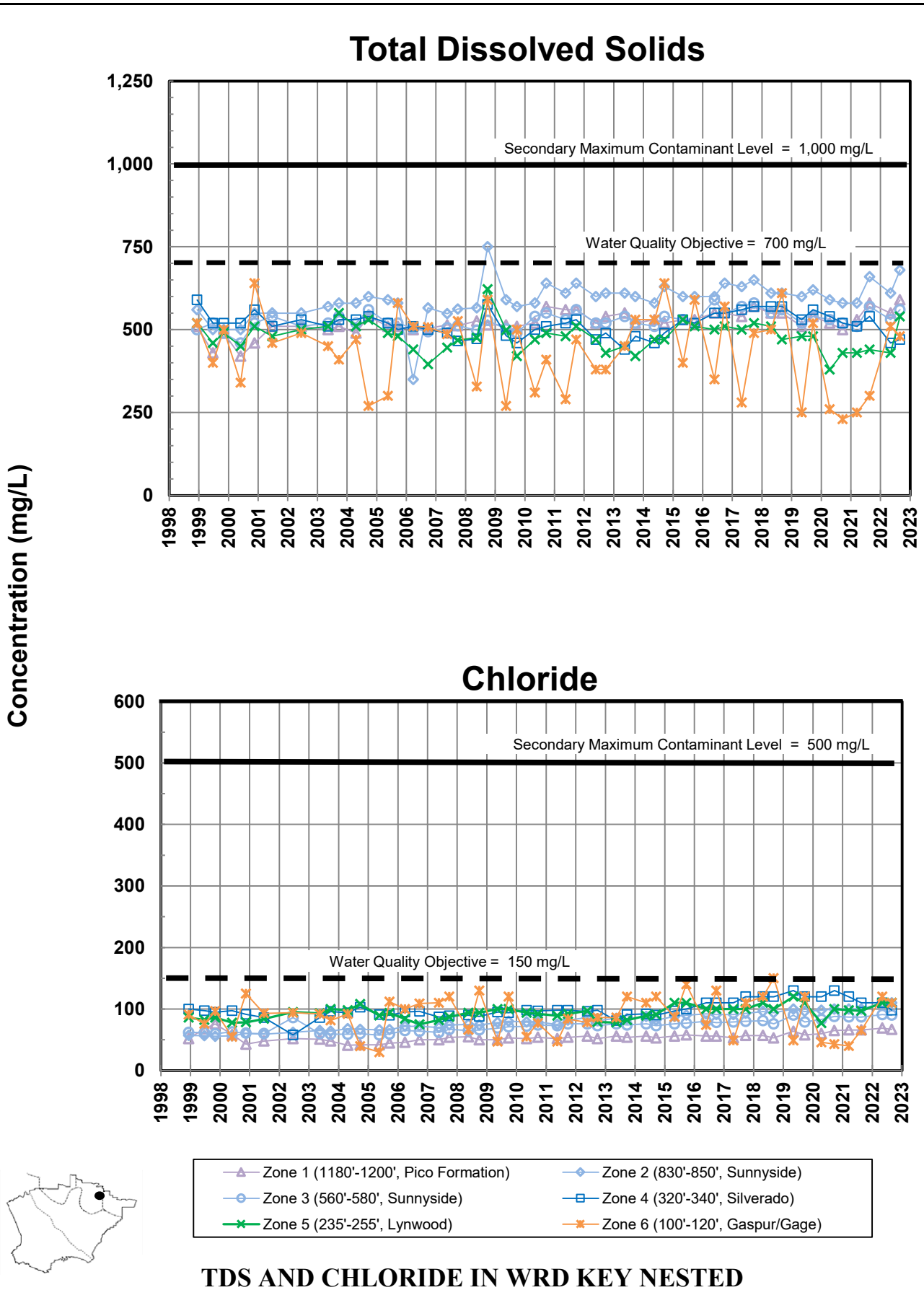


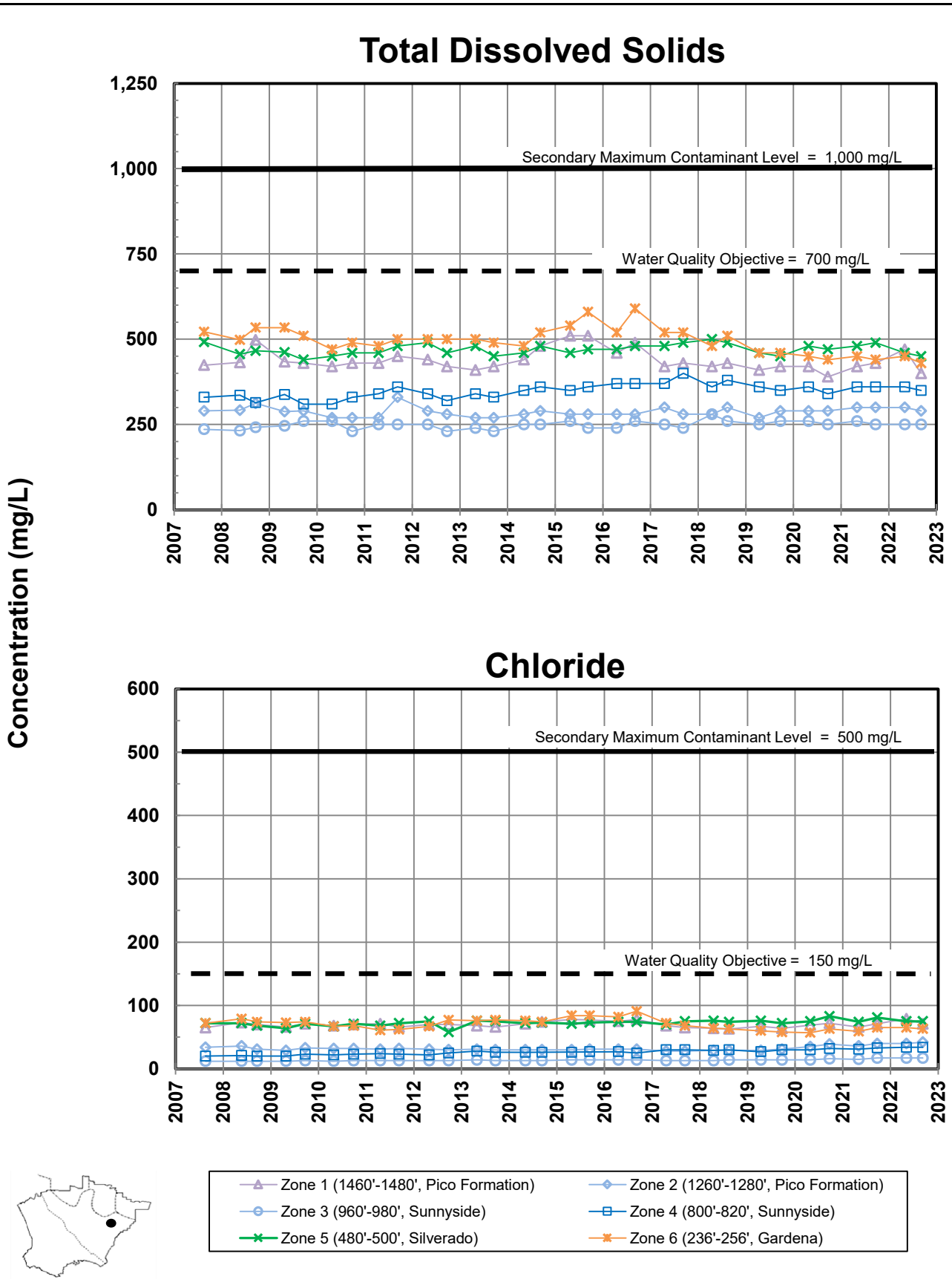
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL RIO HONDO #1

