

**2023 ANNUAL GROUNDWATER  
MONITORING REPORT  
WESTSIDE BASIN  
SAN FRANCISCO AND SAN MATEO COUNTIES,  
CALIFORNIA**

**Prepared By:  
San Francisco Public Utilities Commission**

**In Cooperation with the City of Daly City, the City of San Bruno, and the  
California Water Service Company (South San Francisco District)**

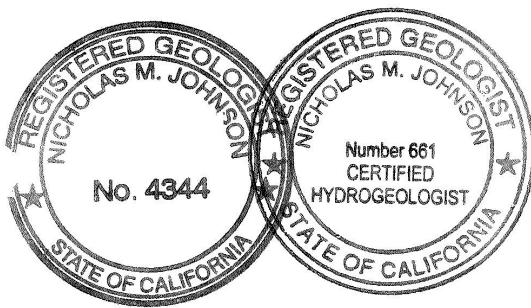
**June 2024**



June 13, 2024

### ACKNOWLEDGEMENTS

The Westside Basin Annual Groundwater Monitoring Report for 2023 was prepared by the San Francisco Public Utilities Commission in cooperation with the City of Daly City, the City of San Bruno, and the California Water Service Company (South San Francisco District). This report summarizes the results of water level elevation monitoring, general groundwater quality sampling and analysis, and additional groundwater-related field activities conducted within the Westside Basin in 2023.



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## EXECUTIVE SUMMARY

This report presents the results of the 2023 groundwater monitoring program for the Westside Groundwater Basin (Westside Basin or Basin) in San Francisco and San Mateo counties, California. The San Francisco Public Utilities Commission (SFPUC) prepared this report in cooperation with its partner agencies the City of Daly City (Daly City), the City of San Bruno (San Bruno), and the California Water Service Company (Cal Water).

The Westside Basin designated by the California Department of Water Resources has an onshore area of approximately 40 square miles extending from Golden Gate Park in San Francisco to the City of Burlingame in San Mateo County. The Basin is an important source of municipal and irrigation water supply for the communities and businesses that overlie it. The North Westside Basin refers to the portion of the Basin in San Francisco and the South Westside Basin refers to the portion of the Basin in San Mateo County.

As classified by the United States Drought Monitor, the San Francisco Peninsula experienced “severe drought,” “moderate drought, and “abnormally dry” conditions from January through March 2023 (USDA, 2023). The San Francisco Peninsula did not experience dry or drought conditions for the remainder of the 2023 CY (USDA, 2023). Precipitation at the San Francisco Downtown gauge was 33.87 inches during water year (WY) 2023 (October 2022 through September 2023) and 27.59 inches for calendar year (CY) 2023 (years cited in the remainder of this report are CYs unless specified as WYs). The average annual precipitation at this station for the preceding 30 years, 1993-2022, is 22.89 inches (NOAA, 2023).

During 2023, SFPUC measured and recorded groundwater levels in 101 monitoring wells throughout the Westside Basin. Measurements were taken quarterly in 33 wells, semi-annually in 5 wells, and continuously in 63 wells using pressure transducers and data loggers. Additionally, SFPUC and the partner agencies conducted water quality sampling in 71 monitoring wells in the spring and fall and at 13 production wells in the spring.

The Regional Groundwater Storage and Recovery (GSR) Project began a second storage period July 1, 2023, following a two-year hold period from July 2021 through June 2023 and the first storage period from May 2016 through June 2021. At the end of 2023 the project’s partner agencies had received a total of 32,935 acre-feet of SFPUC surface water in-lieu of groundwater pumping from the Westside Basin.

Based on a combination of metered and estimated pumping, total groundwater pumping from the Westside Basin was approximately 6,123 acre-feet in 2023, a 23 percent decrease compared to 2022, and 98 percent of the annual average of 6,246 acre-feet for the preceding 10 years (2013-2022).

2023 was the sixth year of the San Francisco Groundwater Supply (SFGW) Project, although municipal groundwater pumping in the North Westside Basin remained low at less than 100 acre-feet. Municipal pumping decreased in the South Westside Basin by 42 percent in 2023 compared to 2022 as a result of the start of a second GSR storage period. Daly City and San Bruno municipal pumping was typical prior to the start of the second GSR storage period. Cal Water had limited ability to pump groundwater during 2023 while its upgraded treatment plant continued to operate at a low level.

Recycled water from the North San Mateo County Sanitation District was largely unavailable for golf course irrigation during 2023 due to system shut down and maintenance. Total recycled water use at the Lake Merced Golf Club, Olympic Club, and San Francisco Golf Club was 135 acre-feet in 2023, significantly lower than an average of 564 acre-feet during 2009-2018 when recycled water was more fully available. Corresponding with the below-average use of recycled water, groundwater use by Lake Merced area golf courses in 2023 was about 350 percent of their average use during 2009-2018.

Groundwater levels in North Westside Basin monitoring wells were generally stable during 2023. In the South Westside Basin, annual high and low groundwater levels in the Primary Production Aquifer generally increased in 2023 compared to 2022.

To manage Lake Merced water levels, SFPUC continues to work with local stakeholders and regulatory agencies to implement a multi-pronged approach. The interim target lake level is 14 to 16 feet North American Vertical Datum of 1988 (NAVD88). During 2023 the seasonal low and high water-level elevations of Lake Merced's South Lake were 16.78 and 18.48 feet NAVD88, about 9 percent higher than 2022 and above the range of interim target lake levels.

Groundwater monitoring continues to provide no definitive indication of saltwater intrusion in the Westside Basin other than in proximity to San Francisco Bay. Monitoring wells near the bay at San Francisco Airport and in Burlingame continue to encounter sub-sea level groundwater elevations and elevated and/or increasing chloride concentrations in some zones.

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## **ACRONYMS AND ABBREVIATIONS**

af	acre-feet
afy	acre-feet per year
Bay	San Francisco Bay
bgs	below ground surface
CASGEM	California Statewide Groundwater Elevation Monitoring Program
San Francisco	City and County of San Francisco
Daly City	City of Daly City
DWR	California Department of Water Resources
°F	degrees Fahrenheit
San Bruno	City of San Bruno
Cal Water	California Water Service Company
CY	calendar year
EIR	Environmental Impact Report



feet NAVD88	elevation in feet relative to North American Vertical Datum 1988
GMP	groundwater management plan
GSR	Regional Groundwater Storage and Recovery Project
LSCE	Luhdorff and Scalmanini Consulting Engineers
MCL	maximum contaminant level
mgd	million gallons per day
mg/L	milligrams per liter
NAVD88	North American Vertical Datum, 1988
NSMCSD	North San Mateo County Sanitation District
RGSR	Regional Groundwater Storage and Recovery Project
SFCD	San Francisco City Datum
SFGW	San Francisco Groundwater Supply Project
SFO	San Francisco International Airport
SFPUC	San Francisco Public Utilities Commission
SFRPD	San Francisco Recreation & Parks Department
SFWD	San Francisco Water Department
SGMA	California Sustainable Groundwater Management Act of 2014
SMCEHSA	San Mateo County Environmental Health Services Agency
SMCL	secondary drinking water standard
SWBVCGMA	South Westside Basin Voluntary Cooperative Groundwater Monitoring Association
TDS	total dissolved solids
Westside Basin or Basin	Westside Groundwater Basin
WQD	SFPUC Water Quality Division
WY	water year (e.g., WY 2023 is October 1, 2022 through September 30, 2023)
USDA	United States Department of Agriculture

## 1.0 INTRODUCTION

This report presents the results of the 2023 annual groundwater monitoring program for the Westside Groundwater Basin (Westside Basin or Basin) in San Francisco and San Mateo counties, California. The San Francisco Public Utilities Commission (SFPUC) prepared this report in cooperation with the City of Daly City (Daly City), the City of San Bruno (San Bruno), and the California Water Service Company (Cal Water).

The Westside Basin extends from Golden Gate Park within the City and County of San Francisco (San Francisco) to the City of Burlingame in San Mateo County. The California Department of Water Resources (DWR) designates it as California basin number 2-35. The Basin provides an important supply of municipal and irrigation water for the communities and businesses that overlie it. The northern and southern portions of the Westside Basin on either side of the San Francisco–San Mateo county line are referred to as the North and South Westside Basins, respectively (Figure 1).

Annual monitoring of the Westside Basin began in 2000 coordinated by the San Mateo County Environmental Health Services Agency (SMCEHSA, 2000). In 2004, SFPUC assumed implementation of the monitoring program in coordination with Daly City, San Bruno, and Cal Water. The monitoring program addresses planning elements in the 2005 *Final Draft North Westside Groundwater Basin Management Plan* (SFPUC, 2005) and the *South Westside Basin Groundwater Management Plan* (San Bruno and others, 2012).

In 2006, SFPUC prepared the report *Hydrogeologic Conditions in the Westside Basin–2005* (Luhdorff and Scalmanini Consulting Engineers [LSCE], 2006) in cooperation with Daly City, San Bruno, and Cal Water. It summarized the basin hydrogeology and provided an overview of historical, current, and planned activities related to groundwater as of 2005. Since 2007, the SFPUC Water Resources Division has prepared the Westside Basin annual groundwater monitoring report.

This annual report summarizes 2023 groundwater levels, pumping, and water quality within the Westside Basin in relation to the historical record. Additionally, it provides the water level record for Lake Merced in relation to groundwater conditions. The report is intended for public education and as a resource for SFPUC and cooperating agencies. The 2023 Westside Basin annual groundwater monitoring report can be accessed at:

<https://sfpuc.org/programs/water-supply-planning/groundwater>

SFPUC, Daly City, San Bruno, and Cal Water plan to continue coordinating the execution and reporting of this comprehensive monitoring program.

Unless stated otherwise, elevations provided in this document are in reference to the North American Vertical Datum of 1988 (NAVD88), which is locally 3.2 feet above mean sea level. San Francisco City Datum (SFCD) is equivalent to an elevation of 11.37 feet NAVD88. References to “sea level” in this document refer to zero elevation NAVD88.

Annual data presented herein are for calendar years (CYs) unless specified as water years (WYs). WY 2023, for example, was October 1, 2022 to September 30, 2023. Water years are useful for parsing wet and dry seasons whereas calendar years are useful for bracketing the typically spring-to-autumn period of relatively high-water demand and groundwater pumping for irrigation. Drought periods are typically defined in water years.

## **1.1 Planned and Ongoing Projects**

The following projects are in progress or being planned concurrently with the groundwater monitoring program.

### **San Francisco Groundwater Supply Project**

The SFPUC San Francisco Groundwater Supply (SFGW) project provides a new, local source of water for San Francisco that improves water supply reliability during local and regional system maintenance, drought, and emergencies. When fully implemented, the SFGW Project will provide up to 4 million gallons per day (mgd), on average, from wells in the North Westside Basin. Groundwater produced from the SFGW wells is blended with water from SFPUC’s Regional Water System before entering the municipal drinking water system.

Phase I test wells were constructed between 2007 and 2011 at the South and West Sunset Playgrounds, the Lake Merced Pump Station, and the Central Pump Station in Golden Gate Park. The project’s Final Environmental Impact Report (EIR) was certified in December 2013 and SFPUC approved the project for completion and implementation in January 2014. Construction of pump stations for the four Phase I wells began in March 2015. Municipal groundwater production from the Lake Merced Pump Station well began in 2017 and from the South and West Sunset wells in early 2018. Production from the Golden Gate Park Central Pump Station well for park irrigation also began in early 2018. Production from the South and West Sunset wells was suspended following the detection in mid-2018 and mid-2021, respectively, of an industrial solvent in the raw groundwater. SFPUC is evaluating treatment options.

Phase II of the SFGW project began in late 2017 and involved rehabilitating two existing irrigation wells in Golden Gate Park and reconstructing their pump stations. Work on the North Lake well station was completed in March 2019 and work on the South Windmill well was completed in July 2020. The Phase II wells are being used for Golden Gate Park irrigation until

completion of the Westside Recycled Water Project in 2027 at which time, they will be connected to the local municipal drinking water system.

### **Recycled Water Projects**

The Harding Park Recycled Water Project was completed in the fall of 2012. The project uses recycled water from the North San Mateo County Sanitation District (NSMCSD), a subsidiary of Daly City, to irrigate Harding Park and Fleming golf courses in San Francisco. SFPUC partnered with NSMCSD to construct a new pump station, distribution piping, and storage tank. The project replaces the use of potable water from SFPUC's Regional Water System for golf course irrigation.

NSMCSD also supplies recycled water to three other golf courses near Lake Merced: Lake Merced Golf Club, Olympic Club, and San Francisco Golf Club.

The Westside Recycled Water Project includes the construction of a new recycled water treatment plant, storage reservoir, pump station, and associated pipelines to replace surface water and groundwater currently used to irrigate Golden Gate Park and Lincoln Park Golf Course in the Lobos basin. The EIR for the project was completed and certified in September 2015. Construction of the recycled water pipeline began in early 2017 and was completed in July 2018. Construction of the treatment facility began in late 2017, and pump station construction began in mid-2019. Recycled water system start-up testing is anticipated for 2025 with fully energized operations anticipated by late 2026.

Plans are under way to supply the San Francisco Zoo and the cemeteries in Colma with recycled water for irrigation in place of groundwater. In addition, SFPUC is currently evaluating feasibility of utilizing excess recycled water produced during off-peak irrigation periods to augment Lake Merced levels.

### **Regional Groundwater Storage and Recovery Project**

In cooperation with its partner agencies Daly City, San Bruno, and Cal Water, SFPUC is establishing a dry-year groundwater supply for its Regional Water System through implementation of the Regional Groundwater Storage and Recovery (GSR) Project in the South Westside Basin. The partner agencies currently supply potable water to their retail customers through a combination of groundwater pumped from the South Westside Basin and surface water purchased from SFPUC. The GSR Project will provide supplemental SFPUC surface water to the partner agencies during normal and wet years. During these years, the partner agencies will reduce their groundwater pumping by a comparable amount, increasing the amount of groundwater retained in storage (referred to as "in-lieu recharge").

During a period of normal and wet years, the volume of groundwater in the South Westside Basin will increase due to natural recharge and reduced groundwater pumping by the partner

agencies, increasing storage by up to 61,000 acre-feet (af) (about 20 billion gallons). During a period of dry or drought years, SFPUC's GSR project wells will pump the stored groundwater while partner agency wells will withdraw their agreed-upon portion of the basin yield as needed to supplement other supplies. This new water supply will increase the Regional Water System's available water supply during a multi-year drought.

The 2002-2005 Pilot In-Lieu Recharge Demonstration Program evaluated the feasibility of GSR in the South Westside Basin and indicated that GSR could be a viable dry-year water supply project (LSCE, 2005).

The GSR Project was approved in 2014, began construction in spring 2015, has completed initial startup, testing, and commissioning, with full completion anticipated in 2026. In addition, a new capital improvement project, "The Regional Groundwater Treatment Project," is evaluating centralized treatment options for some GSR wells. The GSR project delivered in-lieu water to the partner agencies during an initial 5-year storage period from May 2016 through June 2021. The partner agencies resumed pumping groundwater up to their individual designated quantities during a 2-year hold period from July 2021 through June 2023. The project began delivering in-lieu water during a second storage period beginning July 2023. At the end of 2023 the project's partner agencies had received a total of 32,935 acre-feet of SFPUC surface water in-lieu of groundwater pumping from the Westside Basin. Minor amounts of groundwater pumping from GSR wells have occurred during start-up testing and monthly maintenance.

### **Westside Basin Groundwater-Flow Model**

Development of the Westside Basin Groundwater Flow Model began in 2002 with funding from a California State Assembly Bill 303 grant (Daly City, 2003). Subsequent model updates and improvements have been funded by SFPUC and the partner agencies for the GSR Project (HydroFocus, 2007, 2009, 2011, 2017). SFPUC and the partner agencies have used the model to evaluate potential changes in groundwater conditions as a result of future activities and management practices. Model simulations supported the EIRs for the SFGW and GSR projects (Kennedy-Jenks, 2012). More recently the model was used to evaluate the expected performance of the GSR project (SFPUC, 2021). The model will continue to be updated and refined as new data are collected, analyzed, and incorporated into the Basin's hydrogeologic conceptual model and computer model calibration data set.

### **South Westside Basin Groundwater Management Plan**

The 2012 *South Westside Basin Groundwater Management Plan* (GMP) provides a framework for regional groundwater management that sustains the beneficial uses of the groundwater resource in the South Westside Basin (San Bruno and others, 2012). Development of the plan was led by San Bruno and funded by a grant from DWR. The plan's objectives include informing the public of the importance, challenges, and opportunities of groundwater

management in the South Westside Basin and developing consensus among stakeholders on issues and solutions related to groundwater. Additionally, the plan's objectives include building relationships among stakeholders within the South Westside Basin and local and state agencies and supporting programs and actions to ensure the long-term sustainability of the groundwater resource. The plan provides recommendations for managing groundwater levels, protecting groundwater quality, and avoiding land surface subsidence.

### **North Westside Basin Groundwater Management Plan**

SFPUC developed draft groundwater management plans for the North Westside Basin in 2005 and 2016. The recent plan was developed to guide implementation of the SFGW Project and sustainably manage the groundwater resource within the northern portion of the Basin. The plan summarizes the Basin hydrogeology, defines measurable objectives and actions for avoiding saltwater intrusion, land subsidence, and impacts to interconnected surface water, while protecting groundwater yield and quality. The plan also provides for public outreach, stakeholder involvement, and coordination with the management of the South Westside Basin. A draft plan was completed in 2016 and an update will be completed in 2025. Because DWR classified the Westside Basin as very low priority in 2019, submission of a Westside Basin groundwater sustainability plan to DWR is not currently required under the 2014 California Sustainable Groundwater Management Act (SGMA).

### **1.2 Municipal Water Agencies**

Approximately 2.7 million people rely on water supplied by SFPUC to meet their daily water needs. SFPUC is the retail water supplier for domestic, commercial, and institutional customers in San Francisco, which includes the North Westside Basin, and for numerous retail accounts outside the city. In addition, SFPUC provides water to 27 wholesale customers in San Mateo, Alameda, and Santa Clara counties under contractual agreement. Approximately two-thirds of the SFPUC water supply are delivered to the wholesale customers and one-third is delivered to retail customers.

The SFPUC Regional Water System draws approximately 85% of its water from runoff collected in Hetch Hetchy Reservoir in the upper Tuolumne River watershed within Yosemite National Park. This water is conveyed by gravity to Bay Area reservoirs and water users through a 167-mile aqueduct. The remainder of the water supply is derived from local runoff collected in reservoirs in the Alameda Creek and Peninsula watersheds in Alameda and San Mateo counties.

Water supply systems within the South Westside Basin are operated and managed by the Daly City Department of Water and Wastewater Resources, the Water Division of the San Bruno Public Services Department, and Cal Water (an investor-owned water utility) for South San

Francisco District that includes South San Francisco, Colma, and a small portion of Daly City. These systems are supplied by groundwater pumped from the South Westside Basin and contracted water deliveries from the SFPUC Regional Water System. Since the 1990s, SFPUC and its partner agencies in the South Westside Basin have worked cooperatively to monitor and manage groundwater and coordinate projects.

### **1.3 California Groundwater Elevation Monitoring Program**

DWR established the California Statewide Groundwater Elevation Monitoring Program (CASGEM) in 2009 in accordance with Senate Bill X7-6. It requires designated responsible parties to monitor seasonal groundwater elevations in basins within their jurisdiction and submit these data to DWR. SFPUC is the designated CASGEM entity for monitoring and reporting groundwater elevations in the North Westside Basin and six other small groundwater basins within San Francisco: Lobos, Marina, Downtown San Francisco, Islais Valley, South San Francisco, and Visitacion Valley. The potential groundwater supply from the six small basins is relatively minor and currently unused other than springs in Lobos Basin that supply water for the Presidio.

SFPUC measured groundwater levels in CASGEM monitoring wells in the North Westside Basin during in spring and fall 2023 and the Islais Valley Basin in fall 2023. Consisting of Daly City, San Bruno, and Cal Water, the South Westside Basin Voluntary Cooperative Groundwater Monitoring Association (SWBVCGMA) monitors CASGEM wells in the South Westside Basin.

## **2.0 WESTSIDE BASIN CLIMATE, HYDROLOGY, AND HYDROGEOLOGY**

### **2.1 Climate**

San Francisco has a Mediterranean climate with cool dry summers and mild wet winters. Based on meteorological data collected between 1914 and 2015, San Francisco's annual average daily high and low air temperatures are approximately 64- and 51-degrees Fahrenheit (°F), respectively. Temperatures range seasonally from a monthly average daily low of about 45°F in December and January to a monthly average daily high of about 70°F in September and October.

Since the early 1900s, San Francisco's mean annual precipitation has been approximately 21 inches, nearly all of which occurs as rainfall. On average, about 85% of annual precipitation occurs between November and March. December, January, and February are the wettest months, with rainfall averaging approximately four inches per month. May through September are the driest months, with average monthly rainfall of less than one-half inch.

Portions of the Westside Basin near the Pacific Ocean have a distinct maritime Mediterranean climate influenced by wind, fog, and precipitation. In summer and fall, locations adjacent to the ocean, such as Lake Merced, are often foggy with cool temperatures in the 50s and 60s °F.

As classified by the United States Drought Monitor, the San Francisco Peninsula experienced "severe drought," "moderate drought, and "abnormally dry" conditions from January through March 2023 (USDA, 2023). The San Francisco Peninsula did not experience dry or drought conditions for the remainder of the 2023 CY (USDA, 2023). Following three years of below average precipitation during WYs 2020-2022, the San Francisco Downtown gauge recorded 33.87 inches during WY 2023 (October 2022 through September 2023) and 27.59 inches for CY 2023. The average annual precipitation at this station for the preceding 30 years (CYs 1993-2022) is 22.89 inches (NOAA, 2023).

### **2.2 Hydrogeology**

The Westside Basin has a land surface area of approximately 40 square miles in San Francisco and San Mateo counties (Figure 1). DWR designates it as California groundwater basin number 2-35. The Westside Basin borders five other groundwater basins: the Lobos Basin to the north (DWR basin 2-38); the Downtown, Islais Valley, and Visitacion Valley groundwater basins to the east (basins 2-40, 2-33, and 2-32); and the San Mateo Plain subbasin of the Santa Clara Valley basin to the south (basin 2-9.03).

As defined by Phillips and others (1993), the Westside Basin's northern boundary extends approximately four miles inland from Lands End north of Ocean Beach in San Francisco along a



mostly buried bedrock ridge north and through Golden Gate Park. Continuing clockwise around the Basin, its northeastern boundary encompasses the panhandle of Golden Gate Park and extends five miles south through Twin Peaks and Mount Davidson to the San Francisco-San Mateo county line about a mile east of Lake Merced. The eastern Basin boundary continues south into San Mateo County, extending six miles along the southern flank of San Bruno Mountain to San Francisco Bay, and then five miles along the bay shore from South San Francisco to Burlingame. A buried bedrock ridge and a thick accumulation of Bay Mud appears to separate the basin from San Francisco Bay in the San Bruno area. The 1.6-mile southeastern boundary is defined by a bedrock high separating the Westside Basin from the San Mateo Plain Subbasin. The Basin's southwestern boundary follows the Serra Fault zone from Hillsborough twelve miles northwest to the Pacific Ocean. The Basin's onshore western boundary follows the coast for about six miles from Daly City north along Ocean Beach. The Basin may extend west offshore until reaching low-permeability zones associated with deformation along one or more branches of the San Andreas fault. The 2.2-mile county-line boundary between the North and South Westside basins does not have any hydrogeological significance other than influencing the distribution of municipal groundwater pumping.

The Westside Basin contains two primary water-bearing geologic units, the weakly consolidated upper Merced Formation and the younger unconsolidated Colma Formation. These generally sandy units are underlain and bounded by the structurally deformed middle and lower units of the Merced Formation and low-permeability basement rock consisting primarily of the Franciscan Complex. Surficial units include dune sands, alluvium along existing and former stream channels, hillslope deposits, and both engineered and non-engineered artificial fill. These surficial deposits may directly overlie basement rock in hillslope areas of the Basin. The total thickness of the basin's water-bearing units ranges from about 300 feet near Golden Gate Park to 700 feet or more in portions of the South Westside Basin (Figure 2).

Three aquifer zones are recognized in the Westside Basin, the Shallow, Primary Production, and Deep aquifers (LSCE, 2010). The Shallow Aquifer extends 50 to 120 feet below the water table within surficial deposits and the Colma and upper Merced formations. This shallow water-table zone occurs above the "-100-foot clay" and other clayey aquitards beneath portions of the Sunset District and Lake Merced areas. A shallow water-table zone is less well defined in the South Westside Basin due to predominantly fine-grained deposits at shallow depths and the partial dewatering of shallow zones.

The roughly 300-foot thick Primary Production Aquifer occurs within the upper Merced Formation below the -100-foot clay aquitard (where present) and above the W-clay aquitard, or its equivalent, from the Sunset District through Daly City to Colma. The Primary Production Aquifer is subdivided vertically by discontinuous aquitards, including the X- and Y-clays extending between the Sunset District and Daly City, and an aquitard that separates shallow

and deep aquifer zones beneath South San Francisco. The Primary Production Aquifer becomes overlain by fine-grained Bay Sediments southeast of South San Francisco.

The Deep Aquifer is up to 200 feet thick and occurs within the upper Merced Formation beneath the W-clay, or its equivalent, from the Sunset District to Colma.

Groundwater in the vicinity of Lake Merced and north to Golden Gate Park is encountered at relatively shallow depths, ranging from approximately 5 to 60 feet below ground surface (bgs). Lake Merced is incised into the Colma Formation and is in hydraulic continuity with the Shallow Aquifer. Within the pumping depressions of the South Westside Basin, depths to groundwater within the Primary Production and Deep aquifers can exceed 250 feet bgs. Groundwater movement is restricted along the southwestern boundary of the South Westside Basin by a low-permeability boundary formed along the Serra Fault zone.

## **2.3 Surface Water Hydrology**

### **Lake Merced**

Until the early 1900s, Lake Merced was a natural lake fed by local runoff and springflow and drained by a stream discharging from the northwestern end of the lake. The stream flowed to the ocean through the present-day location of the San Francisco Zoo and Sloat Boulevard. The springs were primarily along the eastern side and beneath the southern portion of the lake, resulting in primarily south-to-north flow through the lake.

Today, Lake Merced consists of four lakes (North, East, South, and Impound lakes) and has no channelized inflow or outflow. A narrow channel connects North Lake and East Lake and equalizes their water surface elevations. A conduit between North Lake and South Lake allows water to flow between the lakes when the elevation in either lake is at least approximately 3.35 feet SFCD (14.72 feet NAVD88). When lake levels are below that elevation, these two lakes are separated and typically exhibit different water surface elevations. South Lake and Impound Lake are separated below an elevation of approximately 4.26 feet SFCD (15.63 feet NAVD88) by a levee that contains the Ingleside combined sewer pipeline and serves as the foundation of an elevated pedestrian walkway. Water flows freely beneath the pedestrian walkway and connects both lakes when the level of either lake is above this elevation. Under current and recent conditions, the flow of water through the four lakes is generally north to south.

Beginning with the construction of the Vista Grande Canal and Tunnel by Spring Valley Water Works in 1897, urbanization of the Lake Merced watershed has diverted storm runoff away from the lake to help maintain the lake's water quality. Additionally, urbanization has impeded springflow into the lake as a result of emplaced fill, reduced groundwater recharge to the Shallow Aquifer, and downward hydraulic gradients caused by pumping from the underlying

aquifers. As a result, lake levels have become more sensitive to seasonal and climatic variability.

### **Pine Lake**

Pine Lake (also known as Laguna Puerca) is a relatively shallow, 3.4-acre freshwater lake located in the westernmost portion of Stern Grove and Pine Lake Park, about 0.5-mile northeast of Lake Merced. Pine Lake is one of San Francisco's few natural lakes. Similar to Lake Merced, Pine Lake is incised into the upper portion of the Shallow Aquifer.

The San Francisco Recreation & Parks Department (SFRPD) completed an improvement program for Stern Grove and Pine Lake Park in 2007. Since then, lake levels have been maintained at about 31.5 feet SFCD (42.9 feet NAVD88) by augmenting the lake with groundwater pumped from the previously inactive Stern Grove well approximately 1,500 feet east of Pine Lake. According to SFRPD staff, the lake level is maintained by pumping groundwater into the lake for 2 to 3 days in the summer and 1 day in winter. As a result, the recent average lake level is about 4 feet higher than in 2007 and about 7 feet higher than in 2004, with a typical depth of about 11.5 feet.

### **Golden Gate Park Lakes**

Golden Gate Park has 13 small lakes and ponds that were constructed or substantially altered by the park's development. Five of the lakes (Elk Glen, Middle, South, Mallard, and North lakes) are believed to have been natural and fed by groundwater, whereas the other lakes and ponds may or may not have coincided with pre-existing natural surface water features. The lake levels are currently maintained by groundwater pumped from SFGW project wells until deliveries from the Westside Recycled Water Project begin.

### **3.0 HISTORICAL AND RECENT GROUNDWATER USE**

Groundwater pumped from the Westside Basin has been used as a water supply since at least the early 1900s (Bartell, 1913a). Table 1 and Figure 3 summarize the historical record of municipal groundwater pumping from the Westside Basin since 1949. Table 2 and Figure 4 summarize the record of groundwater pumping for park, golf course, and cemetery irrigation. A brief summary of municipal and irrigation water use follows.

#### **San Francisco**

By the early 1900s, wells drilled to the north, east, and south of Lake Merced were supplying irrigation and potable water pumped from the Westside Basin. The Spring Valley Water Company operated two wells near the outlet of Lake Merced that pumped about 0.1 mgd, or about 100 acre-feet per year (afy) (Bartell, 1913b). Total groundwater pumping from the Lake Merced area, the Sunset District, and Golden Gate Park averaged about 0.4 mgd (400 to 500 afy). In addition, approximately 3 mgd were diverted from spring-fed Lake Merced for potable and emergency use until 1932.

During the early 1930s the San Francisco Board of Public Works installed production wells with a combined capacity of about 6.5 mgd (7,300 afy) in the Sunset District to serve as a drought emergency water supply (San Francisco Water Department [SFWD], 1994). These wells produced an average of 5 mgd (5,600 afy) between 1930 and 1935. Use of these wells ended once Tuolumne River water from Hetch Hetchy Reservoir became available to San Francisco in the mid-1930s (SFWD, 1961).

As described in Section 1.1, SFPUC installed four new municipal water supply wells from 2007 to 2011 as part of the SFGW Project, and in 2020 completed the retrofit of two Golden Gate Park irrigation wells for either irrigation or municipal potable use. Production from the Lake Merced well began in 2017; production from the South Sunset, West Sunset, and Golden Gate Central wells began in 2018; and production from the South Windmill and North Lake wells began in 2021. The SFGW Project contributed approximately 48 af (0.04 mgd) to the municipal water supply in 2023. The three SFGW wells in Golden Gate Park will continue to provide about 1.2 mgd for park irrigation until a reliable recycled water supply is available.

#### **Daly City Service Area**

Local groundwater use by Daly City increased from about 1,500 afy in 1950 to 5,000 afy in 1970 coinciding with post-war development (Kirker, Chapman & Associates, 1972). Between 1970 and 2014, Daly City's groundwater use ranged from approximately 3,000 to 5,000 afy, except during the 2002-2005 Pilot In-Lieu Recharge Demonstration Program (Section 1.1) when pumping was reduced to approximately 700 to 2,700 afy. Daly City pumping declined

substantially during the initial (2016-2021) and current (since July 2023) GSR project storage periods as a result of SFPUC in-lieu surface water deliveries. During the GSR project hold period from July 2021 through June 2023, Daly City resumed pumping up to its designated quantity of 2.2 mgd (reduced provisionally from 3.43 mgd because of treatment limitations). Daly City currently has the following six production wells, although not all operated in 2023: Jefferson, Junipero Serra, Sullivan, Vale, DC-4, and Westlake. Daly City produced 1,478 af (1.32 mgd) of groundwater for municipal use in 2023.

### **South San Francisco District**

Municipal groundwater pumping by Cal Water for its South San Francisco District declined from about 2,200 afy in the 1950s to approximately 1,100 afy in 2002 (Figure 3). From 2003 to 2008, groundwater pumping in South San Francisco was temporarily discontinued as part of the Pilot In-Lieu Recharge Demonstration Program, during which SFPUC surface water supplies temporarily replaced the use of groundwater. From 2008 to 2015, groundwater pumping by Cal Water for South San Francisco steadily increased from approximately 200 to 1,300 afy. Cal Water groundwater pumping declined substantially during the initial (2016-2021) and current (since July 2023) GSR storage periods as a result of SFPUC in-lieu surface water deliveries. During the GSR project hold period from July 2021 through June 2023, Cal Water had sufficient well capacity to pump up to its designated quantity of 1.37 mgd but was unable to during a treatment plant upgrade. Cal Water currently has six production wells, SS-19 through SS-24. Cal Water produced 199 af (0.18 mgd) of groundwater for municipal use in South San Francisco in 2023.

### **San Bruno Service Area**

Municipal groundwater pumping by San Bruno was approximately 2,000 afy from the 1950s through the mid-1980s, then varied between 1,000 and 3,000 afy through 2002 (Figure 3). From 2002 to 2005, San Bruno reduced its pumping to approximately 550 to 1,200 afy during the Pilot In-Lieu Recharge Demonstration Program, after which its pumping ranged between approximately 1,600 to 2,400 afy through 2015. San Bruno's groundwater pumping declined substantially during the initial (2016-2021) and current (since July 2023) GSR storage periods as a result of SFPUC in-lieu surface water deliveries. During the GSR project hold period from July 2021 through June 2023, San Bruno resumed pumping up to its designated quantity of 2.1 mgd. San Bruno currently has four production wells, SB-16, -17, -18, and -20, all of which operated in 2023. San Bruno produced 1,053 af (0.94 mgd) of groundwater for municipal use in 2023.

### **Irrigation and Other Non-Potable Use**

Westside Basin groundwater use for irrigation and other non-potable uses at Golden Gate Park, the San Francisco Zoo, Lake Merced area golf courses, and Colma cemeteries is summarized

below and in Tables 1 and 2 and Figure 4. The estimated annual groundwater use by each of these is discussed in Sections 4.6 through 4.9.

- **Golden Gate Park:** Golden Gate Park historically and currently uses groundwater pumped from wells within the park for irrigation and maintaining lake levels. Three wells constructed or refurbished by the SFGW project have supplied the park's water needs since 2019: South Windmill Replacement well, North Lake well, and Golden Gate Central well. These wells will be operated for potable use once recycled water is available for park use. Groundwater pumping for Golden Gate Park was 1,317 af (1.18 mgd) in 2023.
- **San Francisco Zoo:** The San Francisco Zoo historically and currently uses groundwater for irrigation and various zoo exhibits. Its groundwater pumping has been metered since 2005. The San Francisco Zoo well is operated and maintained by SFRPD. SFPUC regularly records the flowmeter readings from the well. The Zoo produced 166 af (0.15 mgd) of groundwater for its use in 2023. The SFPUC is constructing the Westside Recycled Water Treatment Facility at its Oceanside Wastewater Treatment Plant to deliver recycled water to various locations on the Westside of the City including the San Francisco Zoo. The San Francisco Zoo Recycled Water Project will construct a new recycled water pipeline and convert the Zoo's current groundwater supply and distribution system to recycled water. Supplying this demand with recycled water will offset close to 100% of Zoo's annual groundwater use and will conserve high quality groundwater to supplement potable water supplies in San Francisco.
- **Golf Courses:** There are seven golf courses in the Westside Basin that have used groundwater for irrigation: Harding Park Golf Course, Lake Merced Golf Club, Olympic Club Golf Course, San Francisco Golf Club, California Golf Club, Golden Gate Park Golf Course, and Green Hills Country Club. Following its completion in 2004, the NSMCSW Wastewater Treatment Plant began serving recycled water for irrigating three golf courses (Lake Merced Golf Club, Olympic Club Golf Course, and San Francisco Golf Club). In 2012, recycled water was made available to Harding Park from NSMCSW for irrigation. The Golden Gate Park Golf Course will begin receiving recycled water from the Westside Recycled Water Project beginning approximately fall 2026.

Metered groundwater pumping and recycled water use are reported by Lake Merced Golf Club, Olympic Club Golf Course, and San Francisco Golf Club (Table 2). The estimates of annual groundwater use presented in Table 2 and Figure 4 for the California Golf Club are from LSCE (2005) for 1960-2005, Carollo Engineers (2008) for 2006-2010, and HydroFocus (2011) for 2011-present. Groundwater pumping for golf course irrigation was approximately 997 af (0.89 mgd) in 2023 (excluding irrigation for the Golden Gate Park Golf Course, which is included with the park's total groundwater use).

- **Cemeteries:** The Westside Basin includes about 600 acres of cemetery property within and near Colma that historically and currently have pumped groundwater for irrigation. Estimates of cemetery annual groundwater use presented in Table 1 and Figure 4 are from LSCE (2005) for 1960-2005, Carollo Engineers (2008) for 2006-2010, and Hydro focus (2011) for 2011-present. Golden Gate National Cemetery has not been irrigated with groundwater since the 1960s (Boone, Cook and Associates, 1987). Total groundwater pumping for cemetery irrigation based on these estimates was approximately 859 af (0.77 mgd) in 2023.

## **4.0 2023 GROUNDWATER USE**

In 2023, groundwater pumping in the Westside Basin supplied municipal water for Daly City, South San Francisco (Cal Water), San Bruno, and San Francisco. Additionally, non-potable groundwater was pumped for irrigation and other uses by Golden Gate Park, Pine Lake, San Francisco Zoo, golf courses, and cemeteries. Westside Basin groundwater pumping is described below and summarized in Tables 1 and 2 and Figures 3 and 4.

### **4.1 City of Daly City**

Groundwater pumping by Daly City for municipal use during CY 2023 totaled 1,478 af (1.32 mgd).

### **4.2 California Water Service Company (South San Francisco District)**

Groundwater pumping by Cal Water for municipal use during CY 2023 totaled 199 af (0.18 mgd).

### **4.3 City of San Bruno**

Groundwater pumping by San Bruno for municipal use during CY 2023 totaled 1,053 af (0.94 mgd).

### **4.4 City and County of San Francisco**

Groundwater pumping by SFPUC for municipal use during CY 2023 totaled 48 af (0.04 mgd).

### **4.5 Regional Groundwater Storage and Recovery Project**

No groundwater pumping by the GSR project took place during CY 2023.

### **4.6 Golden Gate Park and Pine Lake**

Metered groundwater pumping for irrigation and other non-potable uses in Golden Gate Park during CY 2023 totaled 1,317 af (1.18 mgd).

In addition, SFRPD estimates that approximately 5 afy of groundwater pumping from the Stern Grove well is needed to maintain the level of Pine Lake.

### **4.7 San Francisco Zoo**

Metered groundwater pumping at the San Francisco Zoo during CY 2023 totaled 166 af (0.15 mgd).



#### **4.8 Golf Courses**

Metered groundwater pumping by Lake Merced Golf Club, Olympic Club Golf Course, and San Francisco Golf Club during CY 2023 totaled approximately 626 af (0.56 mgd) [Table 1 and 2]. Because of the limited availability of recycled water, groundwater pumping for Lake Merced area golf course irrigation in 2023 was more than 60 percent greater than 2022 and about 400 percent greater than when a sufficient supply of recycled water existed prior to 2018.

Groundwater pumping by California Golf Club and Green Hills Country Club is unmetered but estimated to average 237 and 134 afy (0.21 and 0.12 mgd), respectively (HydroFocus, 2011; Table 1).

Total groundwater use for irrigating Westside Basin golf courses in 2023 is estimated to be 997 af (0.89 mgd).

#### **4.9 Cemeteries**

Groundwater pumping for irrigating the Colma cemeteries is unmetered but estimated to average 859 afy (0.77 mgd) [HydroFocus, 2011; Table 1].

#### **4.10 Summary**

As summarized in Table 1, groundwater production from the Westside Basin totaled approximately 6,123 af (5.46 mgd) in 2023. Municipal groundwater use by San Francisco, Daly City, San Bruno, and California Water Service Company (South San Francisco) was 2,777 af (2.48 mgd) in 2023. The three metered golf clubs in the Lake Merced area used 626 af (0.56 mgd) of pumped groundwater and 135 af (0.12 mgd) of recycled water during 2023.

The total metered use of Westside Basin groundwater in 2023 was approximately 4,888 af (4.36 mgd). Metered usage includes municipal pumping for potable use by San Francisco, Daly City, San Bruno, and Cal Water (South San Francisco); and pumping for non-potable use by Golden Gate Park, San Francisco Zoo, Lake Merced Golf Club, Olympic Club Golf Course, and San Francisco Golf Club. Average annual non-metered groundwater pumping in the Westside Basin is estimated to be approximately 1,235 afy (1.10 mgd) [HydroFocus, 2011] and includes California Golf Club, Green Hills Country Club, Pine Lake filling, and cemeteries.

This report does not estimate groundwater pumping for domestic use, remediation, or construction dewatering. These uses may be assumed to be relatively small compared to most of the uses inventoried above.

### **5.0 MONITORING PROGRAM OVERVIEW**

The Westside Basin monitoring program consists of quarterly or more frequent groundwater and lake level gauging and annual, semi-annual (spring and fall), or more frequent groundwater

sampling for selected water quality parameters. These data support an ongoing evaluation of general groundwater conditions and water quality within the aquifer system, with particular emphasis on lake-aquifer interactions and the potential for saltwater intrusion. Program data extend back as far as 1996 and provide a baseline for evaluating the implementation of SFGW, GSR, and other projects.

The groundwater elevation monitoring network consists of 101 individual wells at 41 locations (Table 3, Figure 5). Four are inactive production wells and the remainder are dedicated monitoring wells. The monitored wells are subdivided into coastal, lake-aquifer, Bay side, and general North and South Westside Basin monitoring networks. Table 4 lists a subset of 44 of these wells used to construct groundwater elevation contour maps for the Shallow and Primary Production aquifers. As shown in Table 5, measurements are collected manually on a quarterly or semi-annual basis for some wells, and continually using electronic pressure transducers and data loggers for other wells. Groundwater elevation hydrographs relative to the NAVD88 datum are provided for selected wells in Figures 11 through 14 and 16 through 21, and for all monitored wells in Appendix A. The monitoring program also includes continuous monitoring of the water surface elevation of Lake Merced's South Lake using a pressure transducer installed in a stilling well.

The groundwater quality monitoring network consists of 87 individual wells at 42 locations (Table 6, Figure 6). All are dedicated monitoring wells except for 15 that are active or occasionally active production wells. These wells are subdivided into separate coastal, Bay side, and general basin monitoring networks. Samples are collected annually and semi-annually as indicated in Table 7. Recent and historical groundwater quality monitoring results are presented and discussed in Section 7. The laboratory analytical reports are provided in Appendix B.

SFPUC's Water Quality Division (WQD) has led the fieldwork for the groundwater quality monitoring program since fall 2014. WQD's sampling protocols and field procedures for this program are presented in the *Westside Basin Groundwater Monitoring Manual of Procedures* (SFPUC, 2014; Appendix C).

Samples collected to assess general groundwater quality are analyzed for some or all of the following constituents:

- General minerals: total alkalinity, calcium, magnesium, sodium, potassium, chloride, and sulfate.
- Nitrate.
- General parameters: specific conductance, pH, total dissolved solids (TDS), and hardness (as CaCO<sub>3</sub>).

## 6.0 GROUNDWATER AND LAKE LEVEL MONITORING

Figures 7 and 8 present 2023 spring and fall estimated groundwater elevation contours for the Shallow Aquifer, and Figures 9 and 10 present 2023 spring and fall estimated groundwater elevation contours for the Primary Production Aquifer. The estimated groundwater elevation contours are based on 2023 groundwater level data for the monitoring wells listed in Table 4.

The following sections discuss the groundwater level monitoring results for the coastal, lake-aquifer, South Westside Basin, and Bay side monitoring networks.

### 6.1 Coastal Groundwater Level Monitoring

The coastal groundwater level monitoring network consists of 26 individual wells at 11 locations along the coastal zone from Golden Gate Park south to Daly City (Table 3, Figure 5).

Monitoring well clusters are located in western Golden Gate Park; along the Old Great Highway near Kirkham, Ortega, and Taraval streets; and at San Francisco Zoo, Fort Funston, and Thornton Beach.

Figures 11, 12, 13, and 14 present groundwater elevation hydrographs for the period of record for the Kirkham, Ortega, Taraval, and Zoo monitoring well clusters, respectively. These plots include chloride concentrations monitored at these same wells as discussed in Section 7.1.

Groundwater elevations in both the Shallow and Primary Production Aquifer coastal monitoring wells were above sea level in 2023 except for monitoring well South Windmill MW140 which experienced an annual low groundwater level of -0.63 feet NAVD88.

Table 8 compares 2022 and 2023 annual low groundwater levels for selected coastal monitoring wells. Compared to 2022, annual low groundwater levels in the Shallow Aquifer were lower in 2023 at monitoring wells South Windmill MW57, South Windmill MW140, and Kirkham MW130. Annual low groundwater levels in the remaining Shallow Aquifer wells (monitoring wells Ortega MW125 and Taraval MW145) were higher in 2023 compared to 2022. Annual high groundwater levels in the Shallow Aquifer during 2023 were generally the same as in 2022.

Annual low groundwater levels in the Primary Production Aquifer were lower in 2023 compared to 2022 at monitoring wells Kirkham MW255, Kirkham MW385, Kirkham MW435, Ortega MW265, Ortega MW400, and Ortega MW475. Annual low groundwater levels in the remaining Primary Production Aquifer wells (monitoring wells Taraval MW240, Taraval MW400, Zoo MW275, and Zoo MW450) were higher in 2023 compared to 2022. Annual low groundwater levels monitored in the Deep Aquifer by Taraval MW530 (Figure 13d) and Zoo MW565 (Figure 14c) declined slightly from the prior year, although levels remain well above their 2013 annual lows. The 2013 annual low is used for comparison purposes because groundwater levels were at a 14-year low that year prior to the recent GSR storage period.

Groundwater elevations in monitoring wells SF-1 and SWM-3 remained above sea level during 2023 and were similar to the prior year (see hydrographs in Appendix A). Groundwater elevations in monitoring well South Windmill MW140 were slightly below sea level during the third quarter of 2023 but have now increased to above sea level as of the fourth quarter of 2023. Water level declines in these wells from 2020 to 2021 coincided with resumed pumping from the nearby South Windmill SFGW well beginning in June 2020 after 18 months of in-operation during refurbishment.

Groundwater elevations measured in monitoring wells at Fort Funston and Thornton Beach are generally stable and consistently above sea level (Appendix A). Groundwater conditions at these locations appear to be hydraulically separate from the Westside Basin to the east as a result of low permeability, deformed geologic strata along the Serra fault thrust zone (LSCE, 2004).

## **6.2 Lake Merced and Lake-Aquifer Level Monitoring**

The level of Lake Merced is monitored continuously at South Lake using a pressure transducer installed in a stilling well. Groundwater levels surrounding the lake complex are monitored with a network of 20 dedicated monitoring wells at 10 locations using a combination of continuous and periodic monitoring (Table 3, Figure 5).

SFPUC is working with local stakeholders and regulatory agencies to implement a multi-pronged approach to manage lake levels. This includes adding regional system water to stabilize lake levels, last done in 2005, and establishing an interim target lake level elevation range between 14 and 16 feet NAVD88.

Figure 15 presents the 1997-2023 lake level hydrograph for Lake Merced's South Lake. South Lake water surface elevations ranged from approximately 16.78 to 18.42 feet NAVD88 in 2023 and were above the established interim lake level range of 14 to 16 feet NAVD88. Seasonal high and low lake levels were higher in 2023 than 2022. The 2023 seasonal low level was approximately 5.5 feet above the 2002 seasonal low. The 2002 seasonal low is used for comparison because lake levels were then at a 24-year low prior to the GSR Pilot In-Lieu Recharge Demonstration Program and the availability of recycled water for irrigating Lake Merced Area golf courses. South and Impound lakes were interconnected during 2023 because the level of South Lake did not fall below 15.63 feet NAVD88 (4.26 feet SFCD).

Groundwater elevations in the Shallow Aquifer surrounding Lake Merced ranged from 17.29 feet NAVD88 in monitoring well LMMW-1S to 28.91 feet NAVD88 in LMMW-7SS during spring 2023. During fall 2023, groundwater elevations ranged from 16.49 feet NAVD88 in LMMW-1S to 28.36 feet NAVD88 in LMMW-7SS.

Groundwater elevations in the Primary Production Aquifer in the vicinity of Lake Merced ranged from 0.41 feet NAVD88 in monitoring well LMMW-3D to 15.83 feet NAVD88 in LMMW-2D during spring 2023. During fall 2023, groundwater elevations in the Primary Production Aquifer in the vicinity of Lake Merced ranged from -4.80 feet NAVD88 in LMMW-3D to 14.78 feet NAVD88 in LMMW-2D.

Figure 16 presents groundwater level hydrographs for a pair of monitoring wells near the western shore of South Lake, one screened in the Shallow Aquifer (LMMW-1S) and one in the Primary Production Aquifer (LMMW-1D). Groundwater levels measured in LMMW-1S during 2023 generally remained above levels recorded during the WY 2012-2015 drought. Groundwater elevations in LMMW-1D began a rising trend in 2016, surpassing high levels observed in 2011, then declined from 2019 through 2021 coinciding with increased local pumping. Recycled water was unavailable for irrigating Lake Merced area golf courses for much of 2023, resulting in increased local pumping and a downward influence on water levels. Water levels in both monitoring wells remain substantially above low levels measured in 2002, with recent recoveries following the start of a second GSR project storage period in July 2023.

Groundwater levels in the Primary Production Aquifer measured in monitoring well LMMW-3D near the southwestern shore of Impound Lake (see hydrograph in Appendix A) had been rising since 2016, coinciding with the start of the 2016-2021 GSR storage period. Seasonal highs at this location have exceeded sea level each year since 2017. A groundwater level decline began in 2019 and continued through 2021, coinciding with (a) increased pumping locally by golf courses while recycled water from NSMCSD was largely unavailable from approximately September 2019 to September 2020 and (b) the resumption of pumping by GSR partner agencies during the July 2021 to June 2023 GSR project hold period. Despite increased groundwater use for golf course irrigation in 2023, groundwater levels rose slightly as a result of the start of a second GSR storage period on July 1, 2023.

### **6.3 South Westside Basin Groundwater Level Monitoring**

The groundwater level monitoring network in the South Westside Basin consists of 53 wells at 19 locations along the Basin axis between Daly City and Burlingame (Table 3, Figure 5). One of these wells (LMMW-6D) also is included in the Lake-Aquifer monitoring network, and seven of these wells at three locations comprise the Bay side monitoring program described in Section 6.4.

Excluding wells in the Bay side program discussed below, this network consists of ten monitoring well clusters and one single monitoring well installed by SFPUC from 2007 to 2012 (Kennedy/Jenks, 2009, 2010a, 2012), and four inactive production wells (DC-1, DC-8, SS 1-02, and SB-12), located within Daly City, Colma, South San Francisco, San Bruno, and Millbrae. Monitoring records for nine of these wells extend back to 2000. Prior to fall 2015, the network

included an additional monitoring well cluster (CUP-3A) that was destroyed to accommodate the construction of a GSR production well.

Figures 17, 18, and 19 present groundwater level hydrographs for monitoring well DC-1 Westlake in Daly City, SS1-02 in South San Francisco, and SB-12 in San Bruno. Appendix A provides hydrographs for all network wells.

Groundwater levels in all South Westside Basin monitoring wells representative of the Primary Production Aquifer were below sea level in 2023, ranging from -8.13 (LMMW-6D) to -165.96 (SB-12 Elm Avenue) feet NAVD88 during the spring monitoring event, and from -14.44 feet to -160.50 feet NAVD88 for these same two wells during the fall monitoring event.

Annual high and low groundwater levels in the Primary Production Aquifer generally increased in 2023 compared to 2022 throughout the South Westside Basin, largely due to the start of a new GSR project storage period in July 2023.

Groundwater levels in shallower zones rose or were stable within the South Westside Basin.

#### **6.4 Bay Side Groundwater Level Monitoring**

San Bruno has conducted groundwater level monitoring since 2006 at two well clusters along the San Francisco Bay margin (Bay side) of the Westside Basin, one in the City of Burlingame (Burlingame-S, -M, and -D) and the other at San Francisco International Airport (SFO-S and SFO-D; Figure 5; WRIME, 2007a). San Bruno monitors these wells on a semi-annual basis in accordance with the *San Bruno Saltwater Intrusion Monitoring Wells: Sampling Plan* (WRIME, 2007b). Figures 20 and 21 present groundwater level hydrographs for the Burlingame and SFO monitoring well clusters, respectively.

In March 2023, groundwater elevations in the Burlingame-S, -M, and -D monitoring wells were 2.57, -0.47, and -5.86 feet NAVD88, respectively, and groundwater elevations in SFO-S and SFO-D were 2.56 and -26.12 feet NAVD88, respectively. In August 2023, groundwater elevations in Burlingame-S, -M, and -D were 2.37, -1.05, and -4.79 feet NAVD88, respectively, and groundwater elevations in SFO-S and SFO-D were 1.56 and -24.82 feet NAVD88, respectively. Consistent with previous years, 2023 groundwater levels in SFO-S were above sea level and levels in SFO-D were below sea level. Levels in SFO-D increased approximately 8 feet from 2016 to early 2021, before declining approximately 2 feet in late 2021, stabilizing in 2022, and increasing by approximately 2 feet in 2023. Levels in Burlingame-S and -M have fluctuated within 4 feet of sea level since the wells were installed in 2006. Levels in Burlingame-D have consistently been below sea level since installation and exhibit a gradual decline over the entirety of the dataset. In August 2021, the groundwater elevation in Burlingame-M and Burlingame-D reached all-time lows of -3.96 and -8.24 feet NAVD88, respectively, with levels recovering in 2023 to more typical elevations.

## **7.0 GROUNDWATER QUALITY MONITORING**

Wells included in the groundwater quality monitoring network are listed in Table 6 and located on the map in Figure 6. The network consists of 72 dedicated monitoring wells clustered at 27 locations and 15 production wells. These wells are subdivided into four separate groups: coastal; Sunset District and Lake Merced area; South Westside Basin; and San Francisco Bay margin (Bay side). Samples are typically collected annually and semi-annually as indicated in Table 7.

Water quality monitoring results for sampled raw (untreated) groundwater are presented in Tables 9 and 10 for the period of record in comparison to the maximum contaminant level (MCL) and secondary maximum contaminant levels (SMCL) of each water quality constituent or parameter, if established. Primary MCLs are regulatory benchmarks for drinking water developed to protect human health. SMCLs are benchmarks developed to protect the aesthetic quality of drinking water (e.g., taste, odor, and appearance). Although the monitoring well water quality results are compared to drinking water standards, many of the monitoring wells are not representative of the locations or depths of existing potable production wells. Furthermore, much of the groundwater produced for potable use is blended with surface water prior to being distributed. Laboratory analytical reports are provided in Appendix B.

### **7.1 Coastal Groundwater Quality Monitoring**

The coastal groundwater quality monitoring network consists of 21 wells at 9 locations along the coastal zone from Golden Gate Park south to San Francisco Zoo (Table 6, Figure 6). Monitoring well clusters are located in western Golden Gate Park; along the Old Great Highway near Kirkham, Ortega, and Taraval streets; and at the San Francisco Zoo. The network is configured to detect indications of potential saltwater intrusion along the Pacific Ocean coast. Groundwater samples from these wells are analyzed for specific conductance, TDS, and chloride. Table 9 presents groundwater quality monitoring results for the coastal network. Measured chloride concentrations are plotted on the groundwater level hydrographs provided in Figures 11 through 16.

In 2023, chloride concentrations in groundwater samples collected from the coastal monitoring wells were below the recommended SMCL of 250 milligrams per liter (mg/L) and ranged from 22.8 mg/L for monitoring well Ortega MW400 to 220 mg/L for USGS South Windmill MW57. Chloride concentrations tend to be inversely correlated with depth (higher concentrations in wells screened in shallow zones of the aquifer and lower concentrations in wells screened in deep zones of the aquifer). For example, chloride concentrations in the Kirkham, Ortega, and Taraval monitoring well clusters were as follows:

- Coastal monitoring wells screened between 100 and 140 feet bgs (Kirkham MW255, Ortega MW125, and Taraval MW145) had chloride concentrations between 30.9 mg/L and 43.1 mg/L.
- Coastal monitoring wells screened between 180 and 260 feet bgs (Kirkham MW255, Ortega MW265, and Taraval MW240) had chloride concentrations between 25.1 mg/L and 39.7 mg/L.
- Coastal monitoring wells screened between 330 and 390 feet bgs (Kirkham MW385, Ortega MW400, and Taraval MW400) had chloride concentrations between 22.8 mg/L and 37.4 mg/L.
- Coastal monitoring wells screened between 420 and 520 feet bgs (Kirkham MW435, Ortega MW475, and Taraval MW530) had chloride concentrations between 23.7 mg/L and 29.9 mg/L.

Chloride and TDS concentrations and values of specific conductance for the coastal monitoring wells were generally within historical ranges during 2023.

## **7.2 Sunset District and Lake Merced Area Groundwater Quality Monitoring**

The groundwater quality monitoring network in the Sunset District and Lake Merced area consists of 7 individual wells at 4 separate locations (Table 6, Figure 6). Groundwater samples from these wells are analyzed for total alkalinity, pH, specific conductance, TDS, hardness, calcium, magnesium, sodium, potassium, chloride, sulfate, and nitrate (as nitrate). Table 10 presents historical and recent groundwater quality monitoring results for these wells.

Groundwater chloride concentrations have been elevated in samples from monitoring well LMMW-1S since the well was first sampled in 2009. The spring and fall 2023 samples had chloride concentrations of 175 and 574 mg/L, respectively. The fall result was the highest chloride concentration measured for this well since 2009 and exceeded the recommended SMCL of 250 mg/L.

Groundwater sampled from LMMW-1S have fluctuated above and below the MCL of 45 mg/L for nitrate (as nitrate) since monitoring began in 2004. In 2023 concentrations were 32.1 and 150 mg/L for the spring and fall samples, respectively; the fall result was a new maximum concentration for this well. Groundwater sampled from LMMW-1D has fluctuated above and below the MCL for nitrate (as nitrate) since 2010; 2023 concentrations were 42.9 mg/L and 41.6 mg/L in the spring and fall samples, respectively.

Among the remaining wells in this group, 2023 chloride concentrations ranged between 42 mg/L (West Sunset Playground monitoring well, spring) and 266 mg/L (LMMW-2S, spring) with concentrations in the latter well exceeding the recommended SMCL of 250 mg/L. Nitrate (as



nitrate) concentrations were below the MCL and ranged from below the laboratory detection limit (West Sunset Playground monitoring well, LMMW-3S, and LMMW-3D, spring and fall) to 31.9 mg/L (LMMW-2S, spring).

### **7.3 South Westside Basin Groundwater Quality Monitoring**

The groundwater quality monitoring network in the South Westside Basin consists of 59 wells at 29 locations, 15 of which are active or occasionally active production wells (Table 6, Figure 6). Records for the dedicated monitoring wells extend back to the years they were installed, 2003-2012, whereas some production well records extend back to the mid-1970s for Daly City, the late 1950s for Cal Water, and 2000 for San Bruno. Table 10 presents historical and current groundwater quality monitoring results for these wells. Groundwater samples from these wells are analyzed for total alkalinity, pH, specific conductance, TDS, hardness, calcium, magnesium, sodium, potassium, chloride, sulfate, and nitrate (as nitrate).

Five wells at two locations comprise the Bay side monitoring program and are discussed separately in Section 7.3.5. Groundwater samples from these wells are analyzed for total alkalinity, pH, specific conductance, TDS, hardness, calcium, magnesium, sodium, potassium, chloride, sulfate, nitrate (as nitrate), bromide, boron, and orthophosphate.

During 2023, chloride concentrations in groundwater sampled from the South Westside Basin (excluding the Bay side monitoring wells) were below the recommended SMCL and ranged from 35.9 mg/L (MW-M1, spring) to 214 mg/L (CUP-31A MW595, spring). TDS concentrations ranged from 230 mg/L (Park Plaza MW620, fall) to a maximum of 1,090 mg/L (CUP-44-1 MW580, fall), above the recommended SMCL of 500 mg/L. Nitrate (as nitrate) concentrations in groundwater exceeded the MCL of 45 mg/L in samples collected from monitoring wells Park Plaza MW195 and CUP-23 MW600 and ranged from below the laboratory detection limit to 93 mg/L (CUP-23 MW600, fall). Figure 22 is a plot of nitrate concentrations for six production wells monitored in the South Westside Basin.

The following sections discuss the results of groundwater quality monitoring in the Daly City, Colma, South San Francisco, San Bruno, and Millbrae areas.

#### **7.3.1 Daly City**

During 2023, detected concentrations of nitrate (as nitrate) in groundwater sampled from wells in the Daly City area ranged from below the laboratory detection limit to 54.9 mg/L for well Park Plaza MW195 (spring, Table 10), above the MCL of 45 mg/L.

Figure 23 presents time-series plots of chloride and TDS concentrations and specific conductance in groundwater sampled from the DC-2 Westlake production well. TDS concentrations were generally above the recommended SMCL of 500 mg/L in samples collected from 2001-2014, after which they were below the SMCL through 2021, before recently climbing

above the SMCL from 2022-2023. Chloride concentrations ranged from 52.1 mg/L (DC-Junipero Serra, spring) to 188 mg/L (CUP-10A-MW710, spring), below the recommended SMCL of 250 mg/L. Production wells DC-4 and Vale were out of service in 2023 and could not be sampled.

### **7.3.2 Colma**

Groundwater pumped in the Colma area is used for cemetery irrigation. Currently, groundwater is not pumped for municipal use in Colma. As part of the proposed GSR project, monitoring well clusters CUP-18 and CUP-19 were installed in the Colma area. During 2023, TDS concentrations ranged between 403 mg/L (CUP-19 MW475, spring) and 605 mg/L (CUP-18 MW595, fall). Chloride concentrations ranged from 94.7 mg/L (CUP-19 MW690, fall) to 152 mg/L (CUP-18 MW595, fall), below the recommended SMCL of 250 mg/L. Detected nitrate (as nitrate) concentrations were below the primary MCL of 45 mg/L and ranged from 5.2 mg/L (CUP-19 MW475, spring) to 28.8 mg/L (CUP-19 MW690, spring and fall) (Table 10).

### **7.3.3 South San Francisco**

During 2023, wells sampled in the South San Francisco area had TDS concentrations ranging from 230 mg/L (CUP-23 MW440, spring) to 959 mg/L (CUP-31 MW595, fall), with 15 of 25 wells above the recommended SMCL of 500 mg/L during the spring event, and with 10 of 19 wells above the recommended SMCL during the fall event. Chloride concentrations ranged from 36.8 mg/L (CUP-31A MW480, fall) to 214 mg/L (CUP-31A MW595, spring), and were below the recommended SMCL of 250 mg/L (Table 10). Detected nitrate (as nitrate) concentrations ranged from 0.69 mg/L (CUP-23 MW440, spring) to 93 mg/L (CUP-23 MW600, fall), which exceeds the MCL of 45 mg/L. Groundwater sampled from CUP-23 MW600 first exceeded the MCL for nitrate in 2015 and continued to do so through 2023.

Figure 24 presents time-series plots of chloride, TDS, and specific conductance for groundwater sampled from Cal Water well SS1-21. TDS concentrations and specific conductance have consistently exceeded the recommended SMCLs.

### **7.3.4 San Bruno and Millbrae**

During 2023, groundwater quality in the San Bruno and Millbrae areas was monitored in the CUP-44-1 nested well group, monitoring well MW-M1, and four San Bruno production wells (SB-16, -17, -18, and -20). TDS concentrations ranged from 248 mg/L (MW-M1, fall) to 1,090 mg/L (CUP-44-1 MW580, fall), with each of the four CUP-44-1 nested wells (MW190, MW300, MW460, and MW580) above the recommended SMCL of 500 mg/L (spring and fall). Detected chloride concentrations were below the recommended SMCL of 250 mg/L and ranged from 35.9 mg/L (MW-M1, fall) to 197 mg/L (CUP-44-1 MW580, spring). Detected nitrate (as nitrate) concentrations were below the primary MCL of 45 mg/L and ranged from 0.09 mg/L (SB-16, spring) to 6.22 mg/L (CUP-44-1 MW190, spring).

Figure 25 presents a time-series plot for San Bruno production well SB-20 (Lions Field Park). Chloride, TDS, and specific conductance have been consistently below their respective SMCLs in this well since 2004.

### **7.3.5 Bay Side**

As part of the City of San Bruno's Bay side monitoring program, the SFO and Burlingame well clusters were sampled in March and August 2023 (Table 10). Figures 20 and 21 provide plots of 2023 and historical chloride concentrations for the Burlingame and SFO wells superimposed on their respective 2006-2023 groundwater level hydrographs.

During the 2023 sampling events, chloride concentrations exceeded the upper SMCL of 500 mg/L in groundwater samples from Bay side monitoring wells SFO-S (11,000 mg/L spring and 10,000 mg/L fall), SFO-D (1,200 mg/L spring and 1,300 mg/L fall), and Burlingame-S (1,200 mg/L spring and 1,100 mg/L fall). Chloride concentrations at Burlingame-M (30 mg/L spring and 34 mg/L fall) and Burlingame-D (180 mg/L spring and 46 mg/L fall) were below the recommended SMCL of 250 mg/L. Nitrate (as nitrate) was detected in groundwater samples from monitoring well Burlingame-M at concentrations below the MCL (0.52 mg/L spring and 0.50 mg/L fall). Nitrate was not detected in the remaining Bay side monitoring wells sampled in either the spring or fall of 2023.

## **8.0 SUMMARY OF PROPOSED ACTIVITIES FOR 2024**

### **8.1 Groundwater Monitoring Program**

In 2024, SFPUC, in cooperation with its partner agencies, will assess general groundwater conditions throughout the Westside Basin through continued implementation of the groundwater monitoring and reporting program documented in this report. This program remains consistent with recommendations made in the report on hydrogeologic conditions in 2005 (LSCE, 2006) and will continue to be updated and evaluated.

### **8.2 Coastal Groundwater Monitoring**

SFPUC will ensure groundwater measurements are recorded daily to quarterly (Table 5) and conduct semi-annual (spring and fall) sampling of coastal groundwater quality (TDS, specific conductance, and chloride; Table 7).

### **8.3 Lake Merced**

SFPUC will continue the Lake Merced groundwater and lake-level monitoring program in accordance with the recommendations of the 2005 annual report. Groundwater measurements will be recorded daily to quarterly, consistent with the current program (Table 5).

### **8.4 CASGEM**

SFPUC and the South Westside Basin Voluntary Cooperative Groundwater Monitoring Association (SWBVCGMA) will continue to participate in the CASGEM Program. SFPUC will continue collecting groundwater elevations for the North Westside Basin and reporting these data to DWR. SWBVCGMA will continue collecting South Westside Basin groundwater elevations and reporting these data to DWR.

### **8.5 General Basin Conditions and GSR Project**

SFPUC will continue to monitor water levels and general water quality of key wells in the Westside Basin (Tables 5 and 7). The general water quality and water level monitoring network will document the Basin's response to initial testing and operation of the GSR project.

### **8.6 Bay Side Monitoring**

The City of San Bruno will continue to monitor its Bay side monitoring wells in the southeastern portion of the Westside Basin on a semi-annual basis, in general accordance with the Westside Basin monitoring program, and transmit these data to SFPUC for inclusion in the annual groundwater monitoring report.

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## TABLES

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**Table 1  
Westside Basin Annual Groundwater Pumping**

Calendar Year	North Westside Basin Municipal and Irrigation			South Westside Basin Municipal				Golf Course Irrigation			Cemeteries	Approximate Total
	Golden Gate Park	Zoo	City of San Francisco	Daly City	South San Francisco (Cal Water)	San Bruno	Regional Groundwater Storage and Recovery Project	Lake Merced Area <sup>1</sup>	California Golf Club	Green Hills Country Club		
	acre-feet per year											
1960s	1,100 <sup>2</sup>	60 <sup>2</sup>	0	5,000 <sup>2</sup>	2,000 <sup>2</sup>	1,900-2,400	-	2,235 <sup>2</sup>	665 <sup>2,4</sup>	- <sup>7</sup>	2,400 <sup>2,4</sup>	15,400-15,900
2005	1,100 <sup>2</sup>	400	0	736	0	1,700	-	45	120-150 <sup>2,4</sup>	- <sup>7</sup>	1,400-2,400 <sup>2,4</sup>	5,500-6,500
2006	1,100 <sup>2</sup>	350	0	862	0	1,955	-	85	206 <sup>2,5</sup>	- <sup>7</sup>	787 <sup>2,5</sup>	5,300
2007	909 <sup>3</sup>	616	0	2,603	0	2,350	-	88	206 <sup>2,5</sup>	- <sup>7</sup>	787 <sup>2,5</sup>	7,560
2008	1,280	260	0	3,564	206	2,097	-	122	206 <sup>2,5</sup>	- <sup>7</sup>	787 <sup>2,5</sup>	8,520
2009	1,072	170	0	1,667	380	2,379	-	113	206 <sup>2,5</sup>	- <sup>7</sup>	787 <sup>2,5</sup>	6,770
2010	1,061	195	0	1,743	453	2,364	-	96	206 <sup>2,5</sup>	- <sup>7</sup>	787 <sup>2,5</sup>	6,900
2011	1,027 <sup>3</sup>	404	0	2,699	515	2,129	-	76	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	8,080
2012	971	368	0	3,772	606	1,596	-	104	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	8,650
2013	1,212 <sup>3</sup>	439 <sup>3</sup>	0	3,351	995	2,198	-	102	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	9,530
2014	1,213 <sup>3</sup>	459	0	3,452	1,028	2,025	-	149	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	9,560
2015	1,300 <sup>3</sup>	270	0	1,980	1,312	2,164	-	200	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	8,460
2016	1,188	171	0	941	528	937	-	112	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	5,107
2017	1,184	234	17	62	0.4	303	-	129	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	3,160
2018	1,439	238	234	59	35	333	-	174	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	3,747 <sup>8</sup>
2019	1,420	244	296	56	31	277	-	494	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	4,053 <sup>8</sup>
2020	1,494	211	581	51	52	311	-	817	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	4,752 <sup>8</sup>
2021	1,253	209	564	1,167	101	1,076	131 <sup>9</sup>	448 <sup>2</sup>	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	6,184 <sup>8</sup>
2022	1,362	158	67	2,355	34	2,314	0.07 <sup>9</sup>	382 <sup>2</sup>	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	7,907 <sup>8</sup>
2023	1,317	166	48	1,478	199	1,053	-	626	237 <sup>2,6</sup>	134 <sup>2,6</sup>	859 <sup>2,6</sup>	6,123 <sup>8</sup>

Groundwater pumping data based on metered readings except where otherwise indicated.

<sup>1</sup> Lake Merced Golf Course, Olympic Club Golf Course, and San Francisco Golf Club.

<sup>2</sup> Estimated.

<sup>3</sup> Due to occasional resetting of flowmeters, some readings are estimated.

<sup>4</sup> Irrigation estimates from LSCE (2005).

<sup>5</sup> Irrigation estimates from Carollo (2008).

<sup>6</sup> Irrigation estimates updated based on the HydroFocus Groundwater Model (2011).

<sup>7</sup> Not available.

<sup>8</sup> This total includes the estimated 5 acre-feet of water pumped to fill Pine Lake.

<sup>9</sup> Pumping from Regional Groundwater and Storage Recovery Project wells for testing purposes.



**Table 2**  
**Water Use for Golf Course Irrigation near Lake Merced, 2005-2023**

Calendar Year	Actual Water Use (acre-feet per year) <sup>1</sup>											
	Lake Merced Golf Club			Olympic Club Golf Course			San Francisco Golf Club			Total		
	Re-cycled	Ground-water	Total	Re-cycled	Ground-water	Total	Re-cycled	Ground-water	Total	Re-cycled	Ground-water	Total
2005	91	5	95	275	3	278	107	37	144	473	45	517
2006 <sup>2</sup>	--	--	--	--	--	--	--	--	--	457	85	542
2007	100	37	137	370	2	372	150	49	199	620	88	708
2008	78	31	109	352	30	382	164	61	225	594	122	716
2009	102	31	133	354	20	374	147	62	209	603	113	716
2010	96	33	129	316	10	326	123	53	176	535	96	631
2011	43	18	61	284	20	304	132	38	170	459	76	535
2012	88	37	125	262	20	282	141	47	188	491	104	595
2013	78	32	110	384	13	397	179	57	236	641	102	743
2014	52	18	70	323	74	397	211	57	268	586	149	735
2015	85	30	115	299	123	422	187	47	234	571	200	771
2016	102	51	153	329	23	352	174	38	212	605	112	717
2017 <sup>3</sup>	79	54	133	350	28	378	141	47	188	570	129	699
2018	85	56	141	290	71	361	204	47	252	579	174	753
2019	60	89	149	81	320	402	90	85	174	230	494	725
2020	0	172	172	60	409	469	1	237	237	61	817	878
2021 <sup>4,5</sup>	84	88	172	186	248	434	123	112	235	394	448	841
2022 <sup>6</sup>	71	147	218	338	132	470	162	103	265	571	382	953
2023	37	172	210	57	281	338	40	173	213	135	626	761
Average	74	61	135	273	101	374	138	75	213	483	230	712
Minimum	0	5	61	57	2	278	1	37	144	61	45	517
Maximum	102	172	218	384	409	470	211	237	268	641	817	953

Notes:

<sup>1</sup> Water use data provided by golf courses. Metered values except where indicated.

<sup>2</sup> Total recycled and groundwater use for 2006 are estimated.

<sup>3</sup> San Francisco Golf Club groundwater use data adjusted during preparation of this report.

<sup>4</sup> Lake Merced Golf Club estimated its 2021 groundwater use due to equipment replacement.

<sup>5</sup> San Francisco Golf Club revised its reported groundwater production.

<sup>6</sup> Lake Merced Golf Club 2022 groundwater use is estimated.

**Table 3  
Groundwater Elevation Monitoring Network Wells**

<b>Coastal Monitoring Network<sup>a</sup></b>	GGP NWM-3
	GGP SWM-3
	GGP Soccer Field SF-1
	GGP North Lake Road NL-1
	USGS South Windmill MW57, 140
	Kirkham MW130, 255, 385, 435
	Ortega MW125, 265, 400, 475
	Taraval MW145, 240, 400, 530
	Zoo MW275, 450, 565
	Fort Funston-S, M
	Thornton Beach MW225, 360, 670
<b>Lake-Aquifer Monitoring Network<sup>b</sup></b>	LMMW-1D, 1S
	LMMW-2D, 2S, 2SS
	LMMW-3D, 3S, 3SS
	LMMW-4S, 4SS
	LMMW-5S, 5SS
	LMMW-7SS
	LMMW-8SS
	LMMW-9S <sup>c</sup>
	Lake Merced Pump Station MW155, 270, 440, 575
<b>North Westside Basin General Monitoring Network</b>	West Sunset Playground
	Central Pump Station MW190, 270
<b>South Westside Basin General Monitoring Network<sup>a</sup></b>	LMMW-6D
	DC-1 (Westlake 1)
	DC-8
	Park Plaza MW135, 195, 460, 620
	SSFLP MW120, 220, 440, 520
	CUP-10A MW160, 250, 500, 710
	CUP-18 MW230, 425, 490, 595
	CUP-19 MW180, 475, 600, 690
	CUP-22A MW140, 290, 440, 545
	CUP-23 MW230, 440, 515, 600
	CUP-31A MW145, 280, 480, 595
	CUP-36-1 MW160, 270, 455, 585
	CUP-44-1 MW190, 300, 460, 580
	SS 1-02
SB-12 Elm Avenue	
CUP MW-M1	
<b>Bay Side Monitoring Network<sup>a</sup></b>	UAL13C, 13D
	SFO-S, D
	Burlingame-S, M, D

Notes:

<sup>a</sup> Wells are listed approximately from north to south.

<sup>b</sup> Includes LMMW-6D listed with the southern Westside Basin.

<sup>c</sup> LMMW-9SS was destroyed in 2018 and was replaced with LMMW-9S in late 2019.

**Table 4**  
**Wells Used to Construct Groundwater Elevation Contours**

<b>Shallow Aquifer</b>	<b>Primary Production Aquifer</b>
South Windmill MW57	GGP Soccer Field SF-1
Kirkham MW130	GGP North Lake Road NL-1
Ortega MW125	GGP NWM-3
Taraval MW145	GGP SWM-3
LMMW-1S	Kirkham MW255
LMMW-2S	Ortega MW265
LMMW-3S	West Sunset Playground
LMMW-4S	Taraval MW240
LMMW-5S	Central Pump Station MW270
LMMW-7SS	Zoo MW275
SFO-S	LMMW-1D
Burlingame-S	LMMW-2D
	LMMW-3D
	LMMW-6D
	Lake Merced Pump Station MW270
	DC-1 (Westlake 1)
	DC-8
	Park Plaza MW460
	CUP-10A MW500
	CUP-18 MW425
	CUP-19 MW475
	CUP-22A MW440
	CUP-23 MW440
	CUP-31A MW480
	CUP-36-1 MW455
	SSFLP MW440
	CUP-44-1 MW460
	SB-12 Elm Avenue
	CUP MW-M1
	SFO-D
	Burlingame-D

Notes:  
Wells are listed approximately north to south.

**Table 5  
Groundwater Level Monitoring Frequency**

Well Name	Frequency <sup>1</sup>
<b>Coastal Monitoring Network</b>	
USGS South Windmill MW57	C
USGS South Windmill MW140	C
GGP Soccer Field SF-1	C
GGP North Lake Road NL-1	C
GGP SWM-3	C
GGP NWM-3	C
Kirkham MW130	C
Kirkham MW255	C
Kirkham MW385	C
Kirkham MW435	C
Ortega MW125	C
Ortega MW265	C
Ortega MW400	C
Ortega MW475	C
Taraval MW145	C
Taraval MW240	C
Taraval MW400	C
Taraval MW530	C
Zoo MW275	C
Zoo MW450	C
Zoo MW565	C
Fort Funston-S	Q
Fort Funston-M	Q
Thornton Beach MW225	Q
Thornton Beach MW360	Q
Thornton Beach MW670	Q
<b>Lake-Aquifer Monitoring Network</b>	
LMMW-1D	C
LMMW-1S	C
LMMW-2D	C
LMMW-2S	Q
LMMW-2SS	Q
LMMW-3D	C
LMMW-3S	Q
LMMW-3SS	C
LMMW-4S	C
LMMW-4SS	Q
LMMW-5S	C
LMMW-5SS	C
LMMW-6D	C
LMMW-7SS	Q
LMMW-8SS	Q
LMMW-9S <sup>2</sup>	C
Lake Merced Pump Station MW155	Q
Lake Merced Pump Station MW270	C
Lake Merced Pump Station MW440	C
Lake Merced Pump Station MW575	Q

Well Name	Frequency <sup>1</sup>
<b>Bay Side Monitoring Network</b>	
SFO-S and D <sup>3</sup>	S
Burlingame-S, M, and D <sup>3</sup>	S
UAL13C	Q
UAL13D	Q
<b>North Westside Basin General Monitoring Network</b>	
West Sunset Playground	Q
Central Pump Station MW190	Q
Central Pump Station MW270	Q
<b>South Westside Basin General Monitoring Network</b>	
DC-1 (Westlake 1)	C
Park Plaza MW460, MW620	C
Park Plaza MW135, MW195	Q
South San Francisco Linear Park 120, 440	C
South San Francisco Linear Park 220, 520	Q
DC-8	C
SS 1-02	C
SB-12 Elm Avenue	C
CUP-10A MW500, MW710	C
CUP-10A MW160, MW250	Q
CUP-18 MW490	Q
CUP-18 MW230, MW425, MW660	C
CUP-19 MW180	Q
CUP-19 MW475, MW600, MW690	C
CUP-22A MW140, MW290	Q
CUP-22A MW440, MW545	C
CUP-23 MW230	Q
CUP-23 MW440, MW515, MW600	C
CUP-31A MW480, MW595	C
CUP-31A MW145, MW280	Q
CUP-36-1 MW160, MW270	Q
CUP-36-1 MW455, MW585	C
CUP-44-1 MW190, MW580	Q
CUP-44-1 MW300, MW460	C
CUP-MW-M1	Q

Notes:

<sup>1</sup>Frequency:

C - Continuous water level monitoring

Q - Quarterly water level monitoring

S - Semi-annual water level monitoring (Spring and Fall)

<sup>2</sup> LMMW-9SS was destroyed in 2018 and was replaced with LMMW-9S in late 2019.

<sup>3</sup> Monitoring conducted by City of San Bruno

**Table 6  
Groundwater Quality Monitoring Network Wells**

<b>Coastal Monitoring<sup>a</sup></b>	GGP North Lake Road NL-1
	GGP NWM-3
	GGP Soccer Field SF-1
	GGP SWM-3
	USGS South Windmill MW57, 140
	Kirkham MW130, 255, 385, 435
	Ortega MW125, 265, 400, 475
	Taraval MW145, 240, 400, 530
	Zoo MW275, 450, 565
<b>Sunset District and Lake Merced Area Groundwater Quality Monitoring</b>	West Sunset Playground
	LMMW-1S, 1D
	LMMW-2S, 2D
	LMMW-3S, 3D
<b>South Westside Basin Monitoring<sup>a</sup></b>	LMMW-6D
	Jefferson
	Park Plaza MW195, 460, 620
	DC-2 Westlake
	Junipero Serra
	DC-4
	Vale
	Sullivan
	CUP-10A MW160, 250, 500, 710
	CUP-18 MW230, 425, 490, 595
	CUP-19 MW475, 600, 690
	CUP-22A MW290, 440, 545
	CUP-23 MW230, 440, 515, 600
	CUP-31A MW145, 280, 480, 595
	SS 1-19,-20,-21,-22,-23
	CUP-36-1 MW160, 270, 455, 585
	SSFLP MW120, 220, 440, 520
	CUP-44-1 MW190, 300, 460, 580
	SB 16 Forest Lane
	SB 17 Corporation Yard
	SB 18 City Park
SB 20 Lions Field Park	
CUP MW-M1	
<b>Bay Side Monitoring</b>	SFO - S, D
	Burlingame - S, M, D

Notes:

<sup>a</sup> Wells are listed approximately from north to south.

**Table 7**  
**Groundwater Quality Monitoring Frequency and Analyses**

<b>Well Name</b>	<b>Frequency<sup>1</sup></b>	<b>Analytes</b>
<b>Coastal Monitoring</b>		
GGP North Lake Road NL-1	S	Chloride, total dissolved solids (TDS), specific conductance
GGP NWM-3	S	
GGP Soccer Field SF-1	S	
GGP SWM-3	S	
USGS South Windmill MW57, 140	S	
Kirkham MW130, 255, 385, 435	S	
Ortega MW125, 265, 400, 475	S	
Taraval MW145, 240, 400, 530	S	
Zoo MW275, 450, 565	S	
<b>General Basin Monitoring</b>		
West Sunset Playground	S	General parameters and minerals: total alkalinity, pH, specific conductance, TDS, hardness, calcium, magnesium, sodium, potassium, chloride, sulfate, and nitrate.
LMMW-1S, 1D	S	
LMMW-2S, 2D	S	
LMMW-3S, 3D	S	
LMMW-6D	S	
Park Plaza MW195, 460, 620	S	
DC-2 Westlake	A	
DC-4	A	
Jefferson	A	
Vale	A	
CUP-10A MW160, 250 <sup>2</sup> , 500, 710	S	
CUP-18 MW230, 425, 490, 595	S	
CUP-19 MW475, 600, 690	S	
CUP-22A MW290, 440, 545	S	
CUP-23 MW230, 440, 515, 600	S	
CUP-31A MW145, 280, 480, 595	S	
SS 1-15	A	
SS 1-19	A	
SS 1-20	A	
SS 1-21	A	
SS 1-22	A	
SS 1-23	A	
SSFLP MW120, 220, 440, 520	S	
CUP-36-1 MW160, 270, 455, 585	S	
CUP-44-1 MW190, 300, 460, 580	S	
SB 16 Forest Ln	A	
SB 17 Corporation Yard	A	
SB 18 City Park	A	
SB-20 Lions Field Park	A	
CUP-MW-M1	S	
<b>Bay Side Monitoring<sup>3</sup></b>		
SFO-S, D	S	General parameters and minerals: total alkalinity, pH, specific conductance, TDS, hardness, calcium, magnesium, sodium, potassium, chloride, sulfate, nitrate, bromide, boron, and orthophosphate.
Burlingame-S, M, and D	S	

**Notes**

<sup>1</sup> A - Annual water quality sampling (Spring), S - Semi-annual water quality sampling (Spring and Fall)

<sup>2</sup> Well CUP-10A MW250 has been dry since 2012.

<sup>3</sup> Monitoring conducted by City of San Bruno.

**Table 8**  
**Comparison of Annual Low Groundwater Elevations for Selected Coastal Monitoring Wells**

Monitoring Well (hydrograph figure number)	Aquifer <sup>1</sup>			Change in Groundwater Elevation (feet) <sup>2</sup>
		2022	2023	
South Windmill MW57	S	9.73 (June)	6.37 (October)	-3.36
South Windmill MW140	S	2.72 (May)	-0.63 (September)	-3.35
Kirkham MW130 (Figure 11a)	S	9.17 (July)	7.32 (October)	-1.85
Kirkham MW255 (Figure 11b)	PP	9.46 (July)	7.50 (October)	-1.96
Kirkham MW385 (Figure 11c)	PP	8.99 (July)	7.24 (October)	-1.75
Kirkham MW435 (Figure 11d)	PP	5.41 (July)	4.09 (October)	-1.32
Ortega MW125 (Figure 12a)	S	8.78 (June)	8.98 (October)	0.20
Ortega MW265 (Figure 12b)	PP	11.20 (July)	10.71 (September)	-0.49
Ortega MW400 (Figure 12c)	PP	11.56 (July)	9.75 (October)	-1.81
Ortega MW475 (Figure 12d)	PP	2.63 (August)	2.27 (October)	-0.36
Taraval MW145 (Figure 13a)	S	8.38 (June)	8.86 (August)	0.48
Taraval MW240 (Figure 13b)	PP	11.46 (January)	11.74 (May)	0.28
Taraval MW400 (Figure 13c)	PP	10.81 (June)	11.35 (September)	0.54
Taraval MW530 (Figure 13d)	D	0.26 (August)	0.06 (October)	-0.20
Zoo MW275 (Figure 14a)	PP	5.53 (May)	6.35 (September)	0.82
Zoo MW450 (Figure 14b)	PP	4.7 (April)	5.65 (June)	0.95
Zoo MW565 (Figure 14c)	D	-2.54 (October)	-2.64 (October)	-0.10

<sup>1</sup> S = Shallow aquifer; PP = Primary Production aquifer; D = Deep aquifer.

<sup>2</sup> A negative number indicates a decrease in annual low groundwater elevation from the previous year.

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#34 - GRT HWY/KIRKHAM MW130	Apr-04	28.5	23.3	27.4	1.92	--	28	32.0	27.7**	445	308	160	8.04
GRT HWY/KIRKHAM MW130	Oct-04	30.8	27.5	26.8	1.51	128	33	34.6	28.9	465	233	180	7.90
GRT HWY/KIRKHAM MW130	Apr-05	26.1	26.6	24.7	1.20	120	35	34.0	31.0	457	284	168	7.99
GRT HWY/KIRKHAM MW130	Nov-05	--	--	--	--	122	--	--	--	469	218	180	8.01
GRT HWY/KIRKHAM MW130	May-06	--	--	--	--	--	36	--	--	466	240	--	--
GRT HWY/KIRKHAM MW130	Oct-06	--	--	--	--	--	34	--	--	468	260	--	--
GRT HWY/KIRKHAM MW130	May-07	--	--	--	--	--	34	--	--	478	278	--	--
GRT HWY/KIRKHAM MW130	Oct-07	--	--	--	--	--	34	--	--	413	255	--	--
GRT HWY/KIRKHAM MW130	Apr-08	--	--	--	--	--	34	--	--	459	278	--	--
GRT HWY/KIRKHAM MW130	Sep-08	--	--	--	--	--	33	--	--	437	257	--	--
GRT HWY/KIRKHAM MW130	Apr-09	--	--	--	--	--	36	--	--	444	257	--	--
GRT HWY/KIRKHAM MW130	Nov-09	--	--	--	--	--	32	--	--	416	260	--	--
GRT HWY/KIRKHAM MW130	Apr-10	--	--	--	--	--	32	--	--	423	248	--	--
GRT HWY/KIRKHAM MW130	Nov-10	--	--	--	--	--	33	--	--	420	238	--	--
GRT HWY/KIRKHAM MW130	May-11	--	--	--	--	--	36	--	--	407	241	--	--
GRT HWY/KIRKHAM MW130	Nov-11	--	--	--	--	98	32	--	--	386	250	142	8.06
GRT HWY/KIRKHAM MW130	Apr-12	--	--	--	--	--	34	--	--	390	228	--	--
GRT HWY/KIRKHAM MW130	Nov-12	--	--	--	--	--	35	--	--	379	237	--	--
GRT HWY/KIRKHAM MW130	Apr-13	--	--	--	--	--	32	--	--	377	242	--	--
GRT HWY/KIRKHAM MW130	Oct-13	--	--	--	--	--	29	--	--	349	168*	--	--
GRT HWY/KIRKHAM MW130	Apr-14	--	--	--	--	--	30	--	--	389	207	--	--
GRT HWY/KIRKHAM MW130	Oct-14	--	--	--	--	--	30	--	--	347	197	--	--
GRT HWY/KIRKHAM MW130	Apr-15	--	--	--	--	--	30	--	--	352	201	--	--
GRT HWY/KIRKHAM MW130	Oct-15	--	--	--	--	--	31	--	--	340	212	--	--
GRT HWY/KIRKHAM MW130	Apr-16	--	--	--	--	--	30	--	--	342	186	--	--
GRT HWY/KIRKHAM MW130	Oct-16	--	--	--	--	--	31	--	--	352	268*	--	--
GRT HWY/KIRKHAM MW130	Apr-17	--	--	--	--	--	30	--	--	359	216	--	--
GRT HWY/KIRKHAM MW130	Oct-17	--	--	--	--	--	32	--	--	363	236	--	--
GRT HWY/KIRKHAM MW130	Apr-18	--	--	--	--	--	33	--	--	384	206	--	--
GRT HWY/KIRKHAM MW130	Oct-18	--	--	--	--	--	33	--	--	384	223	--	--
GRT HWY/KIRKHAM MW130	Apr-19	--	--	--	--	--	34	--	--	398	202	--	--
GRT HWY/KIRKHAM MW130	Oct-19	--	--	--	--	--	34	--	--	398	260	--	--
GRT HWY/KIRKHAM MW130	Oct-20	--	--	--	--	--	33	--	--	397	234	--	--
GRT HWY/KIRKHAM MW130	Apr-21	--	--	--	--	--	31	--	--	397	247	--	--
GRT HWY/KIRKHAM MW130	Nov-21	--	--	--	--	--	33	--	--	404	225	--	--
GRT HWY/KIRKHAM MW130	Apr-22	--	--	--	--	--	33	--	--	410	219	--	--
GRT HWY/KIRKHAM MW130	Oct-22	--	--	--	--	--	31	--	--	418	225	--	--
GRT HWY/KIRKHAM MW130	Apr-23	--	--	--	--	--	33	--	--	414	224	--	--
GRT HWY/KIRKHAM MW130	Oct-23	--	--	--	--	--	31	--	--	405	224	--	--



**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#35 - GRT HWY/KIRKHAM MW255	Apr-04	26.3	29.2	21.3	1.33	--	33	29.0	26.4**	476	316	200	7.95
GRT HWY/KIRKHAM MW255	Oct-04	29.4	30.2	23.6	1.43	132	34	29.1	26.1	460	241	184	7.90
GRT HWY/KIRKHAM MW255	Apr-05	28.5	31.5	22.2	1.37	134	36	32.0	28.0	477	297	192	7.89
GRT HWY/KIRKHAM MW255	Nov-05	--	--	--	--	132	37	--	--	471	217	206	7.95
GRT HWY/KIRKHAM MW255	May-06	--	--	--	--	--	37	--	--	462	320	--	--
GRT HWY/KIRKHAM MW255	Oct-06	--	--	--	--	--	36	--	--	472	270	--	--
GRT HWY/KIRKHAM MW255	May-07	--	--	--	--	--	--	--	--	473	280	--	--
GRT HWY/KIRKHAM MW255	Oct-07	--	--	--	--	--	35	--	--	425	249	--	--
GRT HWY/KIRKHAM MW255	Apr-08	--	--	--	--	--	36	--	--	444	260	--	--
GRT HWY/KIRKHAM MW255	Sep-08	--	--	--	--	--	38	--	--	441	261	--	--
GRT HWY/KIRKHAM MW255	Apr-09	--	--	--	--	--	39	--	--	455	284	--	--
GRT HWY/KIRKHAM MW255	Nov-09	--	--	--	--	--	37	--	--	443	254	--	--
GRT HWY/KIRKHAM MW255	Apr-10	--	--	--	--	--	36	--	--	462	299	--	--
GRT HWY/KIRKHAM MW255	Nov-10	--	--	--	--	--	38	--	--	476	287	--	--
GRT HWY/KIRKHAM MW255	May-11	--	--	--	--	--	40	--	--	482	268	--	--
GRT HWY/KIRKHAM MW255	Nov-11	--	--	--	--	124	39	--	--	467	260	180	7.86
GRT HWY/KIRKHAM MW255	Apr-12	--	--	--	--	--	42	--	--	476	271	--	--
GRT HWY/KIRKHAM MW255	Nov-12	--	--	--	--	--	43	--	--	482	304	--	--
GRT HWY/KIRKHAM MW255	Apr-13	--	--	--	--	--	40	--	--	494	292	--	--
GRT HWY/KIRKHAM MW255	Oct-13	--	--	--	--	--	37	--	--	454	228	--	--
GRT HWY/KIRKHAM MW255	Apr-14	--	--	--	--	--	39	--	--	539	283	--	--
GRT HWY/KIRKHAM MW255	Oct-14	--	--	--	--	--	38	--	--	457	250	--	--
GRT HWY/KIRKHAM MW255	Apr-15	--	--	--	--	--	40	--	--	476	263	--	--
GRT HWY/KIRKHAM MW255	Oct-15	--	--	--	--	--	37	--	--	439	254	--	--
GRT HWY/KIRKHAM MW255	Apr-16	--	--	--	--	--	39	--	--	466	259	--	--
GRT HWY/KIRKHAM MW255	Oct-16	--	--	--	--	--	36	--	--	436	254	--	--
GRT HWY/KIRKHAM MW255	Apr-17	--	--	--	--	--	37	--	--	468	270	--	--
GRT HWY/KIRKHAM MW255	Oct-17	--	--	--	--	--	36	--	--	433	240	--	--
GRT HWY/KIRKHAM MW255	Apr-18	--	--	--	--	--	38	--	--	476	288	--	--
GRT HWY/KIRKHAM MW255	Oct-18	--	--	--	--	--	35	--	--	440	245	--	--
GRT HWY/KIRKHAM MW255	Apr-19	--	--	--	--	--	40	--	--	496	281	--	--
GRT HWY/KIRKHAM MW255	Oct-19	--	--	--	--	--	41	--	--	496	299	--	--
GRT HWY/KIRKHAM MW255	Oct-20	--	--	--	--	--	41	--	--	495	288	--	--
GRT HWY/KIRKHAM MW255	Apr-21	--	--	--	--	--	39	--	--	496	306	--	--
GRT HWY/KIRKHAM MW255	Nov-21	--	--	--	--	--	40	--	--	500	262	--	--
GRT HWY/KIRKHAM MW255	Apr-22	--	--	--	--	--	39	--	--	497	256	--	--
GRT HWY/KIRKHAM MW255	Oct-22	--	--	--	--	--	38	--	--	503	270	--	--
GRT HWY/KIRKHAM MW255	Apr-23	--	--	--	--	--	40	--	--	498	266	--	--
GRT HWY/KIRKHAM MW255	Oct-23	--	--	--	--	--	38	--	--	475	261	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#36 - GRT HWY/KIRKHAM MW385	Apr-04	53.4	7.21	24.7	4.83	--	28	72.0	<1.3**	466	362	175	8.05
GRT HWY/KIRKHAM MW385	Oct-04	60.4	7.38	28.1	4.94	116	33	63.7	1.3	454	257	168	8.10
GRT HWY/KIRKHAM MW385	May-05	54.4	7.54	24.8	5.04	124	34	57.0	<0.3	451	303	160	8.16
GRT HWY/KIRKHAM MW385	Nov-05	--	--	--	--	116	35	--	--	446	229	160	8.16
GRT HWY/KIRKHAM MW385	May-06	--	--	--	--	--	36	--	--	450	290	--	--
GRT HWY/KIRKHAM MW385	Oct-06	--	--	--	--	--	34	--	--	451	290	--	--
GRT HWY/KIRKHAM MW385	May-07	--	--	--	--	--	--	--	--	452	286	--	--
GRT HWY/KIRKHAM MW385	Oct-07	--	--	--	--	--	35	--	--	437	277	--	--
GRT HWY/KIRKHAM MW385	Apr-08	--	--	--	--	--	36	--	--	450	288	--	--
GRT HWY/KIRKHAM MW385	Sep-08	--	--	--	--	--	35	--	--	441	280	--	--
GRT HWY/KIRKHAM MW385	Apr-09	--	--	--	--	--	38	--	--	464	262	--	--
GRT HWY/KIRKHAM MW385	Nov-09	--	--	--	--	--	35	--	--	462	284	--	--
GRT HWY/KIRKHAM MW385	Apr-10	--	--	--	--	--	34	--	--	457	282	--	--
GRT HWY/KIRKHAM MW385	Nov-10	--	--	--	--	--	38	--	--	482	298	--	--
GRT HWY/KIRKHAM MW385	May-11	--	--	--	--	--	40	--	--	467	302	--	--
GRT HWY/KIRKHAM MW385	Nov-11	--	--	--	--	120	37	--	--	458	300	164	8.09
GRT HWY/KIRKHAM MW385	Apr-12	--	--	--	--	--	39	--	--	457	290	--	--
GRT HWY/KIRKHAM MW385	Nov-12	--	--	--	--	--	40	--	--	460	290	--	--
GRT HWY/KIRKHAM MW385	Apr-13	--	--	--	--	--	37	--	--	462	302	--	--
GRT HWY/KIRKHAM MW385	Oct-13	--	--	--	--	--	35	--	--	462	273	--	--
GRT HWY/KIRKHAM MW385	Apr-14	--	--	--	--	--	35	--	--	504	288	--	--
GRT HWY/KIRKHAM MW385	Oct-14	--	--	--	--	--	36	--	--	462	284	--	--
GRT HWY/KIRKHAM MW385	Apr-15	--	--	--	--	--	36	--	--	465	285	--	--
GRT HWY/KIRKHAM MW385	Oct-15	--	--	--	--	--	37	--	--	458	288	--	--
GRT HWY/KIRKHAM MW385	Apr-16	--	--	--	--	--	35	--	--	460	263	--	--
GRT HWY/KIRKHAM MW385	Oct-16	--	--	--	--	--	35	--	--	463	258	--	--
GRT HWY/KIRKHAM MW385	Apr-17	--	--	--	--	--	35	--	--	466	303	--	--
GRT HWY/KIRKHAM MW385	Oct-17	--	--	--	--	--	36	--	--	459	277	--	--
GRT HWY/KIRKHAM MW385	Apr-18	--	--	--	--	--	37	--	--	463	256	--	--
GRT HWY/KIRKHAM MW385	Oct-18	--	--	--	--	--	35	--	--	457	284	--	--
GRT HWY/KIRKHAM MW385	Apr-19	--	--	--	--	--	37	--	--	464	261	--	--
GRT HWY/KIRKHAM MW385	Oct-19	--	--	--	--	--	37	--	--	460	292	--	--
GRT HWY/KIRKHAM MW385	Oct-20	--	--	--	--	--	38	--	--	467	271	--	--
GRT HWY/KIRKHAM MW385	Apr-21	--	--	--	--	--	35	--	--	464	276	--	--
GRT HWY/KIRKHAM MW385	Nov-21	--	--	--	--	--	30	--	--	434	255	--	--
GRT HWY/KIRKHAM MW385	Apr-22	--	--	--	--	--	36	--	--	468	263	--	--
GRT HWY/KIRKHAM MW385	Oct-22	--	--	--	--	--	35	--	--	476	273	--	--
GRT HWY/KIRKHAM MW385	Apr-23	--	--	--	--	--	37	--	--	474	275	--	--
GRT HWY/KIRKHAM MW385	Oct-23	--	--	--	--	--	35	--	--	470	287	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#37 - GRT HWY/KIRKHAM MW435	Apr-04	44.7	4.08	32.9	7.20	--	25	60.0	<1.3**	445	322	130	8.12
GRT HWY/KIRKHAM MW435	Oct-04	49.5	4.03	37.6	7.50	116	29	60.8	<0.2	449	253	131	8.20
GRT HWY/KIRKHAM MW435	May-05	46.7	3.90	35.0	7.43	112	30	60.0	<0.3	447	294	132	8.18
GRT HWY/KIRKHAM MW435	Nov-05	--	--	--	--	110	31	--	--	441	229	134	8.21
GRT HWY/KIRKHAM MW435	May-06	--	--	--	--	--	37	--	--	442	280	--	--
GRT HWY/KIRKHAM MW435	Oct-06	--	--	--	--	--	31	--	--	446	270	--	--
GRT HWY/KIRKHAM MW435	May-07	--	--	--	--	--	--	--	--	444	296	--	--
GRT HWY/KIRKHAM MW435	Oct-07	--	--	--	--	--	32	--	--	425	265	--	--
GRT HWY/KIRKHAM MW435	Apr-08	--	--	--	--	--	31	--	--	442	280	--	--
GRT HWY/KIRKHAM MW435	Sep-08	--	--	--	--	--	31	--	--	434	268	--	--
GRT HWY/KIRKHAM MW435	Apr-09	--	--	--	--	--	34	--	--	452	266	--	--
GRT HWY/KIRKHAM MW435	Nov-09	--	--	--	--	--	32	--	--	447	277	--	--
GRT HWY/KIRKHAM MW435	Apr-10	--	--	--	--	--	30	--	--	446	288	--	--
GRT HWY/KIRKHAM MW435	Nov-10	--	--	--	--	--	32	--	--	466	288	--	--
GRT HWY/KIRKHAM MW435	May-11	--	--	--	--	--	33	--	--	450	281	--	--
GRT HWY/KIRKHAM MW435	Nov-11	--	--	--	--	114	31	--	--	442	280	126	8.05
GRT HWY/KIRKHAM MW435	Apr-12	--	--	--	--	--	33	--	--	437	272	--	--
GRT HWY/KIRKHAM MW435	Nov-12	--	--	--	--	--	34	--	--	438	268	--	--
GRT HWY/KIRKHAM MW435	Apr-13	--	--	--	--	--	30	--	--	438	269	--	--
GRT HWY/KIRKHAM MW435	Oct-13	--	--	--	--	--	29	--	--	439	252	--	--
GRT HWY/KIRKHAM MW435	Apr-14	--	--	--	--	--	29	--	--	478	261	--	--
GRT HWY/KIRKHAM MW435	Oct-14	--	--	--	--	--	29	--	--	437	278	--	--
GRT HWY/KIRKHAM MW435	Apr-15	--	--	--	--	--	30	--	--	438	272	--	--
GRT HWY/KIRKHAM MW435	Oct-15	--	--	--	--	--	30	--	--	431	260	--	--
GRT HWY/KIRKHAM MW435	Apr-16	--	--	--	--	--	29	--	--	434	249	--	--
GRT HWY/KIRKHAM MW435	Oct-16	--	--	--	--	--	28	--	--	435	189*	--	--
GRT HWY/KIRKHAM MW435	Apr-17	--	--	--	--	--	28	--	--	436	266	--	--
GRT HWY/KIRKHAM MW435	Oct-17	--	--	--	--	--	29	--	--	430	254	--	--
GRT HWY/KIRKHAM MW435	Apr-18	--	--	--	--	--	29	--	--	431	252	--	--
GRT HWY/KIRKHAM MW435	Oct-18	--	--	--	--	--	29	--	--	430	265	--	--
GRT HWY/KIRKHAM MW435	Apr-19	--	--	--	--	--	30	--	--	436	243	--	--
GRT HWY/KIRKHAM MW435	Oct-19	--	--	--	--	--	30	--	--	427	281	--	--
GRT HWY/KIRKHAM MW435	Oct-20	--	--	--	--	--	30	--	--	433	265	--	--
GRT HWY/KIRKHAM MW435	Apr-21	--	--	--	--	--	28	--	--	431	260	--	--
GRT HWY/KIRKHAM MW435	Nov-21	--	--	--	--	--	36	--	--	467	285	--	--
GRT HWY/KIRKHAM MW435	Apr-22	--	--	--	--	--	29	--	--	434	260	--	--
GRT HWY/KIRKHAM MW435	Oct-22	--	--	--	--	--	28	--	--	442	256	--	--
GRT HWY/KIRKHAM MW435	Apr-23	--	--	--	--	--	30	--	--	440	260	--	--
GRT HWY/KIRKHAM MW435	Oct-23	--	--	--	--	--	28	--	--	434	257	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#30 - GRT HWY/ORTEGA MW125	Apr-04	26.5	21.2	28.0	1.45	--	25	38.0	23.8**	426	344	145	7.93
GRT HWY/ORTEGA MW125	Oct-04	27.3	22.7	25.8	1.15	108	28	34.6	22.0	405	216	146	7.90
GRT HWY/ORTEGA MW125	May-05	26.5	22.5	25.2	1.24	108	29	--	--	412	245	146	7.89
GRT HWY/ORTEGA MW125	Nov-05	--	--	--	--	102	31	--	--	416	220	150	7.84
GRT HWY/ORTEGA MW125	May-06	--	--	--	--	--	31	--	--	417	250	--	--
GRT HWY/ORTEGA MW125	Oct-06	--	--	--	--	--	32	--	--	446	260	--	--
GRT HWY/ORTEGA MW125	May-07	--	--	--	--	--	34	--	--	459	269	--	--
GRT HWY/ORTEGA MW125	Oct-07	--	--	--	--	--	29	--	--	438	255	--	--
GRT HWY/ORTEGA MW125	Apr-08	--	--	--	--	--	35	--	--	447	383*	--	--
GRT HWY/ORTEGA MW125	Oct-08	--	--	--	--	--	30	--	--	450	252	--	--
GRT HWY/ORTEGA MW125	Apr-09	--	--	--	--	--	32	--	--	458	274	--	--
GRT HWY/ORTEGA MW125	Nov-09	--	--	--	--	--	30	--	--	430	251	--	--
GRT HWY/ORTEGA MW125	Apr-10	--	--	--	--	--	31	--	--	438	251	--	--
GRT HWY/ORTEGA MW125	Nov-10	--	--	--	--	--	35	--	--	463	260	--	--
GRT HWY/ORTEGA MW125	May-11	--	--	--	--	--	36	--	--	456	260	--	--
GRT HWY/ORTEGA MW125	Oct-11	--	--	--	--	112	33	--	--	464	260	172	7.82
GRT HWY/ORTEGA MW125	Apr-12	--	--	--	--	--	35	--	--	464	275	--	--
GRT HWY/ORTEGA MW125	Nov-12	--	--	--	--	--	37	--	--	463	273	--	--
GRT HWY/ORTEGA MW125	Apr-13	--	--	--	--	--	34	--	--	478	247	--	--
GRT HWY/ORTEGA MW125	Oct-13	--	--	--	--	--	32	--	--	466	236	--	--
GRT HWY/ORTEGA MW125	Apr-14	--	--	--	--	--	31	--	--	517	254	--	--
GRT HWY/ORTEGA MW125	Oct-14	--	--	--	--	--	30	--	--	442	246	--	--
GRT HWY/ORTEGA MW125	Apr-15	--	--	--	--	--	30	--	--	437	245	--	--
GRT HWY/ORTEGA MW125	Oct-15	--	--	--	--	--	30	--	--	405	243	--	--
GRT HWY/ORTEGA MW125	Apr-16	--	--	--	--	--	30	--	--	433	251	--	--
GRT HWY/ORTEGA MW125	Oct-16	--	--	--	--	--	26	--	--	349	214	--	--
GRT HWY/ORTEGA MW125	Apr-17	--	--	--	--	--	30	--	--	448	256	--	--
GRT HWY/ORTEGA MW125	Oct-17	--	--	--	--	--	31	--	--	440	235	--	--
GRT HWY/ORTEGA MW125	Apr-18	--	--	--	--	--	33	--	--	478	261	--	--
GRT HWY/ORTEGA MW125	Oct-18	--	--	--	--	--	33	--	--	481	261	--	--
GRT HWY/ORTEGA MW125	Apr-19	--	--	--	--	--	34	--	--	484	268	--	--
GRT HWY/ORTEGA MW125	Oct-19	--	--	--	--	--	32	--	--	455	277	--	--
GRT HWY/ORTEGA MW125	Oct-20	--	--	--	--	--	34	--	--	467	280	--	--
GRT HWY/ORTEGA MW125	Apr-21	--	--	--	--	--	33	--	--	469	269	--	--
GRT HWY/ORTEGA MW125	Nov-21	--	--	--	--	--	33	--	--	473	266	--	--
GRT HWY/ORTEGA MW125	Apr-22	--	--	--	--	--	32	--	--	467	264	--	--
GRT HWY/ORTEGA MW125	Oct-22	--	--	--	--	--	32	--	--	462	254	--	--
GRT HWY/ORTEGA MW125	Apr-23	--	--	--	--	--	33	--	--	449	248	--	--
GRT HWY/ORTEGA MW125	Oct-23	--	--	--	--	--	32	--	--	460	254	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#31 - GRT HWY/ORTEGA MW265	Apr-04	14.0	12.0	20.0	1.04	--	15	15.0	5.7**	269	216	90	8.13
GRT HWY/ORTEGA MW265	Oct-04	15.8	12.8	22.7	1.14	82	21	9.4	5.5	260	131	86	8.10
GRT HWY/ORTEGA MW265	May-05	13.5	12.4	19.9	0.89	80	19	--	--	1,392*	--	82	8.03
GRT HWY/ORTEGA MW265	Nov-05	--	--	--	--	--	24	--	--	257	177	--	--
GRT HWY/ORTEGA MW265	May-06	--	--	--	--	--	25	--	--	257	160	--	--
GRT HWY/ORTEGA MW265	Oct-06	--	--	--	--	--	31	--	--	429	250	--	--
GRT HWY/ORTEGA MW265	May-07	--	--	--	--	--	30	--	--	418	240	--	--
GRT HWY/ORTEGA MW265	Oct-07	--	--	--	--	--	31	--	--	448	262	--	--
GRT HWY/ORTEGA MW265	Apr-08	--	--	--	--	--	31	--	--	439	332*	--	--
GRT HWY/ORTEGA MW265	Sep-08	--	--	--	--	--	31	--	--	439	282	--	--
GRT HWY/ORTEGA MW265	Apr-09	--	--	--	--	--	30	--	--	388	232	--	--
GRT HWY/ORTEGA MW265	Nov-09	--	--	--	--	--	30	--	--	430	243	--	--
GRT HWY/ORTEGA MW265	Apr-10	--	--	--	--	--	24	--	--	282	169	--	--
GRT HWY/ORTEGA MW265	Nov-10	--	--	--	--	--	24	--	--	270	158	--	--
GRT HWY/ORTEGA MW265	May-11	--	--	--	--	--	27	--	--	271	284	--	--
GRT HWY/ORTEGA MW265	Oct-11	--	--	--	--	102	30	--	--	410	240	142	7.90
GRT HWY/ORTEGA MW265	Apr-12	--	--	--	--	--	25	--	--	259	163	--	--
GRT HWY/ORTEGA MW265	Nov-12	--	--	--	--	--	33	--	--	394	256	--	--
GRT HWY/ORTEGA MW265	Apr-13	--	--	--	--	--	25	--	--	281	138	--	--
GRT HWY/ORTEGA MW265	Oct-13	--	--	--	--	--	29	--	--	395	195	--	--
GRT HWY/ORTEGA MW265	Apr-14	--	--	--	--	--	28	--	--	404	194	--	--
GRT HWY/ORTEGA MW265	Oct-14	--	--	--	--	--	27	--	--	376	222	--	--
GRT HWY/ORTEGA MW265	Apr-15	--	--	--	--	--	27	--	--	374	210	--	--
GRT HWY/ORTEGA MW265	Oct-15	--	--	--	--	--	27	--	--	358	222	--	--
GRT HWY/ORTEGA MW265	Apr-16	--	--	--	--	--	26	--	--	338	196	--	--
GRT HWY/ORTEGA MW265	Oct-16	--	--	--	--	--	29	--	--	417	183	--	--
GRT HWY/ORTEGA MW265	Apr-17	--	--	--	--	--	22	--	--	274	149	--	--
GRT HWY/ORTEGA MW265	Oct-17	--	--	--	--	--	27	--	--	348	180	--	--
GRT HWY/ORTEGA MW265	Apr-18	--	--	--	--	--	23	--	--	267	157	--	--
GRT HWY/ORTEGA MW265	Oct-18	--	--	--	--	--	27	--	--	342	189	--	--
GRT HWY/ORTEGA MW265	Apr-19	--	--	--	--	--	23	--	--	256	142	--	--
GRT HWY/ORTEGA MW265	Oct-19	--	--	--	--	--	24	--	--	258	172	--	--
GRT HWY/ORTEGA MW265	Oct-20	--	--	--	--	--	24	--	--	260	152	--	--
GRT HWY/ORTEGA MW265	Apr-21	--	--	--	--	--	23	--	--	259	146	--	--
GRT HWY/ORTEGA MW265	Nov-21	--	--	--	--	--	24	--	--	262	155	--	--
GRT HWY/ORTEGA MW265	Apr-22	--	--	--	--	--	24	--	--	260	154	--	--
GRT HWY/ORTEGA MW265	Oct-22	--	--	--	--	--	23	--	--	268	143	--	--
GRT HWY/ORTEGA MW265	Apr-23	--	--	--	--	--	25	--	--	264	148	--	--
GRT HWY/ORTEGA MW265	Oct-23	--	--	--	--	--	26	--	--	316	176	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#32 - GRT HWY/ORTEGA MW400	Apr-04	15.2	11.8	23.1	1.47	--	20	10.0	5.3**	277	230	100	8.11
GRT HWY/ORTEGA MW400	Oct-04	17.0	12.7	23.3	1.31	92	22	13.5	5.8	277	146	88	8.20
GRT HWY/ORTEGA MW400	Apr-05	16.4	13.5	21.8	1.28	88	24	8.7	6.4	272	156	88	8.22
GRT HWY/ORTEGA MW400	Nov-05	--	--	--	--	--	25	--	--	273	176	--	--
GRT HWY/ORTEGA MW400	May-06	--	--	--	--	--	24	--	--	272	180	--	--
GRT HWY/ORTEGA MW400	Oct-06	--	--	--	--	--	24	--	--	272	160	--	--
GRT HWY/ORTEGA MW400	May-07	--	--	--	--	--	24	--	--	276	171	--	--
GRT HWY/ORTEGA MW400	Oct-07	--	--	--	--	--	23	--	--	271	170	--	--
GRT HWY/ORTEGA MW400	Apr-08	--	--	--	--	--	19	--	--	273	174	--	--
GRT HWY/ORTEGA MW400	Sep-08	--	--	--	--	--	24	--	--	268	216	--	--
GRT HWY/ORTEGA MW400	Apr-09	--	--	--	--	--	20	--	--	272	168	--	--
GRT HWY/ORTEGA MW400	Nov-09	--	--	--	--	--	25	--	--	275	166	--	--
GRT HWY/ORTEGA MW400	Apr-10	--	--	--	--	--	24	--	--	274	164	--	--
GRT HWY/ORTEGA MW400	Nov-10	--	--	--	--	--	24	--	--	278	208	--	--
GRT HWY/ORTEGA MW400	May-11	--	--	--	--	--	27	--	--	279	220	--	--
GRT HWY/ORTEGA MW400	Oct-11	--	--	--	--	84	26	--	--	272	160	86	8.04
GRT HWY/ORTEGA MW400	Apr-12	--	--	--	--	--	25	--	--	270	163	--	--
GRT HWY/ORTEGA MW400	Nov-12	--	--	--	--	--	29	--	--	270	165	--	--
GRT HWY/ORTEGA MW400	Apr-13	--	--	--	--	--	25	--	--	272	159	--	--
GRT HWY/ORTEGA MW400	Oct-13	--	--	--	--	--	25	--	--	271	129	--	--
GRT HWY/ORTEGA MW400	Apr-14	--	--	--	--	--	24	--	--	297	135	--	--
GRT HWY/ORTEGA MW400	Oct-14	--	--	--	--	--	24	--	--	270	155	--	--
GRT HWY/ORTEGA MW400	May-15	--	--	--	--	--	24	--	--	270	153	--	--
GRT HWY/ORTEGA MW400	Oct-15	--	--	--	--	--	25	--	--	266	175	--	--
GRT HWY/ORTEGA MW400	Apr-16	--	--	--	--	--	24	--	--	272	130	--	--
GRT HWY/ORTEGA MW400	Oct-16	--	--	--	--	--	23	--	--	273	130	--	--
GRT HWY/ORTEGA MW400	Apr-17	--	--	--	--	--	23	--	--	273	155	--	--
GRT HWY/ORTEGA MW400	Oct-17	--	--	--	--	--	24	--	--	272	155	--	--
GRT HWY/ORTEGA MW400	Apr-18	--	--	--	--	--	24	--	--	272	154	--	--
GRT HWY/ORTEGA MW400	Oct-18	--	--	--	--	--	25	--	--	273	151 <sup>a</sup>	--	--
GRT HWY/ORTEGA MW400	Apr-19	--	--	--	--	--	25	--	--	273	162	--	--
GRT HWY/ORTEGA MW400	Oct-19	--	--	--	--	--	25	--	--	275	183	--	--
GRT HWY/ORTEGA MW400	Oct-20	--	--	--	--	--	25	--	--	271	157	--	--
GRT HWY/ORTEGA MW400	Apr-21	--	--	--	--	--	23	--	--	271	144	--	--
GRT HWY/ORTEGA MW400	Nov-21	--	--	--	--	--	23	--	--	272	153	--	--
GRT HWY/ORTEGA MW400	Apr-22	--	--	--	--	--	23	--	--	270	150	--	--
GRT HWY/ORTEGA MW400	Oct-22	--	--	--	--	--	23	--	--	277	152	--	--
GRT HWY/ORTEGA MW400	Apr-23	--	--	--	--	--	24	--	--	272	147	--	--
GRT HWY/ORTEGA MW400	Oct-23	--	--	--	--	--	23	--	--	266	151	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#33 - GRT HWY/ORTEGA MW475	Apr-04	12.7	2.29	40.9	2.89	--	20	15.0	<1.3**	283	240	45	8.33
GRT HWY/ORTEGA MW475	Oct-04	13.7	1.75	45.6	3.43	80	27	14.2	<0.2	276	129	37	8.70
GRT HWY/ORTEGA MW475	Apr-05	13.5	1.80	43.1	2.87	78	30	13.0	<0.3	280	159	44	8.39
GRT HWY/ORTEGA MW475	Nov-05	--	--	--	--	76	30	--	--	280	136	42	7.67
GRT HWY/ORTEGA MW475	May-06	--	--	--	--	--	30	--	--	278	180	--	--
GRT HWY/ORTEGA MW475	Oct-06	--	--	--	--	--	28	--	--	283	160	--	--
GRT HWY/ORTEGA MW475	May-07	--	--	--	--	--	29	--	--	285	172	--	--
GRT HWY/ORTEGA MW475	Oct-07	--	--	--	--	--	29	--	--	279	184	--	--
GRT HWY/ORTEGA MW475	Apr-08	--	--	--	--	--	30	--	--	286	178	--	--
GRT HWY/ORTEGA MW475	Sep-08	--	--	--	--	--	31	--	--	283	168	--	--
GRT HWY/ORTEGA MW475	Apr-09	--	--	--	--	--	30	--	--	289	170	--	--
GRT HWY/ORTEGA MW475	Nov-09	--	--	--	--	--	30	--	--	292	168	--	--
GRT HWY/ORTEGA MW475	Apr-10	--	--	--	--	--	29	--	--	289	181	--	--
GRT HWY/ORTEGA MW475	Nov-10	--	--	--	--	--	32	--	--	304	203	--	--
GRT HWY/ORTEGA MW475	May-11	--	--	--	--	--	33	--	--	297	172	--	--
GRT HWY/ORTEGA MW475	Oct-11	--	--	--	--	82	31	--	--	289	160	42	8.23
GRT HWY/ORTEGA MW475	Apr-12	--	--	--	--	--	31	--	--	288	194	--	--
GRT HWY/ORTEGA MW475	Nov-12	--	--	--	--	--	33	--	--	290	179	--	--
GRT HWY/ORTEGA MW475	Apr-13	--	--	--	--	--	30	--	--	293	166	--	--
GRT HWY/ORTEGA MW475	Oct-13	--	--	--	--	--	30	--	--	293	140	--	--
GRT HWY/ORTEGA MW475	Apr-14	--	--	--	--	--	28	--	--	320	169	--	--
GRT HWY/ORTEGA MW475	Oct-14	--	--	--	--	--	30	--	--	293	152	--	--
GRT HWY/ORTEGA MW475	May-15	--	--	--	--	--	29	--	--	293	141	--	--
GRT HWY/ORTEGA MW475	Oct-15	--	--	--	--	--	29	--	--	284	176	--	--
GRT HWY/ORTEGA MW475	Apr-16	--	--	--	--	--	29	--	--	297	136	--	--
GRT HWY/ORTEGA MW475	Oct-16	--	--	--	--	--	28	--	--	293	139	--	--
GRT HWY/ORTEGA MW475	Apr-17	--	--	--	--	--	27	--	--	295	146	--	--
GRT HWY/ORTEGA MW475	Oct-17	--	--	--	--	--	29	--	--	294	166	--	--
GRT HWY/ORTEGA MW475	Apr-18	--	--	--	--	--	29	--	--	295	144	--	--
GRT HWY/ORTEGA MW475	Oct-18	--	--	--	--	--	29	--	--	294	162	--	--
GRT HWY/ORTEGA MW475	Apr-19	--	--	--	--	--	30	--	--	295	168	--	--
GRT HWY/ORTEGA MW475	Oct-19	--	--	--	--	--	30	--	--	297	162	--	--
GRT HWY/ORTEGA MW475	Oct-20	--	--	--	--	--	30	--	--	296	165	--	--
GRT HWY/ORTEGA MW475	Apr-21	--	--	--	--	--	28	--	--	294	149	--	--
GRT HWY/ORTEGA MW475	Nov-21	--	--	--	--	--	29	--	--	296	174	--	--
GRT HWY/ORTEGA MW475	Apr-22	--	--	--	--	--	28	--	--	296	162	--	--
GRT HWY/ORTEGA MW475	Oct-22	--	--	--	--	--	29	--	--	304	164	--	--
GRT HWY/ORTEGA MW475	Apr-23	--	--	--	--	--	30	--	--	299	176	--	--
GRT HWY/ORTEGA MW475	Oct-23	--	--	--	--	--	27	--	--	296	169	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#26 - GRT HWY/TARAVAL MW145	Apr-04	28.0	25.2	29.5	2.02	--	30	23.0	37.0**	473	360	170	7.96
GRT HWY/TARAVAL MW145	Oct-04	30.6	25.9	30.3	1.78	132	35	25.2	35.8	478	277	171	7.90
GRT HWY/TARAVAL MW145	Apr-05	29.6	26.1	29.0	1.62	132	35	25.0	36.0	478	295	172	7.88
GRT HWY/TARAVAL MW145	Nov-05	--	--	--	--	--	36	--	--	486	317	--	--
GRT HWY/TARAVAL MW145	May-06	--	--	--	--	--	38	--	--	502	320	--	--
GRT HWY/TARAVAL MW145	Oct-06	--	--	--	--	--	36	--	--	489	300	--	--
GRT HWY/TARAVAL MW145	May-07	--	--	--	--	--	26*	--	--	507	302	--	--
GRT HWY/TARAVAL MW145	Oct-07	--	--	--	--	--	37	--	--	497	305	--	--
GRT HWY/TARAVAL MW145	Apr-08	--	--	--	--	--	37	--	--	495	306	--	--
GRT HWY/TARAVAL MW145	Sep-08	--	--	--	--	--	37	--	--	481	281	--	--
GRT HWY/TARAVAL MW145	Apr-09	--	--	--	--	--	41	--	--	477	271	--	--
GRT HWY/TARAVAL MW145	Nov-09	--	--	--	--	--	38	--	--	464	274	--	--
GRT HWY/TARAVAL MW145	Apr-10	--	--	--	--	--	38	--	--	460	277	--	--
GRT HWY/TARAVAL MW145	Nov-10	--	--	--	--	--	38	--	--	471	263	--	--
GRT HWY/TARAVAL MW145	Jun-11	--	--	--	--	--	38	--	--	483	310	--	--
GRT HWY/TARAVAL MW145	Nov-11	--	--	--	--	116	40	--	--	470	280	162	7.38
GRT HWY/TARAVAL MW145	May-12	--	--	--	--	--	43	--	--	457	273	--	--
GRT HWY/TARAVAL MW145	Nov-12	--	--	--	--	--	46	--	--	449	260	--	--
GRT HWY/TARAVAL MW145	Apr-13	--	--	--	--	--	41	--	--	454	263	--	--
GRT HWY/TARAVAL MW145	Oct-13	--	--	--	--	--	40	--	--	444	238	--	--
GRT HWY/TARAVAL MW145	May-14	--	--	--	--	--	39	--	--	454	238	--	--
GRT HWY/TARAVAL MW145	Nov-14	--	--	--	--	--	34	--	--	383	236	--	--
GRT HWY/TARAVAL MW145	Apr-15	--	--	--	--	--	42	--	--	454	219	--	--
GRT HWY/TARAVAL MW145	Nov-15	--	--	--	--	--	41	--	--	452	139*	--	--
GRT HWY/TARAVAL MW145	May-16	--	--	--	--	--	41	--	--	457	267	--	--
GRT HWY/TARAVAL MW145	Oct-16	--	--	--	--	--	39	--	--	457	265	--	--
GRT HWY/TARAVAL MW145	Apr-17	--	--	--	--	--	39	--	--	460	272	--	--
GRT HWY/TARAVAL MW145	Oct-17	--	--	--	--	--	43	--	--	468	275	--	--
GRT HWY/TARAVAL MW145	Apr-18	--	--	--	--	--	41	--	--	466	272	--	--
GRT HWY/TARAVAL MW145	Nov-18	--	--	--	--	--	42	--	--	440	260	--	--
GRT HWY/TARAVAL MW145	Apr-19	--	--	--	--	--	42	--	--	465	253	--	--
GRT HWY/TARAVAL MW145	Oct-19	--	--	--	--	--	43	--	--	460	269	--	--
GRT HWY/TARAVAL MW145	Oct-20	--	--	--	--	--	42	--	--	475	279	--	--
GRT HWY/TARAVAL MW145	Apr-21	--	--	--	--	--	42	--	--	475	277	--	--
GRT HWY/TARAVAL MW145	Nov-21	--	--	--	--	--	34	--	--	382	204	--	--
GRT HWY/TARAVAL MW145	Apr-22	--	--	--	--	--	42	--	--	475	251	--	--
GRT HWY/TARAVAL MW145	Oct-22	--	--	--	--	--	42	--	--	477	242	--	--
GRT HWY/TARVAL MW145	Apr-23	--	--	--	--	--	43	--	--	489	263	--	--
GRT HWY/TARVAL MW145	Oct-23	--	--	--	--	--	41	--	--	498	259	--	--