FIGURE 4.1



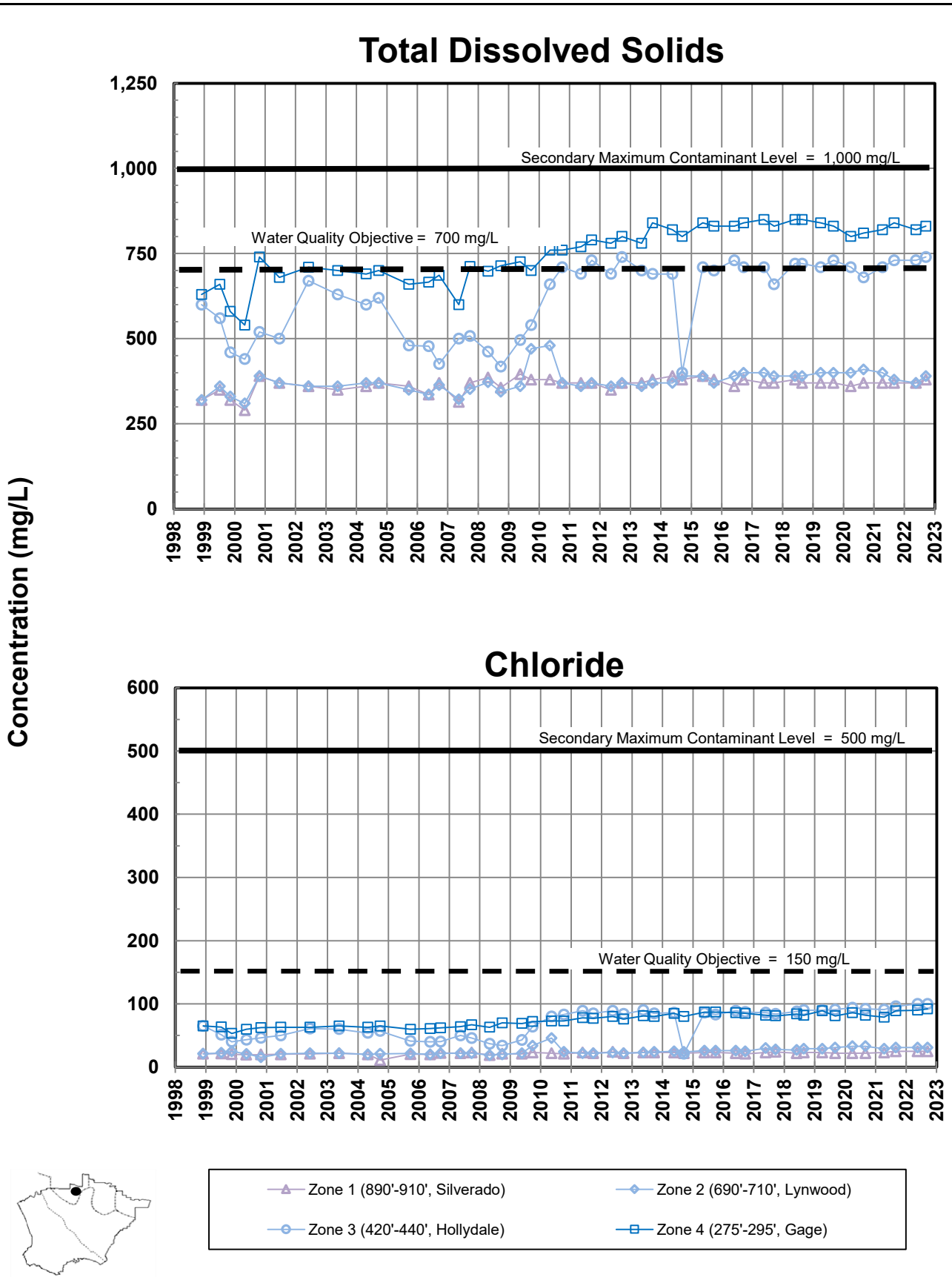
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL PICO #2