**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#27 - GRT HWY/TARAVAL MW240	Apr-04	21.6	19.5	22.2	1.88	--	25	17.0	11.0**	371	276	150	7.95
GRT HWY/TARAVAL MW240	Oct-04	21.6	19.8	23.9	1.67	104	32	19.6	11.3	367	196	130	7.70
GRT HWY/TARAVAL MW240	Apr-05	22.1	21.0	23.1	1.68	104	36	20.0	13.0	369	243	132	7.80
GRT HWY/TARAVAL MW240	Nov-05	--	--	--	--	--	34	--	--	380	230	--	--
GRT HWY/TARAVAL MW240	May-06	--	--	--	--	--	36	--	--	368	240	--	--
GRT HWY/TARAVAL MW240	Oct-06	--	--	--	--	--	33	--	--	366	230	--	--
GRT HWY/TARAVAL MW240	May-07	--	--	--	--	--	35	--	--	373	214	--	--
GRT HWY/TARAVAL MW240	Oct-07	--	--	--	--	--	36	--	--	370	229	--	--
GRT HWY/TARAVAL MW240	Apr-08	--	--	--	--	--	36	--	--	374	226	--	--
GRT HWY/TARAVAL MW240	Sep-08	--	--	--	--	--	34	--	--	375	207	--	--
GRT HWY/TARAVAL MW240	Apr-09	--	--	--	--	--	39	--	--	388	229	--	--
GRT HWY/TARAVAL MW240	Nov-09	--	--	--	--	--	35	--	--	386	217	--	--
GRT HWY/TARAVAL MW240	Apr-10	--	--	--	--	--	35	--	--	386	235	--	--
GRT HWY/TARAVAL MW240	Nov-10	--	--	--	--	--	33	--	--	389	225	--	--
GRT HWY/TARAVAL MW240	Jun-11	--	--	--	--	--	34	--	--	385	249	--	--
GRT HWY/TARAVAL MW240	Nov-11	--	--	--	--	108	35	--	--	379	200	138	7.45
GRT HWY/TARAVAL MW240	May-12	--	--	--	--	--	37	--	--	377	256	--	--
GRT HWY/TARAVAL MW240	Nov-12	--	--	--	--	--	39	--	--	380	221	--	--
GRT HWY/TARAVAL MW240	Apr-13	--	--	--	--	--	35	--	--	380	230	--	--
GRT HWY/TARAVAL MW240	Oct-13	--	--	--	--	--	34	--	--	383	214	--	--
GRT HWY/TARAVAL MW240	May-14	--	--	--	--	--	34	--	--	385	196	--	--
GRT HWY/TARAVAL MW240	Nov-14	--	--	--	--	--	42	--	--	446	266	--	--
GRT HWY/TARAVAL MW240	Apr-15	--	--	--	--	--	34	--	--	383	169	--	--
GRT HWY/TARAVAL MW240	Nov-15	--	--	--	--	--	34	--	--	379	177	--	--
GRT HWY/TARAVAL MW240	May-16	--	--	--	--	--	33	--	--	378	217	--	--
GRT HWY/TARAVAL MW240	Oct-16	--	--	--	--	--	33	--	--	383	206	--	--
GRT HWY/TARAVAL MW240	Apr-17	--	--	--	--	--	33	--	--	381	221	--	--
GRT HWY/TARAVAL MW240	Oct-17	--	--	--	--	--	34	--	--	381	212	--	--
GRT HWY/TARAVAL MW240	Apr-18	--	--	--	--	--	34	--	--	384	225	--	--
GRT HWY/TARAVAL MW240	Nov-18	--	--	--	--	--	33	--	--	374	207	--	--
GRT HWY/TARAVAL MW240	Apr-19	--	--	--	--	--	34	--	--	379	209	--	--
GRT HWY/TARAVAL MW240	Oct-19	--	--	--	--	--	34	--	--	381	219	--	--
GRT HWY/TARAVAL MW240	Oct-20	--	--	--	--	--	34	--	--	380	233	--	--
GRT HWY/TARAVAL MW240	Apr-21	--	--	--	--	--	33	--	--	380	204	--	--
GRT HWY/TARAVAL MW240	Nov-21	--	--	--	--	--	42	--	--	493	257	--	--
GRT HWY/TARAVAL MW240	Apr-22	--	--	--	--	--	32	--	--	378	204	--	--
GRT HWY/TARAVAL MW240	Oct-22	--	--	--	--	--	32	--	--	391	206	--	--
GRT HWY/TARVAL MW240	Apr-23	--	--	--	--	--	34	--	--	384	211	--	--
GRT HWY/TARVAL MW240	Oct-23	--	--	--	--	--	32	--	--	393	208	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#28 - GRT HWY/TARAVAL MW400	Apr-04	17.6	14.7	20.4	1.72	--	20	28.0	<1.3**	313	248	140	8.16
GRT HWY/TARAVAL MW400	Oct-04	18.6	15.1	23.1	1.62	88	26	24.6	<0.2	310	162	104	8.10
GRT HWY/TARAVAL MW400	May-05	18.9	16.3	22.3	1.47	92	28	--	--	308	--	104	8.28
GRT HWY/TARAVAL MW400	Nov-05	--	--	--	--	--	28	--	--	311	193	--	--
GRT HWY/TARAVAL MW400	May-06	--	--	--	--	--	28	--	--	304	200	--	--
GRT HWY/TARAVAL MW400	Oct-06	--	--	--	--	--	27	--	--	309	180	--	--
GRT HWY/TARAVAL MW400	May-07	--	--	--	--	--	28	--	--	311	376*	--	--
GRT HWY/TARAVAL MW400	Oct-07	--	--	--	--	--	28	--	--	306	172	--	--
GRT HWY/TARAVAL MW400	Apr-08	--	--	--	--	--	28	--	--	306	213	--	--
GRT HWY/TARAVAL MW400	Sep-08	--	--	--	--	--	27	--	--	297	173	--	--
GRT HWY/TARAVAL MW400	Apr-09	--	--	--	--	--	29	--	--	311	183	--	--
GRT HWY/TARAVAL MW400	Nov-09	--	--	--	--	--	28	--	--	309	172	--	--
GRT HWY/TARAVAL MW400	Apr-10	--	--	--	--	--	28	--	--	309	188	--	--
GRT HWY/TARAVAL MW400	Nov-10	--	--	--	--	--	28	--	--	310	179	--	--
GRT HWY/TARAVAL MW400	Jun-11	--	--	--	--	--	28	--	--	319	206	--	--
GRT HWY/TARAVAL MW400	Nov-11	--	--	--	--	88	28	--	--	311	190	104	7.49
GRT HWY/TARAVAL MW400	May-12	--	--	--	--	--	29	--	--	312	215	--	--
GRT HWY/TARAVAL MW400	Nov-12	--	--	--	--	--	31	--	--	309	185	--	--
GRT HWY/TARAVAL MW400	Apr-13	--	--	--	--	--	29	--	--	324	195	--	--
GRT HWY/TARAVAL MW400	Oct-13	--	--	--	--	--	28	--	--	327	471*	--	--
GRT HWY/TARAVAL MW400	May-14	--	--	--	--	--	30	--	--	328	162	--	--
GRT HWY/TARAVAL MW400	Nov-14	--	--	--	--	--	29	--	--	327	195	--	--
GRT HWY/TARAVAL MW400	Apr-15	--	--	--	--	--	27	--	--	322	86*	--	--
GRT HWY/TARAVAL MW400	Nov-15	--	--	--	--	--	29	--	--	312	142	--	--
GRT HWY/TARAVAL MW400	May-16	--	--	--	--	--	28	--	--	319	169	--	--
GRT HWY/TARAVAL MW400	Oct-16	--	--	--	--	--	28	--	--	317	162	--	--
GRT HWY/TARAVAL MW400	Apr-17	--	--	--	--	--	28	--	--	320	179	--	--
GRT HWY/TARAVAL MW400	Oct-17	--	--	--	--	--	29	--	--	322	172	--	--
GRT HWY/TARAVAL MW400	Apr-18	--	--	--	--	--	30	--	--	320	172	--	--
GRT HWY/TARAVAL MW400	Nov-18	--	--	--	--	--	29	--	--	318	172 <sup>a</sup>	--	--
GRT HWY/TARAVAL MW400	Apr-19	--	--	--	--	--	30	--	--	342	187	--	--
GRT HWY/TARAVAL MW400	Oct-19	--	--	--	--	--	31	--	--	329	176	--	--
GRT HWY/TARAVAL MW400	Oct-20	--	--	--	--	--	29	--	--	316	168	--	--
GRT HWY/TARAVAL MW400	Apr-21	--	--	--	--	--	28	--	--	319	166	--	--
GRT HWY/TARAVAL MW400	Nov-21	--	--	--	--	--	29	--	--	313	159	--	--
GRT HWY/TARAVAL MW400	Apr-22	--	--	--	--	--	28	--	--	319	171	--	--
GRT HWY/TARAVAL MW400	Oct-22	--	--	--	--	--	28	--	--	322	165	--	--
GRT HWY/TARVAL MW400	Apr-23	--	--	--	--	--	29	--	--	323	175	--	--
GRT HWY/TARVAL MW400	Oct-23	--	--	--	--	--	27	--	--	328	177	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#29 - GRT HWY/TARAVAL MW530	Apr-04	11.1	5.33	48.8	2.45	--	15	9.0	<1.3**	321	254	60	8.35
GRT HWY/TARAVAL MW530	Oct-04	0.08*	<0.02*	<0.01*	<0.35*	119	23	8.5	<0.2	323	188	48	8.30
GRT HWY/TARAVAL MW530	May-05	12.3	5.54	53.5	2.29	120	20	--	--	322	208	60	8.43
GRT HWY/TARAVAL MW530	Nov-05	--	--	--	--	--	26	--	--	322	207	--	--
GRT HWY/TARAVAL MW530	May-06	--	--	--	--	--	26	--	--	324	190	--	--
GRT HWY/TARAVAL MW530	Oct-06	--	--	--	--	--	25	--	--	321	200	--	--
GRT HWY/TARAVAL MW530	May-07	--	--	--	--	--	26	--	--	330	197	--	--
GRT HWY/TARAVAL MW530	Oct-07	--	--	--	--	--	26	--	--	324	192	--	--
GRT HWY/TARAVAL MW530	Apr-08	--	--	--	--	--	27	--	--	329	205	--	--
GRT HWY/TARAVAL MW530	Sep-08	--	--	--	--	--	26	--	--	319	186	--	--
GRT HWY/TARAVAL MW530	Apr-09	--	--	--	--	--	28	--	--	330	192	--	--
GRT HWY/TARAVAL MW530	Nov-09	--	--	--	--	--	26	--	--	331	178	--	--
GRT HWY/TARAVAL MW530	Apr-10	--	--	--	--	--	26	--	--	330	209	--	--
GRT HWY/TARAVAL MW530	Nov-10	--	--	--	--	--	24	--	--	332	185	--	--
GRT HWY/TARAVAL MW530	Jun-11	--	--	--	--	--	24	--	--	336	192	--	--
GRT HWY/TARAVAL MW530	Nov-11	--	--	--	--	132	26	--	--	340	220	56	7.62
GRT HWY/TARAVAL MW530	May-12	--	--	--	--	--	27	--	--	337	185	--	--
GRT HWY/TARAVAL MW530	Nov-12	--	--	--	--	--	30	--	--	343	202	--	--
GRT HWY/TARAVAL MW530	Apr-13	--	--	--	--	--	26	--	--	349	210	--	--
GRT HWY/TARAVAL MW530	Oct-13	--	--	--	--	--	25	--	--	345	195	--	--
GRT HWY/TARAVAL MW530	May-14	--	--	--	--	--	25	--	--	347	170	--	--
GRT HWY/TARAVAL MW530	Nov-14	--	--	--	--	--	25	--	--	342	196	--	--
GRT HWY/TARAVAL MW530	Apr-15	--	--	--	--	--	25	--	--	346	181	--	--
GRT HWY/TARAVAL MW530	Nov-15	--	--	--	--	--	26	--	--	365	162	--	--
GRT HWY/TARAVAL MW530	May-16	--	--	--	--	--	25	--	--	353	183	--	--
GRT HWY/TARAVAL MW530	Oct-16	--	--	--	--	--	25	--	--	352	141	--	--
GRT HWY/TARAVAL MW530	Apr-17	--	--	--	--	--	24	--	--	369	181	--	--
GRT HWY/TARAVAL MW530	Oct-17	--	--	--	--	--	25	--	--	366	197	--	--
GRT HWY/TARAVAL MW530	Apr-18	--	--	--	--	--	25	--	--	348	186	--	--
GRT HWY/TARAVAL MW530	Nov-18	--	--	--	--	--	25	--	--	356	192	--	--
GRT HWY/TARAVAL MW530	Apr-19	--	--	--	--	--	26	--	--	357	186	--	--
GRT HWY/TARAVAL MW530	Oct-19	--	--	--	--	--	27	--	--	353	192	--	--
GRT HWY/TARAVAL MW530	Oct-20	--	--	--	--	--	25	--	--	358	192	--	--
GRT HWY/TARAVAL MW530	Apr-21	--	--	--	--	--	24	--	--	357	187	--	--
GRT HWY/TARAVAL MW530	Nov-21	--	--	--	--	--	25	--	--	367	186	--	--
GRT HWY/TARAVAL MW530	Apr-22	--	--	--	--	--	24	--	--	374	209	--	--
GRT HWY/TARAVAL MW530	Oct-22	--	--	--	--	--	25	--	--	368	193	--	--
GRT HWY/TARVAL MW530	Apr-23	--	--	--	--	--	25	--	--	380	227	--	--
GRT HWY/TARVAL MW530	Oct-23	--	--	--	--	--	24	--	--	378	206	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#42 - ZOO MW275	Apr-04	17.9	0.77*	97.6*	3.06	--	60	45.0*	3.6**	530	360	44	10.20
ZOO MW275	Nov-04	24.1	15.0	45.5	5.07	110	60	12.2	<0.2	431	250	114	8.90
ZOO MW275	May-05	21.1	18.8	35.9	4.89	118	68	7.0	<0.3	446	526*	158	8.32
ZOO MW275	Nov-05	--	--	--	--	--	71	--	--	463	309	--	--
ZOO MW275	May-06	--	--	--	--	--	70	--	--	459	260	--	--
ZOO MW275	Nov-06	20.2	20.9	34.1	4.5	116	66	5.3	<0.3	453	240	132	7.95
ZOO MW275	May-07	--	--	--	--	--	75	--	--	455	242	--	--
ZOO MW275	Oct-07	18.8	20.3	33.9	4.5	116	65	4.6	<0.3	453	246	130	7.86
ZOO MW275	May-08	--	--	--	--	--	64	--	--	456	245	--	--
ZOO MW275	Sep-08	--	--	--	--	--	69	--	--	467	248	--	--
ZOO MW275	Apr-09	--	--	--	--	--	68	--	--	461	246	--	--
ZOO MW275	Nov-09	--	--	--	--	--	68	--	--	475	260	--	--
ZOO MW275	Apr-10	--	--	--	--	--	42*	--	--	486	237	--	--
ZOO MW275	Nov-10	--	--	--	--	--	41*	--	--	493	290	--	--
ZOO MW275	May-11	--	--	--	--	--	44*	--	--	486	314	--	--
ZOO MW275	Oct-11	--	--	--	--	120	69	--	--	458	240	140	7.46
ZOO MW275	May-12	--	--	--	--	--	122*	--	--	468	265	--	--
ZOO MW275	Nov-12	--	--	--	--	--	74	--	--	468	269	--	--
ZOO MW275	Apr-13	--	--	--	--	--	71	--	--	475	254	--	--
ZOO MW275	Oct-13	--	--	--	--	--	69	--	--	474	247	--	--
ZOO MW275	May-14	--	--	--	--	--	68	--	--	476	248	--	--
ZOO MW275	Nov-14	--	--	--	--	--	70	--	--	484	267	--	--
ZOO MW275	Apr-15	--	--	--	--	--	72	--	--	484	232	--	--
ZOO MW275	Nov-15	--	--	--	--	--	75	--	--	491	249	--	--
ZOO MW275	May-16	--	--	--	--	--	72	--	--	495	246	--	--
ZOO MW275	Nov-16	--	--	--	--	--	71	--	--	499	256	--	--
ZOO MW275	Apr-17	--	--	--	--	--	70	--	--	497	269	--	--
ZOO MW275	Oct-17	--	--	--	--	--	74	--	--	500	252	--	--
ZOO MW275	Apr-18	--	--	--	--	--	74	--	--	495	235	--	--
ZOO MW275	Nov-18	--	--	--	--	--	73	--	--	501	241	--	--
ZOO MW275	Apr-19	--	--	--	--	--	76	--	--	498	267	--	--
ZOO MW275	Oct-19	--	--	--	--	--	75	--	--	519	269	--	--
ZOO MW275	Oct-20	--	--	--	--	--	73	--	--	518	298	--	--
ZOO MW275	Apr-21	--	--	--	--	--	75	--	--	520	286	--	--
ZOO MW275	Nov-21	--	--	--	--	--	76	--	--	526	289	--	--
ZOO MW275	May-22	--	--	--	--	--	73	--	--	525	262	--	--
ZOO MW275	Oct-22	--	--	--	--	--	73	--	--	536	257	--	--
ZOO MW275	Apr-23	--	--	--	--	--	78	--	--	531	267	--	--
ZOO MW275	Nov-23	--	--	--	--	--	72	--	--	535	287	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#43 - ZOO MW450	Apr-04	23.9	24.8	43.1	2.75	--	47	19.0	32.6**	469	360	138	8.63
ZOO MW450	Nov-04	24.6	24.9	45.0	2.82	132	43	18.6	39.5	495	298	164	8.40
ZOO MW450	May-05	23.2	26.1	41.7	2.86	122	44	19.0	41.0	491	295	138	8.44
ZOO MW450	Nov-05	--	--	--	--	--	44	--	--	504	293	--	--
ZOO MW450	May-06	--	--	--	--	--	45	--	--	488	300	--	--
ZOO MW450	Nov-06	21.9	27.0	41.6	2.7	154	44	19.6	37.8	488	280	128	8.32
ZOO MW450	May-07	--	--	--	--	--	45	--	--	483	280	--	--
ZOO MW450	Oct-07	18.9	24.1	37.2	2.1	126	42	17.8	30.0	472	290	140	8.22
ZOO MW450	May-08	--	--	--	--	--	42	--	--	474	301	--	--
ZOO MW450	Sep-08	--	--	--	--	--	43	--	--	478	283	--	--
ZOO MW450	Apr-09	--	--	--	--	--	43	--	--	479	274	--	--
ZOO MW450	Nov-09	--	--	--	--	--	43	--	--	486	293	--	--
ZOO MW450	Apr-10	--	--	--	--	--	34*	--	--	474	211*	--	--
ZOO MW450	Nov-10	--	--	--	--	--	67*	--	--	478	261	--	--
ZOO MW450	May-11	--	--	--	--	--	72*	--	--	478	277	--	--
ZOO MW450	Oct-11	--	--	--	--	132	44	--	--	479	270	154	7.01
ZOO MW450	May-12	--	--	--	--	--	128*	--	--	473	468	--	--
ZOO MW450	Nov-12	--	--	--	--	--	47	--	--	478	302	--	--
ZOO MW450	Apr-13	--	--	--	--	--	43	--	--	482	293	--	--
ZOO MW450	Oct-13	--	--	--	--	--	41	--	--	478	274	--	--
ZOO MW450	May-14	--	--	--	--	--	42	--	--	481	274	--	--
ZOO MW450	Nov-14	--	--	--	--	--	43	--	--	494	291	--	--
ZOO MW450	Apr-15	--	--	--	--	--	44	--	--	501	265	--	--
ZOO MW450	Nov-15	--	--	--	--	--	46	--	--	499	278	--	--
ZOO MW450	May-16	--	--	--	--	--	43	--	--	501	292	--	--
ZOO MW450	Nov-16	--	--	--	--	--	43	--	--	504	286	--	--
ZOO MW450	Apr-17	--	--	--	--	--	42	--	--	507	293	--	--
ZOO MW450	Oct-17	--	--	--	--	--	44	--	--	505	282	--	--
ZOO MW450	Apr-18	--	--	--	--	--	45	--	--	511	297	--	--
ZOO MW450	Nov-18	--	--	--	--	--	45	--	--	507	267	--	--
ZOO MW450	Apr-19	--	--	--	--	--	47	--	--	517	300	--	--
ZOO MW450	Oct-19	--	--	--	--	--	47	--	--	531	282	--	--
ZOO MW450	Oct-20	--	--	--	--	--	47	--	--	522	309	--	--
ZOO MW450	Apr-21	--	--	--	--	--	47	--	--	530	307	--	--
ZOO MW450	Nov-21	--	--	--	--	--	49	--	--	539	298	--	--
ZOO MW450	May-22	--	--	--	--	--	48	--	--	555	307	--	--
ZOO MW450	Oct-22	--	--	--	--	--	49	--	--	571	316	--	--
ZOO MW450	Apr-23	--	--	--	--	--	52	--	--	574	309	--	--
ZOO MW450	Nov-23	--	--	--	--	--	51	--	--	590	343	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#45 - ZOO MW565	Apr-04	30.5	10.3	71.6	4.09	--	53	82*	<1.3**	510	380	100	8.31
ZOO MW565	May-05	27.6	10.0	63.3	3.56	170	52	7.6	<0.3	505	313	104	8.25
ZOO MW565	Nov-05	--	--	--	--	--	53	--	--	507	323	--	--
ZOO MW565	May-06	--	--	--	--	--	53	--	--	498	300	--	--
ZOO MW565	Nov-06	27.3	10.4	69.7	3.3	162	53	7.4	<0.3	503	280	104	8.21
ZOO MW565	May-07	--	--	--	--	--	60	--	--	503	281	--	--
ZOO MW565	Oct-07	25.1	9.9	65.6	2.6	170	52	6.9	<0.3	502	295	102	8.25
ZOO MW565	May-08	--	--	--	--	--	52	--	--	494	272	--	--
ZOO MW565	Oct-08	--	--	--	--	--	51	--	--	494	262	--	--
ZOO MW565	Apr-09	--	--	--	--	--	53	--	--	504	282	--	--
ZOO MW565	Nov-09	--	--	--	--	--	53	--	--	506	304	--	--
ZOO MW565	Apr-10	--	--	--	--	--	54	--	--	503	232	--	--
ZOO MW565	Nov-10	--	--	--	--	--	52	--	--	510	283	--	--
ZOO MW565	May-11	--	--	--	--	--	54	--	--	517	330	--	--
ZOO MW565	Oct-11	--	--	--	--	150	52	--	--	449	240	76	8.04
ZOO MW565	May-12	--	--	--	--	--	57	--	--	443	246	--	--
ZOO MW565	Nov-12	--	--	--	--	--	57	--	--	433	244	--	--
ZOO MW565	Apr-13	--	--	--	--	--	52	--	--	438	241	--	--
ZOO MW565	Oct-13	--	--	--	--	--	50	--	--	436	218	--	--
ZOO MW565	May-14	--	--	--	--	--	50	--	--	434	223	--	--
ZOO MW565	Nov-14	--	--	--	--	--	51	--	--	431	230	--	--
ZOO MW565	Apr-15	--	--	--	--	--	52	--	--	430	199	--	--
ZOO MW565	Nov-15	--	--	--	--	--	51	--	--	423	199	--	--
ZOO MW565	May-16	--	--	--	--	--	50	--	--	429	206	--	--
ZOO MW565	Nov-16	--	--	--	--	--	50	--	--	427	187	--	--
ZOO MW565	Apr-17	--	--	--	--	--	48	--	--	424	186	--	--
ZOO MW565	Oct-17	--	--	--	--	--	48	--	--	426	224	--	--
ZOO MW565	Apr-18	--	--	--	--	--	50	--	--	421	209	--	--
ZOO MW565	Nov-18	--	--	--	--	--	50	--	--	423	195	--	--
ZOO MW565	Apr-19	--	--	--	--	--	50	--	--	422	214	--	--
ZOO MW565	Oct-19	--	--	--	--	--	50	--	--	427	194	--	--
ZOO MW565	Oct-20	--	--	--	--	--	48	--	--	417	222	--	--
ZOO MW565	Apr-21	--	--	--	--	--	48	--	--	420	216	--	--
ZOO MW565	Nov-21	--	--	--	--	--	48	--	--	423	211	--	--
ZOO MW565	May-22	--	--	--	--	--	46	--	--	419	208	--	--
ZOO MW565	Oct-22	--	--	--	--	--	46	--	--	428	205	--	--
ZOO MW565	Apr-23	--	--	--	--	--	48	--	--	422	215	--	--
ZOO MW565	Nov-23	--	--	--	--	--	46	--	--	426	228	--	--
SF#57 - USGS South Windmill MW57	May-06	--	--	--	--	--	115	--	--	<b>963</b>	--	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#57 - USGS South Windmill MW57 (continued)	Oct-07	--	--	--	--	--	140	53	41	1,104	600	--	--
USGS South Windmill MW57	May-08	--	--	--	--	--	150	--	--	1,183	653	--	--
USGS South Windmill MW57	Sep-08	--	--	--	--	--	178	--	--	1,228	701	--	--
USGS South Windmill MW57	Apr-09	--	--	--	--	--	178	--	--	1,253	684	--	--
USGS South Windmill MW57	Nov-09	--	--	--	--	--	193	--	--	1,277	666	--	--
USGS South Windmill MW57	Apr-10	--	--	--	--	--	176	--	--	1,281	705	--	--
USGS South Windmill MW57	Nov-10	--	--	--	--	--	151	--	--	1,240	663	--	--
USGS South Windmill MW57	May-11	--	--	--	--	--	157	--	--	1,201	667	--	--
USGS South Windmill MW57	Nov-11	--	--	--	--	284	154	--	--	1,217	690	408	7.0
USGS South Windmill MW57	Apr-12	--	--	--	--	--	168	--	--	1,206	662	--	--
USGS South Windmill MW57	Nov-12	--	--	--	--	--	180	--	--	1,237	686	--	--
USGS South Windmill MW57	Apr-13	--	--	--	--	--	170	--	--	1,287	718	--	--
USGS South Windmill MW57	Oct-13	--	--	--	--	--	173	--	--	1,288	713	--	--
USGS South Windmill MW57	Apr-14	--	--	--	--	--	218	--	--	1,580	765	--	--
USGS South Windmill MW57	Oct-14	--	--	--	--	--	182	--	--	1,310	746	--	--
USGS South Windmill MW57	Apr-15	--	--	--	--	--	188	--	--	1,310	669	--	--
USGS South Windmill MW57	Oct-15	--	--	--	--	--	196	--	--	1,360	750	--	--
USGS South Windmill MW57	Apr-16	--	--	--	--	--	204	--	--	1,420	773	--	--
USGS South Windmill MW57	Oct-16	--	--	--	--	--	191	--	--	1,380	725	--	--
USGS South Windmill MW57	Apr-17	--	--	--	--	--	215	--	--	1,450	826	--	--
USGS South Windmill MW57	Oct-17	--	--	--	--	--	190	--	--	1,280	707	--	--
USGS South Windmill MW57	Apr-18	--	--	--	--	--	182	--	--	1,300	718	--	--
USGS South Windmill MW57	Oct-18	--	--	--	--	--	168	--	--	1,230	680	--	--
USGS South Windmill MW57	Apr-19	--	--	--	--	--	159	--	--	1,230	658	--	--
USGS South Windmill MW57	Oct-19	--	--	--	--	--	140	--	--	1,110	665	--	--
USGS South Windmill MW57	Oct-20	--	--	--	--	--	163	--	--	1,090	593	--	--
USGS South Windmill MW57	Apr-21	--	--	--	--	--	155	--	--	1,160	645	--	--
USGS South Windmill MW57	Oct-21	--	--	--	--	--	175	--	--	1,240	644	--	--
USGS South Windmill MW57	Mar-22	--	--	--	--	--	185	--	--	1,250	637	--	--
USGS South Windmill MW57	Oct-22	--	--	--	--	--	191	--	--	1,290	686	--	--
USGS South Windmill MW57	Apr-23	--	--	--	--	--	204	--	--	1,320	689	--	--
USGS South Windmill MW57	Oct-23	--	--	--	--	--	220	--	--	1,430	749	--	--
SF#58 - USGS South Windmill MW140	May-06	--	--	--	--	--	57	--	--	605	--	--	--
USGS South Windmill MW140	Oct-07	--	--	--	--	--	48	39	31	596	330	--	--
USGS South Windmill MW140	May-08	--	--	--	--	--	57	--	--	636	350	--	--
USGS South Windmill MW140	Sep-08	--	--	--	--	--	61	--	--	658	359	--	--
USGS South Windmill MW140	Apr-09	--	--	--	--	--	67	--	--	703	382	--	--
USGS South Windmill MW140	Nov-09	--	--	--	--	--	70	--	--	744	431	--	--
USGS South Windmill MW140	Apr-10	--	--	--	--	--	65	--	--	720	400	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#58 - USGS South Windmill MW140	Nov-10	--	--	--	--	--	61	--	--	739	412	--	--
(continued)	May-11	--	--	--	--	--	60	--	--	693	490*	--	--
USGS South Windmill MW140	Nov-11	--	--	--	--	202	59	--	--	704	410	176	7.72
USGS South Windmill MW140	Apr-12	--	--	--	--	--	54	--	--	637	361	--	--
USGS South Windmill MW140	Nov-12	--	--	--	--	--	66	--	--	715	399	--	--
USGS South Windmill MW140	Apr-13	--	--	--	--	--	57	--	--	689	371	--	--
USGS South Windmill MW140	Oct-13	--	--	--	--	--	60	--	--	736	393	--	--
USGS South Windmill MW140	Apr-14	--	--	--	--	--	60	--	--	790	382	--	--
USGS South Windmill MW140	Oct-14	--	--	--	--	--	58	--	--	735	418	--	--
USGS South Windmill MW140	Apr-15	--	--	--	--	--	67	--	--	773	414	--	--
USGS South Windmill MW140	Oct-15	--	--	--	--	--	55	--	--	720	394	--	--
USGS South Windmill MW140	Apr-16	--	--	--	--	--	59	--	--	753	401	--	--
USGS South Windmill MW140	Apr-16	--	--	--	--	--	59	--	--	753	401	--	--
USGS South Windmill MW140	Apr-17	--	--	--	--	--	55	--	--	741	391	--	--
USGS South Windmill MW140	Oct-17	--	--	--	--	--	51	--	--	725	367	--	--
USGS South Windmill MW140	Apr-18	--	--	--	--	--	46	--	--	665	361	--	--
USGS South Windmill MW140	Oct-18	--	--	--	--	--	54	--	--	737	412	--	--
USGS South Windmill MW140	Apr-19	--	--	--	--	--	46	--	--	638	325	--	--
USGS South Windmill MW140	Oct-19	--	--	--	--	--	46	--	--	610	394	--	--
USGS South Windmill MW140	Oct-20	--	--	--	--	--	71	--	--	707	377	--	--
USGS South Windmill MW140	Apr-21	--	--	--	--	--	64	--	--	740	414	--	--
USGS South Windmill MW140	Oct-21	--	--	--	--	--	63	--	--	733	381	--	--
USGS South Windmill MW140	Mar-22	--	--	--	--	--	61	--	--	715	370	--	--
USGS South Windmill MW140	Oct-22	--	--	--	--	--	63	--	--	749	388	--	--
USGS South Windmill MW140	Apr-23	--	--	--	--	--	60	--	--	688	376	--	--
USGS South Windmill MW140	Oct-23	--	--	--	--	--	63	--	--	768	410	--	--
SF#69 - GGP NWM-3	Mar-13	26.2	32.0	26.0	3.10	147	52	34.2	20.3	537	295	210	7.31
GGP NWM-3	Oct-13	31.0	37.0	30.0	4.09	165	52	49.0	4.8**	598	309	225	7.11
GGP NWM-3	May-14	30.6	34.1	26.1	4.15	160	52	39.1	10.7	573	294	214	7.11
GGP NWM-3	Nov-14	31.0	34.8	25.7	4.19	158	54	39.4	0.9*	562	286	216	7.14
GGP NWM-3	Apr-15	30.8	35.3	28.1	4.28	171	55	39.3	<0.3	576	303	221	7.08
GGP NWM-3	Nov-15	31.4	34.0	28.8	3.91	175	50	37.3	<0.3	554	292	211	7.14
GGP NWM-3	May-16	--	--	--	--	--	50	--	<0.3	553	296	--	--
GGP NWM-3	Jul-16	--	--	--	--	--	52	--	--	564	296	--	--
GGP NWM-3	Oct-16	--	--	--	--	--	50	--	--	564	267	--	--
GGP NWM-3	Jan-17	--	--	--	--	--	44	--	--	490	243	--	--
GGP NWM-3	Apr-17	--	--	--	--	--	45	--	--	562	304	--	--
GGP NWM-3	Oct-17	--	--	--	--	--	41	--	--	448	249	--	--
GGP NWM-3	May-18	--	--	--	--	--	42	--	--	442	211	--	--



**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#69 - GGP NWM-3	Nov-18	--	--	--	--	--	42	--	--	442	237	--	--
(continued)	Apr-19	--	--	--	--	--	42	--	--	417	234	--	--
GGP NWM-3	Oct-19	--	--	--	--	--	40	--	--	417	231	--	--
GGP NWM-3	Oct-20	--	--	--	--	--	39	--	--	413	232	--	--
GGP NWM-3	Apr-21	--	--	--	--	--	39	--	--	437	243	--	--
GGP NWM-3	Nov-21	--	--	--	--	--	41	--	--	446	236	--	--
GGP NWM-3	Apr-22	--	--	--	--	--	38	--	--	409	216	--	--
GGP NWM-3	Oct-22	--	--	--	--	--	39	--	--	434	232	--	--
GGP NWM-3	Jun-23	--	--	--	--	--	38	--	--	436	237	--	--
GGP NWM-3	Dec-23	--	--	--	--	--	38	--	--	410	222	--	--
SF#70 - GGP SWM-3	Mar-13	26.9	32.7	25.5	0.96	152	42	41.8	32.4	552	336	221	7.67
GGP SWM-3	Oct-13	33.2	40.5	29.9	1.77	175	52	42.0	29.9	636	345	252	7.50
GGP SWM-3	May-14	30.3	34.6	25.1	1.48	150	43	39.2	31.1	569	300	220	7.49
GGP SWM-3	Nov-14	33.1	40.1	25.9	1.65	163	47	43.2	30.8	601	317	243	7.51
GGP SWM-3	Apr-15	33.1	40.1	26.5	1.60	177	52	41.5	28.9	621	349	252	7.46
GGP SWM-3	Nov-15	35.2	41.3	29.1	1.67	175	52	41.8	29.0	623	349	248	7.47
GGP SWM-3	Apr-16	--	--	--	--	--	42	--	31.4	544	299	--	--
GGP SWM-3	Jul-16	--	--	--	--	--	54	--	--	632	333	--	--
GGP SWM-3	Oct-16	--	--	--	--	--	52	--	--	638	339	--	--
GGP SWM-3	Jan-17	--	--	--	--	--	43	--	--	563	326	--	--
GGP SWM-3	Apr-17	--	--	--	--	--	42	--	--	552	307	--	--
GGP SWM-3	Oct-17	--	--	--	--	--	46	--	--	578	320	--	--
GGP SWM-3	May-18	--	--	--	--	--	41	--	--	536	324	--	--
GGP SWM-3	Oct-18	--	--	--	--	--	43	--	--	549	285	--	--
GGP SWM-3	Apr-19	--	--	--	--	--	40	--	--	487	255	--	--
GGP SWM-3	Oct-19	--	--	--	--	--	40	--	--	482	283	--	--
GGP SWM-3	Oct-20	--	--	--	--	--	48	--	--	470	296	--	--
GGP SWM-3	Apr-21	--	--	--	--	--	39	--	--	477	271	--	--
GGP SWM-3	Oct-21	--	--	--	--	--	39	--	--	487	270	--	--
GGP SWM-3	Mar-22	--	--	--	--	--	39	--	--	466	253	--	--
GGP SWM-3	Oct-22	--	--	--	--	--	39	--	--	491	265	--	--
GGP SWM-3	Apr-23	--	--	--	--	--	39	--	--	470	253	--	--
GGP SWM-3	Oct-23	--	--	--	--	--	52	--	--	578	308	--	--
SF#67 - GGP Soccer Field SF-1	Oct-12	23.5	33.5	28.1	3.21	185	46	38.7	10.9	530	305	202	7.32
GGP Soccer Field SF-1	May-13	23.1	35.0	30.0	3.19	174	40	36.0	9.7**	528	280	194	7.47
GGP Soccer Field SF-1	Oct-13	22.3	31.6	29.5	3.06	175	41	27.0	2.5**	528	260	191	7.39
GGP Soccer Field SF-1	May-14	24.6	33.0	28.1	3.16	176	41	27.8	2.7	531	252	195	7.42
GGP Soccer Field SF-1	Nov-14	26.4	34.9	26.0	2.23	166	39	43.2	11.9	535	283	207	7.40
GGP Soccer Field SF-1	Apr-15	24.9	35.3	28.9	3.20	190	42	26.3	1.4	534	278	201	7.34
GGP Soccer Field SF-1	Nov-15	25.5	34.3	27.8	2.38	169	41	35.7	7.6	530	292	201	7.35
GGP Soccer Field SF-1	Apr-16	--	--	--	--	--	39	--	4.1	530	286	--	--

**Table 9**  
**Coastal Monitoring Network Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L)	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	<b>Secondary MCL<sup>1,2</sup></b>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#67 - GGP Soccer Field SF-1	Jul-16	--	--	--	--	--	41	--	--	533	277	--	--
(continued)	Oct-16	--	--	--	--	--	40	--	--	540	261	--	--
GGP Soccer Field SF-1	Jan-17	--	--	--	--	--	39	--	--	531	283	--	--
GGP Soccer Field SF-1	Apr-17	--	--	--	--	--	38	--	--	539	286	--	--
GGP Soccer Field SF-1	Oct-17	--	--	--	--	--	42	--	--	540	284	--	--
GGP Soccer Field SF-1	May-18	--	--	--	--	--	40	--	--	524	283	--	--
GGP Soccer Field SF-1	Nov-18	--	--	--	--	--	41	--	--	532	236	--	--
GGP Soccer Field SF-1	Apr-19	--	--	--	--	--	44	--	--	541	290	--	--
GGP Soccer Field SF-1	Oct-19	--	--	--	--	--	43	--	--	559	292	--	--
GGP Soccer Field SF-1	Oct-20	--	--	--	--	--	41	--	--	555	291	--	--
GGP Soccer Field SF-1	Apr-21	--	--	--	--	--	40	--	--	550	288	--	--
GGP Soccer Field SF-1	Nov-21	--	--	--	--	--	41	--	--	550	287	--	--
GGP Soccer Field SF-1	Apr-22	--	--	--	--	--	39	--	--	549	278	--	--
GGP Soccer Field SF-1	Oct-22	--	--	--	--	--	41	--	--	562	284	--	--
GGP Soccer Field SF-1	Apr-23	--	--	--	--	--	42	--	--	559	286	--	--
GGP Soccer Field SF-1	Dec-23	--	--	--	--	--	40	--	--	545	285	--	--
SF#68 - GGP North Lake Road NL-1	Oct-12	27.9	35.0	26.9	3.43	159	47	33.4	42.3	565	328	218	7.21
GGP North Lake Road NL-1	May-13	27.0	37.9	29.6	2.90	150	43	40.0	21.1**	549	296	205	7.18
GGP North Lake Road NL-1	Oct-13	33.0	41.8	28.9	2.87	165	52	44.0	31.7**	636	326	246	7.19
GGP North Lake Road NL-1	May-14	35.2	35.7	24.8	2.54	154	46	36.4	23.1	563	300	42*	7.21
GGP North Lake Road NL-1	Nov-14	27.3	31.4	22.6	2.36	136	31	27.2	42.6	493	273	183	7.22
GGP North Lake Road NL-1	Apr-15	35.4	32.4	23.1	2.46	143	36	28.8	29.2	499	270	190	7.22
GGP North Lake Road NL-1	Oct-15	43.6	32.3	24.6	2.33	143	37	30.0	33.4	505	293	198	7.18
GGP North Lake Road NL-1	Apr-16	--	--	--	--	--	33	--	41.4	485	262	--	--
GGP North Lake Road NL-1	Jul-16	--	--	--	--	--	33	--	--	480	264	--	--
GGP North Lake Road NL-1	Oct-16	--	--	--	--	--	39	--	--	519	291	--	--
GGP North Lake Road NL-1	Jan-17	--	--	--	--	--	48	--	--	598	320	--	--
GGP North Lake Road NL-1	Apr-17	--	--	--	--	--	38	--	--	506	292	--	--
GGP North Lake Road NL-1	Oct-17	--	--	--	--	--	28	--	--	459	254	--	--
GGP North Lake Road NL-1	May-18	--	--	--	--	--	29	--	--	444	224	--	--
GGP North Lake Road NL-1	Nov-18	--	--	--	--	--	26	--	--	425	243	--	--
GGP North Lake Road NL-1	Apr-19	--	--	--	--	--	34	--	--	426	253	--	--
GGP North Lake Road NL-1	Oct-19	--	--	--	--	--	27	--	--	409	234	--	--
GGP North Lake Road NL-1	Oct-20	--	--	--	--	--	26	--	--	411	242	--	--
GGP North Lake Road NL-1	Apr-21	--	--	--	--	--	27	--	--	431	266	--	--
GGP North Lake Road NL-1	Nov-21	--	--	--	--	--	31	--	--	451	264	--	--
GGP North Lake Road NL-1	Apr-22	--	--	--	--	--	30	--	--	443	242	--	--
GGP North Lake Road NL-1	Oct-22	--	--	--	--	--	42	--	--	502	272	--	--
GGP North Lake Road NL-1	Apr-23	--	--	--	--	--	41	--	--	539	299	--	--
GGP North Lake Road NL-1	Dec-23	--	--	--	--	--	26	--	--	445	236	--	--

## Table 9

### Coastal Monitoring Network Groundwater Quality

#### Notes

<sup>a</sup> = Anomalous primary sample results in 2018 were replaced with the corresponding duplicate result where available, as these results more closely resembled the historical concentrations.

 = Shaded cell indicates data collected in 2023

\* = Anomalous or questionable result

\*\* = Nitrate as NO<sub>3</sub> is a calculated value: [NO<sub>3</sub>] = 4.4 x [Nitrate as N]; for these results, Laboratory reported Nitrate as Nitrogen rather than Nitrate as Nitrate concentration.

Beginning in the Spring of 2016, the lab began reporting all Nitrate results as Nitrate as Nitrogen, and therefore from this point forward all results have been corrected and are no longer being marked by an \*\*.

-- = Not analyzed

mg/L = Milligrams per liter

µmhos/cm = Micromhos per centimeter

# = **Bold** font indicates a result that exceeds an MCL

NE = Not established

MCL<sup>1</sup> = Maximum Contaminant Level; values for MCLs are provided where they have been established for particular constituents. MCLs are drinking water standards that public water systems must achieve. They are not intended to regulate groundwater from monitoring wells or untreated water from production wells, because after withdrawal groundwater may be disinfected, filtered, blended, exposed to the atmosphere, and/or otherwise treated before being delivered to consumers. However, MCLs are used for comparison in this report to provide context for evaluating the quality of untreated groundwater. Primary MCLs are regulatory benchmarks for protecting human health. Secondary MCLs are benchmarks to protect the aesthetic quality of drinking water and are based on effects such as taste, odor, or appearance.

Secondary MCL<sup>2</sup> = 250/500/600: Recommended/Upper/Short Term

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#02 - EDGEWOOD SCHOOL	May-02	--	--	--	--	103	30	36.0	46.0	445	--	169	7.50
	Nov-02	--	--	--	--	144	30	36.0	49.0	452	227	164	7.30
	Jul-03	24.8	25.6	24.5	1.35	110	33	37.0	51.0	450	235	180	7.20
	Apr-04	24.5	25.0	24.5	1.37	--	--	--	--	--	--	--	--
	Nov-04	11.1*	0.254*	26.5	0.28*	108	29	34.5	47.9	446	312	166	7.50
SF#03 - ELK GLEN 2	Apr-00	30.4	32.8	24.2	ND	138	38	48.8	49.2	526	364	211	7.65
	Apr-01	--	--	--	--	140	41	52.0	55.0	580	330	236	7.62
	Dec-01	34.9	37.3	27.6	1.08	140	40	50.8	48.9	580	360	230	7.74
	Apr-04	34.4	38.5	26.9	1.11	--	43	52.0	52.8	583	412	240	7.61
	Nov-04	38.9	39.5	30.9	1.18	143	40	56.0	51.2	590	374	235	7.80
	May-05	34.4	37.2	26.1	0.77	150	39	55.0	51.0	590	362	210	7.63
	Nov-05	--	--	--	--	--	--	--	--	--	--	--	--
SF#07 - LMMW-1S	Apr-09	58.4	89.7	90.6	2.67	340	235	114	10.7	1,488	859	590	7.09
	Nov-09	73.0	110	130	2.80	310	393	122	41.0	1,936	1,035	700	6.74
	Apr-10	52.9	78.4	76.1	2.31	342	129	77.0	<0.3*	1,170	657	454	6.88
	Nov-10	57.2	83.6	111	3.20	276	253	120	39.0	1,584	860	528	6.61
	May-11	51.9	81.5	84.2	3.10	296	172	82.5	19.1	1,274	696	464	6.92
	Oct-11	51.5	80.5	146	2.63	264	260	73.1	56.4	1,558	870	448	6.68
	Apr-12	40.7	66.1	70.7	1.91	268	144	61.9	13.7	1,068	461	394	6.81
	Nov-12	67.0	107	159	3.82	368	386	108	29.9	1,936	1,046	616	--
	Apr-13	60.1	90.5	124	3.84	355	295	72.2	17.8	1,658	820	576	--
	Oct-13	64.3	110	188	3.03	280	374	97.0	38.0	2,059	1,054	582	--
	Apr-14	58.5	88.9	131	2.86	324	258	69.8	16.2	1,740	841	530	--
	Oct-14	59.0	85.8	136	2.73	337	262	66.0	11.4	1,600	848	503	--
	Apr-15	49.3	75.3	93.4	2.52	361	161	42.7	6.24	1,240	632	414	--
	Oct-15	51.4	75.5	110	2.56	384	209	47.1	6.78	1,350	756	461	--
	Apr-16	43.4	65.5	72.5	2.38	372	110	24.4	<0.3*	1,060	541	389	--
	Oct-16	56.6	88.3	141	2.63	316	273	63.0	21.6	1,629	828	518	6.78
	Apr-17	43.3	66.7	107	3.07	288	192	48.2	36.1	1,280	714	420	6.78
	Oct-17	39.4	68.8	130	2.43	194	211	54.6	88.8	1,290	686	395	6.59
	Apr-18	26.4	40.4	66	1.72	106	111	30.5	99.0	818	459	239	6.55
	Oct-18	56.0	81.7	163	2.64	266	275	69.1	80.1	1,720	939	490	6.61
	Apr-19	27.1	39.1	55	1.55	180	102	28.8	26.8	762	416	242	7.89*
	Oct-19	62.5	93.3	185	3.02	310	372	81.4	93.3	1,950	1,030	526	6.75
Oct-20	71.8	105.0	182	2.84	271	367	95.0	48.4	2,120	1,160	646	6.70	
Apr-21	65.1	93.1	133	3.16	340	314	71.1	24.8	1,810	1,020	559	6.77	
Oct-21	63.4	95.5	141	3.20	364	311	64.0	23.4	1,750	911	585	6.75	
Mar-22	45.0	65.9	82	2.87	372	126	20.5	2.13	1,090	565	390	6.84	
Oct-22	70.0	105.0	181	3.23	306	398	84.9	48.8	2,080	1,074	621	6.57	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#07 - LMMW-1S (continued)	Apr-23	43.7	65.3	100	2.61	296	175	38.4	32.1	1,220	638	381	6.63
	Oct-23	111	165.0	199	3.70	245	574	118	150	2,760	1,440	923	6.42
SF#63 - LMMW-1D	Apr-10	32.3	47.7	50.8	3.33	160	104	28.0	48.7	780	438	266	7.93
	Nov-10	27.6	42.2	44.1	3.10	162	106	27.0	48.0	781	431	264	7.85
	May-11	30.0	47.4	48.2	3.20	158	109	28.9	48.3	778	512	272	7.94
	Oct-11	33.8	46.8	48.7	3.22	160	105	28.1	45.5	771	440	270	7.88
	Apr-12	29.6	46.7	49.1	2.91	161	110	29.3	49.8	787	589	271	7.91
	Nov-12	36.2	58.0	58.9	3.40	170	110	28.8	48.0	775	444	263	--
	Apr-13	29.4	46.0	47.2	3.76	164	108	25.4	43.3	781	435	276	--
	Oct-13	33.8	52.6	52.0	3.10	129	76	29.0	50.0	832	423	245	--
	Apr-14	31.0	46.1	45.2	2.98	154	102	27.6	46.6	851	410	265	--
	Oct-14	29.9	43.5	45.0	2.82	154	104	28.0	44.4	775	405	266	--
	Apr-15	29.5	47.3	45.9	2.74	160	104	27.8	46.1	790	440	268	--
	Oct-15	32.8	48.5	48.4	2.96	178	116	28.5	48.2	794	482	284	--
	Apr-16	31.4	47.7	46.8	2.77	148	94	28.9	49.3	807	458	284	--
	Oct-16	30.7	49.4	45.8	2.65	165	104	28.0	48.4	831	410	277	7.92
	Apr-17	28.8	46.9	44.5	3.07	175	101	27.2	46.6	774	426	270	7.93
	Oct-17	39.1	70.4	68.3	3.90	166	108	27.7	48.0	794	423	280	7.95
	Apr-18	30.7	46.6	51.8	2.83	157	104	28.5	47.1	779	397	274	7.88
	Oct-18	32.8	46.6	50.9	2.76	154	103	31.1	45.8	781	448	282	7.82
	Apr-19	30.5	43.9	50.9	2.68	157	104	26.8	44.9	775	396	266	7.97
	Oct-19	31.7	47.6	52.4	3.02	169	109	28.6	47.5	809	427	279	7.92
	Oct-20	31.3	45.6	48.0	2.91	137	92	29.0	44.4	791	465	238	7.91
	Apr-21	32.2	44.3	47.2	2.95	160	102	27.6	45.8	795	445	257	7.84
	Oct-21	30.6	45.3	46.6	3.22	167	109	28.2	46.2	786	431	269	7.80
	Mar-22	32.3	47.4	46.1	3.37	167	107	28.4	43.7	796	423	277	7.84
	Oct-22	32.4	46.1	49.3	3.10	161	102	28.7	46.2	809	426	283	7.84
	Apr-23	31.3	47	51.3	3.16	163	108	34.6	42.9	784	417	264	7.79
	Oct-23	33.4	50.8	50.7	2.95	170	104	24.9	41.6	800	425	277	7.85
SF#09 - LMMW-2S	Apr-09	38.3	33.7	45.2	2.94	170	105	26.0	7.5	710	377	250	7.38
	Nov-09	36.0	36.0	44.0	2.50	170	111	34.0	7.6	756	375	258	7.45
	Apr-10	42.8	29.7	77.3	2.82	252	75	30.0	5.3	806	446	260	7.43
	Nov-10	42.9	31.4	71.5	3.20	262	89	33.0	6.9	836	468	272	7.57
	May-11	44.0	35.0	78.1	3.30	248	93	33.6	5.1	834	507	262	7.54
	Oct-11	45.6	35.8	76.9	2.90	262	90	31.9	4.0	839	460	262	7.47
	Apr-12	39.9	31.7	74.1	2.64	248	93	33.9	5.0	817	464	253	7.43
	Nov-12	41.6	33.4	73.4	2.96	269	101	29.4	3.0	800	441	241	--
	Apr-13	41.8	34.3	71.5	3.18	275	81	28.3	5.2	807	470	257	--
	Oct-13	42.5	35.4	72.1	2.63	209	60	26.0	<0.44*	818	396	245	--

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#09 - LMMW-2S (continued)	Apr-14	43.6	34.5	77.3	2.61	260	81	30.4	4.9	890	464	241	--
	Oct-14	44.2	34.2	71.6	2.37	247	84	32.0	4.4	831	465	259	--
	May-15	42.7	35.8	70.2	2.26	252	91	34.0	4.8	845	439	240	--
	Oct-15	44.3	38.1	75.7	2.45	252	96	33.3	4.6	840	478	258	--
	Apr-16	41.5	36.6	69.0	2.17	250	96	34.0	6.6	852	447	258	--
	Oct-16	38.9	37.4	69.3	1.98	248	100	35.0	8.4	862	450	265	7.63
	Apr-17	40.8	39.5	72.7	2.59	264	99	32.8	5.6	869	455	276	7.51
	Oct-17	49.4	52.3	102.0	2.82	252	120	36.5	9.9	940	492	291	7.55
	Apr-18	48.3	45.8	95.5	2.65	246	141	42.0	12.5	1,010	539	314	7.55
	Oct-18	54.5	49.0	96.8	2.62	206	143	44.5	17.4	1,120	592	341	7.55
	Apr-19	57.0	51.3	99.5	2.55	251	204	49.2	24.6	1,220	632	357	7.87
	Oct-19	59.3	55.1	105	2.95	266	218	51.5	24.7	1,240	689	405	7.51
	Oct-20	63.5	62.2	116	2.92	229	203	62.0	29.5	1,350	752	447	7.53
	Apr-21	67.8	63.8	98.8	3.03	249	233	65.8	32.6	1,390	770	423	7.50
	Oct-21	68.6	66.7	110	3.32	264	248	70.1	32.4	1,410	772	458	7.38
	Mar-22	70.4	69.8	120	3.33	254	248	68.8	30.0	1,440	767	464	7.43
Oct-22	68.5	67.7	115	2.91	250	245	69.0	32.5	1,440	769	458	7.39	
Apr-23	70.5	70	112	2.83	251	266	73.1	31.9	1,500	778	471	7.47	
Oct-23	72.8	74.3	116	2.73	249	242	61.9	29.5	1,410	767	456	7.40	
SF#08 - LMMW-2D	Apr-09	46.3	30.1	72.2	3.38	280	78	26.0	4.9	811	433	258	7.50
	Nov-09	45.0	31.0	70.0	3.00	262	80	32.0	5.1	814	456	250	7.50
	Apr-10	37.3	36.4	49.0	3.03	162	109	31.5	6.9	760	397	260	7.43
	Nov-10	35.8	36.9	44.3	3.50	182	114	32.0	2.1	773	440	262	7.45
	May-11	39.4	43.0	51.0	3.50	178	112	33.2	7.5	784	460	266	7.57
	Oct-11	42.8	46.6	52.7	3.60	190	116	32.8	6.9	791	430	270	7.57
	Apr-12	37.5	41.6	52.5	2.70	181	119	36.5	6.0	808	434	281	7.49
	Nov-12	39.2	46.8	52.9	3.38	204	133	34.4	7.5	804	421	278	--
	Apr-13	41.7	45.0	52.3	3.73	198	124	32.4	7.9	829	441	296	--
	Oct-13	43.2	47.4	55.4	2.88	139	85	36.0	6.0	850	396	242	--
	Apr-14	43.3	45.5	56.5	2.69	184	124	38.9	8.3	946	448	290	--
	Oct-14	44.0	46.1	53.1	2.54	199	132	41.0	8.8	884	474	300	--
	May-15	47.0	49.2	53.1	2.55	170	107	40.0	10.5	884	453	287	--
	Oct-15	48.5	50.7	58.5	2.63	204	136	42.5	10.5	904	512	323	--
	Apr-16	43.6	48.2	53.9	2.60	201	136	44.0	11.4	912	472	322	--
	Oct-16	44.1	50.6	56.6	2.38	201	133	44.0	11.4	922	433	319	7.65
Apr-17	44.0	49.5	54.8	2.91	208	135	44.5	11.6	938	473	337	7.65	
Oct-17	45.5	56.0	65.6	2.77	203	139	44.2	11.7	934	466	336	7.62	
Apr-18	48.5	54.0	62.3	2.62	199	138	45.3	12.9	932	485	337	7.68	
Oct-18	50.0	51.6	59.9	2.68	237	175	45.0	12.5	946	472	341	7.71	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#08 - LMMW-2D (continued)	Apr-19	48.1	50.1	58.7	2.46	211	145	48.0	12.0	962	506	331	8.00
	Oct-19	49.0	50.8	62.6	2.83	213	150	49.8	13.2	966	530	374	7.67
	Oct-20	47.9	50.7	61.0	2.64	180	127	49.0	14.1	940	537	327	7.62
	Apr-21	48.9	48.2	54.5	2.78	201	131	45.9	13.9	937	524	322	7.54
	Oct-21	46.1	50.7	63.7	2.87	216	138	48.4	15.0	951	492	356	7.49
	Mar-22	46.6	51.5	57.3	2.98	211	135	46.7	14.3	938	476	332	7.57
	Oct-22	47.8	49.1	60.4	2.72	209	133	47.2	14.7	941	477	333	7.55
	Oct-23	48.8	53.4	61.8	2.56	213	128	43.2	14.0	931	485	326	7.57
SF#65 - LMMW-2SS	Apr-12	28.2	48.9	77.5	0.59	166	154	61.1	25.3	958	553	285	6.70
SF#11 - LMMW-3S	Apr-04	45.5	53.3	59.1	1.87	--	--	--	--	--	--	--	--
	Nov-04	42.8	45.4	61.2	2.09	264	66	55.7	<0.2	769	403	276	7.20
	Apr-05	41.1	46.0	54.2	1.47	282	51	61.0	0.3	773	469	294	7.23
	Nov-05	48.8	2.16*	45.2	60.5*	243	52	90.0	0.3	770	499	294	7.27
	May-06	28.7	34.2	46.2	1.53	192	44	57.0	<0.3	622	380	222	7.34
	May-07	31.3	36.0	52.4	1.79	270	30	12.9	<0.3	612	342	270	7.20
	May-08	49.5	57.2	49.5	2.27	368	54	3.8	<0.3	850	494	186	7.13
	Apr-09	57.3	63.6	38.3	1.83	434	56	0.8	<0.3	917	518	232	7.27
	Nov-09	48.0	55.0	33.0	1.90	340	55	1.2	<0.3	798	444	400*	7.13
	Apr-10	53.5	57.6	35.8	1.20	300	45	0.8	<0.3	847	465	400	7.07
	Nov-10	54.4	57.3	32.0	1.80	402	66	1.2	<0.88	899	518	406	7.10
	May-11	56.8	65.2	32.0	2.40	372	64	3.5	<0.3	892	479	428	7.20
	Oct-11	51.2	56.2	32.1	2.06	332	50	8.5	<0.3	761	420	340	7.15
	Apr-12	47.3	44.6	47.6	2.84	355	83	1.1	<0.3	897	480	284	6.66
	Nov-12	44.5	52.9	26.1	2.14	260	59	35.2	<0.3	703	443	311	--
	Apr-13	52.4	58.0	25.7	2.68	325	54	32.0	<0.3	786	465	380	--
	Oct-13	27.0*	31.1*	44.8*	--	183*	67*	10*	<0.44	592*	291*	184*	7.61*
	Apr-14	51.6	56.5	33.2	4.00	323	48	20.2	<0.3	857	433	345	--
	Oct-14	55.3	59.2	30.4	1.99	386	50	10.0	<0.88	852	462	406	--
	Apr-15	51.0	60.2	38.2	2.00	375	50	13.5	<0.3	855	463	381	--
Oct-15	70.3	72.5	38.0	2.23	472	60	3.7	<0.3	985	538	474	--	
Apr-16	62.7	70.5	30.3	2.32	432	56	2.5	<0.88	951	506	450	--	
Oct-16	48.5	56.6	45.3	2.02	321	60	27.0	<0.88	794	424	348	--	
Apr-17	55.2	62.9	41.7	2.85	390	63	14.4	<0.308	933	486	387	--	
Oct-17	53.6	66.3	49.5	2.63	431	58	4.5	<0.308	950	486	425	--	
Apr-18	57.6	62.1	52.1	2.40	400	56	3.5	<0.308	884	485	393	7.19 <sup>a</sup>	
Oct-18	59.8	61.4	44.0	2.41	403	63	4.2	<0.308	886	466	411	7.05	
Apr-19	57.3	58.5	39.8	2.50	400	63	4.7	<0.308	886	482	401	--	
Oct-19	56.4	60.8	37.8	2.68	372	62	8.1	<0.308	867	464	391	7.22	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#11 - LMMW-3S (continued)	Oct-20	56.4	60.5	37.4	2.60	376	58	7.4	<0.308	871	481	391	7.14
	Apr-21	64.5	64.8	37.6	2.88	445	66	5.2	<0.176	950	526	435	7.09
	Oct-21	72.9	76.5	36.8	3.46	484	80	0.7	<0.176	1,080	586	507	6.98
	Mar-22	78.1	82.1	40.0	3.70	507	82	<0.5	<0.176	1,130	605	542	6.84
	Oct-22	72.4	77.4	40.0	3.62	472	79	0.6	<0.176	1,080	573	504	6.89
	Apr-23	68.7	72.1	38.7	3.30	446	73	2.52	<0.177	1,030	537	461	6.96
	Oct-23	63.3	68.4	39	2.84	397	70	6.80	<0.177	951	505	423	7.06
SF#10 - LMMW-3D	Apr-04	32.9	36.2	43.5	1.96	--	70	14.0	<0.3	591	340	210	7.58
	Oct-04	31.2	32.9	44.5	2.06	176	76	14.0	<0.2	601	287	200	7.60
	Apr-05	29.6	32.9	43.2	1.86	184	82	15.0	<0.3	605	355	206	7.63
	Nov-05	35.9	35.9	31.5	47.2*	182	82	14.4	<0.3	612	383	--	7.62
	May-06	29.4	30.6	43.2	1.99	178	75	14.0	<0.3	598	340	208	7.62
	May-07	30.3	33.7	45.7	2.00	190	80	13.3	<0.3	608	333	220	7.55
	May-08	29.5	32.0	42.9	2.21	180	76	11.9	<0.3	597	331	210	7.60
	Apr-09	27.7	30.6	44.3	1.74	162	75	11.8	<0.3	594	355	190	7.69
	Nov-09	28.0	31.0	42.0	1.90	180	80	13.0	<0.3	589	353	210	7.67
	Apr-10	27.8	29.1	42.3	0.72	180	70	12.3	<0.3	598	332	180	7.52
	Nov-10	25.7	28.5	39.4	2.20	186	75	13.0	<0.88	602	319	202	7.70
	May-11	27.6	31.4	43.8	2.00	180	73	12.8	<0.3	595	343	224	7.60
	Oct-11	31.7	31.9	44.9	1.96	178	71	12.4	<0.3	592	310	196	7.52
	Apr-12	25.9	29.8	44.1	1.95	182	74	12.5	<0.3	585	292	198	7.62
	Nov-12	26.6	30.2	43.0	2.04	201	75	11.6	<0.3	589	322	193	--
	Apr-13	26.7	30.2	41.9	2.19	188	71	12.5	<0.3	592	333	204	--
	Oct-13	42.9*	54.0*	30.0*	1.98	259*	50*	48*	<0.44	740*	391*	318*	7.28
	Apr-14	28.4	30.0	43.7	1.97	175	68	10.5	<0.3	640	313	193	--
	Oct-14	27.8	29.1	40.2	1.82	184	70	9.8	<0.88	588	313	197	--
	Apr-15	26.3	31.2	41.6	1.77	180	68	9.9	<0.3	581	314	192	--
	Oct-15	29.7	30.8	43.3	1.96	181	70	10.0	<0.3	576	318	195	--
Apr-16	27.4	29.8	38.3	1.80	180	68	10.0	<0.88	590	304	195	--	
Oct-16	28.0	32.4	42.4	1.89	185	68	9.5	<0.88	588	287	196	7.63	
Apr-17	25.9	31.0	42.0	2.19	179	64	9.7	<0.308	590	296	191	7.62	
Oct-17	24.8	31.0	45.2	1.86	184	70	9.2	<0.308	584	289	191	7.54	
Apr-18	29.4	32.0	51.6	1.92	183	67	9.9	<0.308	587	309	198	7.59	
Oct-18	27.8	29.8	46.4	1.91	189	74	9.7	<0.308	584	297	205	7.52	
Apr-19	28.5	29.5	47.3	1.77	188	69	10.0	<0.308	593	313	196	7.93*	
Oct-19	27.9	30.6	47.9	2.05	193	70	9.9	<0.308	585	317	199	7.62	
Oct-20	28.3	31.1	45.7	2.00	188	70	10.0	<0.44	595	314	199	7.58	
Apr-21	29.0	29.5	43.2	2.04	184	65	9.1	<0.176	583	311	185	7.51	
Oct-21	27.5	29.8	43.1	2.10	190	68	8.2	<0.176	593	305	198	7.51	



**Table 10**  
**General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#10 - LMMW-3D (continued)	Mar-22	28.2	30.3	43.7	2.16	189	67	8.4	<0.176	590	301	195	7.36
	Oct-22	28.8	30.3	45.3	2.10	188	66	8.3	<0.176	604	297	194	7.45
	Apr-23	29.3	31.6	46.5	2.04	193	68	8.62	<0.177	606	312	197	7.49
	Oct-23	29.9	32.8	45.7	1.93	193	66	7.42	<0.177	595	315	200	7.51
SF#12 - LMMW-4S	May-14	36.3	41.3	48.7	1.55	204	54	50.5	52.8	763	440	266	--
SF#13 - LMMW-4SS	Apr-04	36.1	42.8	30.9	1.57	--	--	--	--	--	--	--	--
	Oct-04	38.1	40.2	35.1	1.77	194	55	44.5	<0.2	624	464	244	7.30
	May-14	70.8	71.3	53.8	2.23	480	61	43.7	16.9	1,150	610	510	--
SF#15 - LMMW-6D	Apr-04	31.8	34.1	42.9	1.64	--	50	31.0	34.8	564	380	200	7.89
	Nov-04	26.5	27.6	28.3	1.41	130	45	35.5	43.0	521	321	160	8.10
	Apr-05	30.2	30.4	40.4	1.58	140	55	30.0	32.0	560	350	194	7.95
	Nov-05	32.1	2.02*	29.2	42.5*	126	56	36.0	44.0	561	384	--	8.03
	May-06	27.8	27.8	38.7	1.67	130	54	37.0	45.0	560	350	212	8.06
	May-07	26.4	26.9	39.0	1.17	112	50	32.0	55.0	535	312	176	8.12
	May-08	27.7	28.4	39.1	1.70	118	55	33.0	49.0	549	310	178	7.95
	Apr-09	24.9	26.8	39.2	1.54	134	57	29.9	36.0	562	323	192	8.06
	Nov-09	27.0	27.0	37.0	1.70	120	53	34.0	43.8	558	301	180	7.95
	Apr-10	28.3	29.4	40.5	0.09	134	53	31.7	41.9	572	317	186	7.96
	Nov-10	23.6	25.2	31.2	1.60	122	52	28.0	47.0	578	331	182	8.10
	May-11	26.3	29.1	38.5	1.73	104	54	29.5	45.0	569	303	182	7.98
	Oct-11	29.9	30.4	40.8	1.68	136	55	29.3	40.8	572	320	192	--
	Apr-12	26.4	30.3	40.1	1.56	148	58	31.1	40.0	595	315	201	7.89
	Nov-12	28.6	31.7	41.0	1.87	155	63	28.0	33.6	608	349	197	--
	Apr-13	28.4	31.7	40.2	2.20	156	55	28.4	40.1	606	346	212	--
	Oct-13	28.3	29.3	39.7	1.61	154	59	28.0	34.3	592	351	199	7.90
	Apr-14	29.9	31.0	40.2	1.76	148	54	29.3	34.7	645	334	199	--
	Oct-14	28.5	28.7	37.5	1.61	144	52	31.0	42.2	580	338	197	--
	Apr-15	28.8	34.0	39.7	1.60	163	54	27.4	34.1	610	331	205	--
	Oct-15	28.5	28.9	39.6	1.73	137	53	31.7	38.8	564	333	187	--
Apr-16	27.6	29.9	36.5	1.63	146	52	32.0	37.8	584	328	193	--	
Oct-16	26.1	29.5	39.2	1.52	131	49	34.0	41.8	557	295	188	7.95	
Apr-17	26.4	29.7	37.7	1.88	138	47	31.2	36.5	580	307	183	7.90	
Oct-17	27.9	29.6	38.2	1.68	144	51	29.5	38.3	579	326	198	7.89	
Apr-18	27.0	28.6	42.1	1.57	132	50	34.6	41.8	556	308	189	7.96	
Oct-18	27.6	28.1	42.1	1.61	142	48	27.2	33.0	563	321	192	7.88	
Apr-19	27.8	28.2	41.2	1.63	140	51	31.8	38.9	567	312	188	8.04	
Oct-19	30.8	31.3	43.4	1.82	174	58	26.1	21.9	599	328	211	7.90	
Oct-20	37.4	39.5	48.0	2.04	227	62	29.0	23.3	705	397	258	7.80	
Apr-21	30.5	30.6	42.8	1.85	166	51	30.5	35.3	606	342	195	7.77	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#15 - LMMW-6D (continued)	Oct-21	28.3	28.9	39.6	1.86	146	48	34.4	46.2	582	328	193	7.80
	Mar-22	38.0	39.6	45.5	2.16	228	64	28.7	16.7	718	376	260	7.70
	Oct-22	31.2	32.3	41.7	1.85	165	54	31.4	27.9	624	318	209	7.74
	Apr-23	32.3	34.0	44.2	1.89	187	56	3.63	2.40	631	334	217	7.74
	Oct-23	32.6	34.7	42.4	1.75	178	54	27.0	27.8	625	333	214	7.77
SF#16 - LMMW-7SS	Apr-04	44.0	48.5	54.9	1.18	--	--	--	--	--	--	--	--
	Oct-04	43.7	42.6	59.1	1.50	240	46	45.7	50.9	737	456	260	7.70
	Nov-09	42.0	42.0	53.0	1.50	240	43	47.0	52.0	769	496	282	7.58
	Apr-12	38.9	42.9	52.5	1.09	246	44	45.3	44.4	750	444	278	7.54
SF#17 - (NE) WINDMILL	Nov-02	--	--	--	--	168	48	39.0	28.0	574	265	212	7.50
	Jul-03	28.6	36.2	30.6	1.65	180	48	33.0	28.0	575	273	230	7.40
SF#18 - NEW GG PARK (N) LAKE	Nov-04	28.6	35.1	35.1	1.44	158	42	31.1	21.4	530	337	198	7.50
	May-05	24.9	30.4	26.6	0.70	146	41	27.0	25.0	500	289	178	7.69
	Nov-07	27.4	32.2	24.7	1.10	128	44	28.0	31.0	496	290	200	7.52
	Apr-09	23.1	28.6	24.8	1.07	140	44	24.0	28.0	494	298	194	7.79
	Mar-13	24.5	29.8	25.6	0.96	138	42	25.3	29.9	507	297	196	7.55
SF#19 - NEW GG PARK (S) WINDMILL	Nov-04	35.2	40.3	31.8	1.74	162	42	49.0	37.4	598	373	240	7.80
	May-05	25.5	34.5	25.5	1.16	146	42	42.0	20.0	525	311	230	8.04
	Nov-05	--	--	--	--	140	41	--	--	565	358	240	7.76
	Dec-05	28.9	35.8	27.0	1.50	--	--	--	--	--	--	--	--
	Jun-07	--	--	--	--	148	--	--	--	--	--	--	--
	Apr-09	28.4	32.5	27.6	1.41	150	46	40.0	31.0	558	316	224	7.87
SF#20 - (NW) WINDMILL	Aug-13	30.5	36.2	27.7	1.40	152	44	40.0	31.0	573	332	216	7.65
	May-02	--	--	--	--	171	44	37.0	28.0	573	--	219	7.50
	Nov-02	--	--	--	--	120	41	12.0	20.0	415	181	144	8.00
SF#22 - OLYMPIC CLUB #8	Jul-03	20.0	24.3	24.6	1.34	130	43	11.0	18.0	414	164	160	7.90
	May-02	--	--	--	--	189	84	30.5	16.1	685	--	--	8.10
SF#23 - PINE LAKE PROD WELL	Apr-04	38.5	39.7	46.0	1.95	--	--	--	--	--	--	--	--
	Oct-04	32.7	33.4	36.4	1.09	144	35	37.0	65.0	565	336	244	7.20
SF#25 - (S) WINDMILL	May-02	--	--	--	--	133	41	28.0	36.0	476	--	185	7.70
	Nov-02	--	--	--	--	120	40	28.0	38.0	474	202	184	7.70
	Jul-03	25.5	28.6	24.5	1.49	150	43	22.0	36.0	486	202	190	7.80
	Apr-04	24.4	27.7	23.9	1.11	--	40	24.0	37.8	455	330	180	7.70
	Nov-04	29.6	31.0	29.9	1.69	128	37	31.4	36.7	489	312	185	7.70
SF#41 - WEST SUNSET PLAYGROUND	May-04	15.2	16.4	21.7	0.85	--	20	24.0	14.1	317	266	130	8.70
	May-05	16.3	17.0	22.9	1.01	80	26	27.0	16.0	326	205	112	8.59
	May-06	15.0	16.6	21.2	0.73	76	29	28.0	17.0	322	210	110	8.57
	May-07	17.3	16.5	22.2	0.88	75	30	26.7	17.5	317	185	107	8.52
	May-08	18.9	20.2	24.8	1.07	88	29	29.3	22.4	355	210	122	8.37

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#41 - WEST SUNSET PLAYGROUND (continued)	Apr-09	18.5	19.3	24.9	1.09	96	32	29.7	22.4	382	241	140	8.50
	Nov-09	19.0	19.0	23.0	1.00	94	31	31.6	21.1	380	230	128	8.30
	Apr-10	20.6	20.2	24.5	1.13	96	26	31.3	23.5	397	226	136	8.27
	Nov-10	17.2	18.1	21.5	1.10	100	30	31.0	20.0	382	228	134	8.54
	Jun-11	16.6	18.3	22.2	1.10	92	28	30.7	19.6	385	213	128	--
	Oct-11	14.4	12.7	21.6	1.02	66	26	22.4	0.60	264	150	84	7.90
	May-12	13.2	12.9	21.6	1.05	68	68*	22.0	0.72	264	186	79	--
	Oct-12	12.2	12.4	20.4	0.89	69	31	22.7	0.87	268	166	80	--
	Apr-13	13.0	12.1	21.3	1.34	70	26	22.4	0.66	265	125	82	8.50
	Oct-13	12.5	12.0	20.6	0.95	69	25	22.0	0.90	273	137	81	8.56
	May-14	12.9	12.0	18.8	0.92	71	25	21.4	0.58	270	122	390*	8.73
	Nov-14	13.2	12.6	18.4	0.97	71	26	21.6	0.45	268	140	81	8.85
	Apr-15	13.1	13.3	19.2	0.97	74	25	21.5	0.51	270	123	81	8.79
	Oct-15	13.7	12.9	20.2	0.98	77	26	23.0	0.16	269	142	82	8.67
	May-16	11.9	12.3	20.8	0.95	72	25	21.6	0.55	270	143	81	8.84
	Nov-16	11.3	11.7	17.5	1.14	70	24	22.0	<0.44	263	132	79	8.52
	May-17	12.3	11.7	19.6	0.94	71	24	22.4	<0.308	271	138	84	8.75
	Oct-17	11.1	11.9	21.8	0.83	66	24	22.2	0.40	263	143	80	8.85
	May-18	14.1	19.8	30.2	1.74	99	38	19.0	<0.308	351	170	112	8.28
	Nov-18	18.4	26.7	43.7	1.97	126	59	35.1	<0.308	515	245	152	7.12
Apr-19	17.9	30.4	36.2	1.26	142	41	43.8	<0.308	496	228	176	8.44	
Oct-19	23.1	37.5	35.2	1.20	162	42	51.5	10.91	562	305	214	8.13	
Oct-20	31.0	40.0	34.4	1.23	183	42	50.2	26.05	620	350	245	7.97	
Apr-21	24.4	34.7	32.4	1.21	158	40	83.3	33.09	548	297	197	8.26	
Nov-21	25.3	37.8	33.3	1.26	168	41	47.5	18.57	572	289	193	8.06	
May-22	11.7	25.0	33.0	1.28	113	39	31.2	<0.176	415	192	135	8.18	
Oct-22	10.8	25.0	31.7	1.16	113	39	32.2	<0.176	426	190	130	8.31	
Apr-23	9.8	31.2	33.4	1.18	133	42	40.1	<0.177	462	211	152	8.47	
Oct-23	11.2	40.7	37.2	1.16	163	43	41.1	<0.177	540	245	193	8.47	
SF#24 - (S) SUNSET PLAYGROUND	Apr-04	31.1	33.1	36.9	1.31	--	50	27.0	12.8	576	394	200	7.34
	May-05	30.8	33.0	37.8	1.35	164	21	34.0	21.0	560	343	204	7.41
	May-06	28.8	31.6	35.6	1.18	154	54	38.0	30.0	584	360	212	7.39
SF#52 - CENTRAL PUMP ST MW190	May-05	44.2	43.2	46.9	1.81	270	47	47.0	19.0	750	433	300	7.59
	Oct-07	42.9	45.1	43.2	1.27	270	40	40.0	19.4	719	425	290	7.57
	Sep-08	45.4	45.9	43.2	1.40	260	40	45.0	22.0	707	382	294	7.56
SF#53 - CENTRAL PUMP ST MW270	May-05	29.0	21.9	48.2	1.52	168	72	8.7	<0.3	548	296	160	7.96
	Oct-07	28.5	23.1	44.0	1.32	170	70	8.6	<0.3	555	282	170	7.85
	Sep-08	32.2	24.0	45.9	1.60	174	69	10.7	<0.3	554	314	174	7.89
SF#46 - LK MERCED PUMP ST MW155	May-05	26.9	24.1	36.2	1.79	108	--	--	--	480	297	164	7.84

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>45</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
	<b>Secondary MCL<sup>1,2</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>250/500/600</b>	<b>250/500/600</b>	<b>NE</b>	<b>900/1,600/2,200</b>	<b>500/1,000/1,500</b>	<b>NE</b>	<b>NE</b>
SF#46 - LK MERCED PUMP ST MW155 (continued)	Nov-05	26.4	25.0	35.9	1.80	102	39	47.0	49.0	--	353	7.83	7.51
	May-06	26.1	24.8	69.7*	3.26	100	39	47.0	48.0	503	310	182	7.81
	May-07	27.6	26.0	37.3	1.78	113	38	43.4	49.0	--	309	180	7.70
SF#47 - LK MERCED PUMP ST MW270	May-05	22.1	15.7	74.6	1.92	140	--	--	--	550	353	114	7.58
	Dec-05	22.6	16.2	55.6	0.69	114	41	35.0	27.0	510	335	132	--
	May-06	25.0	18.0	51.3	1.35	134	50	35.0	24.0	505	310	140	7.54
	May-07	27.2	20.3	42.1	1.87	118	40	34.1	37.0	--	293	150	7.60
SF#48 - LK MERCED PUMP ST MW440	May-05	19.5	20.8	32.6	1.90	112	--	--	--	400	242	132	8.14
	Dec-05	18.3	20.2	28.7	0.51	100	50	7.5	18.0	416	264	130	8.23
	May-06	19.4	21.8	30.7	1.17	110	52	7.6	19.9	421	250	138	8.18
	May-07	20.1	22.1	31.3	1.67	115	49	8.0	21.0	--	232	140	8.10
SF#49 - LK MERCED PUMP ST MW575	May-05	48.2	29.2	88.6	3.90	214	102	102	<0.3	860	531	240	7.75
	Nov-05	48.5	30.1	88.6	4.01	208	104	83.0	<0.3	--	1,120*	NS	7.80
	May-06	49.2	29.9	87.0	3.50	200	106	85.0	<0.3	861	490	238	7.80
	May-07	50.7	28.5	90.4	3.97	211	105	81.5	<0.3	--	517	250	7.80
SF #71 - PARK PLAZA MW195	Apr-13	104	83.7	84.2	6.03	417	142	195	36.1	1,519	915	656	7.16
	Nov-13	98.8	73.5	84.0	4.61	388	145	160	31.2	1,479	215*	594	7.14
	May-14	111	86.5	73.4	4.45	367	151	179	31.6	1,500	859	614	7.16
	Oct-14	110	85.6	112	5.53	441	146	190	24.5	1,610	961	633	7.03
	May-15	112	86.3	78.8	4.11	328	150	190	36.5	1,560	865	689	7.15
	Dec-15	101	89.6	78.9	4.14	370	166	177	39.3	1,530	958	646	7.15
	May-16	112	88.1	80.9	4.22	389	160	195	41.6	1,580	959	680	7.09
	Nov-16	110	92.7	79.1	4.13	389	144	256*	48.4	1,660	1,010	709	7.07
	May-17	127	92.9	107.0	4.69	446	146	236	47.1	1,690	1,060	715	7.02
	Nov-17	106	84.5	128.0	4.40	462	145	225	45.8	1,730	1,060	640	7.04
	May-18	104	83.7	171.0	4.64	491	107	228	45.3	1,670	988	549	7.13
	Nov-18	106	72.6	138.0	4.32	495	101	213	42.0	1,630	965	598	7.04
	May-19	103	77.4	131.0	3.94	514	97	209	41.9	1,590	941	578	7.34
	Nov-19	103	82.0	87.8	4.08	443	99	194	37.6	1,530	907	627	7.13
	Nov-20	104	80.3	86.8	3.98	449	118	145	34.8	1,460	827	638	7.92
	May-21	99	79.7	85.8	4.09	448	118	129	32.6	1,420	828	579	6.98
	Dec-21	90	76.5	83.7	4.54	409	131	118	34.1	1,380	760	561	7.29
	May-22	93	76.4	82.7	4.41	371	132	118	40.5	1,360	761 <sup>c</sup>	545	7.05
	Nov-22	96	73.4	79.4	4.27	331	159	130	48.8	1,400	784	545	7.08
May-23	102	79.8	81.5	4.09	331	163	152	52.7	1,460	840	572	7.10	
Jan-24	103	82.2	78.1	3.88	329	152	191	54.9	1,480	846	582	7.24	
SF#50 - PARK PLAZA MW460	Apr-05	51.0	52.9	50.0	2.25	274	66	49.0	41.0	847	557	338	7.47
	Nov-05	52.6	1.78*	47.6	49.5*	248	72	41.0	37.0	--	526	--	7.65
	May-06	39.5	43.6	39.5	2.14	218	65	36.0	33.0	733	430	282	7.71

**Table 10**  
**General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#50 - PARK PLAZA MW460 (continued)	May-07	48.9	47.5	47.7	1.87	260	60	39.5	34.0	794	453	312	7.67
	May-08	42.0	43.8	45.3	1.73	230	70	39.9	26.5	730	420	290	7.47
	Apr-09	56.3	57.2	54.1	2.06	316	74	70.0	28.0	965	555	356	7.50
	Nov-09	49.0	51.0	48.0	1.90	270	67	63.0	28.0	862	500	344	7.50
	Apr-10	47.0	51.6	47.6	2.74	270	62	66.6	28.3	865	464	338	7.41
	Dec-10	32.9	34.9	40.8	1.50	198	61	41.0	27.0	712	442	242	7.50
	May-11	37.7	41.4	40.3	2.00	256	65	55.0	26.8	842	501	332	--
	Nov-11	53.4	56.6	55.0	2.00	286	64	91.5	28.3	933	560	372	7.06
	May-12	49.6	51.8	56.0	1.85	263	70	85.4	33.5	898	538	353	--
	Nov-12	49.6	53.6	54.5	2.34	278	71	63.5	32.9	887	512	334	7.32
	Apr-13	64.5*	69.6*	55.2	2.77	396*	33*	68.5	34.8	1,078	618	468*	7.33
	Nov-13	49.6	54.5	51.7	2.01	293	65	62.0	32.1	912	162*	347	7.28
	May-14	59.8	59.5	50.8	1.94	323	65	62.5	33.3	969	519	383	7.30
	Oct-14	48.6	49.2	44.9	1.85	248	66	60.3	32.4	838	425	310	7.25
	May-15	49.5	50.1	48.6	1.82	236	60	64.0	33.4	859	445	298	7.29
	Dec-15	38.0	45.6	46.3	1.77	217	66	58.9	31.0	771	483	288	7.25
	May-16	41.7	44.5	45.0	1.83	223	65	61.5	29.7	794	443	309	7.22
	Nov-16	28.7	33.4	36.6	1.76	165	68	39.3	26.0	656	341	232	7.35
	May-17	36.9	39.3	44.4	1.71	201	59	49.7	22.8	712	414	256	7.33
	Nov-17	28.9	33.7	39.1	1.48	185	63	35.7	24.6	662	363	234	7.31
	May-18	36.0	39.9	53.2	1.62	194	62	42.9	25.0	684	346	252	7.33
	Nov-18	38.3	36.4	45.1	1.61	187	59	48.4	24.4	702	395	248	7.30
	May-19	37.4	38.5	49.3	1.57	197	62	55.2	25.7	695	389	255	7.52
	Nov-19	40.3	41.8	46.7	1.84	213	62	57.5	25.8	736	404	278	7.42
Nov-20	44.8	45.5	50.8	1.91	230	68	63.1	24.3	794	449	301	7.26	
May-21	41.5	42.1	47.0	1.99	223	62	55.3	24.0	757	434	271	7.26	
Dec-21	48.7	49.3	51.7	2.17	277	65	70.3	27.4	865	472	338	7.36	
May-22	50.7	53.1	55.3	2.28	288	61	65.0	26.0	878	484	330	7.13	
Nov-22	55.0	54.3	57.7	2.27	307	65	68.2	30.2	926	502	356	7.10	
May-23	53.0	54.1	56.4	2.24	313	64	56.7	29.3	916	511	358	7.19	
Jan-24	49.5	51.2	54.1	2.02	281	62	49.7	29.7	872	473	323	7.21	
SF#51 - PARK PLAZA MW620	May-05	44.0	41.3	62.1	2.95	208	125	44.0	<0.3	853	250*	176	7.70
	Nov-05	52.0	2.18*	52.6	69.4*	236	142	44.0	<0.3	--	579	--	7.88
	May-06	42.4	44.2	54.3	3.28	218	119	43.0	<0.3	819	490	282	7.89
	May-07	53.1	47.3	63.3	3.02	242	130	41.7	0.3	919	509	329	7.81
	Jun-08	63.2	53.4	68.4	3.08	290	155	43.0	0.6	1,042	592	410	7.79
	Apr-09	58.7	52.6	70.1	3.08	284	143	42.0	0.6	1,044	615	356	7.86
	Nov-09	56.0	51.0	66.0	3.00	274	138	45.0	0.5	1,018	585	360	7.85
Apr-10	60.2	56.4	73.5	3.07	280	143	42.0	0.4	1,061	585	350	7.73	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SF#51 - PARK PLAZA MW620 (continued)	Dec-10	55.1	48.8	63.7	3.10	274	139	42.0	<0.88	1,043	568	358	7.90
	May-11	49.6	47.0	58.1	3.30	280	148	38.3	0.47	1,078	603	400	--
	Nov-11	58.6	55.1	68.8	3.19	294	145	38.2	0.9	1,062	610	388	7.40
	May-12	60.6	55.7	70.4	3.37	300	156	39.2	0.57	1,079	618	396	--
	Nov-12	35.7	33.0	52.8	3.17	188	88	42.5	0.30	704	418	223	6.64
	Apr-13	30.1	28.3	46.3	2.84	160	75	38.8	0.39	620	368	201	7.26
	Nov-13	31.4	28.7	47.2	2.32	164	75	45.0	<0.44	632	357	207	7.39
	May-14	35.3	30.0	43.5	2.23	157	71	47.7	0.306	644	343	207	7.30
	Oct-14	36.8	32.0	42.2	2.23	164	74	54.8	0.346	656	376	216	7.62
	May-15	36.9	33.0	44.9	2.16	172	71	63.0	<0.2	679	365	216	7.76
	Dec-15	32.4	33.7	44.6	2.25	166	76	61.4	<0.3	671	405	225	7.82
	May-16	35.1	31.4	42.6	2.34	164	76	63.3	<0.308	679	369	231	7.79
	Nov-16	31.9	30.7	40.7	2.17	164	77	62.1	<0.308	682	358	237	7.90
	May-17	37.1	32.9	45.5	2.18	163	78	56.3	<0.308	677	396	229	7.83
	Nov-17	35.6	35.4	49.1	2.17	164	84	58.2	<0.308	698	397	235	7.84
	May-18	37.9	35.4	56.3	2.10	163	85	58.5	<0.308	700	348	241	7.81
	Nov-18	39.3	32.9	47.5	2.11	157	81	56.8	<0.308	700	377	235	7.79
	May-19	38.3	32.6	53.4	1.94	162	84	59.3	<0.308	686	375	229	7.89
	Nov-19	36.5	32.0	47.8	2.44	160	82	62.1	<0.308	688	372	231	7.93
	Nov-20	38.2	33.6	50.1	2.31	165	86	59.4	<0.308	693	380	242	7.65
May-21	38.3	32.9	47.9	2.42	163	80	59.2	<0.176	699	381	229	7.66	
Dec-21	38.7	33.4	48.1	2.59	171	83	59.8	<0.176	706	369	245	7.89	
May-22	38.4	34.4	49.8	2.55	195	90	62.5	<0.176	702	373	224	7.69	
Nov-22	38.6	32.9	48.3	2.39	172	82	62.8	<0.176	704	377	233	7.78	
May-23	38.8	33.8	48.4	2.32	177	78	58.2	<0.177	705	395	235	7.74	
Jan-24	39.5	34.5	50.2	2.25	177	75	62.4	0.198	708	230	382	7.79	
Elk Glen Monitoring Well	May-14	55.9	65.4	57.4	1.30	217	81	58.0	37.9	846	456	331	--
CUP-10A MW160	May-10	58.8	60.6	69.7	1.95	252	128	99.0	35.0	1,149	691	428	6.87
	Oct-10	57.0	56.4	68.5	1.10	256	133	99.0	23.0	1,158	679	412	6.86
	Jun-11	60.4	65.1	72.7	1.54	250	137	99.1	37.1	1,149	688	424	6.92
	Nov-11	60.2	62.3	73.2	1.44	260	129	84.4	38.5	1,108	640	408	6.83
	May-12	61.7	59.7	73.7	1.80	273	136	56.5	41.4	1,080	621	393	6.85
	Nov-12	60.1	62.3	75.9	1.59	278	147	64.2	42.4	1,100	632	377	6.89
	Apr-13	65.3	59.9	45.6	1.61	283	130	72.1	45.7	1,123	640	416	6.90
	Nov-13	61.2	59.2	74.0	1.26	274	130	62.0	41.4	1,112	628	392	6.88
	May-14	56.7	59.8	69.0	1.32	271	125	62.8	44.7	1,110	606	396	6.87
	Oct-14	61.0	58.5	72.1	1.31	275	125	63.0	47.2	1,110	618	391	6.84
	May-15	60.0	59.7	70.1	1.23	258	115	63.4	49.1	1,110	538	397	6.87
Dec-15	55.4	59.2	71.3	1.31	368*	195*	59.4	50.5	1,080	621	390	6.88	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>45</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
	<b>Secondary MCL<sup>1,2</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>250/500/600</b>	<b>250/500/600</b>	<b>NE</b>	<b>900/1,600/2,200</b>	<b>500/1,000/1,500</b>	<b>NE</b>	<b>NE</b>
CUP-10A MW160 (continued)	May-16	55.2	56.0	63.9	1.15	263	120	58.5	51.9	1,090	628	818	6.83
	Nov-16	52.5	58.0	64.5	1.08	270	124	63.7	51.5	1,090	630	396	6.85
	May-17	58.7	55.3	67.2	1.14	236	99	51.5	54.6	1,080	628	315	6.80
	Nov-17	51.8	52.8	63.6	1.05	264	129	49.4	52.8	1,080	608	391	6.86
	May-18	59.2	61.1	75.0	1.17	270	133	49.9	53.7	1,080	627	399	6.87
	Nov-18	61.2	57.0	70.3	1.21	305	148	49.6	52.4	1,100	603	451	6.83
	May-19	58.7	61.7	72.9	1.28	268	131	49.8	52.4	1,100	557	384	7.30
	Nov-19	59.4	60.0	73.6	1.35	262	128	49.6	51.9	1,110	632	379	6.92
	Nov-20	60.7	61.4	75.5	1.32	279	131	53.6	51.0	1,110	622	406	6.79
	May-21	61.5	58.0	72.3	1.40	285	127	52.0	47.1	1,090	650	398	6.78
	Nov-21	61.2	60.1	69.1	1.42	292	129	54.3	48.8	1,110	614	417	6.74
	May-22	64.0	63.1	75.1	1.50	296	126	54.6	45.3	1,110	637	414	6.79
	Nov-22	63.8	62.1	72.1	1.51	301	129	55.7	44.0	1,110	628	406	6.72
May-23	63.4	63.3	76.4	1.36	303	127	56.3	40.4	1,140	631	415	6.76	
Dec-23	64.8	63.6	74.0	1.34	322	126	62.0	39.0	1,140	620	417	6.74	
CUP-10A MW250	May-10	44.7	48.3	54.5	2.83	252	128	81.0	48.0	1,102	647	436	6.89
	Oct-10	57.1	58.1	71.7	1.45	264	132	76.0	36.0	1,119	654	398	6.90
	Jun-11	56.4	60.6	69.6	2.13	274	136	78.1	38.2	1,117	697	406	6.96
	Nov-11	59.7	60.8	72.6	1.43	262	130	75.7	38.9	1,096	640	396	6.90
CUP-10A MW500	May-10	41.3	34.5	108	2.42	212	110	68.0	36.0	1,012	598	132	7.48
	Oct-10	51.0	48.2	79.7	0.74	250	122	77.0	38.0	1,079	637	332	7.25
	Jun-11	56.5	57.6	73.0	1.93	242	131	76.2	38.1	1,116	649	382	7.01
	Nov-11	58.7	60.8	70.1	1.54	264	130	76.5	39.2	1,098	630	398	6.88
	May-12	61.7	62.6	72.7	1.42	249	136	126*	39.4	1,158	694	439	6.66
	Nov-12	62.9	66.7	73.1	1.50	255	143	122*	39.4	1,149	707	407	6.69
	Apr-13	63.4	65.4	76.1	1.81	263	130	130	42.6	1,141	681	444	6.78
	Nov-13	63.1	62.6	74.7	1.46	253	123	110	37.8	1,134	669	404	6.77
	May-14	63.6	58.9	65.7	1.31	244	117	105	39.6	1,110	642	404	6.74
	Oct-14	61.8	62.5	63.9	1.29	252	119	104	40.5	1,100	661	403	6.70
	May-15	59.3	59.7	64.6	1.25	220	104	96.3	41.2	1,100	658	381	6.69
	Nov-16	51.5	58.4	65.8	1.16	247	124	113	43.5	1,090	650	415	6.69
	May-17	56.5	56.2	63.8	1.21	204	98	88	43.9	1,090	602	325	6.67
	Nov-17	58.0	60.9	66.2	1.23	247	127	82	42.9	1,090	635	406	6.72
	May-18	60.4	62.7	72.5	1.30	248	127	83.2	44.4	1,090	625	401	6.73
	Nov-18	61.2	56.6	68.3	1.21	284	144	81	43.9	1,090	607	451	6.68
	May-19	61.8	58.3	65.8	1.17	246	125	81	43.5	1,080	664	398	6.74
Nov-19	60.6	59.9	70.1	1.38	240	123	80	42.7	1,100	665	393	6.76	
Nov-20	61.8	62.9	73.5	1.33	251	134	83	44.0	1,100	630	409	6.70	
May-21	61.6	60.2	72.0	1.50	249	132	77	41.6	1,090	663	392	6.64	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>45</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
	<b>Secondary MCL<sup>1,2</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>250/500/600</b>	<b>250/500/600</b>	<b>NE</b>	<b>900/1,600/2,200</b>	<b>500/1,000/1,500</b>	<b>NE</b>	<b>NE</b>
CUP-10A MW500 (continued)	Nov-21	61.1	60.5	68.0	1.47	263	141	77	41.5	1,120	625	422	6.63
	May-22	61.1	64.0	73.5	1.49	268	138	75	38.5	1,120	640	408	6.61
	Nov-22	61.6	62.8	70.7	1.39	279	139	75	38.5	1,120	653	404	6.61
	May-23	62.2	63.4	74.3	1.39	261	135	74.9	35.0	1,130	640	406	6.62
	Dec-23	62.5	63.3	71.6	1.36	267	129	81.0	33.7	1,120	630	407	6.74
CUP-10A MW710	May-12	69.8	46.0	91.5	4.05	210	189	120	<0.3	1,192	689	389	6.92
	Nov-12	72.3	50.6	88.4	4.31	198	189	139	<0.3	1,183	694	370	7.09
	Apr-13	72.3	50.6	86.8	5.61	211	188	137	<0.3	1,205	665	417	7.10
	Nov-13	60.9	52.8	59.2*	1.93*	209	184	110	<0.22	1,208	654	393	7.18
	May-14	77.3	46.9	81.5	3.97	199	179	116	<0.3	1,200	680	390	7.03
	Oct-14	78.0	49.8	85.8	3.89	211	185	115	<0.3	1,210	623	386	6.78
	May-15	74.4	49.7	82.2	3.74	224	189	117	<0.3	1,200	642	332	7.13
	Dec-15	69.6	48.9	91.7	3.62	220	128*	97.8	<0.3	1,210	672	388	7.27
	May-16	72.8	50.0	87.8	3.99	226	190	93.9	<0.308	1,220	625	415	7.20
	Nov-16	67.0	50.3	91.5	3.84	230	193	99.4	<0.308	1,220	649	392	7.09
	May-17	70.7	47.1	87.9	3.50	191	151	93.4	<0.308	1,210	658	318	7.12
	Nov-17	70.2	49.5	89.8	3.72	226	193	87.5	<0.308	1,210	662	395	7.20
	May-18	72.3	50.3	98.7	3.67	227	192	91.2	<0.308	1,220	633	391	7.05
	Nov-18	77.0	48.4	89.6	3.68	249	209	89.8	<0.308	1,210	648	441	7.20
	May-19	77.7	46.4	89.6	3.52	220	185	89.4	<0.308	1,210	628	385	7.27
	Nov-19	72.1	47.3	83.2	3.96	220	187	88.9	<0.308	1,210	653	373	7.26
	Nov-20	72.2	48.9	95.3	4.09	228	192	88.8	<0.308	1,190	662	384	7.10
	May-21	72.6	46.6	94.7	4.15	230	183	86.5	<0.176	1,190	681	368	7.11
	Nov-21	70.1	47.2	91.9	4.36	236	188	93.9	<0.176	1,180	651	385	7.12
	May-22	72.1	49.1	97.1	4.51	238	185	86.3	<0.176	1,180	650	383	7.04
	Nov-22	71.5	47.1	92.5	3.95	275	187	85.9	<0.176	1,180	657	366	7.15
	May-23	72.3	48.1	98.4	4.00	232	188	84.6	<0.177	1,200	670	379	7.10
	Dec-23	71.9	47.6	92.2	3.87	235	183	87.0	<1.11	1,200	625	383	7.20
CUP-18 MW230	May-10	33.7	32.1	59.9	1.62	178	90	38.0	7.4	726	419	210	6.70
	Oct-10	32.6	30.3	61.9	2.21	166	91	37.0	7.3	719	411	202	6.71
	Jun-11	30.3	30.2	59.3	2.18	166	92	38.0	8.8	722	412	208	6.72
	Oct-11	36.4	32.3	63.2	1.89	174	95	37.2	10.2	725	410	214	6.46
	May-12	31.6	31.0	61.2	1.68	176	100	38.3	10.6	731	428	222	6.61
	Nov-12	32.5	32.1	63.0	1.82	172	101	37.3	10.7	733	432	212	6.49
	Apr-13	32.2	30.9	59.2	1.97	181	98	40.7	11.1	740	423	228	6.67
	Nov-13	36.5	32.2	65.0	1.78	173	96	36.0	10.1	743	426	214	6.56
	May-14	35.2	31.2	58.1	1.64	168	95	35.1	10.3	735	401	218	6.47
	Oct-14	35.7	32.7	56.6	1.62	170	99	36.1	11.0	740	399	297	6.27
	May-15	35.9	32.2	60.3	1.61	174	100	35.0	10.7	748	408	226	6.21



**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-18 MW230 (continued)	Dec-15	32.2	32.9	61.5	1.72	166	100	36.9	11.6	735	412	219	6.25
	May-16	36.4	32.1	56.8	1.66	165	99	36.9	10.4	744	414	226	6.07
	Nov-16	32.2	30.9	53.3	1.54	163	105	36.0	11.4	747	399	222	6.13
	May-17	38.1	30.4	56.3	1.77	168	100	37.0	11.8	758	425	228	6.02
	Nov-17	30.9	31.9	60.7	1.50	163	106	35.6	11.1	747	423	226	6.05
	May-18	35.5	32.6	64.3	1.64	157	103	36.1	11.6	758	412	224	5.89
	Nov-18	37.4	31.5	62.3	1.64	166	111	35.7	11.2	757	386	236	5.87
	May-19	36.4	31.2	62.0	1.50	159	108	37.0	11.8	765	365	216	6.04
	Nov-19	35.8	31.4	62.1	1.76	151	108	36.7	12.0	775	436	222	5.94
	Nov-20	36.6	32.9	64.2	1.81	164	113	36.5	11.3	769	433	233	5.95
	May-21	36.4	32.3	65.1	1.83	152	106	36.6	11.1	768	444	213	5.97
	Nov-21	37.1	32.7	66.0	1.96	167	116	36.9	10.9	778	421	237	5.94
	Apr-22	37.4	34.6	68.7	2.04	170	108	36.7	10.5	775	413	231	6.70
	Nov-22	37.4	33.8	63.4	1.76	174	115	36.8	10.6	788	449	232	6.62
	May-23	37.9	34.4	67.4	1.89	178	117	36.2	8.8	801	449	240	6.58
	Dec-23	38.9	35.6	68.4	1.83	170	115	40.6	13.1	810	443	234	6.67
CUP-18 MW425	May-10	31.1	32.0	49.4	1.17	180	91	37.7	7.9	726	418	234	6.64
	Oct-10	32.7	30.6	60.7	1.53	184	96	37.8	8.4	737	421	220	6.74
	Jun-11	30.5	30.1	57.4	2.00	174	96	37.8	10.4	733	358	212	6.70
	Oct-11	35.9	32.0	62.4	1.91	170	95	37.2	10.5	726	410	216	6.58
	May-12	31.9	30.5	60.7	1.62	173	100	38.2	10.9	732	421	222	6.53
	Nov-12	33.3	32.2	63.7	1.83	172	103	38.0	11.3	733	418	212	6.62
	Apr-13	33.7	31.6	61.7	2.15	180	100	40.7	11.5	739	413	227	6.68
	Nov-13	36.1	32.0	63.4	1.82	172	96	36.0	10.6	742	422	221	6.64
	May-14	34.4	30.6	57.8	1.65	169	95	35.6	10.7	735	398	216	6.68
	Oct-14	36.6	32.8	55.6	1.64	169	98	36.7	11.2	739	396	266	6.74
	May-15	34.4	32.4	57.0	1.60	175	100	35.8	10.8	745	640*	223	6.65
	Dec-15	32.3	32.5	61.7	1.72	168	102	36.9	11.7	734	400	221	6.71
	May-16	36.1	32.4	58.9	1.69	170	99	37.4	10.6	745	406	224	6.58
	Nov-16	31.9	31.7	55.9	1.61	164	102	36.0	11.4	749	416	222	6.61
	May-17	36.1	29.6	54.3	1.71	159	97	35.6	11.8	753	416	221	6.51
	Nov-17	33.1	32.0	61.2	1.60	166	107	35.1	11.4	754	417	223	6.62
	May-18	35.8	32.9	65.5	1.66	165	105	35.8	11.6	756	410	229	6.58
	Nov-18	36.7	30.1	63.2	1.66	172	108	37.9	11.8	760	423	230	6.60
	May-19	36.0	31.1	61.2	1.50	165	105	36.7	11.6	764	356	225	6.54
	Nov-19	35.4	32.5	62.9	1.81	162	104	36.2	11.4	772	425	227	6.65
	Nov-20	36.6	32.4	63.4	1.72	171	112	36.6	11.2	771	438	227	6.58
	May-21	36.7	32.5	65.9	1.91	159	105	36.8	11.3	765	400	215	6.61
	Nov-21	36.2	32.3	65.2	2.01	174	116	37.5	11.0	777	407	234	6.59

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-18 MW425 (continued)	Apr-22	37.1	33.8	68.0	1.98	171	108	36.7	10.3	776	419	231	6.75
	Nov-22	36.7	33.7	63.6	1.74	177	116	36.8	10.4	781	427	232	6.64
	May-23	38.9	34.9	67.9	1.88	176	116	36.7	8.9	804	443	239	6.54
	Dec-23	38.8	35.6	68.2	1.81	168	115	40.9	13.4	801	442	233	6.60
CUP-18 MW490	May-10	26.7	26.0	49.7	1.43	142	90	31.0	2.3	639	363	176	6.76
	Oct-10	28.2	24.5	54.3	1.87	135	89	27.0	6.3	633	353	172	7.12
	Jun-11	26.9	24.6	52.7	1.99	132	90	28.7	9.4	635	369	184	6.87
	Nov-11	33.5	31.4	63.1	1.91	172	96	39.1	9.6	722	410	214	6.78
	May-12	31.1	29.2	60.5	1.63	172	100	39.6	9.9	728	420	218	6.63
	Nov-12	32.8	31.5	64.3	1.95	172	103	38.8	10.6	731	424	212	6.67
	Apr-13	33.3	31.8	63.7	2.24	177	99	41.3	11.4	734	428	224	6.73
	Nov-13	35.2	30.8	62.1	1.75	170	95	37.0	10.1	740	412	220	6.75
	May-14	34.2	32.0	57.5	1.71	168	95	36.1	10.4	737	400	217	6.75
	Oct-14	36.5	32.0	61.4	1.76	172	98	37.5	10.6	744	404	224	6.68
	May-15	35.3	31.9	58.4	1.60	176	100	34.6	10.4	745	389	224	6.74
	Dec-15	32.8	33.0	57.8	1.77	170	103	37.2	11.4	739	412	220	6.69
	May-16	35.6	31.8	55.0	1.70	167	98	38.0	10.6	746	416	226	6.67
	Nov-16	30.6	31.4	58.6	1.74	170	104	40.0	10.7	752	422	225	6.71
	May-17	38.1	32.0	58.1	1.78	163	99	36.7	11.3	750	428	221	6.58
	Nov-17	30.0	30.0	57.9	1.46	163	107	34.9	10.9	747	411	223	6.66
	May-18	36.3	33.2	66.2	1.74	159	103	37.8	12.1	748	421	225	6.65
	Nov-18	37.3	32.5	62.1	1.69	175	110	36.7	11.1	755	380	235	6.67
	May-19	35.0	31.8	61.6	1.79	165	108	37.7	11.5	760	359	228	6.80
	Nov-19	35.7	32.6	64.0	1.89	164	107	35.5	11.5	764	412	224	6.78
	Nov-20	36.6	33.2	65.5	1.73	173	112	37.5	11.1	772	440	224	6.69
	May-21	36.1	32.0	64.9	1.94	157	105	36.9	11.0	767	440	213	6.66
	Nov-21	36.7	32.5	65.1	2.02	173	114	38.0	10.9	775	422	235	6.64
	Apr-22	37.8	34.3	68.2	2.06	169	107	36.7	10.1	777	424	230	6.76
	Nov-22	38.4	33.8	66.2	1.93	175	112	37.5	9.9	782	444	231	6.68
	May-23	38.0	34.1	68.1	1.89	178	117	37.7	8.8	797	427	234	6.61
	Dec-23	39.0	35.7	67.3	1.85	170	113	41.4	13.6	807	443	234	6.63
CUP-18 MW595	Apr-13	69.5	57.0	77.0	4.57	271	172	97.9	<0.3	1,176	643	437	7.21
	Nov-13	78.9	59.7	75.0	3.59	265	172	98.0	<0.22	1,233	674	448	7.21
	May-14	74.2	56.5	72.8	3.56	252	166	101	<0.3	1,210	699	428	7.23
	Oct-14	84.7	70.3	73.0	3.59	269	182	116	<0.3	1,290	735	482	7.04
	May-15	80.3	61.4	72.4	3.44	269	178	106	<0.3	1,260	642	482	7.17
	Dec-15	53.7	43.7	59.7	2.98	209	121	67.4	<0.3	908	486	331	7.02
	May-16	47.6	34.8	51.3	2.87	208	95	51.6	<0.308	802	433	281	7.12
	Nov-16	49.1	42.1	51.6	2.91	218	112	66.9	<3.08	894	495	331	7.19

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-18 MW595 (continued)	May-17	42.7	28.4	41.7	2.56	176	80	33.6	<0.308	676	334	221	6.90
	Nov-17	56.1	45.6	58.6	2.58	217	126	75.1	<0.308	<b>943</b>	<b>509</b>	344	7.03
	May-18	44.6	35.0	54.9	2.50	195	80	39.7	0.33	723	380	251	7.23
	Nov-18	60.8	47.8	59.2	2.98	226	124	76.3	<0.308	<b>930</b>	478	349	6.98
	May-19	42.2	34.9	54.7	2.91	190	85	41.5	1.1	729	395	249	7.10
	Nov-19	55.8	47.9	58.2	3.17	211	124	73.8	8.8	<b>972</b>	<b>525</b>	337	7.29
	Nov-20	57.1	47.5	60.0	2.78	207	118	71.3	18.0	<b>916</b>	490	341	7.08
	May-21	48.3	40.5	66.2	2.39	183	123	58.2	9.9	<b>907</b>	<b>517</b>	276	6.72
	Nov-21	41.4	37.2	64.9	2.31	187	119	46.8	15.4	828	456	262	6.57
	Apr-22	41.3	36.9	70.1	2.14	176	116	44.0	10.1	828	447	255	6.64
	Nov-22	44.1	37.2	66.8	2.06	184	123	48.7	9.5	853	491	261	6.60
	May-23	45.4	40.4	70.7	2.16	186	126	51.8	8.1	881	488	277	6.55
	Dec-23	65.4	55.4	74.7	2.64	213	152	131	7.5	<b>1,100</b>	<b>605</b>	375	6.73
CUP-19 MW475	May-10	32.4	35.2	46.8	1.87	154	99	36.8	0.5	691	367	248	7.88
	Oct-10	31.8	31.3	47.8	2.20	152	99	35.6	1.2	680	383	212	7.97
	May-11	30.5	30.0	47.8	2.68	136	100	32.9	2.1	665	397	214	7.99
	Oct-11	36.0	32.0	45.8	2.59	138	96	33.4	4.2	648	370	208	7.30
	May-12	35.3	34.0	47.3	2.46	133	109	49.5	6.4	703	373	233	7.25
	Nov-12	39.0	38.1	47.0	2.70	142	110	64.0	9.0	752	434	249	7.35
	Apr-13	39.9	38.6	48.9	3.26	145	110	64.5	7.8	771	435	268	7.30
	Nov-13	39.6	37.0	48.6	2.53	160	105	58.0	1.8	759	418	257	7.38
	May-14	36.9	33.9	44.1	2.36	151	97	42.6	0.6	709	406	236	7.41
	Nov-14	37.4	35.1	43.3	2.32	149	97	39.1	0.7	685	389	301	7.41
	May-15	35.8	34.7	43.9	2.15	172	106	33.8	0.3	690	281	210	7.19
	Nov-15	34.2	35.2	46.1	2.32	143	100	44.3	2.4	695	382	88.6*	7.36
	May-16	34.5	33.5	41.9	2.40	148	99	38.7	0.8	688	364	233	7.33
	Nov-16	30.6	32.1	40.2	2.21	154	101	42.0	1.1	885*	391	237	7.33
	May-17	37.9	32.1	38.3	2.15	150	98	41.5	2.1	703	359	234	7.18
	Nov-17	30.7	31.0	38.1	1.98	121	84	37.0	1.8	699	399	190	7.38
	May-18	38.0	36.3	50.3	2.27	148	102	38.1	1.4	699	389	239	7.33
	Nov-18	38.8	35.6	48.3	2.30	153	107	46.2	4.1	730	402	253	7.22
	Apr-19	39.3	33.6	47.1	2.21	148	103	40.4	2.4	701	375	235	7.86*
	Nov-19	38.8	34.6	47.5	2.51	147	106	40.0	3.2	714	404	242	7.59
	Oct-20	40.4	38.2	48.1	2.48	137	110	46.6	6.2	746	431	259	7.23
	May-21	41.3	38.6	46.6	2.58	141	109	55.5	10.4	788	475	240	7.15
	Nov-21	42.5	40.5	50.2	2.72	154	116	62.1	10.6	800	430	268	7.26
	May-22	45.3	41.1	53.7	2.85	158	112	58.8	8.9	790	440	273	6.99
	Oct-22	42.6	37.8	52.5	2.61	153	115	61.6	8.5	801	430	261	7.28
	May-23	40.2	37.4	53.3	2.51	154	109	49.8	5.2	768	403	247	7.16

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-19 MW475 (continued)	Nov-23	42.0	39.1	53.2	2.43	157	108	51	6.6	790	430	260	7.24
CUP-19 MW600	May-10	46.8	41.7	56.8	2.15	256	95	18.5	<0.3	802	436	284	7.86
	Oct-10	44.3	37.7	57.0	2.61	260	95	15.5	<0.3	812	444	274	7.94
	May-11	44.6	39.4	55.5	3.03	256	95	11.7	<0.3	817	470	288	8.04
	Oct-11	51.3	39.8	57.5	2.80	276	92	11.0	<0.3	803	460	286	7.48
	May-12	49.7	39.2	58.1	2.57	292	94	4.1	<0.3	816	427	295	7.40
	Nov-12	48.0	39.7	57.8	2.56	273	108	16.3	<0.3	822	459	274	7.47
	Apr-13	52.6	40.8	59.6	3.55	298	94	7.4	<0.3	830	440	305	7.52
	Nov-13	52.2	39.8	57.3	2.56	297	91	3.1	<0.44	832	432	299	7.51
	May-14	51.1	39.9	54.0	2.47	290	87	3.5	<0.3	826	440	294	7.45
	Nov-14	51.0	40.3	54.3	2.35	260	95	15.0	<0.3	827	430	279	7.51
	May-15	50.5	42.0	51.7	2.23	294	94	7.5	<0.3	829	434	288	7.27
	Nov-15	46.1	39.4	54.4	2.35	238	100	26.6	<0.3	800	450	283	7.48
	May-16	47.5	38.5	52.7	2.30	261	97	19.3	<0.308	827	457	300	7.48
	Nov-16	42.4	41.4	51.1	2.21	244	103	33.4	<0.308	822	455	301	7.36
	May-17	46.3	35.4	46.8	2.29	159	101	64.1	<0.308	784	444	263	7.13
	Nov-17	37.9	33.4	46.5	1.87	162	86	43.3	<0.308	811	430	222	7.39
	May-18	45.7	37.8	58.3	2.27	158	106	62.1	<0.308	783	426	270	7.31
	Nov-18	44.4	35.6	52.8	2.18	165	109	57.0	<0.308	778	379	263	7.17
	Apr-19	44.1	34.8	56.2	2.23	159	108	59.2	<0.308	772	395	257	7.30
	Nov-19	46.9	39.5	57.4	2.85	191	108	46.5	0.52	804	436	272	7.45
	Oct-20	48.6	41.2	57.2	2.49	239	99	18.5	<0.308	824	434	297	7.36
	May-21	45.5	39.0	55.6	2.60	213	99	34.6	2.62	812	438	252	7.40
	Nov-21	46.8	39.7	55.4	2.60	226	104	34.3	0.74	827	426	283	7.23
	May-22	50.9	42.0	58.0	2.74	273	97	17.1	<0.176	834	444	303	7.39
	Oct-22	49.4	38.9	57.5	2.51	267	100	16.2	<0.176	842	433	291	7.40
	May-23	49.9	41.0	58.3	2.53	266	96	14.0	<0.177	836	441	289	7.37
	Nov-23	50.4	41.4	57.9	2.41	264	97	18.7	<0.177	835	448	286	7.38
CUP-19 MW690	May-10	81.5	57.4	63.8	3.00	232	160	155	<0.3	1,229	715	448	7.35
	Oct-10	82.4	56.8	74.3	3.58	232	154	150	<1.1	1,233	738	440	7.48
	May-11	82.6	58.9	73.3	3.71	226	165	153	<0.3	1,229	752	448	7.52
	Oct-11	79.8	59.8	74.0	3.63	242	160	151	<0.3	1,223	720	456	7.17
	May-12	83.6	55.3	71.2	2.76	240	167	150	<0.3	1,224	724	442	7.10
	Nov-12	80.5	57.7	73.0	3.37	235	167	150	<0.3	1,175	691	415	7.27
	Apr-13	84.9	58.2	74.7	3.84	245	158	127	<0.3	1,206	--	453	7.23
	Nov-13	77.7	53.0	71.9	2.95	277	144	140	<0.22	1,145	658	422	7.26
	May-14	73.3	50.3	64.8	2.73	221	130	132	<0.3	1,100	647	396	7.22
	Nov-14	64.9	43.4	58.5	2.41	192	110	110	<0.3	950	568	329	7.29
	May-15	58.4	40.4	53.8	2.16	202	115	102	<0.3	891	540	289	7.14

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-19 MW690 (continued)	Nov-15	49.6	36.5	48.2	1.99	148	103	87.1	6.1	800	454	280	7.23
	May-16	53.5	37.5	47.5	1.91	148	101	99.3	7.7	825	437	298	7.17
	Nov-16	51.0	39.7	48.8	1.92	160	105	111	3.3	848	455	314	7.31
	May-17	63.6	39.0	47.2	2.07	156	100	100	8.5	845	469	297	7.21
	Nov-17	49.7	36.6	47.0	1.79	119	84	91	12.7	826	468	233	7.27
	May-18	55.7	37.7	56.2	1.99	146	100	89.4	21.6	820	426	293	7.26
	Nov-18	54.9	35.2	50.9	1.91	152	102	83.3	18.3	804	453	288	7.09
	Apr-19	56.8	34.4	52.5	1.84	148	100	81.3	19.3	791	429	283	7.47
	Nov-19	56.4	35.2	53.2	2.16	149	101	80.2	17.5	793	438	272	7.32
	Oct-20	53.2	36.2	52.1	1.93	142	99	71.9	20.2	793	434	268	7.28
	May-21	50.1	33.5	47.1	2.01	145	93	68.2	22.1	791	457	247	7.17
	Nov-21	50.4	35.6	48.9	2.25	158	100	65.0	24.7	784	415	274	7.24
	May-22	51.0	36.9	50.3	2.50	158	96	60.6	27.5	779	430	274	7.18
	Oct-22	46.4	34.9	48.9	2.28	153	101	61.1	27.1	790	425	269	7.18
May-23	46.4	38.1	51.4	2.39	149	97	59.1	28.8	783	418	259	7.09	
Nov-23	43.9	38.8	49.7	2.24	152	95	48.4	28.8	780	429	259	7.28	
CUP-22A MW290	May-10	54.0	43.3	56.3	2.52	196	106	63.8	32.7	<b>903</b>	<b>537</b>	318	7.08
	Oct-10	49.4	37.6	55.1	2.12	201	99	45.0	45.0	862	465	288	7.38
	May-11	49.3	40.4	54.1	2.76	190	100	47.0	40.5	859	<b>501</b>	300	7.56
	Oct-11	53.5	40.7	55.5	2.69	206	99	50.7	38.0	871	<b>530</b>	316	7.19
	May-12	51.7	39.5	56.4	2.14	208	106	51.5	38.1	880	492	312	7.13
	Nov-12	52.9	43.9	57.5	2.57	219	110	55.2	39.1	880	<b>513</b>	292	7.15
	Apr-13	54.0	42.4	57.8	2.54	218	102	51.0	33.9	887	465	320	7.19
	Nov-13	53.7	42.4	59.1	2.52	211	100	56.0	35.2	900	492	314	7.18
	May-14	52.6	41.3	52.9	2.23	210	99	57.6	35.6	<b>904</b>	499	317	7.23
	Oct-14	59.2	44.6	53.1	2.30	216	103	60.0	37.0	<b>922</b>	<b>502</b>	334	7.13
	May-15	59.9	45.4	54.2	2.29	219	100	58.1	35.6	<b>934</b>	<b>522</b>	328	7.18
	Nov-15	54.7	46.8	59.8	2.46	221	103	61.9	36.8	<b>922</b>	<b>543</b>	324	7.19
	May-16	56.7	45.2	57.4	2.44	222	101	66.2	36.2	<b>943</b>	<b>523</b>	346	7.11
	Nov-16	50.9	45.9	58.1	2.25	234	104	65.3	36.7	<b>941</b>	<b>517</b>	356	6.89
	May-17	65.4	44.2	55.6	2.64	242	98	58.7	39.4	<b>924</b>	<b>528</b>	337	7.24
	Nov-17	53.1	42.9	54.4	2.18	185	81	55.2	37.3	<b>923</b>	<b>520</b>	266	7.19
	May-18	61.6	48.6	64.8	2.53	225	95	52.1	38.5	<b>911</b>	<b>527</b>	347	7.20
	Oct-18	57.3	43.1	56.9	2.24	233	97	53.5	38.5	<b>914</b>	482	332	7.18
	Apr-19	58.9	41.8	61.4	2.17	223	92	48.7	40.7	<b>903</b>	494	312	7.38
	Nov-19	60.0	45.5	63.7	2.54	232	98	61.8	<b>46.6</b>	<b>918</b>	<b>534</b>	327	7.40
Oct-20	57.6	45.1	62.1	2.52	236	98	49.2	37.8	<b>908</b>	496	327	7.30	
May-21	56.8	44.3	61.9	2.62	230	90	45.8	38.0	897	496	304	7.21	
Nov-21	57.0	43.5	58.9	2.77	250	98	49.1	38.7	<b>916</b>	489	334	7.12	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>45</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
	<b>Secondary MCL<sup>1,2</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>250/500/600</b>	<b>250/500/600</b>	<b>NE</b>	<b>900/1,600/2,200</b>	<b>500/1,000/1,500</b>	<b>NE</b>	<b>NE</b>
CUP-22A MW290 (continued)	May-22	58.8	46.0	62.2	2.88	251	93	48.8	37.4	915	502	334	7.24
	Oct-22	59.1	45.2	61.6	2.67	245	196	52.8	37.2	929	517	326	7.14
	May-23	58.3	46.4	62.1	2.60	312	104	52.3	36.1	934	519	329	7.18
	Nov-23	59.6	46.1	63.1	2.56	203	70	44.5	31.9	937	501	253	7.22
CUP-22A MW440	May-10	29.6	9.73	43.7	1.67	102	71	6.8	1.4	441	270	114	8.49
	Oct-10	24.0	12.3	39.8	1.70	103	67	6.4	1.6	456	252	114	8.47
	May-11	25.9	11.7	39.3	2.40	100	73	5.7	1.5	454	288	120	8.54
	Nov-11	24.6	14.7	40.2	2.00	100	73	7.9	0.8	458	290	126	7.51
	May-12	29.1	10.8	39.8	1.75	117	73	6.3	1.5	468	269	129	7.54
	Nov-12	62.3	38.2	57.2	3.09	233	110	59.1	31.1	892	504	306	7.58
	Apr-13	65.0	40.1	59.3	3.07	228	98	55.4	29.0	909	544	324	7.57
	Nov-13	59.5	41.7	58.1	2.77	228	100	59.0	29.9	911	507	322	7.44
	May-14	58.7	40.8	53.3	2.47	224	97	61.2	29.5	908	504	322	7.49
	Oct-14	62.3	44.5	53.8	2.52	222	99	62.9	30.6	914	515	327	9.43*
	May-15	60.8	45.0	53.9	2.51	226	98	58.5	29.2	921	503	332	7.30
	Nov-15	56.8	46.5	58.9	2.54	229	101	65.1	33.1	927	525	331	7.41
	May-16	59.4	45.1	53.8	2.66	229	99	67.2	33.0	942	534	347	7.34
	Nov-16	49.6	43.0	53.7	2.28	233	100	67.5	28.3	917	634*	341	7.33
	May-17	27.4	18.0	35.3	1.62	129	63	12.4	2.6	498	228	149	7.41
	Nov-17	48.4	39.6	52.2	2.07	175	76	52.4	26.8	857	482	244	7.39
	May-18	43.2	34.2	59.9	2.12	174	80	33.4	16.5	692	403	235	7.33
	Oct-18	57.5	42.1	57.4	2.29	237	97	52.8	32.0	905	458	330	7.33
	Apr-19	32.9	23.7	48.1	1.82	141	71	17.8	7.4	550	304	181	7.34
	Nov-19	53.5	40.2	60.4	2.58	216	93	57.1	35.6	850	431	301	7.41
	Oct-20	54.1	42.9	59.2	2.56	231	95	50.3	32.3	886	506	315	7.32
	May-21	31.2	26.9	46.8	2.12	148	73	20.4	10.5	591	306	185	7.38
	Nov-21	54.6	43.2	58.7	2.83	245	98	52.0	31.5	895	484	317	7.30
	May-22	56.4	45.4	60.2	2.91	247	94	50.5	32.1	900	499	328	7.36
	Oct-22	56.1	42.9	59.0	2.54	235	96	51.4	30.6	906	517	313	7.02
	May-23	56.8	46.0	63.0	2.66	244	98	52.7	31.1	913	508	315	7.27
	Nov-23	57.6	45.0	61.7	2.58	203	71	48.3	30.0	918	503	258	7.26
CUP-22A MW545	May-10	65.4	54.6	72.2	2.18	246	106	76.0	24.0	994	575	332	6.89
	Oct-10	58.4	43.7	70.8	2.60	254	108	76.0	24.0	1,011	586	342	6.93
	May-11	59.7	47.7	70.1	3.44	238	116	86.6	22.0	1,035	639	372	7.06
	Nov-11	62.4	47.7	75.3	3.03	254	110	87.2	21.9	1,032	620	356	6.80
	May-12	63.2	48.4	73.6	2.94	254	123	91.5	21.4	1,051	617	369	6.76
	Nov-12	63.5	50.7	78.0	3.09	261	130	100	20.9	1,063	635	348	6.75
	Apr-13	68.0	49.8	78.5	3.17	267	116	87.3	18.3	1,058	654	370	6.81
	Nov-13	61.1	47.1	79.9	2.88	271	113	90.0	19.4	1,067	602	356	6.76

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>45</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
	<b>Secondary MCL<sup>1,2</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>250/500/600</b>	<b>250/500/600</b>	<b>NE</b>	<b>900/1,600/2,200</b>	<b>500/1,000/1,500</b>	<b>NE</b>	<b>NE</b>
CUP-22A MW545 (continued)	May-14	62.6	47.0	72.3	2.72	261	110	94.7	20.4	1,060	605	366	6.80
	Oct-14	68.0	50.0	76.8	2.76	259	112	93.1	20.3	1,070	612	367	6.77
	May-15	66.2	49.4	74.2	2.68	279	110	3.56*	0.82*	1,090	654	340	6.69
	Nov-15	62.9	51.2	80.2	3.03	268	117	96.0	19.5	1,080	626	379	6.78
	May-16	63.3	51.0	79.3	2.87	282	107	94.4	21.2	1,080	620	383	6.70
	Nov-16	60.0	51.8	81.6	2.63	292	116	106	16.7	1,120	635	400	6.71
	May-17	72.6	47.7	73.0	3.05	302	111	102	18.9	1,120	654	398	6.75
	Nov-17	64.8	48.9	79.6	2.63	236	95	105	18.0	1,120	649	318	6.72
	May-18	69.0	52.1	86.2	2.91	299	110	95	20.1	1,120	668	404	6.73
	Oct-18	71.6	50.7	81.5	2.91	309	110	91	19.6	1,120	659	405	6.67
	Apr-19	72.4	49.1	80.8	2.74	304	108	98	22.3	1,110	656	386	6.81
	Nov-19	74.7	52.8	81.7	3.25	305	110	116	27.3	1,120	656	394	6.81
	Oct-20	68.8	51.7	82.1	3.16	299	107	93	24.1	1,100	646	388	6.70
	May-21	67.0	49.8	83.7	3.20	307	102	87	23.5	1,080	628	384	6.65
	Nov-21	70.6	53.3	84.3	3.55	322	103	92	22.6	1,110	614	388	6.56
	May-22	67.3	51.6	81.1	3.30	310	103	88	24.7	1,080	607	386	6.70
	Oct-22	69.9	51.9	86.2	3.12	306	104	90	23.1	1,100	635	377	6.60
	May-23	68.0	52.5	86.8	3.09	249	97	83.3	24.4	1,100	613	380	6.66
	Nov-23	71.5	53.6	88.4	3.09	258	72	79.6	19.4	1,110	637	327	6.74
CUP-23 MW230	Oct-10	52.7	48.4	55.9	1.97	258	84	45.8	59.1	933	539	334	7.18
	May-11	51.7	49.1	55.4	2.23	258	88	40.5	61.7	935	538	344	7.17
	Oct-11	55.4	51.5	56.4	1.98	264	87	41.3	61.9	936	560	348	7.12
	May-12	55.9	51.3	56.5	1.82	272	93	41.1	61.5	957	498	363	7.04
	Nov-12	57.0	52.8	57.5	2.57	284	104	38.6	55.7	965	574	350	7.07
	Apr-13	60.6	53.2	59.7	2.07	286	86	38.6	53.1	979	532	368	7.10
	Nov-13	76.0*	48.4	97.6*	4.33*	290	85	41.0	52.8	984	526	371	7.16
	May-14	58.7	51.8	54.7	1.80	290	85	40.7	55.6	977	549	379	7.12
	Oct-14	61.5	53.6	55.5	1.85	282	83	41.0	55.7	982	557	383	7.28
	May-15	58.7	56.1	53.7	1.86	291	82	39.3	51.9	982	546	370	7.10
	Nov-15	58.0	55.6	57.2	1.77	294	83	41.8	51.9	973	532	378	7.16
	May-16	61.0	55.7	56.2	1.89	294	82	42.8	52.4	988	508	392	7.08
	Nov-16	56.5	54.6	58.1	1.73	300	82	43.7	51.5	996	557	384	7.13
	Apr-17	67.3	54.6	54.9	1.96	320	84	43.1	51.5	1,000	587	427	7.14
	Nov-17	58.7	53.2	56.0	1.81	258	69	43.9	49.7	1,000	544	323	7.14
	May-18	69.0	62.3	64.0	1.87	314	83	47.2	49.3	1,020	597	405	7.06
	Oct-18	64.2	55.7	58.9	1.84	326	87	43.2	48.8	1,010	574	408	7.07
	May-19	66.2	57.1	59.7	1.61	326	86	46.3	48.4	1,010	564	395	7.23
	Nov-19	62.4	57.4	59.1	2.11	310	85	44.6	48.0	1,030	568	403	6.18
	Oct-20	65.2	58.0	61.0	2.06	309	86	43.1	46.2	1,010	563	391	7.16

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-23 MW230 (continued)	May-21	64.1	56.7	62.0	2.14	321	85	42.4	43.8	1,010	565	386	7.18
	Nov-21	62.9	56.1	59.2	2.21	321	86	42.8	44.9	1,010	541	398	7.08
	May-22	65.9	57.2	61.4	2.18	329	87	41.0	41.8	1,010	551	403	7.09
	Oct-22	62.1	54.2	60.8	1.99	311	91	39.9	41.2	1,010	531	380	7.11
	May-23	64.1	59.7	62.5	2.05	323	90	39.3	39.1	1,020	566	380	7.06
	Nov-23	63.3	56.8	61.2	1.86	314	87	36.0	36.6	1,000	548	384	7.07
CUP-23 MW440	Oct-10	29.5	30.2	39.2	2.64	156	63	26.6	19.3	611	321	201	7.96
	May-11	31.2	33.8	40.3	2.54	168	70	35.3	25.4	647	378	228	7.85
	Oct-11	37.6	34.9	41.3	2.29	166	68	38.4	26.0	653	400	236	7.42
	May-12	39.0	39.5	43.9	2.04	182	78	45.2	37.9	734	413	267	7.04
	Nov-12	40.2	44.2	46.5	2.38	186	79	47.4	40.1	757	428	268	7.38
	Apr-13	43.3	43.7	46.6	2.52	201	78	44.5	35.7	783	427	288	7.48
	Nov-13	42.4	41.7	46.3	2.31	190	76	45.0	44.0	781	418	281	7.53
	May-14	42.4	41.7	43.9	2.16	192	76	44.5	46.7	790	425	286	7.43
	Oct-14	42.9	41.9	43.0	2.16	192	77	43.5	47.4	796	434	287	7.57
	May-15	43.2	45.1	42.6	2.06	204	80	46.2	40.0	797	410	297	7.41
	Nov-15	54.9*	63.9*	54.3*	2.32	240*	84	58.6*	132*	1040*	605*	404*	7.36
	May-16	39.4	44.6	44.0	2.06	214	69	40.5	51.9	797	443	305	7.61
	Nov-16	32.0	37.3	41.0	1.72	188	66	34.9	33.7	701	372	254	7.54
	Apr-17	35.6	34.6	39.4	1.84	170	60	24.2	19.8	617	311	213	7.38
	Nov-17	34.6	38.4	40.4	1.65	201	69	34.8	31.0	749	384	270	7.56
	May-18	28.0	30.4	43.4	1.57	145	59	18.3	16.9	543	306	185	7.46
	Oct-18	34.9	34.8	44.9	1.84	182	69	29.1	24.8	668	361	242	7.56
	May-19	27.4	27.4	40.5	1.55	149	60	16.6	13.9	547	281	185	7.67
	Nov-19	25.1	25.8	39.0	1.72	137	59	16.6	15.1	516	286	170	7.61
	Oct-20	21.5	22.8	35.1	1.71	121	57	10.3	5.0	457	261	149	7.96
	May-21	19.2	20.2	32.1	1.68	114	54	8.5	1.9	425	224	128	7.90
	Nov-21	28.2	29.8	39.5	2.02	156	63	20.4	16.9	568	299	195	7.82
	May-22	19.6	19.9	32.6	1.70	114	54	7.3	1.5	426	226	132	7.86
	Oct-22	19.3	19.2	32.9	1.63	115	56	6.6	0.8	434	214	126	7.97
	May-23	20.1	21.0	34.2	1.61	122	59	7.1	0.69	451	230	132	7.71
	Nov-23	26.5	26.9	40.3	1.80	156	60	14.9	3.94	532	272	173	7.93
CUP-23 MW515	Oct-10	41.0	28.9	66.9	2.62	310	64	2.4	<0.88	773	430	235	7.57
	May-11	40.6	29.2	67.0	4.20	300	68	<0.5	<0.3	765	446	230	7.55
	Oct-11	44.3	30.5	70.1	3.79	292	67	0.7	<0.3	750	430	290	7.23
	May-12	42.7	31.9	65.2	3.17	304	68	1.0	<0.3	759	421	246	7.20
	Nov-12	38.6	28.1	68.2	3.56	272	71	1.5	<0.3	717	406	208	7.37
	Apr-13	42.9	30.5	64.1	3.87	302	64	1.5	<0.3	748	414	241	7.30
	Nov-13	41.2	27.6	67.1	3.49	275	63	2.6	<0.44	716	397	217	7.39



**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-23 MW515 (continued)	May-14	39.9	29.8	60.0	3.41	282	61	2.8	<0.3	724	380	229	7.30
	Oct-14	39.4	26.9	58.9	3.13	258	62	4.3	<0.3	699	373	212	7.31
	May-15	37.9	28.1	55.8	3.07	258	62	5.9	<0.3	693	380	209	7.18
	Nov-15	32.0	23.8	56.2	2.98	220	64	9.2	<0.3	641	328	181	7.42
	May-16	31.0	22.0	51.7	3.06	171	64	24.6*	<0.308	598	308	195	7.24
	Nov-16	33.3	26.4	43.7	2.66	166	71	4.7	<0.308	649	328	207	7.25
	Apr-17	54.0	33.8	54.5	3.73	169	72	57.5	<0.308	696	364	225	7.25
	Nov-17	39.4	28.7	48.1	3.14	183	70	44.5	<0.308	667	371	220	7.35
	May-18	42.2	29.8	57.7	3.17	167	70	51.1	<0.308	659	356	213	7.31
	Oct-18	47.3	33.7	50.4	2.76	200	72	68.2	<0.308	758	429	274	7.25
	May-19	38.9	27.0	51.9	2.51	184	71	37.8	<0.308	653	335	208	7.44
	Nov-19	40.4	27.2	49.8	2.97	171	71	43.2	<0.308	654	338	212	7.37
	Oct-20	40.5	28.3	47.1	2.97	166	70	46.9	<0.308	652	360	218	7.22
	May-21	40.6	27.6	46.5	3.08	171	69	45.3	<0.176	651	346	201	7.05
	Nov-21	43.0	29.2	47.5	3.27	195	69	41.0	<0.176	675	348	236	7.08
	May-22	46.6	31.7	51.4	3.36	225	68	29.3	<0.176	695	374	242	7.18
	Oct-22	42.6	27.4	47.0	2.94	179	71	45.7	<0.176	679	333	217	7.16
	May-23	46.5	33.9	55.1	3.37	281	63	5.57	<0.177	736	381	241	7.21
	Nov-23	48.7	38.2	56.6	3.45	272	62	28.4	<0.177	771	431	274	7.18
CUP-23 MW600	Oct-10	25.3	18.5	40.4	2.00	122	63	23.0	41.0	577	322	164	7.74
	May-11	30.8	23.6	40.2	2.84	124	65	23.7	44.9	585	332	184	7.66
	Oct-11	34.2	24.2	42.3	2.86	128	64	31.9	31.3	573	340	190	7.16
	May-12	33.6	25.1	41.6	2.38	133	68	29.6	27.7	575	321	167	7.01
	Nov-12	31.6	24.6	39.2	2.42	130	67	29.1	36.1	578	324	182	7.13
	Apr-13	34.6	26.1	--	2.39	136	65	28.0	28.7	588	311	197	7.16
	Nov-13	35.8	25.9	38.4	2.41	131	62	28.0	37.0	594	316	196	7.16
	May-14	36.9	27.0	35.5	2.28	137	64	30.1	33.6	601	332	202	7.16
	Oct-14	37.9	27.6	35.5	2.22	136	64	29.1	40.3	608	343	203	7.24
	May-15	38.8	29.5	35.2	2.21	139	64	29.7	44.9	620	357	211	7.15
	Nov-15	57.6*	46.5*	60.1*	2.50	135	66	28.3	48.8	617	342	206	6.94
	May-16	56.0	43.2	45.6	2.74	175	78	48.3	122	892	528	339	7.13
	Nov-16	53.2	44.8	47.1	2.63	184	78	57.3	114	919	537	338	7.16
	Apr-17	61.9	41.5	45.2	2.76	182	76	53.0	108	891	476	328	7.22
	Nov-17	44.4	47.0	45.6	1.97	190	79	47.3	106	900	508	326	7.38
	May-18	50.7	52.0	59.3	2.22	180	76	46.1	106	873	510	320	7.30
	Oct-18	49.6	49.9	49.8	2.22	193	77	48.5	101	887	501	336	7.33
	May-19	44.8	45.1	51.7	1.85	176	76	43.7	99	824	476	292	7.20
	Nov-19	44.5	45.7	51.2	2.15	181	76	43.1	88	839	446	303	7.45
	Oct-20	43.8	46.1	48.9	2.17	174	75	41.4	88	827	503	299	7.46

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-23 MW600 (continued)	May-21	42.5	44.4	45.9	2.18	179	71	39.0	84	807	450	279	6.94
	Nov-21	44.8	46.1	47.2	2.45	193	76	48.7	87	832	447	320	7.22
	May-22	45.3	46.3	48.2	2.35	189	72	41.4	87	822	460	304	6.90
	Oct-22	44.3	44.5	49.1	2.18	185	75	41.6	87	835	457	295	6.81
	May-23	44.1	47.1	48.6	2.21	190	76	39.7	83.3	836	446	288	6.84
	Nov-23	46.6	49.1	50.4	2.15	198	74	43.2	93.0	870	481	315	7.09
CUP-31A MW145	Apr-12	61.8	60.5	84.8	3.43	458	61	71.1	2.9	1,096	637	426	6.85
	Oct-12	74.5	70.2	93.2	4.07	418	66	74.6	3.3	1,074	657	383	6.76
	Apr-13	68.6	60.9	83.3	3.56	470	53	67.0	1.5	1,093	603	440	6.79
	Nov-13	<1*	60.8	86.7	3.24	462	53	65.0	4.4	1,095	614	409	6.80
	May-14	61.6	61.5	76.4	3.14	455	51	60.6	6.9	1,080	601	423	6.82
	May-15	68.7	47.6	72.7	3.07	436	52	56.4	5.4	1,070	648	412	6.80
	Nov-15	63.5	62.4	82.1	3.18	457	53	65.2	6.6	1,070	623	381	6.79
	May-16	66.0	62.5	74.8	2.85	275*	48	84.8*	9.4*	816*	484*	287*	7.01*
	Nov-16	60.0	62.1	74.6	3.22	447	45	58.3	5.9	1,060	605	421	6.83
	Apr-17	71.3	60.3	73.3	3.42	448	48	61.8	4.0	1,050	600	427	6.77
	Nov-17	59.9	56.6	74.6	2.78	453	49	70.5	3.9	1,060	607	431	6.82
	May-18	69.8	65.8	86.5	3.05	439	46	70.0	6.6	1,080	602	429	6.84
	Nov-18	71.7	61.1	79.1	3.38	332	50	78.8*	19.14*	937	530	356	6.98
	May-19	66.3	57.9	76.0	3.45	460	49	56.7	8.5	1,040	582	415	8.03*
	Nov-19	67.2	57.0	70.5	3.60	432	46	55.3	7.5	1,030	578	412	6.87
	Nov-20	66.3	56.8	73.7	3.41	440	46	48.1	9.2	1,020	560	402	6.79
	May-21	66.3	55.6	74.8	3.48	442	47	47.3	6.8	1,050	605	392	6.79
	Dec-21	65.0	56.0	73.1	3.66	452	46	48.7	6.2	1,030	570	404	6.77
	May-22	67.9	59.1	79.1	3.84	478	46	52.5	4.4	1,020	576	408	6.68
	Nov-22	69.8	59.8	79.4	4.03	452	46	53.6	4.7	1,030	584	402	6.68
	May-23	70.1	59.7	80.9	3.57	462	47	54.0	3.9	1,050	597	408	6.72
	Jan-24	69.7	60.4	77.1	3.80	459	46	58.4	3.2	1,060	599	414	6.78
CUP-31A MW280	May-12	56.3	45.4	85.1	3.40	320	76	95.2	9.5	1,007	584	339	7.03
	Oct-12	51.1	47.6	71.9	3.47	321	67	89.8	8.9	960	594	342	6.92
	Apr-13	52.7	47.0	74.8	3.14	327	55	83.1	6.9	933	523	337	7.09
	Nov-13	49.4	44.8	76.8	2.83	300	51	87.0	7.0	890	499	304	7.03
	May-14	47.7	42.3	67.1	2.60	300	47	86.1	8.8	874	507	309	7.06
	May-15	46.9	43.6	66.1	2.49	285	47	78.8	8.3	852	520	283	7.00
	Nov-15	42.4	41.3	69.7	2.43	291	51	79.7	8.9	820	483	292	7.11
	May-16	43.1	40.0	69.8	2.37	458*	50	84.1	9.3	1,070*	610*	439*	6.77*
	Nov-16	47.9	49.4	79.4	3.08	307	47	91.0	12.8	902	540	331	7.06
	Apr-17	60.6	50.2	71.1	3.20	345	51	85.2	18.6	945	527	357	6.98
	Nov-17	48.1	47.1	68.5	2.30	343	51	79.9	16.8	948	538	364	6.99

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-31A MW280 (continued)	May-18	56.8	55.2	79.5	2.77	329	50	84.0	21.1	949	549	355	6.97
	Nov-18	59.7	49.6	68.8	2.62	463	47	54.2*	6.16*	1,070	599	421	6.84
	May-19	56.0	48.7	69.2	2.37	342	52	83.1	21	895	537	347	7.80*
	Nov-19	52.8	48.5	67.7	2.80	309	46	77.8	19	917	546	340	7.02
	Nov-20	53.6	47.3	70.3	2.67	336	51	159.0	40	905	531	336	6.98
	May-21	52.3	46.4	71.5	2.90	312	46	73.3	22	899	528	317	6.96
	Dec-21	50.7	46.0	69.8	3.09	315	48	78.5	20	895	505	325	6.94
	May-22	50.4	48.2	74.0	3.17	328	47	76.5	20	883	517	333	6.87
	Nov-22	51.3	44.2	69.9	2.90	311	47	75.4	18	881	505	310	6.90
	May-23	51.0	45.6	72.1	2.85	327	47	71.4	15.8	905	509	320	6.97
	Jan-24	51.9	47.5	73.7	2.70	328	46	76.6	16.4	917	531	318	6.97
CUP-31A MW480	May-12	39.3	52.4	69.5	12.4	460	36	2.6	<0.3	940	542	319	7.21
	Oct-12	36.3	50.4	66.5	14.1	407	45	2.8	<0.3	885	513	280	6.64
	Apr-13	34.6	46.1	62.0	12.3	424	34	3.1	<0.3	867	450	293	7.27
	Nov-13	36.3	48.6	62.5	12.3	444	31	1.5	<0.44	898	470	295	7.27
	May-14	33.9	46.1	56.4	11.4	398	34	3.7	<0.3	846	456	283	7.34
	May-15	36.5	48.3	56.5	8.86	408	35	2.0	<0.3	860	485	277	7.33
	Nov-15	33.9	49.0	62.2	11.8	441	30	<0.5	<0.3	865	488	299	7.30
	May-16	31.5	42.5	55.5	10.1	371	36	2.6	<0.308	790	433	266	7.35
	Nov-16	31.1	41.4	53.0	10.3	328	38	4.0	<0.308	762	419	252	7.46
	Apr-17	35.1	41.1	52.3	9.7	361	40	2.0	<0.308	768	390	256	7.36
	Nov-17	29.5	41.6	54.1	9.6	371	40	<0.5	<0.308	752	414	257	7.42
	May-18	32.0	44.9	60.9	10.0	348	37	<0.5	<0.88	769	416	261	7.40
	Nov-18	33.4	41.4	56.9	9.9	347	39	<0.5	<0.308	763	391	257	7.37
	May-19	32.4	40.4	57.2	9.4	373	39	<0.5	<0.308	758	399	247	7.48
	Nov-19	30.1	39.7	52.9	10.4	337	39	<0.5	<0.308	753	400	243	7.45
	Nov-20	31.4	39.3	53.6	10.4	349	42	<0.5	<0.308	749	391	247	7.39
	May-21	30.7	39.6	54.2	11.1	329	37	<0.5	<0.176	758	409	232	7.37
	Dec-21	32.8	41.1	55.4	12.5	362	37	<0.5	<0.176	775	402	254	7.36
	May-22	30.4	40.0	53.9	10.8	321	45	2.5	<0.176	737	377	241	7.34
	Nov-22	32.5	39.8	54.9	11.1	348	39	<0.5	<0.176	762	403	244	7.29
	May-23	32.2	41.3	55.9	11.90	372	38	<0.5	<0.177	779	398	249	7.32
	Jan-24	31.8	41.6	56.5	11.60	354	37	<0.5	<0.177	773	409	245	7.40
CUP-31A MW595	May-12	112	73.6	127	4.60	207	246	324	<0.3	1,713	1,112	556	7.07
	Oct-12	94.5	67.5	111	7.51	283	163	263	<0.3	1,410	946	442	6.86
	Apr-13	114	71.7	124	3.19	217	232	291	<0.3	1,708	1,048	595	7.22
	Nov-13	108	70.0	151	5.03	210	233	330	<0.22	1,742	1,110	590	7.25
	May-14	113	71.7	132	4.46	208	230	353	<0.3	1,720	1,060	574	7.22
	May-15	113	74.6	127	4.30	203	224	305	<0.3	1,710	1,090	596	7.24

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>45</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
	<b>Secondary MCL<sup>1,2</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>250/500/600</b>	<b>250/500/600</b>	<b>NE</b>	<b>900/1,600/2,200</b>	<b>500/1,000/1,500</b>	<b>NE</b>	<b>NE</b>
CUP-31A MW595 (continued)	Nov-15	104	76.0	133	4.37	232	248	328	<0.3	1,690	1,080	651	7.25
	May-16	101	75.1	144	4.59	207	228	344	<0.308	1,680	1,090	599	7.21
	Nov-16	98.9	70.3	119	4.82	225	195	259	<0.308	1,500	932	532	7.17
	Apr-17	109.0	71.0	109	5.48	242	187	228	<0.308	1,430	891	539	7.25
	Nov-17	95.9	61.8	101	3.95	234	183	209	<0.308	1,400	861	507	7.23
	May-18	97	56.7	102	3.92	256	161	180	<1.1	1,280	792	459	7.24
	Nov-18	98.8	50.1	92	3.95	243	158	170	<0.308	1,280	761	450	7.25
	May-19	96.8	47.9	88	3.61	264	160	170	<0.308	1,210	748	441	7.40
	Nov-19	94.9	48.8	82	4.34	243	155	175	<0.308	1,260	760	447	7.30
	Nov-20	103.0	50.5	93	4.21	257	183	187	<0.308	1,300	792	511	7.13
	May-21	90.3	45.8	89	4.59	257	134	143	<0.176	1,190	718	404	7.22
	Dec-21	90.8	51.3	86	4.67	235	170	192	<0.176	1,310	783	465	7.10
	May-22	104.0	55.3	98	5.34	240	170	212	<0.176	1,350	829	470	7.10
	Nov-22	106.0	50.2	97	4.58	235	177	202	<0.176	1,370	825	466	7.11
	May-23	101.0	65.9	108.0	5.09	219	214	268	<0.177	1,550	945	519	6.89
	Jan-24	109.0	70.4	117.0	4.60	206	209	292	<0.177	1,590	959	546	7.04
CUP-36-1 MW160	May-10	64.0	38.7	95.6	1.74	212	110	127	26.3	1,063	652	336	6.95
	Oct-10	66.0	34.0	94.2	2.94	216	112	119	25.4	1,044	650	314	7.07
	May-11	64.5	34.2	91.0	2.85	206	118	128	29.4	1,060	645	314	7.11
	Nov-11	64.3	33.8	90.6	2.69	216	107	125	24.0	1,020	660	312	6.99
	May-12	62.2	33.0	91.3	2.41	206	114	128	26.4	1,026	636	297	5.94*
	Nov-12	63.7	34.1	92.1	2.72	230	122	126	23.2	1,029	609	303	7.04
	Apr-13	67.5	35.6	92.0	2.88	221	106	115	22.8	1,036	606	309	7.00
	Oct-13	53.9	28.9	90.0	2.26	218	103	120	23.8	1,035	622	304	6.98
	May-14	66.7	32.9	89.8	2.37	212	97	120	24.2	1,030	598	295	7.02
	Oct-14	62.9	31.8	90.2	2.34	223	102	121	24.6	1,030	621	315	7.06
	May-15	68.7	35.4	87.6	2.28	223	98	119	23.4	1,020	584	305	7.06
	Nov-15	62.1	33.7	87.0	2.30	224	99	125	23.4	1,010	595	307	7.04
	May-16	63.7	33.3	92.4	2.34	225	96	124	22.0	1,000	581	302	6.97
	Nov-16	58.0	33.9	93.2	2.47	223	95	131	22.1	1,000	613	285	7.01
	Apr-17	72.0	33.5	87.5	2.58	240	95	125	24.2	1,010	609	313	6.93
	Oct-17	65.6	34.2	92.6	2.46	180	79	112	26.4	1,000	609	257	6.97
	May-18	69.6	35.9	101.0	2.41	224	94	117	31.5	1,000	590	307	6.89
	Oct-18	69.8	34.7	95.8	2.42	219	92	114	34.6	1,000	614	289	6.97
	Apr-19	64.3	31.1	86.9	2.30	234	105	114	37.0	999	620	301	7.07
	Oct-19	67.3	33.0	93.3	2.56	232	100	115	41.7	1,010	603	327	7.03
	Oct-20	65.6	34.4	95.8	2.52	239	108	105	41.6	1,010	629	292	6.97
	Apr-21	66.4	32.4	94.8	2.62	224	93	104	41.1	997	613	293	6.97
	Nov-21	65.6	32.6	90.6	2.79	230	96	108	40.7	1,000	595	312	6.87

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-36-1 MW160 (continued)	May-22	65.3	33.6	95.2	2.80	234	93	108	37.0	989	602	304	6.97
	Oct-22	64.4	31.4	92.8	2.56	232	93	110	35.4	1,000	594	302	6.93
	Apr-23	66.0	32.9	96.6	2.53	236	94	105	35.0	996	590	292	6.86
	Jan-24	65.6	33.0	92.2	2.39	459	179	104	43.5	1,010	608	285	6.99
CUP-36-1 MW270	May-10	31.6	30.7	48.2	1.58	138	118	21.8	7.6	726	408	214	7.63
	Oct-10	34.1	31.2	56.9	2.57	148	119	21.4	7.9	743	434	214	7.70
	May-11	34.2	31.5	55.9	2.70	144	133	23.6	9.0	756	422	230	7.75
	Nov-11	37.2	32.7	64.8	2.44	124	147	25.2	20.5	803	520	226	7.23
	May-12	34.8	31.3	64.8	2.07	106	151	25.8	24.9	817	488	210	5.66*
	Nov-12	35.0	31.9	60.6	2.39	142	138	24.4	12.3	768	430	222	7.33
	Apr-13	37.7	34.2	60.3	2.47	142	131	24.3	12.2	775	435	227	7.33
	Oct-13	36.2	31.6	62.9	2.27	139	126	23.0	11.4	765	440	216	7.24
	May-14	36.7	30.7	55.4	2.19	137	124	23.4	11.2	760	382	220	7.36
	Oct-14	34.7	30.0	55.7	2.08	135	128	24.4	13.0	770	427	221	7.32
	May-15	38.8	34.1	55.9	2.17	141	127	23.7	12.3	770	452	219	7.34
	Nov-15	35.6	33.1	63.4	2.08	145	131	26.1	12.5	763	434	232	7.41
	May-16	36.2	32.7	61.6	1.95	140	132	27.8	14.6	788	412	236	7.29
	Nov-16	33.6	32.8	60.3	2.36	140	124	27.9	11.7	760	496	229	7.31
	Apr-17	38.5	30.3	54.1	2.34	145	115	24.5	9.2	743	456	218	7.26
	Oct-17	34.3	30.7	57.0	2.13	142	116	23.9	7.4	726	435	210	7.33
	May-18	37.0	33.3	62.3	2.16	144	117	24.9	7.6	729	411	220	7.32
	Oct-18	35.1	30.3	55.6	2.08	140	114	24.8	7.3	726	419	219	7.38
	Apr-19	34.2	28.9	53.7	2.08	142	119	23.8	8.1	726	420	222	7.40
	Oct-19	34.9	30.3	60.9	2.20	141	124	24.3	7.8	708	432	220	7.35
	Oct-20	35.4	32.0	58.5	2.29	142	127	24.0	7.0	717	459	230	7.41
	Apr-21	34.9	29.7	57.1	2.34	135	117	22.9	7.1	710	438	199	7.28
	Nov-21	34.3	30.3	56.7	2.57	138	123	22.3	7.2	711	377	210	7.27
	May-22	34.9	29.9	57.6	2.52	136	116	22.2	7.7	708	394	211	7.41
	Oct-22	34.7	29.1	56.1	2.32	136	119	21.7	7.4	719	389	212	7.34
	Apr-23	34.7	30.0	58.0	2.33	134	121	21.8	7.9	715	381	204	7.19
	Jan-24	34.1	30.2	56.6	2.24	135	118	21.4	8.5	721	396	199	7.41
CUP-36-1 MW455	May-10	38.1	25.0	62.3	4.43	220	81	0.6	<0.3	691	361	192	7.51
	Oct-10	36.5	22.6	58.8	4.90	224	86	<0.5	<0.3	687	373	198	7.74
	May-11	38.0	23.3	60.2	5.47	212	89	<0.5	<0.3	696	355	200	7.75
	Nov-11	38.1	24.0	59.6	4.95	222	84	<0.5	<0.3	672	360	194	7.42
	May-12	37.5	22.6	59.0	4.29	216	91	<0.5	<0.3	693	363	194	7.18
	Nov-12	37.5	23.2	59.0	4.80	229	89	<0.5	<0.3	681	349	191	7.28
	Apr-13	39.3	24.0	59.0	5.10	221	84	0.5	<0.3	693	344	194	7.37
	Oct-13	36.1	21.6	59.6	4.56	221	88	<0.25	<0.44	709	356	193	7.34

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-36-1 MW455 (continued)	May-14	40.9	22.8	56.9	4.59	214	84	0.7	<0.3	700	334	193	7.37
	Oct-14	37.8	22.5	54.8	4.50	219	83	<0.5	<0.3	691	353	199	7.34
	May-15	41.2	25.2	55.8	4.48	220	81	<0.5	<0.3	677	342	193	6.98
	Nov-15	37.7	24.7	61.6	4.57	224	90	<0.5	<0.3	705	333	205	7.30
	May-16	37.3	23.5	58.4	4.34	218	88	<0.5	<0.308	716	326	204	7.23
	Nov-16	35.1	23.9	58.8	4.85	222	83	<0.5	<0.308	683	354	199	7.41
	Apr-17	42.4	23.2	55.1	4.59	219	78	<0.5	<0.308	692	392	200	7.27
	Oct-17	39.0	23.6	56.7	4.52	216	79	<0.5	<0.308	684	366	165	7.31
	May-18	40.8	24.4	61.3	4.63	223	84	<0.5	<0.308	689	333	203	7.26
	Oct-18	40.6	22.7	57.2	4.36	217	82	<0.5	<0.308	691	344	199	7.06
	Apr-19	39.4	22.7	56.0	4.53	230	88	<0.5	<0.308	698	351	200	7.76
	Oct-19	41.2	24.0	63.6	4.73	232	89	<0.5	<0.308	694	335	202	7.37
	Oct-20	39.8	24.9	62.5	4.73	220	88	<0.5	<0.308	685	362	198	7.22
	Apr-21	40.5	23.7	60.1	4.73	214	79	<0.5	<0.176	692	337	188	7.30
	Nov-21	40.9	23.3	58.5	5.30	227	88	<0.5	<0.176	705	345	202	7.05
	May-22	40.8	24.6	60.6	5.46	225	83	<0.5	<0.176	691	341	202	7.32
	Oct-22	40.1	23.1	60.2	4.86	228	86	<0.5	<0.176	708	325	202	7.10
	Apr-23	40.2	24.1	62.8	4.95	226	90	<0.5	<0.177	711	344	199	7.16
	Jan-24	41.0	24.5	62.3	4.88	224	85	<0.5	<0.177	718	356	193	7.20
CUP-36-1 MW585	May-10	121	56.1	77.1	3.30	216	186	206	<0.3	<b>1,363</b>	<b>814</b>	512	7.20
	Oct-10	121	53.6	79.0	4.28	216	197	210	<0.3	<b>1,387</b>	<b>826</b>	524	7.27
	May-11	95.0	43.8	75.9	4.17	204	157	167	0.66	<b>1,184</b>	<b>752</b>	444	7.40
	Nov-11	102	49.7	82.2	4.29	218	168	184	<0.3	<b>1,257</b>	<b>780</b>	456	7.22
	May-12	90.3	51.9	83.3	3.53	200	154	200	0.9	<b>1,246</b>	<b>792</b>	436	7.04
	Nov-12	102	61.1	83.5	3.99	225	205	213	<0.3	<b>1,379</b>	<b>861</b>	501	7.10
	Apr-13	96.7	66.3	91.3	4.52	230	174	187	0.57	<b>1,354</b>	<b>779</b>	501	7.13
	Oct-13	101	68.8	104	4.34	232	191	<b>260</b>	<0.22	<b>1,509</b>	<b>914</b>	553	7.09
	May-14	111	68.0	92.3	4.09	229	190	<b>267</b>	<0.3	<b>1,530</b>	<b>944</b>	580	7.17
	Oct-14	114	71.9	93.8	4.15	242	206	<b>284</b>	<0.3	<b>1,590</b>	<b>994</b>	611	7.08
	May-15	99.9	63.7	96.5	4.11	241	207	<b>285</b>	<0.3	<b>1,610</b>	<b>993</b>	633	7.09
	Nov-15	117	79.6	98.7	4.19	254	226	<b>313</b>	<0.3	<b>1,630</b>	<b>1,040</b>	708	7.13
	May-16	109	73.9	98.4	3.84	235	203	<b>298</b>	<0.308	<b>1,600</b>	<b>979</b>	629	7.13
	Nov-16	92.3	67.3	78.2	4.02	224	183	217	<0.308	<b>1,370</b>	<b>842</b>	527	7.07
	Apr-17	56.7*	32.0*	54.2*	3.11*	202	93.3*	36.8*	<0.308	778*	345*	253*	7.12
	Oct-17	49.0*	30.3*	54.9*	2.72*	191	93.4*	29.8*	<0.308	751*	417*	243*	7.13
	May-18	52.6	30.2	65.5	2.79	194	97	31.3	<0.308	735	406	247	7.10
	Oct-18	78.4	39.9	65.7	3.05	192	131	106	<0.308	<b>1,020</b>	<b>605</b>	365	7.03
	Apr-19	76.4	39.9	64.8	3.13	216	139	122	<0.308	<b>1,030</b>	<b>637</b>	382	7.25
	Oct-19	99.2	49.3	74.0	3.49	226	168	180	<0.308	<b>1,180</b>	<b>702</b>	485	7.14

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-36-1 MW585 (continued)	Oct-20	63.8	31.9	61.8	3.02	195	110	72	<3.08	848	508	295	7.15
	Apr-21	62.7	29.3	58.2	3.00	195	104	55	<0.176	818	473	266	7.10
	Nov-21	56.6	27.1	55.4	3.09	194	102	44	<0.176	772	417	262	6.98
	May-22	61.5	29.5	59.0	3.21	199	95	53	<0.176	787	434	271	7.02
	Oct-22	42.7	18.9	45.0	2.44	152	74	31	0.4	620	328	195	7.03
	Apr-23	62.3	31.7	53.1	2.95	168	104	77	<0.177	803	451	272	6.91
	Jan-24	86.1	51.0	64.4	4.01	203	142	171	<0.177	1,150	661	411	6.94
CUP-44-1 MW190	May-10	51.9	33.6	57.7	1.75	238	69	60.6	34.8	842	485	292	6.66
	Oct-10	48.9	29.9	55.2	1.26	232	70	59.0	33.0	849	493	290	6.77
	Jun-11	47.8	36.3	112	1.63	226	98	90.8	53.2	1,042	617	266	6.61
	Oct-11	57.6	36.8	86.2	1.62	256	85	76.1	37.5	937	560	290	6.55
	May-12	49.4	32.6	94.2	1.11	237	90	82.0	40.5	956	533	263	6.49
	Nov-12	51.3	36.5	95.3	1.55	270	106	82.8	37.9	992	582	276	6.58
	May-13	53.2	38.7	102	1.57	261	92	78.5	36.9	1,000	562	287	6.51
	Oct-13	52.9	35.8	108	1.47	252	86	83.0	37.8	979	566	278	6.56
	May-14	51.6	33.0	97.7	1.37	246	93	91.2	40.0	1,030	565	266	6.56
	Oct-14	45.4	32.2	112	1.29	255	96	95.8	43.3	1,030	607	273	6.58
	May-15	50.1	34.9	--	1.24	258	95	92.7	41.3	1,030	619	256	6.52
	Nov-15	47.7	34.0	109	1.23	251	90	96.0	42.2	1,010	611	260	6.50
	May-16	47.6	33.1	97.8	1.29	241	87	96.0	39.2	984	577	267	6.53
	Nov-16	45.2	33.7	110	1.34	248	87	98.4	37.4	965	612	265	6.52
	Apr-17	46.8	34.1	119	1.56	264	91	96.5	38.7	1,020	613	265	6.58
	Oct-17	46.0	34.2	123	1.25	276	101	98.7	35.2	1,040	594	256	6.46
	Apr-18	47.9	34.1	121	1.30	257	95	103.0	33.7	1,040	614	271	6.51
	Oct-18	49.8	33.1	120	1.26	259	96	96.2	30.6	1,040	599	267	6.48
	Apr-19	47.8	32.1	114	1.27	263	98	98.7	30.2	1,040	604	260	6.62
	Oct-19	50.7	34.5	125	1.46	258	98	103.0	30.2	1,050	599	265	6.62
	Oct-20	48.3	34.5	112	1.39	248	102	98.9	30.1	1,050	614	266	6.51
	Apr-21	49.2	33.6	124	1.53	254	100	97.3	29.0	1,040	627	257	6.51
	Nov-21	49.4	34.2	113	1.61	251	98	99.1	29.3	1,040	595	259	6.47
	Apr-22	48.0	34.1	117	1.55	273	96	99.0	27.7	1,040	598	263	6.40
	Oct-22	48.2	33.2	120	1.46	261	92	101	27.1	1,050	617	258	6.46
	Apr-23	49.2	35.3	128.0	1.46	273	95	104	25.5	1,070	624	256	6.42
	Oct-23	48.2	34.6	129.0	1.39	275	91	95	22.9	1,070	623	259	6.46
CUP-44-1 MW300	May-10	52.5	35.2	91.4	2.03	258	84	80.6	36.8	978	564	290	6.57
	Oct-10	46.5	29.9	84.2	1.18	250	86	82.0	38.0	978	538	278	6.67
	Jun-11	50.1	35.2	101	1.81	236	96	88.8	39.9	1,026	617	278	6.74
	Oct-11	53.4	37.0	112	1.73	258	100	92.1	40.4	1,045	620	282	6.50
	May-12	34.7*	22.1*	72.9*	1.51	163*	64*	68.5*	29.6*	687*	372*	177*	6.43

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-44-1 MW300 (continued)	Nov-12	47.1	34.7	109	1.72	265	113	95.0	40.1	1,031	597	266	6.55
	May-13	52.6	36.9	114	1.70	263	100	88.9	38.1	1,060	599	279	6.45
	Oct-13	48.4	34.3	131	1.59	261	98	94.0	40.0	1,066	598	268	6.48
	May-14	51.3	33.1	107	1.48	252	96	97.4	39.9	1,060	590	272	6.57
	Oct-14	47.5	31.9	112	1.41	245	92	96.0	40.6	1,040	601	263	9.46*
	May-15	49.5	34.2	82.6	1.28	262	95	92.2	38.8	1,040	607	267	6.62
	Nov-15	47.6	34.1	109	1.35	259	92	100	40.0	1,030	630	263	6.50
	May-16	45.5	31.5	105	1.24	242	87	97.0	38.3	998	581	262	6.49
	Nov-16	22.9*	15.9*	53.3*	1.62	120*	40.8*	45.7*	15.0*	481*	442	124*	6.19
	Apr-17	45.3	32.8	116	1.78	254	88	94.4	36.3	987	577	256	6.56
	Oct-17	42.6	30.6	109	1.18	261	94	96.9	35.1	1,030	600	265	6.48
	Apr-18	49.5	35.0	123	1.35	262	98	102.0	32.6	1,060	610	277	6.49
	Oct-18	49.7	33.7	119	1.29	259	96	98.5	31.3	1,040	594	269	6.50
	Apr-19	49.2	32.3	113	1.41	267	99	103.0	30.7	1,040	611	265	6.60
	Oct-19	49.9	34.3	121	1.47	252	96	102.0	29.5	1,020	584	259	6.58
	Oct-20	50.1	34.5	112	1.42	253	102	100.0	29.6	1,050	605	267	6.51
	Apr-21	50.2	33.8	127	1.59	261	100	101.0	29.7	1,060	636	270	6.47
	Nov-21	51.0	34.0	112	1.69	272	98	102.0	29.5	1,060	561	268	6.46
	Apr-22	51.0	35.9	122	1.71	271	95	102.0	28.1	1,050	603	272	6.41
	Oct-22	49.7	33.2	124	1.50	268	93	104.0	27.3	1,060	617	263	6.43
	Apr-23	46.3	32.1	118.0	1.47	276	94	97.1	3.5	1,070	607	244	6.47
	Oct-23	49.1	34.7	126.0	1.47	279	91	92.9	2.9	1,070	589	260	6.49
CUP-44-1 MW460	May-10	55.4	46.6	62.9	3.39	168	134	118	2.1	1,026	618	336	6.98
	Oct-10	49.5	40.4	57.6	2.57	172	131	110	2.0	990	569	336	7.06
	Jun-11	53.1	47.2	62.0	3.62	164	136	119	1.9	988	599	338	7.04
	Oct-11	59.0	50.0	65.6	3.49	180	135	117	2.6	988	650	342	6.85
	May-12	55.8	44.8	60.3	2.50	169	135	116	2.1	974	561	339	6.79
	Nov-12	53.6	47.4	64.1	3.23	178	146	113	2.4	968	560	319	6.89
	May-13	57.2	50.7	64.1	3.28	177	136	103	2.3	968	527	345	6.79
	Oct-13	58.2	48.0	66.7	4.03	231	117	86	12.3	1,006	590	352	6.89
	May-14	58.0	46.6	59.9	3.10	180	127	106	5.7	982	536	348	6.91
	Oct-14	54.9	46.3	60.2	3.03	220	117	86	11.5	1,000	577	363	6.89
	May-15	57.4	49.4	58.8	2.85	225	120	83.6	12.6	993	549	352	6.91
	Nov-15	54.4	48.2	60.3	2.96	226	124	84.7	12.8	977	569	385	6.90
	May-16	58.6	48.8	60.5	2.97	215	119	96.0	11.9	978	567	365	6.87
	Nov-16	49.0	46.5	59.6	3.07	176	127	109	5.0	942	562	333	6.85
	Apr-17	48.7	44.2	61.0	3.47	185	119	98	6.9	909	521	310	6.95
	Oct-17	48.9	44.2	62.2	2.71	166	127	98	5.6	917	507	325	6.86
	Apr-18	52.6	45.1	65.5	2.93	165	121	96.5	8.7	891	505	306	6.91



**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
CUP-44-1 MW460 (continued)	Oct-18	48.7	38.3	58.9	2.66	162	118	81	11.1	847	466	286	6.91
	Apr-19	46.3	37.6	57.4	2.65	157	115	82	12.8	844	484	281	7.59*
	Oct-19	49.0	40.5	66.2	2.97	155	113	82	13.4	832	472	277	7.03
	Oct-20	49.1	41.8	63.6	3.05	157	116	90	10.9	867	509	289	6.92
	Apr-21	47.1	39.6	61.0	2.94	160	110	87	11.9	843	516	273	6.89
	Nov-21	60.4	38.3	62.7	5.66	174	132	100	5.2	932	514	308	6.76
	Apr-22	54.2	45.8	66.2	3.49	176	128	103	5.5	946	522	327	6.88
	Oct-22	53.9	43.7	64.5	3.29	166	128	104	3.5	954	528	319	6.63
	Apr-23	55.5	46.7	67.4	3.28	172	134	109	0.79	973	548	324	6.79
	Oct-23	54.8	46.0	65.6	3.08	170	127	96.1	0.64	955	533	315	6.48
CUP-44-1 MW580	May-10	94.9	80.2	89.3	4.86	252	85	293	<0.3	1,576	992	608	7.53
	Oct-10	89.7	72.5	90.0	4.06	252	174	300	<2.2	1,582	1,074	610	7.55
	Jun-11	102	90.3	96.8	6.02	244	183	336	<0.3	1,618	1,054	624	7.53
	Oct-11	98.8	94.2	101	6.07	264	182	340	<0.3	1,629	1,100	644	7.11
	May-12	25.1*	15.4*	19.2*	2.25*	83*	33*	47.6*	0.5*	375*	207*	132*	6.97*
	Nov-12	97.6	84.9	92.3	5.77	264	192	320	<0.3	1,565	996	603	7.24
	May-13	104	99.1	102	6.47	263	184	299	<0.3	1,621	1,012	635	7.19
	Oct-13	102	79.3	109	5.33	254	180	350	<0.22	1,654	1,086	640	7.19
	May-14	110	93.6	94.3	5.31	250	180	354	<0.3	1,670	1,070	670	7.31
	Oct-14	98.6	80.9	98.7	5.00	259	186	360	<0.3	1,660	1,090	662	7.29
	May-15	--	94.9	96.6	5.03	262	184	357	<0.3	1,700	1,080	666	7.33
	Nov-15	104	91.5	101	5.38	276	194	362	<0.3	1,680	1,130	664	7.26
	May-16	101	93.3	95.3	4.99	257	180	380	<1.1	1,680	1,130	681	7.34
	Nov-16	97.8	93.4	108	5.47	265	184	386	<0.308	1,660	1,120	679	7.26
	Apr-17	105	95.7	106	6.82	264	177	362	<0.308	1,660	1,110	672	7.25
	Oct-17	97.9	84.6	99	4.44	265	190	347	<0.308	1,660	1,090	687	7.25
	Apr-18	116	100.0	113	5.42	253	184	366	<0.308	1,660	1,070	692	7.26
	Oct-18	111	90.4	100	5.04	258	189	366	<0.308	1,670	1,090	684	7.22
	Apr-19	111	90.9	103	5.20	276	204	397	<0.308	1,710	1,130	716	7.40
	Oct-19	113	97.5	108	5.48	258	194	391	<0.308	1,680	1,090	737	7.35
	Oct-20	113	94.7	103	5.65	256	192	342	<0.308	1,670	1,100	672	7.00
	Apr-21	114	90.7	111	5.72	258	188	373	<0.176	1,660	1,120	647	7.19
	Nov-21	112	91.6	101	6.41	265	189	384	<0.176	1,700	1,060	673	7.41
	Apr-22	111	97.7	108	6.11	288	207	379	<0.176	1,700	1,070	715	7.38
	Oct-22	112	92.1	118	5.83	259	192	306	<0.176	1,740	1,090	674	7.37
	May-23	114.0	96.7	103.0	5.44	265	197	376	<0.177	1,730	1,060	742	7.44
	Oct-23	116.0	98.3	110.0	5.52	263	189	350	<0.177	1,720	1,090	673	7.48
MW-M1	May-10	25.5	18.9	30.1	2.20	110	51	21.0	11.8	465	260	140	6.73
	Oct-10	23.1	16.4	28.1	1.64	110	56	22.0	12.0	475	272	152	6.87

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
MW-M1 (continued)	Jun-11	25.5	19.4	31.8	2.19	110	55	22.3	12.6	475	291	148	6.91
	Oct-11	29.7	19.0	31.4	1.93	112	53	20.7	13.1	456	290	148	6.77
	May-12	25.6	19.4	32.1	1.71	115	59	23.7	13.0	477	477*	156	6.76
	Nov-12	26.9	20.1	32.7	2.11	134	59	25.2	13.7	478	278	150	6.85
	May-13	29.1	21.4	32.2	2.14	119	57	22.2	12.0	484	258	160	6.71
	Oct-13	26.0	19.0	30.7	1.94	115	55	25.0	13.6	487	258	154	6.77
	May-14	28.8	20.0	29.3	1.97	111	54	24.2	13.2	480	236	152	6.76
	Nov-14	29.8	21.5	29.6	1.83	114	55	25.2	14.0	489	294	156	6.80
	Apr-15	29.8	22.0	31.5	1.90	42.8*	40	23.6	14.4	485	253	160	6.70
	Oct-15	27.8	20.2	31.5	1.88	114	54	25.0	15.0	474	292	153	6.79
	May-16	24.6	18.1	26.3	1.36	108	46	16.4	18.9	437	206	147	6.78
	Nov-16	25.2	19.4	27.3	1.53	114	36	22.5	22.6	435	238	146	6.79
	Apr-17	26.6	18.0	24.6	1.50	114	38	17.8	23.5	434	251	145	6.68
	Oct-17	23.0	17.5	27.9	1.30	118	38	19.4	22.5	433	234	148	6.83
	May-18	27.0	20.8	33.8	1.49	118	37	20.5	22.0	437	247	152	6.78
	Nov-18	29.2	18.6	30.6	1.48	115	36	20.2	21.6	437	232	149	6.82
	Apr-19	27.0	19.4	31.2	1.54	120	38	21.1	22.8	442	254	150	7.61*
	Oct-19	27.4	19.5	31.1	1.65	122	40	21.3	20.7	446	261	150	7.04
	Oct-20	28.0	19.8	32.1	1.70	116	37	21.1	22.5	442	265	149	6.92
	Apr-21	27.4	19.2	36.6	2.02	133	45	31.1	16.0	466	257	141	6.89
	Nov-21	27.5	18.7	28.8	1.76	118	38	19.3	25.6	439	228	152	6.77
	May-22	27.5	19.2	30.2	1.84	115	38	18.4	25.1	438	236	148	6.78
	Oct-22	29.0	19.2	31.5	1.84	111	51	22.9	16.6	480	258	145	6.69
	Apr-23	28.4	19.5	31.4	1.79	113	51	23.3	27.6	469	257	148	6.67
	Oct-23	28.5	20.3	31.0	1.64	123	36	20.4	23.7	452	248	150	6.81
DC#01 - A ST	Apr-00	24.8	27.6	37.8	2.19	113	72	20.6	53.5	540	280	176	8.10
	Apr-01	--	--	--	--	110	73	17.0	57.0	500	300	170	8.20
	Oct-01	28.4	27.4	40.7	1.85	110	72	17.0	63.0	560	340	190	8.13
	Apr-03	33.0	32.0	44.0	1.60	111	84	22.0	25.0	609	370	--	7.70
	Nov-04	37.6	34.2	47.1	2.22	96	77	22.4	85.5	675	402	216	8.10
	May-05	40.0	40.1	46.1	2.18	92	70	31.0	33.0	775	--	254	8.03
	May-06	42.0	44.6	39.5	3.16	92	91	30.0	137	748	--	252	7.96
	Jun-07	37.7	41.0	43.1	2.23	100	85	33.0	140	779	466	250	7.91
	Apr-08	42.2	38.9	49.0	2.06	92	92	29.7	131	765	445	260	7.97
DC#03 - DC-4	Feb-81	22.0	23.0	42.0	--	107	60	11.0	--	--	170	--	9.10
	Jan-83	26.0	24.0	48.0	1.50	72	62	10.0	--	--	360	--	7.10
	Apr-85	25.0	23.0	38.0	--	116	64	14.0	40.0	--	234	--	7.80
	Jul-88	26.0	23.0	--	38.0	128	66	16.0	45.0	--	--	--	--
	Apr-00	27.1	32.5	42.2	1.83	126	65	32.3	42.2	474	324	202	8.12

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
DC#03 - DC-4 (continued)	Nov-04	30.4	30.6	45.7	1.52	126	53	30.5	49.7	566	386	186	8.00
	May-05	28.1	29.1	39.1	1.59	150	59	31.0	49.0	570	--	188	8.03
	May-06	29.6	33.9	36.5	2.21	122	57	34.0	54.0	569	--	194	8.05
	Jun-07	27.7	31.1	37.6	1.85	130	80*	36.0	59.0	596	358	220	7.98
	Apr-09	26.6	27.5	37.6	1.50	130	57	32.4	56.0	602	327	198	7.98
	Apr-10	30.3	30.6	41.1	1.57	126	60	36.5	66.7	641	365	212	7.90
	May-11	30.4	32.7	41.6	2.26	124	59	36.5	65.6	634	378	208	7.98
	Apr-12	28.7	30.8	41.8	1.71	128	64	38.6	69.6	642	361	213	8.00
	May-13	29.4	30.7	38.5	1.60	131	55	34.0	61.6	612	369	202	8.04
	Jun-14	32.6	32.7	39.2	1.64	131	58	38.3	63.6	642	378	215	7.99
	Oct-14	37.0	34.0	40.2	1.53	146	58	42.0	74.8	684	404	241	7.80
Apr-15	31.3	29.1	37.6	1.46	136	57	32.1	57.1	609	326	208	7.93	
DC#06 - JEFFERSON	Apr-00	21.1	21.5	32.4	1.71	114	56	10.9	11.6	427	240	141	8.10
	Apr-01	--	--	--	--	110	56	11.0	11.0	390	230	150	8.10
	Oct-01	20.9	21.5	36.3	1.84	110	55	11.3	10.6	430	250	140	8.14
	Apr-03	20.0	20.0	35.0	1.60	138	60	9.7	1.8	393	230	--	7.52
	Nov-04	21.3	20.1	39.7	2.20	114	51	8.7	4.9	422	294	144	8.20
	May-05	20.3	20.9	34.2	1.82	110	56	9.2	7.9	420	--	128	8.12
	May-06	20.1	23.0	20.2	3.00	112	57	10.1	9.2	424	--	158	8.14
	Jun-07	18.4	20.7	31.7	1.90	110	80	10.3	9.4	427	253	140	8.09
	Apr-08	20.1	21.4	35.3	1.74	106	56	10.0	10.0	430	258	156	8.12
	Apr-09	17.9	19.6	31.5	1.79	112	58	11.0	10.0	442	252	134	8.04
	Apr-10	18.6	19.3	32.7	1.30	134	55	10.8	9.3	442	268	156	7.93
	May-11	18.9	20.4	33.7	1.90	108	58	11.3	10.2	445	128*	136	8.14
	Apr-12	18.8	20.8	34.0	1.71	109	59	12.3	10.9	446	266	136	8.11
	May-13	20.3	22.0	33.7	1.89	111	57	14.0	12.3	459	257	139	8.17
	Jun-14	20.7	22.1	31.4	1.63	111	58	15.0	12.6	468	258	145	8.14
	Oct-14	22.2	21.2	31.0	1.65	114	61	15.0	12.3	473	260	150	8.14
	Jun-16	21.9	23.5	31.5	1.62	113	59	17.3	14.0	486	249	153	8.16
	Apr-17	18.7	21.7	31.8	1.83	110	58	12.6	11.0	466	265	141	8.02
	Apr-18	21.8	22.4	39.9	1.81	107	61	12.2	10.2	461	240	142	8.17
	Apr-19	20.9	20.8	36.7	1.62	108	62	11.6	10.5	455	256	139	8.17
May-20	20.4	20.7	33.4	1.93	110	63	11.8	10.9	456	265	146	8.08	
Apr-22	21.3	21.7	34.4	2.04	112	59	13.4	11.6	461	243	142	8.02	
Apr-23	22.6	23.6	37.3	1.94	118	62	17.9	13.7	488	259	150	8.01	
DC#10 - VALE	Apr-00	24.5	27.0	37.8	2.68	122	66	25.8	33.4	619	286	172	8.14
	Apr-01	--	--	--	--	120	70	23.0	33.0	490	270	170	8.00
	Oct-01	28.1	26.5	41.1	2.01	120	75	24.8	35.9	540	330	180	8.14
	Oct-02	29.0	26.0	40.0	2.70	120	69	34.0	41.0	510	330	--	8.20

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
DC#10 - VALE (continued)	Nov-04	31.4	30.1	46.6	2.16	128	63	28.8	30.7	567	364	190	8.20
	May-05	28.2	29.3	38.6	1.83	126	97*	29.0	--	570	--	186	8.11
	May-06	26.5	30.6	34.1	2.33	124	64	37.0	39.0	573	--	194	8.20
	Jun-07	26.1	28.5	37.8	2.14	130	65	29.0	33.0	567	339	210	8.10
	Apr-08	29.3	29.3	41.6	2.07	128	69	27.4	32.2	570	341	192	8.11
	Apr-09	25.8	25.9	37.3	1.92	120	67	26.0	34.8	577	310	182	8.06
	Apr-10	26.4	25.3	38.3	0.79	122	67	27.7	35.7	580	338	184	7.95
	May-11	26.8	27.7	39.5	2.36	118	66	28.5	36.3	580	346	186	8.15
	Apr-12	26.2	26.3	40.3	1.86	120	68	28.8	38.7	581	329	186	8.07
	May-13	28.5	29.7	41.0	2.16	125	67	30.0	39.6	592	322	184	8.12
	Jun-14	29.2	28.7	38.3	2.00	121	66	29.7	39.6	595	<b>774*</b>	191	8.11
	Oct-14	30.5	27.9	39.6	1.95	126	70	31.0	38.7	603	348	198	8.08
	Apr-15	30.9	28.9	37.8	1.86	129	70	29.8	39.5	602	340	195	8.12
Jun-16	30.3	29.9	37.3	1.92	126	66	33.1	39.9	605	332	202	8.13	
DC#11 - DC-2 (WESTLAKE)	Nov-74	33.0	35.0	55.0	2.00	194	73	38.0	<b>71.0</b>	--	412	--	7.60
	Sep-81	36.0	35.0	47.0	--	158	75	35.0	--	--	260	--	7.90
	Jan-83	36.0	34.0	36.0	1.60	119	70	36.0	--	--	260	--	7.20
	Apr-85	39.0	39.0	51.0	--	173	81	44.0	<b>73.0</b>	--	344	--	7.60
	Apr-01	--	--	--	--	170	180	92.0	28.0	820	<b>530</b>	320	7.80
	Oct-01	49.0	48.9	71.1	2.81	170	120	96.7	27.3	<b>910</b>	<b>570</b>	--	7.70
	Apr-03	37.0	43.0	58.0	1.80	224	100	69.0	23.0	725	460	--	7.20
	May-05	23.2	26.2	38.1	1.58	114	48	26.0	41.0	490	--	160	8.22
	May-06	40.5	44.6	56.9	1.77	186	96	72.0	30.0	830	--	302	7.59
	Jun-07	37.7	46.6	55.0	2.43	190	105	78.0	29.0	855	--	330	7.55
	Apr-08	50.7	47.6	68.5	2.87	176	122	107	24.1	<b>950</b>	<b>577</b>	320	7.64
	Apr-09	47.8	42.2	65.5	2.87	174	120	113	19.9	<b>976</b>	<b>572</b>	320	7.58
	Apr-10	49.3	46.7	74.3	2.97	196	121	110	20.5	<b>978</b>	<b>600</b>	318	7.53
	May-11	48.9	47.2	69.9	3.24	174	122	112	21.6	<b>968</b>	<b>582</b>	318	7.67
	Apr-12	49.0	45.5	72.2	3.05	172	126	116	20.5	<b>984</b>	<b>584</b>	322	7.68
	May-13	50.8	47.0	69.7	3.51	176	124	120	19.4	<b>979</b>	<b>551</b>	312	7.69
	Jun-14	49.1	43.7	67.7	3.09	165	121	114	18.6	<b>974</b>	<b>741*</b>	317	7.70
	Oct-14	55.0	42.8	71.0	3.29	168	128	120	16.7	<b>990</b>	<b>574</b>	324	7.65
	Jun-16	41.0	43.7	55.2	2.16	177	99	89.0	17.8	864	470	293	7.59
	Apr-17	38.1	46.2	57.1	2.28	188	92	68.9	31.1	861	487	287	7.49
Apr-21	44.0	45.6	56.5	2.18	205	88	68.1	36.5	869	494	290	7.55	
Apr-22	57.0	46.8	76.7	4.11	175	122	130.0	15.4	<b>998</b>	<b>563</b>	328	7.53	
Apr-23	58.8	45.7	81.0	3.99	175	134	142.0	11.3	<b>1,040</b>	<b>611</b>	332	7.53	
DC-JUNIPERO SERRA	Jun-14	21.0	23.8	32.5	1.44	110	49	25.9	37.2	504	273	157	8.21
	Apr-19	22.1	23.1	36.8	1.37	111	50	25.6	37.4	488	281	158	8.30

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
DC-JUNIPERO SERRA (continued)	Apr-21	24.2	24.8	35.7	1.67	117	48	28.1	37.3	514	284	160	8.07
	Apr-22	24.0	24.8	36.4	1.81	113	50	26.9	36.2	506	269	160	8.11
	Apr-23	23.8	25.3	37.9	1.67	115	52	32.8	36.2	520	285	163	8.10
DC#13 - SULLIVAN	May-20	29.7	30.0	41.1	1.89	140	60	34.6	47.5	606	364	210	8.06
	Apr-21	29.5	29.2	39.8	1.79	136	57	32.1	45.8	594	341	192	8.02
SSFLP 120	Oct-07	70.0	50.0	110	3.70	192	180	57.0	--	1,160	690	380	8.20
	May-08	67.3	47.4	92.0	3.53	284	176	54.0	<0.3	1,133	665	372	7.22
	Sep-08	65.7	47.8	90.5	2.84	306	168	57.0	<0.3	1,117	662	362	7.11
	Apr-09	60.5	44.8	85.6	2.89	272	170	51.5	<0.3	1,124	626	288	7.19
	Nov-09	64.0	48.0	90.0	2.90	250	173	53.0	<0.3	1,154	665	360	7.25
	Dec-10	66.0	45.7	91.5	3.50	292	173	49.0	<1.1	1,211	626	386	7.30
	May-11	60.0	46.1	87.8	3.00	294	173	51.6	0.37	1,202	668	390	7.20
	Nov-11	59.6	44.9	89.7	3.79	244	156	62.1	<0.3	1,056	630	322	7.14
	May-12	59.7	44.3	91.6	2.71	268	163	61.9	<0.3	1,097	623	354	7.13
	Nov-12	58.0	43.9	87.0	3.31	271	161	64.7	<0.3	1,092	622	321	7.15
	Apr-13	63.5	43.9	--	3.24	274	152	57.1	<0.3	1,097	629	352	7.13
	Nov-13	61.1	45.3	97.2	3.14	272	149	58.0	<0.22	1,101	616	345	7.01
	May-14	62.1	42.7	85.8	2.85	262	142	61.1	<0.3	1,100	598	338	7.05
	Oct-14	61.9	42.9	86.2	2.87	269	144	71.8	<0.3	1,090	622	357	7.13
	May-15	60.9	45.8	83.0	2.99	268	139	64.3	<0.3	1,090	615	354	7.17
	Nov-15	58.7	45.6	86.0	3.14	273	146	61.7	<0.3	1,090	644	355	7.17
	May-16	60.8	44.7	89.1	2.87	271	138	65.9	<0.3	1,090	588	383	7.13
	Nov-16	54.8	46.5	92.2	3.08	271	135	69.0	<0.308	1,080	626	345	7.11
	Apr-17	68.3	44.0	85.0	3.19	292	145	64.7	<0.308	1,070	590	348	6.97
	Nov-17	61.8	45.9	97.8	2.86	226	116	61.2	<0.308	1,090	630	280	7.18
	May-18	66.7	47.7	96.5	3.08	290	144	63.7	<0.308	1,080	605	362	7.06
	Oct-18	64.5	42.5	88.4	2.83	279	138	63.5	<0.308	1,070	603	347	7.16
	Apr-19	63.4	42.9	88.4	2.80	282	137	66.7	<0.308	768*	617	343	8.14
	Nov-19	65.1	45.2	94.3	3.07	284	139	68.3	<0.308	1,100	607	346	7.20
	Oct-20	61.5	44.5	92.1	3.21	265	131	66.4	<0.308	1,070	608	338	7.05
	Apr-21	63.3	43.7	90.8	3.33	274	132	62.5	<0.176	1,050	611	322	7.09
	Nov-21	63.5	44.1	89.7	3.56	290	135	66.0	<0.176	1,060	599	89.9	7.15
	May-22	64.4	45.3	94.1	3.53	293	131	65.7	<0.176	1,070	601	346	7.06
	Oct-22	61.2	43.6	95.4	3.23	277	136	65.5	<0.176	1,070	594	333	7.06
	May-23	62.6	45.1	98.0	3.20	300	140	59.6	<0.177	1,110	614	349	7.03
	Jan-24	63.1	44.9	92.5	3.07	290	131	61.6	5.49	1,090	611	332	7.15
SSFLP 220	Oct-07	35.0	29.0	54.0	2.40	150	100	20.0	--	643	366	210	8.20
	May-08	34.0	29.0	48.8	2.28	156	102	20.0	0.4	640	416	206	7.59
	Sep-08	34.6	30.6	49.6	2.40	146	104	20.0	0.5	639	395	220	7.51

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SSFLP 220 (continued)	Apr-09	31.1	27.5	46.0	2.09	146	101	19.9	0.5	655	357	200	7.56
	Nov-09	32.0	28.0	47.0	2.10	146	100	20.0	0.6	658	350	200	7.56
	Dec-10	32.1	26.9	47.0	1.70	146	100	18.0	<0.88	681	376	208	7.60
	May-11	27.9	25.7	43.9	2.20	142	104	20.2	0.8	661	369	204	7.50
	Nov-11	33.3	27.2	51.6	2.02	140	106	19.2	2.2	642	390	192	7.13
	May-12	29.0	25.7	52.7	2.02	136	111	19.1	2.6	647	368	198	7.18
	Nov-12	29.9	27.2	53.4	2.26	135	108	20.1	2.6	645	358	184	7.19
	Apr-13	31.9	28.8	52.2	2.33	136	104	18.1	2.6	651	393	191	7.22
	Nov-13	31.2	26.9	52.4	2.19	134	103	18.0	2.5	648	366	172	7.17
	May-14	30.3	25.6	47.7	1.96	131	101	19.5	2.8	651	389	184	7.29
	Oct-14	31.6	26.1	47.5	2.00	132	102	19.6	2.8	647	310	190	7.20
	May-15	31.9	27.8	47.7	1.99	131	100	18.3	3.1	649	372	186	7.14
	Nov-15	29.2	26.6	49.5	1.96	136	107	19.8	2.9	645	371	191	7.33
	May-16	29.3	27.1	48.8	1.90	141	103	19.9	3.1	644	386	203	7.17
	Nov-16	27.7	28.4	52.0	2.21	131	100	22.7	3.1	647	381	184	7.15
	Apr-17	40.7*	31.8*	58.1*	2.60*	133	99	19.2	3.1	643	366	258*	7.16
	Nov-17	29.2	27.1	52.5	1.95	108	85	18.4	3.0	645	353	149*	7.18
	May-18	32.9	28.4	60.8	2.12	133	104	19.2	3.3	647	395	192	7.17
	Oct-18	31.8	25.9	51.2	1.92	130	101	18.8	3.3	645	355	187	7.16
	Apr-19	30.6	25.2	50.1	1.92	128	101	21.5	3.4	<b>1060*</b>	376	191	7.98
	Nov-19	31.2	26.5	54.5	2.22	128	102	20.2	3.3	650	268	182	7.21
	Oct-20	30.6	28.1	54.8	2.24	128	103	19.6	3.4	649	370	188	7.12
	Apr-21	31.0	26.4	53.5	2.22	131	101	19.4	3.4	644	360	178	7.10
	Nov-21	30.9	25.8	50.2	2.36	138	107	20.1	3.7	647	350	193	7.17
May-22	31.6	27.0	53.7	2.45	131	98	19.0	3.6	649	361	190	7.12	
Oct-22	30.9	25.9	54.0	2.27	130	103	20.2	3.7	659	334	180	7.07	
May-23	30.4	27.0	54.7	2.20	134	105	18.9	3.65	654	360	188	7.09	
Jan-24	31.1	27.3	53.9	2.14	134	102	21.0	4.12	662	365	181	7.14	
SSFLP 440	Oct-07	28.0	19.0	66.0	4.80	192	65	<1.0	--	571	310	150	8.30
	Jun-08	26.3	18.5	60.3	4.59	206	63	<0.5	<0.3	583	295	150	7.89
	Sep-08	27.7	19.8	64.9	5.13	206	62	<0.5	<0.3	577	317	148	7.82
	Apr-09	24.4	17.0	59.6	4.63	200	61	<0.5	<0.3	590	299	142	7.91
	Nov-09	26.0	18.0	60.0	4.40	206	61	<0.5	<0.3	594	304	140	7.92
	Dec-10	24.7	16.5	57.6	4.90	210	63	<0.5	<0.88	614	296	142	8.00
	May-11	21.1	15.1	51.2	5.00	194	65	<0.5	<0.3	600	301	150	7.90
	Nov-11	30.0	18.7	62.4	4.97	204	64	<0.5	<0.3	586	310	146	7.42
	May-12	26.1	20.4	60.3	4.97	210	72	<0.5	<0.3	608	305	160	7.38
	Nov-12	25.6	18.8	61.5	5.25	207	67	<0.5	<0.3	594	245	143	7.49
	Apr-13	26.9	20.3	59.2	5.62	211	63	<0.5	<0.3	597	303	150	7.47

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SSFLP 440 (continued)	Nov-13	27.6	23.4	58.5	5.38	212	68	<0.25	<0.44	618	290	184	7.44
	May-14	28.1	24.0	51.0	4.91	212	70	<0.5	<0.3	635	328	174	7.49
	Oct-14	28.1	22.0	52.0	5.00	207	65	<0.5	<0.3	602	297	162	7.34
	May-15	29.0	24.4	53.2	5.05	209	67	<0.5	<0.3	620	260	168	7.45
	Nov-15	26.9	24.0	54.1	5.09	210	71	<0.5	<0.3	623	298	174	7.21
	May-16	26.7	24.0	55.3	4.86	234	77	<0.5	<0.308	629	320	177	7.35
	Nov-16	22.5	21.2	58.1	5.54	202	60	<0.5	<0.308	594	296	151	7.32
	Apr-17	32.2	23.0	61.6	6.22	201	58	<0.5	<0.308	586	277	197	7.20
	Nov-17	25.1	22.2	57.8	4.95	166	53	<0.5	<0.308	596	285	123	7.49
	May-18	23.5	18.9	60.7	4.54	209	62	<0.5	<0.308	589	276	154	7.50
	Oct-18	27.9	20.8	55.9	5.06	207	63	<0.5	<0.308	599	299	157	7.53
	Apr-19	26.0	19.5	55.6	4.90	209	63	0.51	<0.308	629	303	151	8.12
	Nov-19	27.7	21.9	59.6	5.18	208	64	<0.5	<0.308	612	356	163	7.53
	Oct-20	28.2	25.6	59.0	5.66	205	67	<0.5	<0.308	624	306	174	7.44
	Apr-21	28.0	23.6	57.1	5.49	204	61	<0.5	<0.176	604	304	154	7.44
	Nov-21	27.3	22.0	55.5	5.79	220	66	<0.5	<0.176	604	299	165	7.49
	May-22	28.1	23.5	58.8	6.18	211	61	<0.5	<0.176	613	313	172	7.48
	Oct-22	27.8	22.6	56.0	5.66	210	63	<0.5	<0.176	623	306	160	7.50
May-23	30.2	26.3	59.1	5.70	220	68	<0.5	<0.177	635	297	188	7.33	
Jan-24	30.4	26.3	57.0	5.54	220	66	<0.5	<0.177	643	311	177	7.35	
SSFLP 520	Oct-07	47.0	18.0	110	3.90	<2.0	110	66.0	--	822	490	190	8.30
	Jun-08	44.5	18.3	102	4.00	198	107	66.0	<0.3	842	486	182	7.61
	Sep-08	47.0	18.4	105	4.18	208	103	65.0	<0.3	833	483	186	7.57
	Apr-09	41.1	16.4	90.3	3.66	194	106	62.0	<0.3	848	450	186	7.62
	Nov-09	44.0	17.0	93.0	3.50	200	107	67.0	<0.3	853	462	190	7.67
	Dec-10	44.5	16.2	93.7	3.60	196	106	59.0	<0.88	881	473	192	7.70
	May-11	36.8	14.7	79.5	4.00	186	107	62.7	<0.3	855	483	194	7.80
	Nov-11	44.3	17.1	93.4	3.93	202	99	51.8	<0.3	799	440	182	7.35
	May-12	41.9	17.1	93.7	3.87	207	106	52.5	<0.3	816	461	187	7.21
	Nov-12	40.9	17.6	93.5	4.26	210	96	52.0	<0.3	795	447	174	7.36
	Apr-13	43.2	18.1	91.7	4.20	214	93	40.4	<0.3	789	427	177	7.32
	Nov-13	43.3	17.4	96.5	3.84	219	92	45.0	<0.44	801	417	182	7.24
	May-14	42.7	16.9	85.9	3.56	208	86	47.0	<0.3	634*	438	179	7.32
	Oct-14	43.6	17.5	90.4	3.62	214	89	53.6	<0.3	794	440	182	7.27
	May-15	43.9	17.8	86.2	3.49	215	87	45.4	<0.3	783	425	175	7.25
	Nov-15	41.4	17.6	88.1	3.64	216	95	44.3	<0.3	793	368*	187	7.22
	May-16	40.1	16.8	90.1	3.30	205	92	48.7	<0.308	796	446	175	7.05
Nov-16	39.6	17.2	94.6	3.70	198	94	52.6	<0.308	801	435	174	7.25	
Apr-17	45.1	16.2	88.8	3.90	199	90	44.2	<0.308	772	431	152	7.08	

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SSFLP 520 (continued)	Nov-17	36.4	14.7	82.2	3.11	160	76	40.6	<0.308	758	415	135	6.95
	May-18	43.8	16.7	98.1	3.64	202	95	40.6	<0.308	772	398	177	7.26
	Oct-18	43.3	15.1	87.1	3.25	194	89	40.6	<0.308	765	419	171	7.32
	Apr-19	41.2	14.8	87.9	3.29	197	92	43.0	<0.308	583	421	167	7.47
	Nov-19	42.8	15.2	95.4	3.44	192	91	44.4	<0.308	773	384	164	7.29
	Oct-20	41.7	15.8	95.2	3.86	197	94	42.0	<0.308	763	408	168	7.24
	Apr-21	41.3	15.1	88.9	3.70	191	85	40.5	<0.176	753	412	155	7.35
	Nov-21	42.7	14.8	88.7	3.98	200	92	45.0	<0.176	770	409	169	7.25
	May-22	42.9	15.5	96.2	4.14	195	88	45.8	<0.176	772	426	171	7.24
	Oct-22	41.7	14.2	93.2	3.72	195	90	44.5	<0.176	780	418	161	7.25
	May-23	38.9	14.3	93.2	3.63	206	83	31.5	<0.177	729	383	154	7.24
Jan-24	37.8	13.7	87.8	3.35	205	76	28.6	<0.177	718	391	147	7.31	
SS#05 - SS 1-14	Feb-58	57.0	54.0	69.0	3.60	280	128	89.0	13.0	--	--	--	7.75
	Feb-60	55.0	46.0	69.0	3.60	261	120	82.0	16.0	--	--	--	7.65
	Feb-62	52.0	52.0	72.0	5.40	271	126	89.0	16.0	--	--	--	8.50
	Feb-64	58.0	44.0	78.0	2.10	273	125	79.0	14.0	--	--	--	7.83
	Feb-66	54.0	46.0	77.0	4.20	268	122	86.0	16.0	--	--	--	7.90
	Feb-68	60.0	52.0	81.0	3.90	327	131	87.0	12.0	--	--	--	7.75
	Aug-70	42.0	59.0	70.0	4.00	283	124	77.0	14.0	--	--	--	7.78
	Jun-72	58.0	53.0	76.0	3.20	298	127	87.0	28.0	<b>1,028</b>	<b>624</b>	--	7.70
	Sep-74	55.0	55.0	66.0	2.40	299	125	74.0	30.0	--	--	--	7.60
	Apr-76	54.0	52.0	70.0	3.90	277	125	69.0	30.0	--	--	--	7.40
	Apr-78	48.0	54.0	66.0	2.60	274	122	63.0	37.0	--	--	--	7.51
	Aug-80	57.0	48.0	66.0	2.50	276	111	65.0	31.0	--	--	--	7.66
	Dec-82	45.0	50.0	72.0	2.50	260	112	68.0	30.0	--	--	--	7.59
	Nov-84	--	--	--	--	--	--	--	37.0	--	--	--	--
	Nov-86	48.0	52.0	72.0	2.60	280	122	72	33.0	<b>980</b>	<b>581</b>	--	--
	Sep-87	47.0	50.0	70.0	3.00	274	112	71	30.0	--	--	--	7.77
	Aug-90	46.0	52.0	69.0	2.70	256	117	59	35.0	<b>950</b>	<b>549</b>	--	7.60
	Apr-00	12.0	69.0	83.0	3.00	360	120	98	<b>53.0</b>	<b>1,181</b>	<b>694</b>	448	7.55
	Apr-01	--	--	--	--	310	120	83	<b>120</b>	<b>930</b>	<b>600</b>	370	7.60
	Oct-01	65.8	78.0	88.8	2.51	310	130	130	<b>60.0</b>	<b>1,200</b>	<b>770</b>	470	7.43
	Oct-02	58.1	60.6	80.9	2.90	260	120	86.0	38.0	<b>1,100</b>	<b>590</b>	--	7.70
	May-04	1.34*	1.68*	1.09*	6.83	--	120	140	<b>70.4</b>	<b>1,339</b>	<b>800</b>	540	7.47
	Oct-04	78.8	87.5	80.4	2.45	360	117	142	<b>77.0</b>	<b>1,367</b>	<b>919</b>	495	7.40
Apr-05	82.5	92.8	92.8	2.67	380	128	149	<b>81.0</b>	<b>1,259</b>	--	550	7.40	
May-06	82.7	91.0	86.3	2.92	386	126	145	<b>82.0</b>	<b>1,436</b>	--	560	7.50	
Jun-07	86.6	100	95.3	3.02	420	125	157	<b>80.0</b>	<b>1,473</b>	<b>894</b>	600	7.35	
May-11	57.0	70.1	74.1	2.60	276	129	91.1	36.4	<b>1,149</b>	<b>635</b>	414	7.70	



**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	<b>Primary MCL<sup>1</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>45</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>
	<b>Secondary MCL<sup>1,2</sup></b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>NE</b>	<b>250/500/600</b>	<b>250/500/600</b>	<b>NE</b>	<b>900/1,600/2,200</b>	<b>500/1,000/1,500</b>	<b>NE</b>	<b>NE</b>
SS#06 - SS 1-15	May-13	63.8	62.8	74.6	3.29	287	114	100	23.3	1,099	642	400	7.46
	Oct-14	74.9	64.4	76.7	2.98	183*	110	120	11.0	1,210	732	479	7.33
	Apr-15	62.5	58.2	72.2	2.68	315	124	91	21.0	1,080	595	348	7.44
	May-16	59.1	55.2	68.9	2.67	278	111	97	21.9	1,060	622	397	7.38
SS#08 - SS 1-19	May-08	49.4	60.4	72.3	2.12	252	93	82	47.0	993	587	342	7.31
	Apr-09	51.8	60.6	66.2	2.43	276	131	87	27.0	1,138	643	420	7.58
	Apr-10	53.7	68.9	76.1	2.76	324	128	86	31.6	1,143	651	266	7.54
	May-13	57.1	68.5	71.8	2.72	299	130	88	33.4	1,138	638	424	7.65
	Oct-14	59.0	63.5	67.3	2.43	146*	128	88	31.7	1,120	648	427	7.72
	Apr-15	58.5	65.8	67.9	2.42	245	108	83.8	32.2	1,110	618	462	7.68
	May-16	56.5	62.4	64.8	2.27	270	120	82.7	29.1	1,080	618	412	7.63
	Apr-18	53.0	59.8	69.6	2.26	280	94	85.6	32.4	1,010	574	390	7.12
	Apr-19	53.2	60.4	67.1	2.19	270	130	74.1	14.7	1,050	586	394	7.50
	Jun-20	53.7	62.4	64.1	2.30	287	104	79.7	21.0	1,030	602	387	7.35
	May-21	52.3	58.6	71.1	2.38	272	106	77.6	18.2	1,010	578	363	7.27
	Apr-22	52.9	62.0	69.7	2.63	273	116	73.1	14.8	1,020	550	380	7.46
	May-23	52.6	62.3	74.5	2.47	278	127	71.2	15.5	1,060	599	374	7.51
SS#09 - SS 1-20	May-08	44.8	49.3	73.6	3.18	210	82	93	35.0	863	517	296	7.30
	May-13	89.4	49.6	79.0	5.73	225	157	190	6.2	1,232	730	421	7.48
	Jun-14	87.4	48.7	87.1	4.90	209	151	197	9.9	1,280	756	438	7.45
	Oct-14	89.5	46.8	87.4	5.08	107*	150	190	7.0	1,240	758	428	7.56
	Apr-15	86.5	50.6	86.8	4.54	228	160	185	9.6	1,230	724	401	7.46
	Apr-19	41.6	41.8	61.6	1.62	225	70	89	29.5	826	480	289	7.39
	Jun-20	40.7	43.5	58.3	1.95	226	63	88	29.5	829	493	291	7.17
	May-21	41.2	42.1	64.4	1.99	219	62	87	29.6	816	488	273	7.09
	Apr-22	43.5	44.7	64.9	2.46	217	62	91	32.3	829	467	283	7.10
May-23	83.1	56.7	91.6	3.85	215	141	201	4.92	1,240	772	436	7.24	
SS#10 - SS 1-21	May-89	102	38.0	113	5.00	291	156	184	--	1,242	771	--	7.40
	Oct-02	122	40.7	101	5.80	230	160	200	1.8	1,300	780	--	7.50
	May-04	1.52	1.41	1.28	1.66	--	165	220	<0.3	1,363	980	470	7.43
	Oct-04	36.2	33.1	88.0	8.74	306	71	6.5	<0.2	943	548	266	7.70
	Apr-05	129	47.2	105	4.88	250	186	241	<0.3	1,408	--	500	7.41
	May-06	125	49.6	91.3	5.92	228	182	248	<0.3	1,429	--	510	7.57
	Jun-07	118	44.7	92.3	5.14	220	190	246	<0.3	1,437	929	530	7.30
	Apr-09	97.3	35.7	89.8	4.35	218	147	168	<0.3	1,208	747	396	7.40
	Apr-10	102	33.9	88.0	4.51	226	143	163	<0.3	1,195	724	388	7.35
	May-11	97.4	36.8	90.1	5.40	198	148	176	<0.3	1,234	759	410	7.50
	Apr-12	103	38.7	90.3	4.47	214	156	181	<0.3	1,246	763	398	7.33
	May-13	111	41.4	87.6	5.04	233	162	200	<0.22	1,295	753	432	7.44

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SS#10 - SS 1-21 (continued)	Jun-14	103	38.7	94.5	4.48	218	153	190	<0.3	1,280	778	433	7.49
	Apr-15	109	41.8	91.1	4.31	195	136	196	<0.3	1,290	798	489	7.46
	Apr-18	123	46.2	98.8	4.98	222	180	238	<0.308	1,390	854	502	7.43
	Apr-19	112	39.2	88.2	4.46	241	172	202	<0.308	1,290	805	454	7.38
	May-21	105	37.9	90.4	4.97	223	143	186	<0.176	1,220	772	409	7.35
	Apr-22	91	33.3	84.0	4.57	226	117	143	<0.176	1,070	632	356	7.42
	May-23	82.1	30.1	84.9	4.33	220	109	116	<0.177	1,010	603	314	7.41
SS#15 - SS 1-22	Jun-14	95.1	39.5	87.9	4.65	228	146	185	2.0	1,260	563	420	7.49
	Apr-15	98.0	40.6	85.9	4.40	240	151	162	1.4	1,200	732	191*	7.46
	May-16	113.0	42.9	87.9	4.90	226	160	209	1.2	1,310	823	461	7.42
	Apr-18	100	42.7	90.6	5.34	240	150	185	2.2	1,240	744	438	7.47
	Apr-19	105	41.0	87.4	4.75	248	171	197	2.4	1,300	783	460	7.63
	Jun-20	102	40.3	85.2	5.18	234	150	177	2.7	1,240	769	434	7.47
	May-21	104	39.8	94.1	5.38	236	146	171	2.8	1,220	746	408	7.40
	Apr-22	104	40.1	93.0	5.20	243	138	165	3.2	1,200	707	410	7.40
May-23	100.0	39.2	100.0	5.12	239	140	162	3.27	1,200	719	404	7.45	
SS#16 - SS 1-23	Jun-14	75.4	34.5	72.9	4.68	214	118	111	0.9	1,020	575	330	7.52
	May-16	91.2	36.3	69.3	4.59	214	132	142	0.9	1,080	628	379	7.44
	Apr-18	90.3	45.6	83.2	5.65	240	141	167	1.4	1,200	727	436	7.53
	Apr-19	91.8	37.3	77.0	4.49	238	134	146	2.6	1,130	668	395	7.83
	Jun-20	86.0	38.2	72.5	5.03	235	123	135	3.0	1,110	664	381	7.51
	May-21	85.2	40.3	87.7	5.89	253	124	142	3.2	1,120	666	371	7.48
	Apr-22	82.1	35.3	78.3	4.90	246	103	110	3.7	1,010	564	338	7.46
	May-23	82.1	35.8	82.1	4.91	249	112	118	4.08	1,050	607	345	7.46
SS#17 - SS 1-24	May-21	65.9	54.6	78.3	6.44	293	107	127	<0.176	1,120	635	387	7.36
	Apr-22	95.3	52.7	83.5	5.58	270	132	164	<0.176	1,210	707	448	7.38
	May-23	110.0	49.6	91.8	5.26	242	157	199	<0.177	1,310	801	466	7.41
Burlingame-S <sup>3</sup>	Nov-06	64	37	530	7.0	190	220	600	<0.44	--	1,400	--	--
	Apr-07	30	18	97	2.5	170	110	160	1.8	1,100	610*	--	7.20
	Aug-07	49	32	480	4.5	260	270	520	1.5	2,600	1,500	--	7.40
	Feb-08	53	37	590	5.1	230	280	490	1.1	2,200	1,400	--	7.20
	Aug-08	38.3	26	309	3.68	236	327	511	<0.44	2,420	1,540	--	7.16
	Feb-09	53.8	37.6	469	4.94	314	518	601	<0.44	2,840	1,760	--	7.45
	Oct-09	42.4	28.3	309	3.76	277	425	480	<0.44	2,550	1,630	--	7.09
	Mar-10	56	42	540	8.1	330	500	350	<0.88	2,900	1,400	--	7.39
	Aug-10	59	42	480	5.6	150	430	320	<0.88	2,600	1,300	--	7.42
	Mar-11	58	38	490	5.1	320	580	290	<1.76	2,900	1,500	--	7.50
	Aug-11	61	44	420	5.5	320	580	270	<0.88	2,800	1,500	--	7.30
	Mar-12	66	47	460	6.1	300	670	220	<0.88	2,900	1,600	--	7.60

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
Burlingame-S <sup>3</sup> (continued)	Aug-12	35*	20*	130*	2.9*	170*	130*	77*	1.6	570*	510*	--	7.55
	Mar-13	71	50	550	6.4	340	700	230	<0.88	2,800	2,800	--	7.53
	Aug-13	73	55	530	6.6	360	810	170	<1.76	3,400	2,000	--	7.26
	Mar-14	72	52	490	6.4	150*	780	210	<0.88	2,800	1,900	--	7.34
	Aug-14	100	82	520	12	230	1,000	91	<1.76	3,900	2,100	--	7.47
	Mar-15	87	64	560	7.4	360	880	150	<0.88	3,400	2,100	--	7.56
	Aug-15	57	40	380	5	300	600	190	<0.88	2,500	1,500	--	7.33
	Mar-16	82	68	520	7.2	370	940	100	<1.76	3,700	2,200	--	7.33
	Aug-16	99	76	590	8.9	430	1,100	66	<1.76	4,400	2,500	--	7.29
	Mar-17	100	80	680	8.4	420	1,200	60	<4.4	4,400	2,400	--	7.36
	Aug-17	100	84	660	8.5	440	1,200	52	<0.88	4,100	2,300	--	7.29
	Mar-18	110	88	660	8.9	440	1,300	51	<4.4	4,500	2,500	--	7.19
	Aug-18	94	79	560	7.0	440	1,100	21*	<1.76	4,200	2,500	--	7.27
	Mar-19	110	91	690	9.2	420	1,200	43	<1.76	4,300	2,400	--	7.39
	Aug-19	110	81	610	8.2	440	1,200	47	<4.4	4,100	2,300	--	7.53
	May-20	100	79	600	8.7	430	1,200	44	<4.4	4,300	2,400	--	7.60
	Aug-20	100	85	640	9.0	430	1,200	43	<4.4	4,300	2,300	--	7.41
	Apr-21	110	88	700	9.5	430	1,200	35	<4.4	4,300	2,400	--	7.24
	Aug-21	110	96	730	8.3	430	1,300	35	<1.76	4,100	2,400	--	7.30
	Mar-22	110	97	710	8.6	440	1,300	31	<4.4	4,400	2,400	--	7.33
	Aug-22	97	84	670	7.8	420	1,100	35	<4.4	4,000	2,300	--	7.48
	Mar-23	100	92	720	8.70	440	1,200	37	<4.43	3,900	2,400	--	7.37
	Aug-23	100	92	650	8.00	410	1,100	33	<4.43	4,100	4,200	--	7.23
Burlingame-M <sup>3</sup>	Nov-06	37	24	77	4.5	220	140	220	<0.44	--	1,200	--	--
	Apr-07	34	23	84	3.3	200	110	68	<0.44	870	480	--	7.20
	Aug-07	27	16	96	3.1	200	74	47	<0.44	760	420	--	7.40
	Feb-08	28	16	76	3.0	170	67	46	<0.44	660	400	--	7.20
	Aug-08	29.6	17.0	65	2.59	163	67	41	<0.44	614	363	--	6.96
	Feb-09	33.5	19.1	62	2.59	172	79	38.5	<0.44	611	350	--	7.03
	Oct-09	32.3	18.9	58	2.53	160	74	36.3	<0.44	570	337	--	7.22
	Mar-10	28	18	58	3.4	160	67	31	<0.44	590	310	--	7.33
	Aug-10	33	19	51	2.5	180	63	29	<0.88	570	320	--	7.39
	Mar-11	28	16	42	2.0	180	66	27	<0.88	550	310	--	7.37
	Aug-11	28	19	45	2.1	330	66	25	<0.88	540	310	--	7.12
	Mar-12	31	21	54	2.4	150	68	--	<0.88	540	310	--	7.34
	Aug-12	31	20	53	2.4	150	71	25	<0.88	350	310	--	7.53
	Mar-13	33	20	55	2.4	150	79	24	<0.88	510	340	--	7.62
	Aug-13	30	17	47	2.2	140	73	25	<0.88	560	370	--	7.20
	Mar-14	31	20	70	2.4	64*	72	24	<0.88	480	330	--	7.23

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
Burlingame-M <sup>3</sup> (continued)	Aug-14	33	20	56	2.4	140	67	24	<0.88	570	330	--	7.29
	Mar-15	33	21	58	2.4	140	92	23	<0.88	580	400	--	7.51
	Aug-15	20	11	32	1.8	110	49	18	1.5	390	230	--	7.19
	Mar-16	35	23	61	2.3	160	120*	22	<0.88	710	400	--	7.24
	Aug-16	38	24	68	2.6	140	130*	20	<0.88	740	428	--	7.18
	Mar-17	30	19	58	2.4	140	90	20	<0.88	600	320	--	7.24
	Aug-17	30	20	52	2.5	160	78	23	<0.88	530	330	--	7.31
	Mar-18	34	21	57	2.5	140	100	20	<0.88	610	330	--	7.06
	Aug-18	40	27	77	2.3	160	130	6.4*	<1.76	780	480	--	7.28
	Mar-19	20	8.6	30	2.7	66	48	7.5	<0.88	310	90	--	6.97
	Aug-19	17	5.7	19	2.6	54	32	5.9	<0.88	230	86	--	6.96
	May-20	24	12.0	41	2.8	84	70	9.0	<0.88	410	220	--	7.10
	Aug-20	19	7.3	24	2.5	59	45	7.1	<0.88	280	160	--	6.96
	Apr-21	29	16.0	52	2.8	95	89	9.2	<0.88	510	330	--	7.01
	Aug-21	30	17.0	54	2.8	98	94	10.0	<0.88	490	310	--	7.02
	Mar-22	18	6.0	23	2.9	54	35	6.0	<0.88	250	130	--	6.88
	Aug-22	41	26	81	2.9	140	150	14.0	<0.88	770	410	--	7.38
	Mar-23	34	21	69	2.4	140	30	6.4	2.30	570	340	--	7.19
	Aug-23	16	5	19	2.1	49	34	6.0	2.22	240	120	--	6.75
Burlingame-D <sup>3</sup>	Nov-06	61	42	230	12	190	140	140	<0.44	--	<b>820</b>	--	--
	Apr-07	24	17	120	5	220	94	69	<0.44	860	<b>520</b>	--	7.20
	Aug-07	26	17	83	4	230	78	36	<0.44	680	400	--	7.30
	Feb-08	32	18	61	3	200	45	26	<0.44	580	350	--	7.20
	Aug-08	30.3	17.2	53.1	2.53	195	42	22.7	<0.44	525	332	--	6.96
	Feb-09	37.0	19.0	54.6	2.57	193	47	25	<0.44	531	303	--	6.99
	Oct-09	34.5	16.7	49.0	2.22	189	44	23.3	<0.44	519	310	--	7.16
	Mar-10	38	23	51	6.9	180	46	24	<0.88	530	280	--	7.57
	Aug-10	38	18	47	2.3	260	41	24	3.5	540	300	--	7.64
	Mar-11	32	14	47	1.7	180	44	24	<0.88	550	310	--	7.37
	Aug-11	34	16	44	1.8	180	43	24	<0.88	540	310	--	7.12
	Mar-12	37	18	51	--	180	41	24	<0.88	510	290	--	7.61
	Aug-12	37	18	49	2.0	180	40	23	<0.88	330	300	--	7.74
	Mar-13	35	15	51	1.9	180	47	25	<0.88	470	310	--	7.68
	Aug-13	35	16	49	1.8	180	42	24	<0.88	510	320	--	7.50
	Mar-14	36	16	67	1.9	76*	43	23	<0.88	440	310	--	7.52
	Aug-14	35	16	47	1.8	170	38	22	<0.88	530	300	--	7.64
	Mar-15	36	16	52	1.8	170	43	23	<0.88	470	320	--	7.75
	Aug-15	32	14	43	1.6	180	42	24	<0.88	500	280	--	7.49
	Mar-16	34	16	45	1.7	180	45	23	<0.88	500	290	--	7.54

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
Burlingame-D <sup>3</sup> (continued)	Aug-16	33	14	50	1.9	160	32	23	<0.88	500	300	--	7.47
	Mar-17	33	15	49	1.9	160	43	21	<0.88	500	280	--	7.56
	Aug-17	33	15	44	1.8	180	50	22	<0.88	470	300	--	7.58
	Mar-18	36	16	47	1.7	170	48	22	<0.88	500	270	--	7.39
	Aug-18	34	15	48	1.9	160	18*	7.7*	<1.76	490	280	--	7.57
	Mar-19	33	14	43	2.1	140	41	17	<0.88	430	260	--	7.52
	Aug-19	37	16	46	1.9	160	43	20	<0.88	450	270	--	7.68
	May-20	35	15	51	1.8	160	42	20	<0.88	480	16,000*	--	7.64
	Aug-20	38	16	44	1.8	160	43	22	<0.88	490	260	--	7.56
	Apr-21	33	13	42	1.9	140	34	16	<0.88	430	250	--	7.51
	Aug-21	37	16	48	1.8	160	41	21	<0.88	430	300	--	7.57
	Mar-22	40	17	50	1.8	180	43	21	<0.88	530	300	--	7.51
	Aug-22	38	17	49	1.9	160	41	21	<0.88	500	300	--	7.79
	Mar-23	40	18	51	1.9	160	180	29	<0.89	450	290	--	7.65
	Aug-23	36	15	46	2.0	160	46	19	<0.89	560	240	--	7.50
SFO-D <sup>3</sup>	Nov-06	26	19	140	6.6	210	440	88	<0.44	--	1,100	--	--
	Apr-07	40	29	180	9.5	260	270	50	<0.44	1,400	720	--	7.50
	Aug-07	57	38	190	8.9	260	540	120	<0.44	2,700	1,400	--	7.70
	Feb-08	110	84	530*	13	210	260	39	<0.44	1,300	730	--	7.50
	Aug-08	40.3	29.6	121	7.39	195	473	50.8	<0.44	1,970	1,040	--	7.43
	Feb-09	54.9	40.8	196	9.00	297	2,210*	179*	<0.44	5,310*	3,000	--	7.47
	Oct-09	45.5	31.9	131	7.70	230	498	61	<0.44	2,040	1,150	--	7.35
	Mar-10	49	36	150	9.5	220	240	40	<0.88	1,300	580	--	7.37
	Aug-10	72	55	320	11	220	550	60	<0.88	2,300	1,100	--	7.43
	Mar-11	57	42	260	7.8	220	520	59	<1.8	2,200	1,200	--	7.45
	Aug-11	51	40	170	8.2	200	350	45	<22	1,600	960	--	7.26
	Mar-12	67	52	250	9.4	240	440	54	<0.88	1,800	980	--	7.39
	Aug-12	72	58	300	9.6	230	580	61	<0.88	2,200	1,200	--	7.67
	Mar-13	100	86	540	11	240	1,100	96	<0.88	3,600	2,200	--	7.75
	Aug-13	69	54	290	9.9	240	720	80	<0.88	2,300	1,300	--	7.32
	Mar-14	100	87	520	10	220	1,100	93	<0.88	3,200	2,100	--	7.55
	Aug-14	92	68	640	8.0	420*	1,100	110	<1.76	4,300	2,400	--	7.42
	Mar-15	85	70	390	12.0	220	760	66	<0.88	2,500	1,600	--	7.76
	Aug-15	110	96	560	11.0	240	1,200	130	<1.76	4,100	2,300	--	7.53
	Mar-16	60	47	230	9	570	470	49	<0.88	2,000	1,200	--	7.35
	Aug-16	88	76	440	10	230	880	83	<1.76	3,300	1,800	--	7.73
	Mar-17	120	110	830	13	260	1,500	140	<0.88	5,500	3,200	--	7.53
	Aug-17	80	66	360	12	230	710	57	<0.88	2,600	1,500	--	7.59
	Mar-18	130	120	660	13	260	1,500	140	<4.4	5,100	2,800	--	7.51

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SFO-D <sup>3</sup> (continued)	Aug-18	100	90	490	10	240	1,200	46	<1.76	4,200	2,400	--	7.45
	Mar-19	120	110	630	12	250	1,300	110	<1.76	4,600	2,500	--	7.47
	Aug-19	120	100	570	12	240	1,200	110	<4.4	4,100	2,300	--	7.63
	May-20	110	98	550	13	250	1,300	110	<4.4	4,500	2,500	--	7.64
	Aug-20	140	120	630	13	260	1,400	130	<4.4	4,800	2,700	--	7.59
	Apr-21	110	97	580	12	240	1,100	97	<4.4	4,100	2,300	--	7.37
	Aug-21	89	75	410	11	230	770	75	<1.76	2,700	1,700	--	7.34
	Mar-22	140	130	770	14	260	1,600	140	<4.4	5,200	2,900	--	7.53
	Aug-22	61	44	210	10	230	360	37	<0.88	1,600	970	--	7.47
	Mar-23	140	140	810	13	280	1,200	110	<88.6	5,000	3,000	--	7.54
	Aug-23	130	110	650	12	240	1,300	120	<17.7	4,500	2,400	--	7.45
SFO-S <sup>3</sup>	Nov-06	330	390	3,600	64	620	8,400	1,100	33.4	--	16,000	--	7.00
	Apr-07	320	370	4,200	57	73	9,300	1,200	<2.2	28,000	17,000	--	7.00
	Aug-07	350	470	5,100	62	740	9,200	740	<2.2	38,000	16,000	--	8.20
	Feb-08	370	490	5,300	64	660	9,600	670	<2.2	34,000	16,000	--	7.00
	Aug-08	439	439	4,770	59	620	10,500	716	<4.4	29,400	21,200	--	7.15
	Feb-09	497	630	4,980	77.3	673	12,400	830	<2.2	31,400	17,800	--	7.51
	Oct-09	487	618	4,850	62.8	744	9,990	663	<0.88	27,500	15,400	--	7.11
	Mar-10	530	630	4,900	93	680	9,800	640	<4.4	2,900*	1,200*	--	7.08
	Aug-10	490	640	4,500	63	680	10,000	660	<0.88	27,000	11,000	--	7.16
	Mar-11	500	600	5,000	76	690	14,000	680	<4.4	27,000	15,000	--	7.17
	Aug-11	390	510	4,300	61	680	9,600	700	<0.88	26,000	15,000	--	7.02
	Mar-12	530	400	5,200	67	680	9,900	670	<4.4	26,000	15,000	--	7.16
	Aug-12	550	700	5,000	79	680	9,800	650	<0.88	27,000	18,000	--	7.36
	Mar-13	460	580	4,800	75	680	10,000	720	<8.8	25,000	17,000	--	7.32
	Aug-13	450	550	5,100	69	600	9,700	740	<4.4	26,000	17,000	--	6.98
	Mar-14	520	650	5,500	72	640	9,300	680	<1.76	18,000	17,000	--	7.15
	Aug-14	450	550	5,400	72	660	9,900	730	<1.76	27,000	18,000	--	7.23
	Mar-15	550	680	5,200	77	660	9,300	680	<0.88	27,000	17,000	--	7.82
	Aug-15	450	560	4,500	64	660	9,700	710	<4.4	26,000	19,000	--	7.09
	Mar-16	490	590	4,500	76	660	10,000	730	<17.6	28,000	16,000	--	7.16
	Aug-16	500	640	4,600	79	650	9,400	630	<8.8	38,000	4,200*	--	7.15
	Mar-17	460	580	5,300	77	650	10,000	700	<4.4	28,000	15,000	--	7.10
	Aug-17	480	590	2,000*	83	620	10,000	660	<8.8	27,000	14,000	--	7.40
	Mar-18	490	590	4,600	97	670	9,600	720	<17.6	27,000	19,000	--	7.14
	Aug-18	530	700	4,600	100	660	10,000	690	<1.76	38,000	18,000	--	7.14
	Mar-19	510	610	4,200	91	660	10,000	700	<88.0	850*	18,000	--	7.17
	Aug-19	540	640	4,800	81	660	10,000	730	<17.6	26,000	18,000	--	7.21
	May-20	530	630	4,400	76	600	11,000	750	<44.4	28,000	280*	--	7.25

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SFO-S <sup>3</sup> (continued)	Aug-20	520	620	4,700	98	650	11,000	730	<176	28,000	20,000	--	7.23
	Apr-21	540	640	5,100	76	610	9,800	720	<17.6	28,000	23,000	--	7.10
	Aug-21	560	680	5,500	92	640	10,000	780	<13.2	26,000	19,000	--	7.19
	Mar-22	580	720	5,400	74	660	11,000	750	<1.76	28,000	18,000	--	7.22
	Aug-22	530	620	5,300	77	540	11,000	780	<8.8	28,000	20,000	--	7.29
	Mar-23	560	640	5300	71	660	11,000	760	<4.43	26,000	15,000	--	7.27
	Aug-23	550	650	5200	66	700	10,000	730	<4.43	27,000	17,000	--	7.11
SB#05 - SB 16 FOREST LN	Apr-09	50.3	34.8	51.0	2.92	180	110	77.0	0.3	856	484	302	7.38
	May-10	60.3	45.8	58.6	2.60	186	105	80.0	0.3	866	519	290	7.27
	May-11	38.5	27.5	39.7	3.54	178	114	83.8	0.4	876	536	290	7.40
	May-13	59.9	42.2	57.4	3.57	191	115	82.1	<0.3	899	477	322	7.34
	Apr-14	59.5	39.6	57.6	3.12	186	112	88.4	0.3	964	478	308	7.34
	Oct-14	57.8	40.1	54.1	3.07	189	114	86.9	0.3	888	513	318	7.34
	Apr-15	59.9	41.5	56.7	2.98	183	111	85.3	0.4	903	294*	332	7.39
	Apr-16	52.6	38.6	53.3	2.92	185	113	88.4	0.4	904	513	325	7.39
	Apr-18	60.2	42.1	58.9	3.09	187	115	92.2	<0.308	886	493	329	7.33
	Apr-19	58.1	38.8	56.2	2.72	185	114	61.4*	<0.308	888	503	312	7.39
	Jul-20	62.4	41.3	57.6	3.33	187	114	92.8	<0.308	891	510	321	7.31
	May-21	60.8	41.6	56.8	3.26	187	112	90.4	<0.176	911	494	62	7.30
	Apr-22	62.4	42.1	58.8	3.74	189	115	92.3	0.28	896	504	324	7.31
	Apr-23	62.2	41.0	62.4	3.25	382	122	91.6	0.40	926	540	317	7.27
SB#06 - SB 17 CORPORATION YARD	Apr-00	34.0	21.0	46.0	4.00	152	66	29.0	3.5	510	290	172	7.60
	Apr-01	--	--	--	--	160	59	27.0	3.9	480	300	170	7.77
	Oct-01	34.1	21.0	48.8	3.35	160	58	27.3	3.8	530	280	170	7.67
	Oct-02	33.4	22.1	48.5	3.30	160	61	28.0	4.0	540	270	--	7.60
	May-04	0.62*	0.36*	0.76*	2.89	--	58	23.0	1.4	518	340	136	7.57
	Nov-04	33.1	21.8	48.4	2.25	140	57	30.8	3.5	514	304	158	7.50
	May-05	32.8	20.4	45.5	3.37	150	56	25.0	5.4	521	319	158	7.58
	May-06	31.9	19.7	40.1	3.42	152	55	26.0	5.0	523	--	162	7.60
	Jun-07	30.3	19.1	43.1	3.47	150	55	25.0	5.5	525	295	160	7.50
	Apr-08	31.5	20.2	43.5	3.25	152	57	23.7	5.5	520	300	160	7.57
	May-10	29.6	19.9	43.3	2.55	140	55	24.0	5.6	524	292	158	7.39
	May-11	29.5	18.9	44.1	3.69	144	56	24.2	5.9	526	305	166	7.54
	Apr-12	29.2	19.2	44.1	3.22	148	58	23.4	6.1	518	281	154	7.48
	May-13	29.4	19.5	42.8	3.52	150	55	22.2	5.6	527	269	159	7.55
	Apr-14	32.1	18.9	45.0	3.45	145	53	23.1	5.9	571	278	151	7.64
	Oct-14	29.1	20.8	37.9	2.53	143	58	23.5	5.7	520	293	158	7.59
	Apr-15	32.3	19.3	44.7	3.16	152	58	23.4	6.5	741*	506*	159	7.84
	May-16	27.6	19.0	37.1	2.22	127	55	24.2	3.8	499	282	146	7.17

**Table 10  
General Basin Groundwater Quality**

Well	Sample Date	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Potassium (mg/L)	Total Alkalinity (mg/L)	Chloride (mg/L)	Sulfate (mg/L)	Nitrate (as NO <sub>3</sub> ) (mg/L) <sup>b</sup>	Specific Conductance (µmhos/cm)	Total Dissolved Solids (mg/L)	Hardness (as CaCO <sub>3</sub> ) (mg/L)	pH
	Primary MCL <sup>1</sup>	NE	NE	NE	NE	NE	NE	NE	45	NE	NE	NE	NE
	Secondary MCL <sup>1,2</sup>	NE	NE	NE	NE	NE	250/500/600	250/500/600	NE	900/1,600/2,200	500/1,000/1,500	NE	NE
SB#06 - SB 17 CORPORATION YARD (continued)	Apr-17	32.7	17.8	38.3	3.33	149	51	21.0	8.6	518	295	126	7.50
	Apr-18	31.6	19.3	50.0	3.42	152	54	22.0	8.2	516	281	158	7.54
	Apr-19	31.2	18.1	48.8	3.24	150	55	21.3	7.4	527	292	151	7.69
	Aug-20	30.2	19.6	42.3	2.96	145	54	22.6	7.7	515	264	154	7.45
	May-21	31.2	18.5	43.9	3.54	145	51	24.6	8.2	516	276	145	7.48
	Apr-22	32.1	19.3	44.7	3.94	150	54	22.9	7.2	521	288	158	7.51
	Apr-23	32.2	18.8	47.5	3.70	151	57	24.3	7.27	538	294	155	7.49
SB#07 - SB 18 CITY PARK	May-13	29.7	23.8	42.9	3.62	138	71	24.4	7.0	560	290	173	7.46
	Apr-14	31.2	22.8	43.2	3.24	133	69	27.9	7.2	613	288	170	7.45
	Oct-14	31.1	23.0	39.3	3.17	138	71	28.0	7.5	564	313	175	7.42
	Apr-15	32.7	24.7	43.4	3.12	137	74	28.6	7.5	580	304	181	7.45
	Apr-16	30.6	22.8	40.7	3.19	136	70	31.4	7.5	583	315	175	7.47
	Apr-17	32.6	23.3	40.3	3.50	144	56	29.8	5.8	547	294	170	7.41
	Apr-18	29.8	23.3	48.8	3.43	143	59	29.7	6.2	537	297	170	7.43
	May-19	30.4	20.5	47.0	2.74	140	62	28.3	7.4	549	295	161	7.65
	May-20	29.6	21.0	42.2	3.26	143	58	30.7	7.4	523	289	164	7.35
	May-21	29.5	20.2	40.1	3.13	132	54	26.9	7.3	519	274	148	7.29
Apr-22	32.3	22.6	43.1	3.61	137	64	30.4	7.0	545	287	167	7.33	
SB#08 - SB 20 LIONS FIELD PARK	Nov-04	51.0	36.8	81.5	3.52	232	84	70.1	1.6	829	488	260	7.80
	May-05	47.0	36.1	72.8	3.93	220	89	62.0	1.4	786	464	256	7.74
	May-06	41.5	32.7	67.3	3.73	210	86	58.0	1.3	777	--	244	7.66
	Jun-07	43.2	30.3	70.8	3.90	220	95	60.0	1.4	769	432	240	7.55
	Apr-08	40.2	32.2	63.9	4.67	202	84	53.6	1.4	750	432	94*	7.68
	Apr-09	37.2	27.8	60.5	3.69	200	83	51.0	1.4	750	419	226	7.58
	May-10	38.7	32.7	55.8	3.06	200	80	50.6	1.5	743	427	220	7.84
	May-11	41.3	31.9	66.9	3.82	188	83	54.4	1.5	740	438	220	7.69
	Apr-12	38.6	29.9	63.6	3.39	196	87	52.4	1.4	732	405	219	7.62
	May-13	39.0	30.8	59.8	4.13	198	83	46.8	1.4	737	381	227	7.65
	Apr-14	41.1	29.0	62.9	3.74	189	80	49.5	1.4	790	381	212	7.66
	Oct-14	39.1	29.0	57.2	3.52	193	81	49.4	1.5	721	389	222	7.66
	Apr-15	40.4	29.8	61.2	3.40	197	84	48.6	1.5	734	403	224	7.65
	Apr-16	38.8	28.1	58.0	3.36	187	80	49.3	1.5	730	376	215	7.69
	Apr-17	50.0	27.4	43.5	3.06	182	80	52.9	0.8	737	418	247	7.46
	Apr-18	39.9	29.3	63.8	3.58	190	80	47.6	1.3	710	376	222	7.61
	May-19	41.2	28.1	63.1	3.20	194	85	49.3	1.2	728	376	216	7.69
	May-20	40.9	27.2	56.1	3.69	195	82	51.4	1.2	719	408	224	7.65
	May-21	40.6	29.3	62.2	3.94	187	77	48.8	1.3	721	374	210	7.60
Apr-22	41.5	30.0	63.3	4.24	194	82	50.5	1.2	722	390	225	7.68	
Apr-23	40.6	29.3	67.3	3.9	192	84	52.4	1.49	743	398	217	7.60	



## Table 10 General Basin Groundwater Quality

### Notes

<sup>a</sup> = Duplicate result used as the primary sample was inadvertently not analyzed for the indicated parameter.