FIGURE 4.2



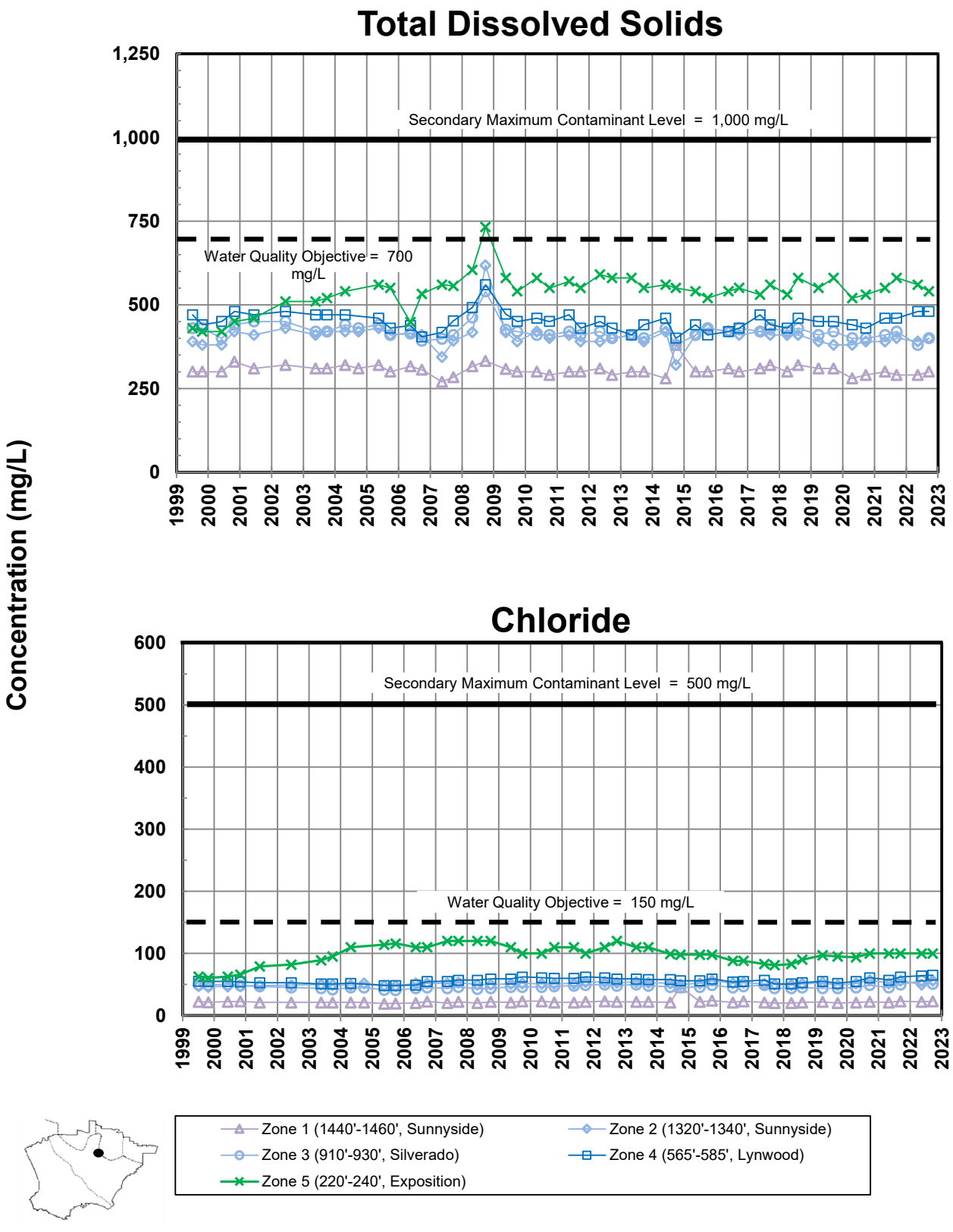
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL NORWALK #2

FIGURE 4.3



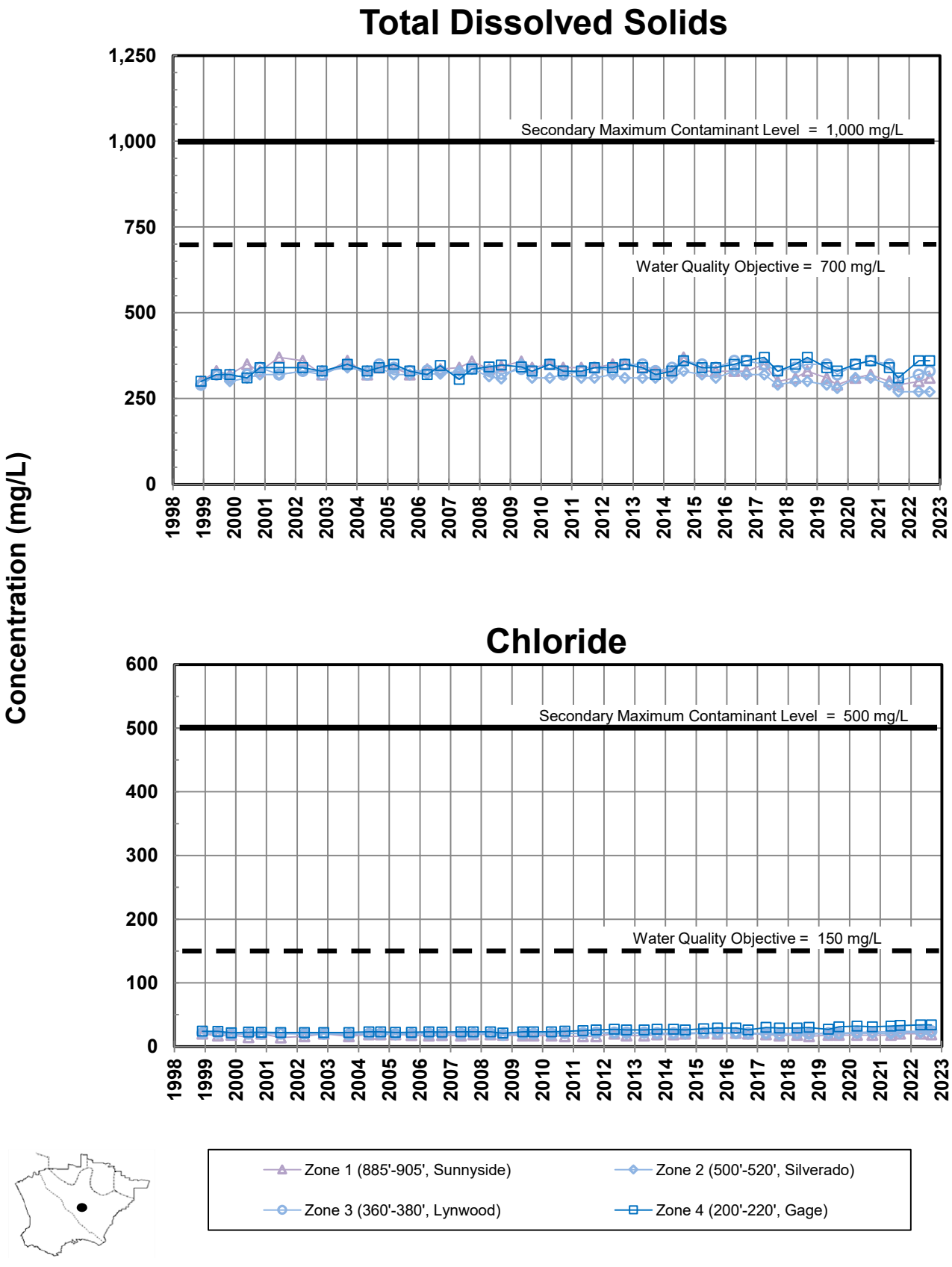
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL HUNTINGTON PARK #1