<sup>b</sup> = Beginning in the Spring of 2016, the lab began reporting all Nitrate results as Nitrate as Nitrogen. All data presented herein are presented as Nitrate as NO<sub>3</sub>. Where Nitrate as NO<sub>3</sub> is a calculated value: [NO<sub>3</sub>] = 4.4 x [Nitrate as N].

█ = Shaded cell indicates data collected in 2023

mg/L = milligrams per liter

µmhos/cm = Micromhos per centimeter

-- = Not analyzed

ND = Non-detectable concentration. Detection limit not known.

\* = Anomalous or questionable result

# = **Font** indicates a result that exceeds the maximum contaminant level (MCL) and/or the secondary maximum contaminant level (SMCL)

NE = Not established

MCL<sup>1</sup> = Maximum Contaminant Level; values for MCLs are provided where they have been established for particular constituents. MCLs are drinking water standards that public water systems must achieve. They are not intended to regulate groundwater from monitoring wells or untreated water from production wells, because after withdrawal groundwater may be disinfected, filtered, blended, exposed to the atmosphere, and/or otherwise treated before being delivered to consumers. However, MCLs are used for comparison in this report to provide context for evaluating the quality of untreated groundwater. Primary MCLs are regulatory benchmarks for protecting human health. Secondary MCLs are benchmarks to protect the aesthetic quality of drinking water and are based on effects such as taste, odor, or appearance.

Secondary MCL<sup>2</sup> = 250/500/600: Recommended/Upper/Short Term

## FIGURES

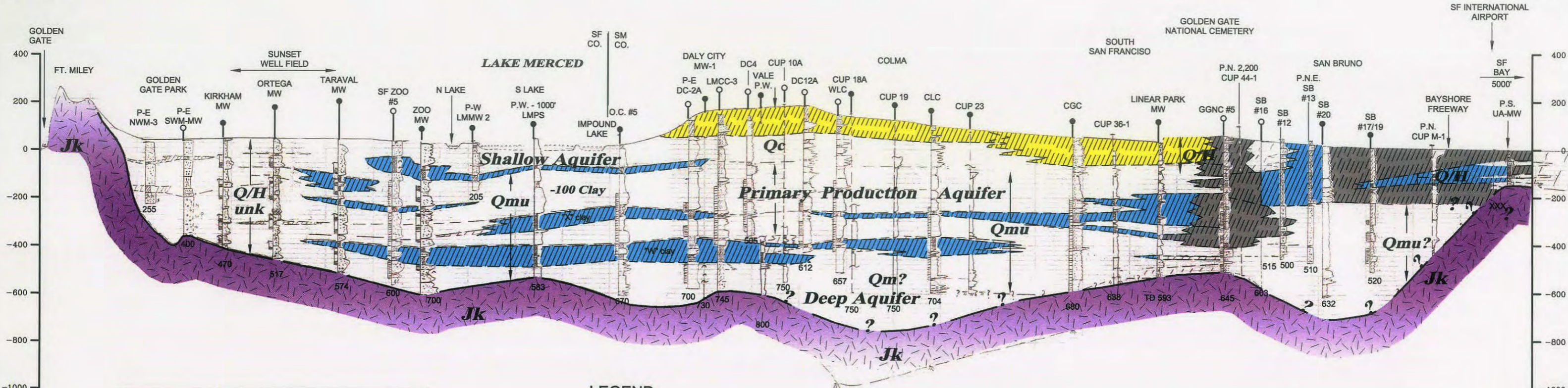
---

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NORTH

SOUTH



Cross Section Location Map

LEGEND

WELL PROFILES	
E-Log	Drill Log
#13	#21
Well Identification	
PW - Production Well	
TH - Test Hole	
MW - Monitoring Well	
TW - Test Well	
Seal	
Clay w/Sand	
Sand/Gravel Screen/Intake	
Clay	
Bedrock at Borehole or From:	
Philips; 1993	
Bonilla; 1964	
647	647
Total Depth	
P.N. - Projected North	
P.W. - Projected West	
P.E. - Projected East	
P.N.E. - Projected Northeast	
● -Elog Reviewed	
○ -Elog Not Reviewed	

CROSS-SECTION LEGEND

	"Blue" Clay
	Blue & Gray Clays with Sand & Clay, and Sand Beds
	Clay & Sand Red & Brown Soil Zone
	Sand, Sand & Gravel or Sandy Gravel
	Bedrock

STRATIGRAPHIC UNITS\*

<b>Q/H</b>	Bay Clays
<b>Q/H unk</b>	Unknown Correlation
<b>Qc</b>	Colma Formation
<b>Qmu</b>	Upper Merced Formation
<b>Qm?</b>	Older Merced Formation - Middle, Lower
<b>Jk</b>	Franciscan Bedrock

\* SURFICIAL UNITS NOT SHOWN

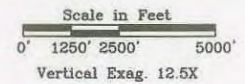
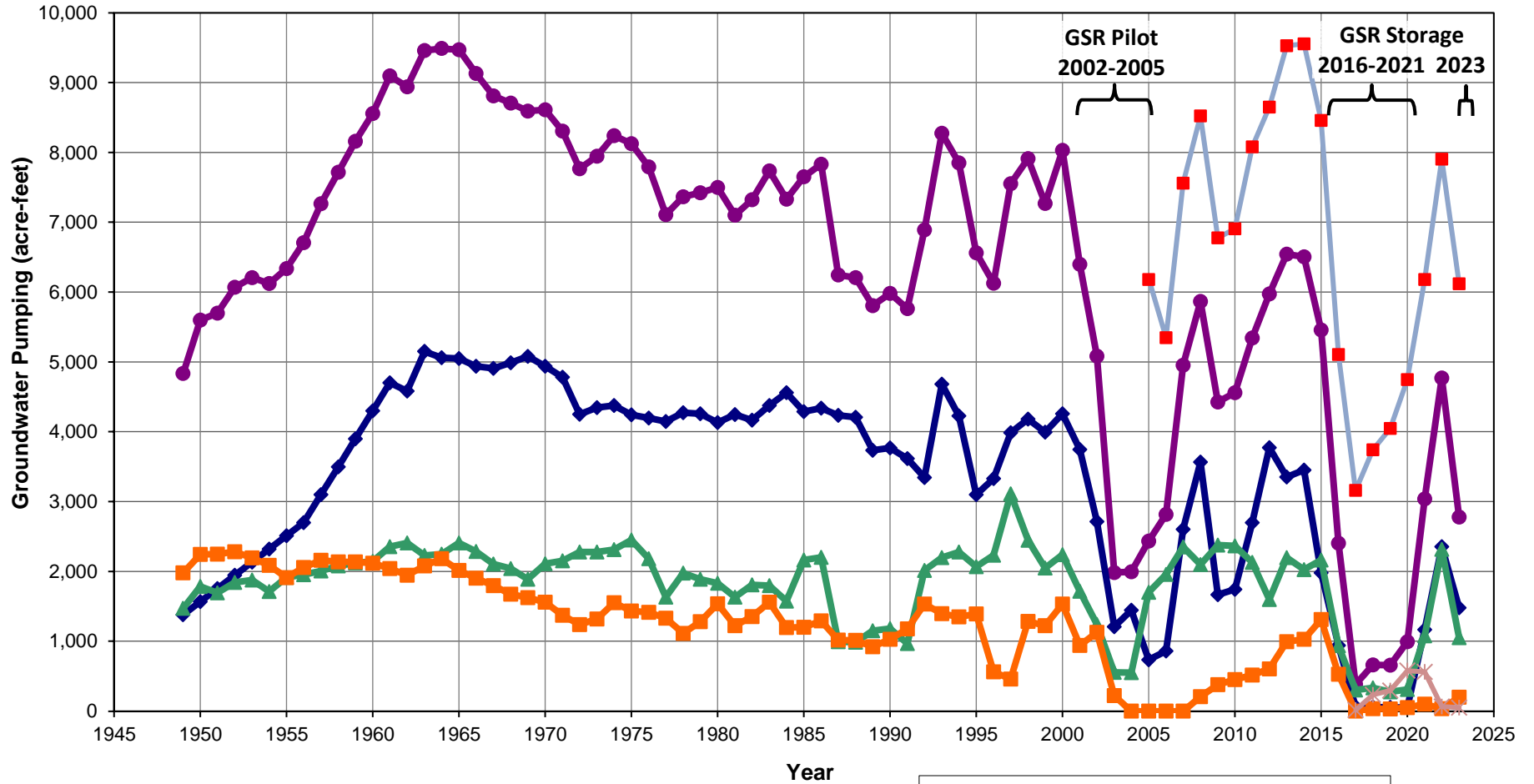
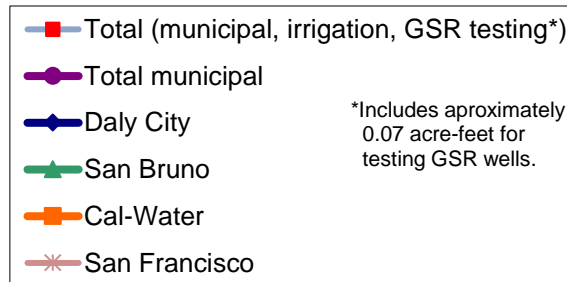


Figure 2

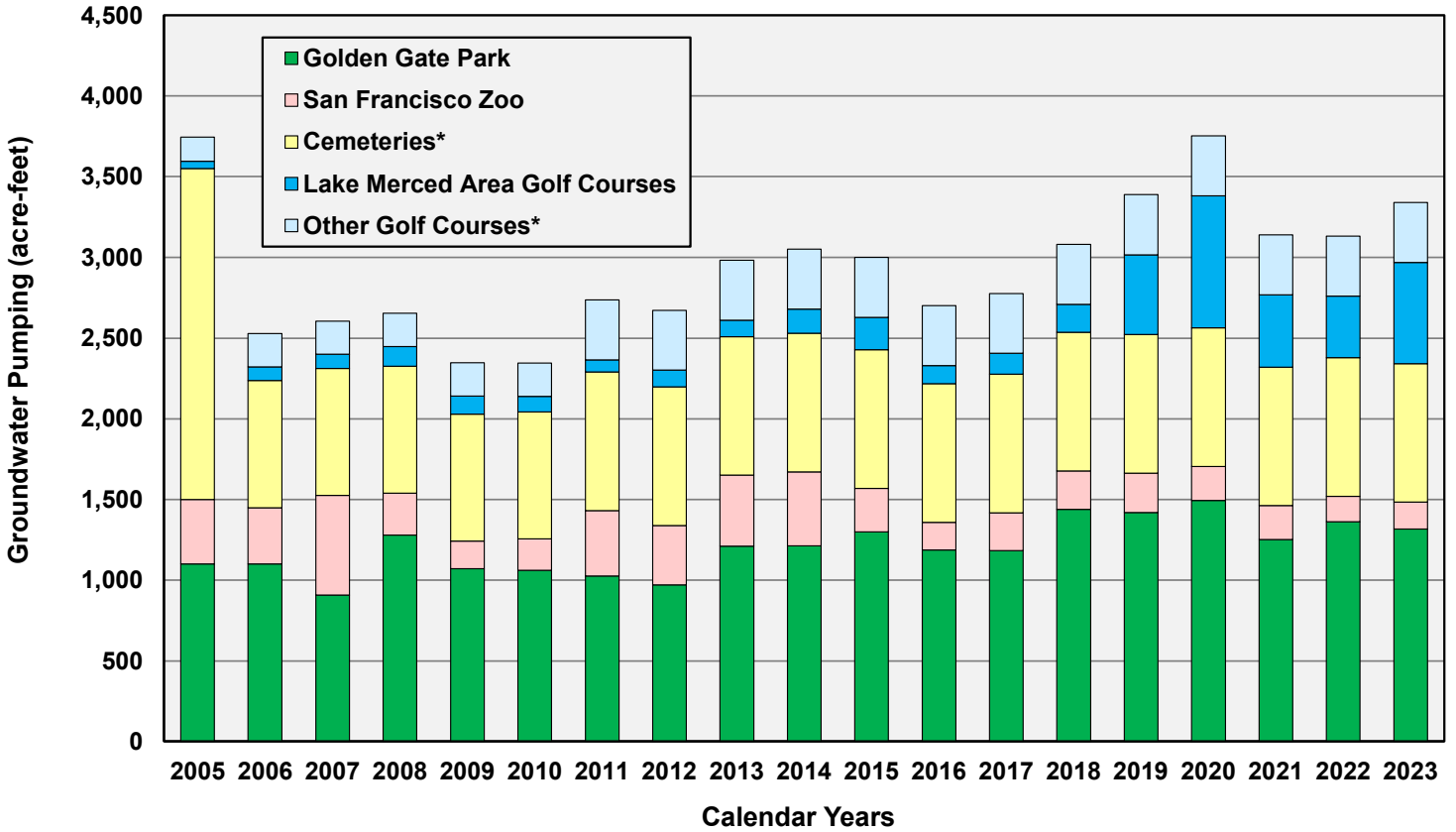
**Figure 3**  
**Westside Basin Groundwater Pumping**  
**1949-2023**



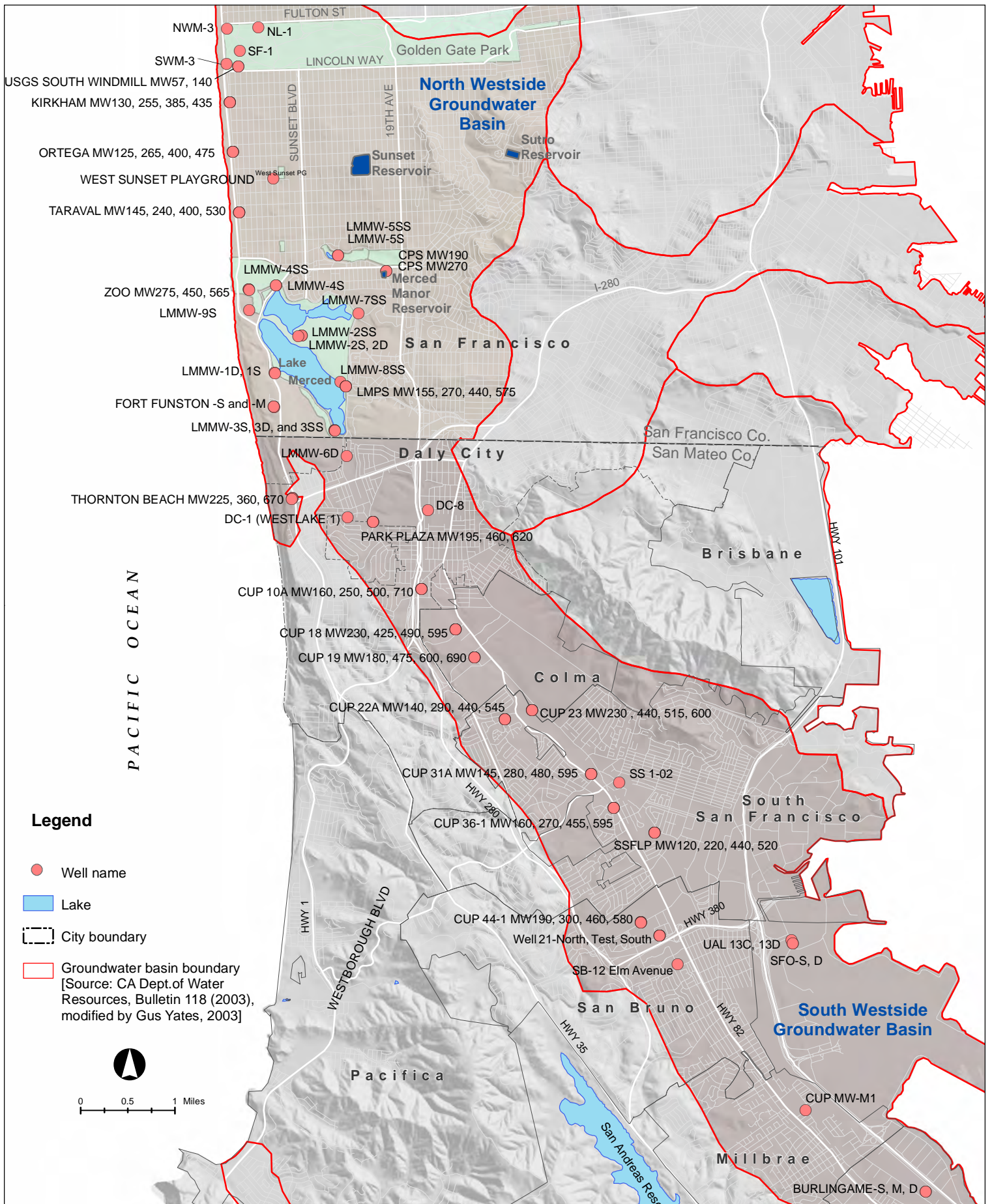
- GSR Pilot Demonstration 2002 - 2005
- GSR Storage Period May 2016 - June 2021
- GSR Hold Period July 2021 - June 2023
- GSR Storage Period July 2023 - Present



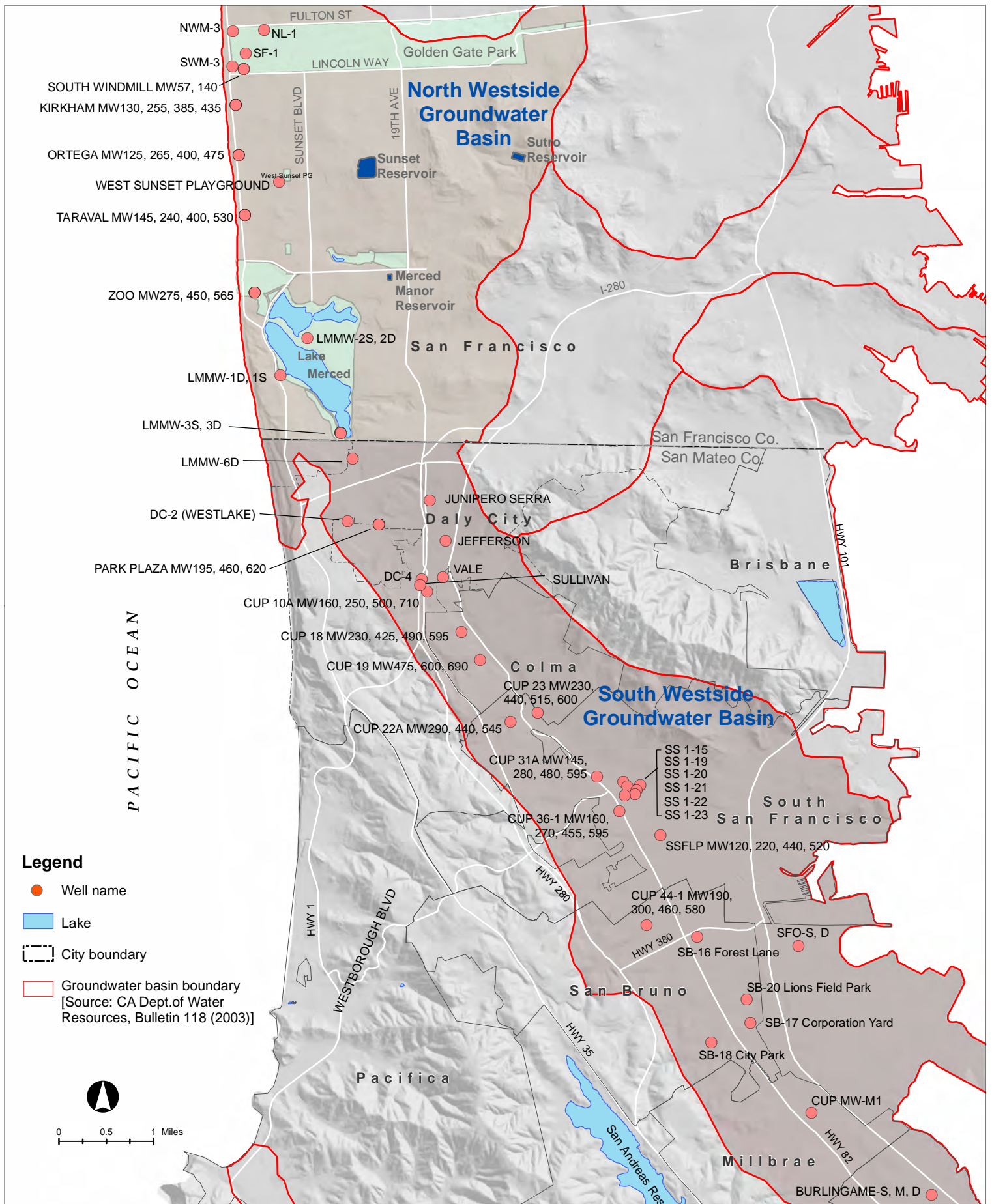
**Figure 4**  
**Westside Basin Groundwater Pumping for Irrigation 2005-2023**



\*Estimates based on: LSCE (2005) for 2005; Carollo (2008) for 2006-2010; and HydroFocus (2017) for 2011-2023. Other golf courses include California Golf Club and Green Hills Country Club.



**Figure 5**  
**Well Location Map**  
**Groundwater Elevation Monitoring Network**



**Legend**

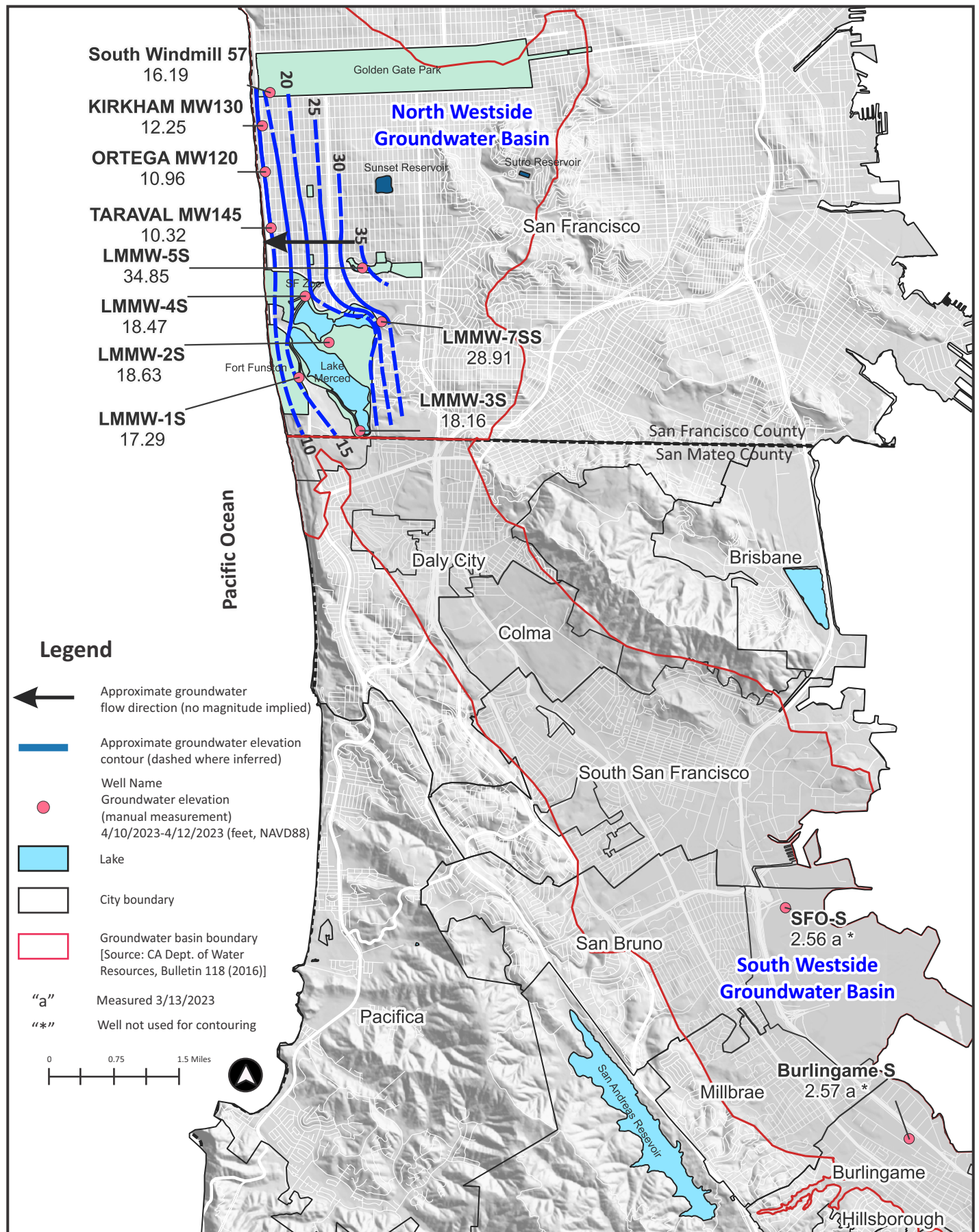
- Well name
- Lake
- City boundary
- Groundwater basin boundary  
[Source: CA Dept. of Water Resources, Bulletin 118 (2003)]



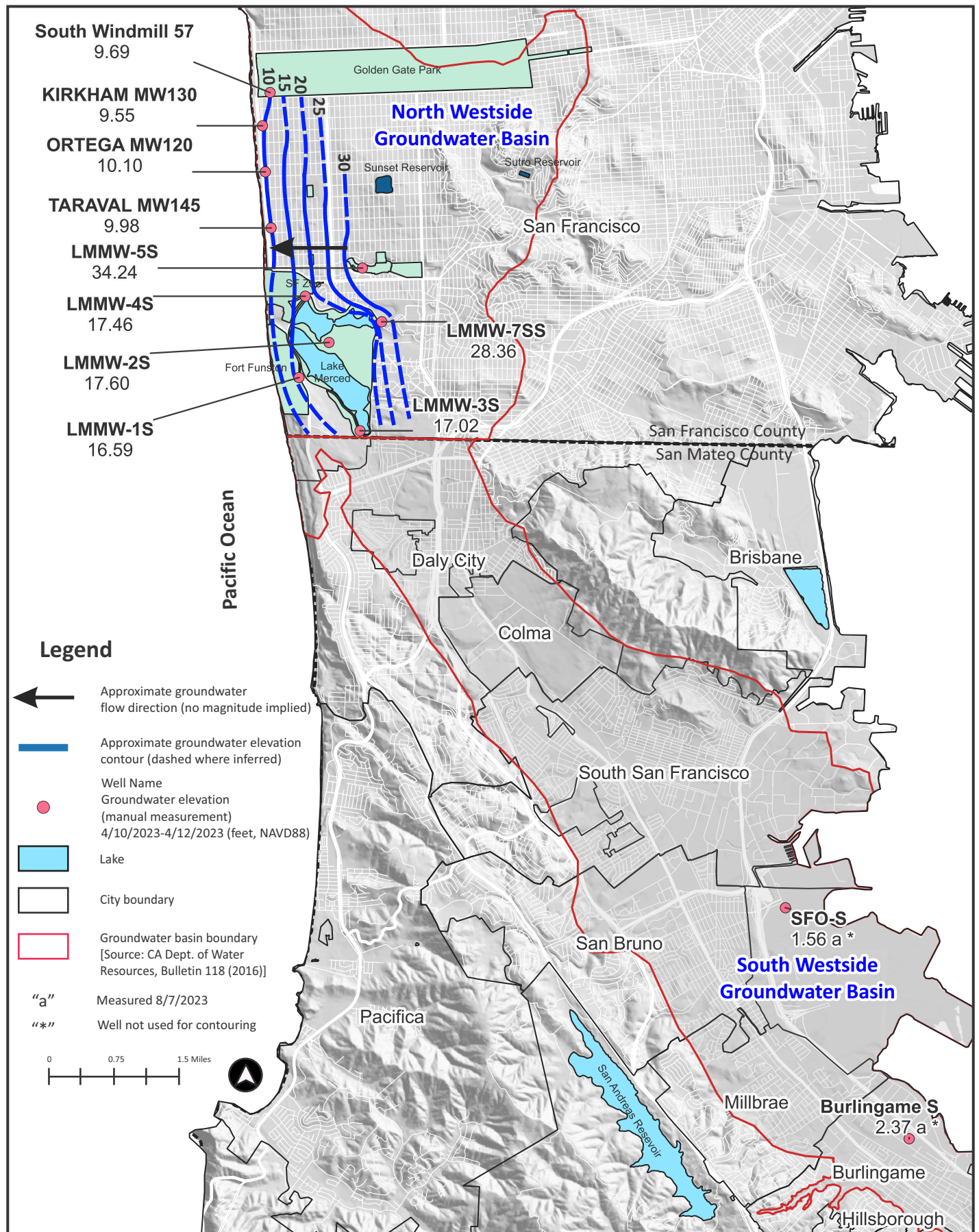
0 0.5 1 Miles

**Figure 6**  
**Well Location Map**  
**Groundwater Quality Monitoring Network**

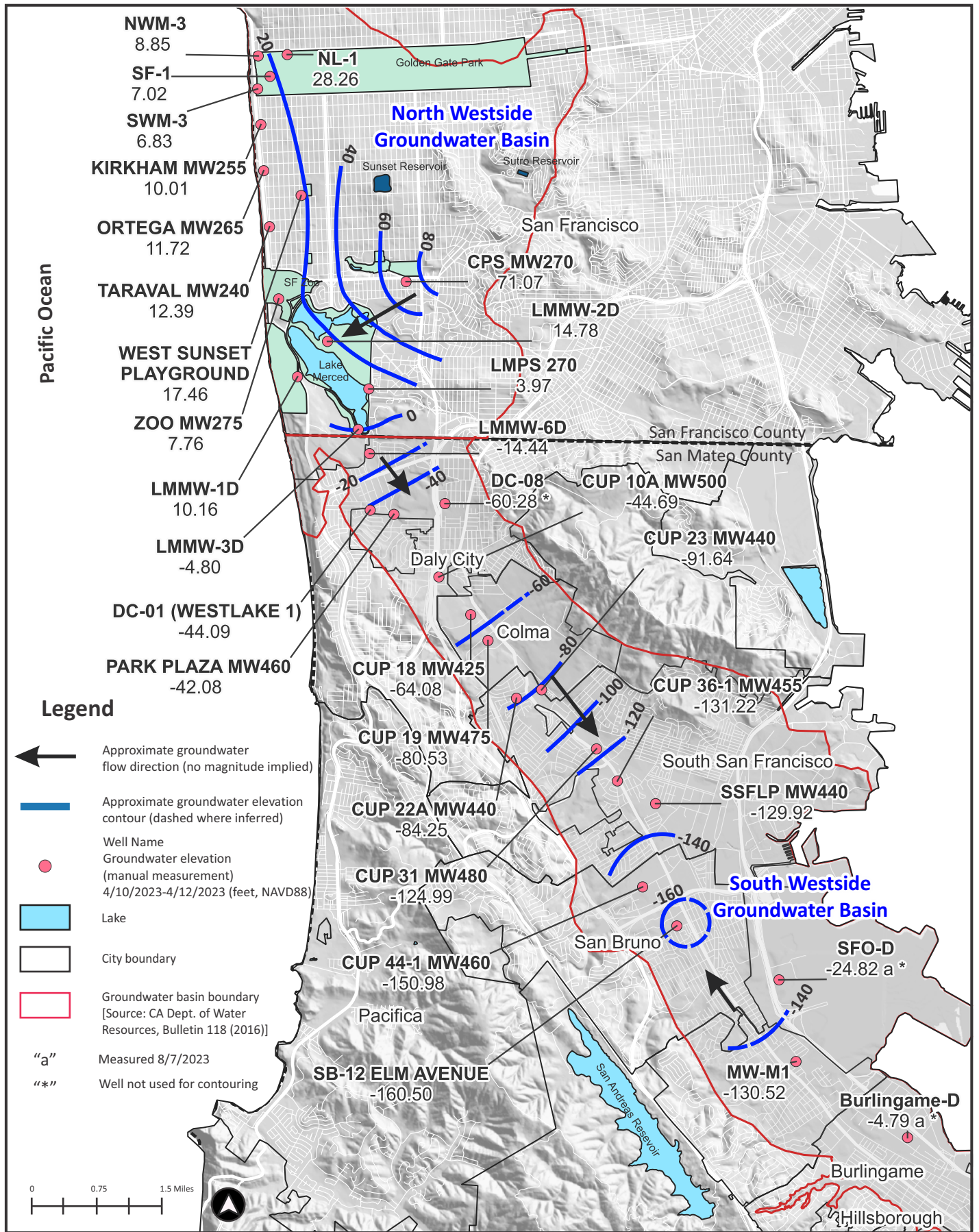




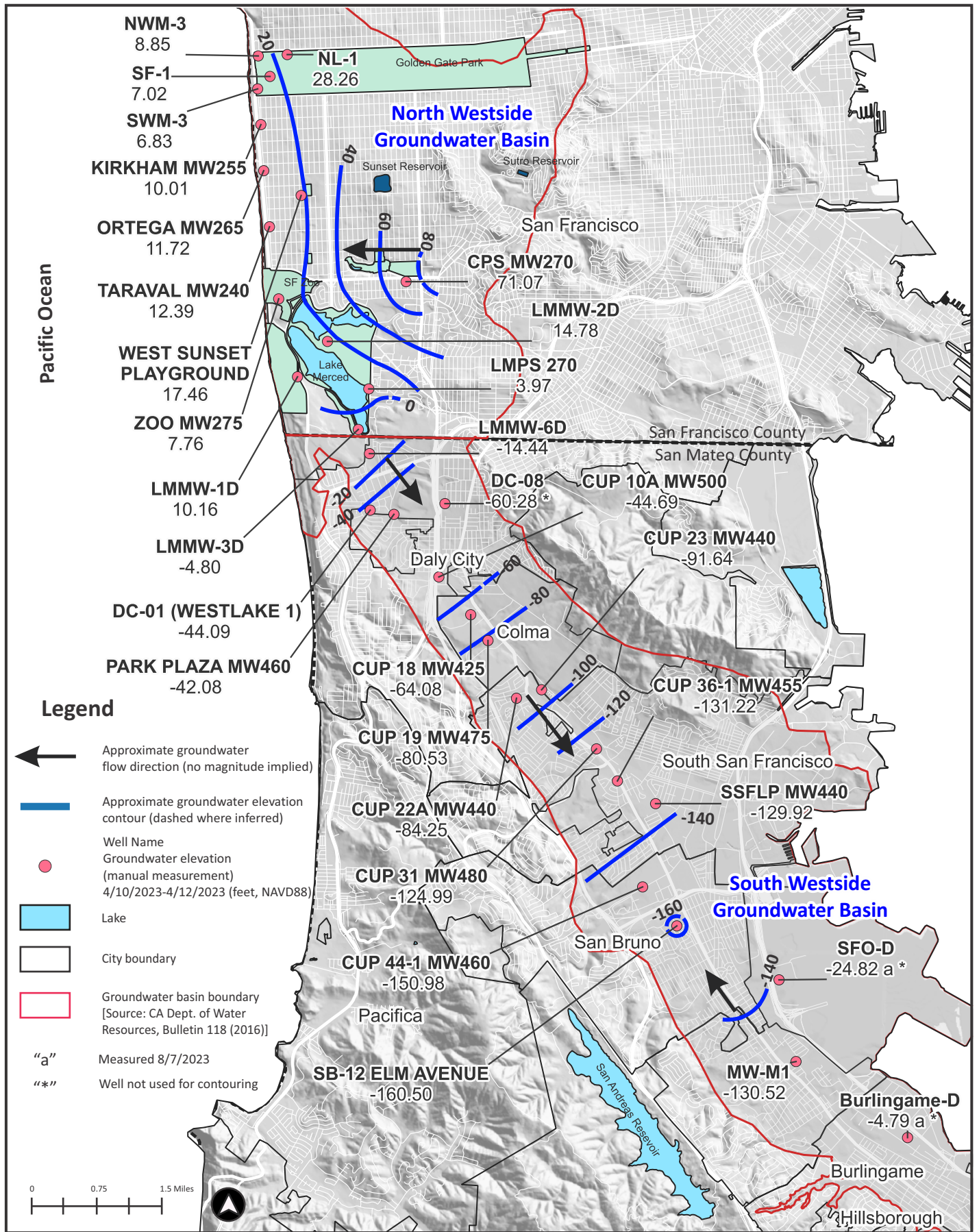
**Figure 7**  
Groundwater Elevation Contours  
Shallow Aquifer, Spring 2023



**Figure 8**  
Groundwater Elevation Contours  
Shallow Aquifer, Fall 2023



**Figure 9**  
**Groundwater Elevation Contours**  
**Primary Production Aquifer, Spring 2023**



**Figure 10**  
**Groundwater Elevation Contours**  
**Primary Production Aquifer, Fall 2023**

Figure 11a Kirkham 130

Groundwater Elevation and Chloride Concentration Hydrograph

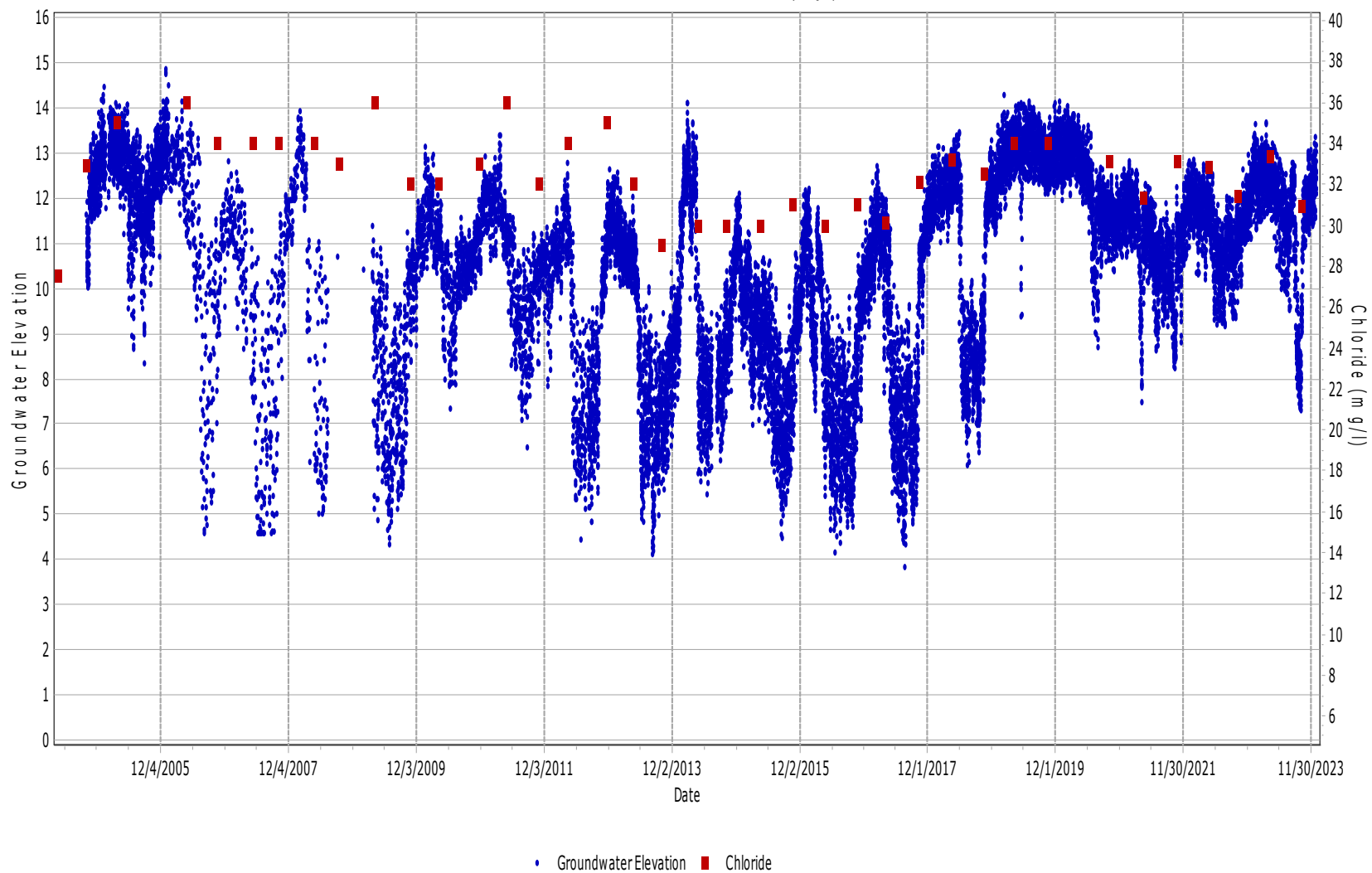


Figure 11b Kirkham 255

Groundwater Elevation and Chloride Concentration Hydrograph

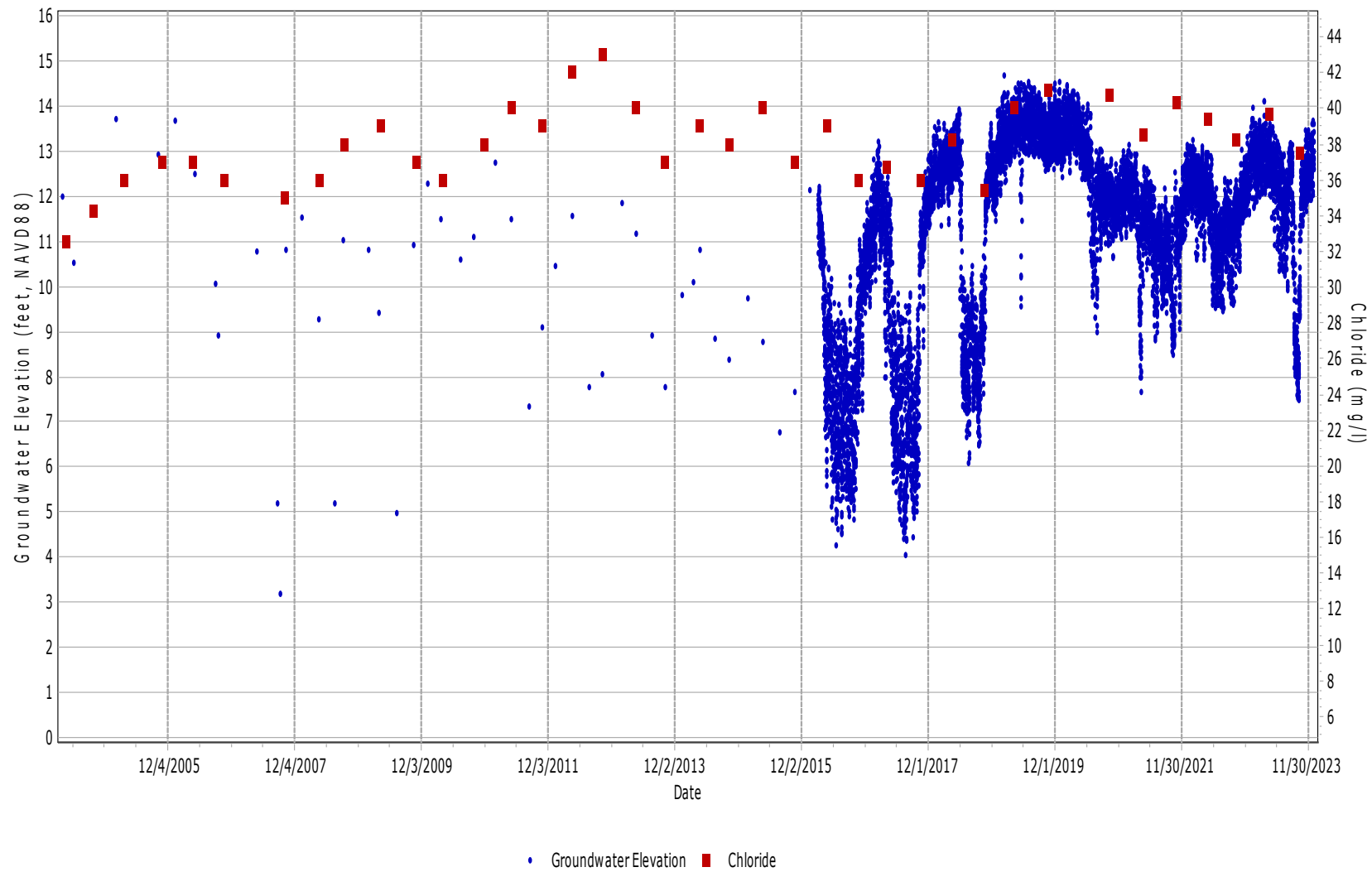


Figure 11c Kirkham 385

Groundwater Elevation and Chloride Concentration Hydrograph

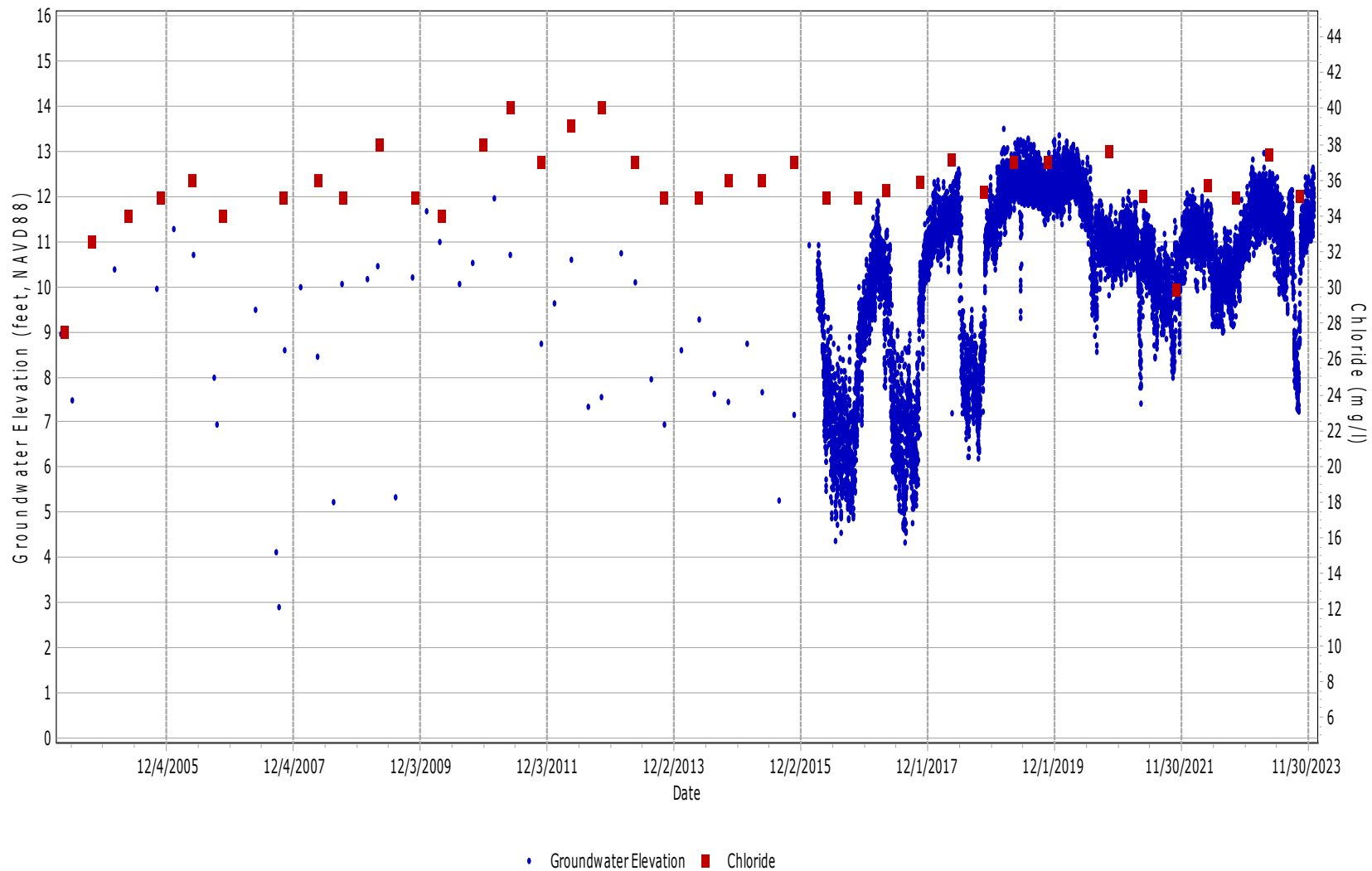


Figure 11d Kirkham 435

Groundwater Elevation and Chloride Concentration Hydrograph

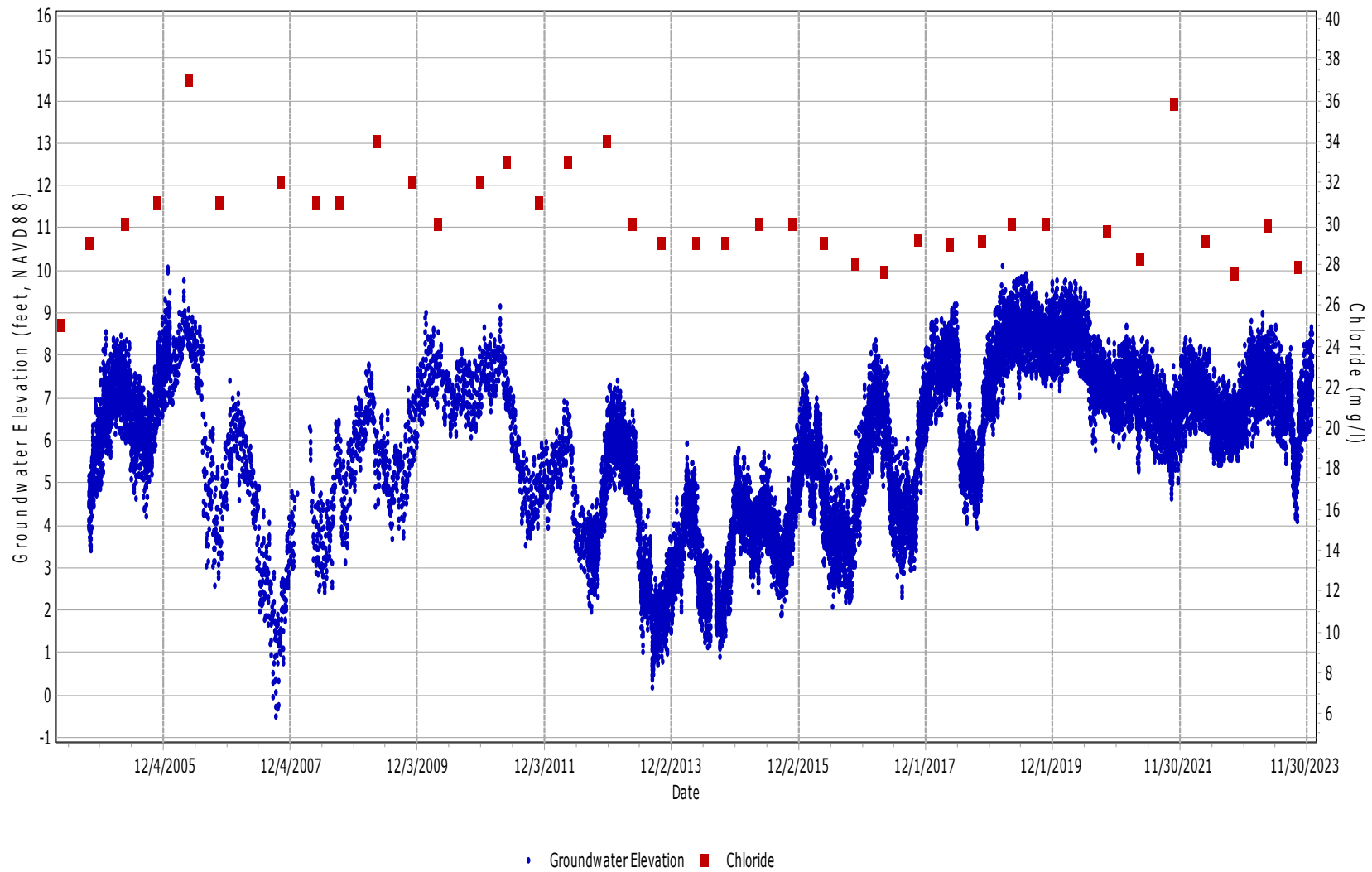




Figure 12a Ortega 125

Groundwater Elevation and Chloride Concentration Hydrograph

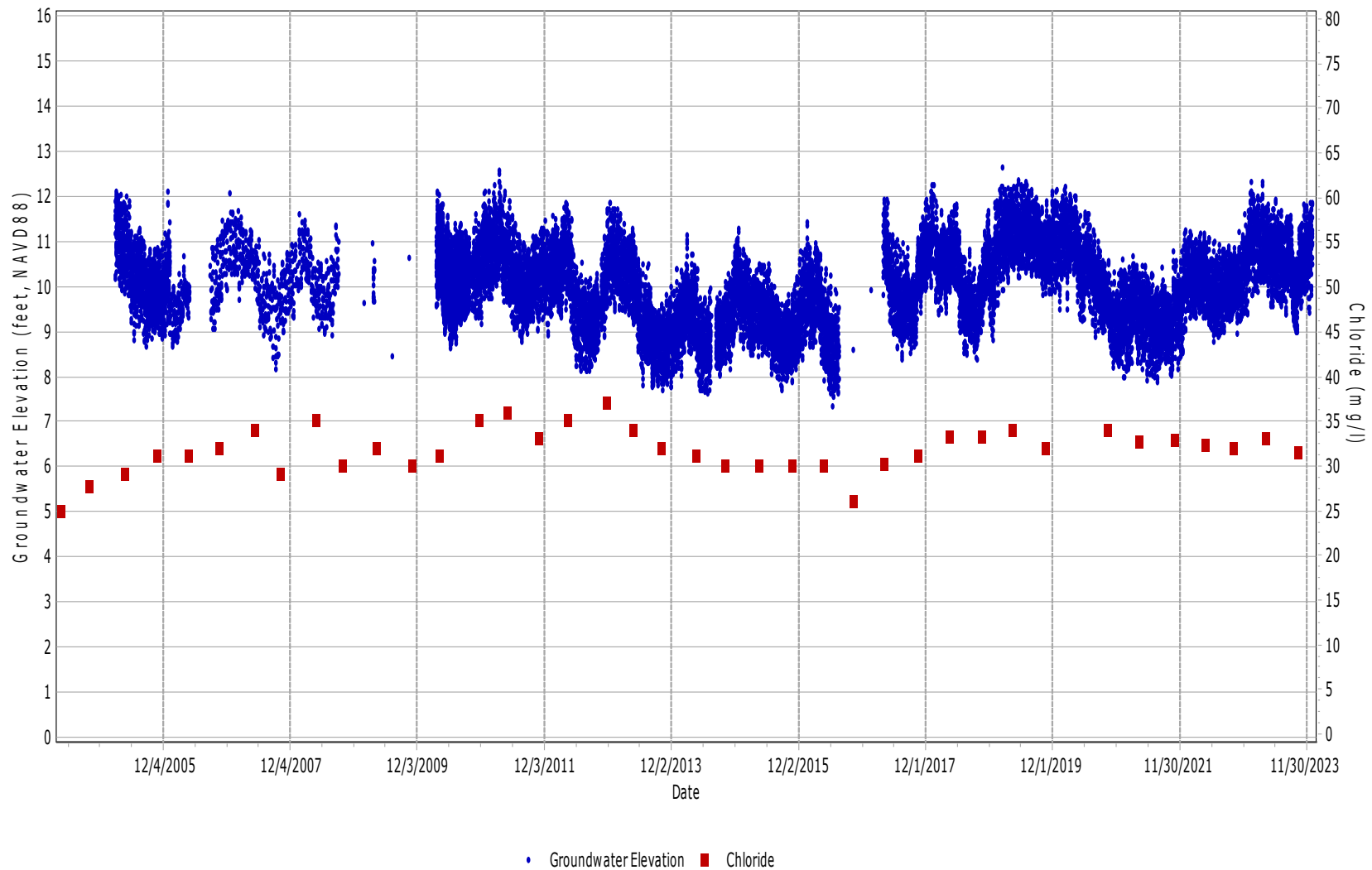


Figure 12b Ortega 265

Groundwater Elevation and Chloride Concentration Hydrograph

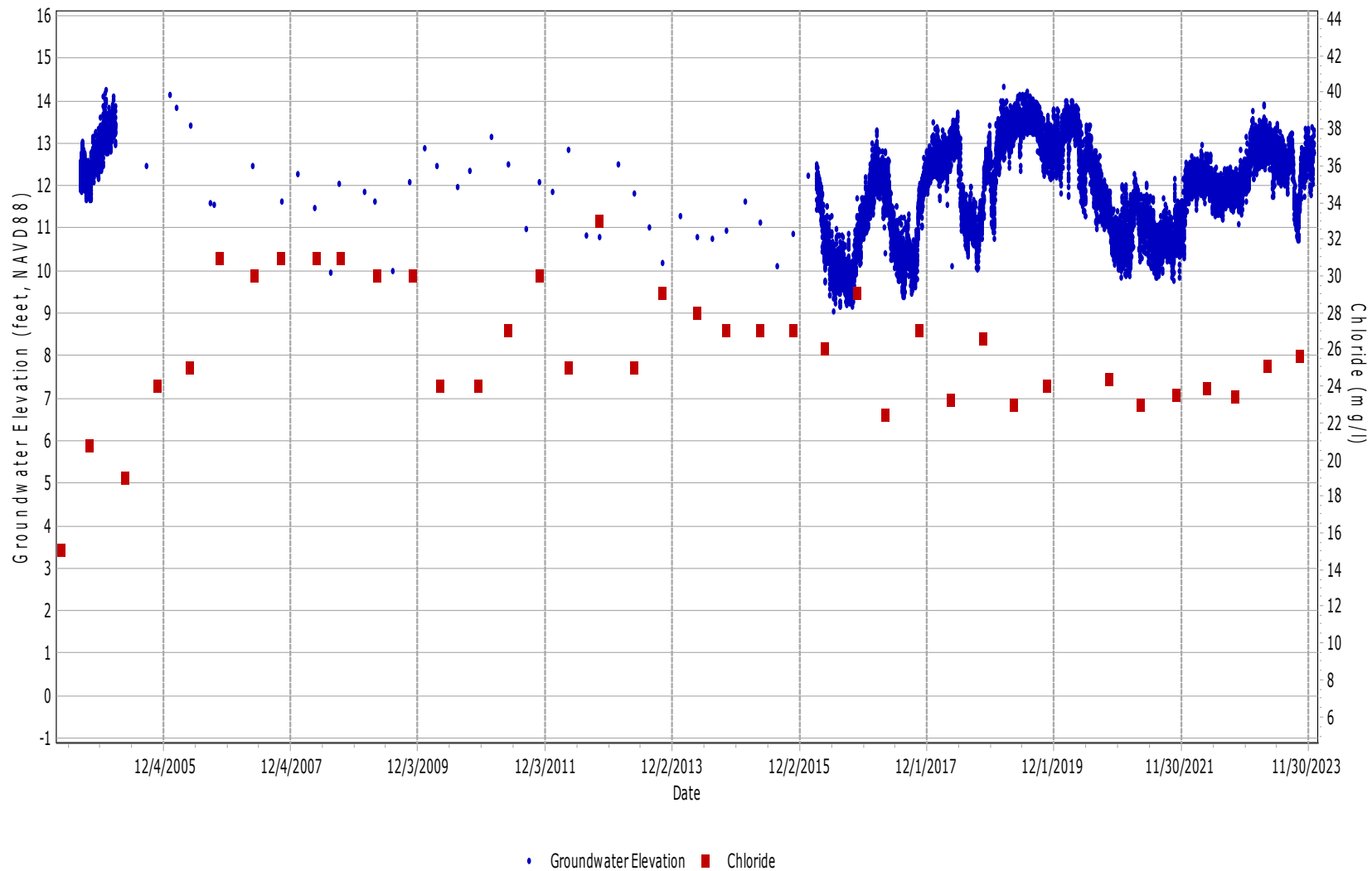


Figure 12c Ortega 400

Groundwater Elevation and Chloride Concentration Hydrograph

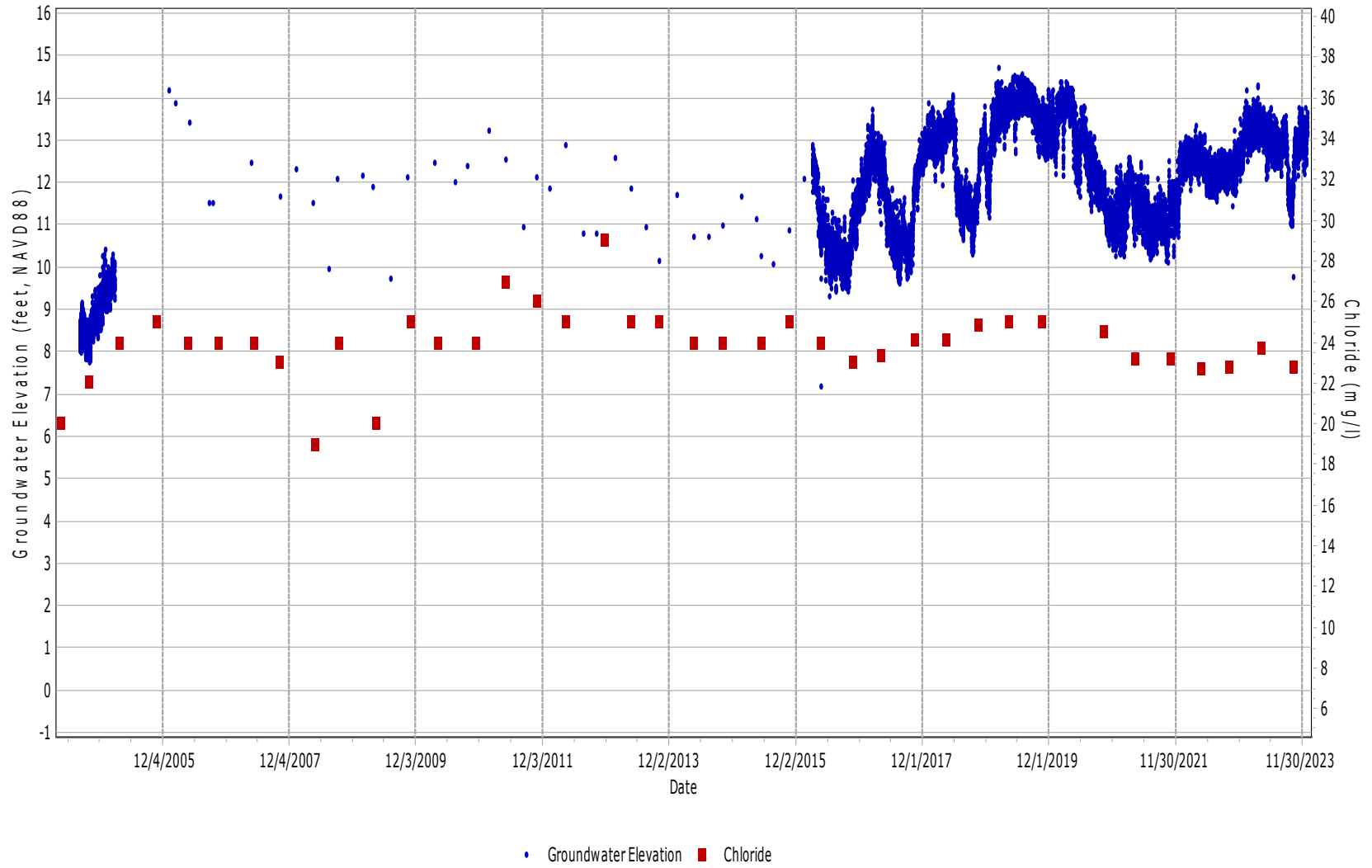


Figure 12c Ortega 400

Groundwater Elevation and Chloride Concentration Hydrograph

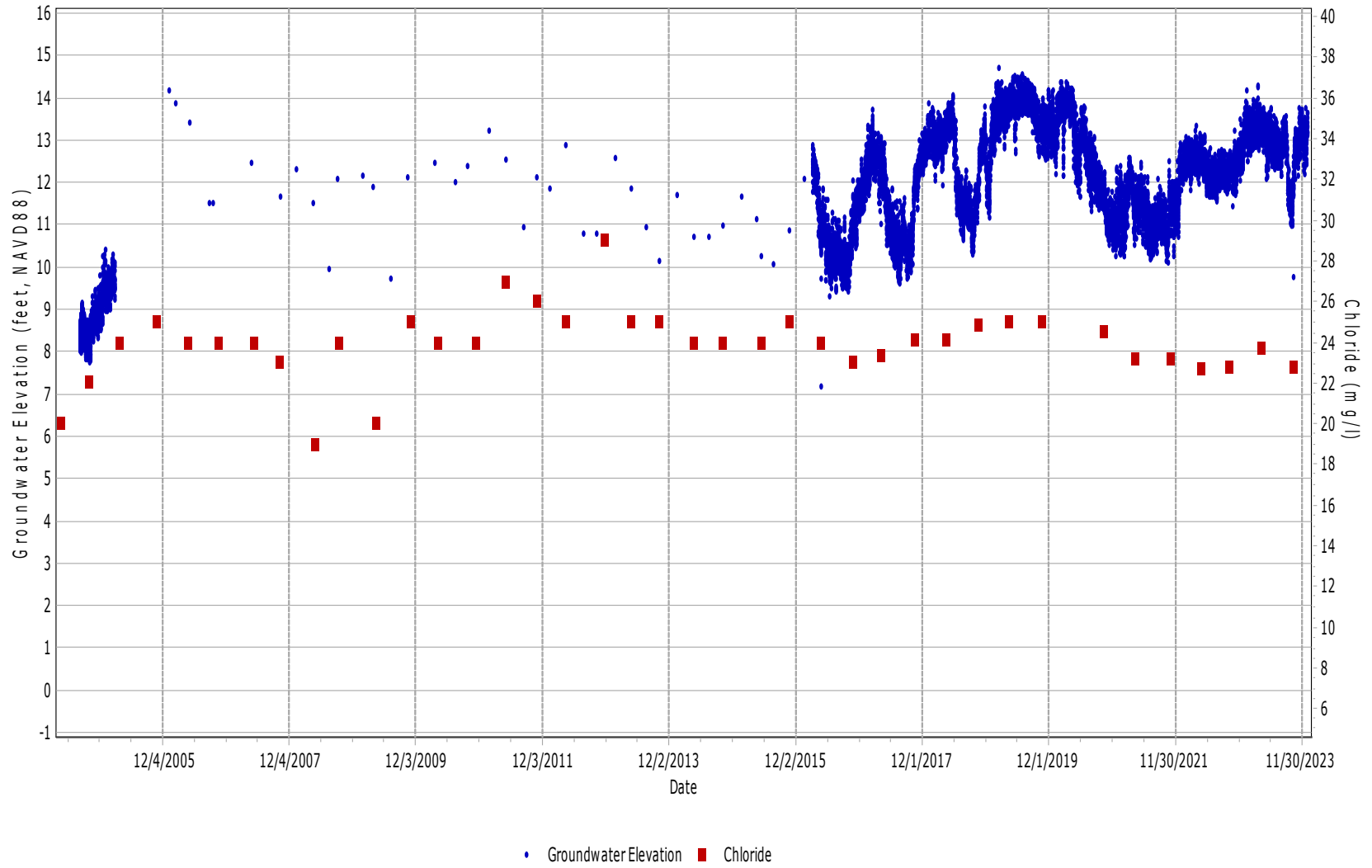


Figure 12d Ortega 475

Groundwater Elevation and Chloride Concentration Hydrograph

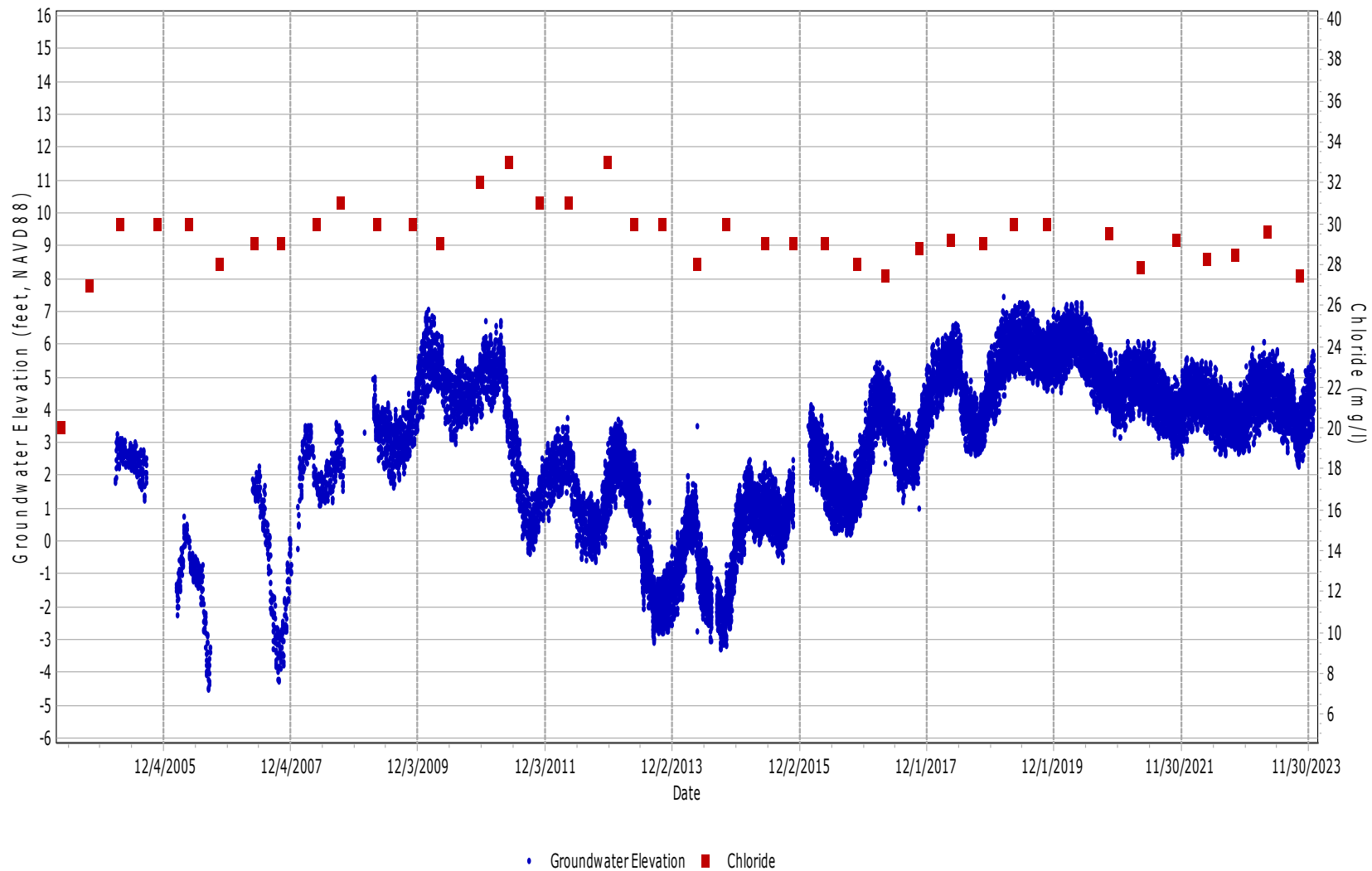


Figure 13a Taraval 145

Groundwater Elevation and Chloride Concentration Hydrograph

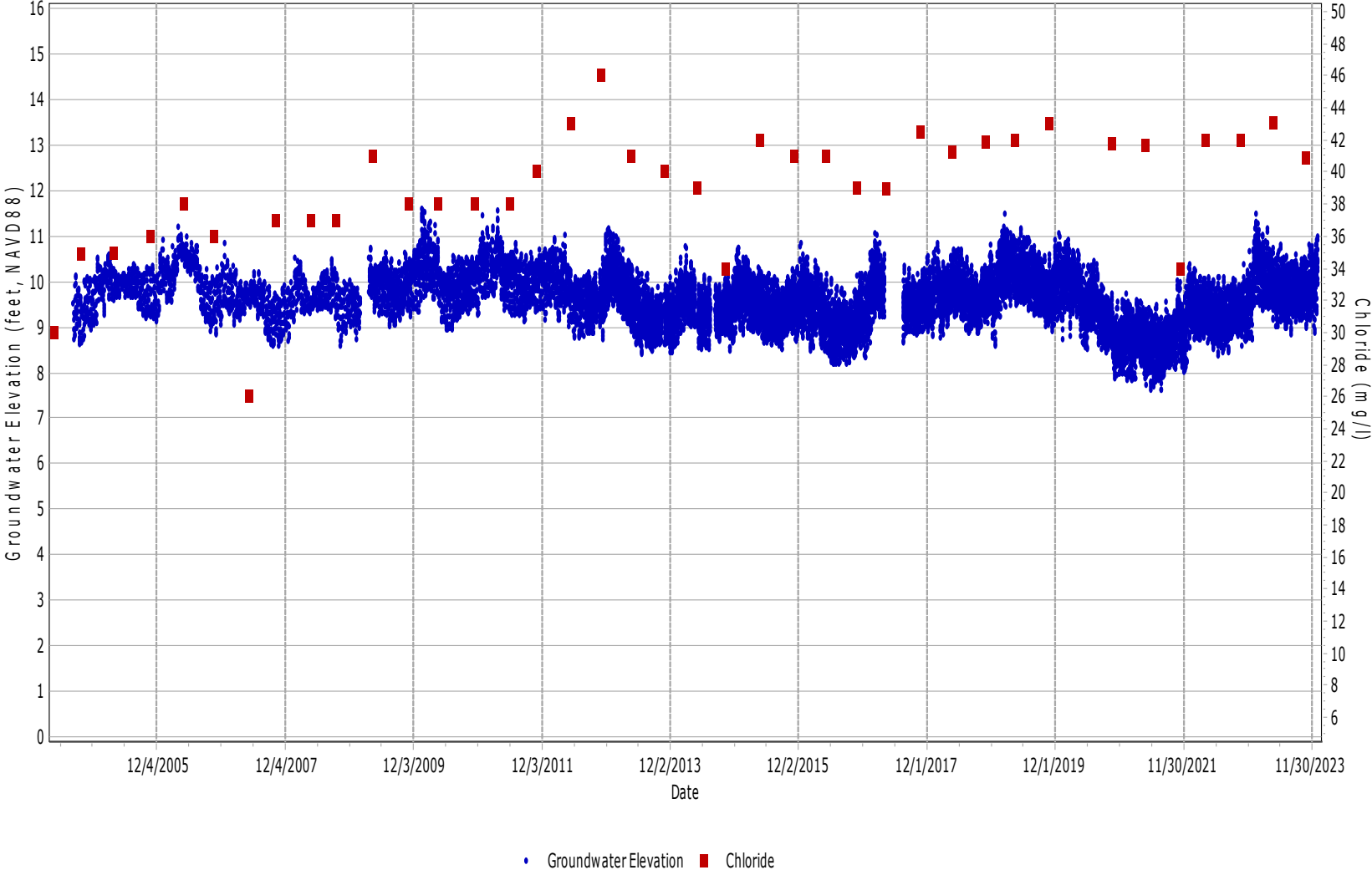


Figure 13b Taraval 240

Groundwater Elevation and Chloride Concentration Hydrograph

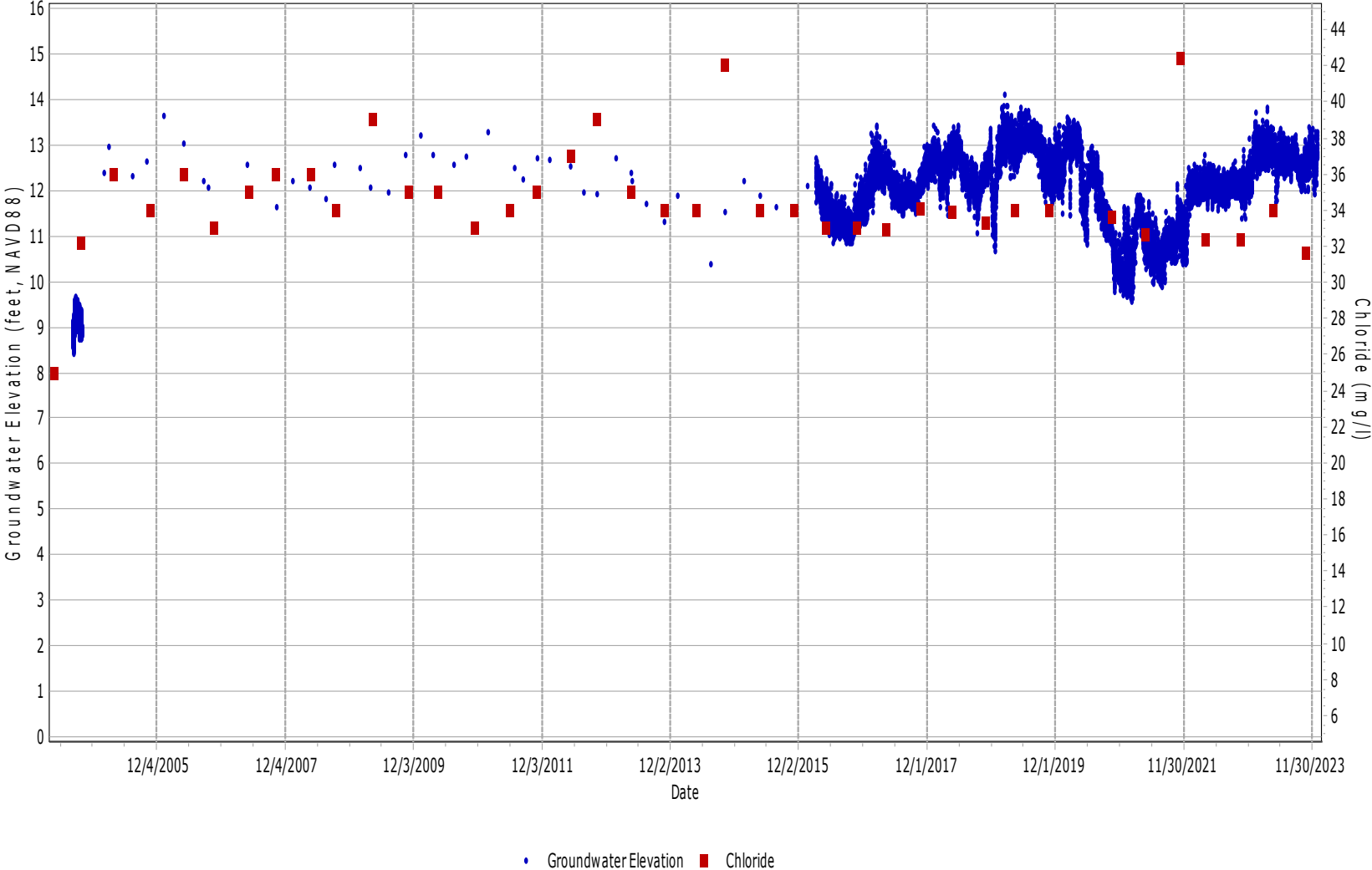


Figure 13c Taraval 400

Groundwater Elevation and Chloride Concentration Hydrograph

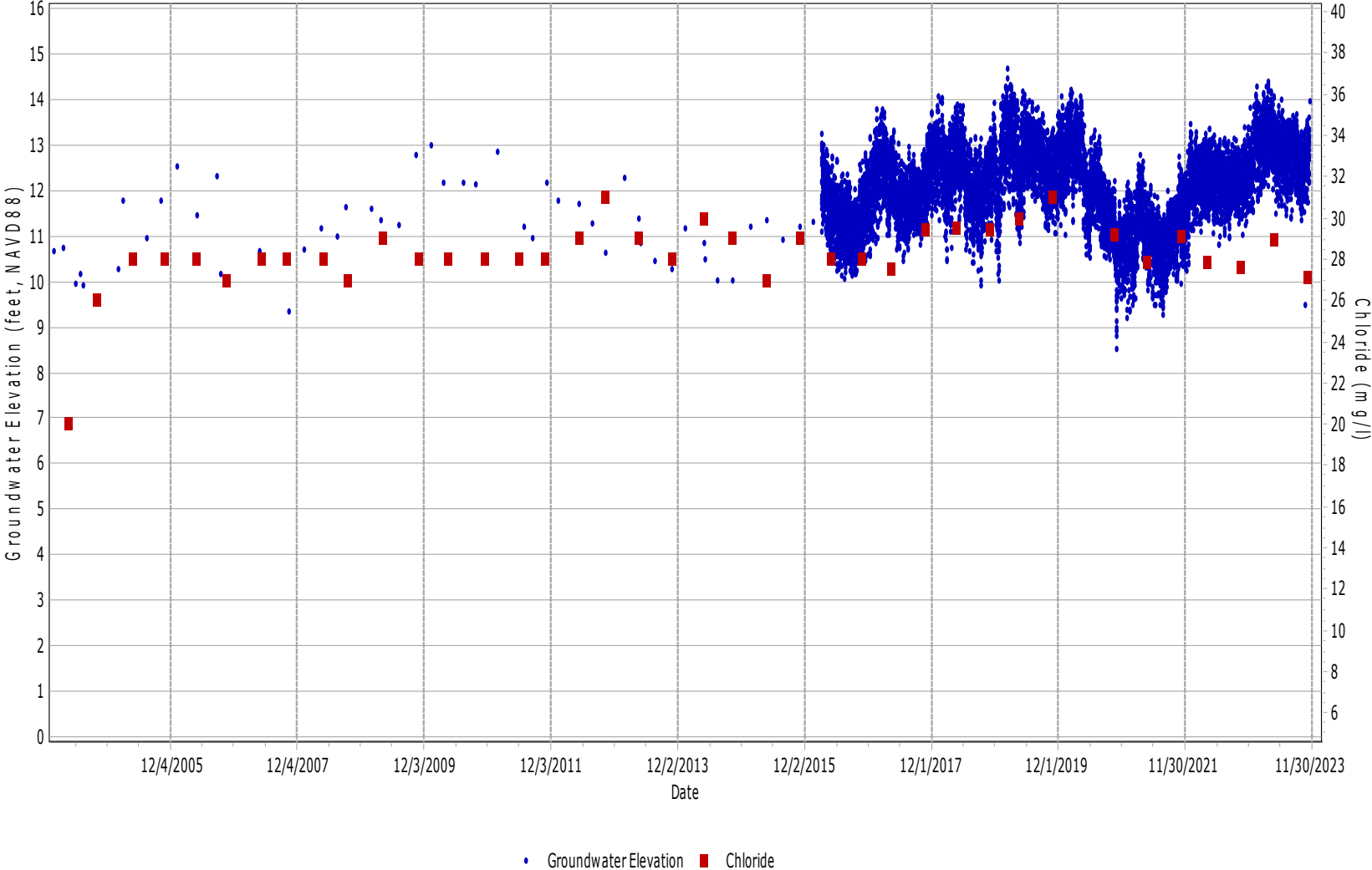




Figure 13d Taraval 530

Groundwater Elevation and Chloride Concentration Hydrograph

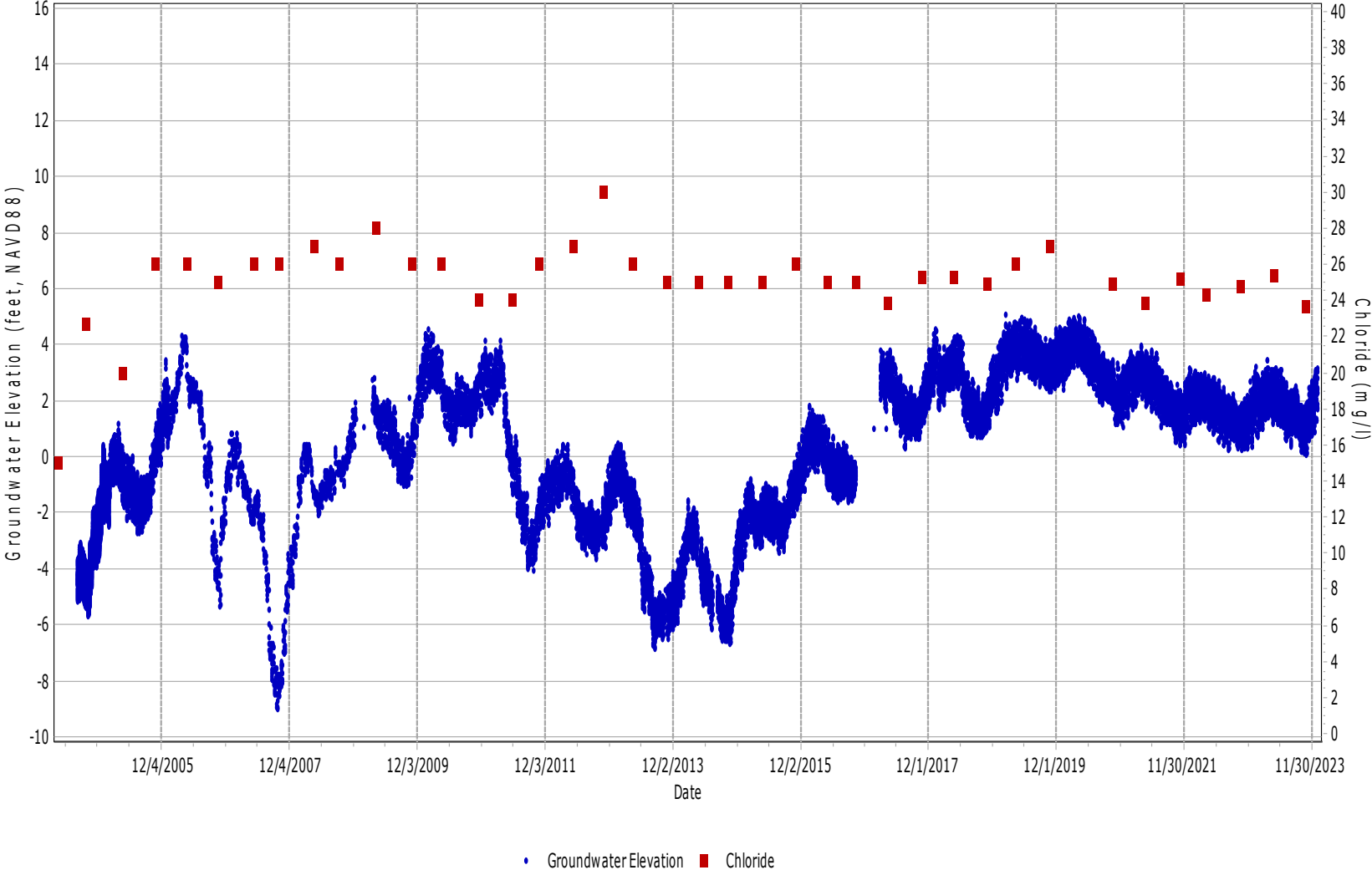


Figure 14a Zoo 275

Groundwater Elevation and Chloride Concentration Hydrograph

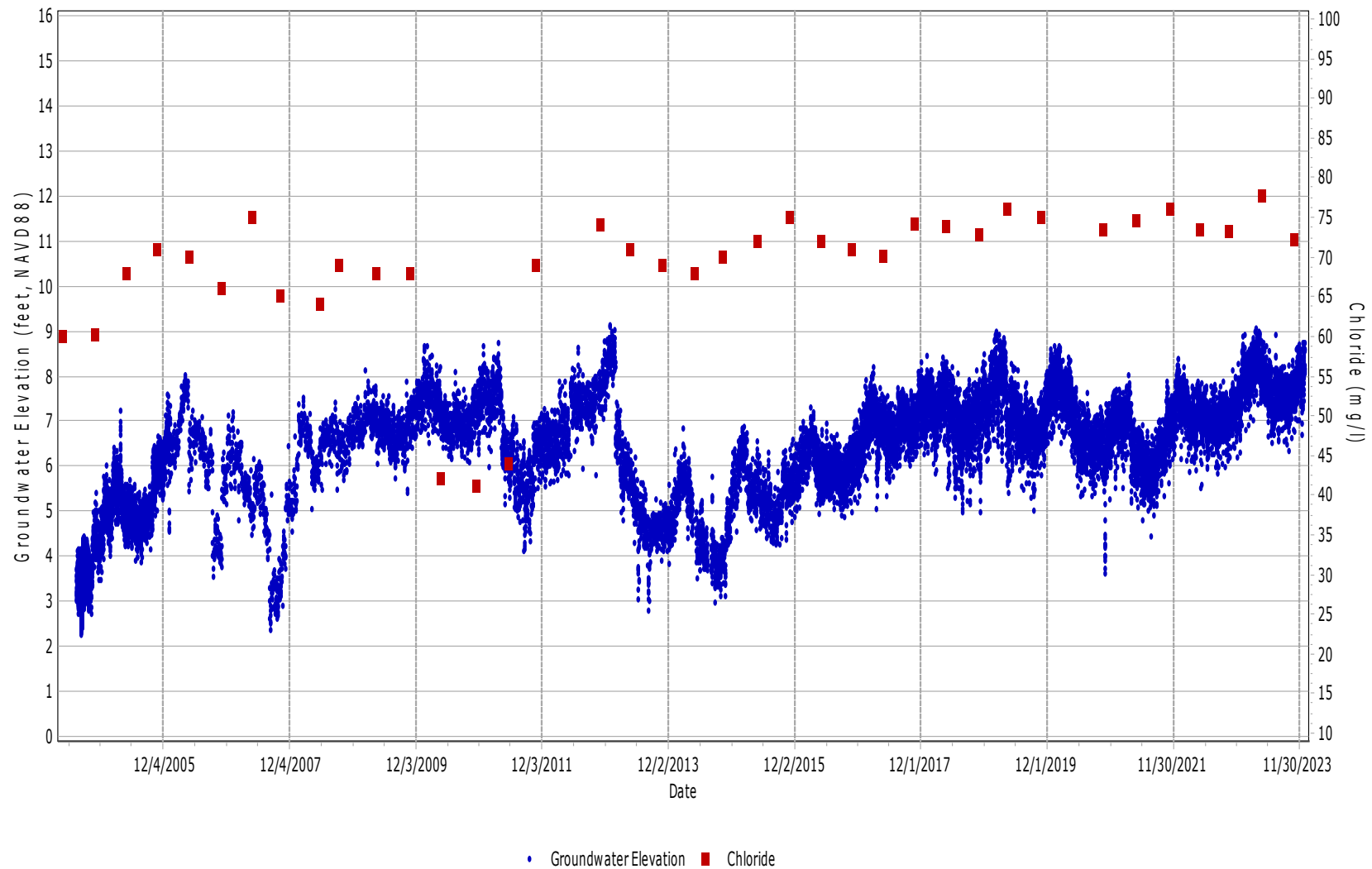


Figure 14b Zoo 450

Groundwater Elevation and Chloride Concentration Hydrograph

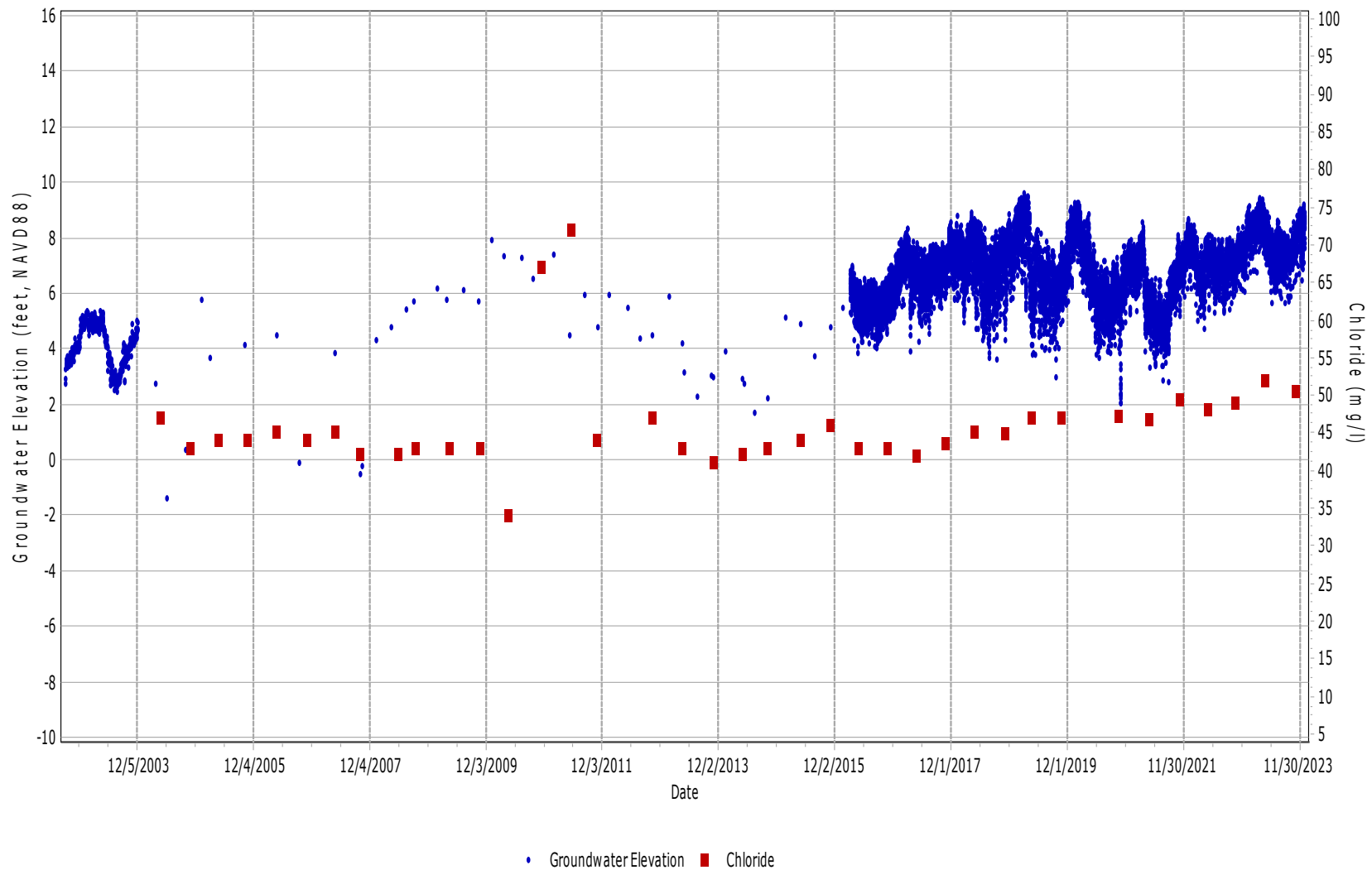


Figure 14c Zoo 565

Groundwater Elevation and Chloride Concentration Hydrograph

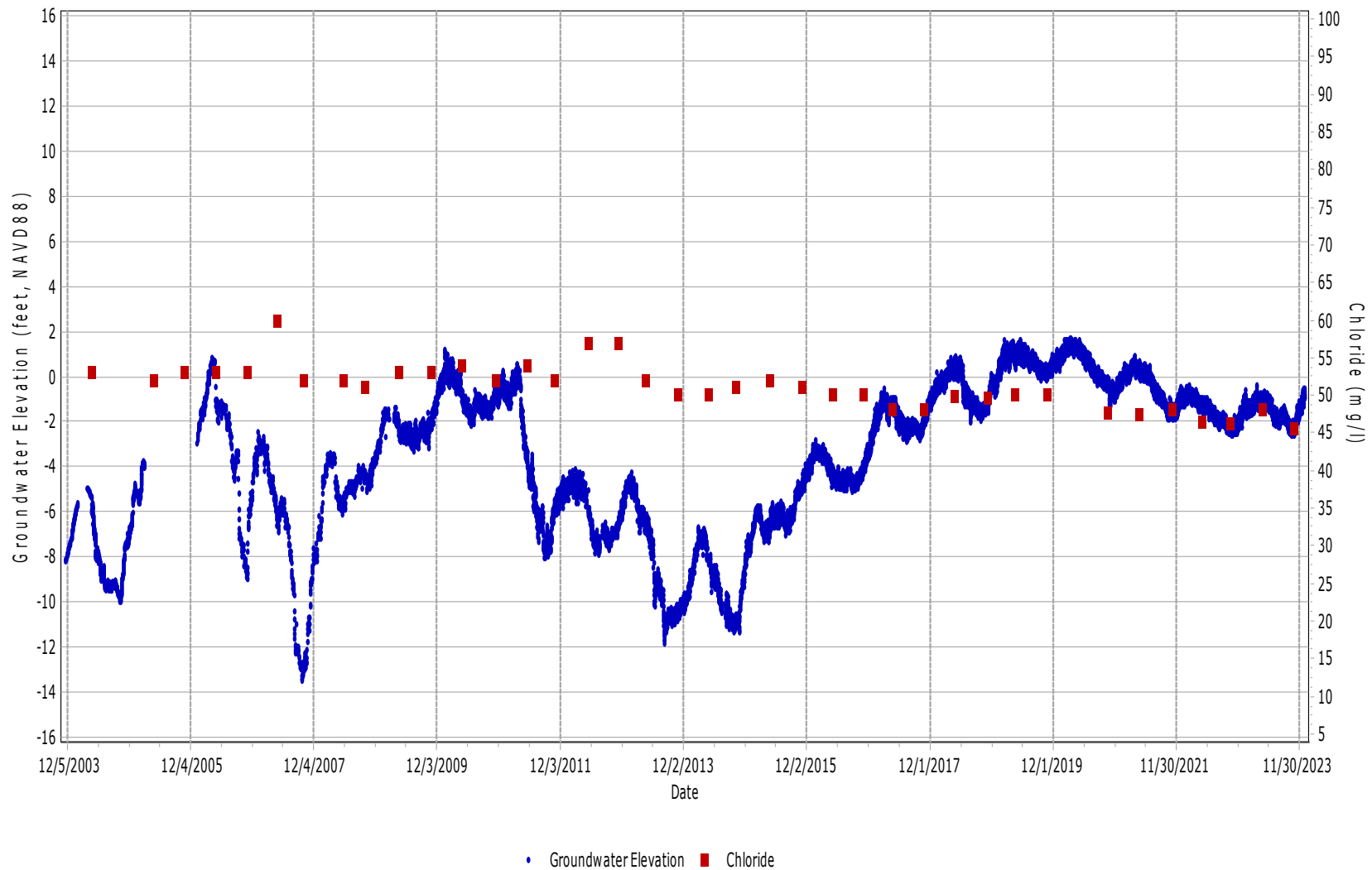


Figure 15 Lake Merced Surface Elevation

Lake Merced Water Surface Elevation, South Lake

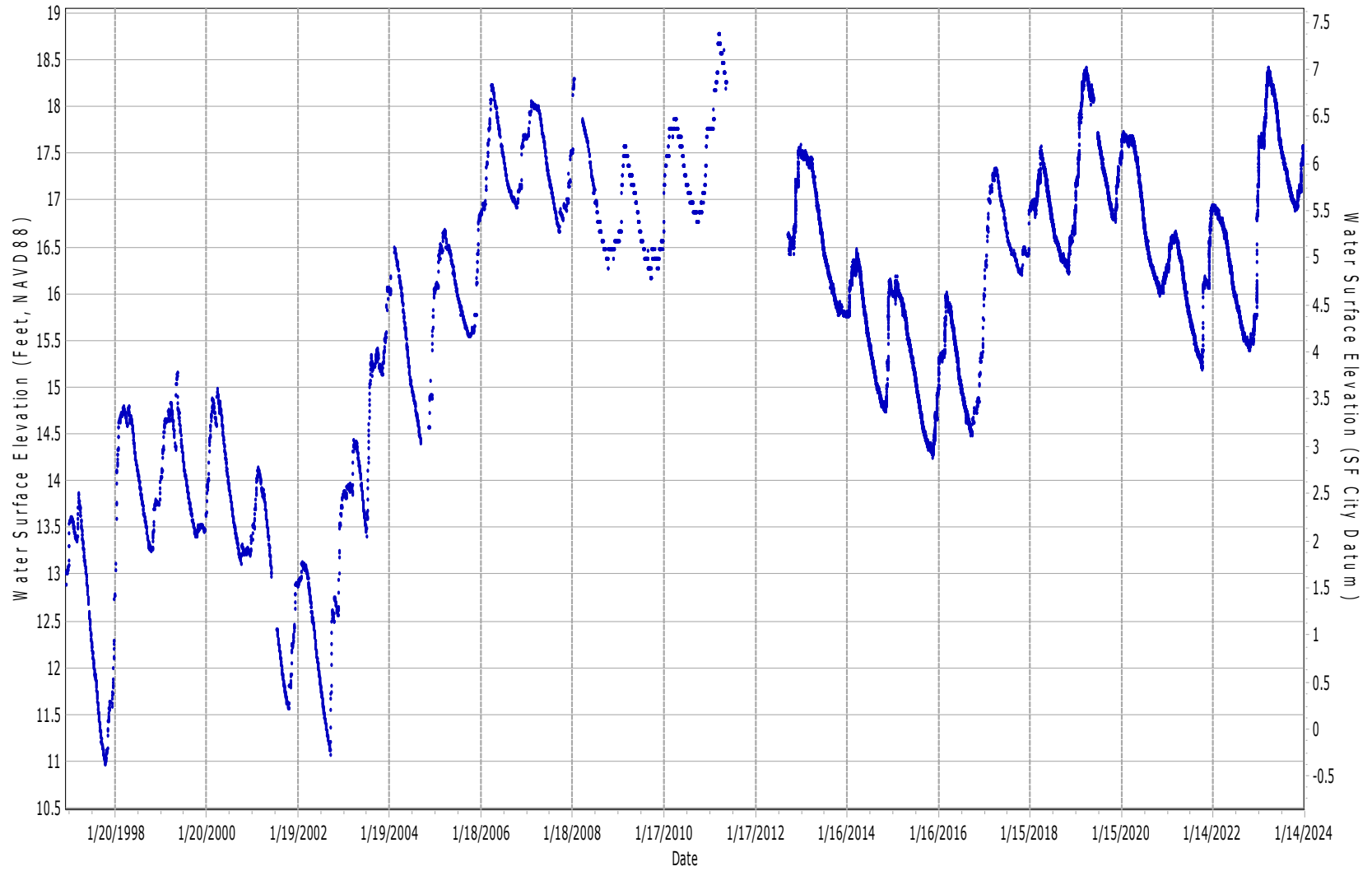


Figure 16

LMMW-1S & LMMW-1D

Groundwater Elevation Hydrograph: Shallow and Primary Production Aquifers

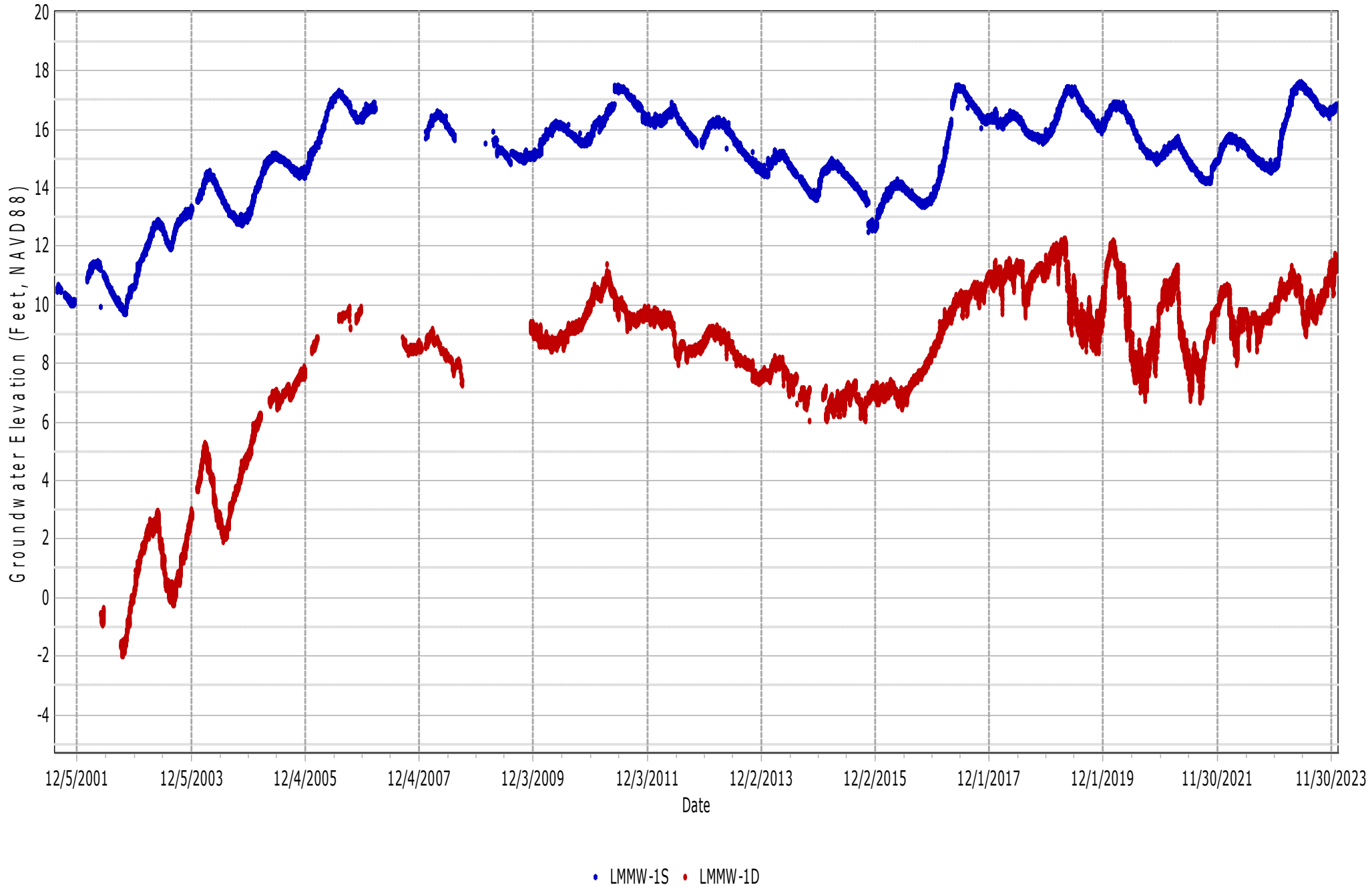
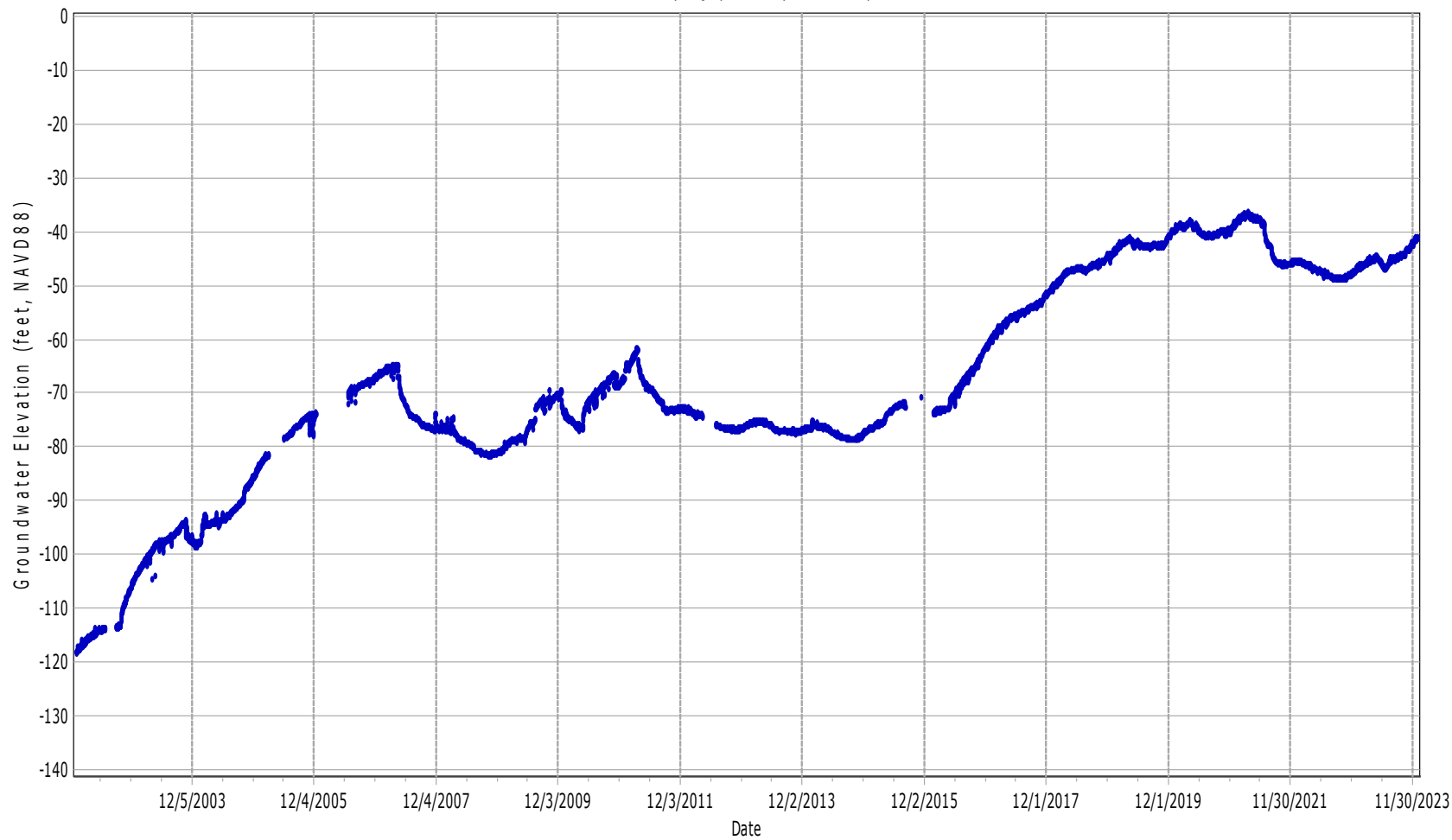


Figure 17 DC-01 (WESTLAKE 1)

Groundwater Elevation Hydrograph - Primary Production Aquifer



• GroundwaterElevation

Figure 18 CAL. WATER SERV. SS1-02

Groundwater Elevation Hydrograph - Primary Production Aquifer

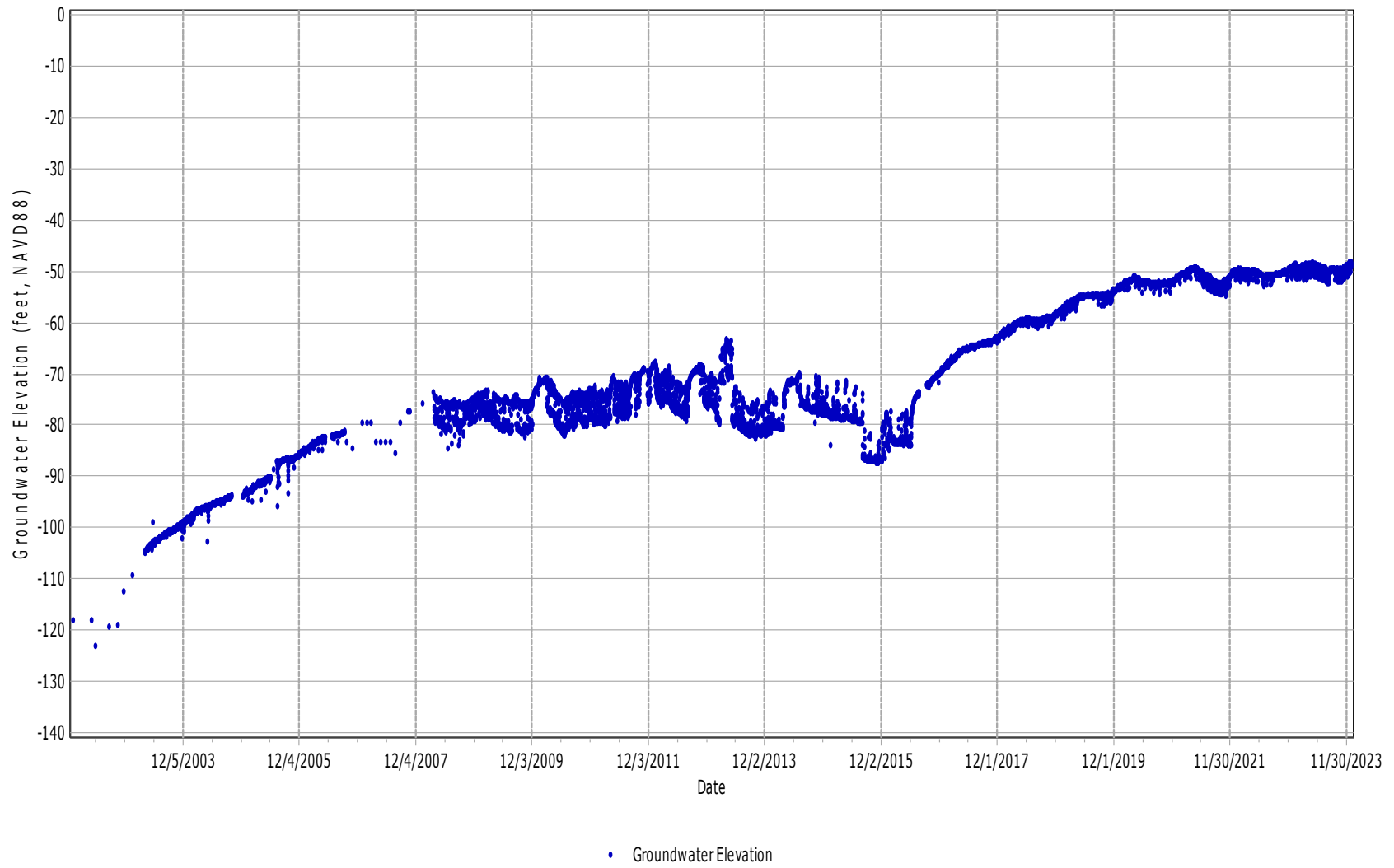
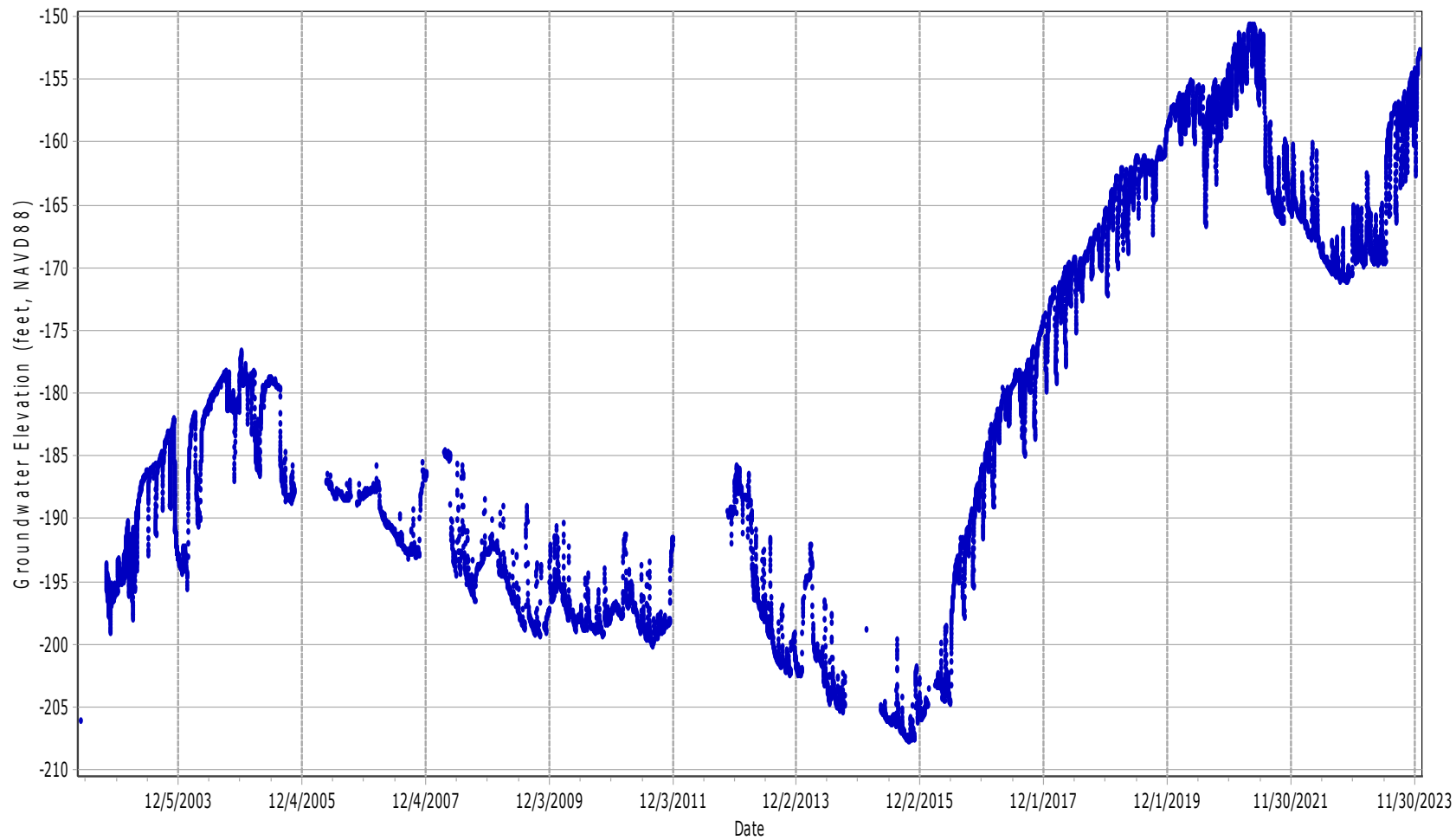




Figure 19 SB-12 ELM AVENUE

Groundwater Elevation Hydrograph - Primary Production Aquifer



• GroundwaterElevation

Figure 20a Burlingame S

Groundwater Elevation and Chloride Concentration Hydrograph

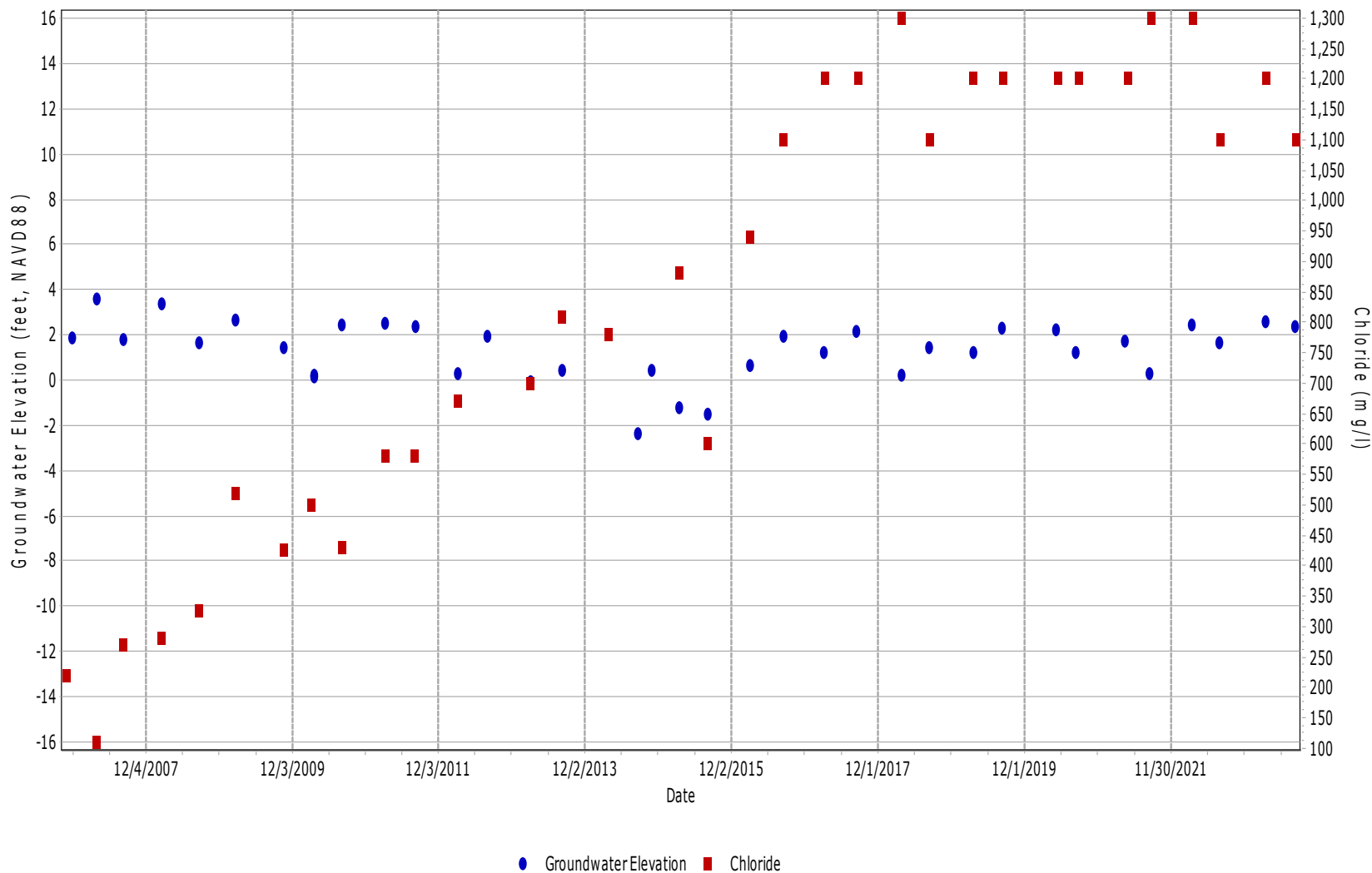


Figure 20b Burlingame M

Groundwater Elevation and Chloride Concentration Hydrograph

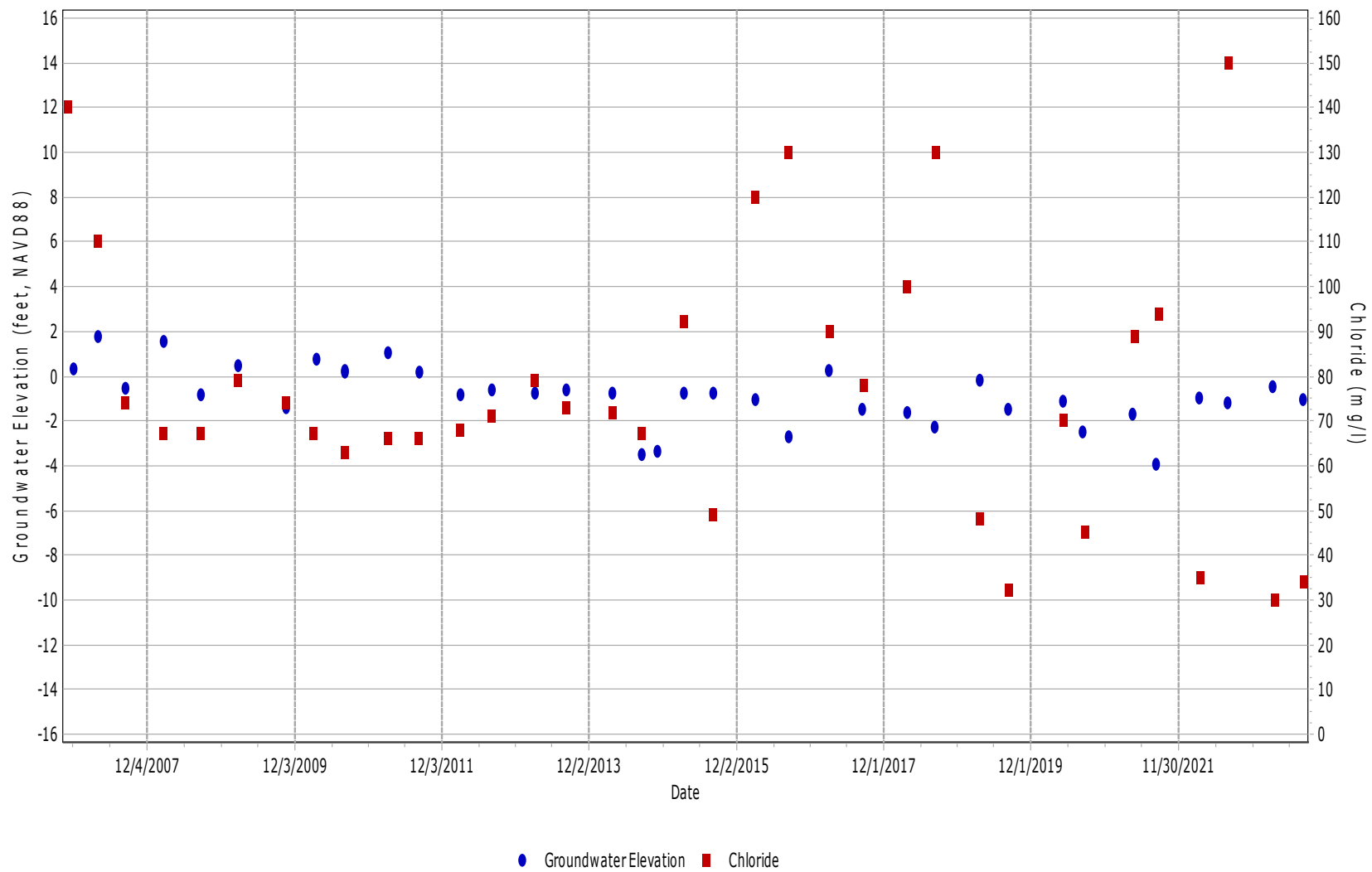


Figure 20c Burlingame D

Groundwater Elevation and Chloride Concentration Hydrograph

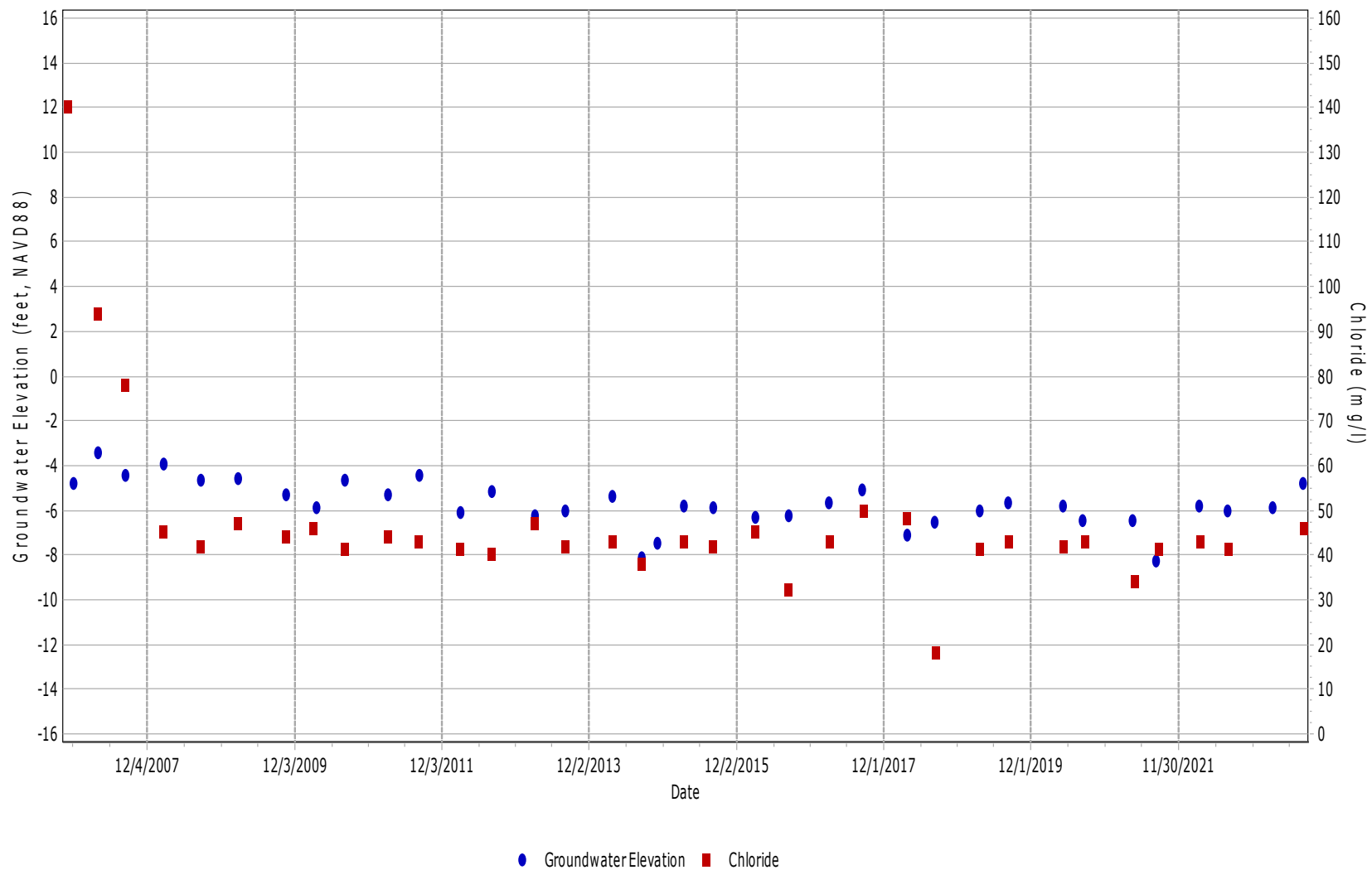
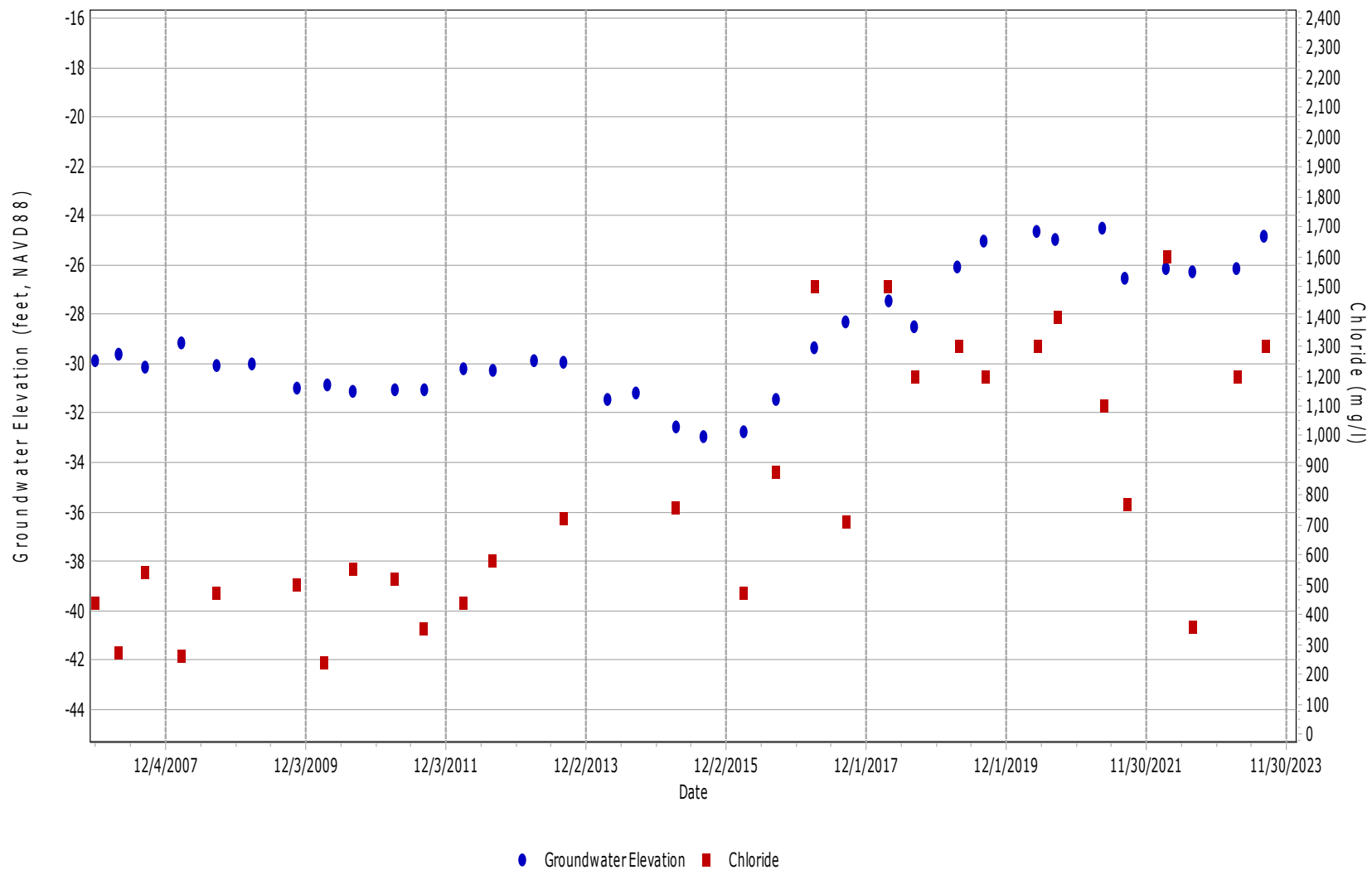


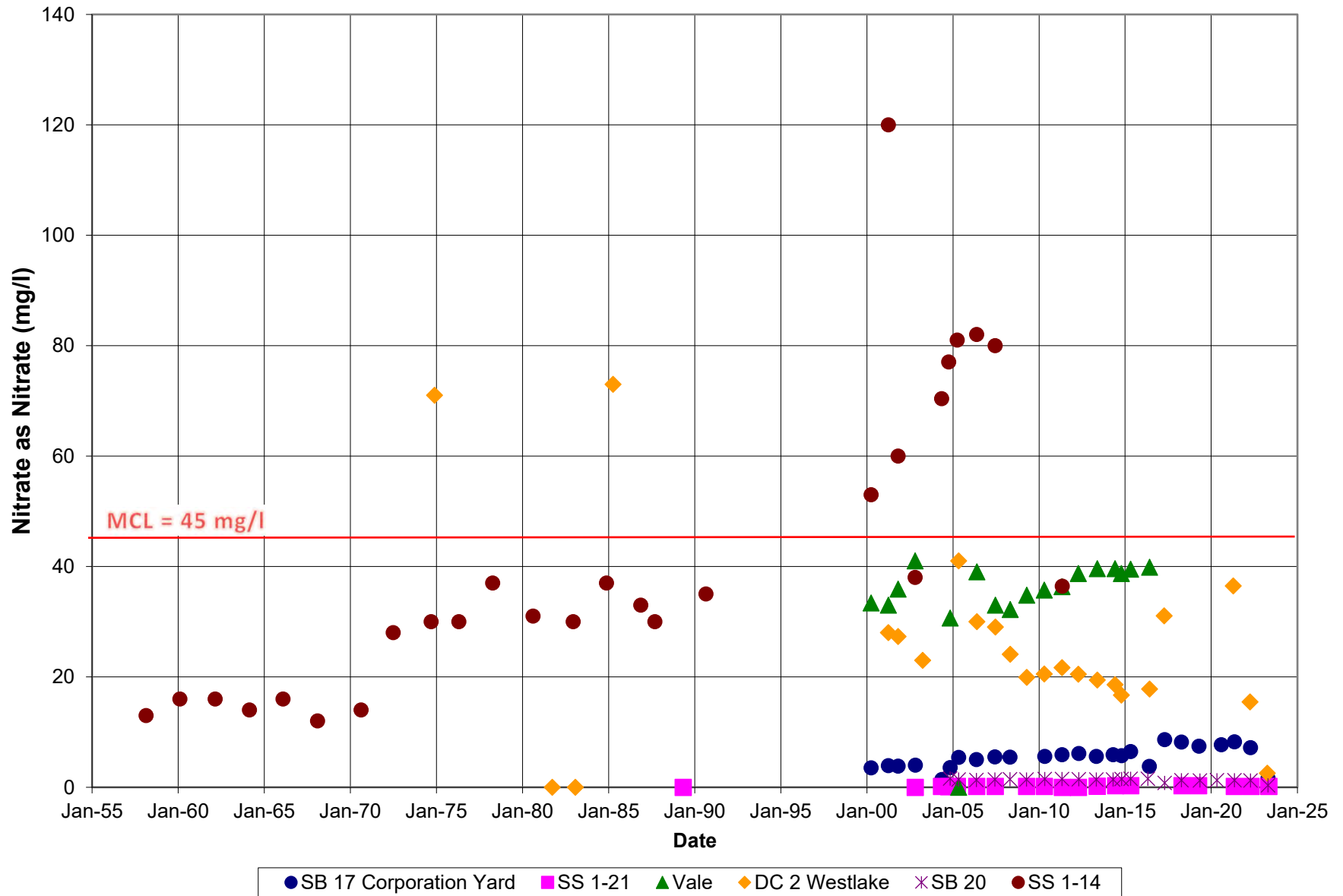


Figure 21b SFO D

Groundwater Elevation and Chloride Concentration Hydrograph

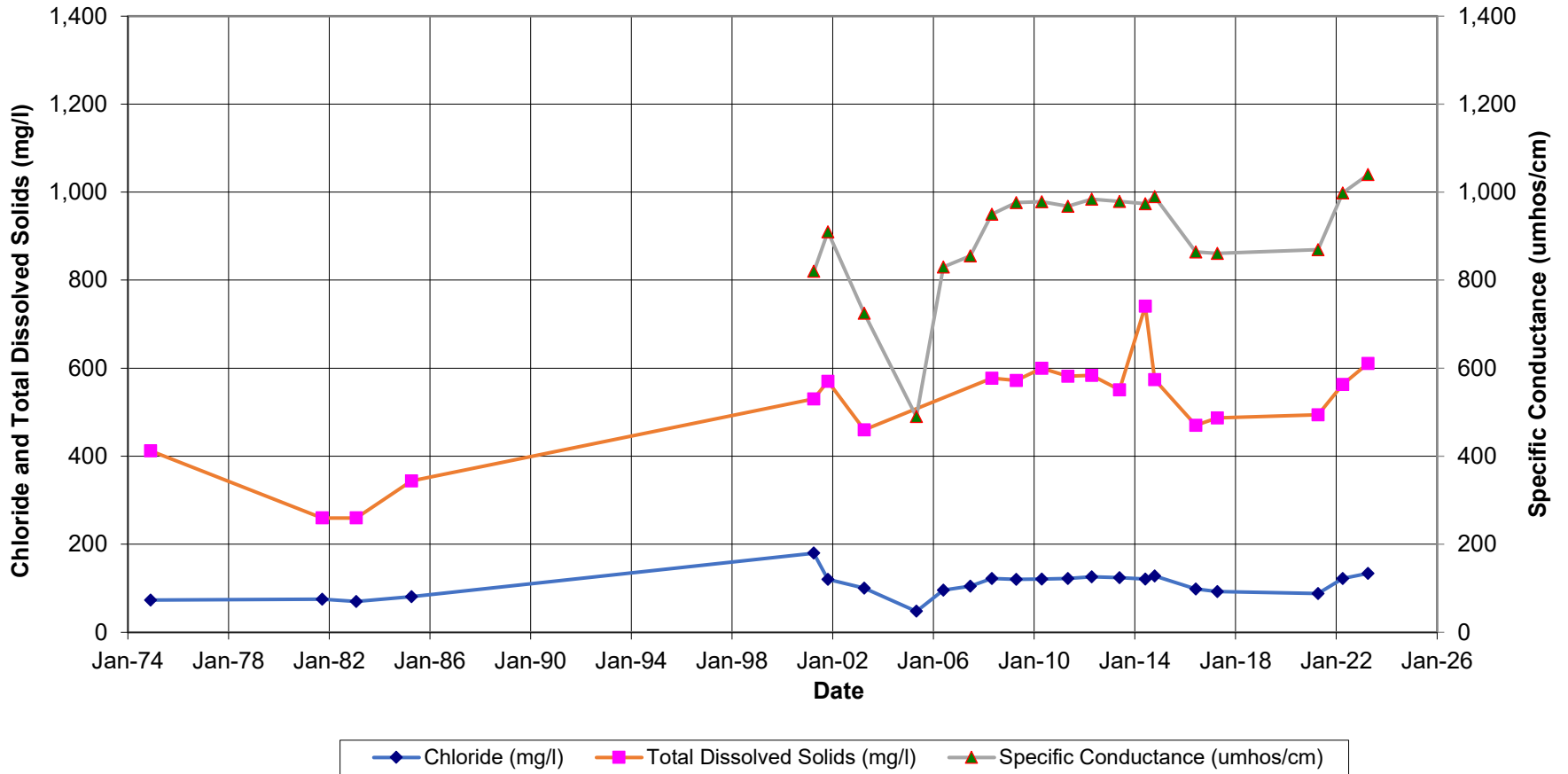


**Figure 22**  
**Nitrate Concentrations in Southern Westside Basin Groundwater, 1957-2023**



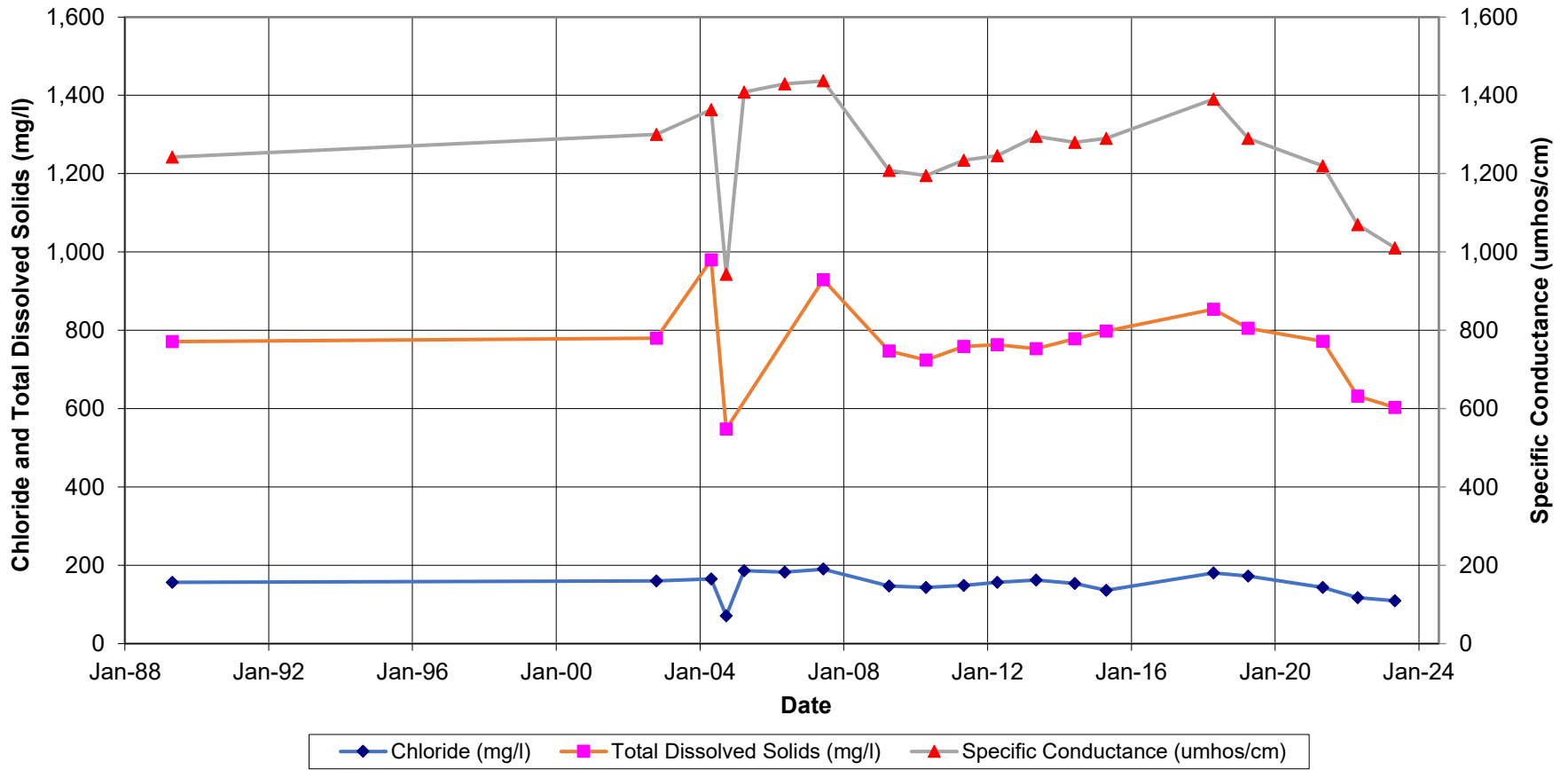
SS 1-14 was offline from 2007-2011 and permanently taken out of service in 2015. Vale has been offline since 2018.

**Figure 23**  
**Long-Term Water Quality, Daly City Westlake DC-2**

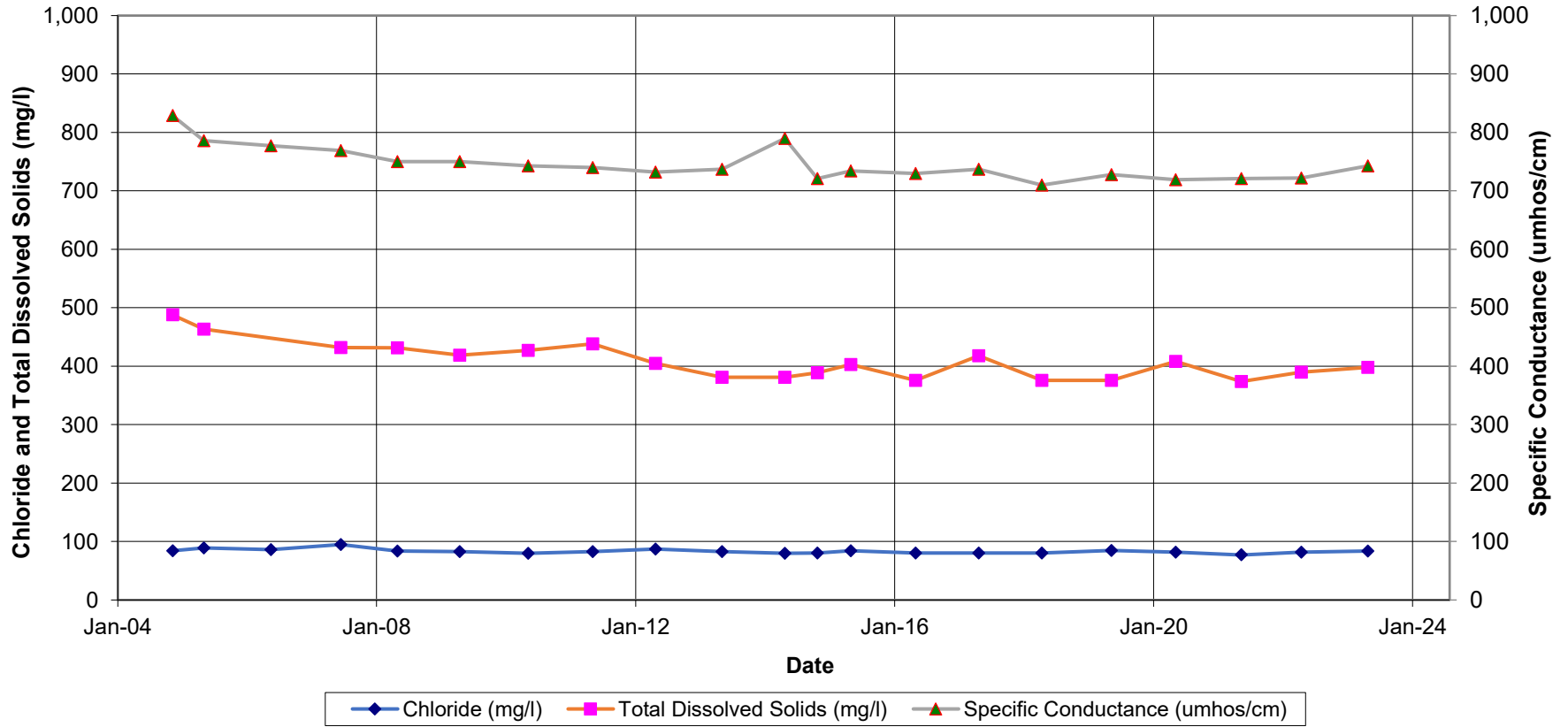




**Figure 24**  
**Long-Term Water Quality, Cal Water SS 1-21**



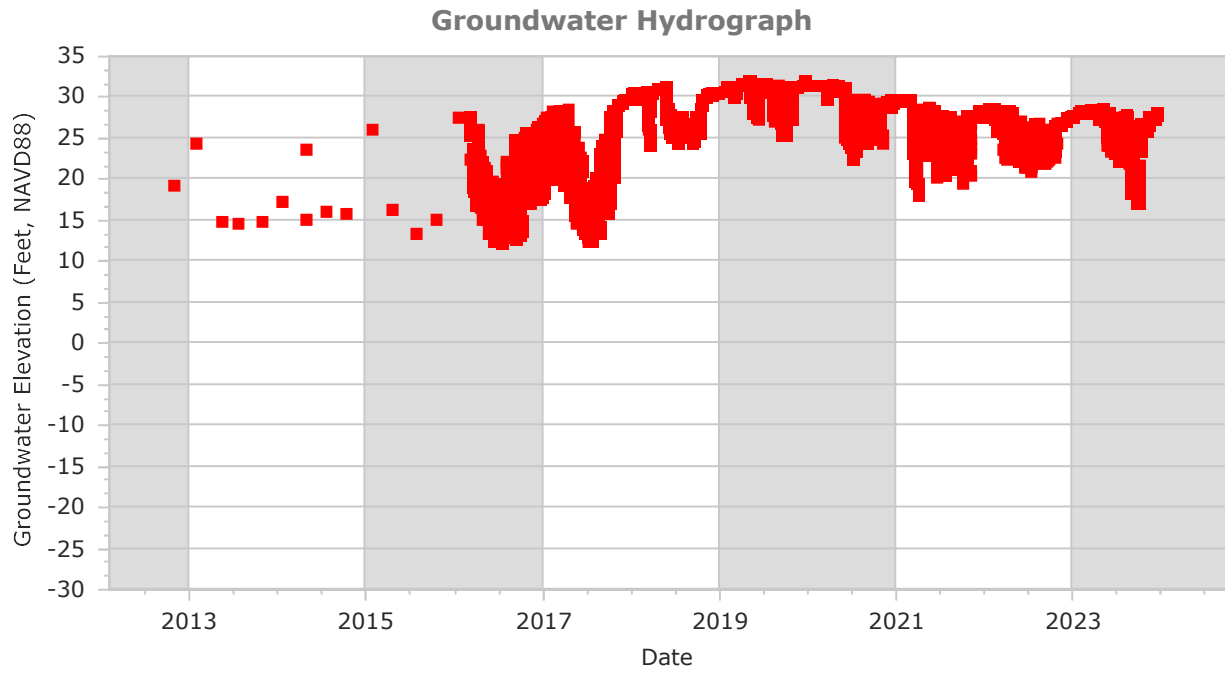
**Figure 25**  
**Long-Term Water Quality, San Bruno SB-20**  
**Lions Field Park**



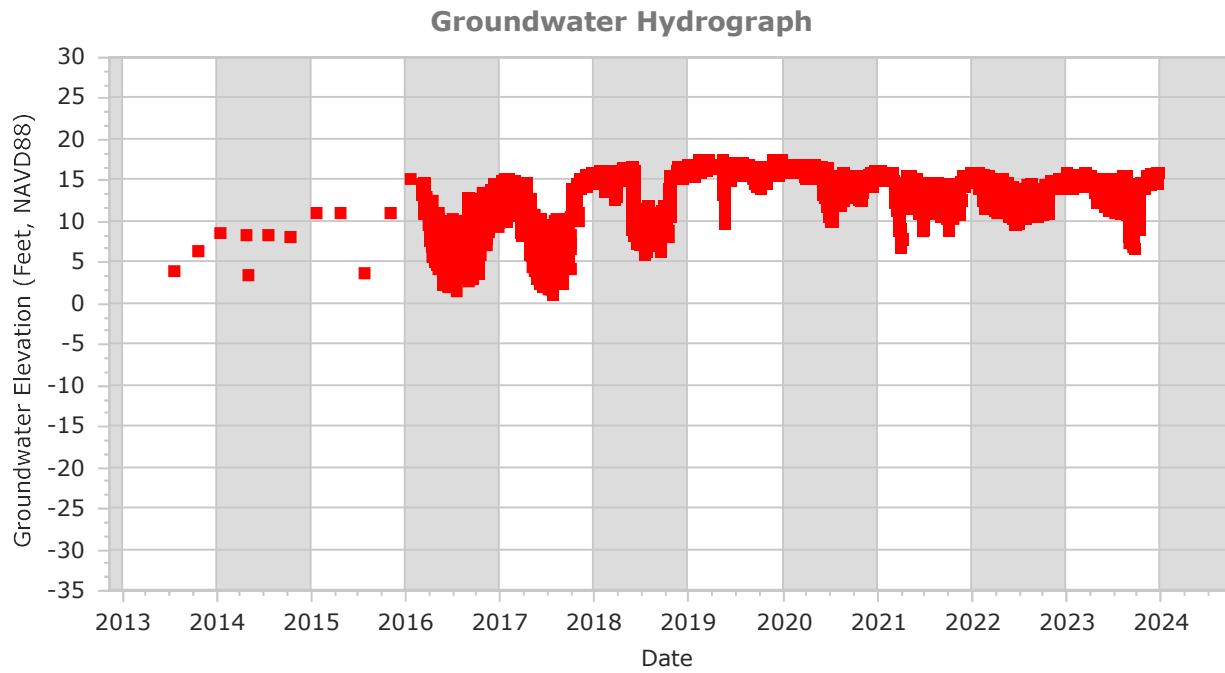
**APPENDIX A**  
**Groundwater Elevation Hydrographs**

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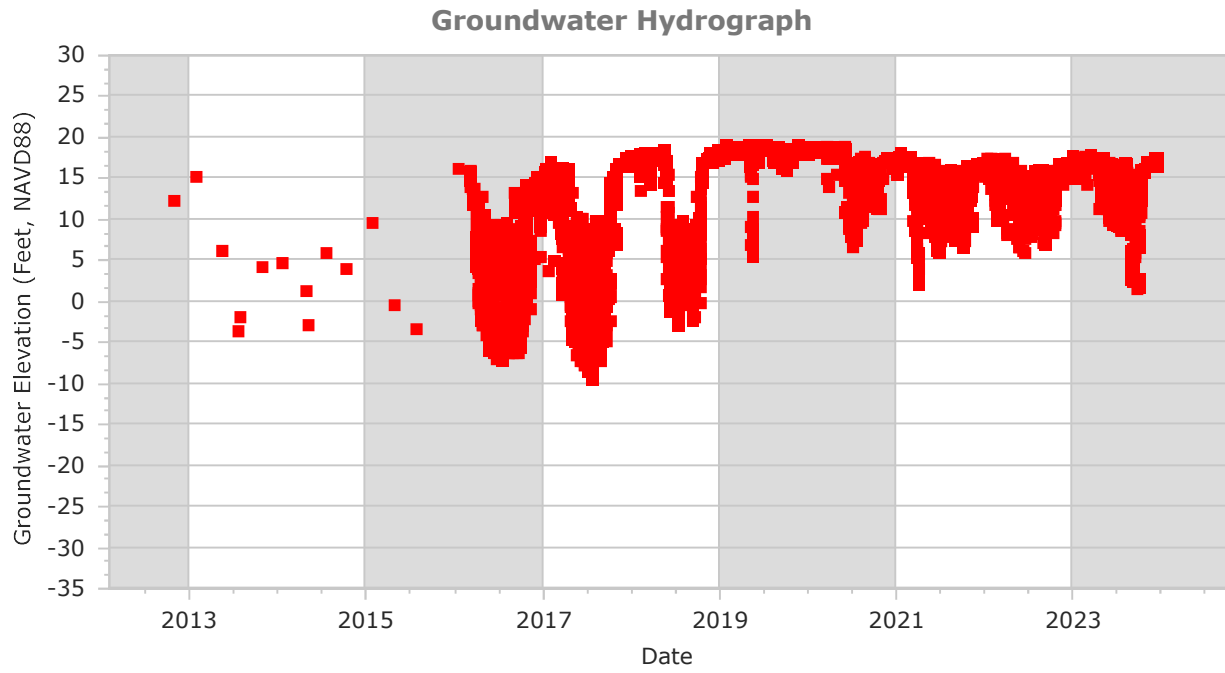
Station Name: NL-1