FIGURE 4.4



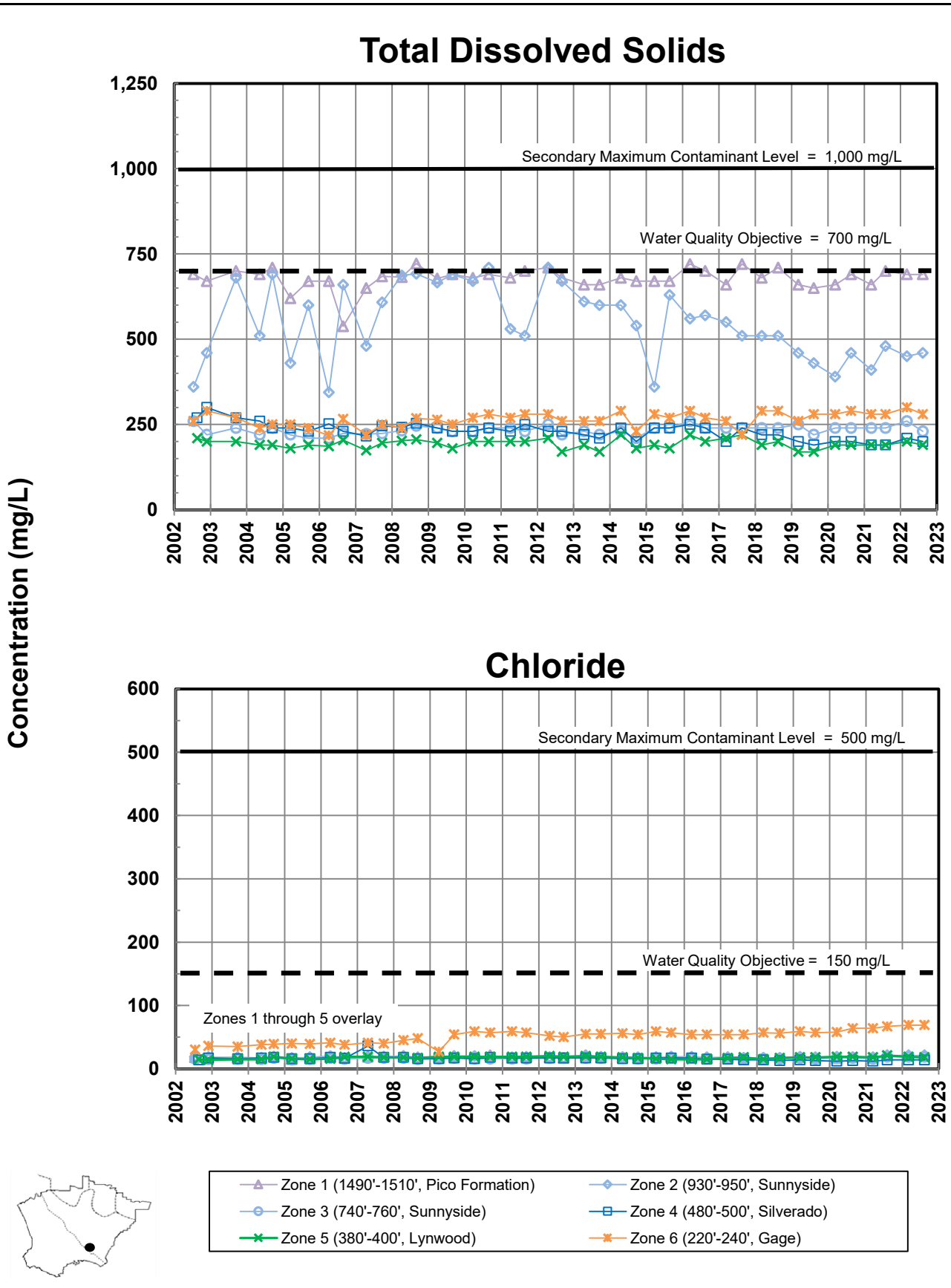
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL SOUTH GATE #1