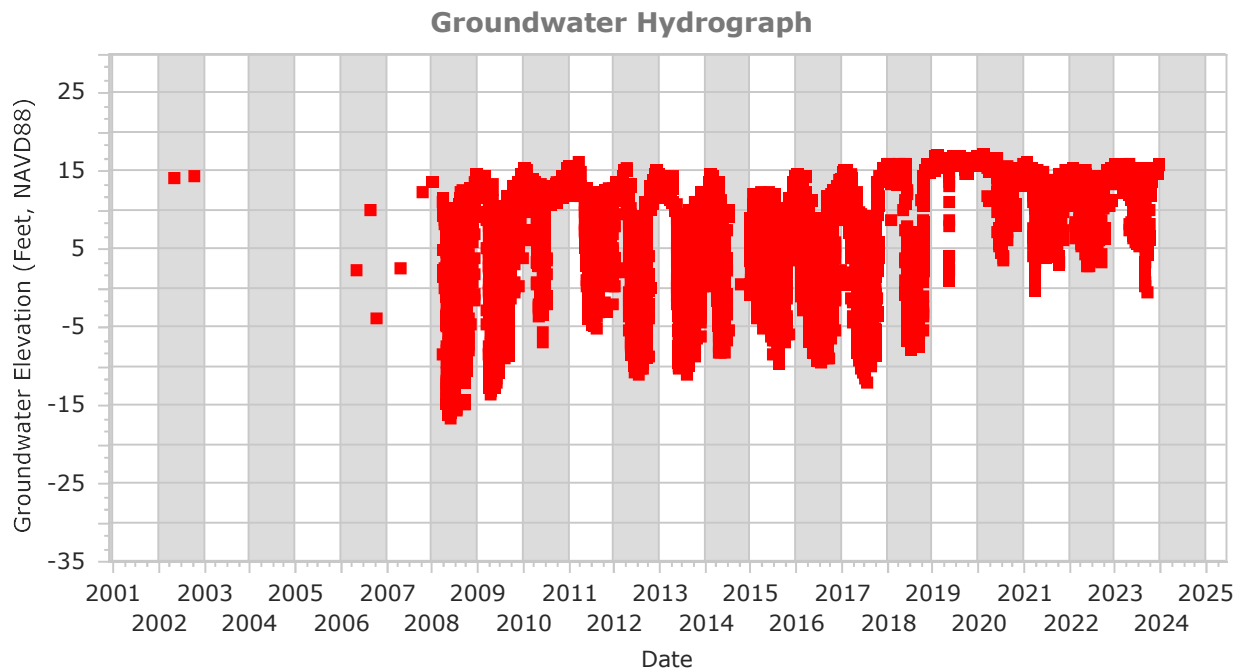
Station Name: NWM-3



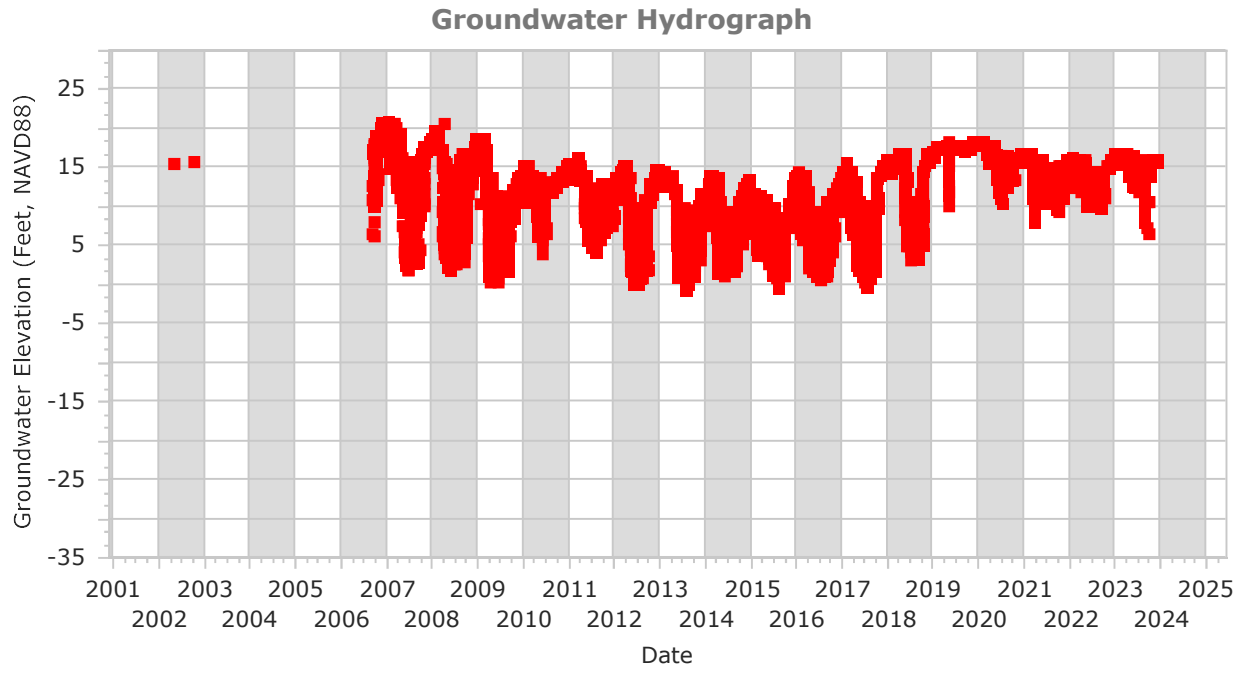
Station Name: SF-1



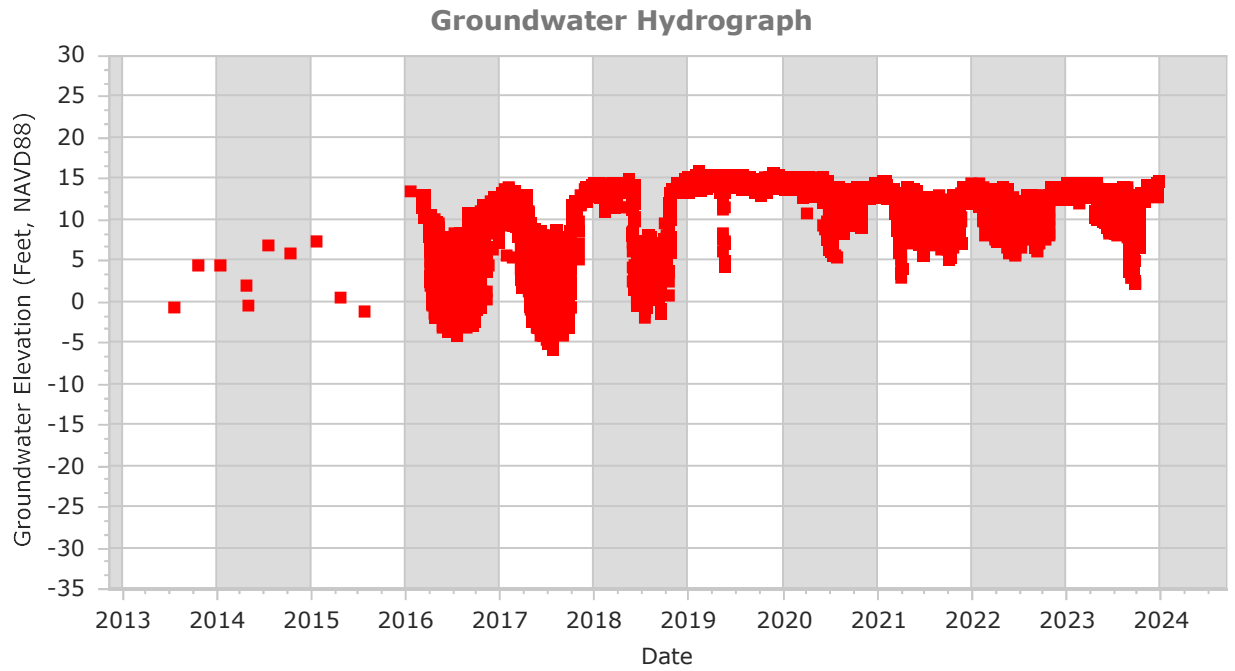
Station Name: South Windmill 140



Station Name: South Windmill 57

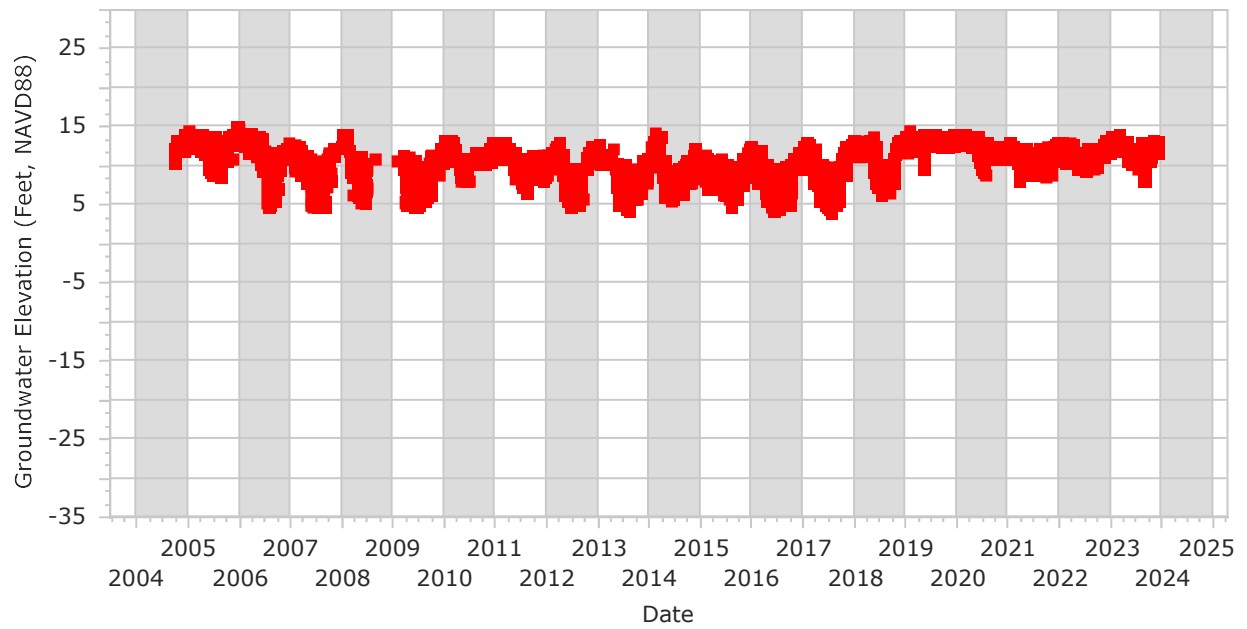


Station Name: SWM-3



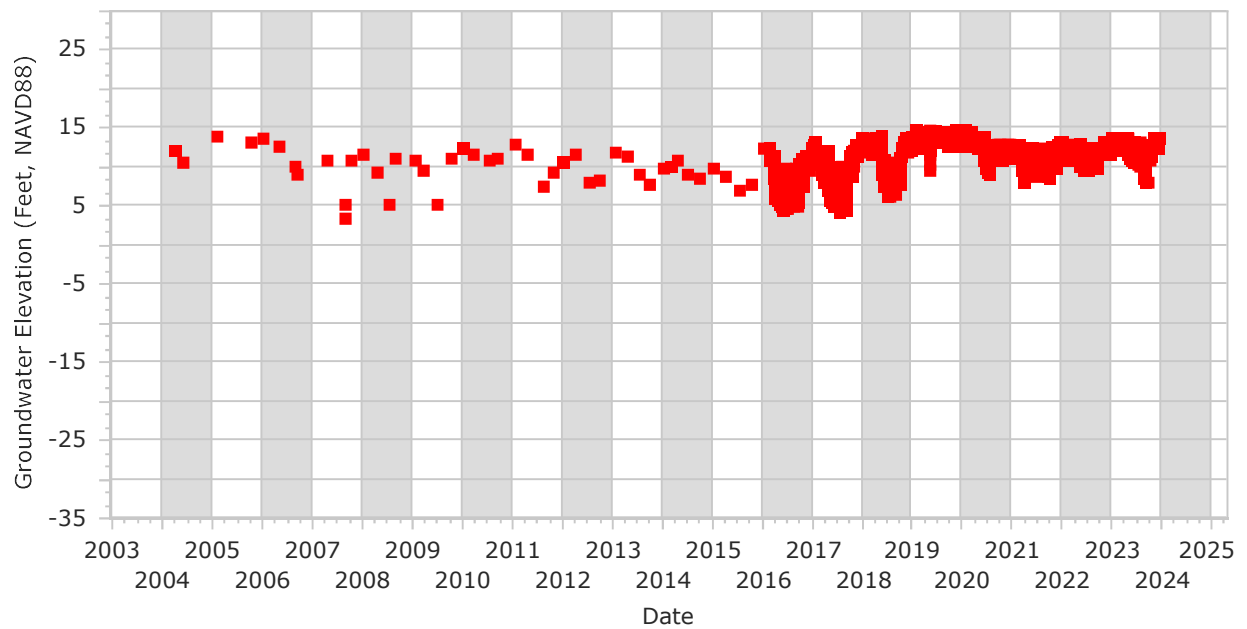
Station Name: KIRKHAM MW130

Groundwater Hydrograph



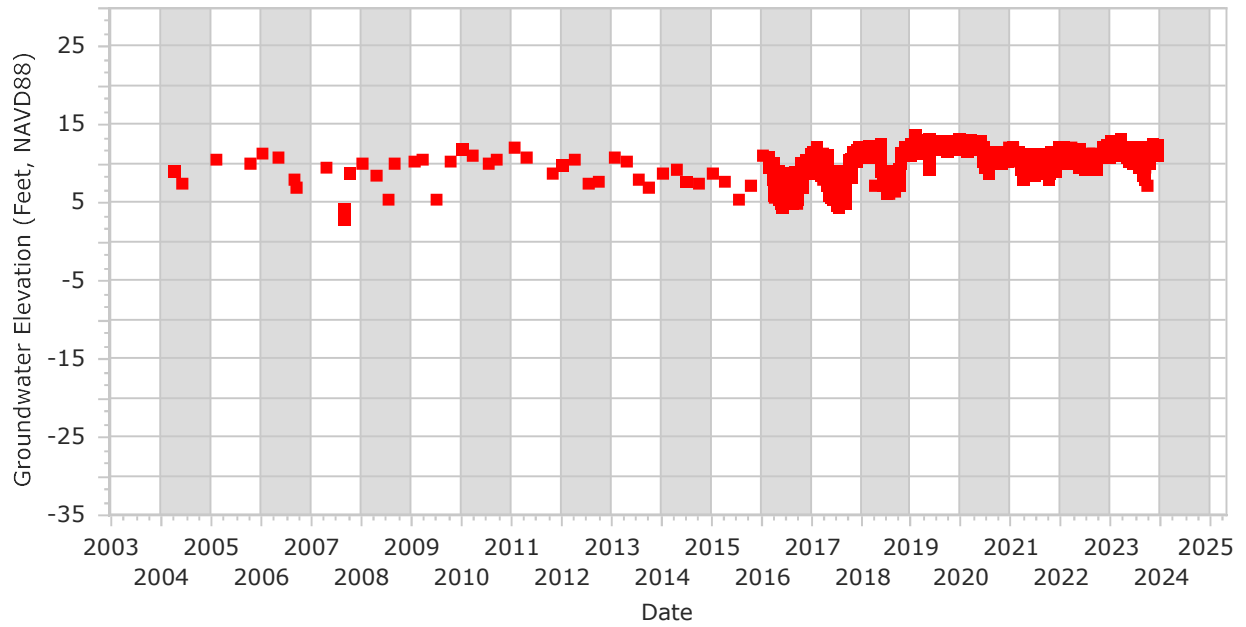
Station Name: KIRKHAM MW255

Groundwater Hydrograph



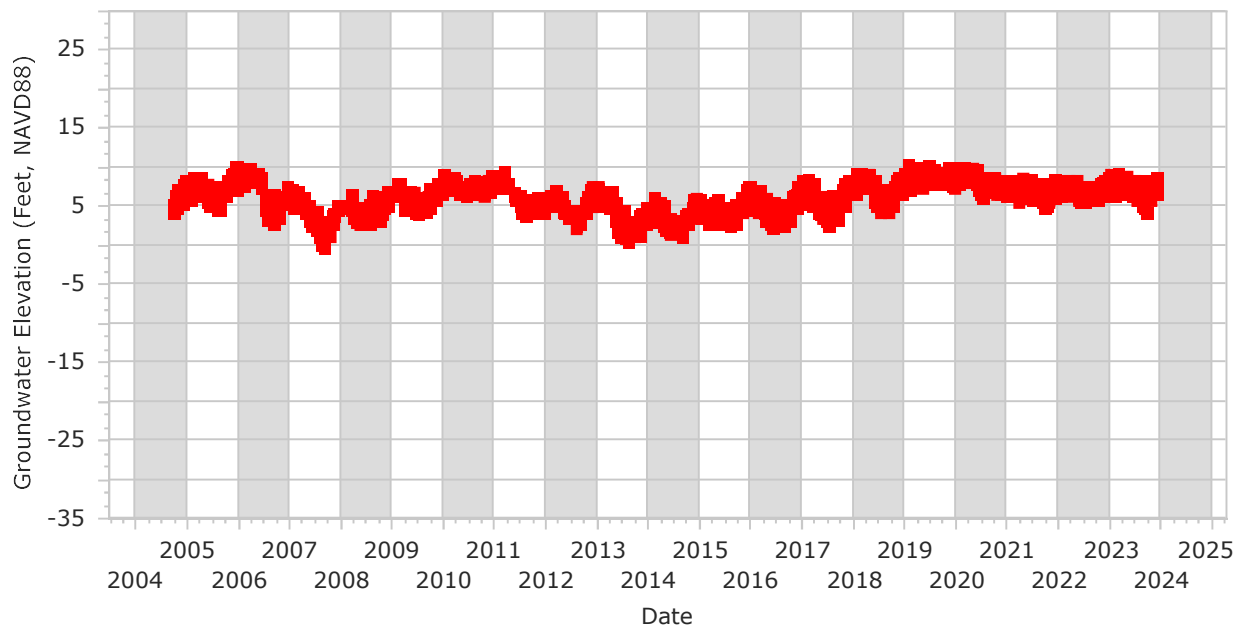
Station Name: KIRKHAM MW385

Groundwater Hydrograph



Station Name: KIRKHAM MW435

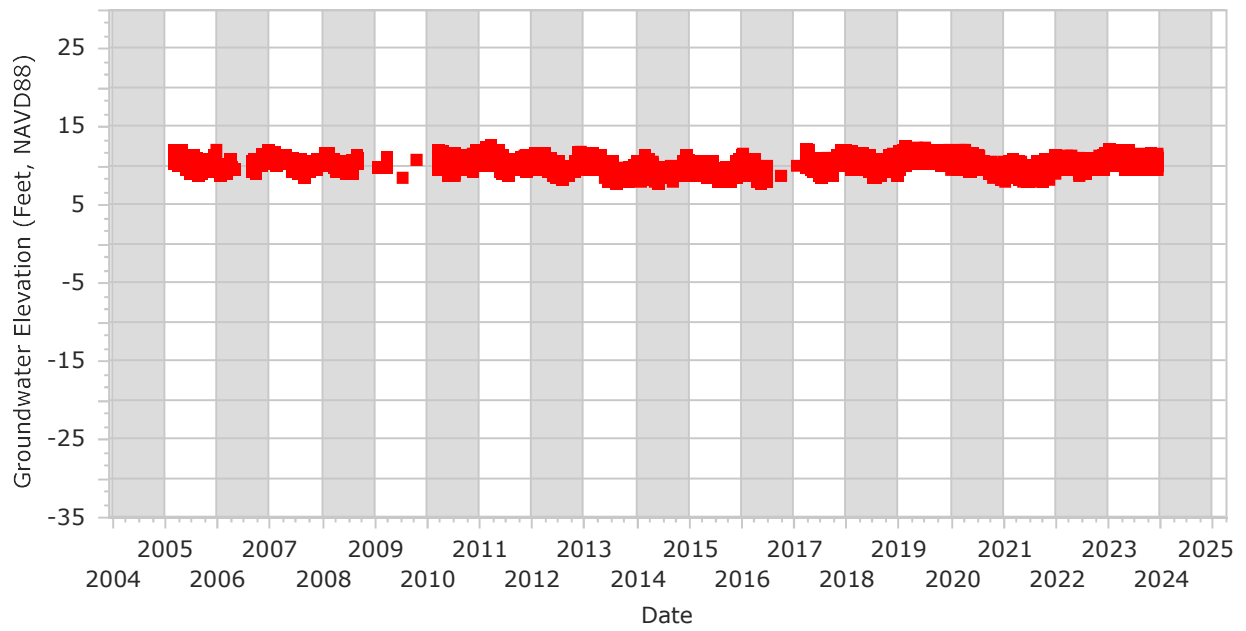
Groundwater Hydrograph





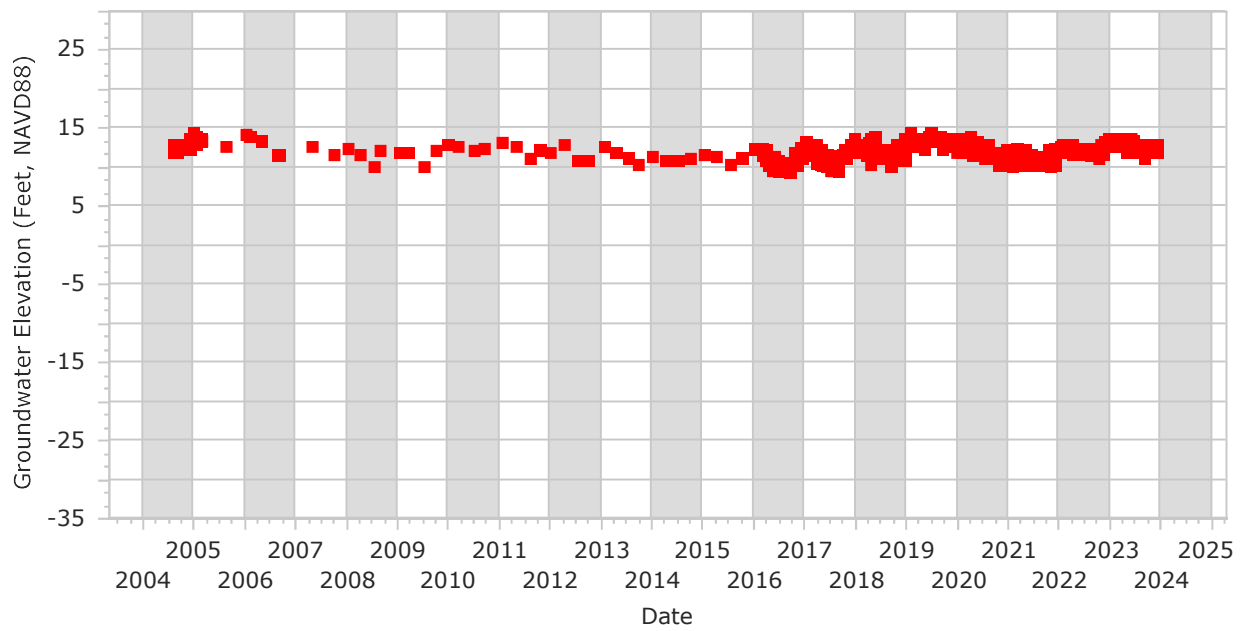
Station Name: ORTEGA MW120

### Groundwater Hydrograph

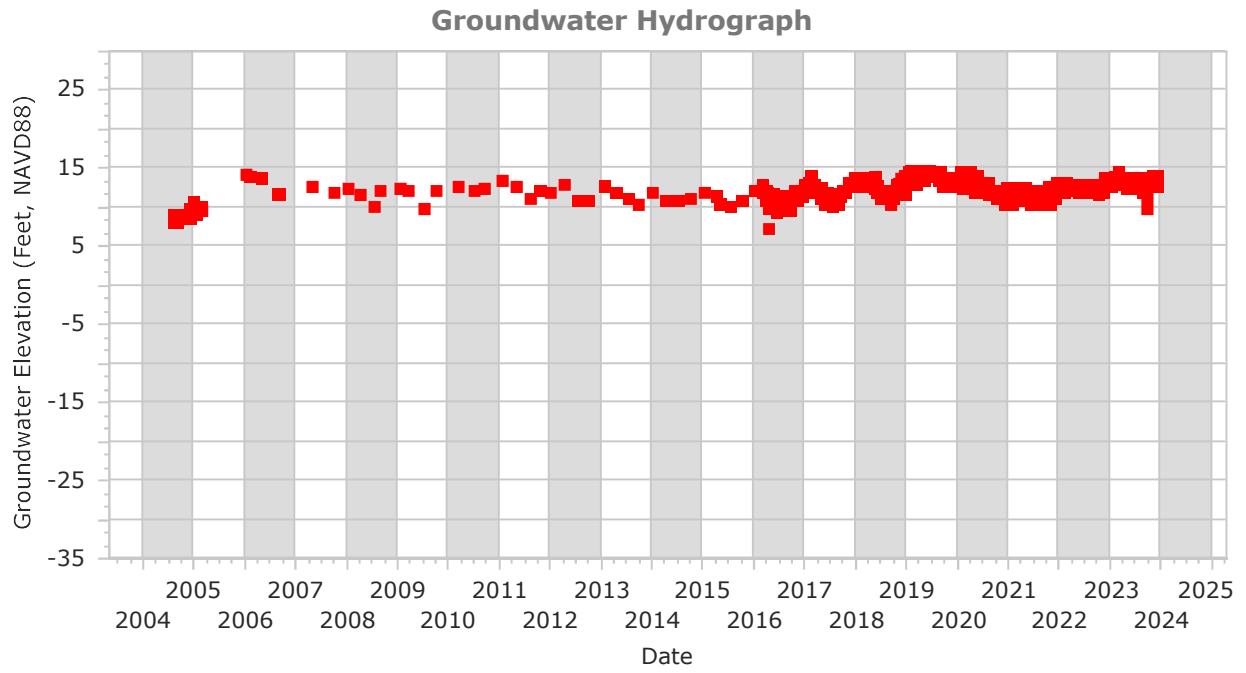


Station Name: ORTEGA MW265

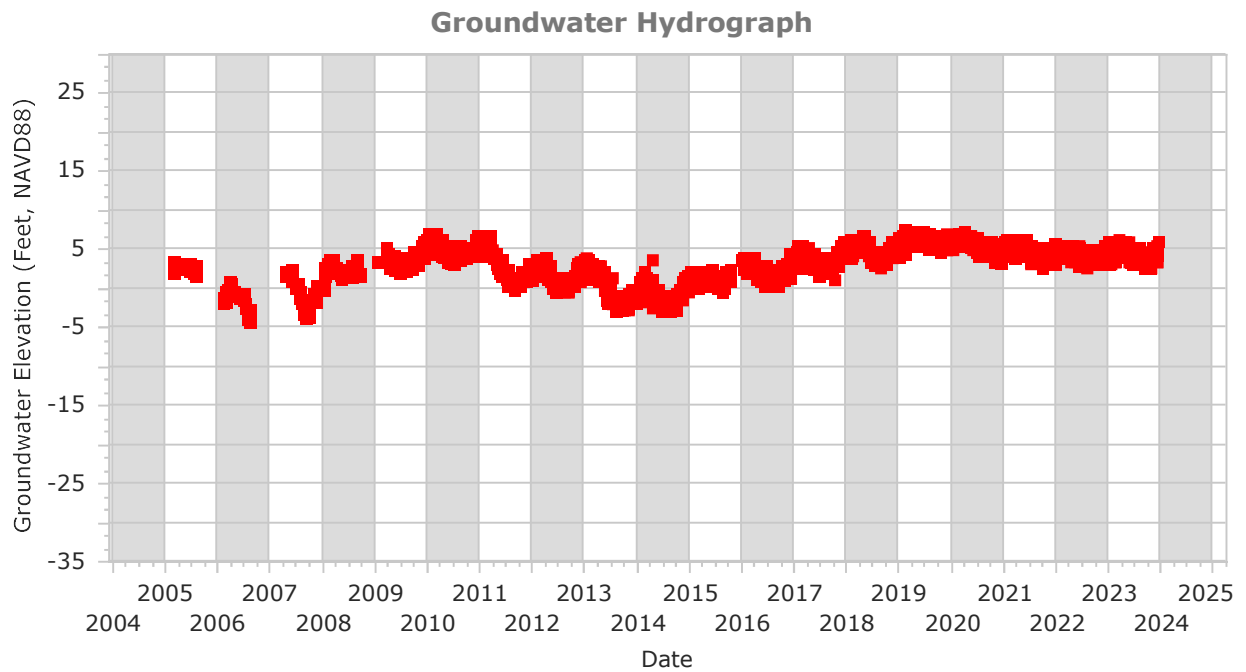
### Groundwater Hydrograph



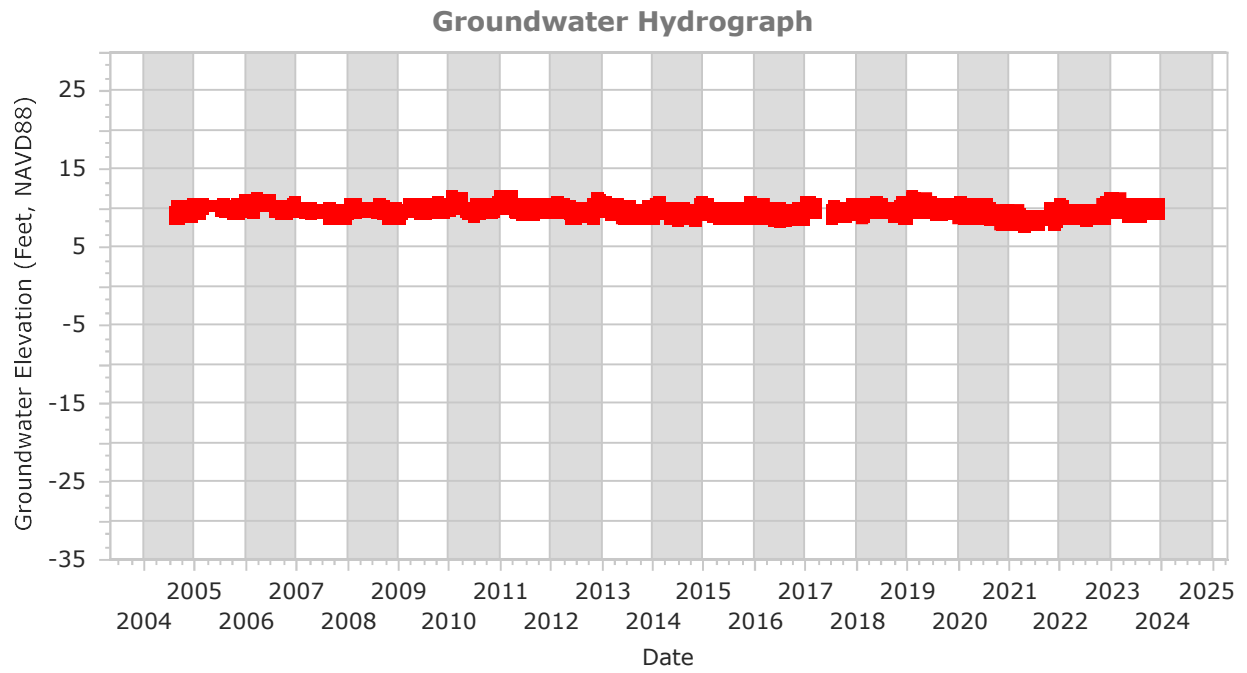
Station Name: ORTEGA MW400



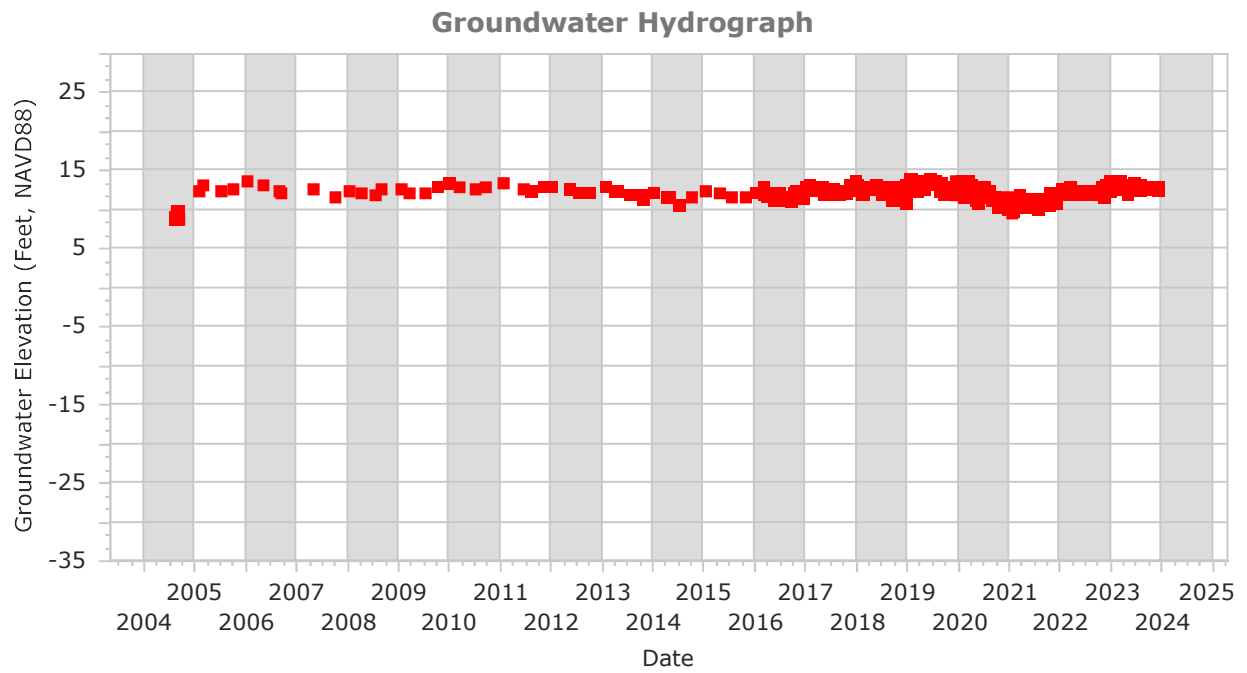
Station Name: ORTEGA MW475



Station Name: TARAVAL MW145

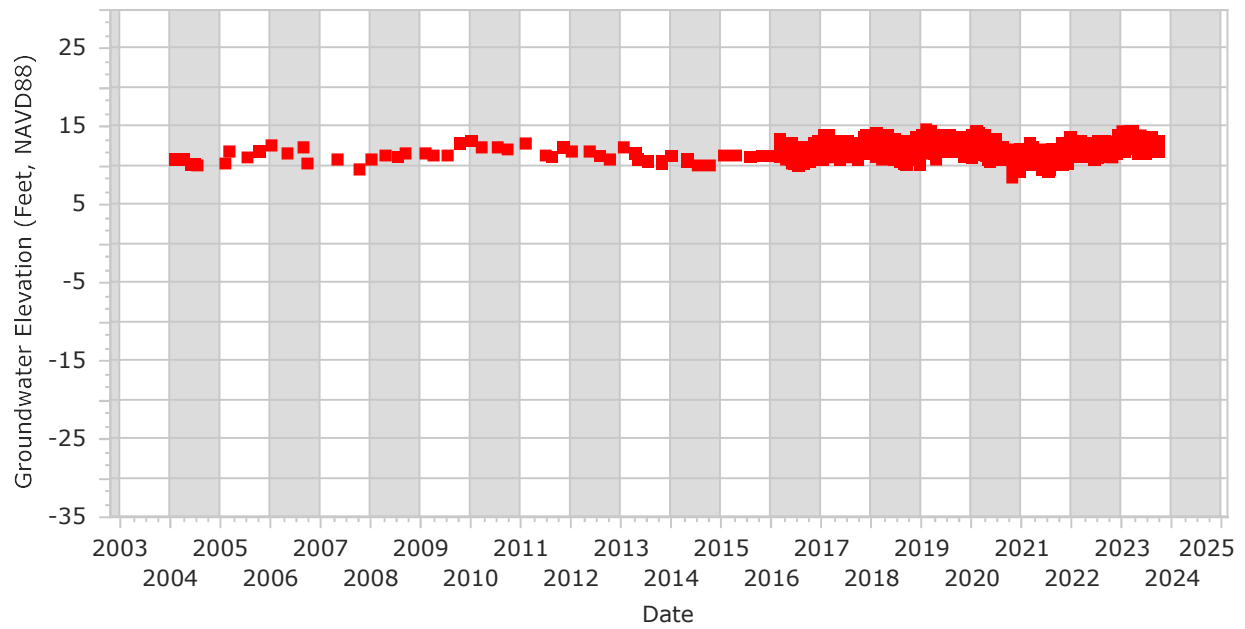


Station Name: TARAVAL MW240



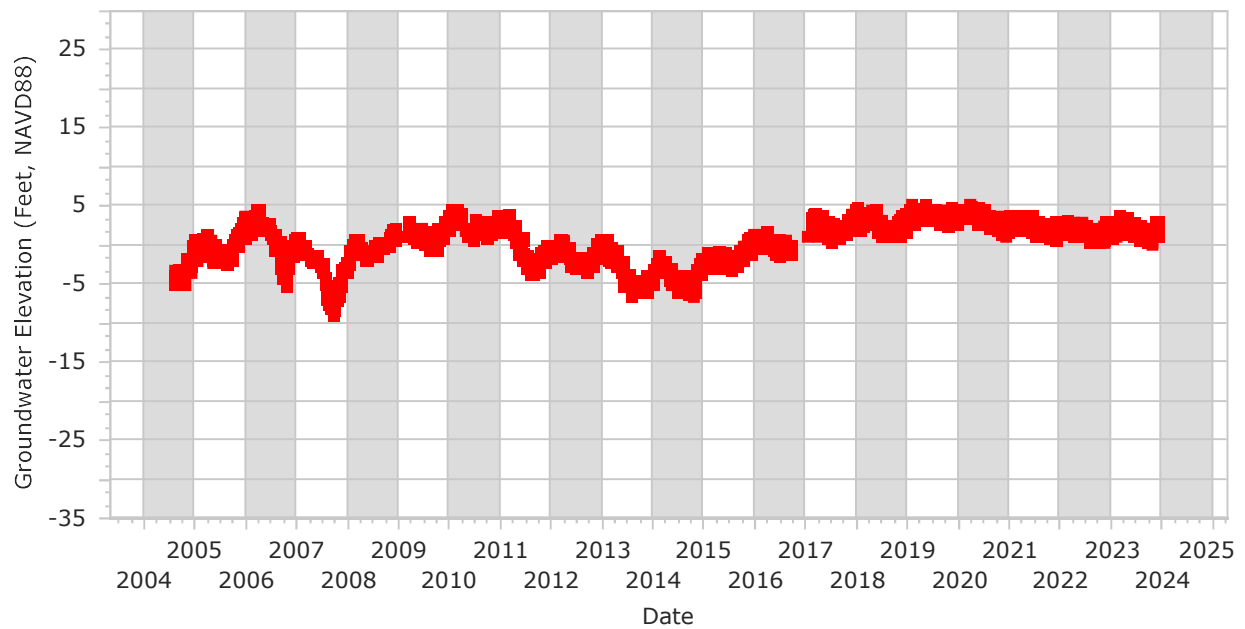
Station Name: TARAVAL MW400

Groundwater Hydrograph



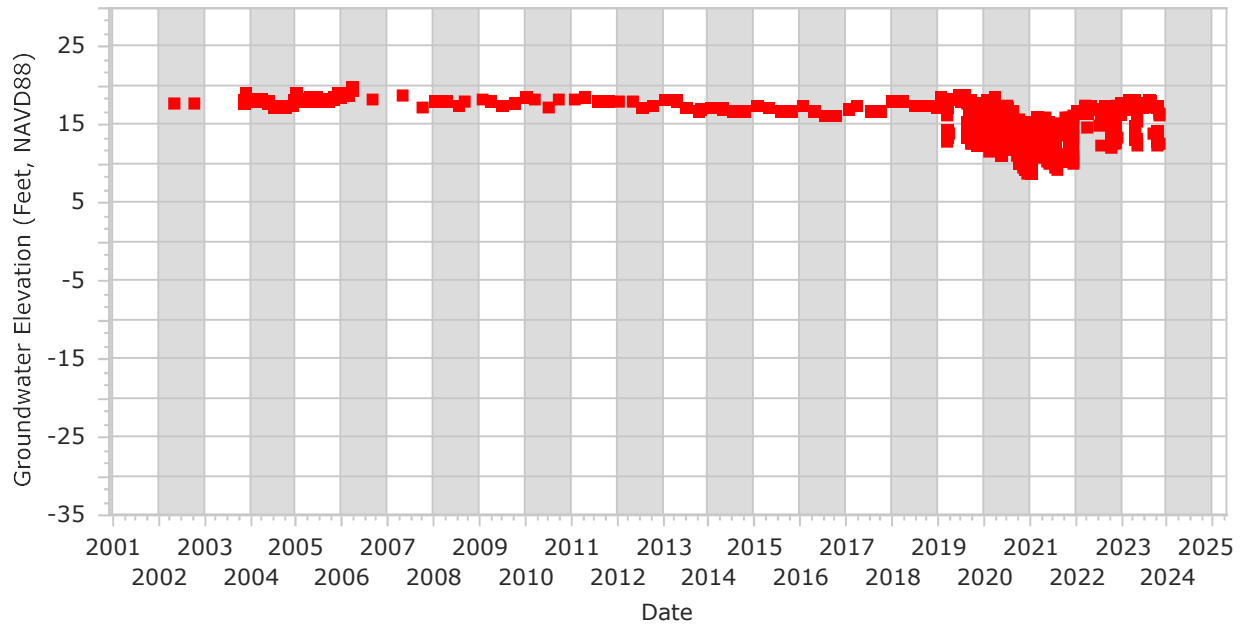
Station Name: TARAVAL MW530

Groundwater Hydrograph



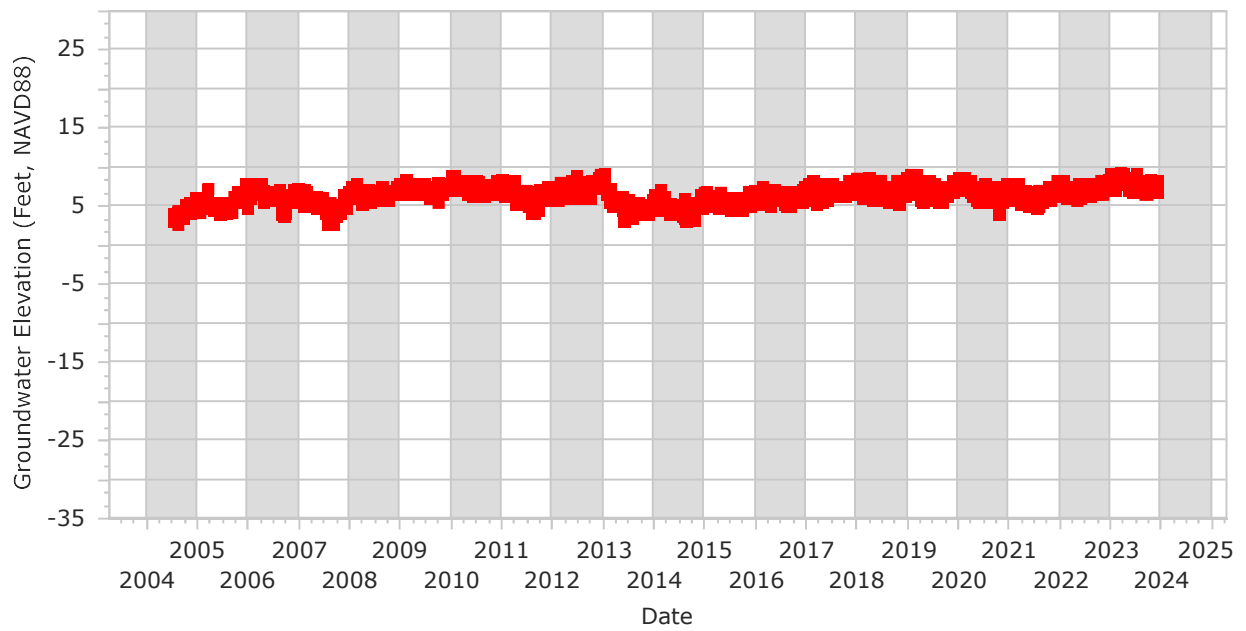
Station Name: WEST SUNSET PLAYGROUND

Groundwater Hydrograph



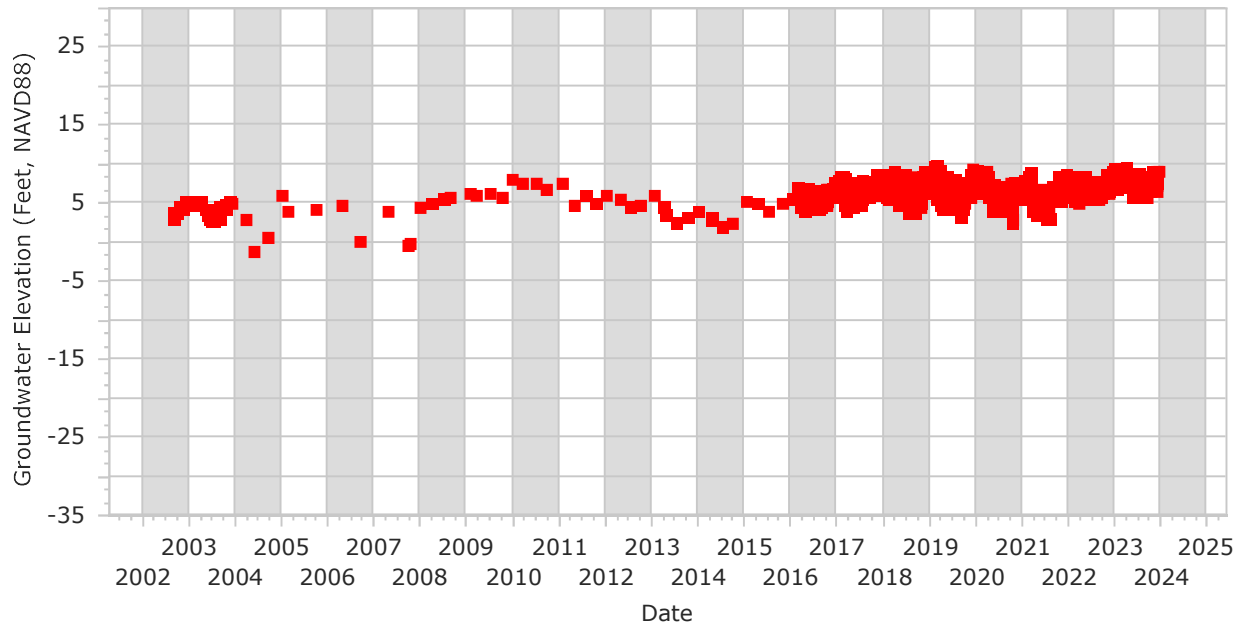
Station Name: ZOO MW275

Groundwater Hydrograph



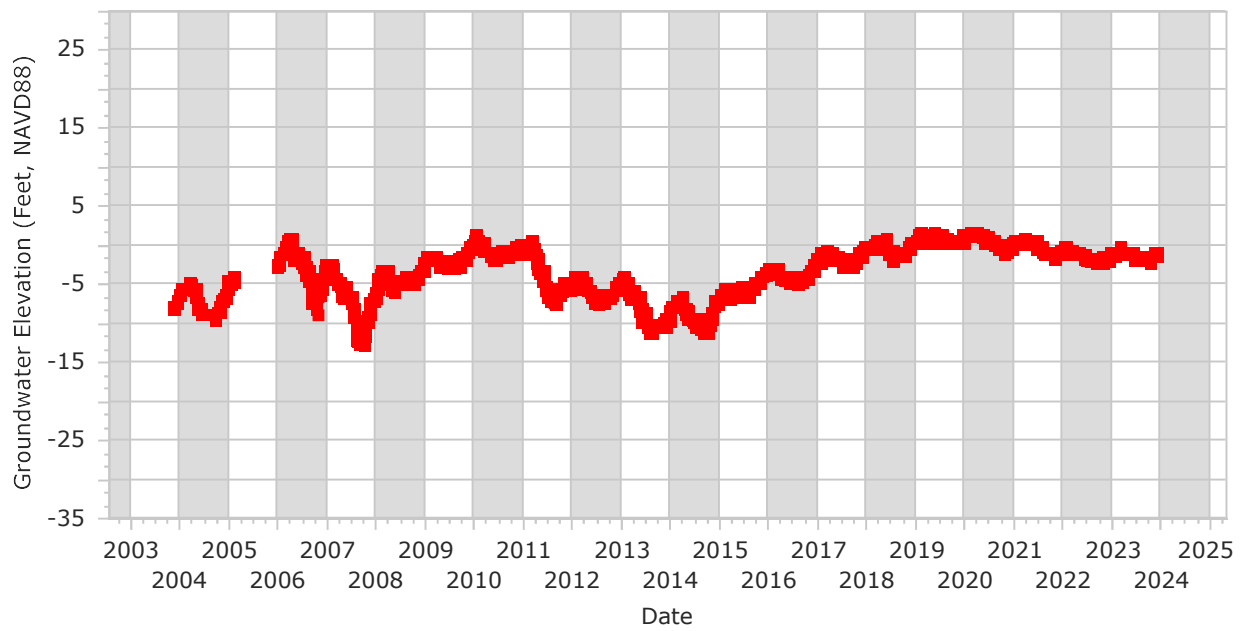
Station Name: ZOO MW450

Groundwater Hydrograph

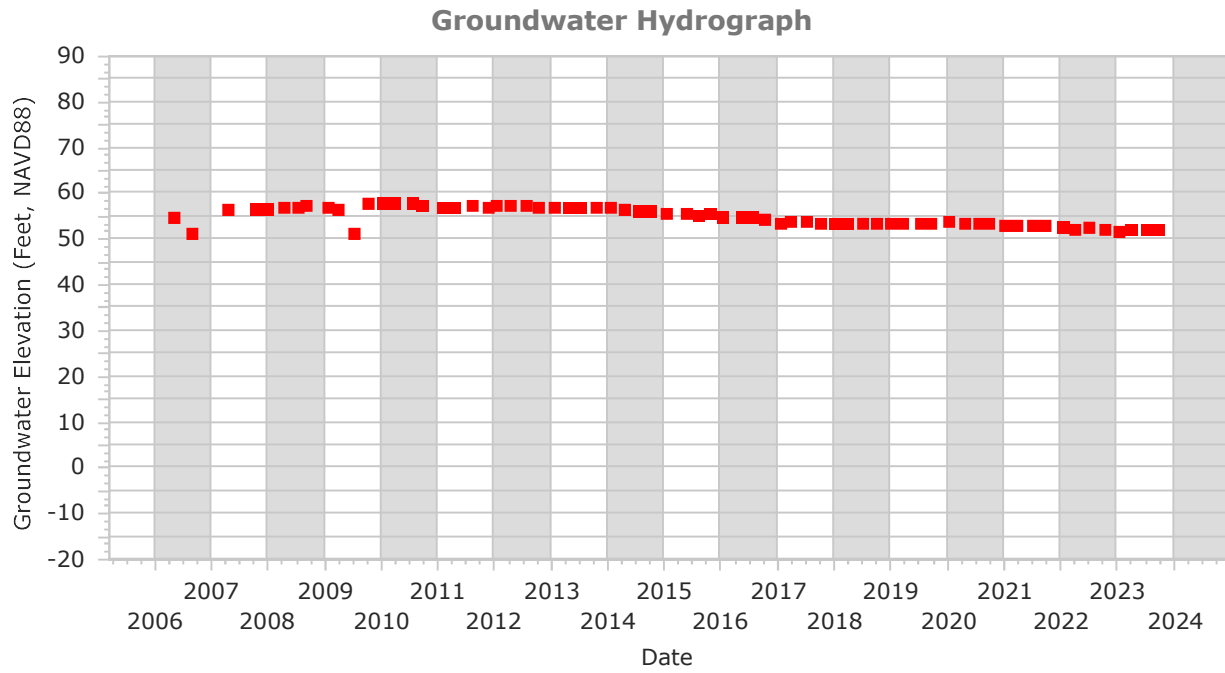


Station Name: ZOO MW565

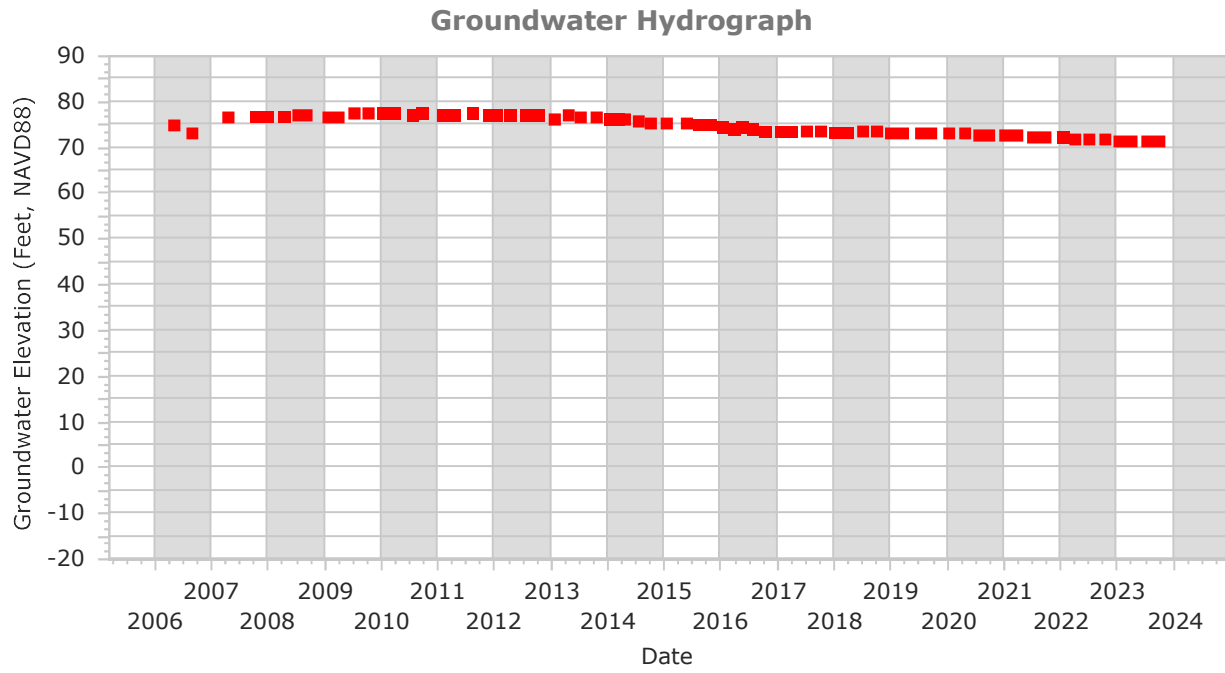
Groundwater Hydrograph



Station Name: CENTRAL PUMP 190

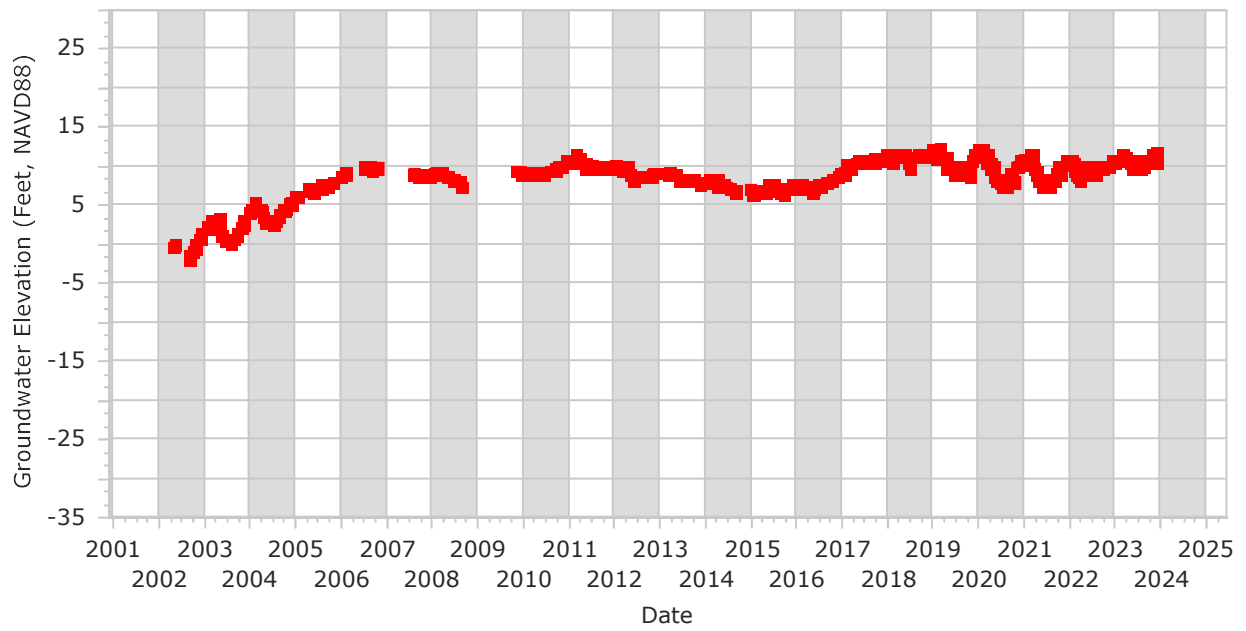


Station Name: CENTRAL PUMP 270



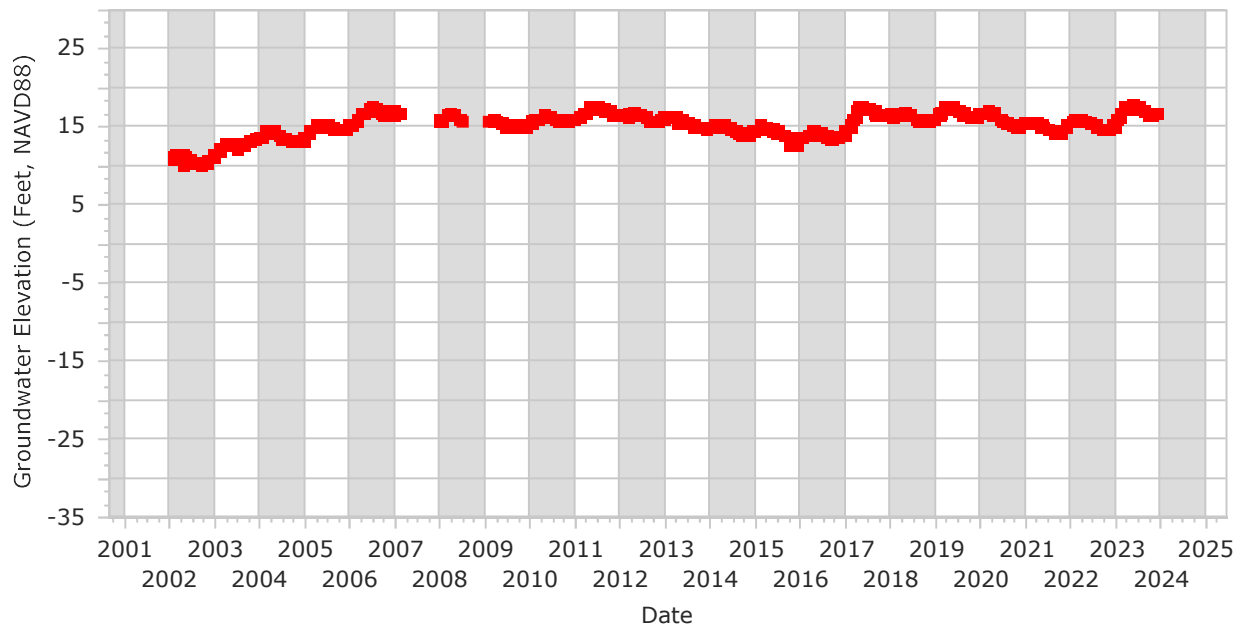
Station Name: LMMW-1D

Groundwater Hydrograph



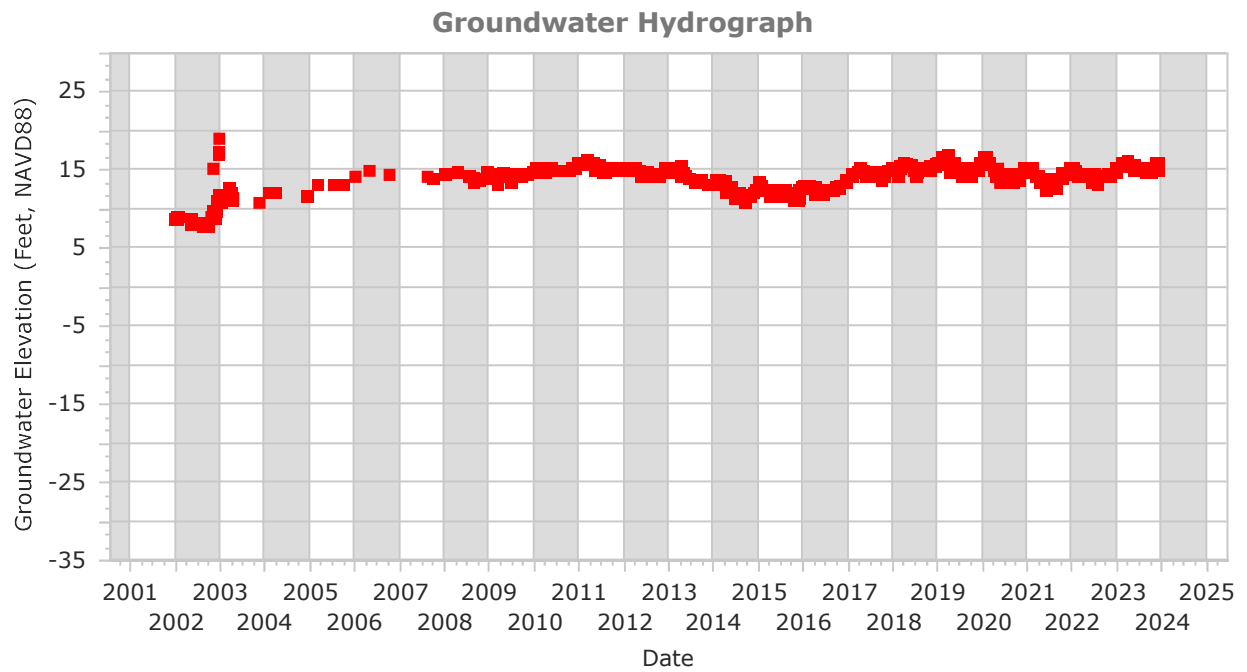
Station Name: LMMW-1S

Groundwater Hydrograph

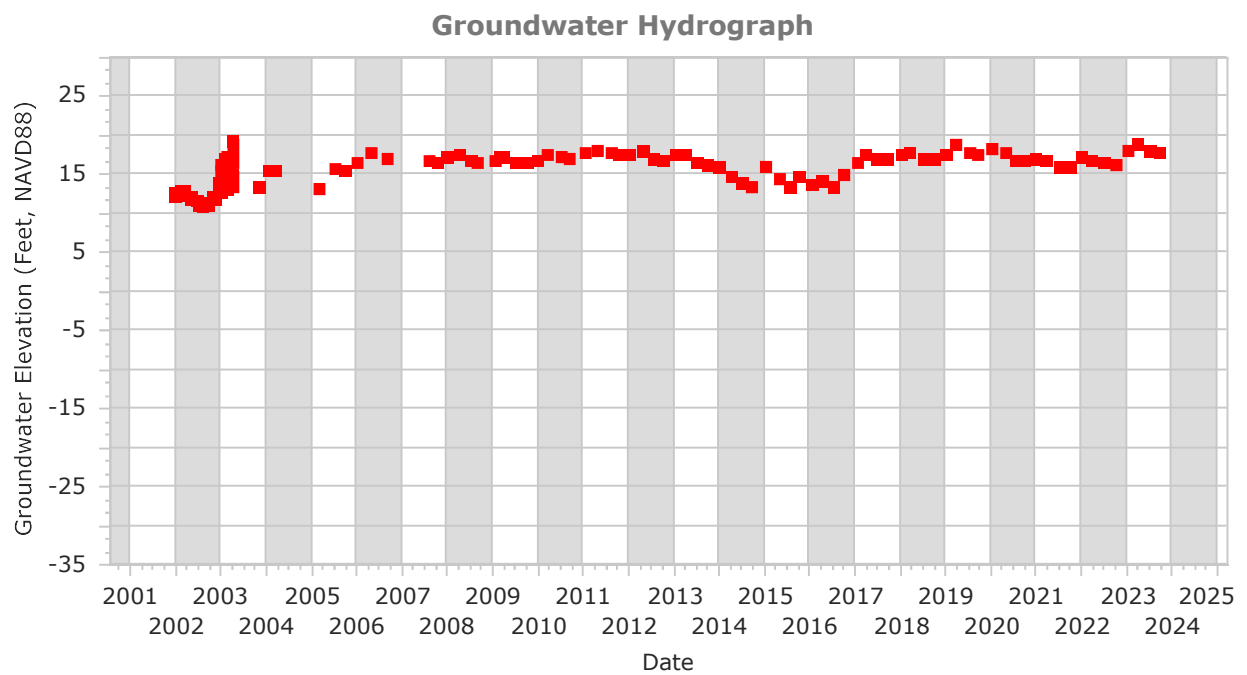




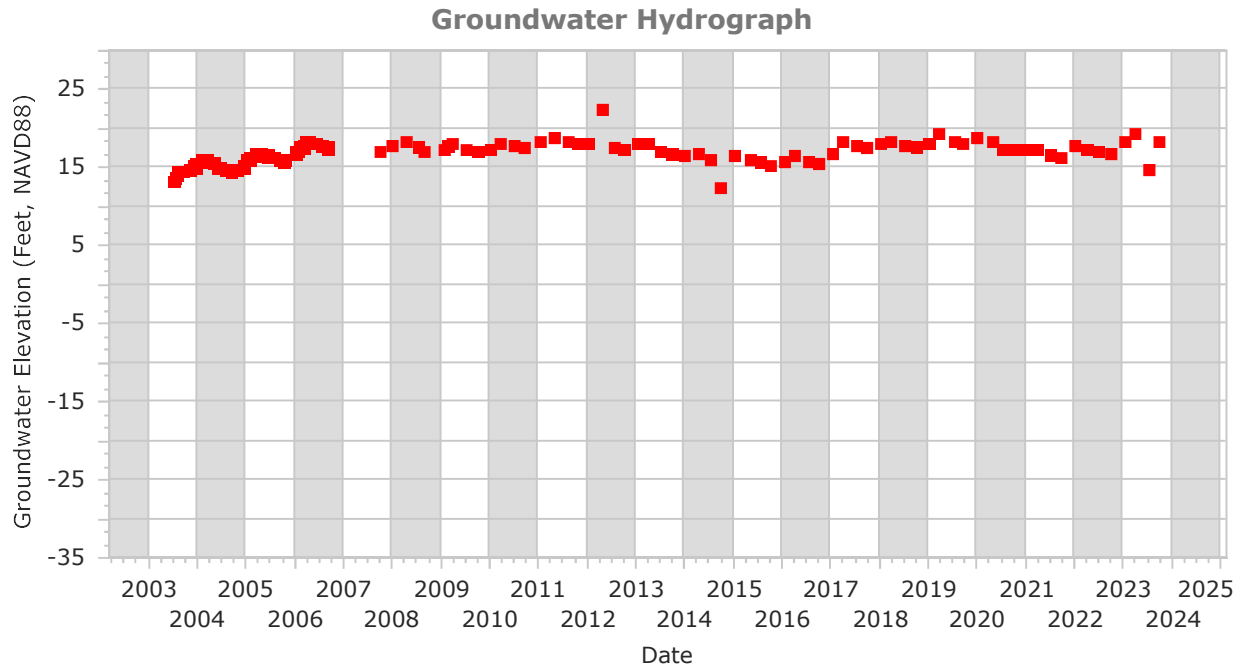
Station Name: LMMW-2D



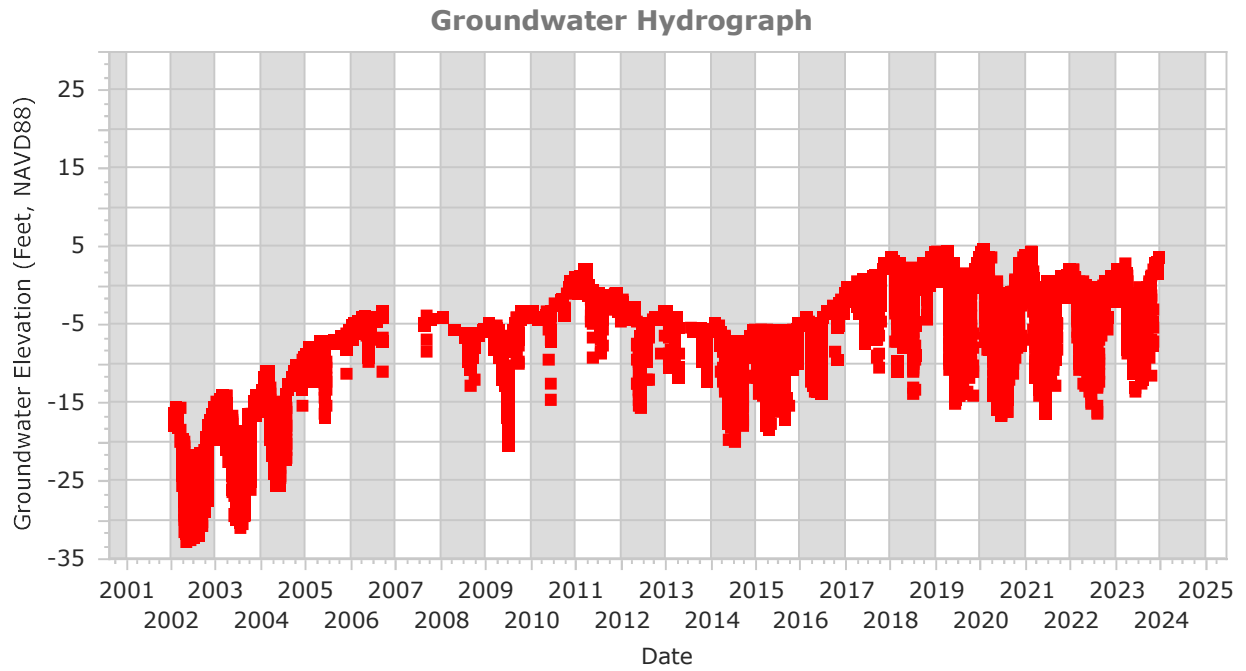
Station Name: LMMW-2S



Station Name: LMMW-2SS

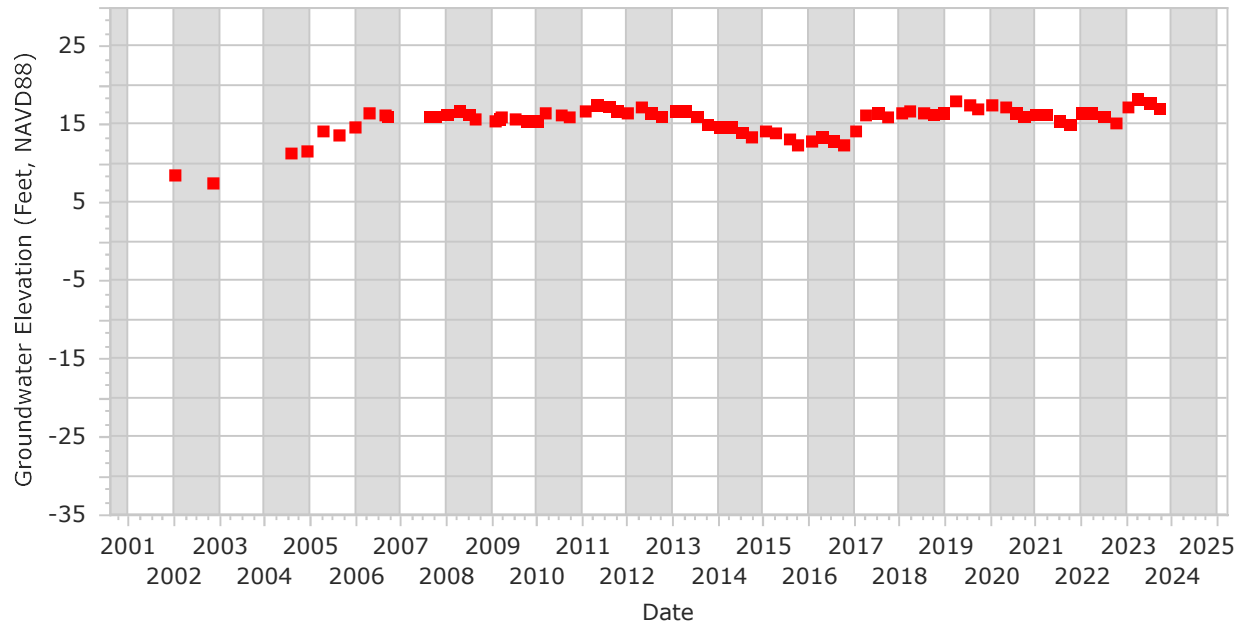


Station Name: LMMW-3D



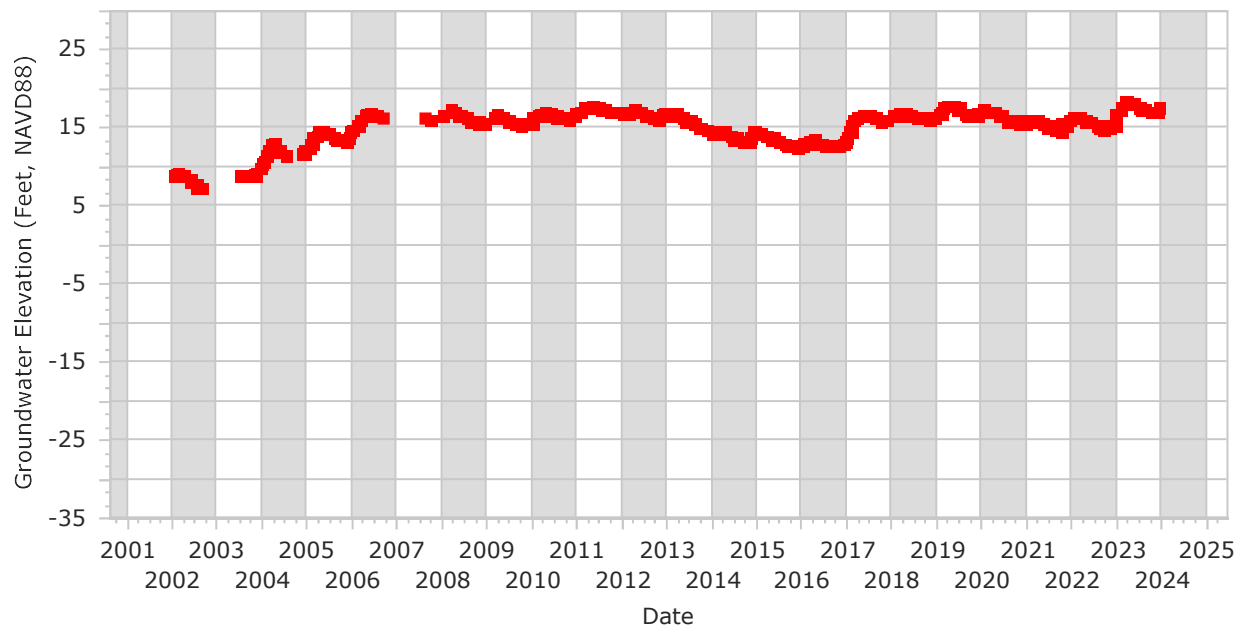
Station Name: LMMW-3S

Groundwater Hydrograph



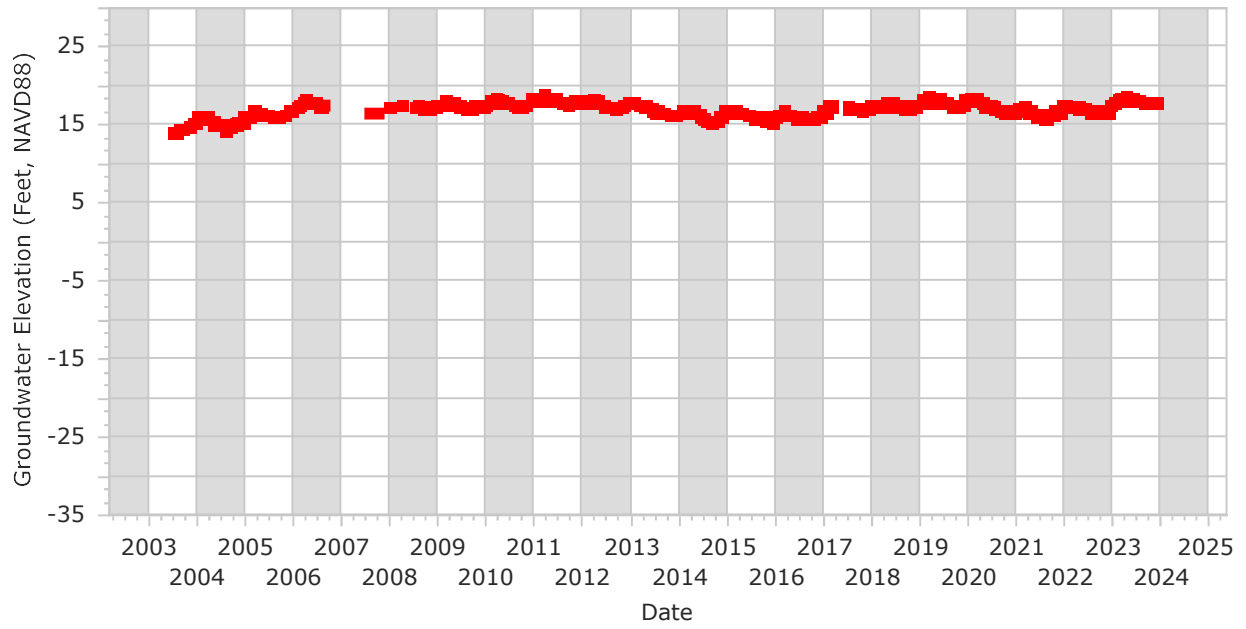
Station Name: LMMW-3SS

Groundwater Hydrograph



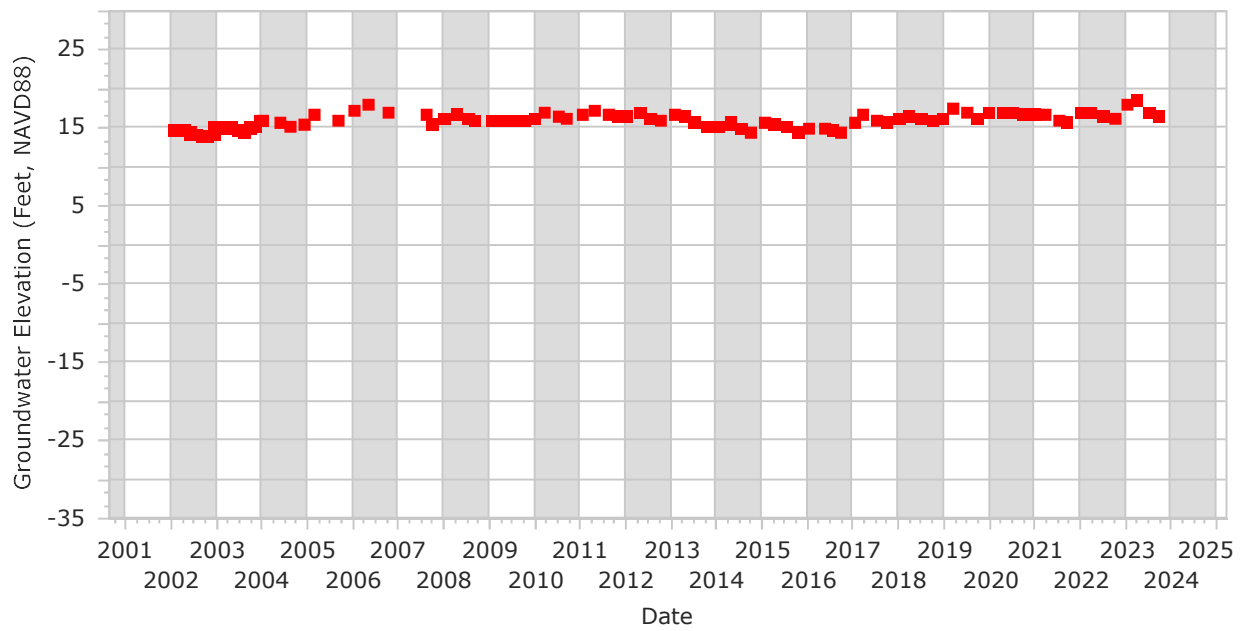
Station Name: LMMW-4S

Groundwater Hydrograph

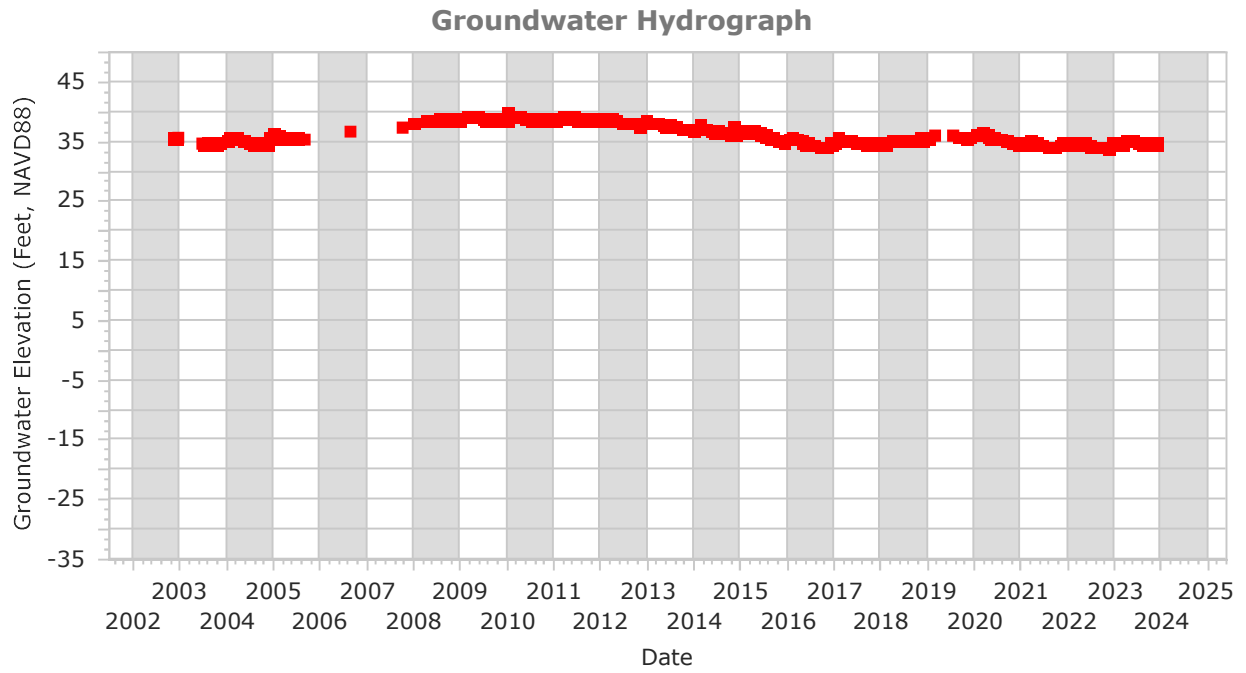


Station Name: LMMW-4SS

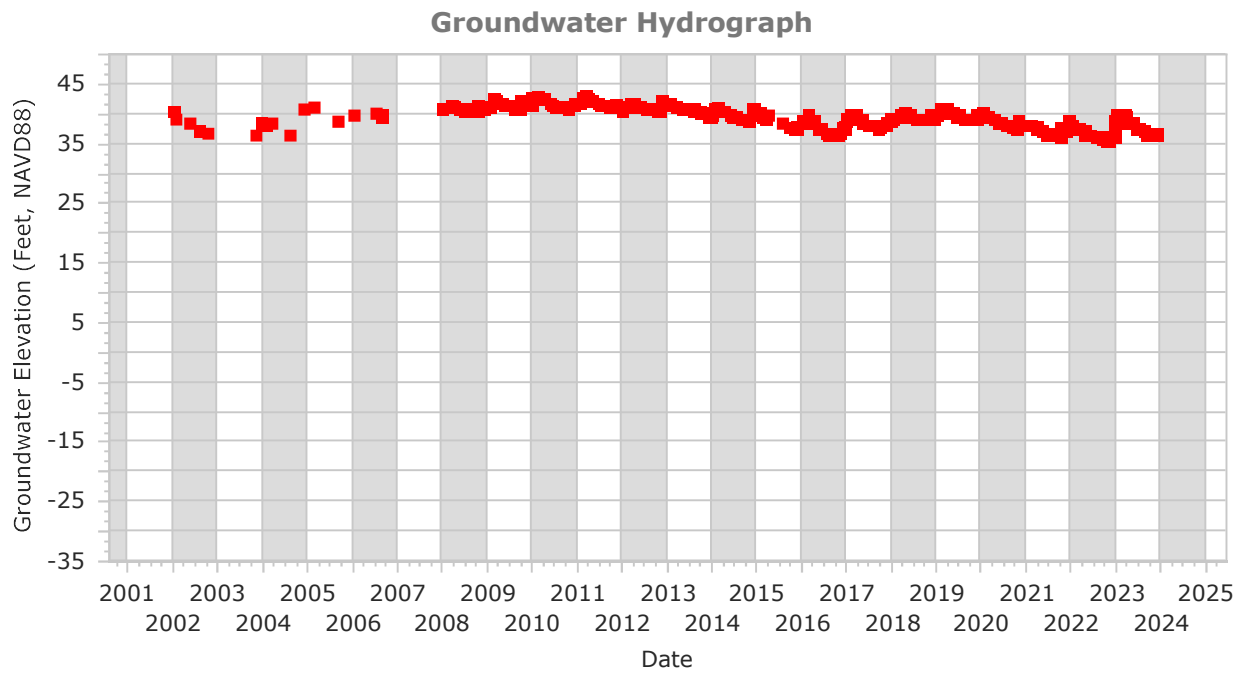
Groundwater Hydrograph



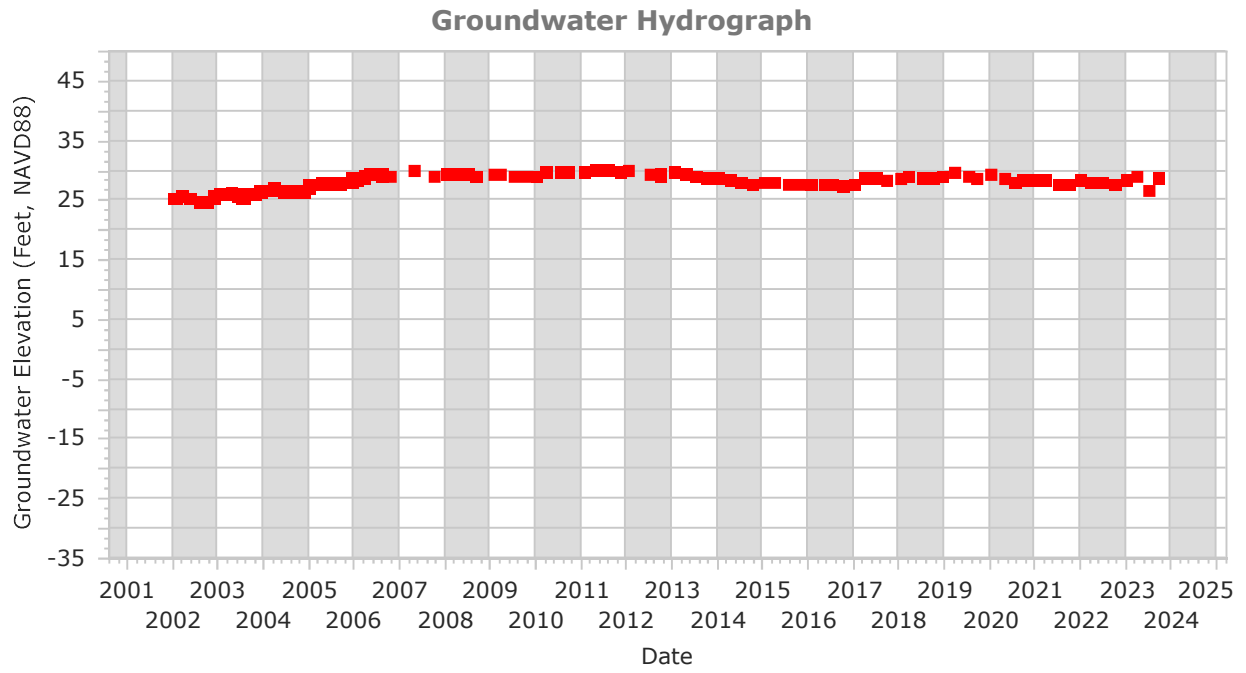
Station Name: LMMW-5S



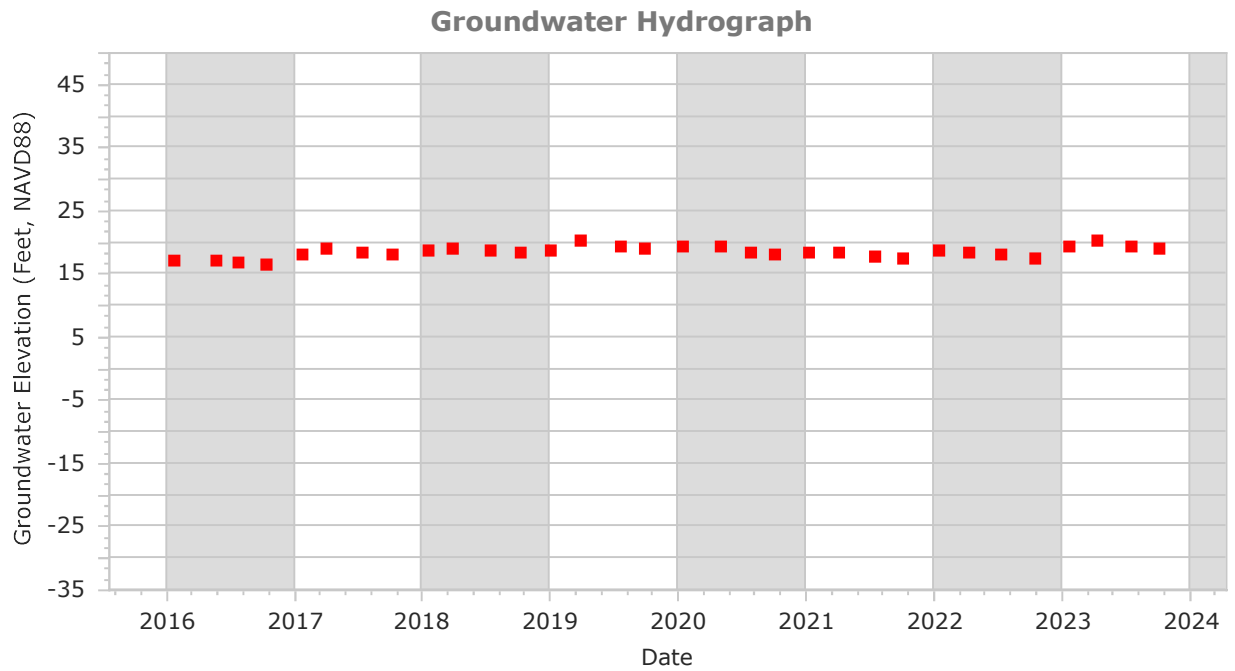
Station Name: LMMW-5SS



Station Name: LMMW-7SS

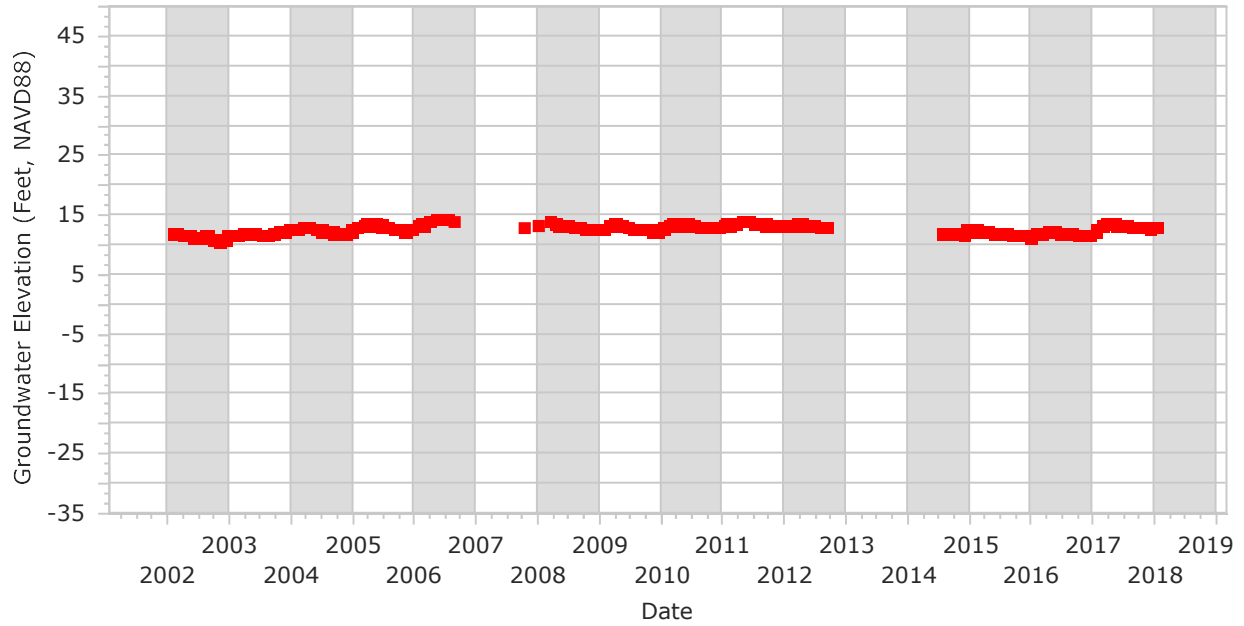


Station Name: LMMW-8SS



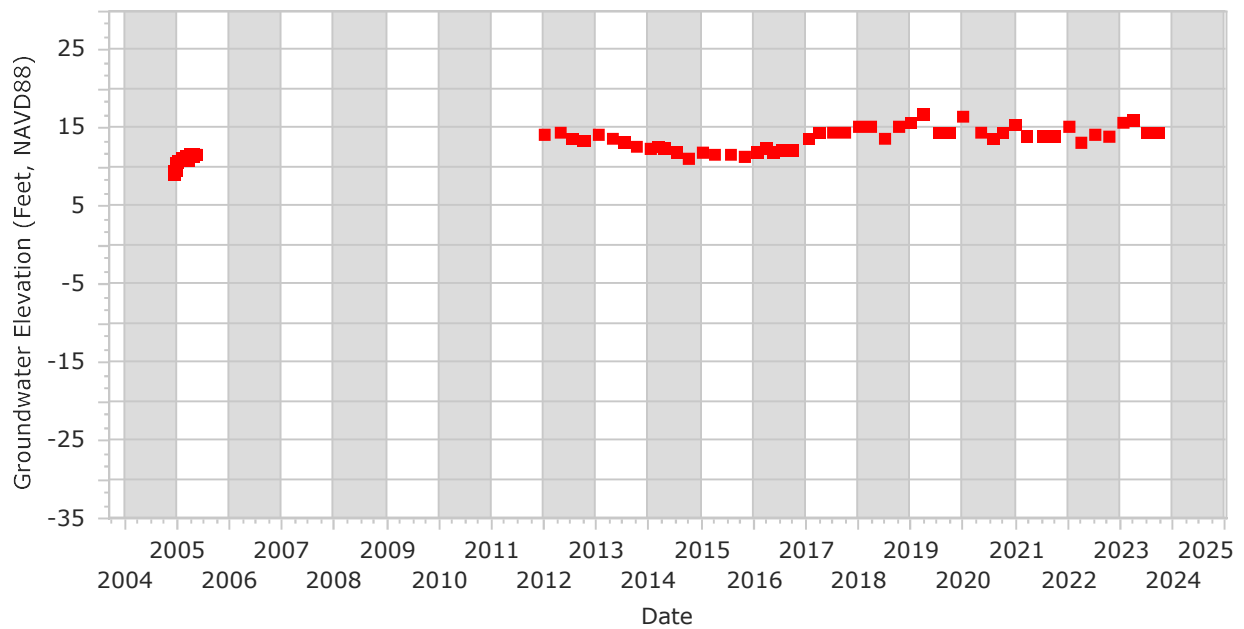
Station Name: LMMW-9SS

Groundwater Hydrograph



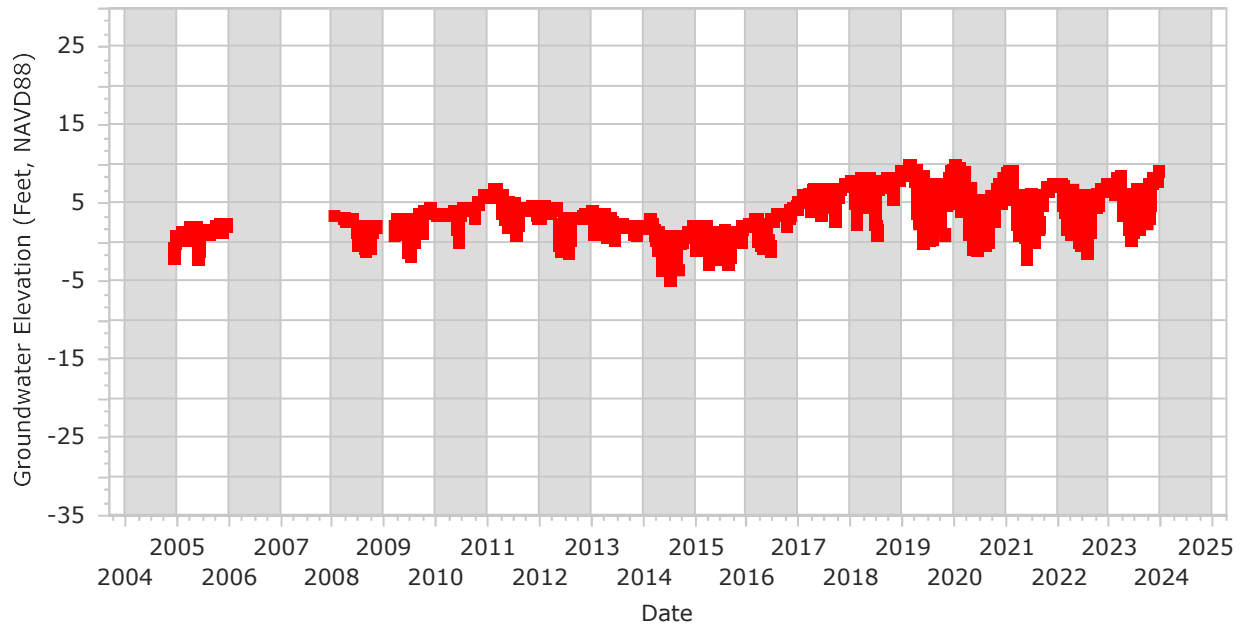
Station Name: LMPS 155

Groundwater Hydrograph



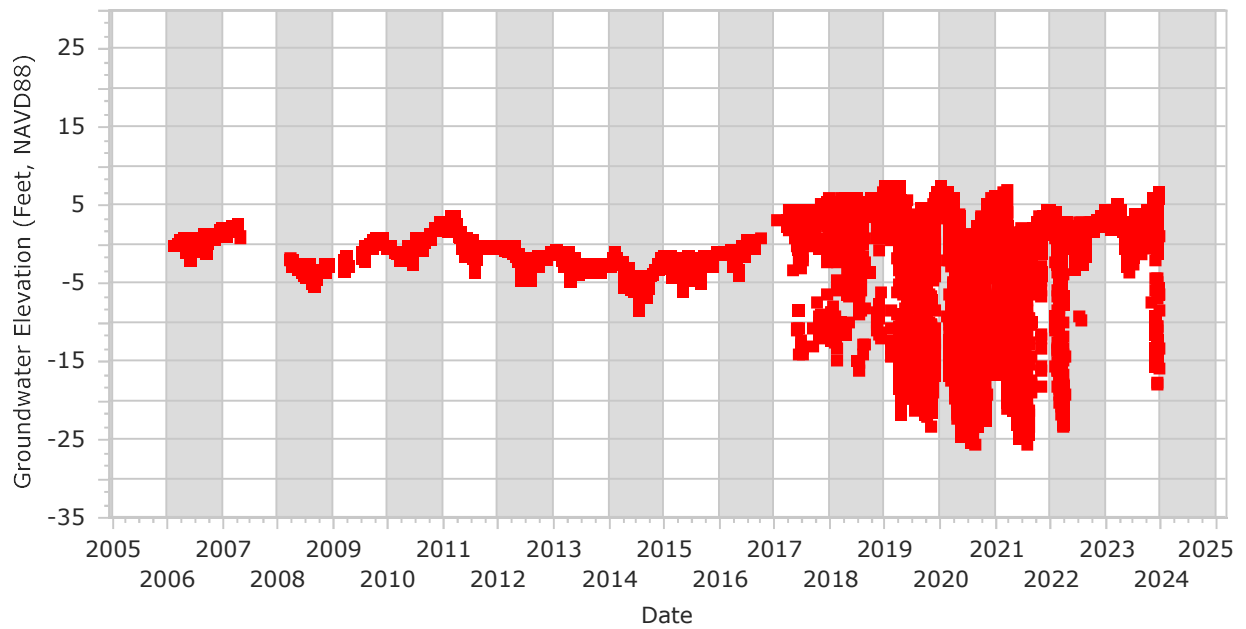
Station Name: LMPS 270

Groundwater Hydrograph



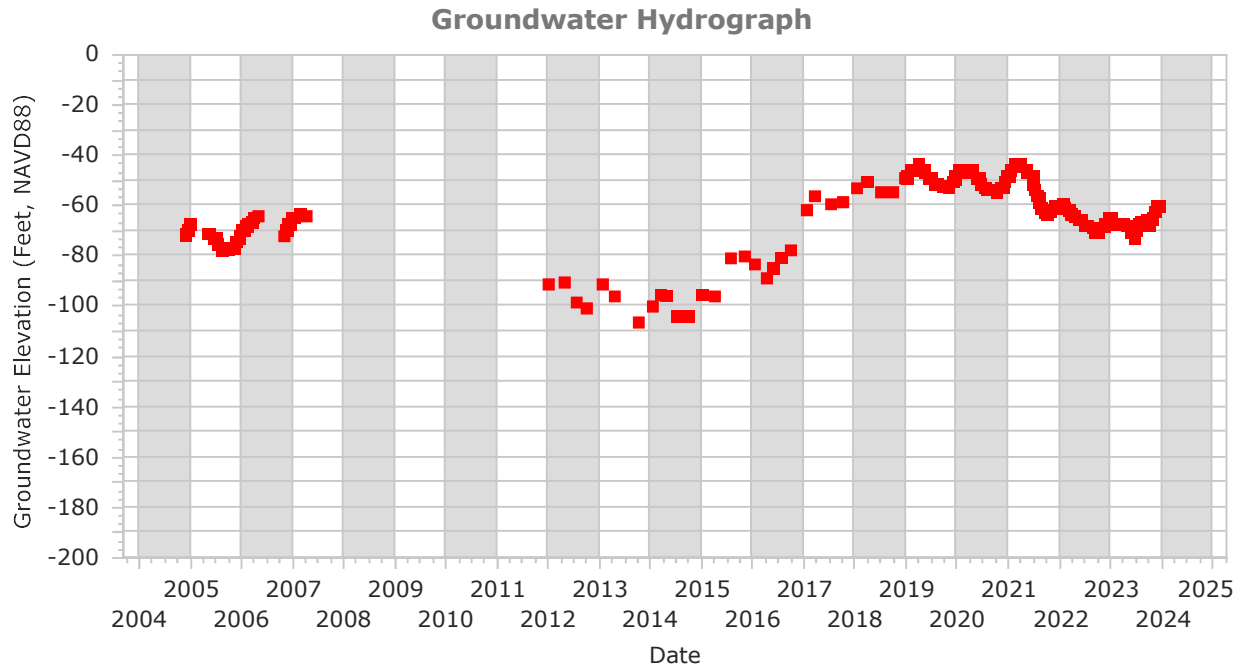
Station Name: LMPS 440

Groundwater Hydrograph

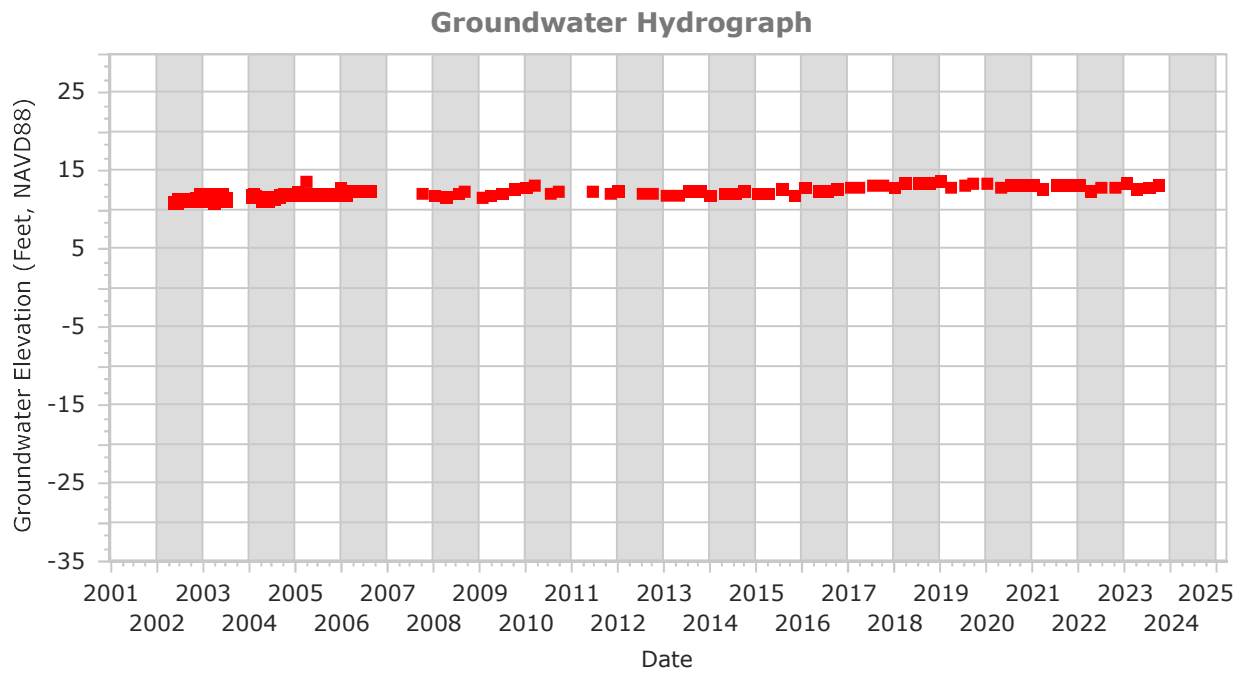




Station Name: LMPS 575

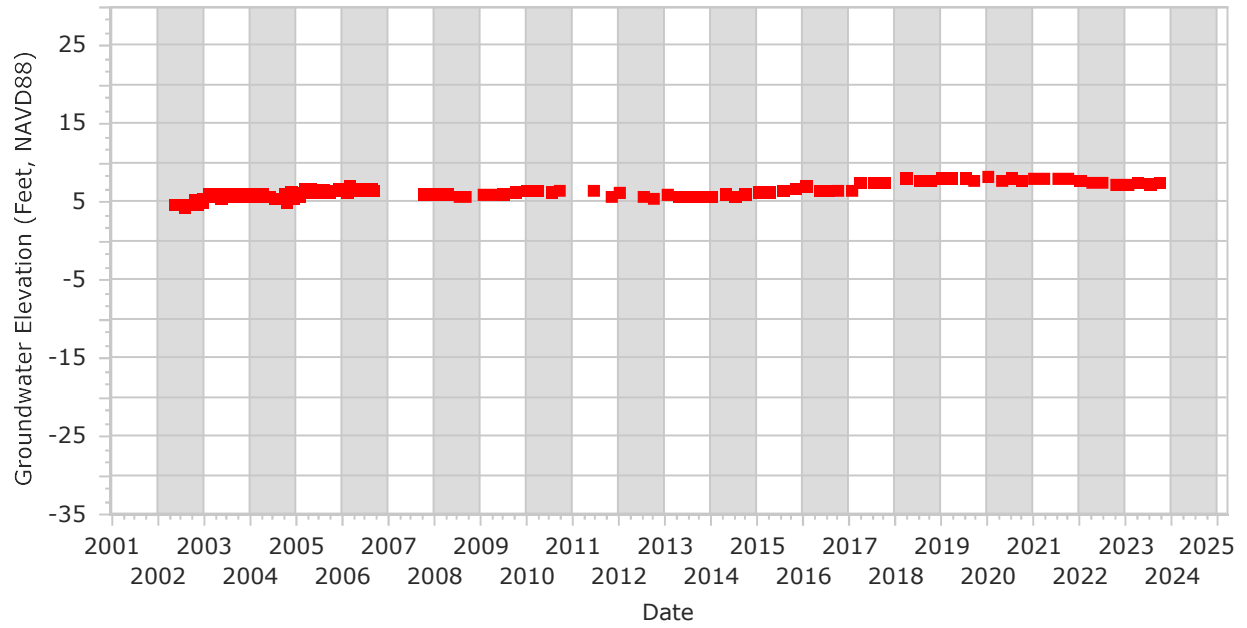


Station Name: FORT FUNSTON-M



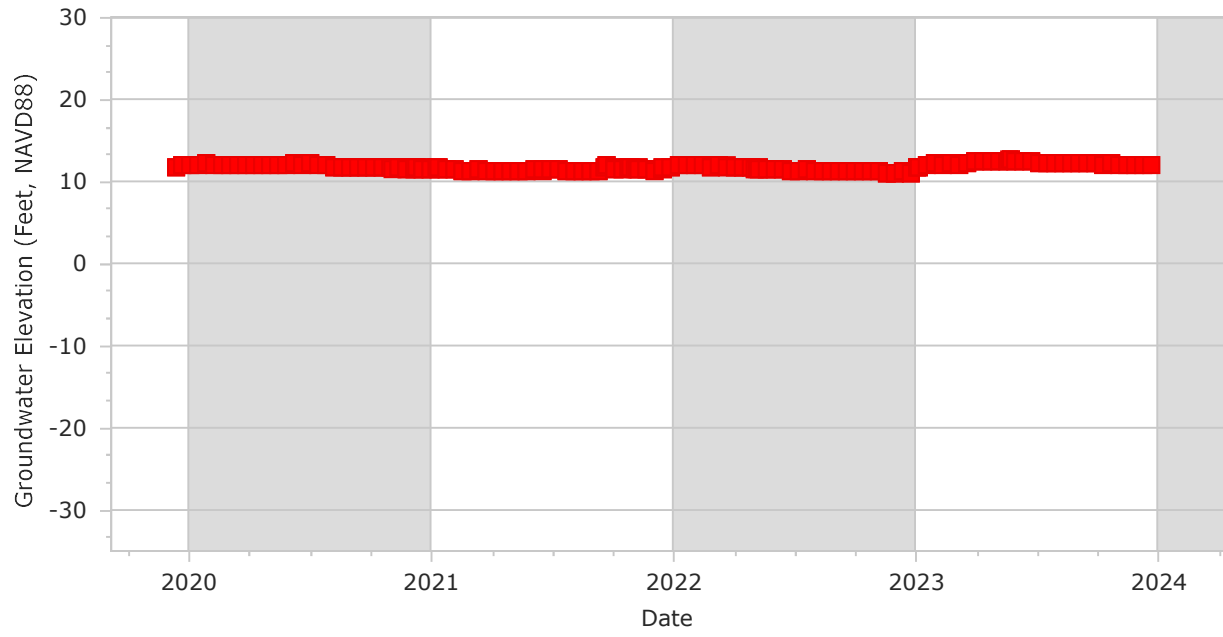
Station Name: FORT FUNSTON-S

### Groundwater Hydrograph

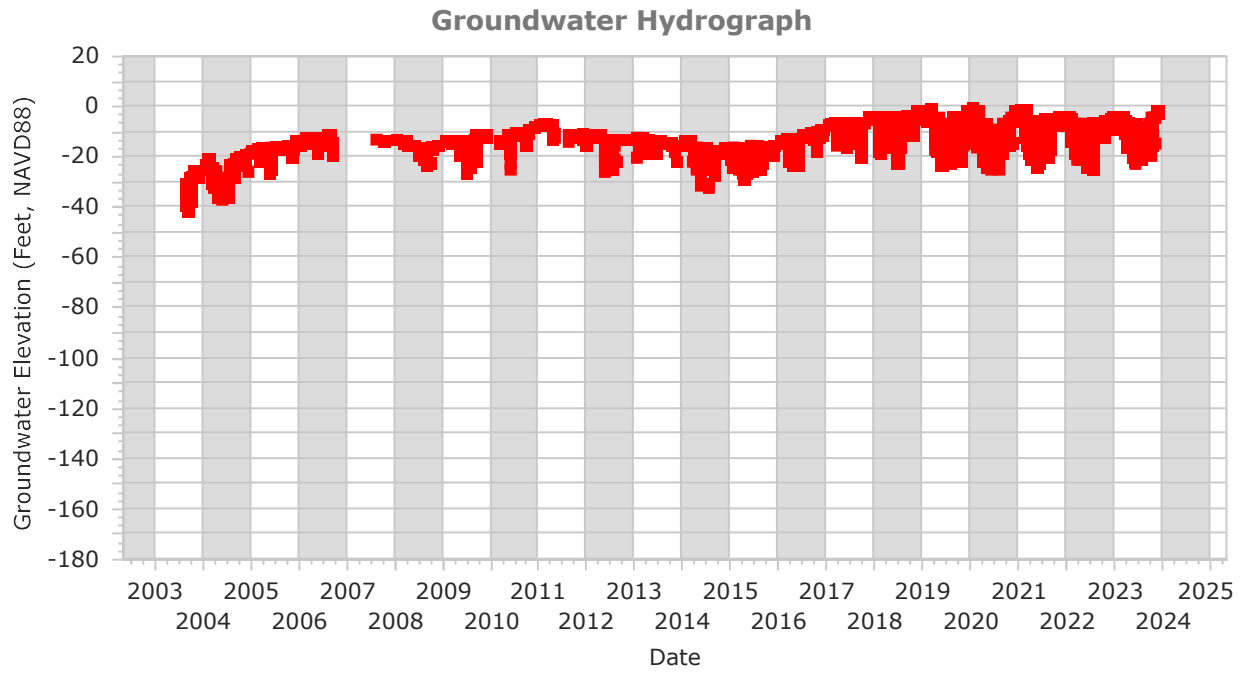


Station Name: LMMW-9S

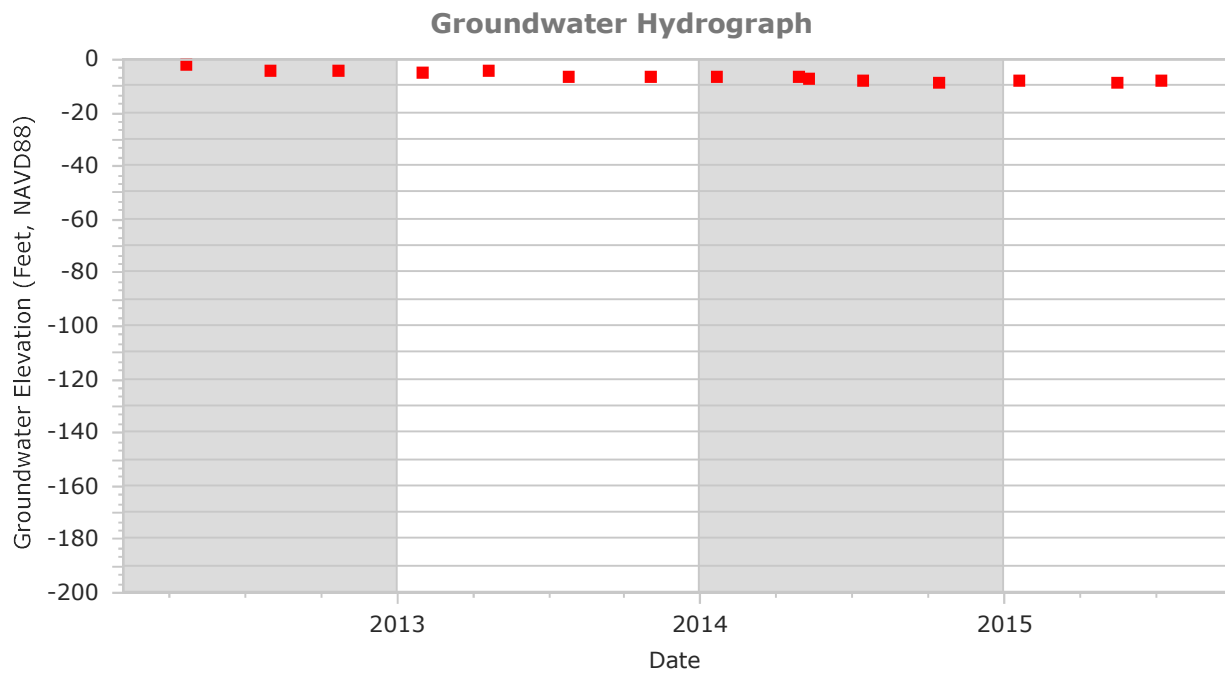
### Groundwater Hydrograph



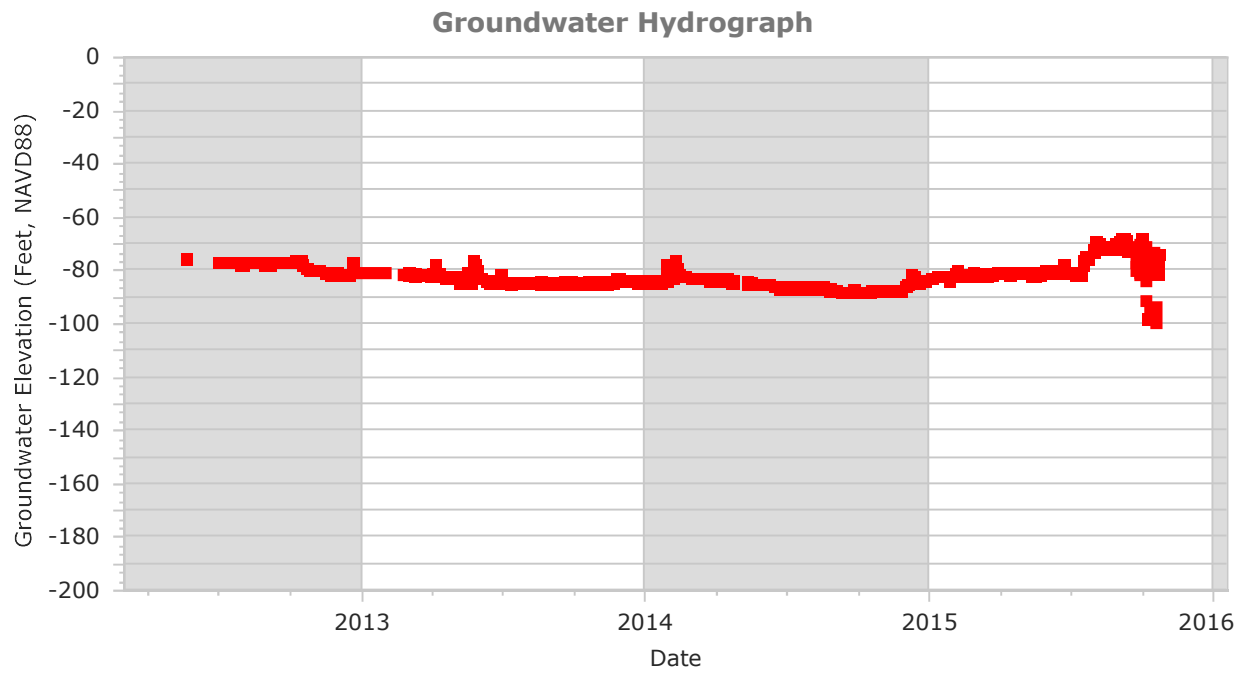
Station Name: LMMW-6D



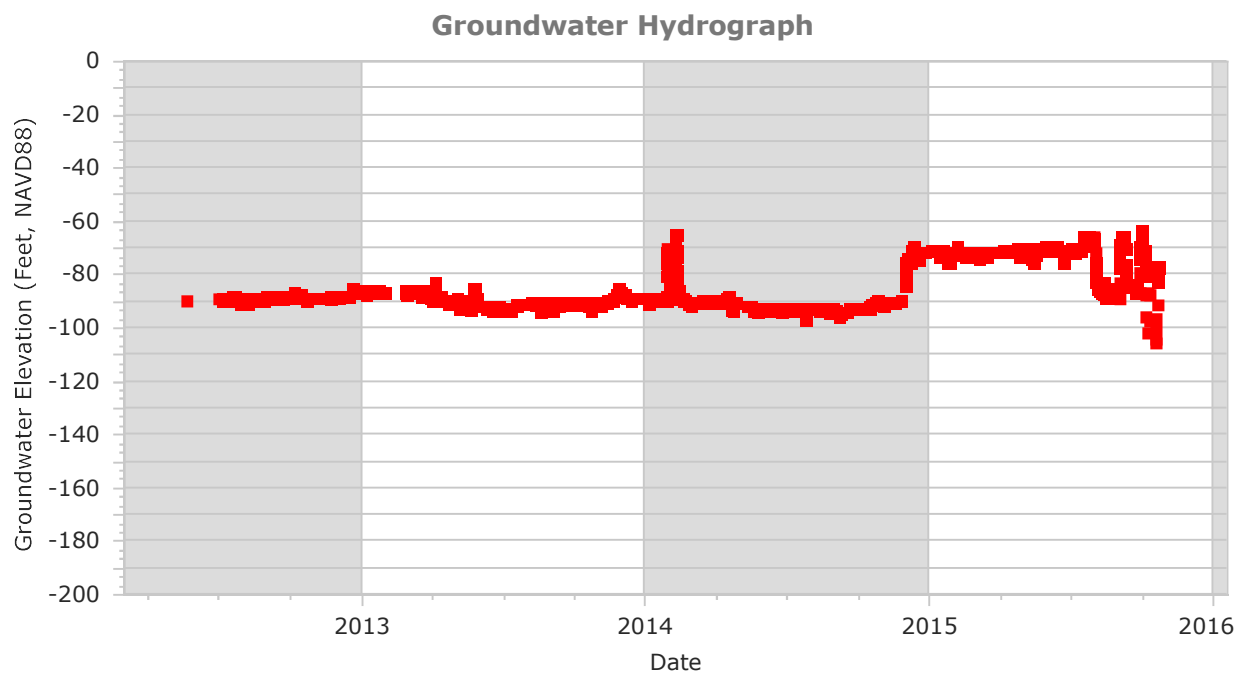
Station Name: MW-CUP-3A-240



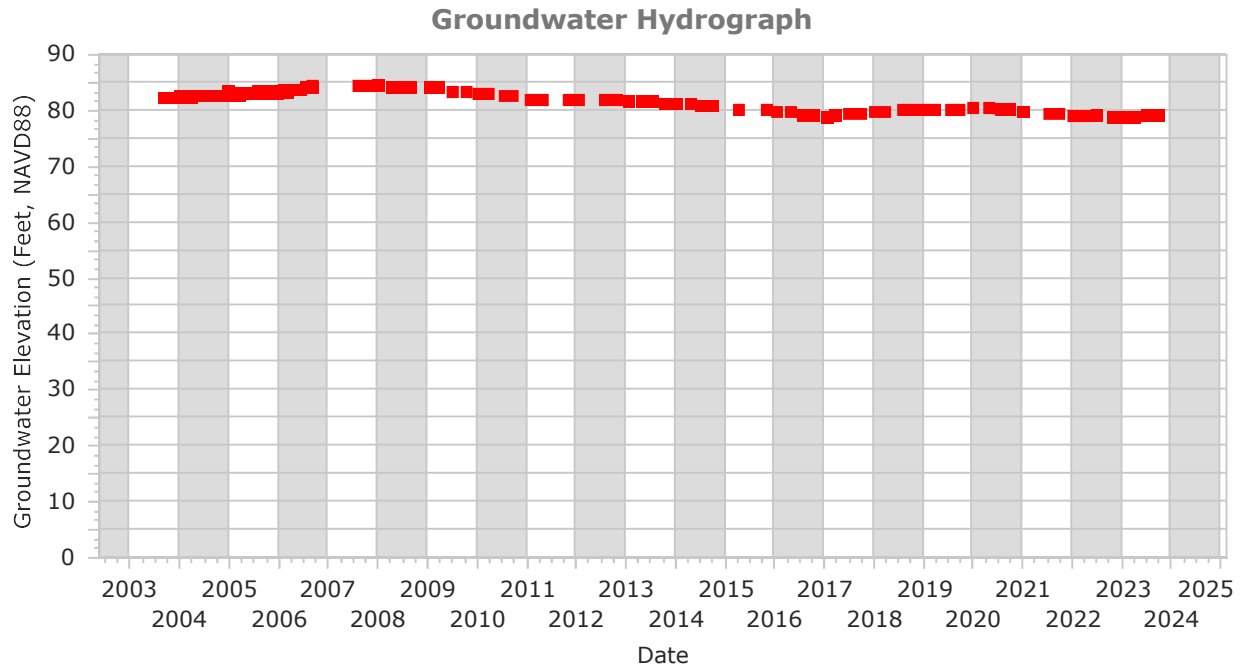
Station Name: MW-CUP-3A-450



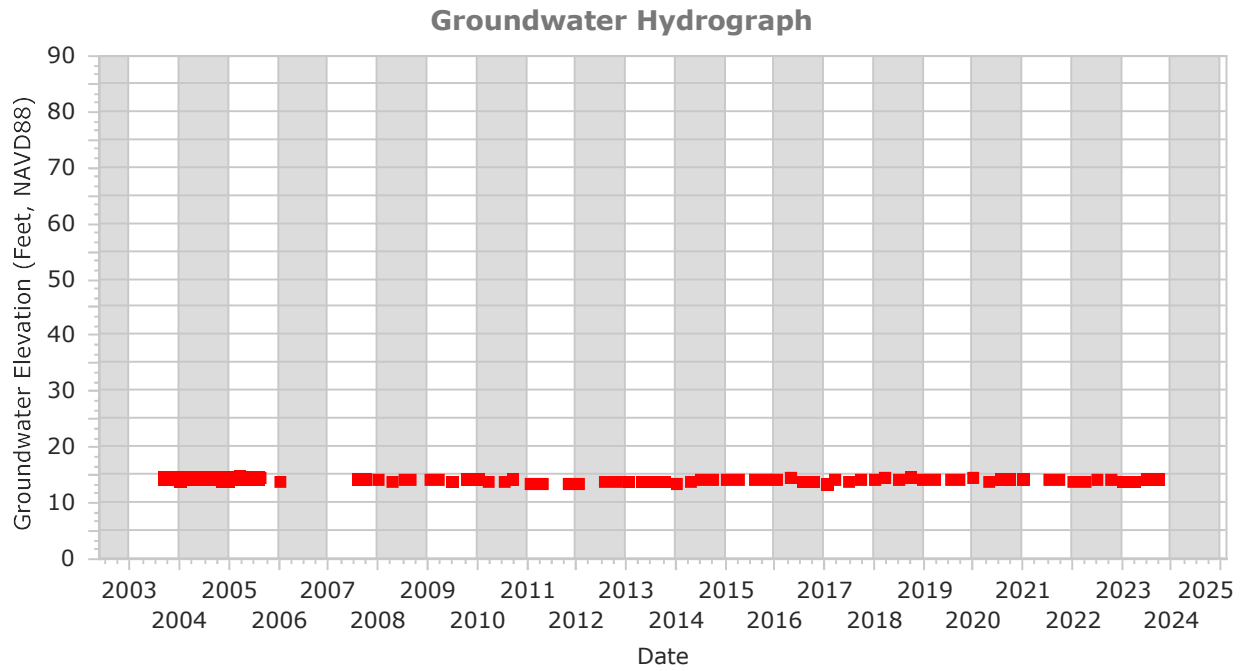
Station Name: MW-CUP-3A-580



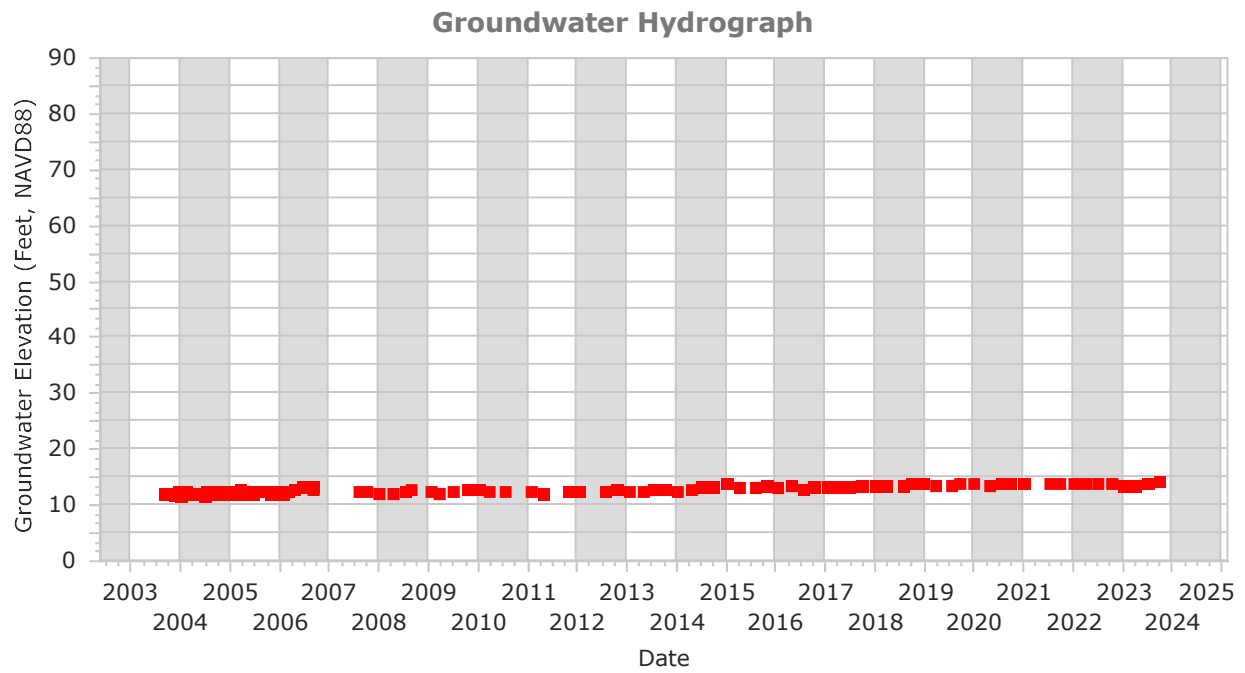
Station Name: THORNTON BEACH MW225



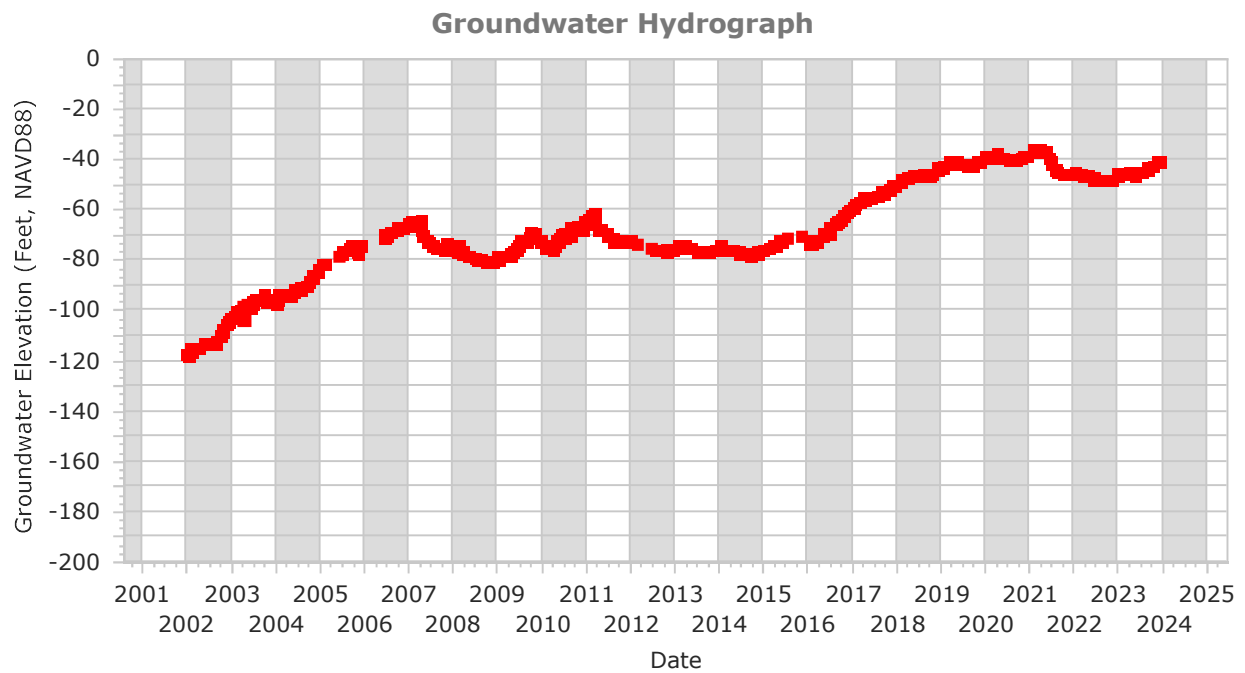
Station Name: THORNTON BEACH MW360



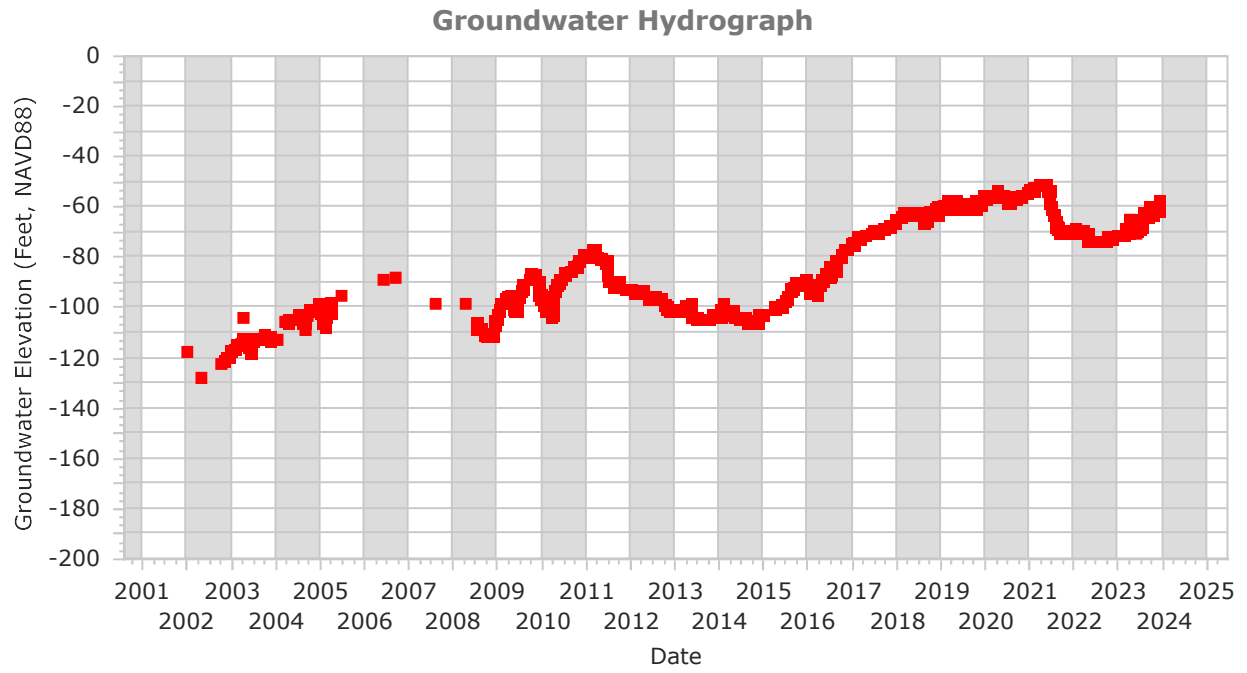
Station Name: THORNTON BEACH MW670



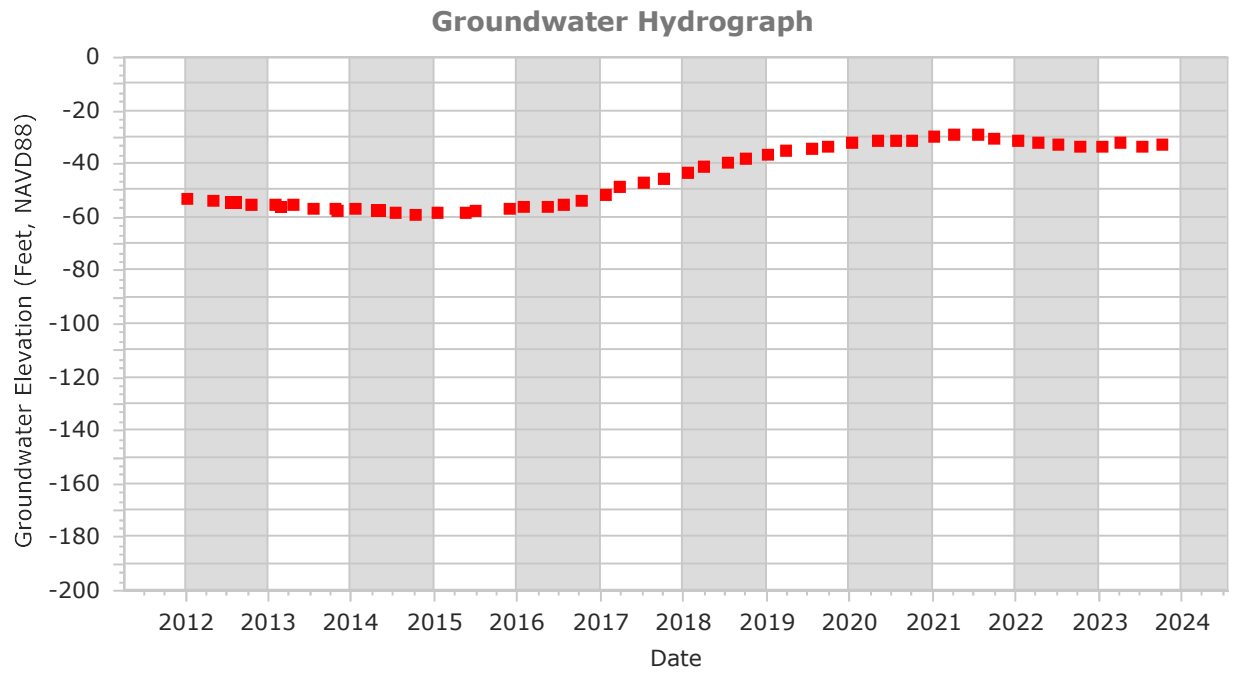
Station Name: DC-01 (WESTLAKE 1)



Station Name: DC-08

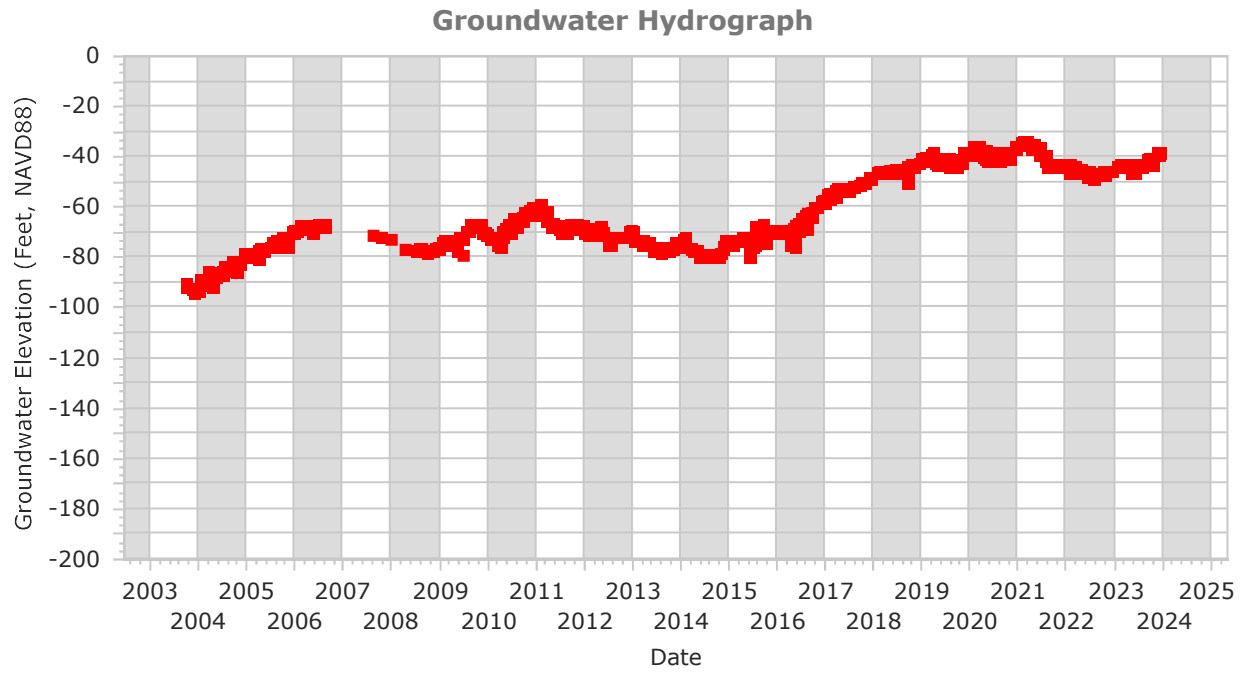


Station Name: PARK PLAZA MW195

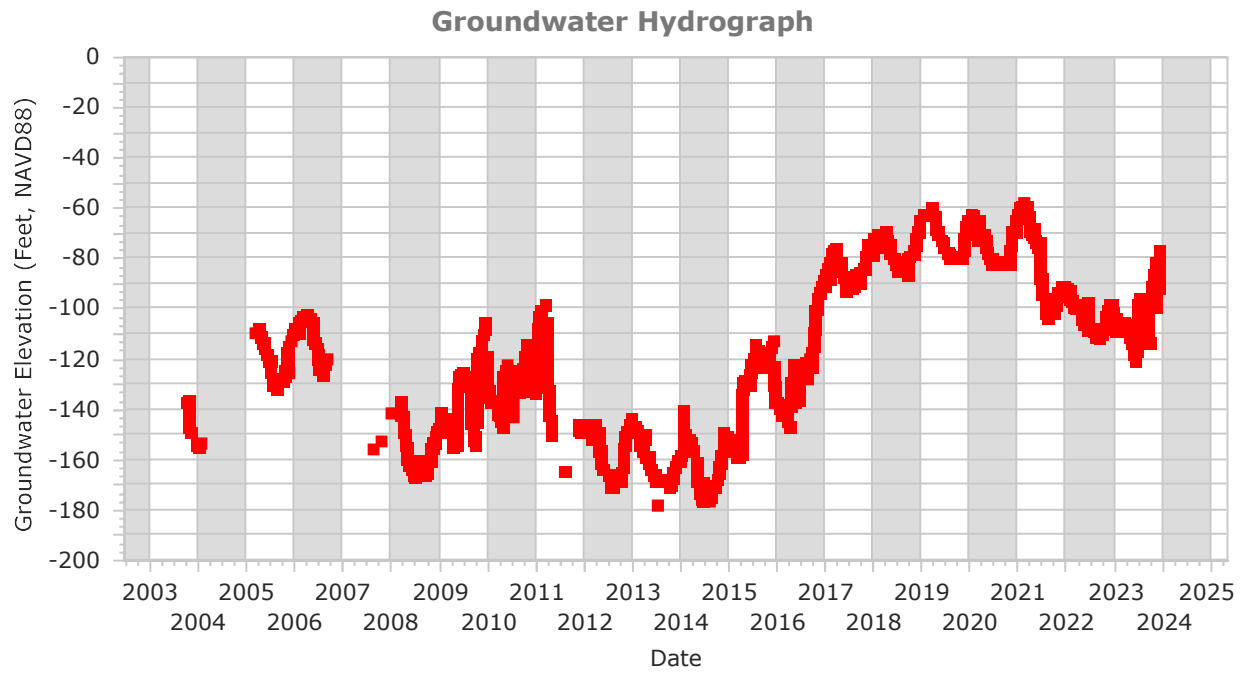




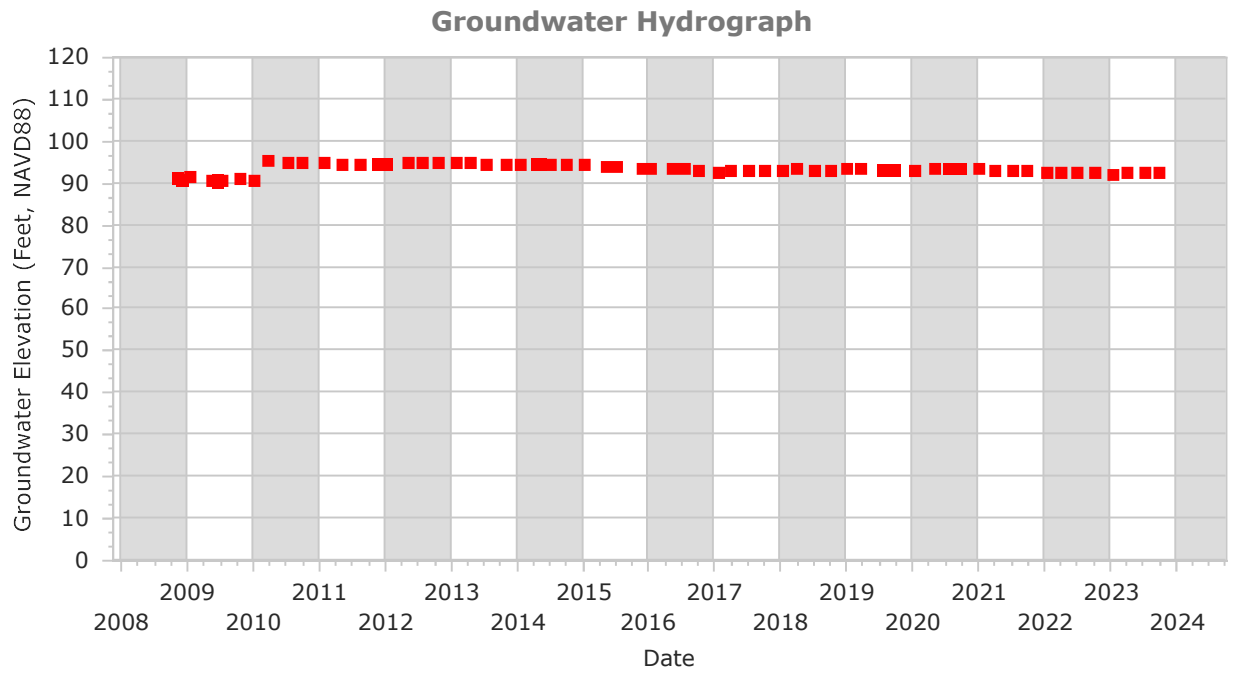
Station Name: PARK PLAZA MW460



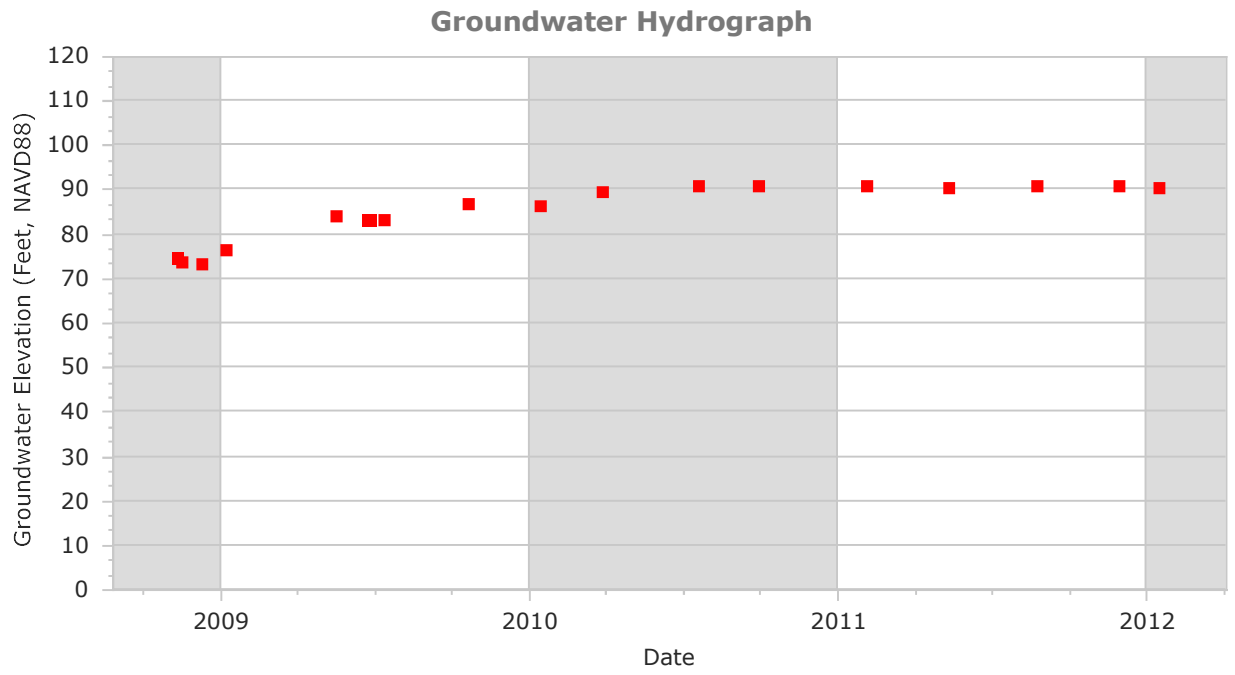
Station Name: PARK PLAZA MW620



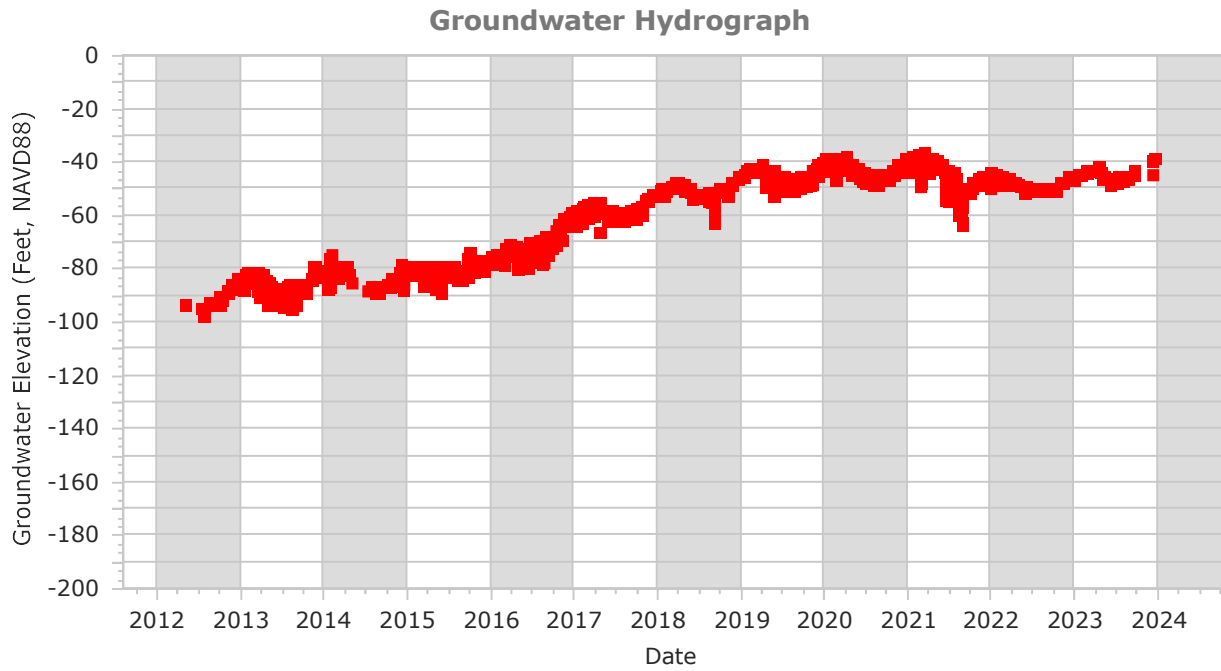
Station Name: MW-CUP-10A-160



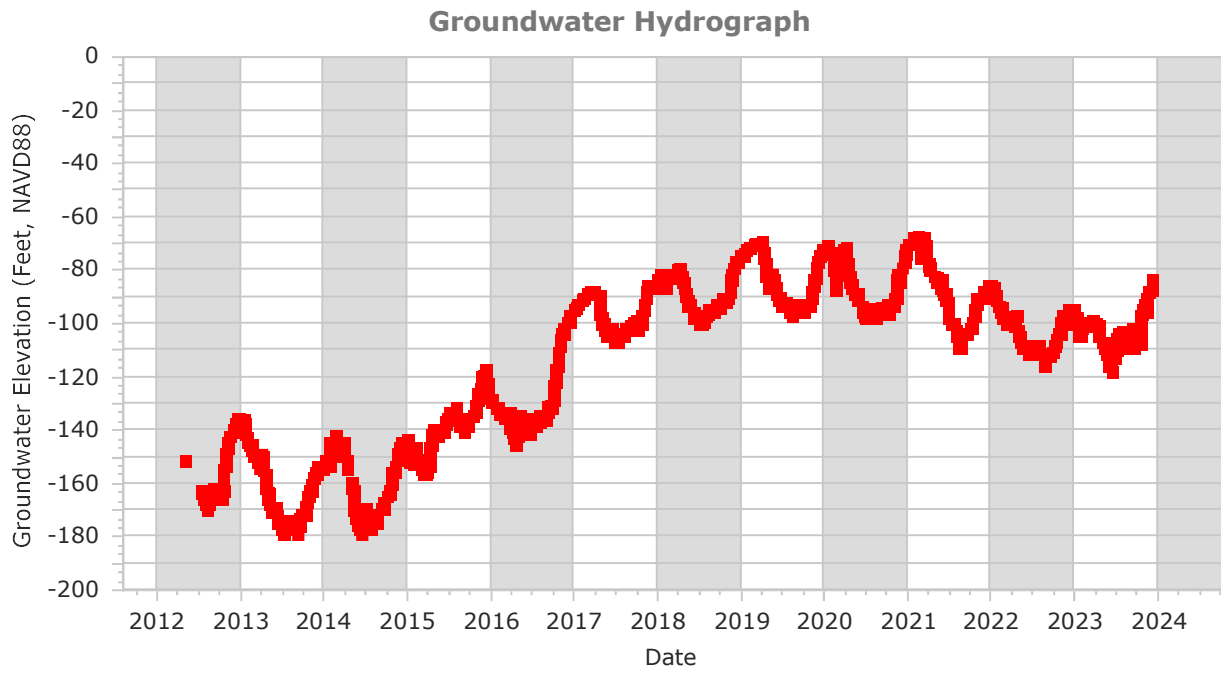
Station Name: MW-CUP-10A-250



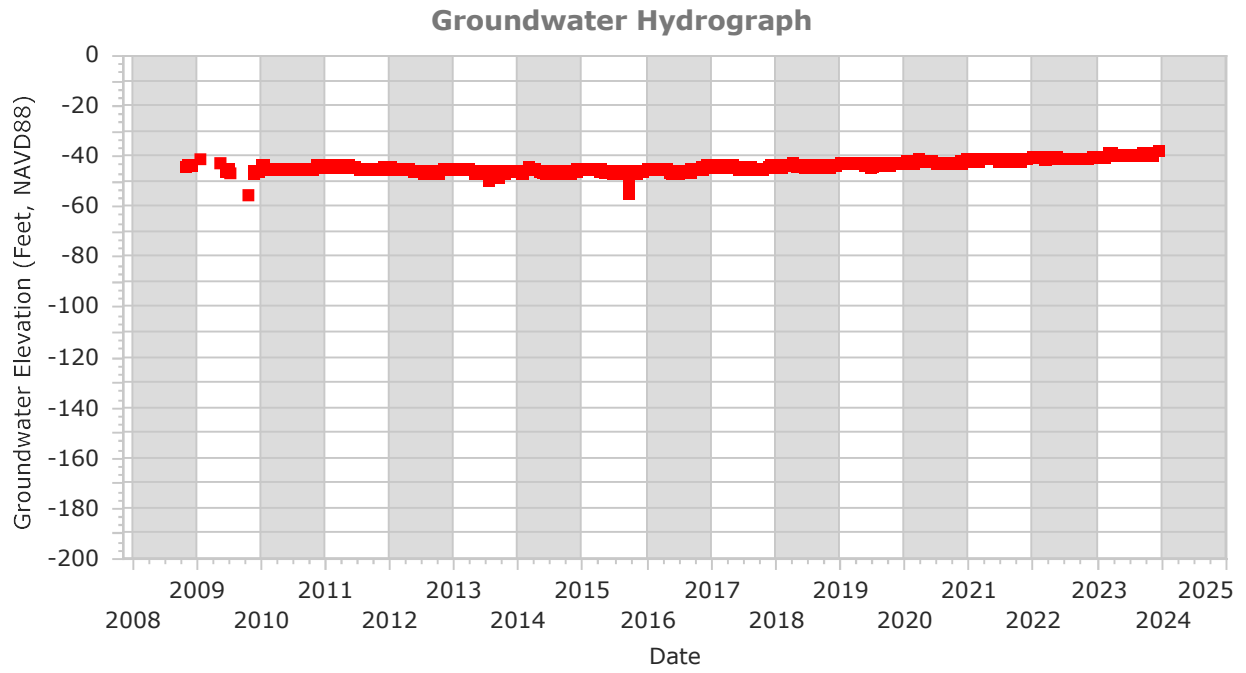
Station Name: MW-CUP-10A-500



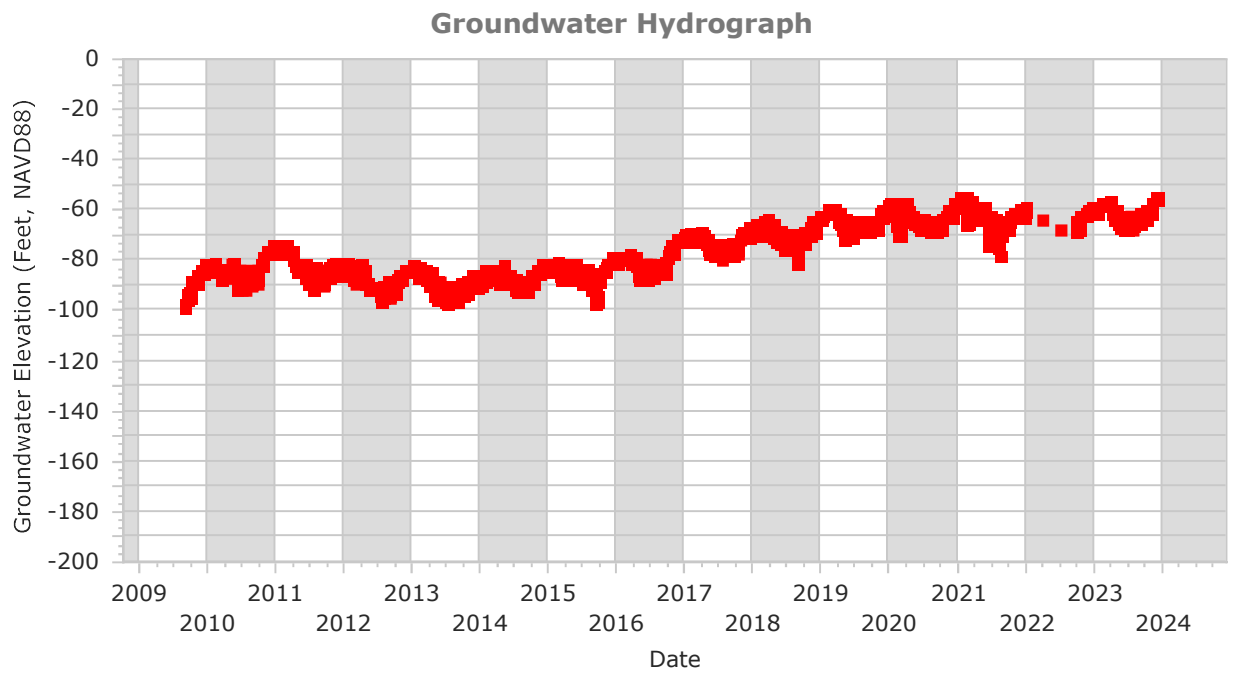
Station Name: MW-CUP-10A-710



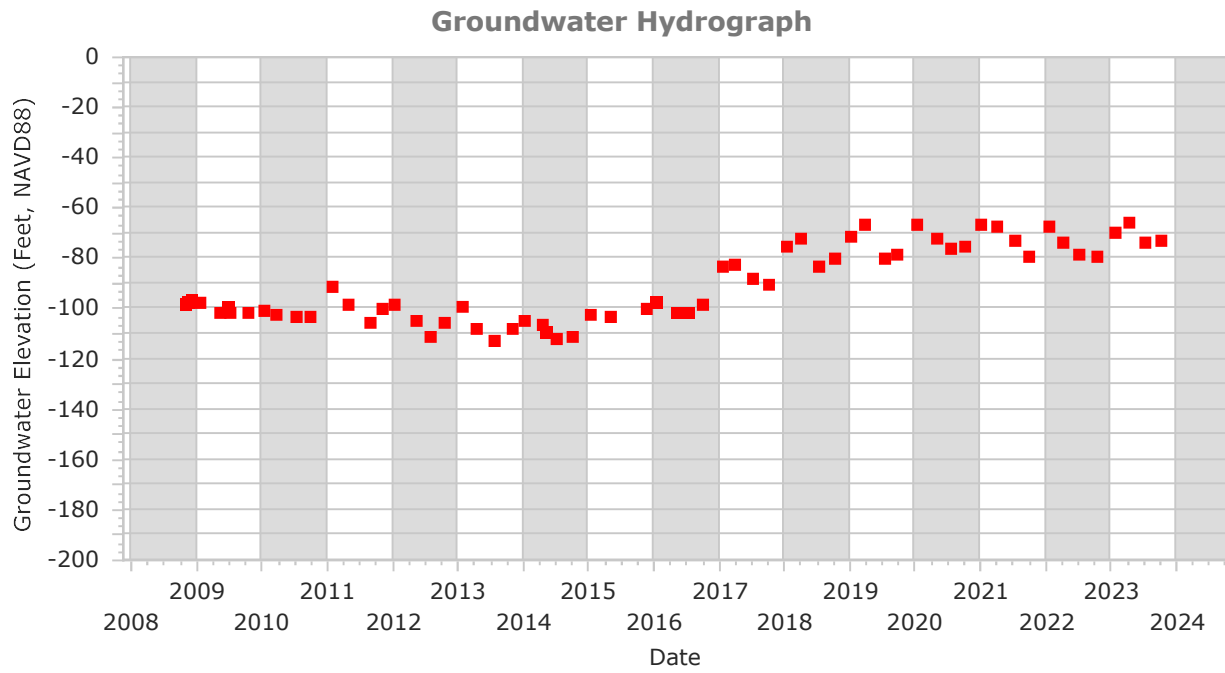
Station Name: MW-CUP-18-230



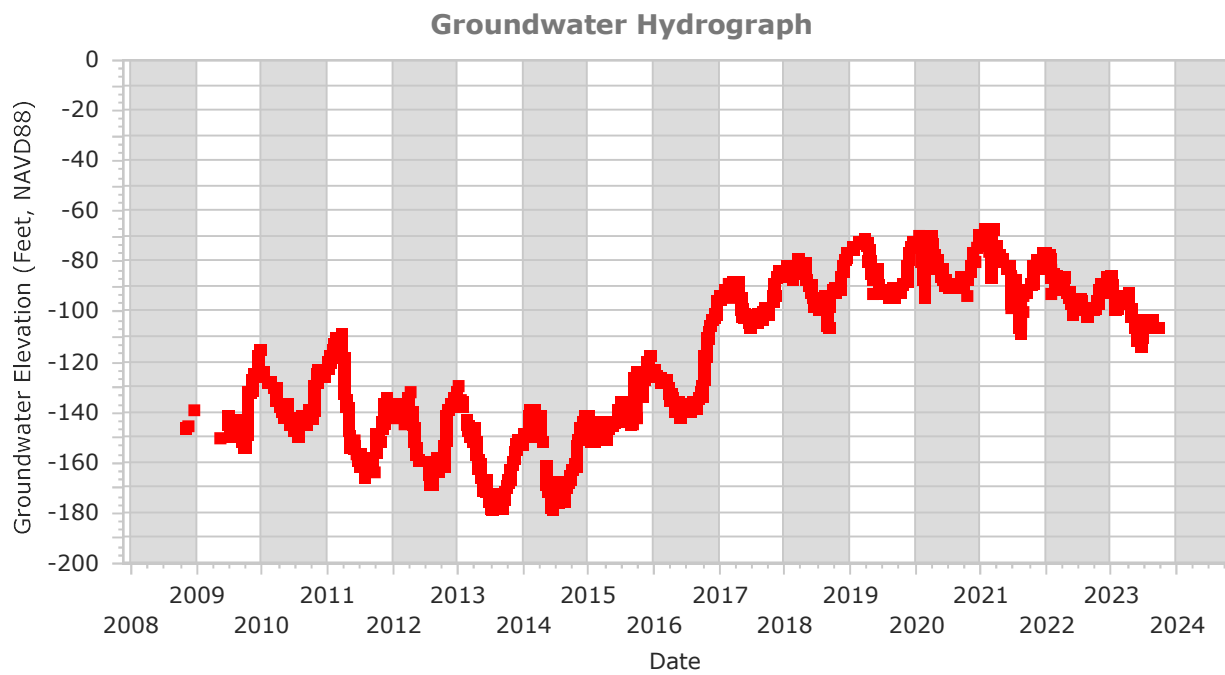
Station Name: MW-CUP-18-425



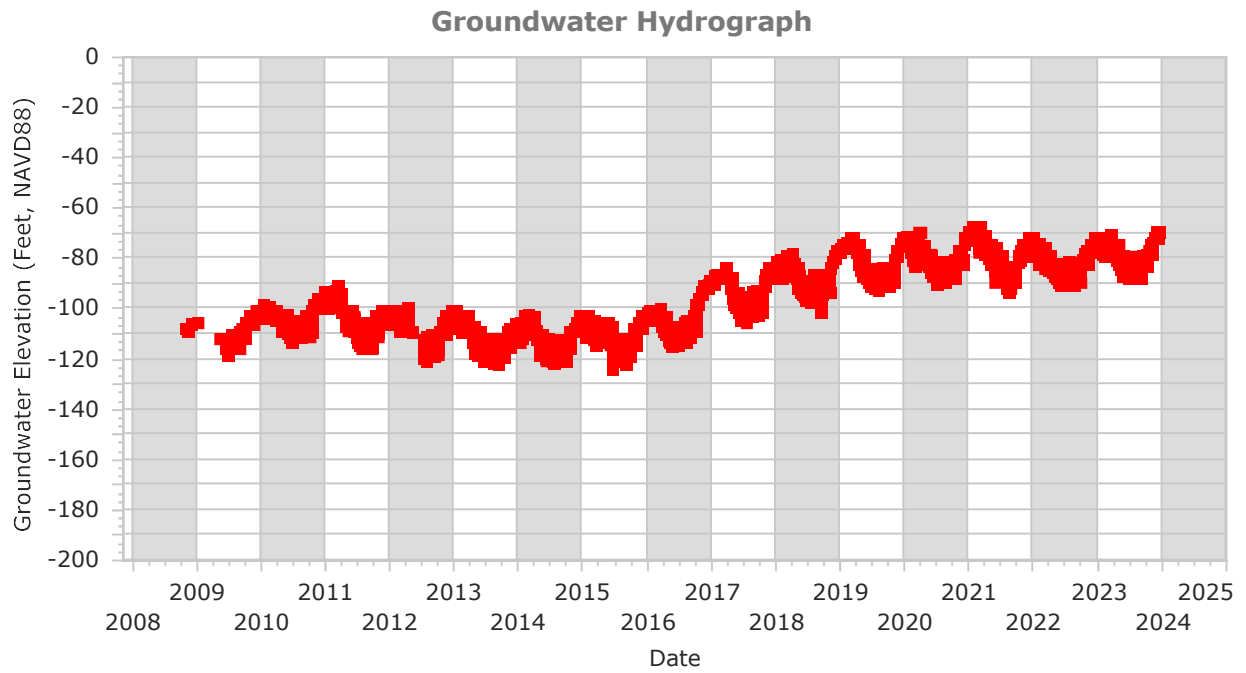
Station Name: MW-CUP-18-490



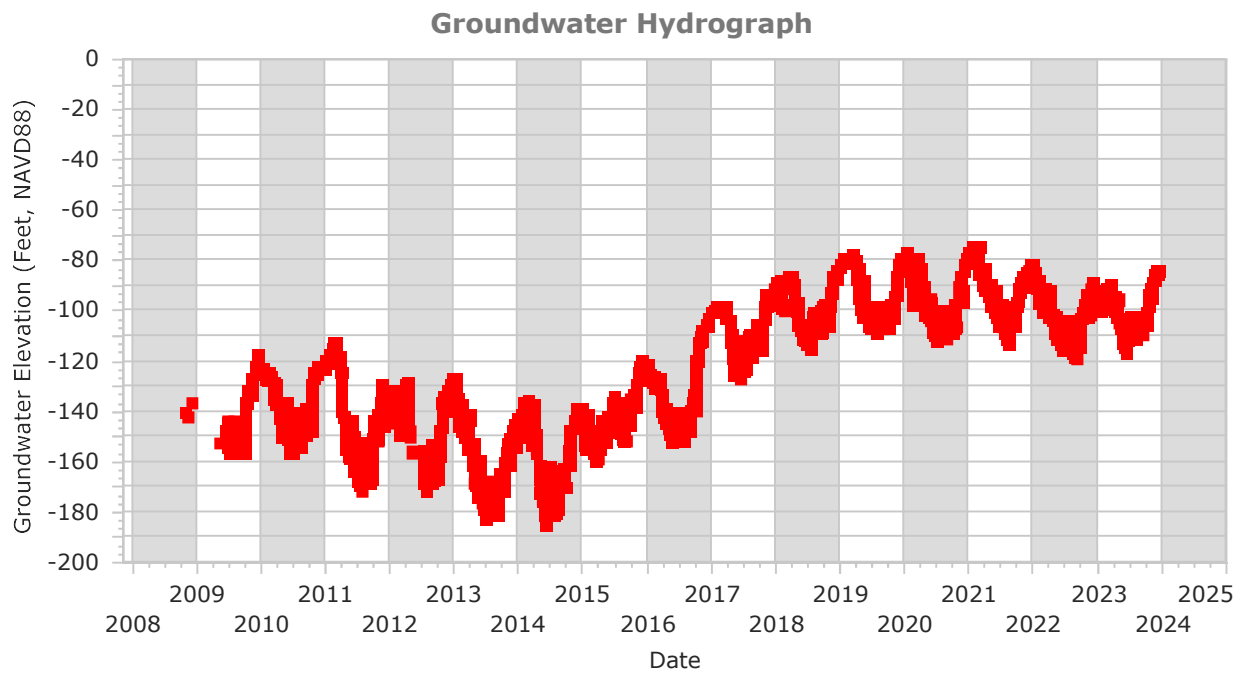
Station Name: MW-CUP-18-660



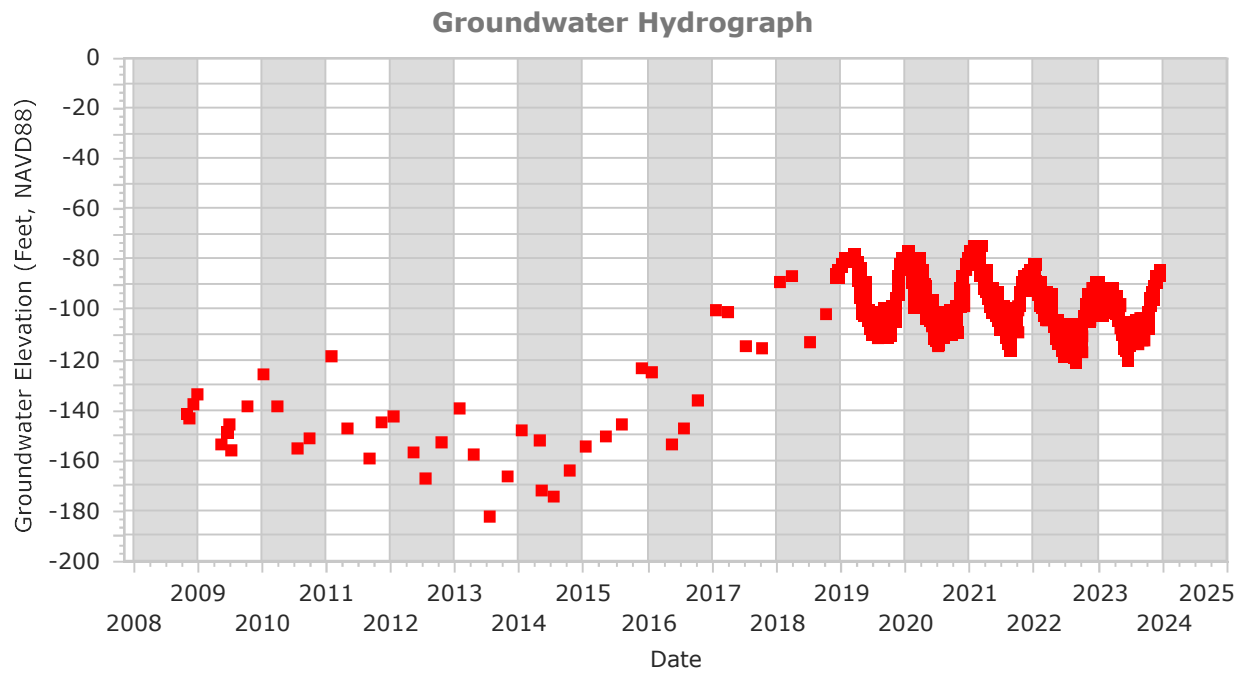
Station Name: MW-CUP-19-475



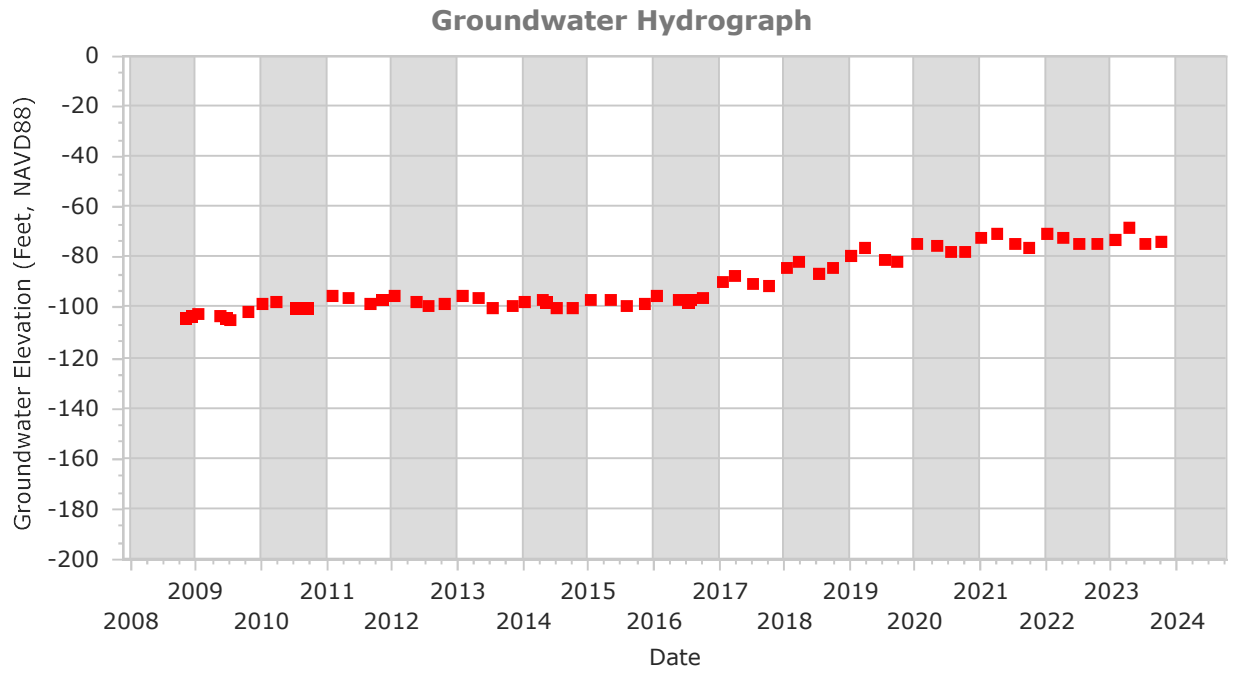
Station Name: MW-CUP-19-600



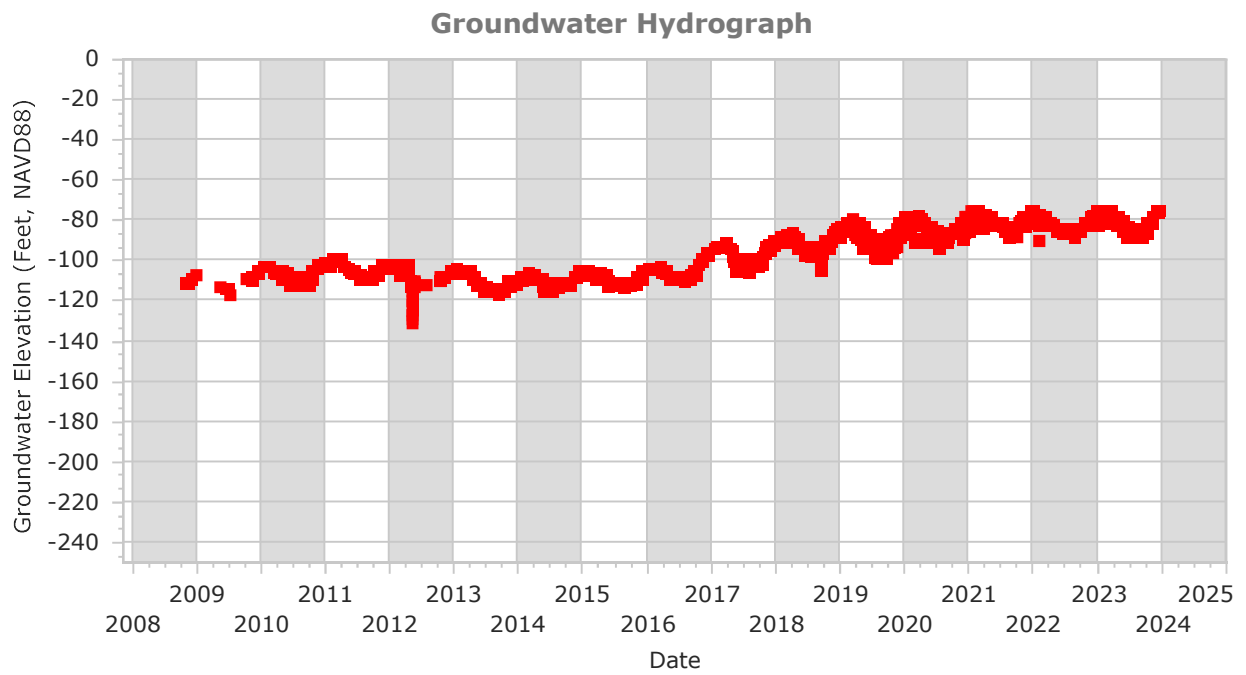
Station Name: MW-CUP-19-690



Station Name: MW-CUP-22A-290

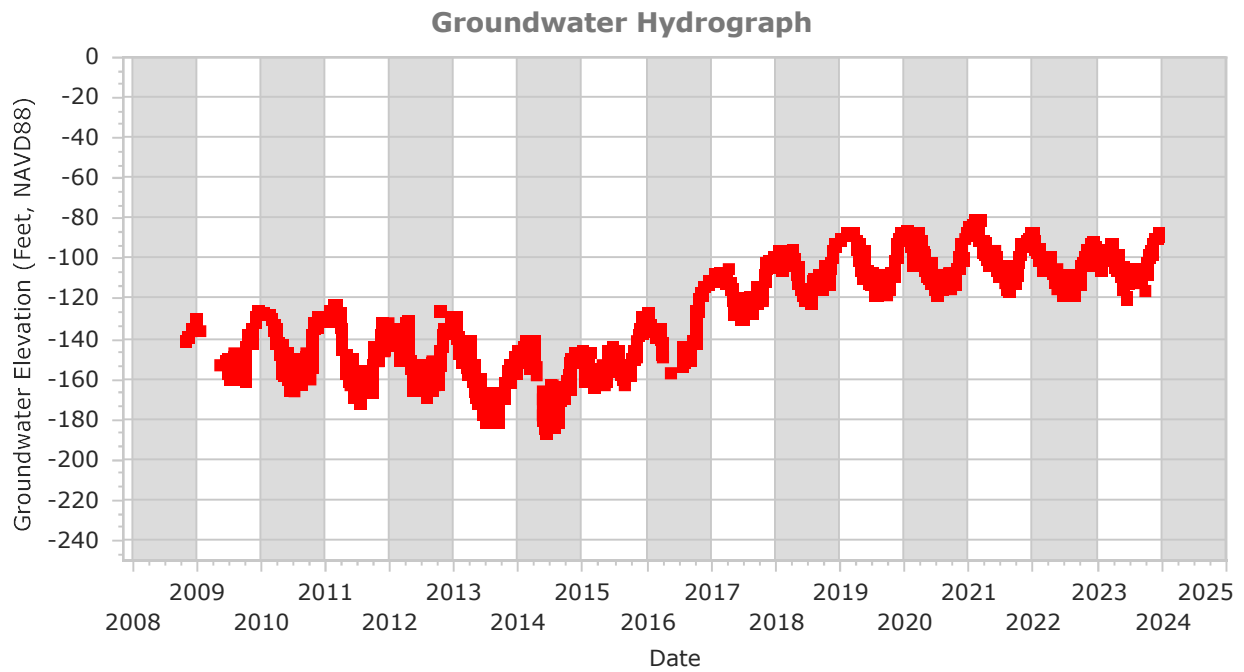


Station Name: MW-CUP-22A-440

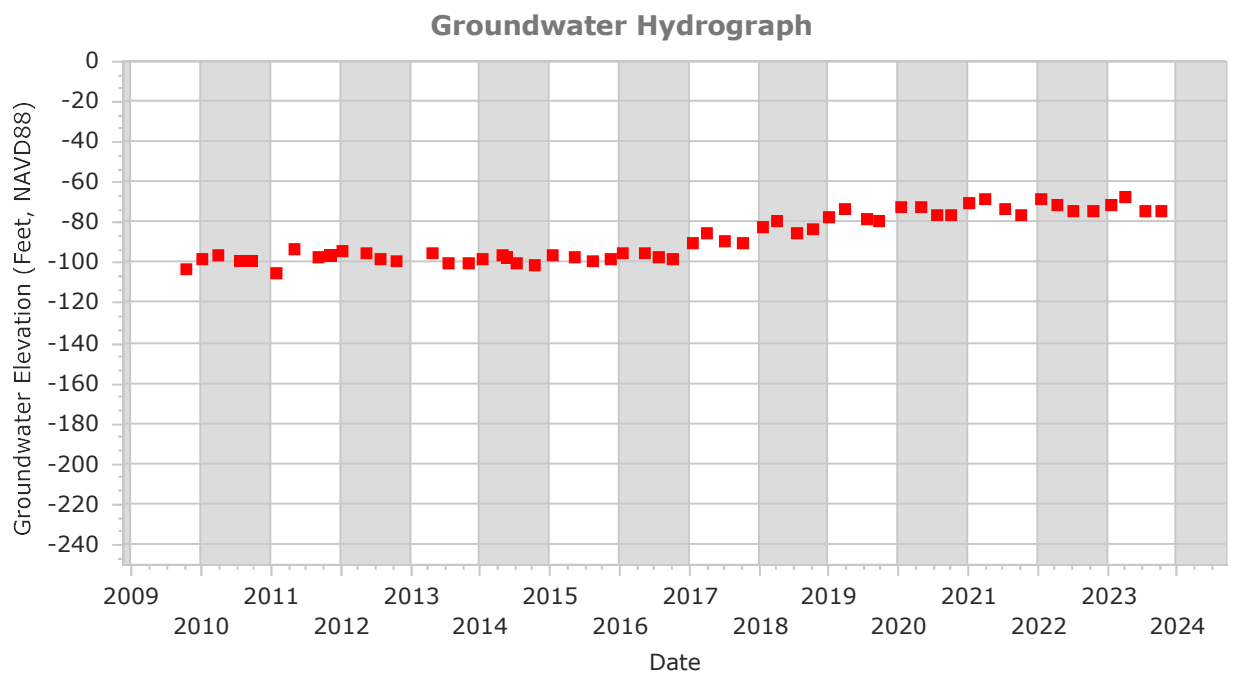




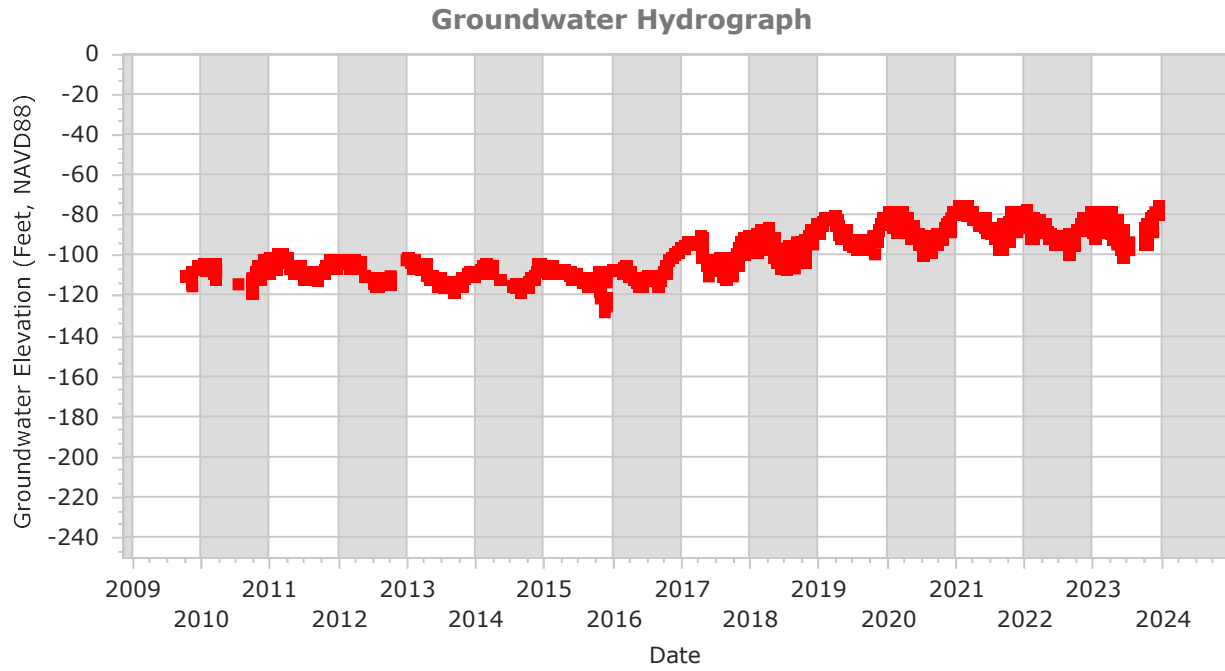
Station Name: MW-CUP-22A-545



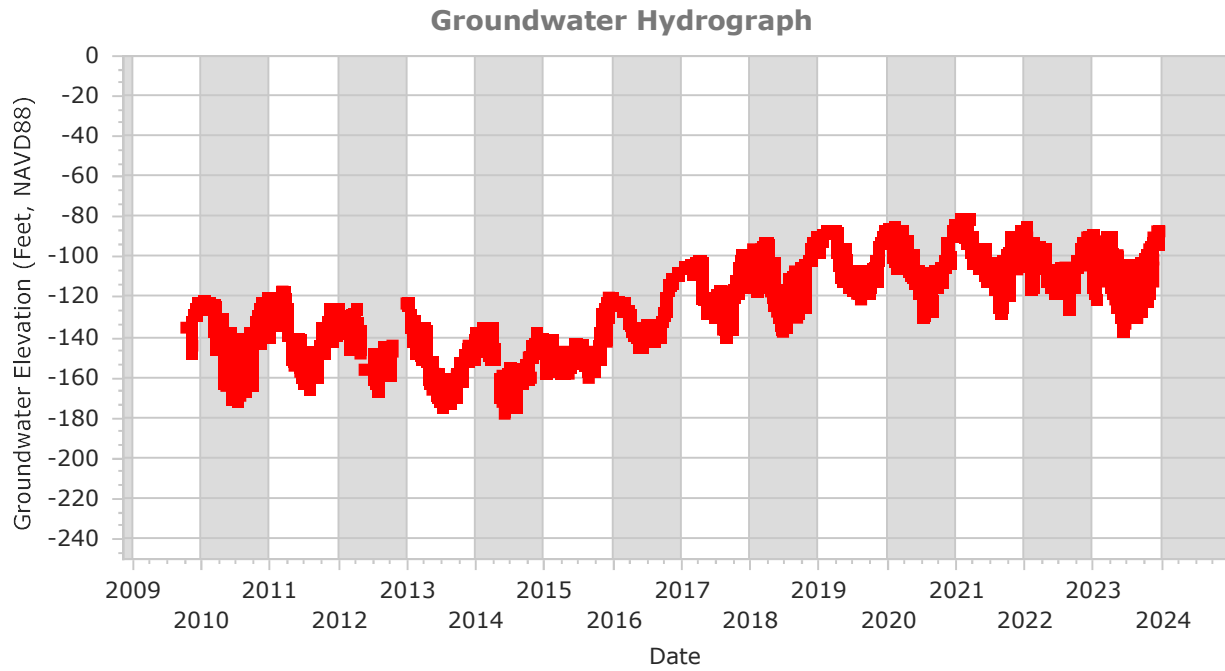
Station Name: MW-CUP-23-230



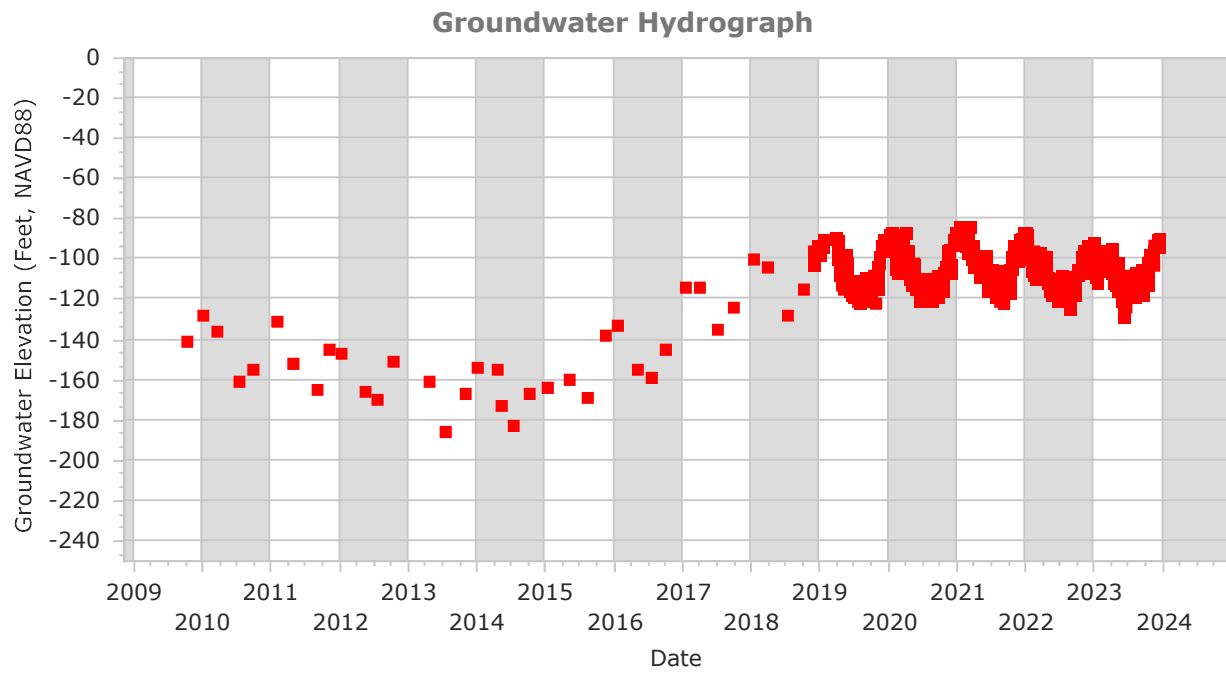
Station Name: MW-CUP-23-440



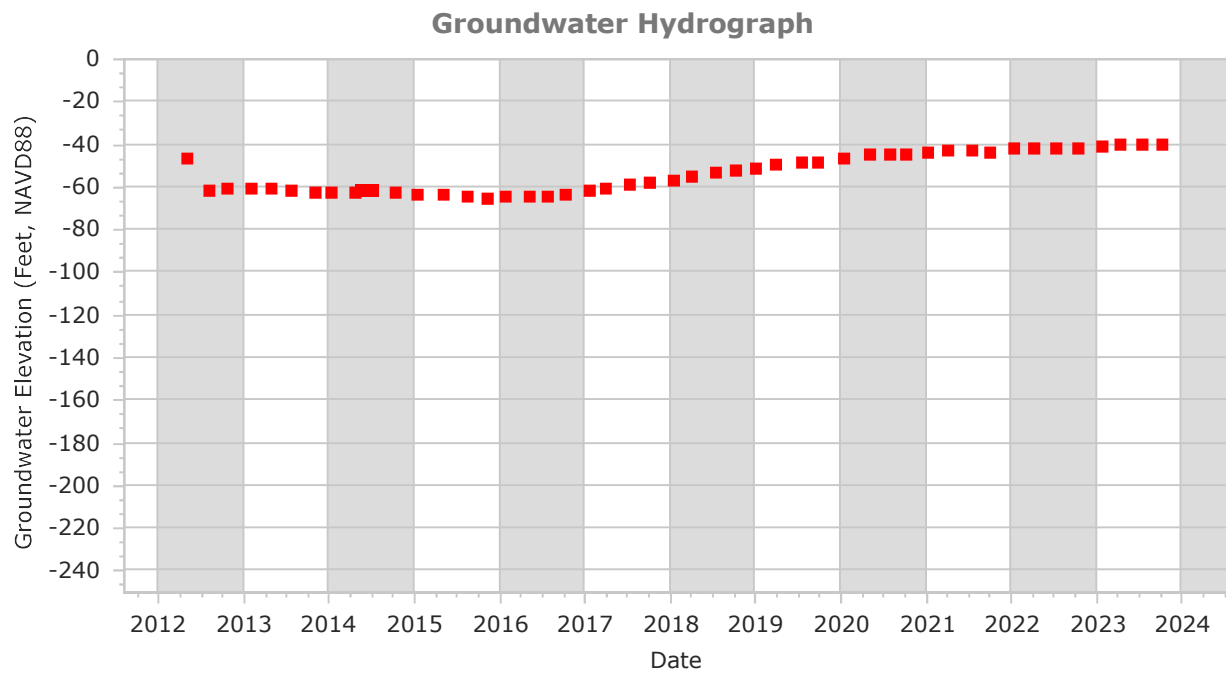
Station Name: MW-CUP-23-515



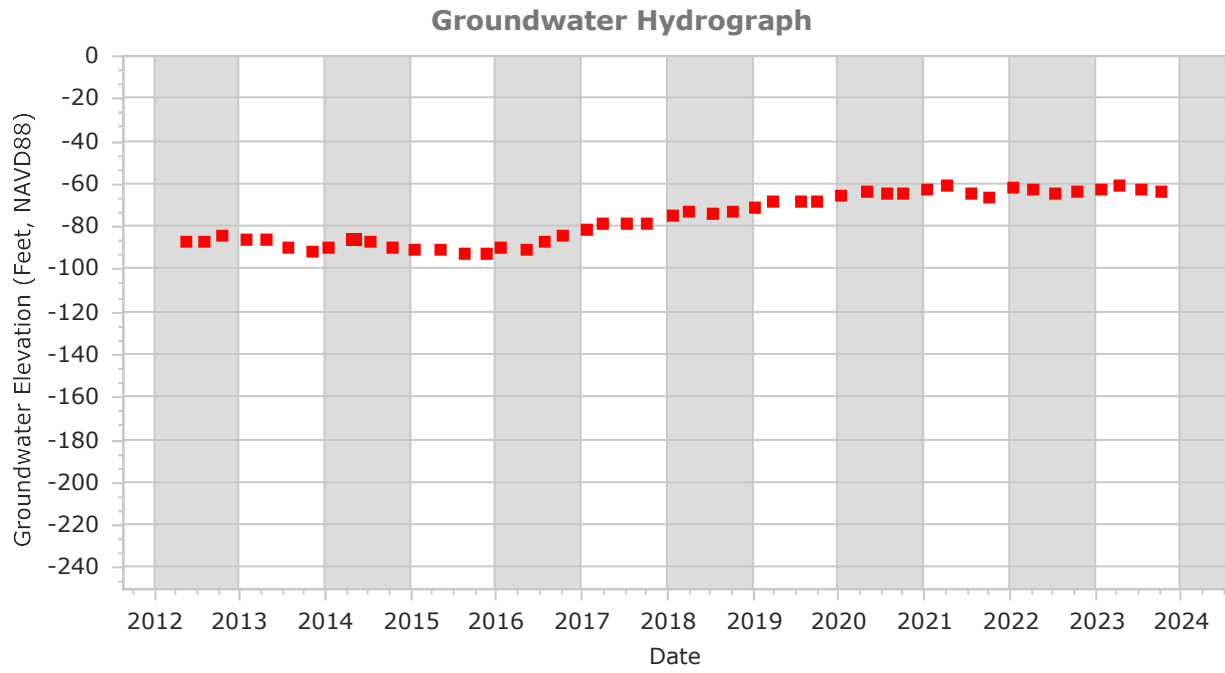
Station Name: MW-CUP-23-600



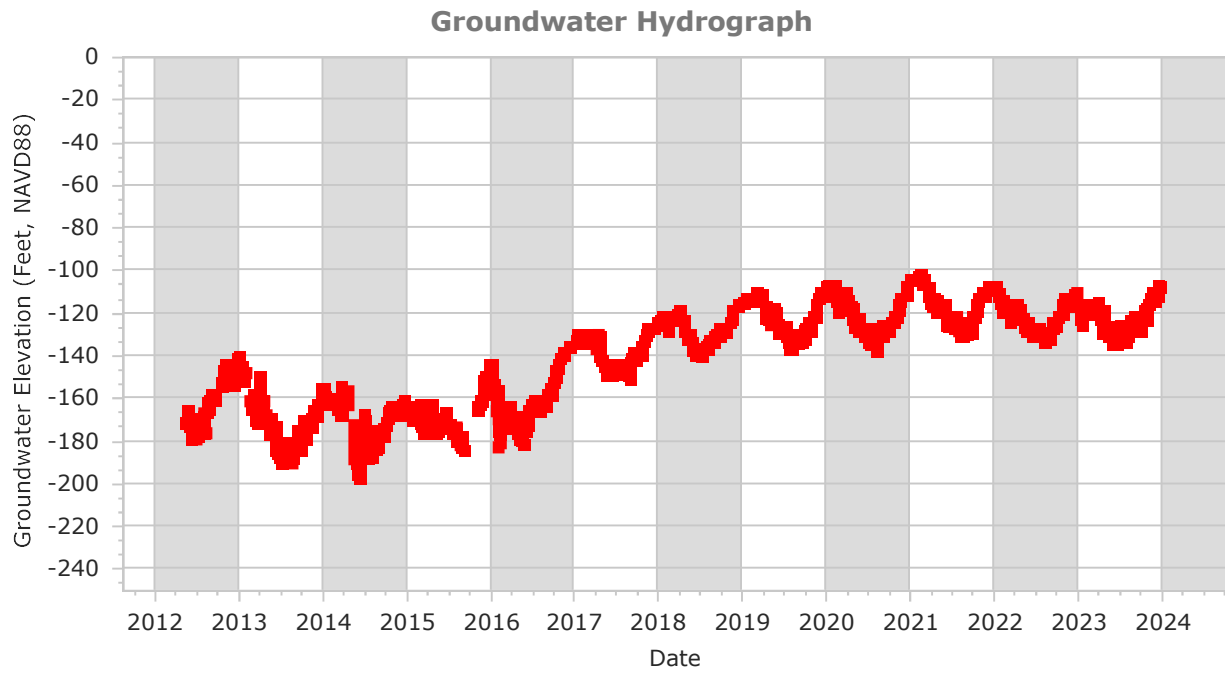
Station Name: MW-CUP-31-145



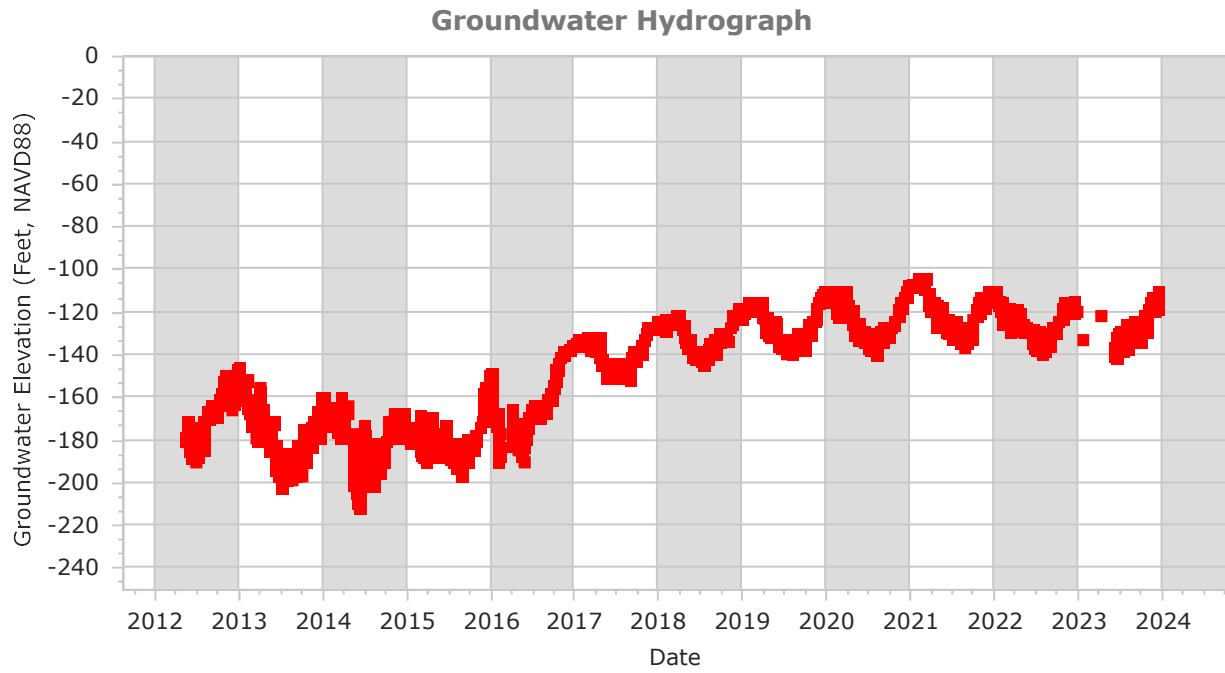
Station Name: MW-CUP-31-280



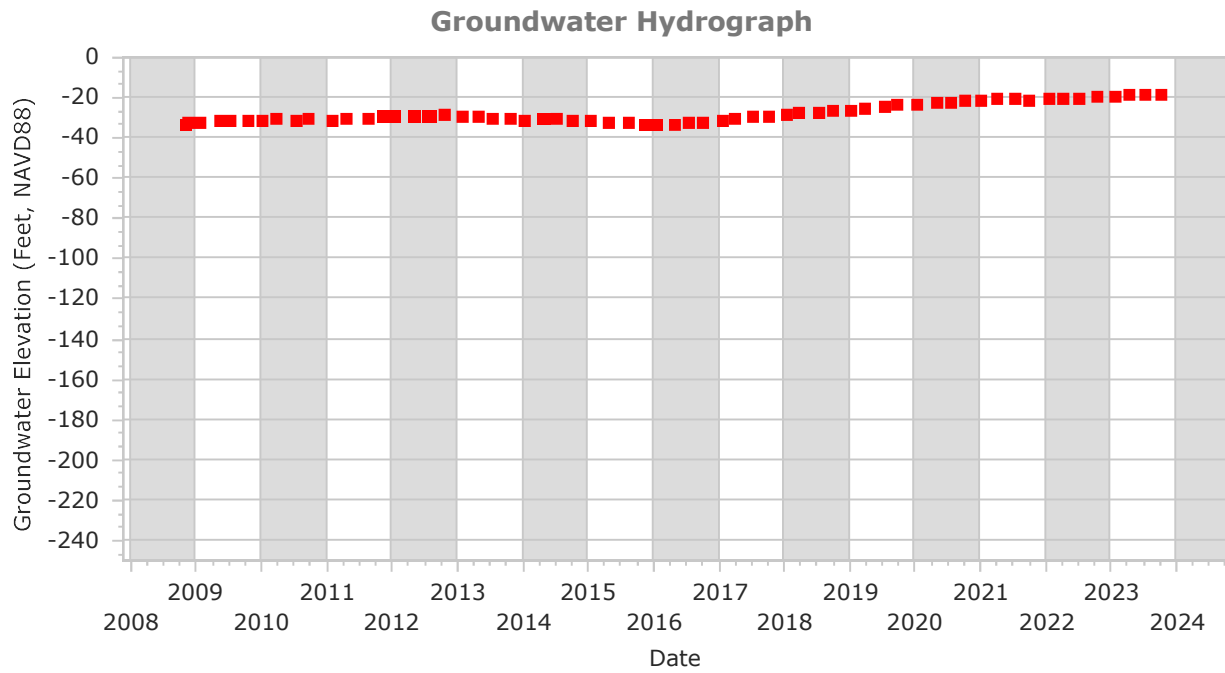
Station Name: MW-CUP-31-480



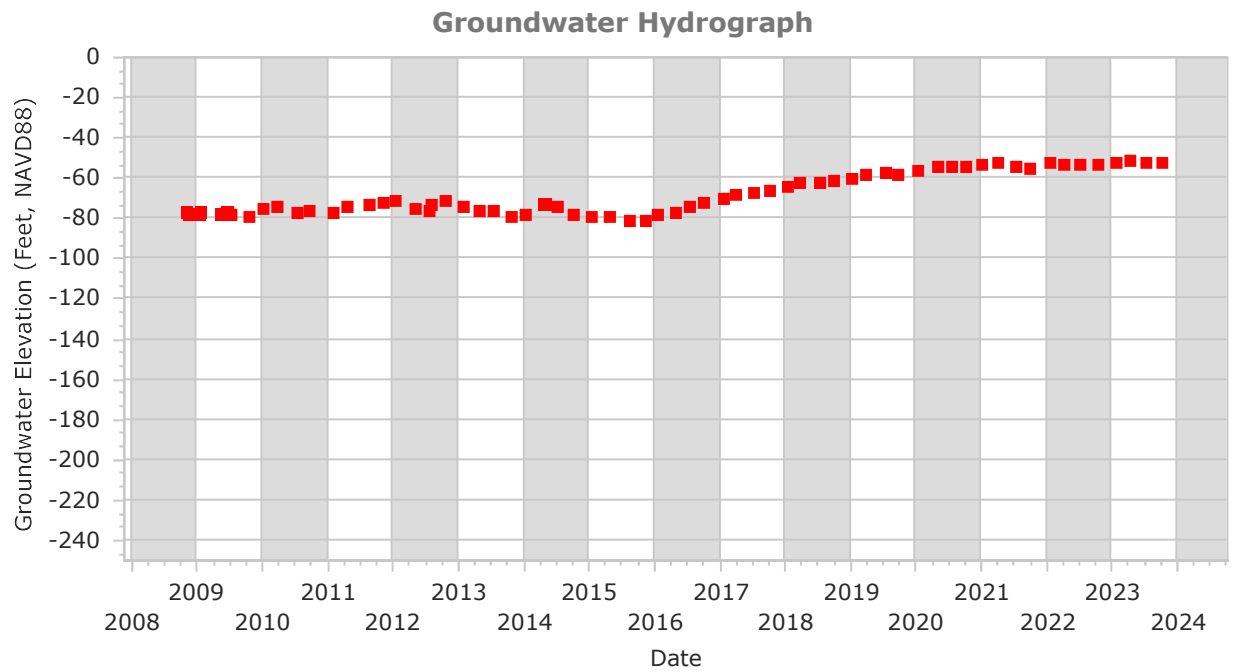
Station Name: MW-CUP-31-595



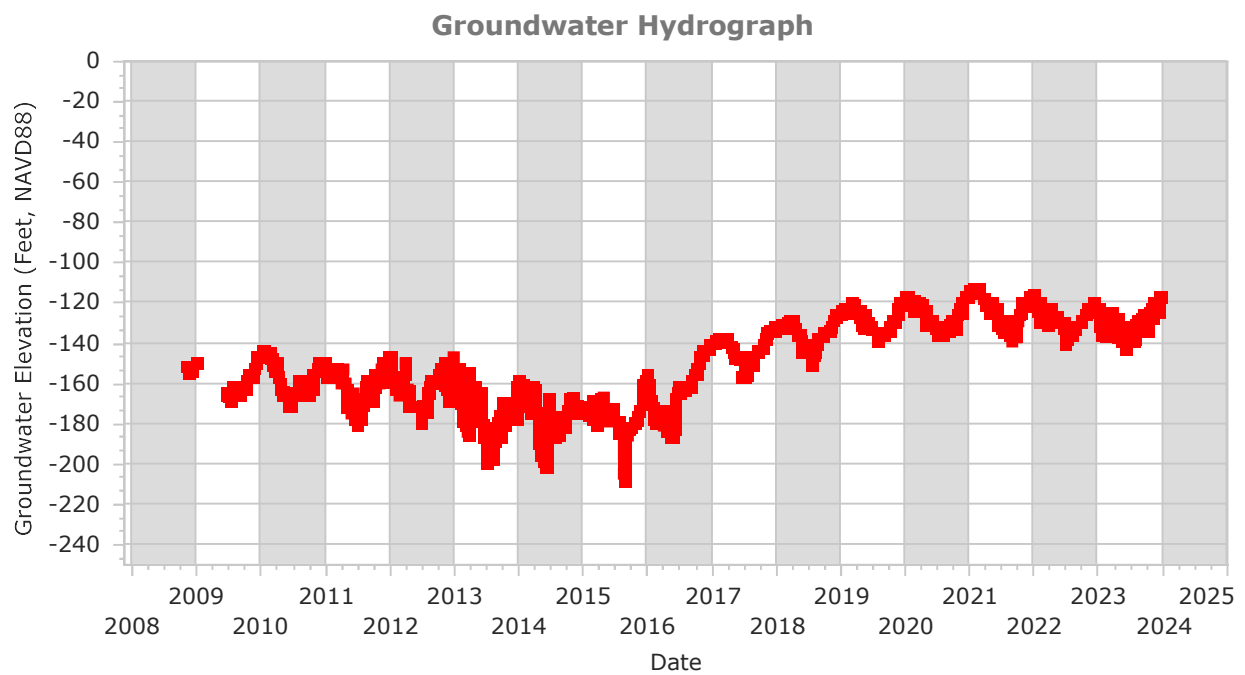
Station Name: MW-CUP-36-1-160



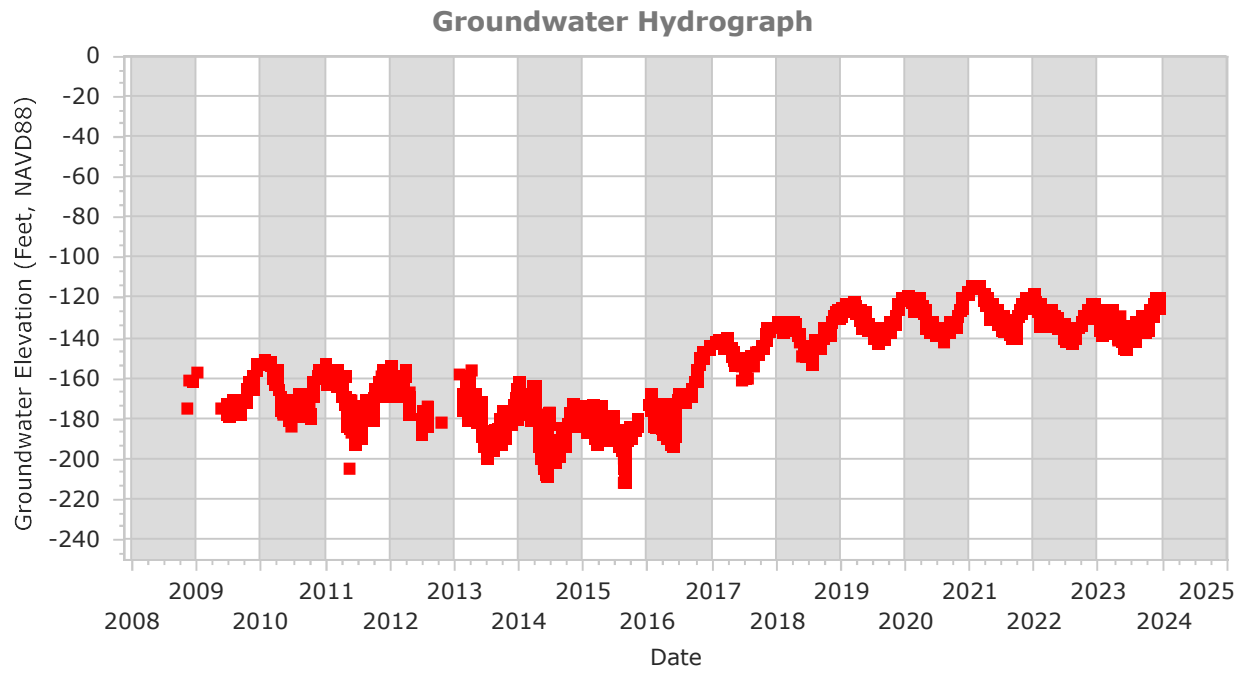
Station Name: MW-CUP-36-1-270



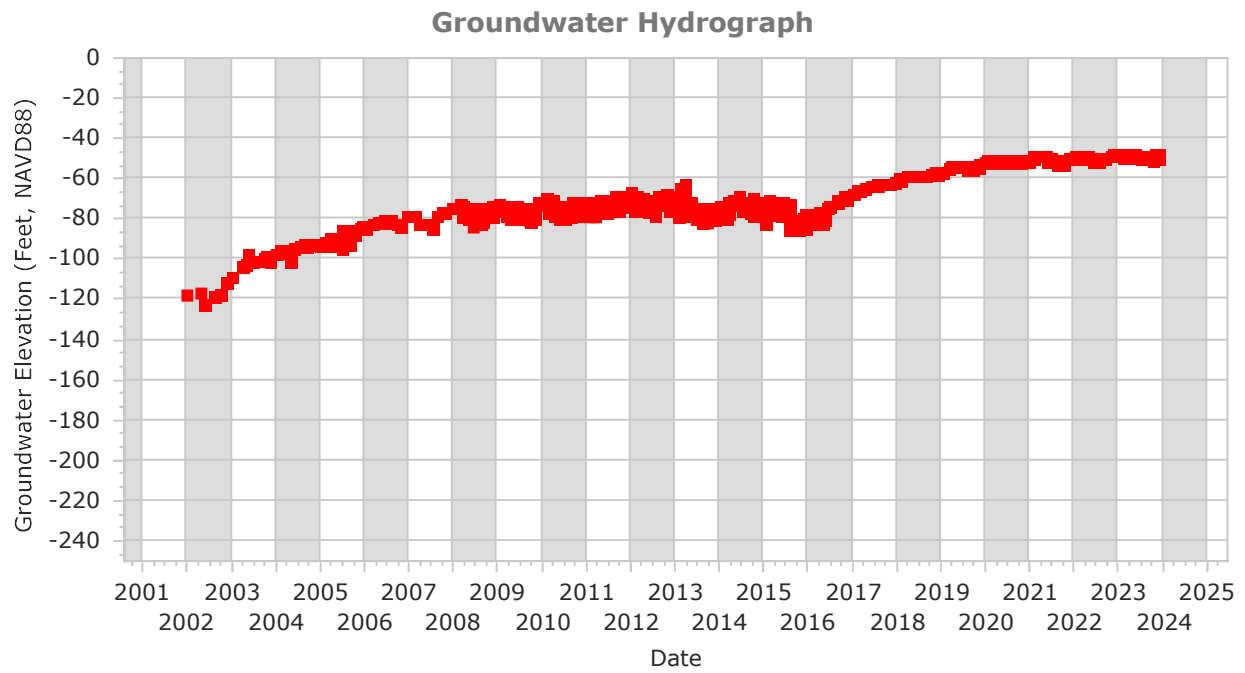
Station Name: MW-CUP-36-1-455



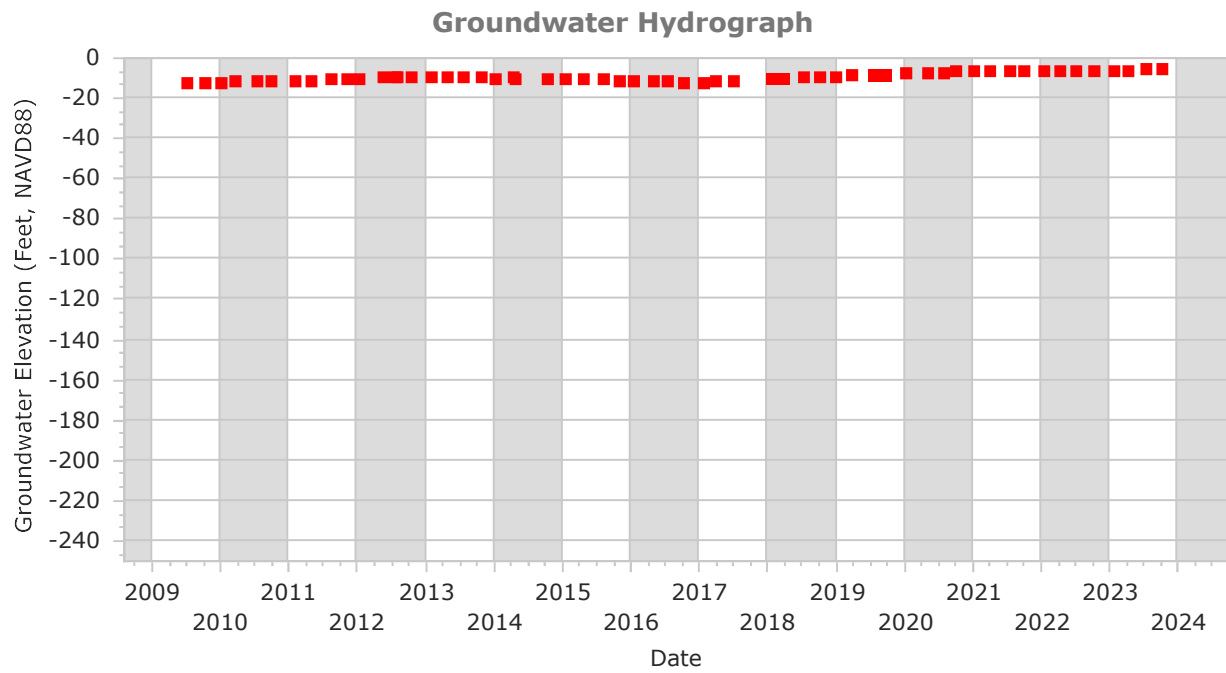
Station Name: MW-CUP-36-1-585



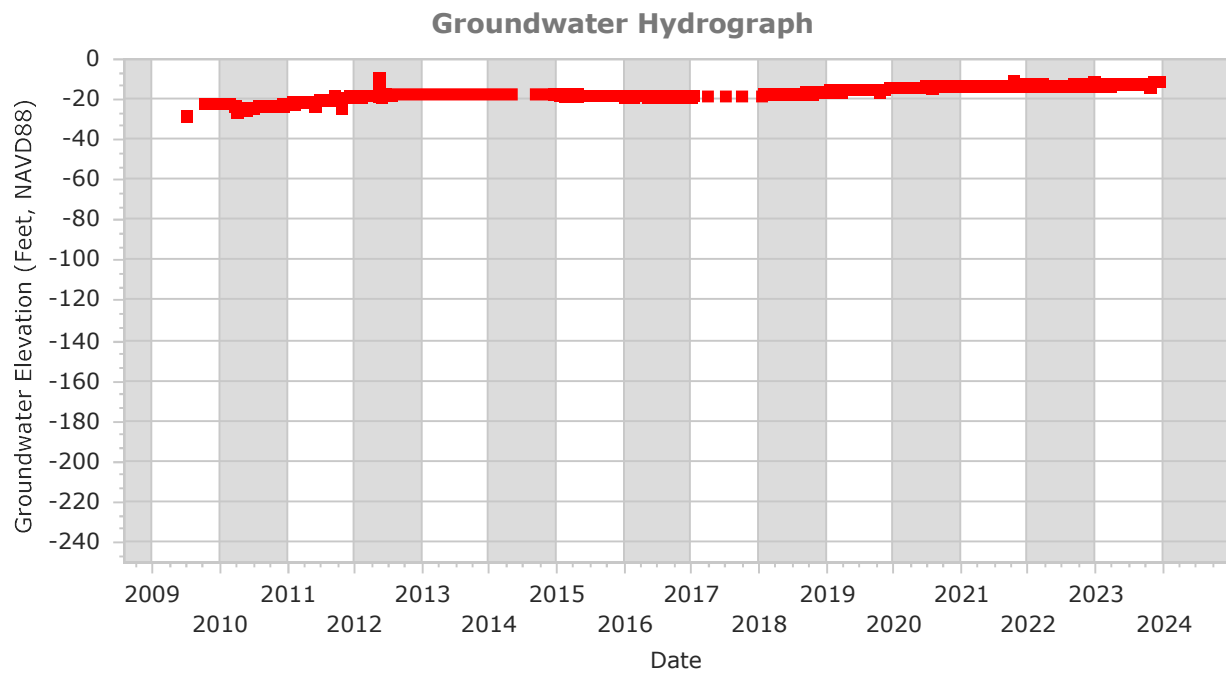
Station Name: CAL. WATER SERV. SS1-02



Station Name: MW-CUP-44-1-190

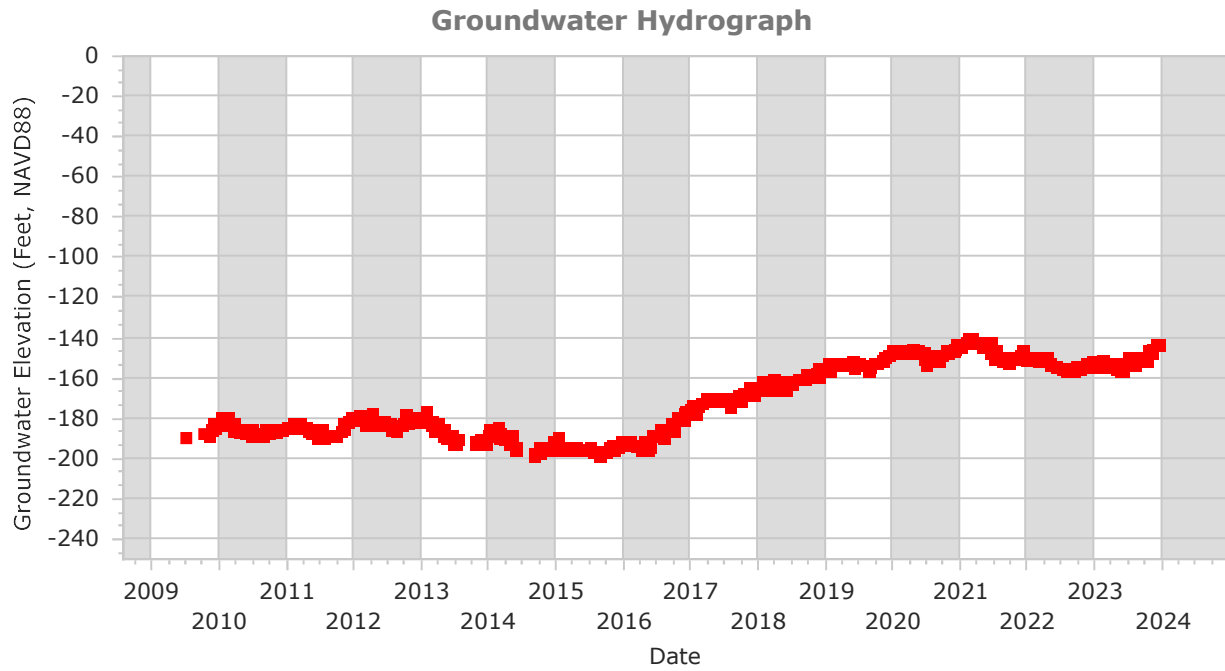


Station Name: MW-CUP-44-1-300

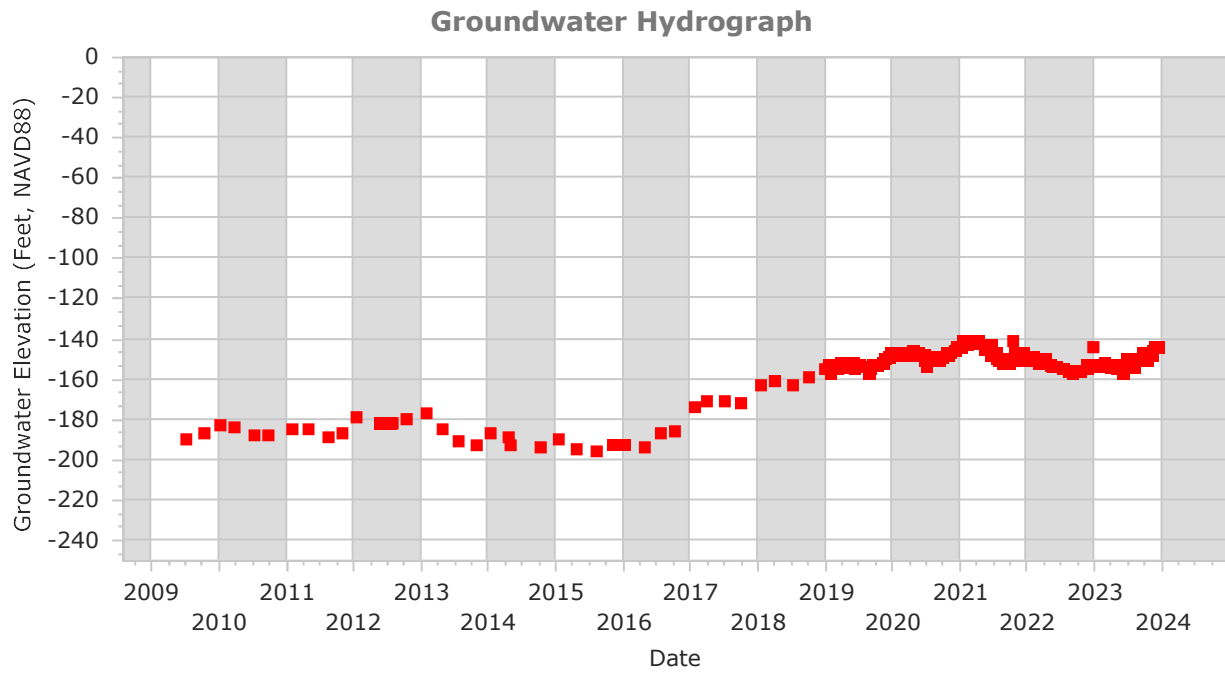




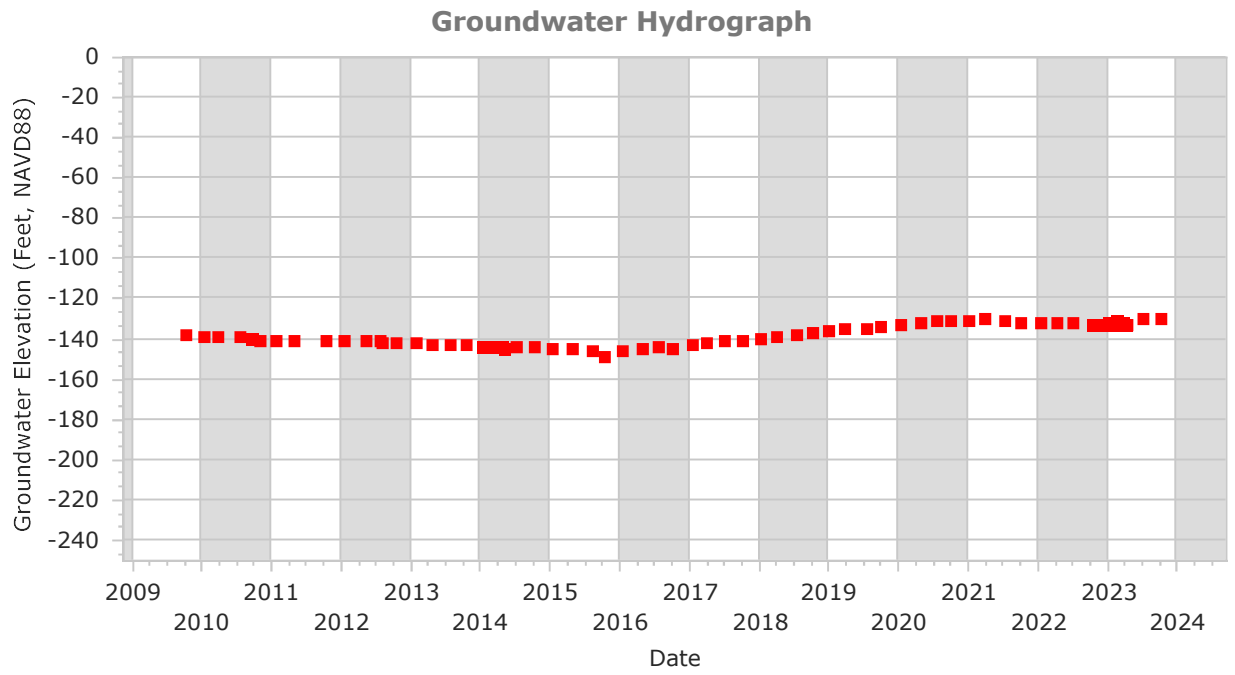
Station Name: MW-CUP-44-1-460



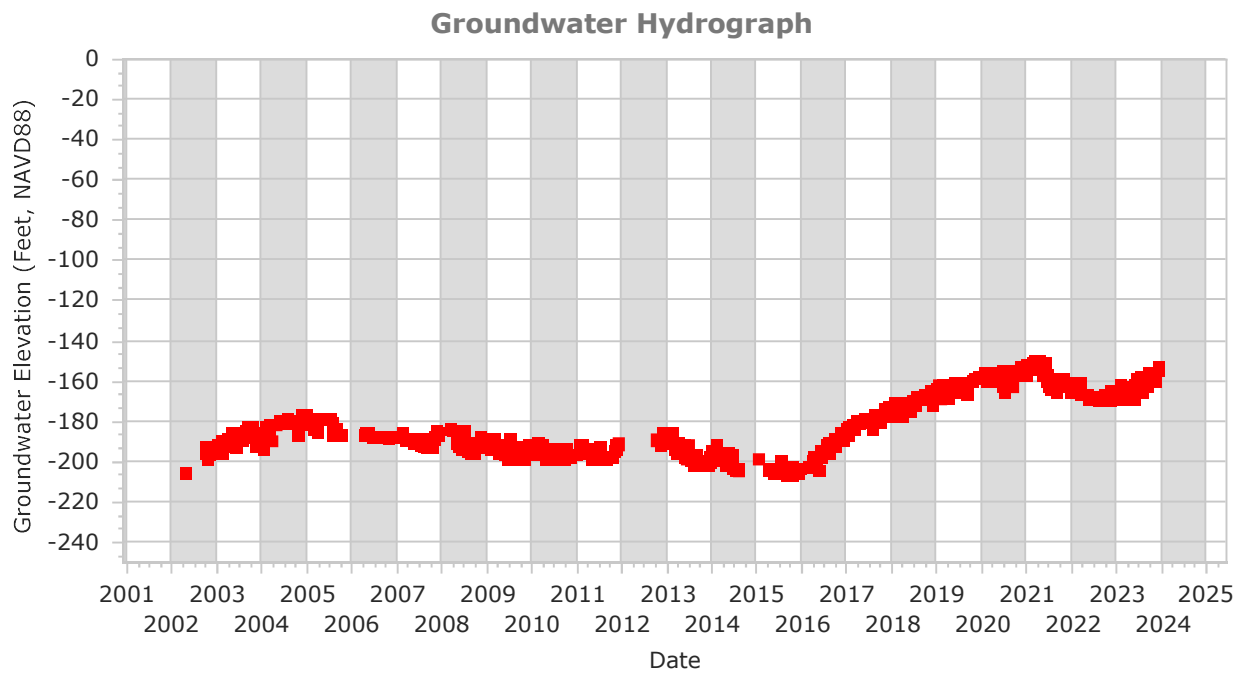
Station Name: MW-CUP-44-1-580



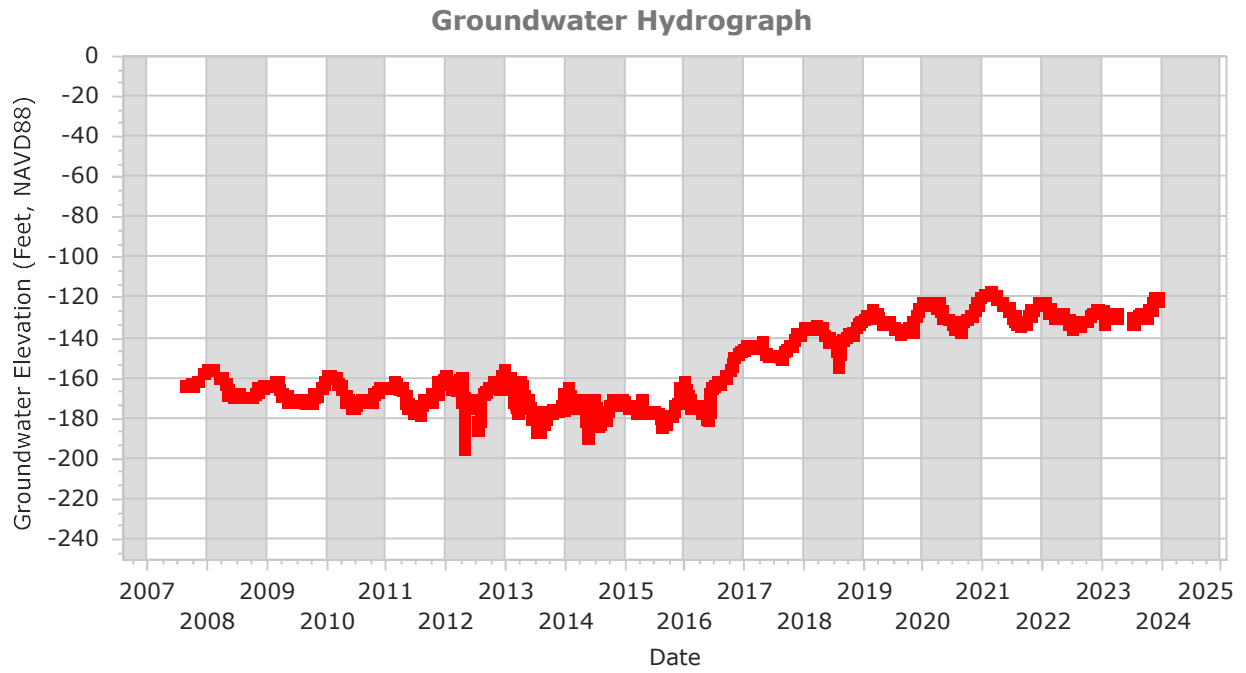
Station Name: MW-M1



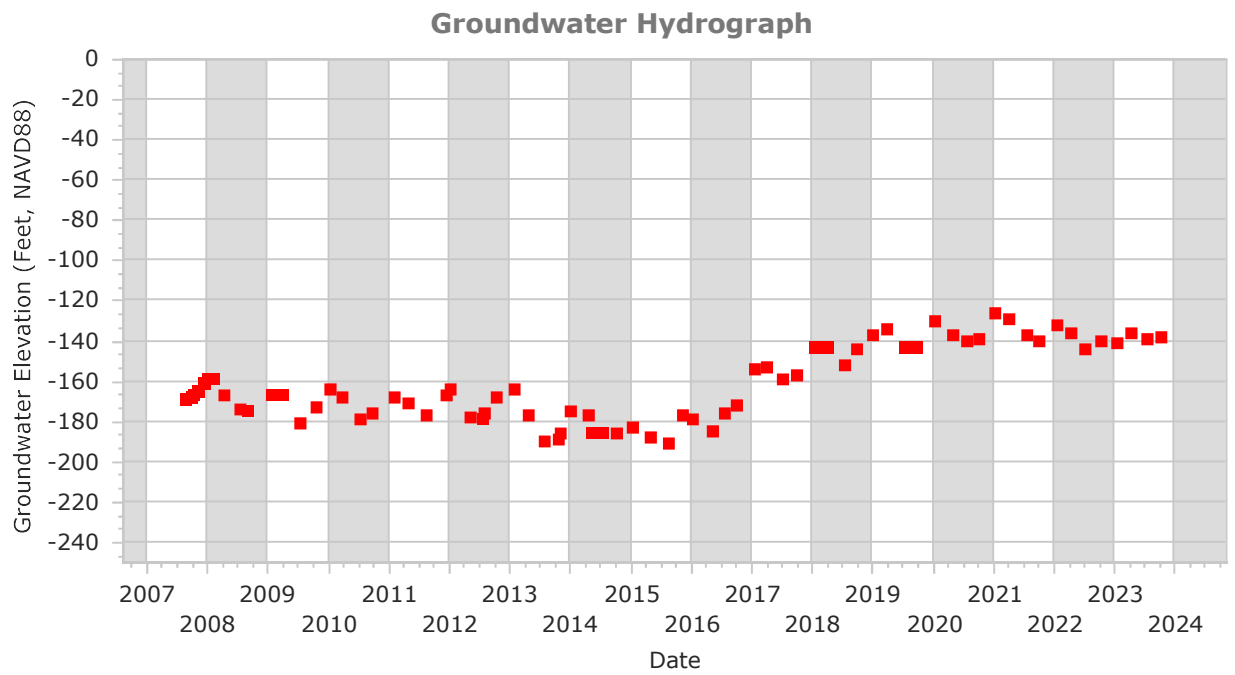
Station Name: SB-12 ELM AVENUE



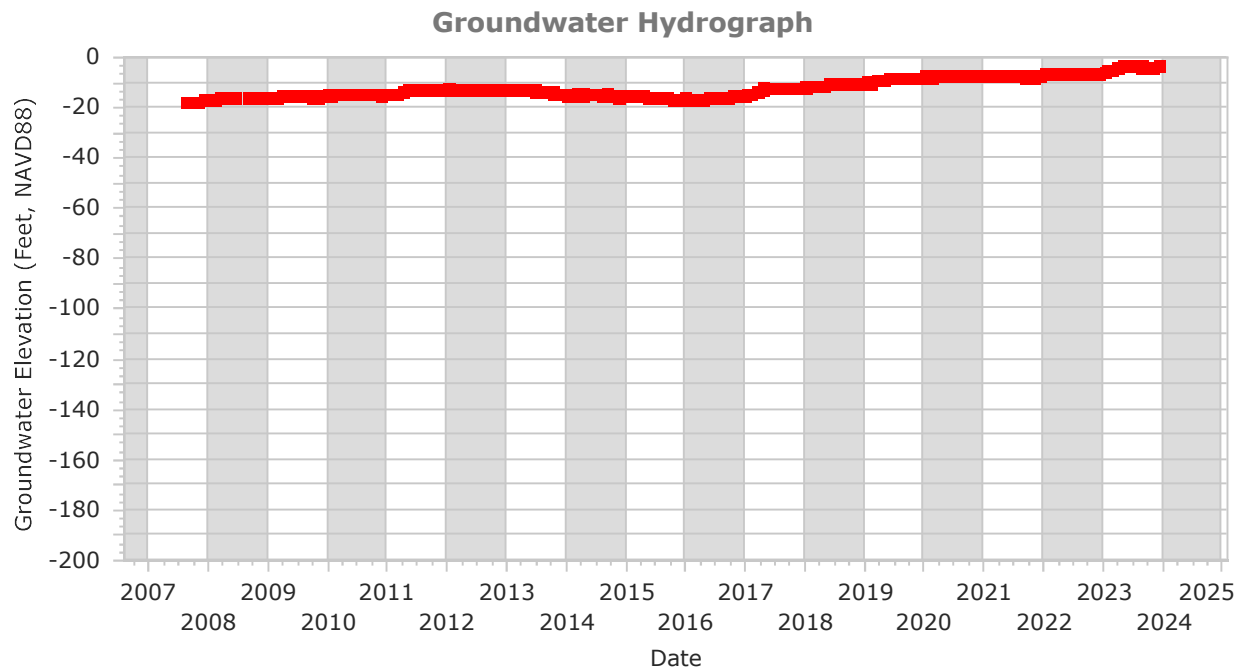
Station Name: SSFLP MW440



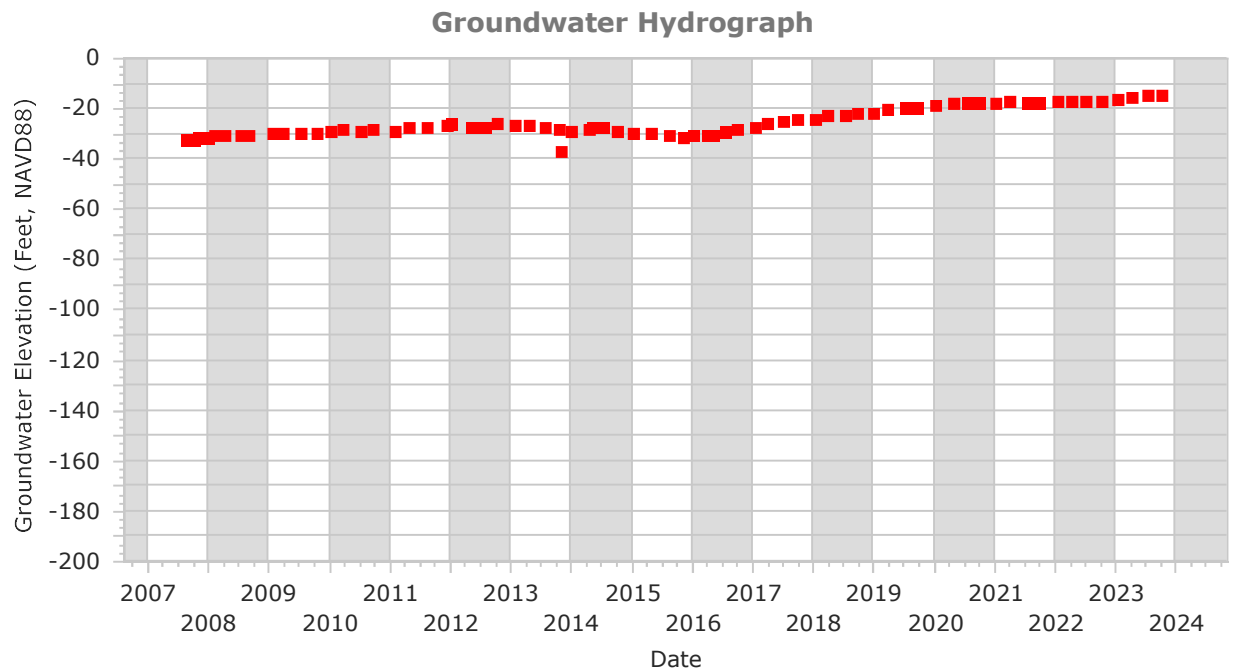
Station Name: SSFLP MW520



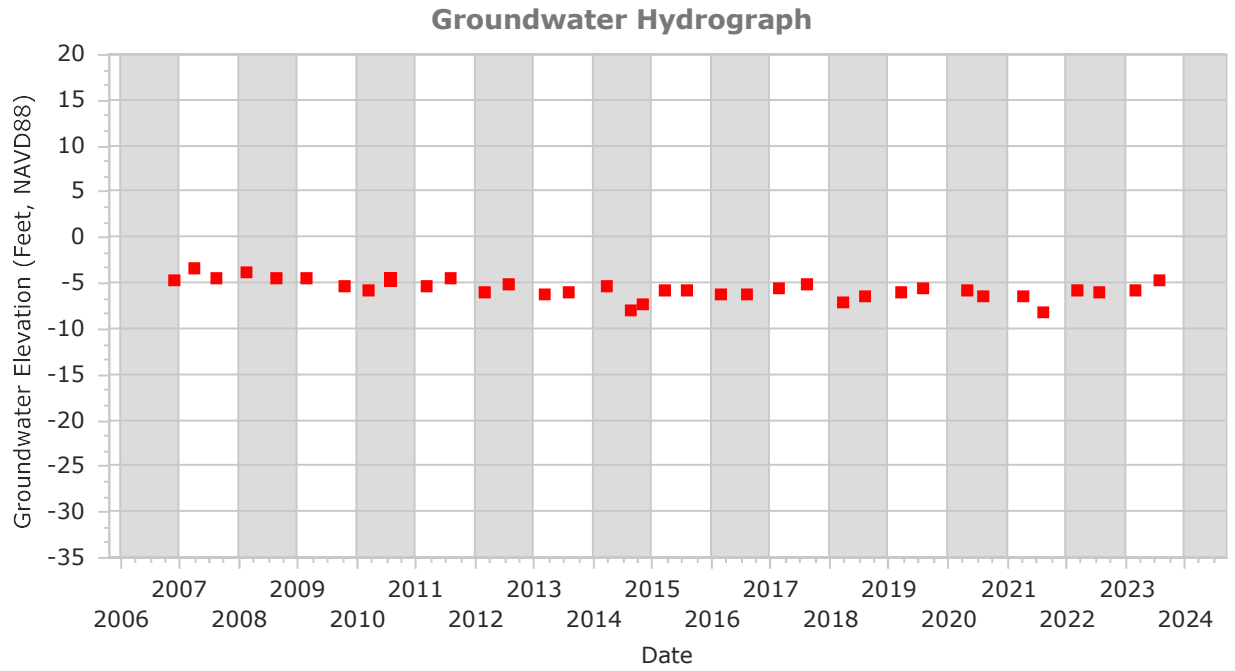
Station Name: SSFLP MW120



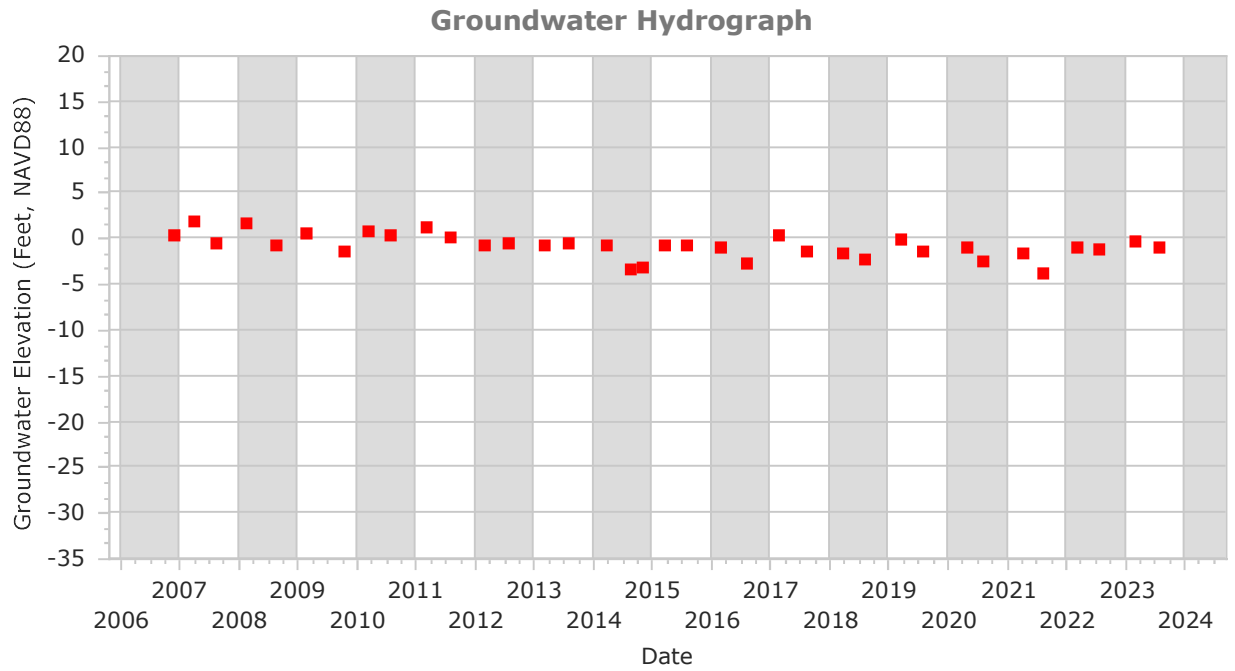
Station Name: SSFLP MW220



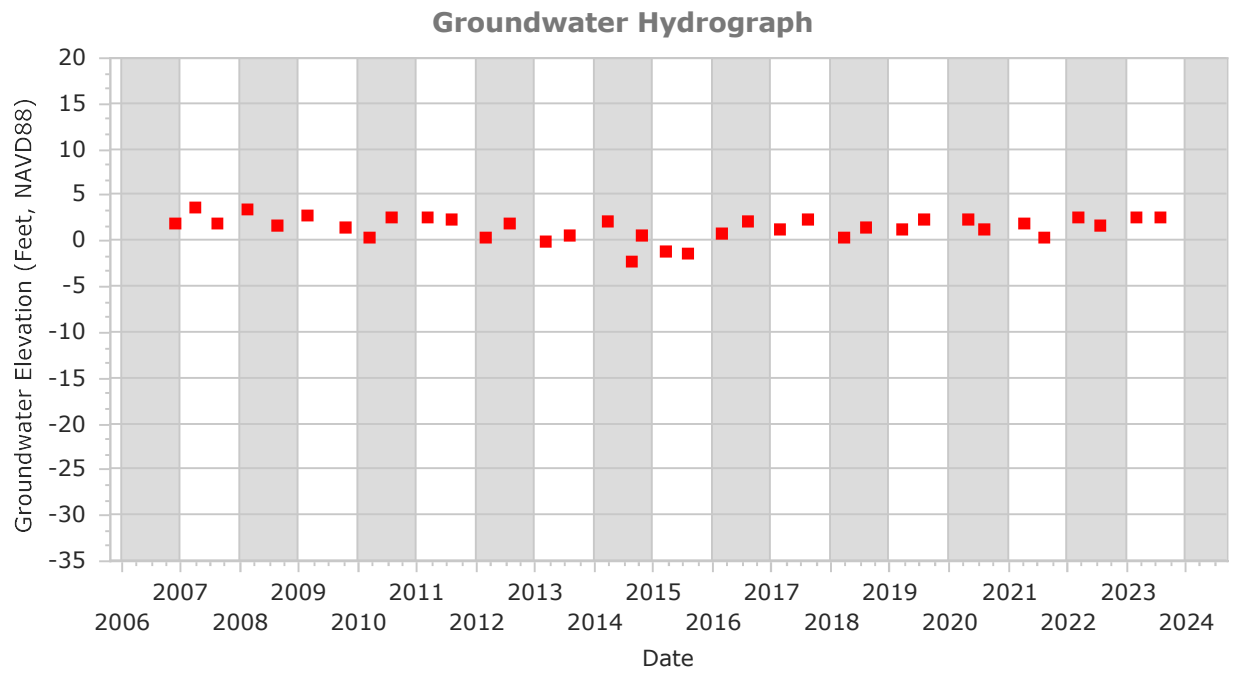
Station Name: Burlingame D



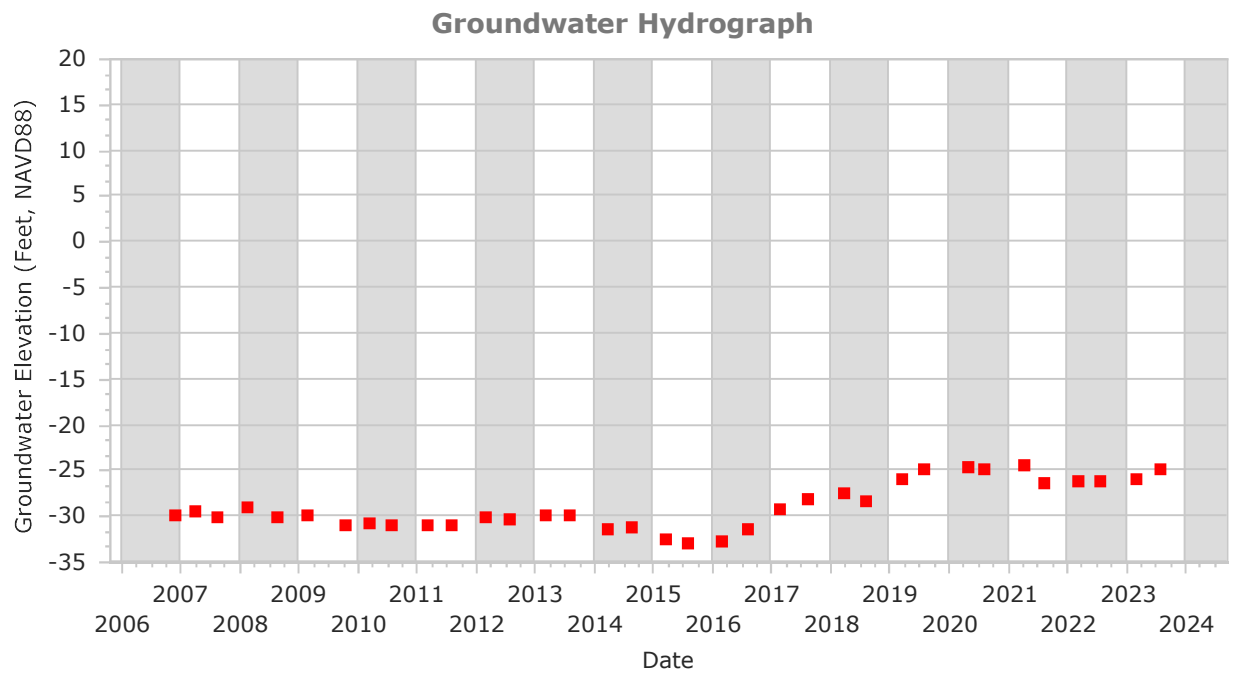
Station Name: Burlingame M



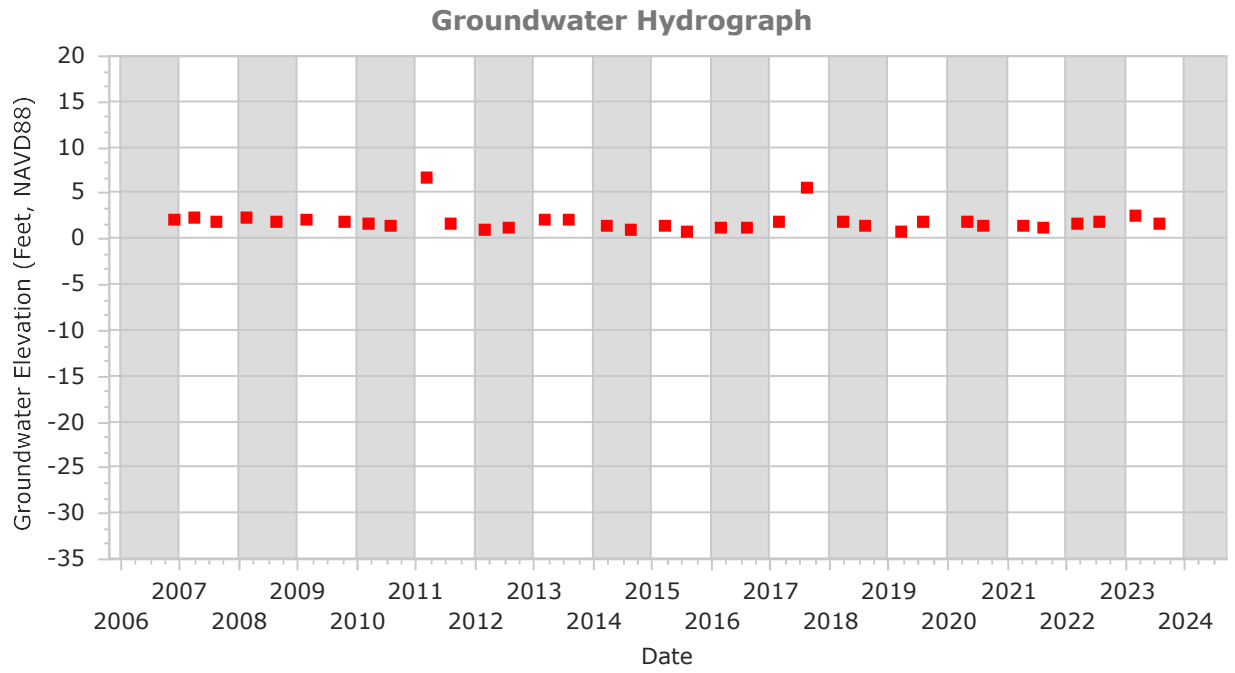
Station Name: Burlingame S



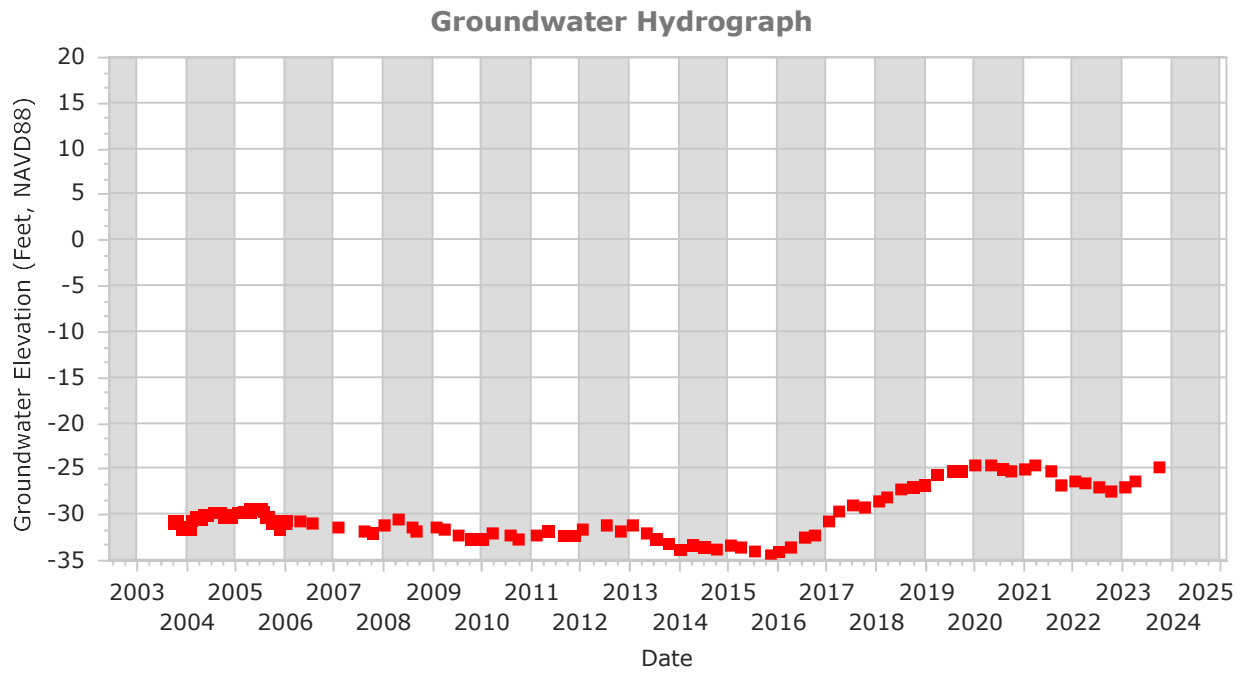
Station Name: SFO-D



Station Name: SFO-S

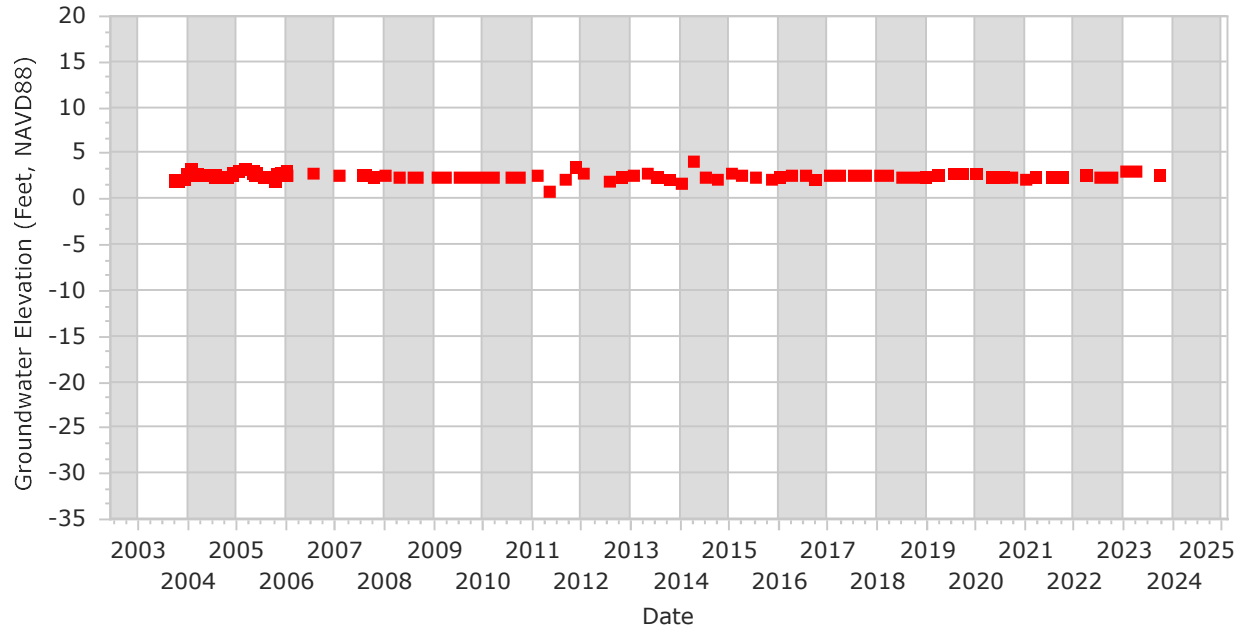


Station Name: UAL MW13C



Station Name: UAL MW13D

### Groundwater Hydrograph





**APPENDIX B**  
**Laboratory Analytical Results**

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_Daly City

**Scheduled Sample Date:** 04/05/2023

**Sampling Team:** Field

**Lab Sample#:** 2301744-01 **Sample Source:** WSB\_DC06\_JEFF **External ID:**

**Date Collected:** 04/05/2023 08:30AM **Date Received:** 04/05/2023 11:44AM **Sample Matrix:** Aqueous **Location Desc:**

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	17.9	mg/L	0.5	2.5	04/05/2023	2059526 PWARNER	
Nitrate as N	3.1	mg/L	0.17	0.2	04/05/2023	2059526 PWARNER	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	22.6	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	23.6	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	1.94	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
Sodium, Na	37.3	mg/L	0.02	1	05/03/2023	2060934 BTRINH	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	118	mg/L	0.593	3	04/05/2023	2059555 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	61.8	mg/L		3	04/05/2023	2059556 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	488	µmhos/cm		1	04/05/2023	2059562 DCARDONA	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	150	mg/L	0.474	3	04/05/2023	2059557 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	8.01	pH			04/05/2023	2059564 DCARDONA	H1,H3
Temperature (°C)	19.6	°C			04/05/2023	2059564 DCARDONA	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	259	mg/L	13.2	20	04/09/2023	2059558 ABALALIO	

**Lab Sample#:** 2301744-02 **Sample Source:** WSB\_DC11\_DC2 **External ID:**

**Date Collected:** 04/05/2023 09:30AM **Date Received:** 04/05/2023 11:44AM **Sample Matrix:** Aqueous **Location Desc:**

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	2.55	mg/L	0.17	0.2	04/05/2023	2059526 PWARNER	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	58.8	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	45.7	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	3.99	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
Sodium, Na	81	mg/L	0.02	1	05/03/2023	2060934 BTRINH	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	175	mg/L	1.19	6	04/05/2023	2059555 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	134	mg/L		6	04/05/2023	2059556 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>							

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_Daly City

**Scheduled Sample Date:** 04/05/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1040	µmhos/cm		1	04/05/2023	2059562 DCARDONA	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	332	mg/L	0.948	6	04/05/2023	2059557 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.53	pH			04/05/2023	2059564 DCARDONA	H1,H3
Temperature (°C)	20.1	°C			04/05/2023	2059564 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	611	mg/L	13.2	20	04/09/2023	2059558 ABALALIO	>MCL

**Lab Sample#: 2301744-02A**      **Sample Source:** WSB\_DC11\_DC2      **External ID:**

**Date Collected:** 04/05/2023 09:30AM      **Date Received:** 04/05/2023 11:44AM      **Sample Matrix:** Aqueous      **Location Desc:**

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	142	mg/L	1	5	04/06/2023	2059596 PWARNER	

**Lab Sample#: 2301744-03**      **Sample Source:** WSB\_DC12\_JS      **External ID:**

**Date Collected:** 04/05/2023 08:55AM      **Date Received:** 04/05/2023 11:44AM      **Sample Matrix:** Aqueous      **Location Desc:**

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	32.8	mg/L	1	5	04/05/2023	2059526 PWARNER	
Nitrate as N	8.17	mg/L	0.34	0.4	04/05/2023	2059526 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	23.8	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	25.3	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	1.67	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
Sodium, Na	37.9	mg/L	0.02	1	05/03/2023	2060934 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	115	mg/L	0.593	3	04/05/2023	2059555 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	52.1	mg/L		3	04/05/2023	2059556 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	520	µmhos/cm		1	04/05/2023	2059562 DCARDONA	
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	163	mg/L	0.474	3	04/05/2023	2059557 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	8.1	pH			04/05/2023	2059564 DCARDONA	H1,H3
Temperature (°C)	19.8	°C			04/05/2023	2059564 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	285	mg/L	13.2	20	04/09/2023	2059558 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_Daly City

**Scheduled Sample Date:** 04/05/2023

**Sampling Team:** Field

**QC list for Run#: 2059526 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312461-01										
	MRL_CK	Chloride		0.51	mg/L	102				
	MRL_CK	Sulfate		0.516	mg/L	103				
	MRL_CK	Nitrate as N		0.0408	mg/L	102				
QC2312461-02										
	CCV	Chloride		2.46	mg/L	98				
	CCV	Sulfate		2.38	mg/L	95				
	CCV	Nitrate as N		0.194	mg/L	97				
QC2312461-03										
	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2312461-04										
	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2312461-05										
	LCS	Chloride		2.48	mg/L	99				
	LCS	Sulfate		2.39	mg/L	95				
	LCS	Nitrate as N		0.201	mg/L	100				
QC2312461-06										
	CCV	Chloride		19.8	mg/L	98				
	CCV	Sulfate		21.4	mg/L	107				
	CCV	Nitrate as N		1.67	mg/L	105				
QC2312461-07										
	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2312461-08										
	CAL	Chloride		19.8	mg/L	99		0.2		
	CAL	Sulfate		21.6	mg/L	108		0.1		
	CAL	Nitrate as N		1.68	mg/L	105		0.034		
QC2312461-09										
	CAL	Chloride		10.3	mg/L	103		0.2		
	CAL	Sulfate		10.1	mg/L	101		0.1		
	CAL	Nitrate as N		0.804	mg/L	101		0.034		
QC2312461-10										
	CAL	Chloride		5.05	mg/L	101		0.2		
	CAL	Sulfate		4.85	mg/L	97		0.1		

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/05/2023

**Routine:** WSB\_Daly City

**Sampling Team:** Field

Sample ID	Parameter	Value	Unit	Temp	Flow	Notes
QC2312461-11	Nitrate as N	0.393	mg/L	98		0.034
	Chloride	2.46	mg/L	98		0.2
	Sulfate	2.39	mg/L	95		0.1
	Nitrate as N	0.195	mg/L	98		0.034
QC2312461-12	Chloride	0.98	mg/L	98		0.2
	Sulfate	0.974	mg/L	97		0.1
	Nitrate as N	0.0792	mg/L	99		0.034
QC2312461-13	Chloride	0.792	mg/L	99		0.2
	Sulfate	0.787	mg/L	98		0.1
	Nitrate as N	0.0623	mg/L	97		0.034
QC2312461-14	Chloride	0.509	mg/L	102		0.2
	Sulfate	0.516	mg/L	103		0.1
	Nitrate as N	0.0411	mg/L	103		0.034
QC2312461-15	Chloride	<1	mg/L			0.2 1
	Sulfate	<0.5	mg/L			0.1 0.5
	Nitrate as N	<0.04	mg/L			0.034 0.04
QC2312461-16	Chloride	2.48	mg/L	99		0.2 1
	Sulfate	2.41	mg/L	96		0.1 0.5
	Nitrate as N	0.2	mg/L	100		0.34 0.04
QC2312461-17	Chloride	9.9	12.7 mg/L	114		Splt# 2302317-02A (9.9mg/L)
	Sulfate	42.7	47.3 mg/L	184		Splt# 2302317-02A (42.7mg/L)
	Nitrate as N	0.483	0.729 mg/L	123		Splt# 2302317-02A (0.483mg/L)
QC2312461-18	Chloride	9.9	12.5 mg/L	106	1	Splt# 2302317-02A (9.9mg/L)
	Sulfate	42.7	46.9 mg/L	164	1	Splt# 2302317-02A (42.7mg/L)
	Nitrate as N	0.483	0.714 mg/L	116	2	Splt# 2302317-02A (0.483mg/L)
QC2312461-19	Chloride	16	18.2 mg/L	85		Splt# 2301613-05 (16mg/L)
	Sulfate	16.5	19 mg/L	98		Splt# 2301613-05 (16.5mg/L)
	Nitrate as N	0.104	0.3 mg/L	98		Splt# 2301613-05 (0.104mg/L)
QC2312461-20	Chloride	16	18.3 mg/L	89	0	Splt# 2301613-05 (16mg/L)
	Sulfate	16.5	19.2 mg/L	105	0	Splt# 2301613-05 (16.5mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_Daly City

**Scheduled Sample Date:** 04/05/2023

**Sampling Team:** Field

Sample ID	Method	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
SPKD of 2301613-05		Nitrate as N	0.104	0.303 mg/L	100	0			Splt# 2301613-05 (0.104mg/L)
QC2312461-21	CCV	Chloride		2.44 mg/L	97				
	CCV	Sulfate		2.37 mg/L	94				
	CCV	Nitrate as N		0.194 mg/L	97				
QC2312461-22	BLK	Chloride		<1 mg/L			0.2	1	
	BLK	Sulfate		<0.5 mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04 mg/L			0.034	0.04	
QC2312461-23	CCV	Chloride		19.7 mg/L	98				
	CCV	Sulfate		21.5 mg/L	108				
	CCV	Nitrate as N		1.66 mg/L	104				
QC2312461-24	CCV	Chloride		2.45 mg/L	97				
	CCV	Sulfate		2.39 mg/L	95				
	CCV	Nitrate as N		0.195 mg/L	97				
QC2312461-25	BLK	Chloride		<1 mg/L			0.2	1	
	BLK	Sulfate		<0.5 mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04 mg/L			0.034	0.04	
QC2312461-26	BLK	Chloride		<1 mg/L			0.2	1	
	BLK	Sulfate		<0.5 mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04 mg/L			0.034	0.04	
QC2312461-27	SPK of 2302317-02A	Chloride	9.9	12.7 mg/L	112				Splt# 2302317-02A (9.9mg/L)
	SPK of 2302317-02A	Sulfate	42.7	47.3 mg/L	182				Splt# 2302317-02A (42.7mg/L)
	SPK of 2302317-02A	Nitrate as N	0.483	0.71 mg/L	114				Splt# 2302317-02A (0.483mg/L)
QC2312461-28	SPKD of 2302317-02A	Chloride	9.9	12.5 mg/L	105	1			Splt# 2302317-02A (9.9mg/L)
	SPKD of 2302317-02A	Sulfate	42.7	47.2 mg/L	179	0			Splt# 2302317-02A (42.7mg/L)
	SPKD of 2302317-02A	Nitrate as N	0.483	0.705 mg/L	111	0			Splt# 2302317-02A (0.483mg/L)

**QC list for Run#: 2059555 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312481-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2312481-02	MRL_CK	Alkalinity		3.31	mg/L	110				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/05/2023

**Routine:** WSB\_Daly City

**Sampling Team:** Field

QC2312481-03	SPK of 2301744-01	Alkalinity	118	158	mg/L	99		3	Splt# 2301744-01 (118mg/L)
QC2312481-04	SPKD of 2301744-01	Alkalinity	118	158	mg/L	98	0	3	Splt# 2301744-01 (118mg/L)
QC2312481-06	LCS	Alkalinity		40.2	mg/L	101		3	

**QC list for Run#: 2059556 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312482-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2312482-02	MRL_CK	Chloride		3.02	mg/L	101				
QC2312482-03	SPK of 2301744-01	Chloride	61.8	103	mg/L	104			3	Splt# 2301744-01 (61.8mg/L)
QC2312482-04	SPKD of 2301744-01	Chloride	61.8	103	mg/L	103	0		3	Splt# 2301744-01 (61.8mg/L)
QC2312482-06	LCS	Chloride		41.1	mg/L	103			3	

**QC list for Run#: 2059557 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312483-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2312483-02	MRL_CK	Hardness, Total, as CaCO3		2.97	mg/L	99				
QC2312483-03	DUP of 2301744-03	Hardness, Total, as CaCO3	163	163	mg/L		0	0.474	3	Splt# 2301744-03 (163mg/L)
QC2312483-04	LCS	Hardness, Total, as CaCO3		42.9	mg/L	107			3	

**QC list for Run#: 2059558 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312484-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2312484-02	DUP of 2302464-01	Total Dissolved Solids	100	95	mg/L		5	13.2	20	Splt# 2302464-01 (100mg/L)
QC2312484-03	LCS	Total Dissolved Solids		92	mg/L	96		13.2	20	

**QC list for Run#: 2059562 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312486-02	ICV	Specific Conductance @25°C		155	µmhos/cm	106				
QC2312486-03										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/05/2023

**Routine:** WSB\_Daly City

**Sampling Team:** Field

Sample #	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
QC2312486-04	BLK	Specific Conductance @25°C	<1	µmhos/cm					
QC2312486-05	MRL CK	Specific Conductance @25°C	10	µmhos/cm	100				
QC2312486-06	DUP of 2301744-01	Specific Conductance @25°C	488	487	µmhos/cm	0		1	Splt# 2301744-01 (488µmhos/cm)
QC2312486-06	CCV	Specific Conductance @25°C	102	µmhos/cm	102				

**QC list for Run#: 2059564 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312489-04	ICV	pH		9	pH	99				
	ICV	Temperature (°C)		19.1	°C					
QC2312489-05	DUP of 2301744-01	pH	8.01	8.01	pH	0				Splt# 2301744-01 (8.01pH) H1,H3
	DUP of 2301744-01	Temperature (°C)	19.6	19.6	°C					Splt# 2301744-01 (19.6°C)
QC2312489-06	CCV	pH		9	pH	99				
	CCV	Temperature (°C)		19.1	°C					

**QC list for Run#: 2059596 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312516-01	MRL CK	Sulfate		0.512	mg/L	102				
	MRL CK	Nitrate as N		0.0394	mg/L	99				
QC2312516-02	CCV	Sulfate		2.4	mg/L	96				
	CCV	Nitrate as N		0.194	mg/L	97				
QC2312516-03	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2312516-04	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2312516-05	LCS	Sulfate		2.39	mg/L	95				
	LCS	Nitrate as N		0.198	mg/L	99				
QC2312516-06	CCV	Sulfate		21.6	mg/L	108				
	CCV	Nitrate as N		1.67	mg/L	105				
QC2312516-07	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_Daly City

**Scheduled Sample Date:** 04/05/2023

**Sampling Team:** Field

QC#	Sample ID	Analyte	Parent Result	Current Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
QC2312516-08	SPK of 2302030-02	Sulfate	136	141	mg/L	207				Splt# 2302030-02 (136mg/L) Parent sample exceeds calibration range, spike recovery results not meaningful
	SPK of 2302030-02	Nitrate as N	0.0687	0.265	mg/L	98				Splt# 2302030-02 (0.0687mg/L)
QC2312516-09	SPKD of 2302030-02	Sulfate	136	131	mg/L	0	7			Splt# 2302030-02 (136mg/L) Parent sample exceeds calibration range, spike recovery results not meaningful
	SPKD of 2302030-02	Nitrate as N	0.0687	0.257	mg/L	94	3			Splt# 2302030-02 (0.0687mg/L)

**QC list for Run#: 2060934 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313460-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2313460-02	LCS	Calcium, Ca		1.87	mg/L	93		0.04	1	
	LCS	Magnesium, Mg		2.03	mg/L	102		0.007	0.2	
	LCS	Potassium, K		2.05	mg/L	103		0.04	0.2	
	LCS	Sodium, Na		2.07	mg/L	103		0.02	1	
QC2313460-03	DUP of 2301744-01	Calcium, Ca	22.6	22.1	mg/L		1	0.04	1	Splt# 2301744-01 (22.6mg/L)
	DUP of 2301744-01	Magnesium, Mg	23.6	22.7	mg/L		3	0.007	0.2	Splt# 2301744-01 (23.6mg/L)
	DUP of 2301744-01	Potassium, K	1.94	1.89	mg/L		2	0.04	0.2	Splt# 2301744-01 (1.94mg/L)
	DUP of 2301744-01	Sodium, Na	37.3	35.5	mg/L		4	0.02	1	Splt# 2301744-01 (37.3mg/L)
QC2313460-04	SPK of 2301744-01	Calcium, Ca	22.6	24.2	mg/L	80		0.04	1	Splt# 2301744-01 (22.6mg/L)
	SPK of 2301744-01	Magnesium, Mg	23.6	25.1	mg/L	74		0.007	0.2	Splt# 2301744-01 (23.6mg/L) Spike too low
	SPK of 2301744-01	Potassium, K	1.94	3.99	mg/L	102		0.04	0.2	Splt# 2301744-01 (1.94mg/L)
	SPK of 2301744-01	Sodium, Na	37.3	38.1	mg/L	38		0.02	1	Splt# 2301744-01 (37.3mg/L) Spike too low
QC2313460-05	SPKD of 2301744-01	Calcium, Ca	22.6	24.6	mg/L	100	1	0.04	1	Splt# 2301744-01 (22.6mg/L)
	SPKD of 2301744-01	Magnesium, Mg	23.6	25.5	mg/L	96	1	0.007	0.2	Splt# 2301744-01 (23.6mg/L)
	SPKD of 2301744-01	Potassium, K	1.94	4.03	mg/L	104	1	0.04	0.2	Splt# 2301744-01 (1.94mg/L)
	SPKD of 2301744-01	Sodium, Na	37.3	38.5	mg/L	59	1	0.02	1	Splt# 2301744-01 (37.3mg/L) Spike too low
QC2313460-06										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2301744**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/05/2023

**Routine:** WSB\_Daly City

**Sampling Team:** Field

	MRL_CK	Calcium, Ca	<1	mg/L	N/A	0.04	1
	MRL_CK	Magnesium, Mg	<0.2	mg/L	N/A	0.007	0.2
	MRL_CK	Potassium, K	0.229	mg/L	91	0.04	0.2
	MRL_CK	Sodium, Na	<1	mg/L	N/A	0.02	1
QC2313495-01							
	ICV	Potassium, K	1.93	mg/L	96	0.03	0.2
QC2313495-02							
	ICV	Calcium, Ca	9.77	mg/L	97	0.05	1
	ICV	Magnesium, Mg	9.86	mg/L	98	0.01	0.2
	ICV	Sodium, Na	10.1	mg/L	103	0.002	1

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302249**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/10/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302249-01	<b>Sample Source:</b> WSB_SF11_LM3S	<b>External ID:</b>
<b>Date Collected:</b> 04/10/2023 10:08AM	<b>Date Received:</b> 04/10/2023 03:05PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#11 - LMMW3S

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	2.52	mg/L	0.1	0.5	04/10/2023	2059704 PWARNER	
Nitrate as N	<0.04	mg/L	0.034	0.04	04/10/2023	2059704 PWARNER	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	68.7	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	72.1	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	3.3	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
Sodium, Na	38.7	mg/L	0.02	1	05/03/2023	2060934 BTRINH	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	446	mg/L	1.19	6	04/10/2023	2059736 DCARDONA	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	73.3	mg/L		6	04/10/2023	2059737 DCARDONA	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1030	µmhos/cm		1	04/10/2023	2059744 ALEE	>MCL

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	461	mg/L	0.948	6	04/10/2023	2059739 DCARDONA	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	6.96	pH			04/10/2023	2059745 ALEE	H1,H3
Temperature (°C)	16.9	°C			04/10/2023	2059745 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	537	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	>MCL

<b>Lab Sample#:</b> 2302249-02	<b>Sample Source:</b> WSB_SF10_LM3D	<b>External ID:</b>
<b>Date Collected:</b> 04/10/2023 11:17AM	<b>Date Received:</b> 04/10/2023 03:05PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#10 - LMMW3D

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	8.62	mg/L	0.1	0.5	04/10/2023	2059704 PWARNER	
Nitrate as N	<0.04	mg/L	0.034	0.04	04/10/2023	2059704 PWARNER	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	29.3	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	31.6	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	2.04	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
Sodium, Na	46.5	mg/L	0.02	1	05/03/2023	2060934 BTRINH	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	193	mg/L	0.593	3	04/10/2023	2059736 DCARDONA	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	68.2	mg/L		3	04/10/2023	2059737 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302249**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/10/2023

**Sampling Team:** Field

<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	606	µmhos/cm		1	04/10/2023	2059744 ALEE	
<i>MBP_HARDNESS_T(SM 2340 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	197	mg/L	0.474	3	04/10/2023	2059739 DCARDONA	
<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.49	pH			04/10/2023	2059745 ALEE	H1,H3
Temperature (°C)	17.7	°C			04/10/2023	2059745 ALEE	
<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	312	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	

**Lab Sample#:** 2302249-03      **Sample Source:** WSB\_SF15\_LM6D      **External ID:**

**Date Collected:** 04/10/2023 01:40PM      **Date Received:** 04/10/2023 03:05PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#15 - LMMW6D

Test/Analyte

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	3.63	mg/L	0.1	0.5	04/10/2023	2059704 PWARNER	
Nitrate as N	0.541	mg/L	0.034	0.04	04/10/2023	2059704 PWARNER	
<i>SEM_200.7_DW(EPA 200.7)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	32.3	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	34	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	1.89	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
Sodium, Na	44.2	mg/L	0.02	1	05/03/2023	2060934 BTRINH	
<i>MBP_ALK(SM 2320 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	187	mg/L	0.593	3	04/10/2023	2059736 DCARDONA	
<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	56.1	mg/L		3	04/10/2023	2059737 DCARDONA	
<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	631	µmhos/cm		1	04/10/2023	2059744 ALEE	
<i>MBP_HARDNESS_T(SM 2340 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	217	mg/L	0.474	3	04/10/2023	2059739 DCARDONA	
<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.74	pH			04/10/2023	2059745 ALEE	H1,H3
Temperature (°C)	17.8	°C			04/10/2023	2059745 ALEE	
<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	334	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	

**Lab Sample#:** 2302249-04      **Sample Source:** WSB\_SF\_DUP\_FULL      **External ID:**

**Date Collected:** 04/10/2023 10:10AM      **Date Received:** 04/10/2023 03:05PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#11 - LMMW3S

Test/Analyte

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	1.87	mg/L	0.1	0.5	04/10/2023	2059704 PWARNER	
Nitrate as N	<0.04	mg/L	0.034	0.04	04/10/2023	2059704 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302249**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/10/2023

**Sampling Team:** Field

<i>SEM_200.7_DW(EPA 200.7)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	69.3	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	74.3	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	3.37	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
Sodium, Na	39.5	mg/L	0.02	1	05/03/2023	2060934 BTRINH	
<i>MBP_ALK(SM 2320 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	447	mg/L	1.19	6	04/10/2023	2059736 DCARDONA	
<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	74.9	mg/L		6	04/10/2023	2059737 DCARDONA	
<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	1030	µmhos/cm		1	04/10/2023	2059744 ALEE	>MCL
<i>MBP_HARDNESS_T(SM 2340 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	468	mg/L	0.948	6	04/10/2023	2059739 DCARDONA	
<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	6.95	pH			04/10/2023	2059745 ALEE	H1,H3
Temperature (°C)	16.7	°C			04/10/2023	2059745 ALEE	
<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	536	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	>MCL

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## Water Quality Laboratory

**FOLDER ID: 2302249**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/10/2023

**Sampling Team:** Field

**QC list for Run#: 2059704 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312599-01	MRL_CK	Sulfate		0.519	mg/L	104				
	MRL_CK	Nitrate as N		0.0403	mg/L	101				
QC2312599-02	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2312599-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2312599-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2312599-05	LCS	Sulfate		2.36	mg/L	94				
	LCS	Nitrate as N		0.195	mg/L	97				
QC2312599-06	CCV	Sulfate		21.7	mg/L	108				
	CCV	Nitrate as N		1.68	mg/L	106				
QC2312599-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2312599-08	SPK of 2301828-03	Sulfate	13.5	15.9	mg/L	94				Splt# 2301828-03 (13.5mg/L)
	SPK of 2301828-03	Nitrate as N	0.0448	0.232	mg/L	94				Splt# 2301828-03 (0.0448mg/L)
QC2312599-09	SPKD of 2301828-03	Sulfate	13.5	16.3	mg/L	112	2			Splt# 2301828-03 (13.5mg/L)
	SPKD of 2301828-03	Nitrate as N	0.0448	0.248	mg/L	102	6			Splt# 2301828-03 (0.0448mg/L)
QC2312599-10	CCV	Sulfate		2.42	mg/L	96				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2312599-11	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2059736 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312621-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2312621-02	MRL_CK	Alkalinity		3.09	mg/L	103				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302249**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/10/2023

**Routine:** WSB\_SFPUC

**Sampling Team:** Field

QC2312621-03	SPK of 2302441-01	Alkalinity	37.2	77.4	mg/L	100				3	Splt# 2302441-01 (37.2mg/L)
QC2312621-04	SPKD of 2302441-01	Alkalinity	37.2	77	mg/L	99	0			3	Splt# 2302441-01 (37.2mg/L)
QC2312621-06	LCS	Alkalinity		39.3	mg/L	98				3	

**QC list for Run#: 2059737 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312622-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2312622-02	MRL_CK	Chloride		2.74	mg/L	91				
QC2312622-03	SPK of 2302441-01	Chloride	12.6	53	mg/L	101			3	Splt# 2302441-01 (12.6mg/L)
QC2312622-04	SPKD of 2302441-01	Chloride	12.6	53.7	mg/L	103	1		3	Splt# 2302441-01 (12.6mg/L)
QC2312622-06	LCS	Chloride		40.4	mg/L	101			3	

**QC list for Run#: 2059739 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312623-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2312623-02	MRL_CK	Hardness, Total, as CaCO3		2.67	mg/L	89				
QC2312623-03	DUP of 2302441-01	Hardness, Total, as CaCO3	44.2	44.9	mg/L		1	0.474	3	Splt# 2302441-01 (44.2mg/L)
QC2312623-04	LCS	Hardness, Total, as CaCO3		39.4	mg/L	98			3	

**QC list for Run#: 2059744 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312626-02	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2312626-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2312626-04	MRL_CK	Specific Conductance @25°C		9.94	µmhos/cm	99				
QC2312626-05	DUP of 2301828-03	Specific Conductance @25°C	153	154	µmhos/cm		0		1	Splt# 2301828-03 (153µmhos/cm)
QC2312626-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302249**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/10/2023

**Sampling Team:** Field

**QC list for Run#: 2059745 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312627-04	ICV	pH		8.99	pH	99				
	ICV	Temperature (°C)		20.5	°C					
QC2312627-05	DUP of 2301834-03	pH	8.38	8.35	pH		0			Splt# 2301834-03 (8.38pH) H1, H3
	DUP of 2301834-03	Temperature (°C)	18.4	18.1	°C					Splt# 2301834-03 (18.4°C)
QC2312627-06	CCV	pH		8.99	pH					
	CCV	Temperature (°C)		20.4	°C					
QC2312627-07	CCV	pH		9	pH					
	CCV	Temperature (°C)		20.2	°C					

**QC list for Run#: 2059819 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312674-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2312674-02	DUP of 2302580-01	Total Dissolved Solids	101	97	mg/L		4	13.2	20	Splt# 2302580-01 (101mg/L)
QC2312674-03	LCS	Total Dissolved Solids		90	mg/L			13.2	20	
QC2312674-04	DUP of 2302251-05	Total Dissolved Solids	256	257	mg/L			13.2	20	Splt# 2302251-05 (256mg/L)

**QC list for Run#: 2060934 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313460-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2313460-02	LCS	Calcium, Ca		1.87	mg/L			0.04	1	
	LCS	Magnesium, Mg		2.03	mg/L			0.007	0.2	
	LCS	Potassium, K		2.05	mg/L			0.04	0.2	
	LCS	Sodium, Na		2.07	mg/L			0.02	1	
QC2313460-03	DUP of 2301744-01	Calcium, Ca	22.6	22.1	mg/L		1	0.04	1	Splt# 2301744-01 (22.6mg/L)
	DUP of 2301744-01	Magnesium, Mg	23.6	22.7	mg/L		3	0.007	0.2	Splt# 2301744-01 (23.6mg/L)
	DUP of 2301744-01	Potassium, K	1.94	1.89	mg/L		2	0.04	0.2	Splt# 2301744-01 (1.94mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302249**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/10/2023

**Sampling Team:** Field

Sample ID	Parameter	Unit	Result 1	Result 2	Unit	Filter	Residue	Flow	Notes	
DUP of 2301744-01	Sodium, Na	mg/L	37.3	35.5	mg/L	4	0.02	1	Splt# 2301744-01 (37.3mg/L)	
QC2313460-04										
SPK of 2301744-01	Calcium, Ca	mg/L	22.6	24.2	mg/L	80	0.04	1	Splt# 2301744-01 (22.6mg/L)	
SPK of 2301744-01	Magnesium, Mg	mg/L	23.6	25.1	mg/L	74	0.007	0.2	Splt# 2301744-01 (23.6mg/L) Spike too low	
SPK of 2301744-01	Potassium, K	mg/L	1.94	3.99	mg/L	102	0.04	0.2	Splt# 2301744-01 (1.94mg/L)	
SPK of 2301744-01	Sodium, Na	mg/L	37.3	38.1	mg/L	38	0.02	1	Splt# 2301744-01 (37.3mg/L) Spike too low	
QC2313460-05										
SPKD of 2301744-01	Calcium, Ca	mg/L	22.6	24.6	mg/L	100	1	0.04	1	Splt# 2301744-01 (22.6mg/L)
SPKD of 2301744-01	Magnesium, Mg	mg/L	23.6	25.5	mg/L	96	1	0.007	0.2	Splt# 2301744-01 (23.6mg/L)
SPKD of 2301744-01	Potassium, K	mg/L	1.94	4.03	mg/L	104	1	0.04	0.2	Splt# 2301744-01 (1.94mg/L)
SPKD of 2301744-01	Sodium, Na	mg/L	37.3	38.5	mg/L	59	1	0.02	1	Splt# 2301744-01 (37.3mg/L) Spike too low
QC2313460-06										
MRL_CK	Calcium, Ca	mg/L	<1		mg/L	N/A	0.04	1		
MRL_CK	Magnesium, Mg	mg/L	<0.2		mg/L	N/A	0.007	0.2		
MRL_CK	Potassium, K	mg/L	0.229		mg/L	91	0.04	0.2		
MRL_CK	Sodium, Na	mg/L	<1		mg/L	N/A	0.02	1		
QC2313495-01										
ICV	Potassium, K	mg/L		1.93	mg/L	96	0.03	0.2		
QC2313495-02										
ICV	Calcium, Ca	mg/L		9.77	mg/L	97	0.05	1		
ICV	Magnesium, Mg	mg/L		9.86	mg/L	98	0.01	0.2		
ICV	Sodium, Na	mg/L		10.1	mg/L	103	0.002	1		