FIGURE 4.5



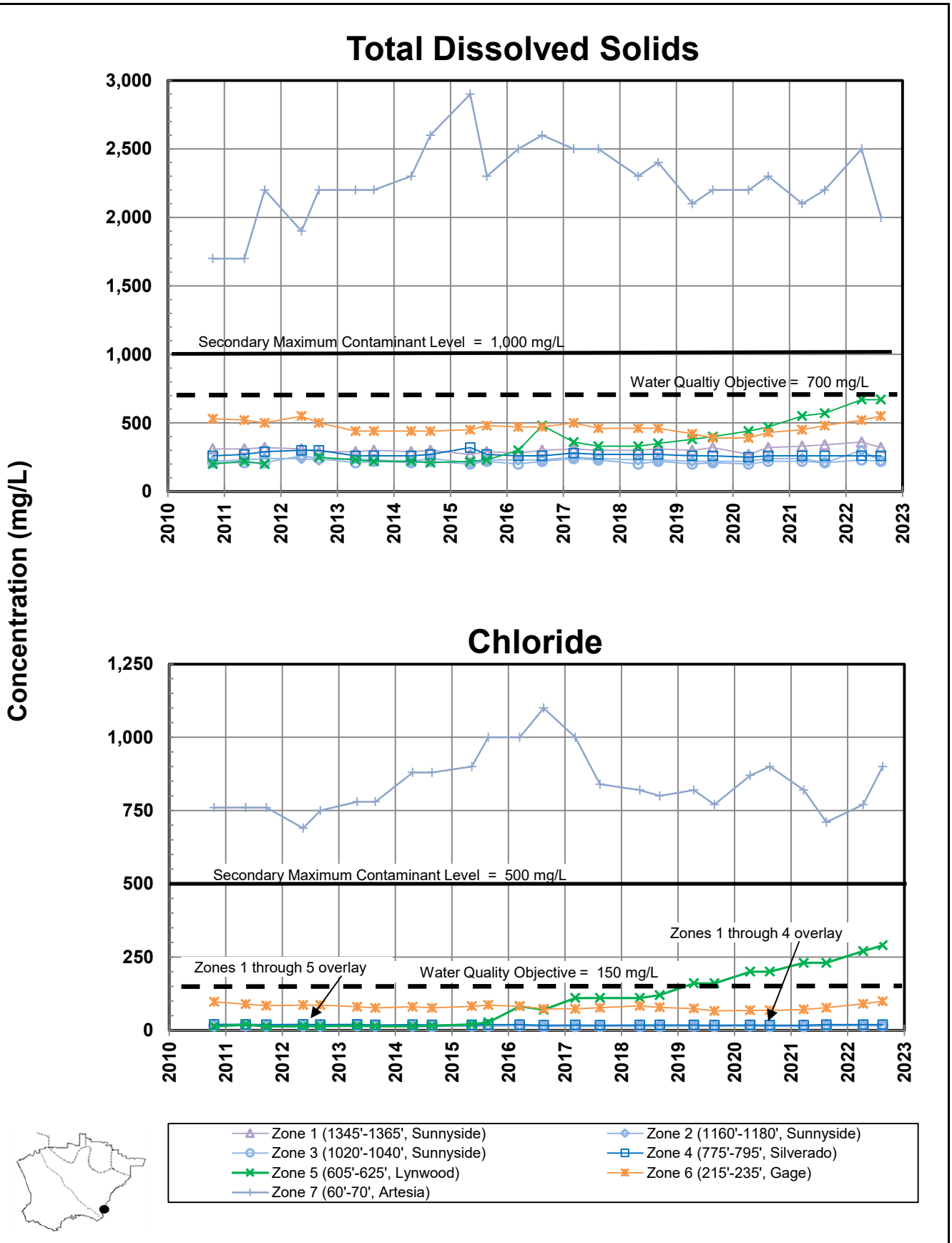
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL WILLOWBROOK #1

FIGURE 4.6



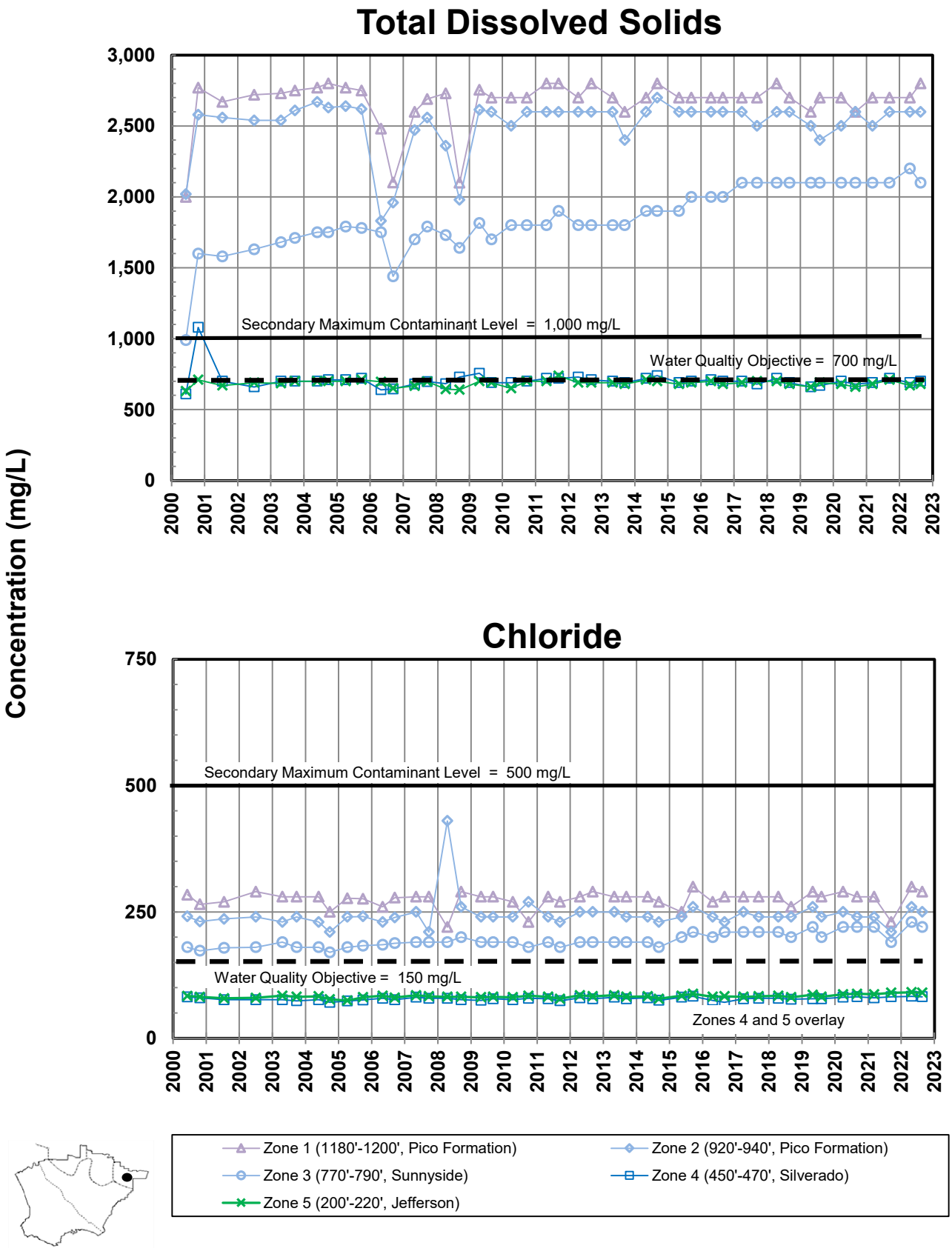
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL LONG BEACH #6

FIGURE 4.7



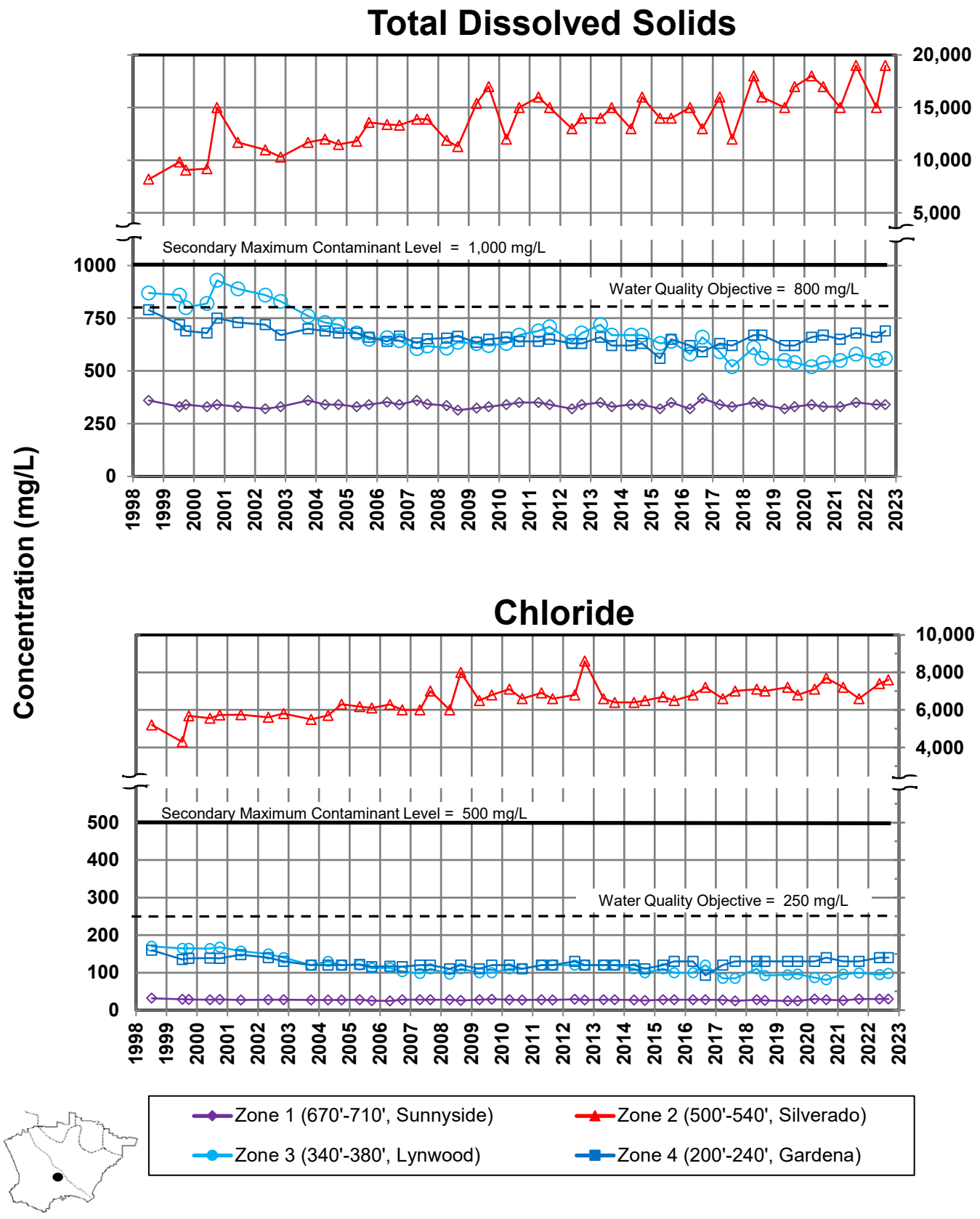
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL SEAL BEACH #1

FIGURE 4.8



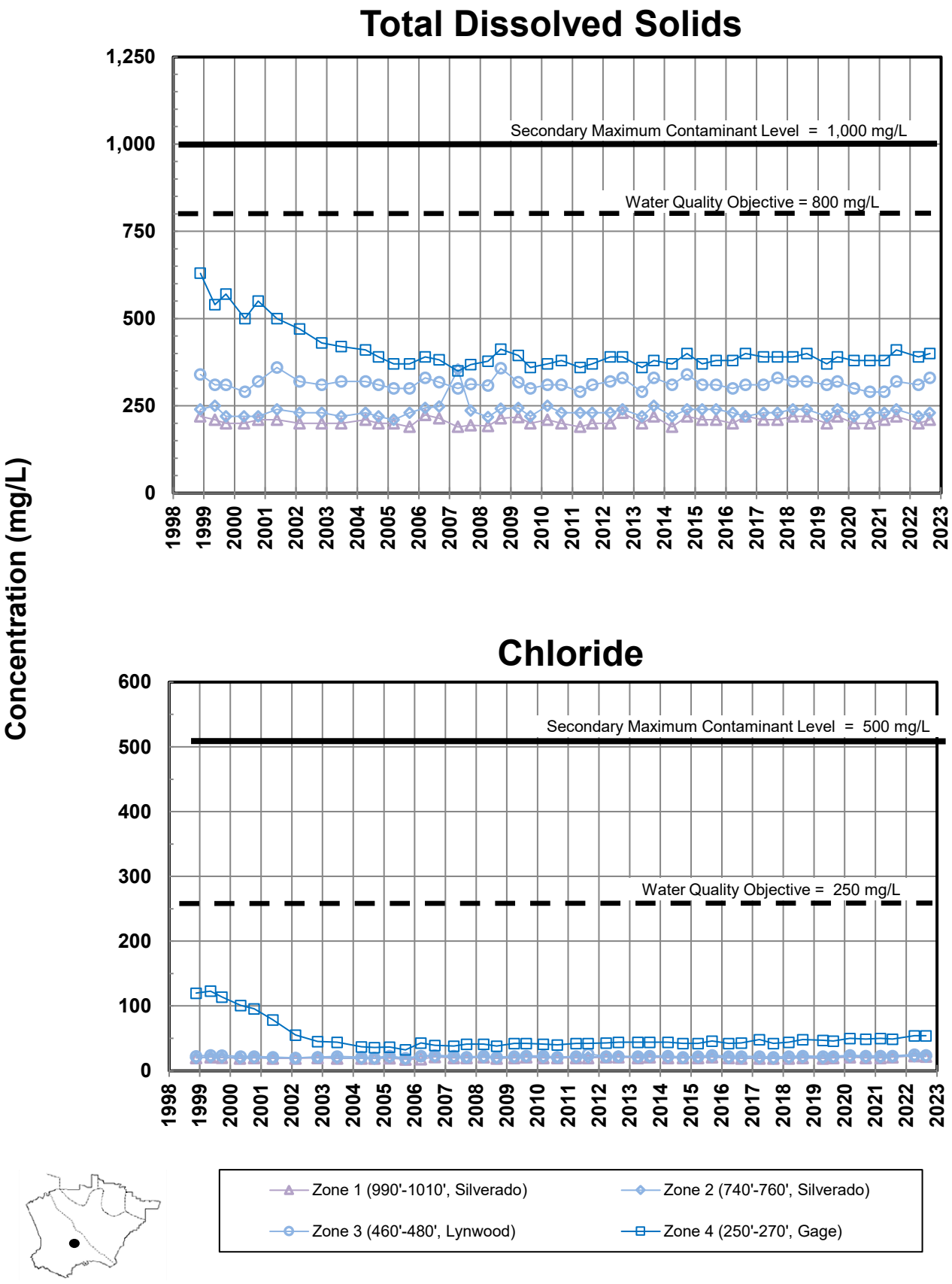
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL WHITTIER #1

FIGURE 4.9



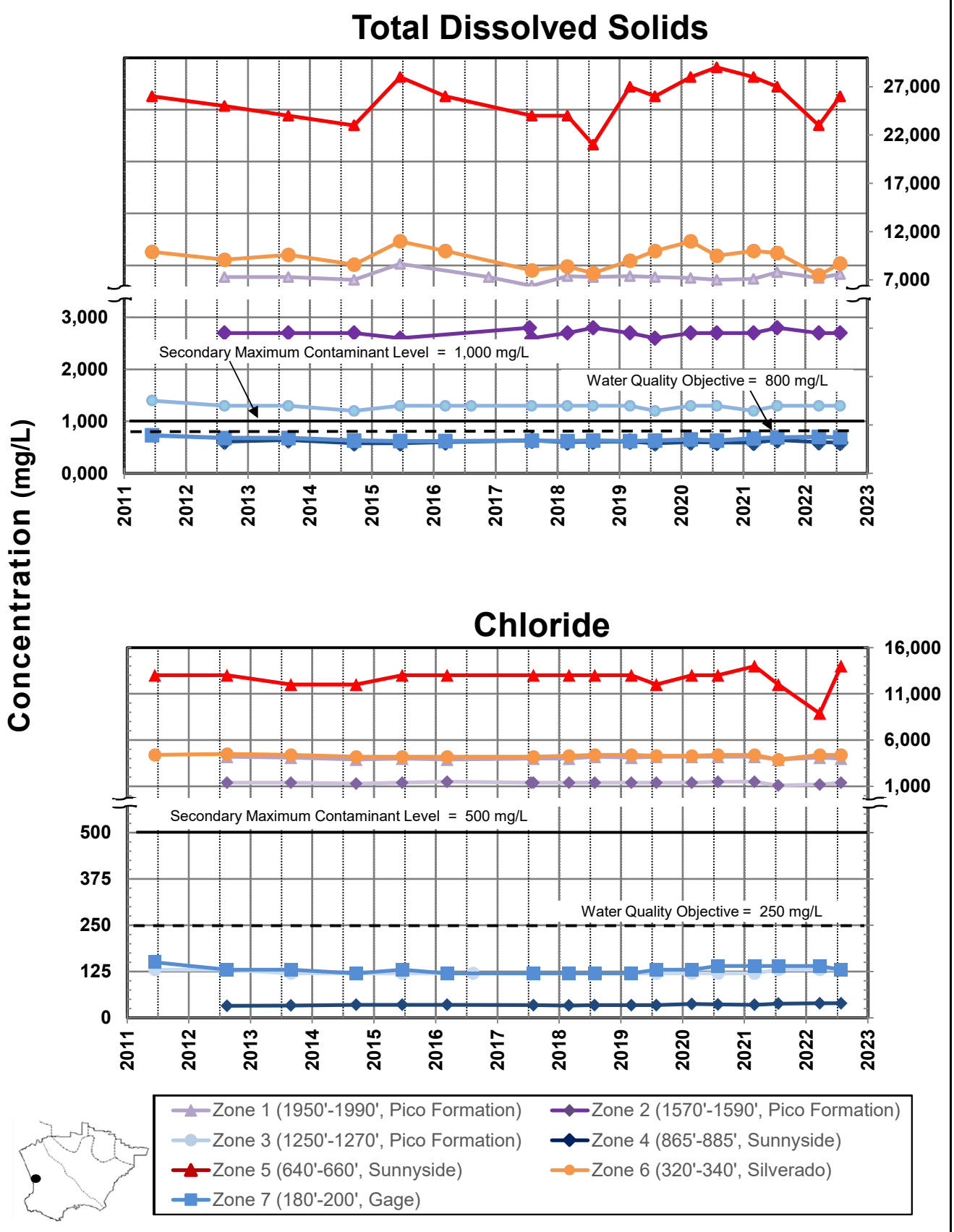
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL PM-4 MARINER

FIGURE 4.10



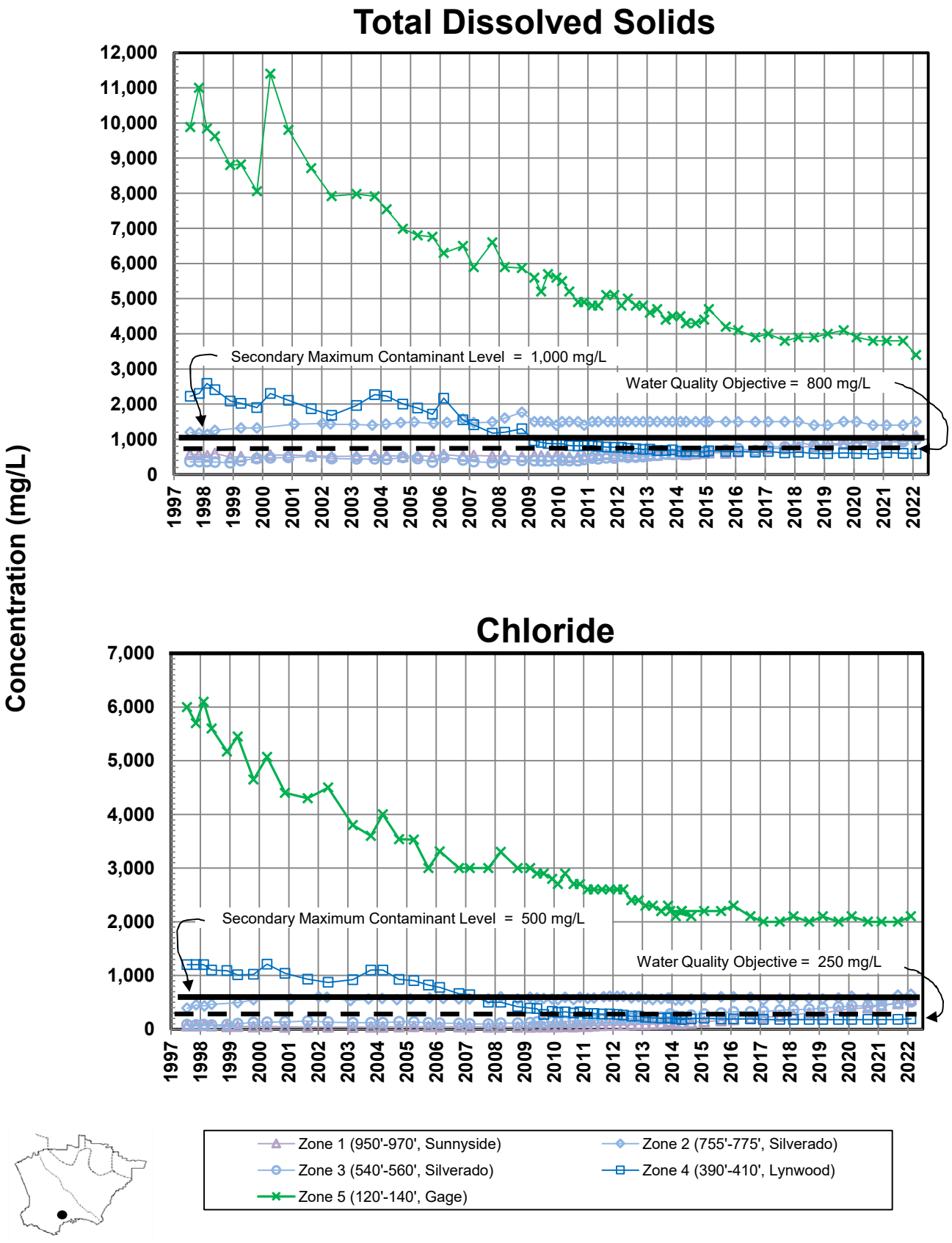
TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL CARSON #1

FIGURE 4.11



TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL MANHATTAN BEACH #1

FIGURE 4.12



TDS AND CHLORIDE IN WRD KEY NESTED MONITORING WELL WILMINGTON #2

FIGURE 4.13

Mission:

"To provide, protect and preserve safe and sustainable groundwater"

WRD
WATER REPLENISHMENT DISTRICT

Water Replenishment District
4040 Paramount Boulevard
Lakewood, CA 90712
Tel. (562) 275-4300
www.wrd.org