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302250-01	<b>Sample Source:</b> WSB_SF09_LM2S	<b>External ID:</b>
<b>Date Collected:</b> 04/12/2023 10:14AM	<b>Date Received:</b> 04/12/2023 05:09PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#09 - LMMW2S

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	73.1	mg/L	1	5	04/13/2023	2059922 PWARNER	
Nitrate as N	7.2	mg/L	0.34	0.4	04/13/2023	2059922 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	70.5	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	69.6	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	2.83	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	251	mg/L	2.96	15	04/13/2023	2059948 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	266	mg/L		15	04/13/2023	2059954 ALEE	>MCL

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1500	µmhos/cm		1	04/12/2023	2059904 DCARDONA	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	471	mg/L	2.37	15	04/13/2023	2059956 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.47	pH			04/12/2023	2059903 DCARDONA	H1,H3
Temperature (°C)	12.1	°C			04/12/2023	2059903 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	778	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	>MCL

<b>Lab Sample#:</b> 2302250-01A	<b>Sample Source:</b> WSB_SF09_LM2S	<b>External ID:</b>
<b>Date Collected:</b> 04/12/2023 10:14AM	<b>Date Received:</b> 04/12/2023 05:09PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#09 - LMMW2S

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sodium, Na	112	mg/L	0.08	4	05/03/2023	2060934 BTRINH	

<b>Lab Sample#:</b> 2302250-02	<b>Sample Source:</b> WSB_SF08_LM2D	<b>External ID:</b>
<b>Date Collected:</b> 04/12/2023 12:38PM	<b>Date Received:</b> 04/12/2023 05:09PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#08 - LMMW2D

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	52.4	mg/L	0.5	2.5	04/13/2023	2059922 PWARNER	
Nitrate as N	3.32	mg/L	0.17	0.2	04/13/2023	2059922 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	47.3	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	51.2	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	2.78	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
Sodium, Na	63.4	mg/L	0.02	1	05/03/2023	2060934 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	216	mg/L	1.19	6	04/13/2023	2059948 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	136	mg/L		6	04/13/2023	2059954 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	957	µmhos/cm		1	04/12/2023	2059904 DCARDONA	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	331	mg/L	0.948	6	04/13/2023	2059956 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.57	pH			04/12/2023	2059903 DCARDONA	H1,H3
Temperature (°C)	14.2	°C			04/12/2023	2059903 DCARDONA	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	508	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	>MCL

**Lab Sample#: 2302250-03**      **Sample Source:** WSB\_SF07\_LM1S      **External ID:**

**Date Collected:** 04/12/2023 03:17PM      **Date Received:** 04/12/2023 05:09PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#07 - LMMW1S

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	38.4	mg/L	1	5	04/13/2023	2059922 PWARNER	
Nitrate as N	7.24	mg/L	0.34	0.4	04/13/2023	2059922 PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	43.7	mg/L	0.04	1	05/03/2023	2060934 BTRINH	
Magnesium, Mg	65.3	mg/L	0.007	0.2	05/03/2023	2060934 BTRINH	
Potassium, K	2.61	mg/L	0.04	0.2	05/03/2023	2060934 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	296	mg/L	2.96	15	04/13/2023	2059948 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	175	mg/L		15	04/13/2023	2059954 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1220	µmhos/cm		1	04/12/2023	2059904 DCARDONA	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	381	mg/L	2.37	15	04/13/2023	2059956 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.63	pH			04/12/2023	2059903 DCARDONA	H1,H3
Temperature (°C)	15	°C			04/12/2023	2059903 DCARDONA	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	638	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302250-03A	<b>Sample Source:</b> WSB_SF07_LM1S	<b>External ID:</b>
<b>Date Collected:</b> 04/12/2023 03:17PM	<b>Date Received:</b> 04/12/2023 05:09PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#07 - LMMW1S

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sodium, Na	99.9	mg/L	0.08	4	05/03/2023	2060934 BTRINH	

<b>Lab Sample#:</b> 2302250-04	<b>Sample Source:</b> WSB_SF63_LM1D	<b>External ID:</b>
<b>Date Collected:</b> 04/12/2023 04:29PM	<b>Date Received:</b> 04/12/2023 05:09PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#63 - LMMW1D

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	34.6	mg/L	1	5	04/13/2023	2059922 PWARNER	
Nitrate as N	9.69	mg/L	0.34	0.4	04/13/2023	2059922 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	31.3	mg/L	0.04	1	05/05/2023	2061065 BTRINH	
Magnesium, Mg	47	mg/L	0.007	0.2	05/05/2023	2061065 BTRINH	
Potassium, K	3.16	mg/L	0.04	0.2	05/05/2023	2061065 BTRINH	
Sodium, Na	51.3	mg/L	0.02	1	05/05/2023	2061065 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	163	mg/L	1.19	6	04/13/2023	2059948 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	108	mg/L		6	04/13/2023	2059954 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	784	µmhos/cm		1	04/12/2023	2059904 DCARDONA	

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	264	mg/L	0.948	6	04/13/2023	2059956 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.79	pH			04/12/2023	2059903 DCARDONA	H1,H3
Temperature (°C)	17.3	°C			04/12/2023	2059903 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	417	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	

<b>Lab Sample#:</b> 2302250-05	<b>Sample Source:</b> WSB_SF_DUP_FULL	<b>External ID:</b>
<b>Date Collected:</b> 04/12/2023 10:16AM	<b>Date Received:</b> 04/12/2023 05:09PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#09 - LMMW2S

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	77.6	mg/L	1	5	04/13/2023	2059922 PWARNER	
Nitrate as N	7.38	mg/L	0.34	0.4	04/13/2023	2059922 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	71.1	mg/L	0.04	1	05/05/2023	2061065 BTRINH	
Magnesium, Mg	69.9	mg/L	0.007	0.2	05/05/2023	2061065 BTRINH	
Potassium, K	2.94	mg/L	0.04	0.2	05/05/2023	2061065 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

<u>MBP_ALK(SM 2320 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	251	mg/L	2.96	15	04/13/2023	2059948 ALEE	
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	266	mg/L		15	04/13/2023	2059954 ALEE	>MCL
<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	1480	µmhos/cm		1	04/12/2023	2059904 DCARDONA	>MCL
<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	472	mg/L	2.37	15	04/13/2023	2059956 ALEE	
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.38	pH			04/12/2023	2059903 DCARDONA	H1,H3
Temperature (°C)	11.2	°C			04/12/2023	2059903 DCARDONA	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	775	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	>MCL
<b>Lab Sample#: 2302250-05A    Sample Source: WSB_SF_DUP_FULL    External ID:</b>							
<b>Date Collected: 04/12/2023 10:16AM    Date Received: 04/12/2023 05:09PM    Sample Matrix: Aqueous    Location Desc: SF#09 - LMMW2S</b>							
<u>Test/Analyte</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<u>SEM_200.7_DW(EPA 200.7)</u>							
Sodium, Na	110	mg/L	0.1	5	05/05/2023	2061065 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

**QC list for Run#: 2059903 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312739-04	ICV	pH		8.99	pH	99				
	ICV	Temperature (°C)		19.8	°C					
QC2312739-05	DUP of 2302250-01	pH	7.47	7.45	pH		0			Splt# 2302250-01 (7.47pH) H1,H3
	DUP of 2302250-01	Temperature (°C)	12.1	11.7	°C					Splt# 2302250-01 (12.1°C)
QC2312739-06	CCV	pH		9.01	pH					
	CCV	Temperature (°C)		19.1	°C					

**QC list for Run#: 2059904 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312740-02	ICV	Specific Conductance @25°C		156	µmhos/cm	106				
QC2312740-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2312740-04	MRL_CHK	Specific Conductance @25°C		9.96	µmhos/cm	99				
QC2312740-05	DUP of 2302250-01	Specific Conductance @25°C	1500	1490	µmhos/cm		0		1	Splt# 2302250-01 (1500µmhos/cm)
QC2312740-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2059922 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312757-01	MRL_CHK	Sulfate		0.538	mg/L	108				
	MRL_CHK	Nitrate as N		0.0394	mg/L	99				
QC2312757-02	CCV	Sulfate		2.5	mg/L	99				
	CCV	Nitrate as N		0.2	mg/L	100				
QC2312757-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2312757-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2312757-05	LCS	Sulfate		2.47	mg/L	98				
	LCS	Nitrate as N		0.199	mg/L	99				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

QC#	Sample	Analyte	Result	Units	RPD	MDL	MRL	Flag/Comments
QC2312757-06	BLK	Sulfate	<0.5	mg/L		0.1	0.5	
	BLK	Nitrate as N	<0.04	mg/L		0.034	0.04	
QC2312757-07	CCV	Sulfate	22	mg/L	110			
	CCV	Nitrate as N	1.71	mg/L	108			
QC2312757-08	SPKD of 2301805-03	Sulfate	14.1	16.7	mg/L	102	4	Splt# 2301805-03 (14.1mg/L)
	SPKD of 2301805-03	Nitrate as N	0.0499	0.237	mg/L	94	5	Splt# 2301805-03 (0.0499mg/L)
QC2312757-09	SPK of 2301805-03	Sulfate	14.1	16	mg/L	75		Splt# 2301805-03 (14.1mg/L)
	SPK of 2301805-03	Nitrate as N	0.0499	0.251	mg/L	101		Splt# 2301805-03 (0.0499mg/L)
QC2312757-10	CCV	Sulfate	2.47	mg/L	98			
	CCV	Nitrate as N	0.2	mg/L	100			
QC2312757-11	BLK	Sulfate	<0.5	mg/L		0.1	0.5	
	BLK	Nitrate as N	<0.04	mg/L		0.034	0.04	
QC2312757-12	SPK of 2301832-01	Sulfate	23.4	27.1	mg/L	147		Splt# 2301832-01 (23.4mg/L)
	SPK of 2301832-01	Nitrate as N	0.216	0.428	mg/L	106		Splt# 2301832-01 (0.216mg/L)
QC2312757-13	SPKD of 2301832-01	Sulfate	23.4	26.7	mg/L	132	1	Splt# 2301832-01 (23.4mg/L)
	SPKD of 2301832-01	Nitrate as N	0.216	0.421	mg/L	103	1	Splt# 2301832-01 (0.216mg/L)
QC2312757-14	SPK of 2301805-03	Sulfate	14.1	16.4	mg/L	90		Splt# 2301805-03 (14.1mg/L)
	SPK of 2301805-03	Nitrate as N	0.0499	0.245	mg/L	98		Splt# 2301805-03 (0.0499mg/L)

**QC list for Run#: 2059948 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312770-01	BLK	Alkalinity	<3		mg/L			0.593	3	
QC2312770-02	MRL_CK	Alkalinity	3.13		mg/L	104				
QC2312770-03	SPK of 2302549-01	Alkalinity	58.1	98.2	mg/L	100			3	Splt# 2302549-01 (58.1mg/L)
QC2312770-04	SPKD of 2302549-01	Alkalinity	58.1	98.7	mg/L	102	0		3	Splt# 2302549-01 (58.1mg/L)
QC2312770-05	DUP of 2302549-02	Alkalinity	59.6	59.6	mg/L		0	0.593	3	Splt# 2302549-02 (59.6mg/L)
QC2312770-06										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

LCS Alkalinity 39.3 mg/L 98 3

**QC list for Run#: 2059954 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312776-01	BLK	Chloride	<3		mg/L			1.16	3	
QC2312776-02	MRL_CK	Chloride	2.72		mg/L	90				
QC2312776-03	SPK of 2302549-01	Chloride	13.9	55.1	mg/L	103			3	Splt# 2302549-01 (13.9mg/L)
QC2312776-04	SPKD of 2302549-01	Chloride	13.9	55	mg/L	103	0		3	Splt# 2302549-01 (13.9mg/L)
QC2312776-05	DUP of 2302549-02	Chloride	13.9	14	mg/L		0		3	Splt# 2302549-02 (13.9mg/L)
QC2312776-06	LCS	Chloride	41		mg/L	102			3	

**QC list for Run#: 2059956 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312778-01	BLK	Hardness, Total, as CaCO3	<3		mg/L			0.474	3	
QC2312778-02	MRL_CK	Hardness, Total, as CaCO3	2.89		mg/L	96				
QC2312778-03	DUP of 2302549-02	Hardness, Total, as CaCO3	64.2	63.4	mg/L		1	0.474	3	Splt# 2302549-02 (64.2mg/L)
QC2312778-04	LCS	Hardness, Total, as CaCO3	39.7		mg/L	99			3	

**QC list for Run#: 2059988 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312808-01	BLK	Total Dissolved Solids	<20		mg/L			13.2	20	
QC2312808-02	DUP of 2302253-01	Total Dissolved Solids	248	247	mg/L		0	13.2	20	Splt# 2302253-01 (248mg/L)
QC2312808-03	LCS	Total Dissolved Solids	90		mg/L	94		13.2	20	

**QC list for Run#: 2060934 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313460-01	BLK	Calcium, Ca	<1		mg/L			0.04	1	
	BLK	Magnesium, Mg	<0.2		mg/L			0.007	0.2	
	BLK	Potassium, K	<0.2		mg/L			0.04	0.2	
	BLK	Sodium, Na	<1		mg/L			0.02	1	
QC2313460-02										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

Sample #	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments	
LCS	Calcium, Ca		1.87	mg/L	93		0.04	1		
LCS	Magnesium, Mg		2.03	mg/L	102		0.007	0.2		
LCS	Potassium, K		2.05	mg/L	103		0.04	0.2		
LCS	Sodium, Na		2.07	mg/L	103		0.02	1		
QC2313460-03										
DUP of 2301744-01	Calcium, Ca		22.6	22.1	mg/L	1	0.04	1	Splt# 2301744-01 (22.6mg/L)	
DUP of 2301744-01	Magnesium, Mg		23.6	22.7	mg/L	3	0.007	0.2	Splt# 2301744-01 (23.6mg/L)	
DUP of 2301744-01	Potassium, K		1.94	1.89	mg/L	2	0.04	0.2	Splt# 2301744-01 (1.94mg/L)	
DUP of 2301744-01	Sodium, Na		37.3	35.5	mg/L	4	0.02	1	Splt# 2301744-01 (37.3mg/L)	
QC2313460-04										
SPK of 2301744-01	Calcium, Ca		22.6	24.2	mg/L	80	0.04	1	Splt# 2301744-01 (22.6mg/L)	
SPK of 2301744-01	Magnesium, Mg		23.6	25.1	mg/L	74	0.007	0.2	Splt# 2301744-01 (23.6mg/L) Spike too low	
SPK of 2301744-01	Potassium, K		1.94	3.99	mg/L	102	0.04	0.2	Splt# 2301744-01 (1.94mg/L)	
SPK of 2301744-01	Sodium, Na		37.3	38.1	mg/L	38	0.02	1	Splt# 2301744-01 (37.3mg/L) Spike too low	
QC2313460-05										
SPKD of 2301744-01	Calcium, Ca		22.6	24.6	mg/L	100	1	0.04	1	Splt# 2301744-01 (22.6mg/L)
SPKD of 2301744-01	Magnesium, Mg		23.6	25.5	mg/L	96	1	0.007	0.2	Splt# 2301744-01 (23.6mg/L)
SPKD of 2301744-01	Potassium, K		1.94	4.03	mg/L	104	1	0.04	0.2	Splt# 2301744-01 (1.94mg/L)
SPKD of 2301744-01	Sodium, Na		37.3	38.5	mg/L	59	1	0.02	1	Splt# 2301744-01 (37.3mg/L) Spike too low
QC2313460-06										
MRL_CK	Calcium, Ca		<1	mg/L	N/A		0.04	1		
MRL_CK	Magnesium, Mg		<0.2	mg/L	N/A		0.007	0.2		
MRL_CK	Potassium, K		0.229	mg/L	91		0.04	0.2		
MRL_CK	Sodium, Na		<1	mg/L	N/A		0.02	1		
QC2313495-01										
ICV	Potassium, K		1.93	mg/L	96		0.03	0.2		
QC2313495-02										
ICV	Calcium, Ca		9.77	mg/L	97		0.05	1		
ICV	Magnesium, Mg		9.86	mg/L	98		0.01	0.2		
ICV	Sodium, Na		10.1	mg/L	103		0.002	1		

**QC list for Run#: 2061065 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313537-01										
BLK	Calcium, Ca		<1		mg/L			0.04	1	
BLK	Magnesium, Mg		<0.2		mg/L			0.007	0.2	
BLK	Potassium, K		<0.2		mg/L			0.04	0.2	
BLK	Sodium, Na		<1		mg/L			0.02	1	
QC2313537-02										
LCS	Calcium, Ca		1.82		mg/L	91		0.04	1	
LCS	Magnesium, Mg		1.98		mg/L	98		0.007	0.2	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302250**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/11/2023

**Sampling Team:** Field

LCS	Potassium, K	2.07	mg/L	103	0.04	0.2	
LCS	Sodium, Na	2.09	mg/L	105	0.02	1	
QC2313537-03							
DUP of 2302250-04	Calcium, Ca	31.3	30.4	mg/L	3	0.04	1 Splt# 2302250-04 (31.3mg/L)
DUP of 2302250-04	Magnesium, Mg	47	45.1	mg/L	4	0.007	0.2 Splt# 2302250-04 (47mg/L)
DUP of 2302250-04	Potassium, K	3.16	3.06	mg/L	3	0.04	0.2 Splt# 2302250-04 (3.16mg/L)
DUP of 2302250-04	Sodium, Na	51.3	50.1	mg/L	2	0.02	1 Splt# 2302250-04 (51.3mg/L)
QC2313537-04							
SPK of 2302250-04	Calcium, Ca	31.3	32.3	mg/L	50	0.04	1 Splt# 2302250-04 (31.3mg/L)
SPK of 2302250-04	Magnesium, Mg	47	46.5	mg/L	0	0.007	0.2 Splt# 2302250-04 (47mg/L)
SPK of 2302250-04	Potassium, K	3.16	5.14	mg/L	99	0.04	0.2 Splt# 2302250-04 (3.16mg/L)
SPK of 2302250-04	Sodium, Na	51.3	52.1	mg/L	39	0.02	1 Splt# 2302250-04 (51.3mg/L)
QC2313537-05							
SPKD of 2302250-04	Calcium, Ca	31.3	32.8	mg/L	76	1	0.04 1 Splt# 2302250-04 (31.3mg/L)
SPKD of 2302250-04	Magnesium, Mg	47	47.7	mg/L	35	2	0.007 0.2 Splt# 2302250-04 (47mg/L)
SPKD of 2302250-04	Potassium, K	3.16	5.21	mg/L	102	1	0.04 0.2 Splt# 2302250-04 (3.16mg/L)
SPKD of 2302250-04	Sodium, Na	51.3	53	mg/L	85	1	0.02 1 Splt# 2302250-04 (51.3mg/L)
QC2313537-06							
MRL_CK	Calcium, Ca	<1	mg/L	N/A	0.04	1	
MRL_CK	Magnesium, Mg	<0.2	mg/L	N/A	0.007	0.2	
MRL_CK	Potassium, K	0.258	mg/L	103	0.04	0.2	
MRL_CK	Sodium, Na	<1	mg/L	N/A	0.02	1	
QC2313588-01							
ICV	Potassium, K	2.04	mg/L	102	0.03	0.2	
QC2313588-02							
ICV	Calcium, Ca	9.6	mg/L	96	0.05	1	
ICV	Magnesium, Mg	9.91	mg/L	99	0.01	0.2	
ICV	Sodium, Na	10.1	mg/L	103	0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302251**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/12/2023

**Sampling Team:** Field

**Lab Sample#:** 2302251-01      **Sample Source:** WSB\_SF58\_SWD140      **External ID:**

**Date Collected:** 04/11/2023 09:49AM      **Date Received:** 04/11/2023 02:14PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#58 - USGS SOUTH WINDMILL MW140

<u>Test/Analyte</u>							
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	59.7	mg/L		6	04/11/2023	2059830 ALEE	
<u>MBP_COND(SM 2510 B)</u>							
<u>Specific Conductance @25°C</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	688	µmhos/cm		1	04/11/2023	2059805 ABALALIO	
<u>MBP_TDS(SM 2540 C)</u>							
<u>Total Dissolved Solids</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	376	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	

**Lab Sample#:** 2302251-02      **Sample Source:** WSB\_SF57\_SWD57      **External ID:**

**Date Collected:** 04/11/2023 09:43AM      **Date Received:** 04/11/2023 02:14PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#57 - USGS SOUTH WINDMILL MW57

<u>Test/Analyte</u>							
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	204	mg/L		15	04/11/2023	2059830 ALEE	
<u>MBP_COND(SM 2510 B)</u>							
<u>Specific Conductance @25°C</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	1320	µmhos/cm		1	04/11/2023	2059805 ABALALIO	>MCL
<u>MBP_TDS(SM 2540 C)</u>							
<u>Total Dissolved Solids</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	689	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	>MCL

**Lab Sample#:** 2302251-03      **Sample Source:** WSB\_SF\_DUP      **External ID:**

**Date Collected:** 04/11/2023 09:45AM      **Date Received:** 04/11/2023 02:14PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#57 - USGS SOUTH WINDMILL MW57

<u>Test/Analyte</u>							
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	204	mg/L		15	04/11/2023	2059830 ALEE	
<u>MBP_COND(SM 2510 B)</u>							
<u>Specific Conductance @25°C</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	1330	µmhos/cm		1	04/11/2023	2059805 ABALALIO	>MCL
<u>MBP_TDS(SM 2540 C)</u>							
<u>Total Dissolved Solids</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	702	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	>MCL

**Lab Sample#:** 2302251-04      **Sample Source:** WSB\_SF70\_SWM3      **External ID:**

**Date Collected:** 04/11/2023 11:16AM      **Date Received:** 04/11/2023 02:14PM      **Sample Matrix:** Aqueous      **Location Desc:** WSB\_SF70, GGP SWM-3

<u>Test/Analyte</u>							
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	38.9	mg/L		3	04/11/2023	2059830 ALEE	
<u>MBP_COND(SM 2510 B)</u>							
<u>Specific Conductance @25°C</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	470	µmhos/cm		1	04/11/2023	2059805 ABALALIO	
<u>MBP_TDS(SM 2540 C)</u>							
<u>Total Dissolved Solids</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	253	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302251**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/12/2023

**Sampling Team:** Field

**Lab Sample#:** 2302251-05      **Sample Source:** WSB\_SF\_DUP      **External ID:**

**Date Collected:** 04/11/2023 11:18AM      **Date Received:** 04/11/2023 02:14PM      **Sample Matrix:** Aqueous      **Location Desc:** WSB\_SF70, GGP SWM-3

Test/Analyte

<u>Test/Analyte</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<b>MBP_CHLORIDE(SM 4500-CL- D)</b> Chloride	38.9	mg/L		3	04/11/2023	2059830 ALEE	
<b>MBP_COND(SM 2510 B)</b> Specific Conductance @25°C	471	µmhos/cm		1	04/11/2023	2059805 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b> Total Dissolved Solids	256	mg/L	13.2	20	04/14/2023	2059819 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302251**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/12/2023

**Sampling Team:** Field

**QC list for Run#: 2059805 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312684-02	ICV	Specific Conductance @25°C		155	µmhos/cm	106				
QC2312684-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2312684-04	MRL_CK	Specific Conductance @25°C		9.96	µmhos/cm	99				
QC2312684-05	DUP of 2301798-01	Specific Conductance @25°C	272	275	µmhos/cm		0		1	Splt# 2301798-01 (272µmhos/cm)
QC2312684-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2312684-07	CCV	Specific Conductance @25°C		1430	µmhos/cm	101				

**QC list for Run#: 2059819 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312674-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2312674-02	DUP of 2302580-01	Total Dissolved Solids	101	97	mg/L		4	13.2	20	Splt# 2302580-01 (101mg/L)
QC2312674-03	LCS	Total Dissolved Solids		90	mg/L	94		13.2	20	
QC2312674-04	DUP of 2302251-05	Total Dissolved Solids	256	257	mg/L		0	13.2	20	Splt# 2302251-05 (256mg/L)

**QC list for Run#: 2059830 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312688-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2312688-02	MRL_CK	Chloride		2.7	mg/L	90				
QC2312688-03	SPK of 2302251-05	Chloride	38.9	79.7	mg/L	102			3	Splt# 2302251-05 (38.9mg/L)
QC2312688-04	SPKD of 2302251-05	Chloride	38.9	79.6	mg/L	102	0		3	Splt# 2302251-05 (38.9mg/L)
QC2312688-06	LCS	Chloride		40.7	mg/L	102			3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302252**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/13/2023

**Sampling Team:** Field

**Lab Sample#:** 2302252-01 **Sample Source:** WSB\_SF34\_KIR130 **External ID:**

**Date Collected:** 04/17/2023 11:35AM **Date Received:** 04/17/2023 01:47PM **Sample Matrix:** Aqueous **Location Desc:** SF#34 - GRT HWY/KIRKHAM MW130

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	33.4	mg/L		3	04/17/2023	2060092 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	414	µmhos/cm		1	04/17/2023	2060084 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	224	mg/L	13.2	20	04/21/2023	2060168 DCARDONA	

**Lab Sample#:** 2302252-02 **Sample Source:** WSB\_SF35\_KIR255 **External ID:**

**Date Collected:** 04/17/2023 11:47AM **Date Received:** 04/17/2023 01:47PM **Sample Matrix:** Aqueous **Location Desc:** SF#35 - GRT HWY/KIRKHAM MW255

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	39.7	mg/L		3	04/17/2023	2060092 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	498	µmhos/cm		1	04/17/2023	2060084 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	266	mg/L	13.2	20	04/21/2023	2060168 DCARDONA	

**Lab Sample#:** 2302252-03 **Sample Source:** WSB\_SF36\_KIR385 **External ID:**

**Date Collected:** 04/17/2023 10:56AM **Date Received:** 04/17/2023 01:47PM **Sample Matrix:** Aqueous **Location Desc:** SF#36 - GRT HWY/KIRKHAM MW385

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	37.4	mg/L		3	04/17/2023	2060092 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	474	µmhos/cm		1	04/17/2023	2060084 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	275	mg/L	13.2	20	04/21/2023	2060168 DCARDONA	

**Lab Sample#:** 2302252-04 **Sample Source:** WSB\_SF37\_KIR435 **External ID:**

**Date Collected:** 04/17/2023 10:41AM **Date Received:** 04/17/2023 01:47PM **Sample Matrix:** Aqueous **Location Desc:** SF#37 - GRT HWY/KIRKHAM MW435

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	29.9	mg/L		3	04/17/2023	2060092 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	438	µmhos/cm		1	04/17/2023	2060084 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	263	mg/L	13.2	20	04/21/2023	2060168 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302252**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/13/2023

**Sampling Team:** Field

**Lab Sample#:** 2302252-05      **Sample Source:** WSB\_SF\_DUP      **External ID:**

**Date Collected:** 04/17/2023 10:43AM      **Date Received:** 04/17/2023 01:47PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#37 - GRT HWY/KIRKHAM MW435

Test/Analyte

<u>Test/Analyte</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	29.6	mg/L		3	04/17/2023	2060092 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	440	µmhos/cm		1	04/17/2023	2060084 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	260	mg/L	13.2	20	04/21/2023	2060168 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302252**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/13/2023

**Sampling Team:** Field

**QC list for Run#: 2060084 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312880-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2312880-02	ICV	Specific Conductance @25°C		156	µmhos/cm	106				
QC2312880-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2312880-04	MRL_CHK	Specific Conductance @25°C		10	µmhos/cm	100				
QC2312880-05	DUP of 2302116-01	Specific Conductance @25°C	173	172	µmhos/cm		0		1	Splt# 2302116-01 (173µmhos/cm)
QC2312880-06	CCV	Specific Conductance @25°C		103	µmhos/cm	103				
QC2312880-07	CCV	Specific Conductance @25°C		1440	µmhos/cm	102				

**QC list for Run#: 2060092 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312885-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2312885-02	MRL_CHK	Chloride		2.72	mg/L	90				
QC2312885-03	SPK of 2302252-05	Chloride	29.6	70.7	mg/L	103			3	Splt# 2302252-05 (29.6mg/L)
QC2312885-04	SPKD of 2302252-05	Chloride	29.6	70.4	mg/L	102	0		3	Splt# 2302252-05 (29.6mg/L)
QC2312885-06	LCS	Chloride		41	mg/L	102			3	

**QC list for Run#: 2060168 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312938-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2312938-02	DUP of 2302702-01	Total Dissolved Solids	93	94	mg/L		1	13.2	20	Splt# 2302702-01 (93mg/L)
QC2312938-03	LCS	Total Dissolved Solids		90	mg/L	94		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302253**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/13/2023

**Sampling Team:** Field

**Lab Sample#:** 2302253-01 **Sample Source:** WSB\_SF30\_ORT125 **External ID:**

**Date Collected:** 04/13/2023 11:32AM **Date Received:** 04/13/2023 02:26PM **Sample Matrix:** Aqueous **Location Desc:** SF#30 - GRT HWY/ORTEGA MW125

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	33	mg/L		3	04/13/2023	2059954 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	449	µmhos/cm		1	04/13/2023	2059965 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	248	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	

**Lab Sample#:** 2302253-02 **Sample Source:** WSB\_SF31\_ORT265 **External ID:**

**Date Collected:** 04/13/2023 10:26AM **Date Received:** 04/13/2023 02:26PM **Sample Matrix:** Aqueous **Location Desc:** SF#31 - GRT HWY/ORTEGA MW265

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	25.1	mg/L		3	04/13/2023	2059954 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	264	µmhos/cm		1	04/13/2023	2059965 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	148	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	

**Lab Sample#:** 2302253-03 **Sample Source:** WSB\_SF32\_ORT400 **External ID:**

**Date Collected:** 04/13/2023 10:55AM **Date Received:** 04/13/2023 02:26PM **Sample Matrix:** Aqueous **Location Desc:** SF#32 - GRT HWY/ORTEGA MW400

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	23.7	mg/L		3	04/13/2023	2059954 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	272	µmhos/cm		1	04/13/2023	2059965 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	147	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	

**Lab Sample#:** 2302253-04 **Sample Source:** WSB\_SF33\_ORT475 **External ID:**

**Date Collected:** 04/13/2023 11:45AM **Date Received:** 04/13/2023 02:26PM **Sample Matrix:** Aqueous **Location Desc:** SF#33 - GRT HWY/ORTEGA MW475

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	29.6	mg/L		3	04/13/2023	2059954 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	299	µmhos/cm		1	04/13/2023	2059965 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	176	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302253**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/13/2023

**Sampling Team:** Field

**Lab Sample#:** 2302253-05      **Sample Source:** WSB\_SF\_DUP      **External ID:**

**Date Collected:** 04/13/2023 11:47AM      **Date Received:** 04/13/2023 02:26PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#33 - GRT HWY/ORTEGA MW475

Test/Analyte

<u>Test/Analyte</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	29.9	mg/L		3	04/13/2023	2059954 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	299	µmhos/cm		1	04/13/2023	2059965 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	169	mg/L	13.2	20	04/17/2023	2059988 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302253**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 04/13/2023

**Sampling Team:** Field

**QC list for Run#: 2059954 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312776-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2312776-02	MRL CK	Chloride		2.72	mg/L	90				
QC2312776-03	SPK of 2302549-01	Chloride	13.9	55.1	mg/L	103			3	Splt# 2302549-01 (13.9mg/L)
QC2312776-04	SPKD of 2302549-01	Chloride	13.9	55	mg/L	103	0		3	Splt# 2302549-01 (13.9mg/L)
QC2312776-05	DUP of 2302549-02	Chloride	13.9	14	mg/L		0		3	Splt# 2302549-02 (13.9mg/L)
QC2312776-06	LCS	Chloride		41	mg/L	102			3	

**QC list for Run#: 2059965 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312786-02	ICV	Specific Conductance @25°C		156	µmhos/cm	106				
QC2312786-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2312786-04	MRL CK	Specific Conductance @25°C		9.99	µmhos/cm	99				
QC2312786-05	DUP of 2302253-01	Specific Conductance @25°C	449	454	µmhos/cm		1		1	Splt# 2302253-01 (449µmhos/cm)
QC2312786-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2059988 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312808-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2312808-02	DUP of 2302253-01	Total Dissolved Solids	248	247	mg/L		0	13.2	20	Splt# 2302253-01 (248mg/L)
QC2312808-03	LCS	Total Dissolved Solids		90	mg/L	94		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302254**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/18/2023

**Sampling Team:** Field

**Lab Sample#:** 2302254-01 **Sample Source:** WSB\_SF68\_GGPNL1 **External ID:**

**Date Collected:** 04/18/2023 11:09AM **Date Received:** 04/18/2023 01:22PM **Sample Matrix:** Aqueous **Location Desc:** WSB\_SF68, GGP NORTH LAKE ROAD NL-1

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	40.6	mg/L		3	04/18/2023	2060170 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	539	µmhos/cm		1	04/18/2023	2060163 ABALALIO	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	299	mg/L	13.2	20	04/21/2023	2060168 DCARDONA	

**Lab Sample#:** 2302254-03 **Sample Source:** WSB\_SF67\_GGSPF1 **External ID:**

**Date Collected:** 04/18/2023 09:26AM **Date Received:** 04/18/2023 01:22PM **Sample Matrix:** Aqueous **Location Desc:** WSB\_SF67, GGP SOCCER FIELD SF-1

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	41.5	mg/L		3	04/18/2023	2060170 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	559	µmhos/cm		1	04/18/2023	2060163 ABALALIO	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	286	mg/L	13.2	20	04/21/2023	2060168 DCARDONA	

**Lab Sample#:** 2302254-04 **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 04/18/2023 11:34AM **Date Received:** 04/18/2023 01:22PM **Sample Matrix:** Aqueous **Location Desc:** WSB\_SF68, GGP NORTH LAKE ROAD NL-1

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	41	mg/L		3	04/18/2023	2060170 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	539	µmhos/cm		1	04/18/2023	2060163 ABALALIO	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	299	mg/L	13.2	20	04/21/2023	2060168 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302254**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/18/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2060163 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312934-02	ICV	Specific Conductance @25°C		156	µmhos/cm	106				
QC2312934-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2312934-04	MRL_CHK	Specific Conductance @25°C		10	µmhos/cm	100				
QC2312934-05	DUP of 2302104-01	Specific Conductance @25°C	128	128	µmhos/cm		0		1	Splt# 2302104-01 (128µmhos/cm)
QC2312934-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2312934-07	CCV	Specific Conductance @25°C		1430	µmhos/cm	101				

**QC list for Run#: 2060168 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312938-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2312938-02	DUP of 2302702-01	Total Dissolved Solids	93	94	mg/L		1	13.2	20	Splt# 2302702-01 (93mg/L)
QC2312938-03	LCS	Total Dissolved Solids		90	mg/L	94		13.2	20	

**QC list for Run#: 2060170 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2312939-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2312939-02	MRL_CHK	Chloride		2.59	mg/L	86				
QC2312939-03	SPK of 2302115-03	Chloride	14.1	55.4	mg/L	103			3	Splt# 2302115-03 (14.1mg/L)
QC2312939-04	SPKD of 2302115-03	Chloride	14.1	55.2	mg/L	103	0		3	Splt# 2302115-03 (14.1mg/L)
QC2312939-05	DUP of 2302254-04	Chloride	41	41.2	mg/L		0		3	Splt# 2302254-04 (41mg/L)
QC2312939-06	LCS	Chloride		40.9	mg/L	102			3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302255**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Routine: WSB\_SFPUC+Consult.B

Scheduled Sample Date: 04/19/2023

Sampling Team: Field

Lab Sample#: 2302255-01	Sample Source: WSB_SF41_WSPLAY	External ID:
Date Collected: 04/19/2023 11:59PM	Date Received: 04/20/2023 12:18PM	Sample Matrix: Aqueous
		Location Desc: SF#41 - WEST SUNSET PLAYGROUND

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	9.79	mg/L	0.04	1	05/08/2023	2061135 BTRINH	
Magnesium, Mg	31.2	mg/L	0.007	0.2	05/08/2023	2061135 BTRINH	
Potassium, K	1.18	mg/L	0.04	0.2	05/08/2023	2061135 BTRINH	
Sodium, Na	33.4	mg/L	0.02	1	05/08/2023	2061135 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	133	mg/L	0.593	3	04/20/2023	2060295 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	41.5	mg/L		3	04/20/2023	2060296 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	462	µmhos/cm		1	04/20/2023	2060289 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	152	mg/L	0.474	3	04/20/2023	2060297 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	8.47	pH			04/20/2023	2060288 ABALALIO	H1,H3
Temperature (°C)	17.2	°C			04/20/2023	2060288 ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	211	mg/L	13.2	20	04/24/2023	2060326 ABALALIO	

Lab Sample#: 2302255-01A	Sample Source: WSB_SF41_WSPLAY	External ID:
Date Collected: 04/19/2023 11:59PM	Date Received: 04/20/2023 12:18PM	Sample Matrix: Aqueous
		Location Desc: SF#41 - WEST SUNSET PLAYGROUND

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	<0.04	mg/L	0.034	0.04	04/20/2023	2060259 PWARNER	

Lab Sample#: 2302255-01B	Sample Source: WSB_SF41_WSPLAY	External ID:
Date Collected: 04/19/2023 11:59PM	Date Received: 04/20/2023 12:18PM	Sample Matrix: Aqueous
		Location Desc: SF#41 - WEST SUNSET PLAYGROUND

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	40.1	mg/L	0.5	2.5	04/24/2023	2060435 PWARNER	

Lab Sample#: 2302255-02	Sample Source: WSB_SB-M-1	External ID:
Date Collected: 04/19/2023 11:59PM	Date Received: 04/20/2023 12:18PM	Sample Matrix: Aqueous
		Location Desc: GSR_SB_CUP-M-1, MILLBRAE CORP. YARD, tem

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	4.07	mg/L	0.17	0.2	04/20/2023	2060259 PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	28.4	mg/L	0.04	1	05/08/2023	2061135 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302255**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/19/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Magnesium, Mg	19.5	mg/L	0.007	0.2	05/08/2023	2061135 BTRINH	
Potassium, K	1.79	mg/L	0.04	0.2	05/08/2023	2061135 BTRINH	
Sodium, Na	31.4	mg/L	0.02	1	05/08/2023	2061135 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	113	mg/L	0.593	3	04/20/2023	2060295 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	50.9	mg/L		3	04/20/2023	2060296 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	469	µmhos/cm		1	04/20/2023	2060289 ABALALIO	
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	148	mg/L	0.474	3	04/20/2023	2060297 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
pH	6.67	pH			04/20/2023	2060288 ABALALIO	H1,H3
Temperature (°C)	18.3	°C			04/20/2023	2060288 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Total Dissolved Solids	257	mg/L	13.2	20	04/24/2023	2060326 ABALALIO	

**Lab Sample#:** 2302255-02A **Sample Source:** WSB\_SB-M-1 **External ID:**

**Date Collected:** 04/19/2023 11:59PM **Date Received:** 04/20/2023 12:18PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SB\_CUP-M-1, MILLBRAE CORP. YARD, terr

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	23.3	mg/L	0.5	2.5	04/24/2023	2060435 PWARNER	

**Lab Sample#:** 2302255-03 **Sample Source:** WSB\_SF\_DUP\_FULL **External ID:**

**Date Collected:** 04/19/2023 11:59PM **Date Received:** 04/20/2023 12:18PM **Sample Matrix:** Aqueous **Location Desc:** SF#41- WEST SUNSET PLAYGROUND

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	9.62	mg/L	0.04	1	05/08/2023	2061135 BTRINH	
Magnesium, Mg	31.1	mg/L	0.007	0.2	05/08/2023	2061135 BTRINH	
Potassium, K	1.17	mg/L	0.04	0.2	05/08/2023	2061135 BTRINH	
Sodium, Na	33.2	mg/L	0.02	1	05/08/2023	2061135 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	133	mg/L	0.593	3	04/20/2023	2060295 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	41.4	mg/L		3	04/20/2023	2060296 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	462	µmhos/cm		1	04/20/2023	2060289 ABALALIO	
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	152	mg/L	0.474	3	04/20/2023	2060297 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302255**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/19/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	8.41	pH			04/20/2023	2060288 ABALALIO	H1,H3
Temperature (°C)	18.1	°C			04/20/2023	2060288 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Total Dissolved Solids	212	mg/L	13.2	20	04/24/2023	2060326 ABALALIO	

**Lab Sample#:** 2302255-03A    **Sample Source:** WSB\_SF\_DUP\_FULL    **External ID:**

**Date Collected:** 04/19/2023 11:59PM    **Date Received:** 04/20/2023 12:18PM    **Sample Matrix:** Aqueous    **Location Desc:** SF#41 - WEST SUNSET PLAYGROUND

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	<0.04	mg/L	0.034	0.04	04/20/2023	2060259 PWARNER	

**Lab Sample#:** 2302255-03B    **Sample Source:** WSB\_SF\_DUP\_FULL    **External ID:**

**Date Collected:** 04/19/2023 11:59PM    **Date Received:** 04/20/2023 12:18PM    **Sample Matrix:** Aqueous    **Location Desc:** SF#41 - WEST SUNSET PLAYGROUND

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	40	mg/L	0.5	2.5	04/24/2023	2060435 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302255**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/19/2023

**Sampling Team:** Field

**QC list for Run#: 2060259 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313002-01	MRL_CK	Sulfate		0.524	mg/L	105				
	MRL_CK	Nitrate as N		0.0399	mg/L	100				
QC2313002-02	CCV	Sulfate		2.45	mg/L	98				
	CCV	Nitrate as N		0.197	mg/L	99				
QC2313002-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313002-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313002-05	LCS	Sulfate		2.44	mg/L	97				
	LCS	Nitrate as N		0.205	mg/L	103				
QC2313002-06	CCV	Sulfate		22.2	mg/L	111				
	CCV	Nitrate as N		1.72	mg/L	108				
QC2313002-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313002-08	SPK of 2302132-07	Sulfate	15.2	18.1	mg/L	116				Splt# 2302132-07 (15.2mg/L)
	SPK of 2302132-07	Nitrate as N	0.202	0.408	mg/L	104				Splt# 2302132-07 (0.202mg/L)
QC2313002-09	SPKD of 2302132-07	Sulfate	15.2	18.1	mg/L	115	0			Splt# 2302132-07 (15.2mg/L)
	SPKD of 2302132-07	Nitrate as N	0.202	0.409	mg/L	104	0			Splt# 2302132-07 (0.202mg/L)
QC2313002-10	CCV	Sulfate		2.43	mg/L	97				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2313002-11	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313002-12	SPK of 2302144-01	Sulfate	19.8	22.5	mg/L	107				Splt# 2302144-01 (19.8mg/L)
	SPK of 2302144-01	Nitrate as N	0.241	0.442	mg/L	101				Splt# 2302144-01 (0.241mg/L)
QC2313002-13	SPKD of 2302144-01	Sulfate	19.8	22.7	mg/L	114	0			Splt# 2302144-01 (19.8mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302255**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/19/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

SPKD of 2302144-01	Nitrate as N	0.241	0.452	mg/L	106	2	Spl# 2302144-01 (0.241mg/L)		
QC2313002-14	CCV	Nitrate as N		0.2	mg/L	100			
QC2313002-15	BLK	Nitrate as N		<0.04	mg/L		0.034	0.04	

**QC list for Run#: 2060288 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313022-04	ICV	pH		8.99	pH	99				
	ICV	Temperature (°C)		19.1	°C					
QC2313022-05	DUP of 2302127-01	pH	8.8	8.82	pH		0			Spl# 2302127-01 (8.8pH) H1,H3
	DUP of 2302127-01	Temperature (°C)	17	16.8	°C					Spl# 2302127-01 (17°C)
QC2313022-06	CCV	pH		9.01	pH	99				
	CCV	Temperature (°C)		18.9	°C					
QC2313022-07	CCV	pH		9	pH	99				
	CCV	Temperature (°C)		18.5	°C					

**QC list for Run#: 2060289 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313023-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2313023-02	ICV	Specific Conductance @25°C		156	µmhos/cm	106				
QC2313023-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313023-04	MRL_CK	Specific Conductance @25°C		10	µmhos/cm	100				
QC2313023-05	DUP of 2302127-01	Specific Conductance @25°C	197	198	µmhos/cm		0		1	Spl# 2302127-01 (197µmhos/cm)
QC2313023-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2313023-07	CCV	Specific Conductance @25°C		1420	µmhos/cm	101				

**QC list for Run#: 2060295 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313028-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313028-02										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302255**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/19/2023

**Sampling Team:** Field

MRL_CK	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
	Alkalinity	3.45	mg/L	115				
QC2313028-03								
SPK of 2302127-02	Alkalinity	50.8	90.7	mg/L	99		3	Splt# 2302127-02 (50.8mg/L)
QC2313028-04								
SPKD of 2302127-02	Alkalinity	50.8	90.1	mg/L	98	0	3	Splt# 2302127-02 (50.8mg/L)
QC2313028-05								
DUP of 2302127-01	Alkalinity	51.2	51.2	mg/L		0	3	Splt# 2302127-01 (51.2mg/L)
QC2313028-06								
LCS	Alkalinity	39.5	mg/L	98			3	

**QC list for Run#: 2060296 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313029-01	BLK	Chloride	<3		mg/L			1.16	3	
QC2313029-02	MRL_CK	Chloride	2.54		mg/L	84				
QC2313029-03										
SPK of 2302127-02	Chloride	13.2	53.8	mg/L	101		3		Splt# 2302127-02 (13.2mg/L)	
QC2313029-04										
SPKD of 2302127-02	Chloride	13.2	54	mg/L	102	0	3		Splt# 2302127-02 (13.2mg/L)	
QC2313029-05										
DUP of 2302127-01	Chloride	14.5	14.5	mg/L		0	3		Splt# 2302127-01 (14.5mg/L)	
QC2313029-06										
LCS	Chloride	40.2	mg/L	100			3			

**QC list for Run#: 2060297 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313030-01	BLK	Hardness, Total, as CaCO3	<3		mg/L			0.474	3	
QC2313030-02	MRL_CK	Hardness, Total, as CaCO3	2.7		mg/L	90				
QC2313030-03										
DUP of 2302127-01	Hardness, Total, as CaCO3	51.7	51.8	mg/L		0	3	0.474	Splt# 2302127-01 (51.7mg/L)	
QC2313030-04										
LCS	Hardness, Total, as CaCO3	39.2	mg/L	97			3			

**QC list for Run#: 2060326 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313053-01	BLK	Total Dissolved Solids	<20		mg/L			13.2	20	
QC2313053-02										
DUP of 2302255-01	Total Dissolved Solids	211	215	mg/L		1	3	13.2	20	Splt# 2302255-01 (211mg/L)
QC2313053-03										
LCS	Total Dissolved Solids	91	mg/L	95			3	13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302255**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/19/2023

**Sampling Team:** Field

**QC list for Run#: 2060435 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313134-01	MRL_CK	Sulfate		0.52	mg/L	104				
	MRL_CK	Nitrate as N		0.0396	mg/L	99				
QC2313134-02	CCV	Sulfate		2.42	mg/L	96				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2313134-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313134-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313134-05	LCS	Sulfate		2.42	mg/L	97				
	LCS	Nitrate as N		0.198	mg/L	99				
QC2313134-06	CCV	Sulfate		21.7	mg/L	109				
	CCV	Nitrate as N		1.68	mg/L	106				
QC2313134-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313134-08	SPK of 2302309-01	Sulfate	13.3	16.5	mg/L	127				Splt# 2302309-01 (13.3mg/L)
	SPK of 2302309-01	Nitrate as N	0.178	0.375	mg/L	98				Splt# 2302309-01 (0.178mg/L)
QC2313134-09	SPKD of 2302309-01	Sulfate	13.3	16.5	mg/L	126	0			Splt# 2302309-01 (13.3mg/L)
	SPKD of 2302309-01	Nitrate as N	0.178	0.382	mg/L	103	1			Splt# 2302309-01 (0.178mg/L)

**QC list for Run#: 2061135 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313538-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2313538-02	LCS	Calcium, Ca		1.86	mg/L	92		0.04	1	
	LCS	Magnesium, Mg		1.98	mg/L	99		0.007	0.2	
	LCS	Potassium, K		2.03	mg/L	101		0.04	0.2	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302255**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/19/2023

**Sampling Team:** Field

LCS	Sodium, Na	2.07	mg/L	104	0.02	1	
QC2313538-03							
DUP of 2302255-01	Calcium, Ca	9.79	9.76	mg/L	0	0.04	1 Splt# 2302255-01 (9.79mg/L)
DUP of 2302255-01	Magnesium, Mg	31.2	31.1	mg/L	0	0.007	0.2 Splt# 2302255-01 (31.2mg/L)
DUP of 2302255-01	Potassium, K	1.18	1.14	mg/L	4	0.04	0.2 Splt# 2302255-01 (1.18mg/L)
DUP of 2302255-01	Sodium, Na	33.4	34.1	mg/L	2	0.02	1 Splt# 2302255-01 (33.4mg/L)
QC2313538-04							
SPK of 2302255-01	Calcium, Ca	9.79	11.9	mg/L	103	0.04	1 Splt# 2302255-01 (9.79mg/L)
SPK of 2302255-01	Magnesium, Mg	31.2	32.7	mg/L	74	0.007	0.2 Splt# 2302255-01 (31.2mg/L)
SPK of 2302255-01	Potassium, K	1.18	3.27	mg/L	105	0.04	0.2 Splt# 2302255-01 (1.18mg/L)
SPK of 2302255-01	Sodium, Na	33.4	35.2	mg/L	90	0.02	1 Splt# 2302255-01 (33.4mg/L)
QC2313538-05							
SPKD of 2302255-01	Calcium, Ca	9.79	11.9	mg/L	104	0	0.04 1 Splt# 2302255-01 (9.79mg/L)
SPKD of 2302255-01	Magnesium, Mg	31.2	33.2	mg/L	101	1	0.007 0.2 Splt# 2302255-01 (31.2mg/L)
SPKD of 2302255-01	Potassium, K	1.18	3.18	mg/L	99	2	0.04 0.2 Splt# 2302255-01 (1.18mg/L)
SPKD of 2302255-01	Sodium, Na	33.4	35.8	mg/L	121	1	0.02 1 Splt# 2302255-01 (33.4mg/L)
QC2313538-06							
MRL_CK	Calcium, Ca	<1		mg/L	N/A	0.04	1
MRL_CK	Magnesium, Mg	<0.2		mg/L	N/A	0.007	0.2
MRL_CK	Potassium, K	0.24		mg/L	95	0.04	0.2
MRL_CK	Sodium, Na	<1		mg/L	N/A	0.02	1
QC2313640-01							
ICV	Potassium, K	2.03		mg/L	102	0.03	0.2
QC2313640-02							
ICV	Calcium, Ca	9.79		mg/L	97	0.05	1
ICV	Magnesium, Mg	10		mg/L	100	0.01	0.2
ICV	Sodium, Na	10.2		mg/L	103	0.002	1

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302256**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/20/2023

**Sampling Team:** Field

**Lab Sample#:** 2302256-01 **Sample Source:** WSB\_SF26\_TAR145 **External ID:**

**Date Collected:** 04/24/2023 10:37AM **Date Received:** 04/24/2023 12:24PM **Sample Matrix:** Aqueous **Location Desc:** SF#26 - GRT HWY/TARAVAL MW145

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	43.1	mg/L		3	04/24/2023	2060458 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	489	µmhos/cm		1	04/24/2023	2060468 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	263	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	

**Lab Sample#:** 2302256-02 **Sample Source:** WSB\_SF27\_TAR240 **External ID:**

**Date Collected:** 04/24/2023 10:28AM **Date Received:** 04/24/2023 12:24PM **Sample Matrix:** Aqueous **Location Desc:** SF#27 - GRT HWY/TARAVAL MW240

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	34	mg/L		3	04/24/2023	2060458 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	384	µmhos/cm		1	04/24/2023	2060468 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	211	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	

**Lab Sample#:** 2302256-03 **Sample Source:** WSB\_SF28\_TAR400 **External ID:**

**Date Collected:** 04/24/2023 09:44AM **Date Received:** 04/24/2023 12:24PM **Sample Matrix:** Aqueous **Location Desc:** SF#28 - GRT HWY/TARAVAL MW400

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	28.9	mg/L		3	04/24/2023	2060458 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	323	µmhos/cm		1	04/24/2023	2060468 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	175	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	

**Lab Sample#:** 2302256-04 **Sample Source:** WSB\_SF29\_TAR530 **External ID:**

**Date Collected:** 04/24/2023 09:55AM **Date Received:** 04/24/2023 12:24PM **Sample Matrix:** Aqueous **Location Desc:** SF#29 - GRT HWY/TARAVAL MW530

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	25.4	mg/L		3	04/24/2023	2060458 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	380	µmhos/cm		1	04/24/2023	2060468 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	227	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302256**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/20/2023

**Sampling Team:** Field

**Lab Sample#:** 2302256-05      **Sample Source:** WSB\_SF\_DUP      **External ID:**

**Date Collected:** 04/24/2023 10:48AM      **Date Received:** 04/24/2023 12:24PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#26 - GRT HWY/TARAVAL MW145

Test/Analyte

<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	44.4	mg/L		6	04/24/2023	2060458 ALEE	

<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	488	µmhos/cm		1	04/24/2023	2060468 DCARDONA	

<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	265	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302256**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/20/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2060458 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313149-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2313149-02	MRL_CK	Chloride		2.75	mg/L	91				
QC2313149-03	SPK of 2302694-01	Chloride	6.22	46.9	mg/L	102			3	Splt# 2302694-01 (6.22mg/L)
QC2313149-04	SPKD of 2302694-01	Chloride	6.22	47.4	mg/L	103	1		3	Splt# 2302694-01 (6.22mg/L)
QC2313149-05	DUP of 2302256-05	Chloride	44.4	41.5	mg/L		6		6	Splt# 2302256-05 (44.4mg/L)
QC2313149-06	LCS	Chloride		41	mg/L	103			3	

**QC list for Run#: 2060468 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313156-02	ICV	Specific Conductance @25°C		155	µmhos/cm	106				
QC2313156-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313156-04	MRL_CK	Specific Conductance @25°C		10	µmhos/cm	100				
QC2313156-05	DUP of 2302694-01	Specific Conductance @25°C	151	151	µmhos/cm		0		1	Splt# 2302694-01 (151µmhos/cm)
QC2313156-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2060526 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313195-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2313195-02	DUP of 2302937-01	Total Dissolved Solids	79	78	mg/L		1	13.2	20	Splt# 2302937-01 (79mg/L)
QC2313195-03	DUP of 2302256-05	Total Dissolved Solids	265	268	mg/L		1	13.2	20	Splt# 2302256-05 (265mg/L)
QC2313195-04	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302257**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 04/24/2023

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

Lab Sample#:	2302257-01	Sample Source:	WSB_SB-44-1-190	External ID:	
Date Collected:	04/24/2023 09:38AM	Date Received:	04/25/2023 12:12PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SB_CUP-44-1-190, GG NATIONAL CEMETE

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	6.22	mg/L	0.34	0.4	04/25/2023	2060491 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	49.2	mg/L	0.04	1	05/05/2023	2061065 BTRINH	
Magnesium, Mg	35.3	mg/L	0.007	0.2	05/05/2023	2061065 BTRINH	
Potassium, K	1.46	mg/L	0.04	0.2	05/05/2023	2061065 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	273	mg/L	1.19	6	04/25/2023	2060531 ABALALIO	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	94.5	mg/L		6	04/25/2023	2060533 ABALALIO	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1070	µmhos/cm		1	04/25/2023	2060545 ALEE	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	256	mg/L	0.948	6	04/25/2023	2060535 ABALALIO	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	6.42	pH			04/25/2023	2060548 ALEE	H1,H3
Temperature (°C)	18.9	°C			04/25/2023	2060548 ALEE	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	624	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	>MCL

Lab Sample#:	2302257-01A	Sample Source:	WSB_SB-44-1-190	External ID:	
Date Collected:	04/24/2023 09:38AM	Date Received:	04/25/2023 12:12PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SB_CUP-44-1-190, GG NATIONAL CEMETE

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	104	mg/L	1	5	04/26/2023	2060574 PWARNER	

Lab Sample#:	2302257-01B	Sample Source:	WSB_SB-44-1-190	External ID:	
Date Collected:	04/24/2023 09:38AM	Date Received:	04/25/2023 12:12PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SB_CUP-44-1-190, GG NATIONAL CEMETE

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Sodium, Na	128	mg/L	0.1	5	05/05/2023	2061065 BTRINH	

Lab Sample#:	2302257-02	Sample Source:	WSB_SB-44-1-300	External ID:	
Date Collected:	04/24/2023 10:23AM	Date Received:	04/25/2023 12:12PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SB_CUP-44-1-300, GG NATIONAL CEMETE

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	5.76	mg/L	0.34	0.4	04/25/2023	2060491 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

Calcium, Ca	46.3	mg/L	0.04	1	05/05/2023	2061065	BTRINH	
Magnesium, Mg	32.1	mg/L	0.007	0.2	05/05/2023	2061065	BTRINH	
Potassium, K	1.47	mg/L	0.04	0.2	05/05/2023	2061065	BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Alkalinity	276	mg/L	1.19	6	04/25/2023	2060531	ABALALIO	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Chloride	94.2	mg/L		6	04/25/2023	2060533	ABALALIO	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Specific Conductance @25°C	1070	µmhos/cm		1	04/25/2023	2060545	ALEE	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Hardness, Total, as CaCO3	244	mg/L	0.948	6	04/25/2023	2060535	ABALALIO	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
pH	6.47	pH			04/25/2023	2060548	ALEE	H1,H3
Temperature (°C)	19	°C			04/25/2023	2060548	ALEE	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Total Dissolved Solids	607	mg/L	13.2	20	04/28/2023	2060526	DCARDONA	>MCL
<b>Lab Sample#:</b> 2302257-02A	<b>Sample Source:</b> WSB_SB-44-1-300			<b>External ID:</b>				
<b>Date Collected:</b> 04/24/2023 10:23AM	<b>Date Received:</b> 04/25/2023 12:12PM	<b>Sample Matrix:</b> Aqueous	<b>Location Desc:</b> GSR_SB_CUP-44-1-300, GG NATIONAL CEMETE					
<u>Test/Analyte</u>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Sulfate	97.1	mg/L	1	5	04/26/2023	2060574	PWARNER	
<b>Lab Sample#:</b> 2302257-02B	<b>Sample Source:</b> WSB_SB-44-1-300			<b>External ID:</b>				
<b>Date Collected:</b> 04/24/2023 10:23AM	<b>Date Received:</b> 04/25/2023 12:12PM	<b>Sample Matrix:</b> Aqueous	<b>Location Desc:</b> GSR_SB_CUP-44-1-300, GG NATIONAL CEMETE					
<u>Test/Analyte</u>								
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Sodium, Na	118	mg/L	0.1	5	05/05/2023	2061065	BTRINH	
<b>Lab Sample#:</b> 2302257-03	<b>Sample Source:</b> WSB_SB-44-1-460			<b>External ID:</b>				
<b>Date Collected:</b> 04/24/2023 09:52AM	<b>Date Received:</b> 04/25/2023 12:12PM	<b>Sample Matrix:</b> Aqueous	<b>Location Desc:</b> GSR_SB_CUP-44-1-460, GG NATIONAL CEMETE					
<u>Test/Analyte</u>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Nitrate as N	0.788	mg/L	0.34	0.4	04/25/2023	2060491	PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Calcium, Ca	55.5	mg/L	0.04	1	05/05/2023	2061065	BTRINH	
Magnesium, Mg	46.7	mg/L	0.007	0.2	05/05/2023	2061065	BTRINH	
Potassium, K	3.28	mg/L	0.04	0.2	05/05/2023	2061065	BTRINH	
Sodium, Na	67.4	mg/L	0.02	1	05/05/2023	2061065	BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Alkalinity	172	mg/L	1.19	6	04/25/2023	2060531	ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	134	mg/L		6	04/25/2023	2060533 ABALALIO	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	973	µmhos/cm		1	04/25/2023	2060545 ALEE	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	324	mg/L	0.948	6	04/25/2023	2060535 ABALALIO	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.79	pH			04/25/2023	2060548 ALEE	H1,H3
Temperature (°C)	19.1	°C			04/25/2023	2060548 ALEE	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	548	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	>MCL

**Lab Sample#:** 2302257-03A **Sample Source:** WSB\_SB-44-1-460 **External ID:**

**Date Collected:** 04/24/2023 09:52AM **Date Received:** 04/25/2023 12:12PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SB\_CUP-44-1-460, GG NATIONAL CEMETE

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	109	mg/L	1	5	04/26/2023	2060574 PWARNER	

**Lab Sample#:** 2302257-05 **Sample Source:** WSB\_SB\_DUP **External ID:**

**Date Collected:** 04/24/2023 10:35AM **Date Received:** 04/25/2023 12:12PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SB\_CUP-44-1-460, GG NATIONAL CEMETE

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	0.681	mg/L	0.34	0.4	04/25/2023	2060491 PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	55.5	mg/L	0.04	1	05/05/2023	2061065 BTRINH	
Magnesium, Mg	46.5	mg/L	0.007	0.2	05/05/2023	2061065 BTRINH	
Potassium, K	3.27	mg/L	0.04	0.2	05/05/2023	2061065 BTRINH	
Sodium, Na	67.4	mg/L	0.02	1	05/05/2023	2061065 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	172	mg/L	1.19	6	04/25/2023	2060531 ABALALIO	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	133	mg/L		6	04/25/2023	2060533 ABALALIO	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	969	µmhos/cm		1	04/25/2023	2060545 ALEE	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	325	mg/L	0.948	6	04/25/2023	2060535 ABALALIO	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.78	pH			04/25/2023	2060548 ALEE	H1,H3
Temperature (°C)	19.5	°C			04/25/2023	2060548 ALEE	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

<i>Total Dissolved Solids</i>	529	mg/L	13.2	20	04/28/2023	2060526	DCARDONA	>MCL
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<b>Lab Sample#:</b> 2302257-05A	<b>Sample Source:</b> WSB_SB_DUP	<b>External ID:</b>
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<b>Date Collected:</b> 04/24/2023 10:35AM	<b>Date Received:</b> 04/25/2023 12:12PM	<b>Sample Matrix:</b> Aqueous	<b>Location Desc:</b> GSR_SB_CUP-44-1-460, GG NATIONAL CEMETE
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Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	140	mg/L	1	5	04/26/2023	2060574 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

**QC list for Run#: 2060491 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313178-01	MRL_CK	Sulfate		0.529	mg/L	106				
	MRL_CK	Nitrate as N		0.0405	mg/L	102				
QC2313178-02	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.193	mg/L	96				
QC2313178-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313178-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313178-05	LCS	Sulfate		2.43	mg/L	97				
	LCS	Nitrate as N		0.201	mg/L	100				
QC2313178-06	CCV	Sulfate		22.3	mg/L	112				
	CCV	Nitrate as N		1.73	mg/L	109				
QC2313178-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313178-08	SPK of 2302937-01	Sulfate	15.6	18.4	mg/L	114				Splt# 2302937-01 (15.6mg/L)
	SPK of 2302937-01	Nitrate as N	0.195	0.416	mg/L	111				Splt# 2302937-01 (0.195mg/L)
QC2313178-09	SPKD of 2302937-01	Sulfate	15.6	18.5	mg/L	118	0			Splt# 2302937-01 (15.6mg/L)
	SPKD of 2302937-01	Nitrate as N	0.195	0.406	mg/L	106	2			Splt# 2302937-01 (0.195mg/L)
QC2313178-10	CCV	Sulfate		22.3	mg/L	111				
	CCV	Nitrate as N		1.73	mg/L	108				
QC2313178-11	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2060526 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313195-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2313195-02	DUP of 2302937-01	Total Dissolved Solids	79	78	mg/L		1	13.2	20	Splt# 2302937-01 (79mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

QC2313195-03	DUP of 2302256-05	Total Dissolved Solids	265	268	mg/L	1	13.2	20	Splt# 2302256-05 (265mg/L)
QC2313195-04	LCS	Total Dissolved Solids		94	mg/L	98	13.2	20	

**QC list for Run#: 2060531 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313204-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313204-02	MRL CK	Alkalinity		3.09	mg/L	103				
QC2313204-03	SPK of 2302286-03	Alkalinity	45.8	84.9	mg/L	97			3	Splt# 2302286-03 (45.8mg/L)
QC2313204-04	SPKD of 2302286-03	Alkalinity	45.8	85.9	mg/L	100	1		3	Splt# 2302286-03 (45.8mg/L)
QC2313204-05	DUP of 2302257-02	Alkalinity	276	275	mg/L		0	1.19	6	Splt# 2302257-02 (276mg/L)
QC2313204-06	LCS	Alkalinity		39.6	mg/L	99			3	

**QC list for Run#: 2060533 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313206-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2313206-02	MRL CK	Chloride		2.73	mg/L	91				
QC2313206-03	SPK of 2302286-03	Chloride	9.82	51	mg/L	103			3	Splt# 2302286-03 (9.82mg/L)
QC2313206-04	SPKD of 2302286-03	Chloride	9.82	50.9	mg/L	103	0		3	Splt# 2302286-03 (9.82mg/L)
QC2313206-05	DUP of 2302257-02	Chloride	94.2	93.9	mg/L		0		6	Splt# 2302257-02 (94.2mg/L)
QC2313206-06	LCS	Chloride		41	mg/L	103			3	

**QC list for Run#: 2060535 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313203-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2313203-02	MRL CK	Hardness, Total, as CaCO3		2.53	mg/L	84				
QC2313203-03	DUP of 2302286-03	Hardness, Total, as CaCO3	47.2	47.4	mg/L		0	0.474	3	Splt# 2302286-03 (47.2mg/L)
QC2313203-04	LCS	Hardness, Total, as CaCO3		39	mg/L	97			3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

**QC list for Run#: 2060545 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313208-02	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2313208-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313208-04	MRL_CK	Specific Conductance @25°C		9.89	µmhos/cm	98				
QC2313208-05	DUP of 2302965-01	Specific Conductance @25°C	149	149	µmhos/cm		0		1	Splt# 2302965-01 (149µmhos/cm)
QC2313208-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2313208-07	CCV	Specific Conductance @25°C		1430	µmhos/cm	101				

**QC list for Run#: 2060548 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313211-04	ICV	pH		8.99	pH	99				
	ICV	Temperature (°C)		19.9	°C					
QC2313211-05	DUP of 2302965-01	pH	9.06	9.06	pH		0			Splt# 2302965-01 (9.06pH) H1,H3
	DUP of 2302965-01	Temperature (°C)	19.3	19.5	°C					Splt# 2302965-01 (19.3°C)
QC2313211-06	CCV	pH		8.98	pH	99				
	CCV	Temperature (°C)		20.2	°C					
QC2313211-07	CCV	pH		8.98	pH	99				
	CCV	Temperature (°C)		20.2	°C					

**QC list for Run#: 2060574 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313234-01	MRL_CK	Chloride		0.508	mg/L	102				
	MRL_CK	Sulfate		0.512	mg/L	102				
	MRL_CK	Nitrate as N		0.0412	mg/L	103				
QC2313234-02	CCV	Chloride		2.47	mg/L	98				
	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.194	mg/L	97				
QC2313234-03	BLK	Chloride		<1	mg/L			0.2	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/24/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Sample ID	Parameter	Result	Unit	Method	Flow (MGD)	Notes
QC2313234-04	BLK Sulfate	<0.5	mg/L		0.1	0.5
	BLK Nitrate as N	<0.04	mg/L		0.034	0.04
QC2313234-05	BLK Sulfate	<0.5	mg/L		0.1	0.5
	BLK Nitrate as N	<0.04	mg/L		0.034	0.04
QC2313234-06	LCS Chloride	2.54	mg/L		102	
	LCS Sulfate	2.38	mg/L		95	
	LCS Nitrate as N	0.203	mg/L		102	
QC2313234-07	BLK Chloride	<1	mg/L		0.2	1
	BLK Sulfate	<0.5	mg/L		0.1	0.5
	BLK Nitrate as N	<0.04	mg/L		0.034	0.04
QC2313234-08	CCV Chloride	19.7	mg/L		98	
	CCV Sulfate	21.4	mg/L		107	
	CCV Nitrate as N	1.66	mg/L		104	
QC2313234-09	SPKD of 2302284-03 Sulfate	13.6	16.4	mg/L	114	0 Splt# 2302284-03 (13.6mg/L)
	SPKD of 2302284-03 Nitrate as N	0.183	0.384	mg/L	101	0 Splt# 2302284-03 (0.183mg/L)
QC2313234-10	SPK of 2302284-03 Sulfate	13.6	16.5	mg/L	116	Splt# 2302284-03 (13.6mg/L)
	SPK of 2302284-03 Nitrate as N	0.183	0.383	mg/L	100	Splt# 2302284-03 (0.183mg/L)
QC2313234-11	CCV Chloride	2.46	mg/L		98	
	CCV Sulfate	2.37	mg/L		94	
	CCV Nitrate as N	0.193	mg/L		96	
QC2313234-12	BLK Chloride	<1	mg/L		0.2	1
	BLK Sulfate	<0.5	mg/L		0.1	0.5
	BLK Nitrate as N	<0.04	mg/L		0.034	0.04
QC2313234-13	CAL Chloride	19.8	mg/L		99	0.2
	CAL Sulfate	21.5	mg/L		107	0.1
	CAL Nitrate as N	1.68	mg/L		105	0.034
QC2313234-14	CAL Chloride	10.3	mg/L		103	0.2
	CAL Sulfate	10.1	mg/L		101	0.1
	CAL Nitrate as N	0.802	mg/L		101	0.034

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/24/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

	CAL	Sulfate	4.84	mg/L	96		0.1	
	CAL	Nitrate as N	0.391	mg/L	98		0.034	
QC2313234-15								
	CAL	Chloride	2.47	mg/L	99		0.2	
	CAL	Sulfate	2.4	mg/L	96		0.1	
	CAL	Nitrate as N	0.196	mg/L	98		0.034	
QC2313234-16								
	CAL	Chloride	0.981	mg/L	98		0.2	
	CAL	Sulfate	0.971	mg/L	97		0.1	
	CAL	Nitrate as N	0.0782	mg/L	98		0.034	
QC2313234-17								
	CAL	Chloride	0.788	mg/L	98		0.2	
	CAL	Sulfate	0.787	mg/L	98		0.1	
	CAL	Nitrate as N	0.0635	mg/L	99		0.034	
QC2313234-18								
	CAL	Chloride	0.51	mg/L	102		0.2	
	CAL	Sulfate	0.517	mg/L	103		0.1	
	CAL	Nitrate as N	0.0408	mg/L	102		0.034	
QC2313234-19								
	BLK	Chloride	<1	mg/L			0.2	1
	BLK	Sulfate	<0.5	mg/L			0.1	0.5
	BLK	Nitrate as N	<0.04	mg/L			0.034	0.04
QC2313234-20								
	ICV	Chloride	2.54	mg/L	102		0.2	1
	ICV	Sulfate	2.37	mg/L	94		0.1	0.5
	ICV	Nitrate as N	0.203	mg/L	101		0.34	0.04
QC2313234-21								
	SPK of 2302299-07	Sulfate	15.4	18.3	mg/L	114		Splt# 2302299-07 (15.4mg/L)
	SPK of 2302299-07	Nitrate as N	0.205	0.411	mg/L	104		Splt# 2302299-07 (0.205mg/L)
QC2313234-22								
	SPKD of 2302299-07	Sulfate	15.4	18.1	mg/L	106	1	Splt# 2302299-07 (15.4mg/L)
	SPKD of 2302299-07	Nitrate as N	0.205	0.405	mg/L	101	1	Splt# 2302299-07 (0.205mg/L)
QC2313234-23								
	MDL	Chloride	5.37	mg/L	10700			
	MDL	Sulfate	5.08	mg/L	10200			
	MDL	Nitrate as N	0.415	mg/L	10400			
QC2313234-24								
	MDL	Chloride	12.9	mg/L	10300			
	MDL	Sulfate	12.9	mg/L	10300			
	MDL	Nitrate as N	1.02	mg/L	10300			

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302257**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

**QC list for Run#: 2061065 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313537-01										
	BLK	Calcium, Ca	<1		mg/L			0.04	1	
	BLK	Magnesium, Mg	<0.2		mg/L			0.007	0.2	
	BLK	Potassium, K	<0.2		mg/L			0.04	0.2	
	BLK	Sodium, Na	<1		mg/L			0.02	1	
QC2313537-02										
	LCS	Calcium, Ca	1.82		mg/L	91		0.04	1	
	LCS	Magnesium, Mg	1.98		mg/L	98		0.007	0.2	
	LCS	Potassium, K	2.07		mg/L	103		0.04	0.2	
	LCS	Sodium, Na	2.09		mg/L	105		0.02	1	
QC2313537-03										
	DUP of 2302250-04	Calcium, Ca	31.3	30.4	mg/L		3	0.04	1	Splt# 2302250-04 (31.3mg/L)
	DUP of 2302250-04	Magnesium, Mg	47	45.1	mg/L		4	0.007	0.2	Splt# 2302250-04 (47mg/L)
	DUP of 2302250-04	Potassium, K	3.16	3.06	mg/L		3	0.04	0.2	Splt# 2302250-04 (3.16mg/L)
	DUP of 2302250-04	Sodium, Na	51.3	50.1	mg/L		2	0.02	1	Splt# 2302250-04 (51.3mg/L)
QC2313537-04										
	SPK of 2302250-04	Calcium, Ca	31.3	32.3	mg/L	50		0.04	1	Splt# 2302250-04 (31.3mg/L)
	SPK of 2302250-04	Magnesium, Mg	47	46.5	mg/L	0		0.007	0.2	Splt# 2302250-04 (47mg/L)
	SPK of 2302250-04	Potassium, K	3.16	5.14	mg/L	99		0.04	0.2	Splt# 2302250-04 (3.16mg/L)
	SPK of 2302250-04	Sodium, Na	51.3	52.1	mg/L	39		0.02	1	Splt# 2302250-04 (51.3mg/L)
QC2313537-05										
	SPKD of 2302250-04	Calcium, Ca	31.3	32.8	mg/L	76	1	0.04	1	Splt# 2302250-04 (31.3mg/L)
	SPKD of 2302250-04	Magnesium, Mg	47	47.7	mg/L	35	2	0.007	0.2	Splt# 2302250-04 (47mg/L)
	SPKD of 2302250-04	Potassium, K	3.16	5.21	mg/L	102	1	0.04	0.2	Splt# 2302250-04 (3.16mg/L)
	SPKD of 2302250-04	Sodium, Na	51.3	53	mg/L	85	1	0.02	1	Splt# 2302250-04 (51.3mg/L)
QC2313537-06										
	MRL_CK	Calcium, Ca	<1		mg/L	N/A		0.04	1	
	MRL_CK	Magnesium, Mg	<0.2		mg/L	N/A		0.007	0.2	
	MRL_CK	Potassium, K	0.258		mg/L	103		0.04	0.2	
	MRL_CK	Sodium, Na	<1		mg/L	N/A		0.02	1	
QC2313588-01										
	ICV	Potassium, K		2.04	mg/L	102		0.03	0.2	
QC2313588-02										
	ICV	Calcium, Ca		9.6	mg/L	96		0.05	1	
	ICV	Magnesium, Mg		9.91	mg/L	99		0.01	0.2	
	ICV	Sodium, Na		10.1	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302258**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/25/2023

**Sampling Team:** Field

**Lab Sample#:** 2302258-01 **Sample Source:** WSB\_SF42\_ZOO275 **External ID:**

**Date Collected:** 04/27/2023 09:33AM **Date Received:** 04/27/2023 11:40AM **Sample Matrix:** Aqueous **Location Desc:** SF#42 - ZOO MW275

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	77.7	mg/L		3	04/27/2023	2060673 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	531	µmhos/cm		1	04/27/2023	2060675 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	267	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	

**Lab Sample#:** 2302258-02 **Sample Source:** WSB\_SF43\_ZOO450 **External ID:**

**Date Collected:** 04/27/2023 09:09AM **Date Received:** 04/27/2023 11:40AM **Sample Matrix:** Aqueous **Location Desc:** SF#43 - ZOO MW450

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	52	mg/L		3	04/27/2023	2060673 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	574	µmhos/cm		1	04/27/2023	2060675 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	309	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	

**Lab Sample#:** 2302258-03 **Sample Source:** WSB\_SF45\_ZOO565 **External ID:**

**Date Collected:** 04/27/2023 09:23AM **Date Received:** 04/27/2023 11:40AM **Sample Matrix:** Aqueous **Location Desc:** SF#45 - ZOO MW565

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	48.1	mg/L		3	04/27/2023	2060673 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	422	µmhos/cm		1	04/27/2023	2060675 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	215	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	

**Lab Sample#:** 2302258-04 **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 04/27/2023 09:37AM **Date Received:** 04/27/2023 11:40AM **Sample Matrix:** Aqueous **Location Desc:** SF#42 - ZOO MW275

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	76.9	mg/L		3	04/27/2023	2060673 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	532	µmhos/cm		1	04/27/2023	2060675 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	272	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302258**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 04/25/2023

**Sampling Team:** Field

**QC list for Run#: 2060673 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313302-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2313302-02	MRL CK	Chloride		2.72	mg/L	90				
QC2313302-03	SPK of 2302294-01	Chloride	14.9	56	mg/L	103			3	Splt# 2302294-01 (14.9mg/L)
QC2313302-04	SPKD of 2302294-01	Chloride	14.9	55.9	mg/L	103	0		3	Splt# 2302294-01 (14.9mg/L)
QC2313302-06	LCS	Chloride		40.8	mg/L	102			3	
QC2313302-11	DUP of 2302294-02	Chloride	7.3	7.35	mg/L		0		3	Splt# 2302294-02 (7.3mg/L)

**QC list for Run#: 2060675 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313304-01	CAL	Specific Conductance @25°C		1420	µmhos/cm	101				
QC2313304-02	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2313304-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313304-04	MRL CK	Specific Conductance @25°C		9.95	µmhos/cm	99				
QC2313304-05	DUP of 2302311-01	Specific Conductance @25°C	149	149	µmhos/cm		0		1	Splt# 2302311-01 (149µmhos/cm)
QC2313304-06	CCV	Specific Conductance @25°C		101	µmhos/cm	101				
QC2313304-07	CCV	Specific Conductance @25°C		1420	µmhos/cm	101				

**QC list for Run#: 2060711 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313340-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2313340-02	DUP of 2302258-01	Total Dissolved Solids	267	269	mg/L		0	13.2	20	Splt# 2302258-01 (267mg/L)
QC2313340-03	LCS	Total Dissolved Solids		91	mg/L	95		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302259**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/26/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302259-01	<b>Sample Source:</b> WSB_SS-36-1-160	<b>External ID:</b>
<b>Date Collected:</b> 04/26/2023 11:11AM	<b>Date Received:</b> 04/26/2023 11:48AM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_SS_CUP-36-1-160, ROW AT FUNERAL HOM

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	105	mg/L	1	5	04/26/2023	2060574 PWARNER	
Nitrate as N	7.89	mg/L	0.34	0.4	04/26/2023	2060574 PWARNER	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	66	mg/L	0.04	1	05/08/2023	2061135 BTRINH	
Magnesium, Mg	32.9	mg/L	0.007	0.2	05/08/2023	2061135 BTRINH	
Potassium, K	2.53	mg/L	0.04	0.2	05/08/2023	2061135 BTRINH	
Sodium, Na	96.6	mg/L	0.02	1	05/08/2023	2061135 BTRINH	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	236	mg/L	1.19	6	04/26/2023	2060608 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	93.6	mg/L		6	04/26/2023	2060611 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	996	µmhos/cm		1	04/26/2023	2060603 ABALALIO	>MCL

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	292	mg/L	0.948	6	04/26/2023	2060614 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	6.86	pH			04/26/2023	2060600 ABALALIO	H1,H3
Temperature (°C)	20.1	°C			04/26/2023	2060600 ABALALIO	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	590	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	>MCL

<b>Lab Sample#:</b> 2302259-02	<b>Sample Source:</b> WSB_SS-36-1-270	<b>External ID:</b>
<b>Date Collected:</b> 04/26/2023 10:38AM	<b>Date Received:</b> 04/26/2023 11:48AM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_SS_CUP-36-1-270, ROW AT FUNERAL HOM

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	21.8	mg/L	0.2	1	04/26/2023	2060574 PWARNER	
Nitrate as N	1.79	mg/L	0.068	0.08	04/26/2023	2060574 PWARNER	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	34.7	mg/L	0.04	1	05/08/2023	2061135 BTRINH	
Magnesium, Mg	30	mg/L	0.007	0.2	05/08/2023	2061135 BTRINH	
Potassium, K	2.33	mg/L	0.04	0.2	05/08/2023	2061135 BTRINH	
Sodium, Na	58	mg/L	0.02	1	05/08/2023	2061135 BTRINH	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	134	mg/L	0.593	3	04/26/2023	2060608 ALEE	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	121	mg/L		3	04/26/2023	2060611 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302259**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/26/2023

**Sampling Team:** Field

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	715	µmhos/cm		1	04/26/2023	2060603 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	204	mg/L	0.474	3	04/26/2023	2060614 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.19	pH			04/26/2023	2060600 ABALALIO	H1,H3
Temperature (°C)	19.7	°C			04/26/2023	2060600 ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	381	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	

**Lab Sample#:** 2302259-03 **Sample Source:** WSB\_SS-36-1-455 **External ID:**

**Date Collected:** 04/26/2023 09:43AM **Date Received:** 04/26/2023 11:48AM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SS\_CUP-36-1-455, ROW AT FUNERAL HOM

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	<0.5	mg/L	0.1	0.5	04/26/2023	2060574 PWARNER	
Nitrate as N	<0.04	mg/L	0.034	0.04	04/26/2023	2060574 PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	40.2	mg/L	0.04	1	05/08/2023	2061135 BTRINH	
Magnesium, Mg	24.1	mg/L	0.007	0.2	05/08/2023	2061135 BTRINH	
Sodium, Na	62.8	mg/L	0.02	1	05/08/2023	2061135 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	226	mg/L	0.593	3	04/26/2023	2060608 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	90.1	mg/L		3	04/26/2023	2060611 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	711	µmhos/cm		1	04/26/2023	2060603 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	199	mg/L	0.474	3	04/26/2023	2060614 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.16	pH			04/26/2023	2060600 ABALALIO	H1,H3
Temperature (°C)	19.6	°C			04/26/2023	2060600 ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	344	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	

**Lab Sample#:** 2302259-03A **Sample Source:** WSB\_SS-36-1-455 **External ID:**

**Date Collected:** 04/26/2023 09:43AM **Date Received:** 04/26/2023 11:48AM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SS\_CUP-36-1-455, ROW AT FUNERAL HOM

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Potassium, K	4.95	mg/L	0.08	0.4	05/08/2023	2061135 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302259**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 04/26/2023

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

Lab Sample#:	2302259-04	Sample Source:	WSB_SS-36-1-585	External ID:	
Date Collected:	04/26/2023 10:00AM	Date Received:	04/26/2023 11:48AM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SS_CUP-36-1-585, ROW AT FUNERAL HOM

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	77	mg/L	0.5	2.5	04/26/2023	2060574 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	62.3	mg/L	0.04	1	05/08/2023	2061135 BTRINH	
Magnesium, Mg	31.7	mg/L	0.007	0.2	05/08/2023	2061135 BTRINH	
Potassium, K	2.95	mg/L	0.04	0.2	05/08/2023	2061135 BTRINH	
Sodium, Na	53.1	mg/L	0.02	1	05/08/2023	2061135 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	168	mg/L	1.19	6	04/26/2023	2060608 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	104	mg/L		6	04/26/2023	2060611 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	803	µmhos/cm		1	04/26/2023	2060603 ABALALIO	
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	272	mg/L	0.948	6	04/26/2023	2060614 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	6.91	pH			04/26/2023	2060600 ABALALIO	H1,H3
Temperature (°C)	19.9	°C			04/26/2023	2060600 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	451	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	

Lab Sample#:	2302259-04A	Sample Source:	WSB_SS-36-1-585	External ID:	
Date Collected:	04/26/2023 10:00AM	Date Received:	04/26/2023 11:48AM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SS_CUP-36-1-585, ROW AT FUNERAL HOM

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	<0.04	mg/L	0.034	0.04	04/26/2023	2060574 PWARNER	

Lab Sample#:	2302259-05	Sample Source:	WSB_SS_DUP	External ID:	
Date Collected:	04/26/2023 10:28AM	Date Received:	04/26/2023 11:48AM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SS_CUP-36-1-585, ROW AT FUNERAL HOM

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	77.6	mg/L	0.5	2.5	04/26/2023	2060574 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	60.8	mg/L	0.04	1	05/08/2023	2061135 BTRINH	
Magnesium, Mg	30	mg/L	0.007	0.2	05/08/2023	2061135 BTRINH	
Potassium, K	2.88	mg/L	0.04	0.2	05/08/2023	2061135 BTRINH	
Sodium, Na	51.5	mg/L	0.02	1	05/08/2023	2061135 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302259**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/26/2023

**Sampling Team:** Field

<i>MBP_ALK(SM 2320 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	168	mg/L	1.19	6	04/26/2023	2060608 ALEE	
<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	104	mg/L		6	04/26/2023	2060611 ALEE	
<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	802	µmhos/cm		1	04/26/2023	2060603 ABALALIO	
<i>MBP_HARDNESS_T(SM 2340 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	256	mg/L	0.948	6	04/26/2023	2060614 ALEE	
<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	6.8	pH			04/26/2023	2060600 ABALALIO	H1,H3
Temperature (°C)	20.1	°C			04/26/2023	2060600 ABALALIO	
<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	454	mg/L	13.2	20	05/01/2023	2060711 ABALALIO	

**Lab Sample#:** 2302259-05A **Sample Source:** WSB\_SS\_DUP **External ID:**

**Date Collected:** 04/26/2023 10:28AM **Date Received:** 04/26/2023 11:48AM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SS\_CUP-36-1-585, ROW AT FUNERAL HOM

**Test/Analyte**

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Nitrate as N	<0.04	mg/L	0.034	0.04	04/26/2023	2060574 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302259**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/26/2023

**Sampling Team:** Field

**QC list for Run#: 2060574 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313234-01	MRL_CK	Chloride		0.508	mg/L	102				
	MRL_CK	Sulfate		0.512	mg/L	102				
	MRL_CK	Nitrate as N		0.0412	mg/L	103				
QC2313234-02	CCV	Chloride		2.47	mg/L	98				
	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.194	mg/L	97				
QC2313234-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313234-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313234-05	LCS	Chloride		2.54	mg/L	102				
	LCS	Sulfate		2.38	mg/L	95				
	LCS	Nitrate as N		0.203	mg/L	102				
QC2313234-06	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313234-07	CCV	Chloride		19.7	mg/L	98				
	CCV	Sulfate		21.4	mg/L	107				
	CCV	Nitrate as N		1.66	mg/L	104				
QC2313234-08	SPKD of 2302284-03	Sulfate	13.6	16.4	mg/L	114	0			Splt# 2302284-03 (13.6mg/L)
	SPKD of 2302284-03	Nitrate as N	0.183	0.384	mg/L	101	0			Splt# 2302284-03 (0.183mg/L)
QC2313234-09	SPK of 2302284-03	Sulfate	13.6	16.5	mg/L	116				Splt# 2302284-03 (13.6mg/L)
	SPK of 2302284-03	Nitrate as N	0.183	0.383	mg/L	100				Splt# 2302284-03 (0.183mg/L)
QC2313234-10	CCV	Chloride		2.46	mg/L	98				
	CCV	Sulfate		2.37	mg/L	94				
	CCV	Nitrate as N		0.193	mg/L	96				
QC2313234-11	BLK	Chloride		<1	mg/L			0.2	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302259**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/26/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Sample ID	Parameter	Value	Unit	Method	Result	Result
BLK	Sulfate	<0.5	mg/L		0.1	0.5
BLK	Nitrate as N	<0.04	mg/L		0.034	0.04
QC2313234-12						
CAL	Chloride	19.8	mg/L	99	0.2	
CAL	Sulfate	21.5	mg/L	107	0.1	
CAL	Nitrate as N	1.68	mg/L	105	0.034	
QC2313234-13						
CAL	Chloride	10.3	mg/L	103	0.2	
CAL	Sulfate	10.1	mg/L	101	0.1	
CAL	Nitrate as N	0.802	mg/L	101	0.034	
QC2313234-14						
CAL	Chloride	5.03	mg/L	101	0.2	
CAL	Sulfate	4.84	mg/L	96	0.1	
CAL	Nitrate as N	0.391	mg/L	98	0.034	
QC2313234-15						
CAL	Chloride	2.47	mg/L	99	0.2	
CAL	Sulfate	2.4	mg/L	96	0.1	
CAL	Nitrate as N	0.196	mg/L	98	0.034	
QC2313234-16						
CAL	Chloride	0.981	mg/L	98	0.2	
CAL	Sulfate	0.971	mg/L	97	0.1	
CAL	Nitrate as N	0.0782	mg/L	98	0.034	
QC2313234-17						
CAL	Chloride	0.788	mg/L	98	0.2	
CAL	Sulfate	0.787	mg/L	98	0.1	
CAL	Nitrate as N	0.0635	mg/L	99	0.034	
QC2313234-18						
CAL	Chloride	0.51	mg/L	102	0.2	
CAL	Sulfate	0.517	mg/L	103	0.1	
CAL	Nitrate as N	0.0408	mg/L	102	0.034	
QC2313234-19						
BLK	Chloride	<1	mg/L		0.2	1
BLK	Sulfate	<0.5	mg/L		0.1	0.5
BLK	Nitrate as N	<0.04	mg/L		0.034	0.04
QC2313234-20						
ICV	Chloride	2.54	mg/L	102	0.2	1
ICV	Sulfate	2.37	mg/L	94	0.1	0.5
ICV	Nitrate as N	0.203	mg/L	101	0.34	0.04
QC2313234-21						
SPK of 2302299-07	Sulfate	15.4	18.3	mg/L	114	Split# 2302299-07 (15.4mg/L)
SPK of 2302299-07	Nitrate as N	0.205	0.411	mg/L	104	Split# 2302299-07 (0.205mg/L)
QC2313234-22						

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302259**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/26/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Sample #	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
SPKD of 2302299-07	Sulfate		15.4	18.1 mg/L	106	1			Splt# 2302299-07 (15.4mg/L)
SPKD of 2302299-07	Nitrate as N		0.205	0.405 mg/L	101	1			Splt# 2302299-07 (0.205mg/L)
QC2313234-23									
	MDL	Chloride		5.37 mg/L			10700		
	MDL	Sulfate		5.08 mg/L			10200		
	MDL	Nitrate as N		0.415 mg/L			10400		
QC2313234-24									
	MDL	Chloride		12.9 mg/L			10300		
	MDL	Sulfate		12.9 mg/L			10300		
	MDL	Nitrate as N		1.02 mg/L			10300		

**QC list for Run#: 2060600 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313253-04										
	ICV	pH		8.97	pH	99				
	ICV	Temperature (°C)		20.8	°C					
QC2313253-05										
	DUP of 2302284-04	pH	9.23	9.25	pH		0			Splt# 2302284-04 (9.23pH) H1,H3
	DUP of 2302284-04	Temperature (°C)	17.9	17.9	°C					Splt# 2302284-04 (17.9°C)
QC2313253-06										
	CCV	pH		8.98	pH	99				
	CCV	Temperature (°C)		20.9	°C					
QC2313253-07										
	CCV	pH		8.97	pH	99				
	CCV	Temperature (°C)		21	°C					

**QC list for Run#: 2060603 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313249-01										
	CAL	Specific Conductance @25°C		1420	µmhos/cm	101				
QC2313249-02										
	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2313249-03										
	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313249-04										
	MRL CK	Specific Conductance @25°C		9.99	µmhos/cm	99				
QC2313249-05										
	DUP of 2302259-01	Specific Conductance @25°C	996	995	µmhos/cm		0		1	Splt# 2302259-01 (996µmhos/cm)
QC2313249-06										
	CCV	Specific Conductance @25°C		101	µmhos/cm	101				

**QC list for Run#: 2060608 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302259**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/26/2023

**Sampling Team:** Field

Sample #	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
QC2313256-01	BLK	Alkalinity	<3	mg/L			0.593	3	
QC2313256-02	MRL CK	Alkalinity	3.07	mg/L	102				
QC2313256-03	SPK of 2302259-02	Alkalinity	134	174	mg/L	99		3	Splt# 2302259-02 (134mg/L)
QC2313256-04	SPKD of 2302259-02	Alkalinity	134	173	mg/L	98	0	3	Splt# 2302259-02 (134mg/L)
QC2313256-06	LCS	Alkalinity	39.8	mg/L	99			3	

**QC list for Run#: 2060611 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313259-01	BLK	Chloride	<3		mg/L			1.16	3	
QC2313259-02	MRL CK	Chloride	2.63		mg/L	87				
QC2313259-03	SPK of 2302259-02	Chloride	121	162	mg/L	102			3	Splt# 2302259-02 (121mg/L)
QC2313259-04	SPKD of 2302259-02	Chloride	121	162	mg/L	102	0		3	Splt# 2302259-02 (121mg/L)
QC2313259-06	LCS	Chloride	41.2		mg/L	103			3	

**QC list for Run#: 2060614 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313260-01	BLK	Hardness, Total, as CaCO3	<3		mg/L			0.474	3	
QC2313260-02	MRL CK	Hardness, Total, as CaCO3	2.63		mg/L	87				
QC2313260-03	DUP of 2302259-05	Hardness, Total, as CaCO3	256	282	mg/L	9		0.948	6	Splt# 2302259-05 (256mg/L)
QC2313260-04	LCS	Hardness, Total, as CaCO3	38.9		mg/L	97			3	

**QC list for Run#: 2060711 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313340-01	BLK	Total Dissolved Solids	<20		mg/L			13.2	20	
QC2313340-02	DUP of 2302258-01	Total Dissolved Solids	267	269	mg/L		0	13.2	20	Splt# 2302258-01 (267mg/L)
QC2313340-03	LCS	Total Dissolved Solids	91		mg/L	95		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302259**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 04/26/2023

**Sampling Team:** Field

**QC list for Run#: 2061135 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313538-01										
	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2313538-02										
	LCS	Calcium, Ca		1.86	mg/L	92		0.04	1	
	LCS	Magnesium, Mg		1.98	mg/L	99		0.007	0.2	
	LCS	Potassium, K		2.03	mg/L	101		0.04	0.2	
	LCS	Sodium, Na		2.07	mg/L	104		0.02	1	
QC2313538-03										
	DUP of 2302255-01	Calcium, Ca	9.79	9.76	mg/L		0	0.04	1	Splt# 2302255-01 (9.79mg/L)
	DUP of 2302255-01	Magnesium, Mg	31.2	31.1	mg/L		0	0.007	0.2	Splt# 2302255-01 (31.2mg/L)
	DUP of 2302255-01	Potassium, K	1.18	1.14	mg/L		4	0.04	0.2	Splt# 2302255-01 (1.18mg/L)
	DUP of 2302255-01	Sodium, Na	33.4	34.1	mg/L		2	0.02	1	Splt# 2302255-01 (33.4mg/L)
QC2313538-04										
	SPK of 2302255-01	Calcium, Ca	9.79	11.9	mg/L	103		0.04	1	Splt# 2302255-01 (9.79mg/L)
	SPK of 2302255-01	Magnesium, Mg	31.2	32.7	mg/L	74		0.007	0.2	Splt# 2302255-01 (31.2mg/L)
	SPK of 2302255-01	Potassium, K	1.18	3.27	mg/L	105		0.04	0.2	Splt# 2302255-01 (1.18mg/L)
	SPK of 2302255-01	Sodium, Na	33.4	35.2	mg/L	90		0.02	1	Splt# 2302255-01 (33.4mg/L)
QC2313538-05										
	SPKD of 2302255-01	Calcium, Ca	9.79	11.9	mg/L	104	0	0.04	1	Splt# 2302255-01 (9.79mg/L)
	SPKD of 2302255-01	Magnesium, Mg	31.2	33.2	mg/L	101	1	0.007	0.2	Splt# 2302255-01 (31.2mg/L)
	SPKD of 2302255-01	Potassium, K	1.18	3.18	mg/L	99	2	0.04	0.2	Splt# 2302255-01 (1.18mg/L)
	SPKD of 2302255-01	Sodium, Na	33.4	35.8	mg/L	121	1	0.02	1	Splt# 2302255-01 (33.4mg/L)
QC2313538-06										
	MRL_CK	Calcium, Ca		<1	mg/L	N/A		0.04	1	
	MRL_CK	Magnesium, Mg		<0.2	mg/L	N/A		0.007	0.2	
	MRL_CK	Potassium, K		0.24	mg/L	95		0.04	0.2	
	MRL_CK	Sodium, Na		<1	mg/L	N/A		0.02	1	
QC2313640-01										
	ICV	Potassium, K		2.03	mg/L	102		0.03	0.2	
QC2313640-02										
	ICV	Calcium, Ca		9.79	mg/L	97		0.05	1	
	ICV	Magnesium, Mg		10	mg/L	100		0.01	0.2	
	ICV	Sodium, Na		10.2	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Routine: WSB\_SFPUC+Consult.A

Scheduled Sample Date: 05/22/2023

Sampling Team: Field

Lab Sample#: 2302260-01 Sample Source: WSB\_SS11SSLP120 External ID:

Date Collected: 05/22/2023 10:35AM Date Received: 05/18/2023 01:03PM Sample Matrix: Aqueous Location Desc: SS#11 - SS LINEAR PARK MW-120

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	59.6	mg/L	0.5	2.5	05/18/2023	2061771 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	62.6	mg/L	0.04	1	05/31/2023	2062343 BTRINH	
Magnesium, Mg	45.1	mg/L	0.007	0.2	05/31/2023	2062343 BTRINH	
Potassium, K	3.2	mg/L	0.04	0.2	05/31/2023	2062343 BTRINH	
Sodium, Na	98	mg/L	0.02	1	05/31/2023	2062343 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	300	mg/L	1.19	6	05/18/2023	2061772 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	140	mg/L		6	05/18/2023	2061775 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1110	µmhos/cm		1	05/18/2023	2061781 ABALALIO	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	349	mg/L	0.948	6	05/18/2023	2061777 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.03	pH			05/18/2023	2061779 ABALALIO	H1,H3
Temperature (°C)	17.5	°C			05/18/2023	2061779 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	614	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	>MCL

Lab Sample#: 2302260-01A Sample Source: WSB\_SS11SSLP120 External ID:

Date Collected: 05/22/2023 10:35AM Date Received: 05/18/2023 01:03PM Sample Matrix: Aqueous Location Desc: SS#11 - SS LINEAR PARK MW-120

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	<0.04	mg/L	0.034	0.04	05/18/2023	2061771 PWARNER	

Lab Sample#: 2302260-02 Sample Source: WSB\_SS12SSLP220 External ID:

Date Collected: 05/22/2023 10:39AM Date Received: 05/18/2023 01:03PM Sample Matrix: Aqueous Location Desc: SS#12 - SS LINEAR PARK MW-220

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	18.9	mg/L	0.2	1	05/18/2023	2061771 PWARNER	
Nitrate as N	0.823	mg/L	0.068	0.08	05/18/2023	2061771 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	30.4	mg/L	0.04	1	05/31/2023	2062343 BTRINH	
Magnesium, Mg	27	mg/L	0.007	0.2	05/31/2023	2062343 BTRINH	
Potassium, K	2.2	mg/L	0.04	0.2	05/31/2023	2062343 BTRINH	
Sodium, Na	54.7	mg/L	0.02	1	05/31/2023	2062343 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/22/2023

**Sampling Team:** Field

<i>MBP_ALK(SM 2320 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	134	mg/L	0.593	3	05/18/2023	2061772 ALEE	
<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	105	mg/L		3	05/18/2023	2061775 ALEE	
<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	654	µmhos/cm		1	05/18/2023	2061781 ABALALIO	
<i>MBP_HARDNESS_T(SM 2340 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	188	mg/L	0.474	3	05/18/2023	2061777 ALEE	
<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.09	pH			05/18/2023	2061779 ABALALIO	H1,H3
Temperature (°C)	17.2	°C			05/18/2023	2061779 ABALALIO	
<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	360	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	

**Lab Sample#:** 2302260-03 **Sample Source:** WSB\_SS13SSLP440 **External ID:**

**Date Collected:** 05/22/2023 09:50AM **Date Received:** 05/18/2023 01:03PM **Sample Matrix:** Aqueous **Location Desc:** SS#13 - SS LINEAR PARK MW-440

**Test/Analyte**

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	<0.5	mg/L	0.1	0.5	05/18/2023	2061771 PWARNER	
Nitrate as N	<0.04	mg/L	0.034	0.04	05/18/2023	2061771 PWARNER	
<i>SEM_200.7_DW(EPA 200.7)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	30.2	mg/L	0.04	1	05/31/2023	2062343 BTRINH	
Magnesium, Mg	26.3	mg/L	0.007	0.2	05/31/2023	2062343 BTRINH	
Sodium, Na	59.1	mg/L	0.02	1	05/31/2023	2062343 BTRINH	
<i>MBP_ALK(SM 2320 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	220	mg/L	0.593	3	05/18/2023	2061772 ALEE	
<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	68	mg/L		3	05/18/2023	2061775 ALEE	
<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	635	µmhos/cm		1	05/18/2023	2061781 ABALALIO	
<i>MBP_HARDNESS_T(SM 2340 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	188	mg/L	0.474	3	05/18/2023	2061777 ALEE	
<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.33	pH			05/18/2023	2061779 ABALALIO	H1,H3
Temperature (°C)	16.9	°C			05/18/2023	2061779 ABALALIO	
<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	297	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Routine: WSB\_SFPUC+Consult.A

Scheduled Sample Date: 05/22/2023

Sampling Team: Field

Lab Sample#: 2302260-03A Sample Source: WSB\_SS13SSLP440 External ID:

Date Collected: 05/22/2023 09:50AM Date Received: 05/18/2023 01:03PM Sample Matrix: Aqueous Location Desc: SS#13 - SS LINEAR PARK MW-440

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SEM_200.7_DW(EPA 200.7)							
Potassium, K	5.7	mg/L	0.12	0.6	05/31/2023	2062343 BTRINH	

Lab Sample#: 2302260-04 Sample Source: WSB\_SS14SSLP520 External ID:

Date Collected: 05/22/2023 09:34AM Date Received: 05/18/2023 01:03PM Sample Matrix: Aqueous Location Desc: SS#14 - SS LINEAR PARK MW-520

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))							
Sulfate	31.5	mg/L	0.5	2.5	05/18/2023	2061771 PWARNER	
SEM_200.7_DW(EPA 200.7)							
Calcium, Ca	38.9	mg/L	0.04	1	05/31/2023	2062343 BTRINH	
Magnesium, Mg	14.3	mg/L	0.007	0.2	05/31/2023	2062343 BTRINH	
Potassium, K	3.63	mg/L	0.04	0.2	05/31/2023	2062343 BTRINH	
Sodium, Na	93.2	mg/L	0.02	1	05/31/2023	2062343 BTRINH	
MBP_ALK(SM 2320 B)							
Alkalinity	206	mg/L	0.593	3	05/18/2023	2061772 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)							
Chloride	83.4	mg/L		3	05/18/2023	2061775 ALEE	
MBP_COND(SM 2510 B)							
Specific Conductance @25°C	729	µmhos/cm		1	05/18/2023	2061781 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)							
Hardness, Total, as CaCO3	154	mg/L	0.474	3	05/18/2023	2061777 ALEE	
MBP_PH(SM 4500-H+ B)							
pH	7.24	pH			05/18/2023	2061779 ABALALIO	H1,H3
Temperature (°C)	16.9	°C			05/18/2023	2061779 ABALALIO	
MBP_TDS(SM 2540 C)							
Total Dissolved Solids	383	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	

Lab Sample#: 2302260-04A Sample Source: WSB\_SS14SSLP520 External ID:

Date Collected: 05/22/2023 09:34AM Date Received: 05/18/2023 01:03PM Sample Matrix: Aqueous Location Desc: SS#14 - SS LINEAR PARK MW-520

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))							
Nitrate as N	<0.04	mg/L	0.034	0.04	05/18/2023	2061771 PWARNER	

Lab Sample#: 2302260-05 Sample Source: WSB\_SS\_DUP External ID:

Date Collected: 05/22/2023 10:57AM Date Received: 05/18/2023 01:03PM Sample Matrix: Aqueous Location Desc: SS#11 - SS LINEAR PARK MW-120

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SEM_200.7_DW(EPA 200.7)							
Calcium, Ca	61.9	mg/L	0.04	1	05/31/2023	2062343 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/22/2023

**Sampling Team:** Field

<i>Magnesium, Mg</i>	44.6	mg/L	0.007	0.2	05/31/2023	2062343	BTRINH	
<i>Potassium, K</i>	3.2	mg/L	0.04	0.2	05/31/2023	2062343	BTRINH	
<i>Sodium, Na</i>	97.7	mg/L	0.02	1	05/31/2023	2062343	BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Alkalinity</i>	285	mg/L	1.19	6	05/18/2023	2061772	ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Chloride</i>	135	mg/L		6	05/18/2023	2061775	ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Specific Conductance @25°C</i>	1080	µmhos/cm		1	05/18/2023	2061781	ABALALIO	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Hardness, Total, as CaCO3</i>	349	mg/L	0.948	6	05/18/2023	2061777	ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>pH</i>	7.07	pH			05/18/2023	2061779	ABALALIO	H1,H3
<i>Temperature (°C)</i>	17.2	°C			05/18/2023	2061779	ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Total Dissolved Solids</i>	600	mg/L	13.2	20	05/22/2023	2061770	DCARDONA	>MCL
<b>Lab Sample#:</b>	<b>2302260-05A</b>	<b>Sample Source:</b>	<b>WSB_SS_DUP</b>	<b>External ID:</b>				
<b>Date Collected:</b>	05/22/2023 10:57AM	<b>Date Received:</b>	05/18/2023 01:03PM	<b>Sample Matrix:</b>	Aqueous	<b>Location Desc:</b>	SS#11 - SS LINEAR PARK MW-120	
<b>Test/Analyte</b>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Nitrate as N</i>	<0.04	mg/L	0.034	0.04	05/18/2023	2061771	PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/22/2023

**Sampling Team:** Field

**QC list for Run#: 2061770 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314099-01	BLK	Total Dissolved Solids	<20		mg/L			13.2	20	
QC2314099-02	LCS	Total Dissolved Solids	83		mg/L	87		13.2	20	
QC2314099-03	DUP of 2303599-01	Total Dissolved Solids	50	48	mg/L		4	13.2	20	Splt# 2303599-01 (50mg/L)
QC2314099-04	DUP of 2302904-03	Total Dissolved Solids	418	427	mg/L		2	13.2	20	Splt# 2302904-03 (418mg/L)

**QC list for Run#: 2061771 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314100-01	MRL_CK	Fluoride	0.103		mg/L	103				
	MRL_CK	Sulfate	0.514		mg/L	103				
	MRL_CK	Nitrate as N	0.0414		mg/L	104				
QC2314100-02	CCV	Fluoride	0.485		mg/L	97				
	CCV	Sulfate	2.37		mg/L	94				
	CCV	Nitrate as N	0.194		mg/L	97				
QC2314100-03	BLK	Fluoride	<0.1		mg/L			0.02	0.1	
	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2314100-04	BLK	Fluoride	<0.1		mg/L			0.02	0.1	
	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2314100-05	LCS	Fluoride	0.201		mg/L	100				
	LCS	Sulfate	1.44		mg/L	96				
	LCS	Nitrate as N	0.237		mg/L	94				
QC2314100-06	BLK	Fluoride	<0.1		mg/L			0.02	0.1	
	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2314100-07	CCV	Fluoride	4.09		mg/L	102				
	CCV	Sulfate	21.2		mg/L	106				
	CCV	Nitrate as N	1.65		mg/L	104				
QC2314100-08										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/22/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Sample ID	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
SPKD of 2303058-09	Fluoride	0.626	1.12	mg/L	99	0			Splt# 2303058-09 (0.626mg/L)
SPKD of 2303058-09	Sulfate	1.58	4	mg/L	96	1			Splt# 2303058-09 (1.58mg/L)
SPKD of 2303058-09	Nitrate as N	<0.04	0.219	mg/L	110	0			Splt# 2303058-09 (<0.04mg/L)
QC2314100-09									
SPK of 2303058-09	Fluoride	0.626	1.12	mg/L	99				Splt# 2303058-09 (0.626mg/L)
SPK of 2303058-09	Sulfate	1.58	4.04	mg/L	98				Splt# 2303058-09 (1.58mg/L)
SPK of 2303058-09	Nitrate as N	<0.04	0.221	mg/L	111				Splt# 2303058-09 (<0.04mg/L)
QC2314100-10									
CCV	Fluoride		0.476	mg/L	95				
CCV	Sulfate		2.35	mg/L	94				
CCV	Nitrate as N		0.192	mg/L	96				
QC2314100-11									
BLK	Fluoride		<0.1	mg/L			0.02	0.1	
BLK	Sulfate		<0.5	mg/L			0.1	0.5	
BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2314100-12									
SPK of 2302260-03	Fluoride	<0.1	0.507	mg/L	101				Splt# 2302260-03 (<0.1mg/L)
SPK of 2302260-03	Sulfate	<0.5	2.5	mg/L	99				Splt# 2302260-03 (<0.5mg/L)
SPK of 2302260-03	Nitrate as N	<0.04	0.202	mg/L	101				Splt# 2302260-03 (<0.04mg/L)
QC2314100-13									
SPKD of 2302260-03	Fluoride	<0.1	0.507	mg/L	101	0			Splt# 2302260-03 (<0.1mg/L)
SPKD of 2302260-03	Sulfate	<0.5	2.5	mg/L	99	0			Splt# 2302260-03 (<0.5mg/L)
SPKD of 2302260-03	Nitrate as N	<0.04	0.2	mg/L	100	0			Splt# 2302260-03 (<0.04mg/L)

**QC list for Run#: 2061772 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314101-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2314101-02	MRL_CK	Alkalinity		3.26	mg/L	109				
QC2314101-03	SPK of 2303036-01	Alkalinity	36.8	76.7	mg/L	99			3	Splt# 2303036-01 (36.8mg/L)
QC2314101-04	SPKD of 2303036-01	Alkalinity	36.8	80.3	mg/L	109	4		3	Splt# 2303036-01 (36.8mg/L)
QC2314101-05	DUP of 2303036-02	Alkalinity	33.3	33.1	mg/L		0	0.593	3	Splt# 2303036-02 (33.3mg/L)
QC2314101-06	LCS	Alkalinity		39.4	mg/L	98			3	

**QC list for Run#: 2061775 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/22/2023

**Sampling Team:** Field

Sample ID	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
QC2314103-01	BLK	Chloride	<3	mg/L			1.16	3	
QC2314103-02	MRL CK	Chloride	2.87	mg/L	95				
QC2314103-03	SPK of 2303036-01	Chloride	8.92	50.2 mg/L	103			3	Splt# 2303036-01 (8.92mg/L)
QC2314103-04	SPKD of 2303036-01	Chloride	8.92	50.2 mg/L	103	0		3	Splt# 2303036-01 (8.92mg/L)
QC2314103-05	DUP of 2303036-02	Chloride	10.2	10.1 mg/L		0		3	Splt# 2303036-02 (10.2mg/L)
QC2314103-06	LCS	Chloride	40.7	mg/L	102			3	

**QC list for Run#: 2061777 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314105-01	BLK	Hardness, Total, as CaCO3	<3		mg/L			0.474	3	
QC2314105-02	MRL CK	Hardness, Total, as CaCO3	2.67		mg/L	89				
QC2314105-03	DUP of 2303036-02	Hardness, Total, as CaCO3	31.8	32	mg/L		0	0.474	3	Splt# 2303036-02 (31.8mg/L)
QC2314105-04	LCS	Hardness, Total, as CaCO3	39.7		mg/L	99			3	

**QC list for Run#: 2061779 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314107-04	ICV	pH	9.04		pH	99				
	ICV	Temperature (°C)	18.4		°C					
QC2314107-05	DUP of 2303036-01	pH	9.07	9.08	pH		0			Splt# 2303036-01 (9.07pH) H1,H3
	DUP of 2303036-01	Temperature (°C)	17.1	17.1	°C					Splt# 2303036-01 (17.1°C)
QC2314107-06	CCV	pH	9.05		pH	100				
	CCV	Temperature (°C)	18.4		°C					
QC2314107-07	CCV	pH	9.04		pH	99				
	CCV	Temperature (°C)	18.4		°C					

**QC list for Run#: 2061781 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314109-01	CAL	Specific Conductance @25°C	1430		µmhos/cm	101				
QC2314109-02										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/22/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Sample ID	Parameter	Result	Units	MDL	MRL	Notes
ICV	Specific Conductance @25°C	155	µmhos/cm	106		
QC2314109-03	BLK	<1	µmhos/cm		1	
QC2314109-04	MRL_CHK	10	µmhos/cm	100		
QC2314109-05	DUP of 2303036-01	140	140	µmhos/cm	0	1 Splt# 2303036-01 (140µmhos/cm)
QC2314109-06	CCV	102	µmhos/cm	102		
QC2314109-07	CCV	1430	µmhos/cm	101		

**QC list for Run#: 2062343 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314383-01	BLK	Calcium, Ca	<1		mg/L			0.04	1	
	BLK	Magnesium, Mg	<0.2		mg/L			0.007	0.2	
	BLK	Potassium, K	<0.2		mg/L			0.04	0.2	
	BLK	Sodium, Na	<1		mg/L			0.02	1	
QC2314383-02	LCS	Calcium, Ca	1.84		mg/L	91		0.04	1	
	LCS	Magnesium, Mg	1.99		mg/L	99		0.007	0.2	
	LCS	Potassium, K	2.03		mg/L	101		0.04	0.2	
	LCS	Sodium, Na	2.04		mg/L	102		0.02	1	
QC2314383-03	DUP of 2302904-01	Calcium, Ca	40.2	40.6	mg/L		1	0.04	1	Splt# 2302904-01 (40.2mg/L)
	DUP of 2302904-01	Magnesium, Mg	37.4	37.1	mg/L		0	0.007	0.2	Splt# 2302904-01 (37.4mg/L)
	DUP of 2302904-01	Potassium, K	2.51	2.5	mg/L		0	0.04	0.2	Splt# 2302904-01 (2.51mg/L)
	DUP of 2302904-01	Sodium, Na	53.3	53.4	mg/L		0	0.02	1	Splt# 2302904-01 (53.3mg/L)
QC2314383-04	SPK of 2302904-01	Calcium, Ca	40.2	41.4	mg/L	59		0.04	1	Splt# 2302904-01 (40.2mg/L)
	SPK of 2302904-01	Magnesium, Mg	37.4	38.8	mg/L	71		0.007	0.2	Splt# 2302904-01 (37.4mg/L)
	SPK of 2302904-01	Potassium, K	2.51	4.57	mg/L	103		0.04	0.2	Splt# 2302904-01 (2.51mg/L)
	SPK of 2302904-01	Sodium, Na	53.3	53.9	mg/L	30		0.02	1	Splt# 2302904-01 (53.3mg/L)
QC2314383-05	SPKD of 2302904-01	Calcium, Ca	40.2	42.4	mg/L	112	2	0.04	1	Splt# 2302904-01 (40.2mg/L)
	SPKD of 2302904-01	Magnesium, Mg	37.4	39.4	mg/L	98	1	0.007	0.2	Splt# 2302904-01 (37.4mg/L)
	SPKD of 2302904-01	Potassium, K	2.51	4.68	mg/L	109	2	0.04	0.2	Splt# 2302904-01 (2.51mg/L)
	SPKD of 2302904-01	Sodium, Na	53.3	55.5	mg/L	107	2	0.02	1	Splt# 2302904-01 (53.3mg/L)
QC2314383-06	MRL_CHK	Calcium, Ca	<1		mg/L	N/A		0.04	1	
	MRL_CHK	Magnesium, Mg	<0.2		mg/L	N/A		0.007	0.2	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302260**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/22/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

	MRL_CK	Potassium, K	0.232	mg/L	92	0.04	0.2
	MRL_CK	Sodium, Na	<1	mg/L	N/A	0.02	1
QC2314517-01							
	ICV	Potassium, K	2.03	mg/L	101	0.03	0.2
QC2314517-02							
	ICV	Calcium, Ca	9.63	mg/L	96	0.05	1
	ICV	Magnesium, Mg	9.89	mg/L	98	0.01	0.2
	ICV	Sodium, Na	10.1	mg/L	103	0.002	1

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302486**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/01/2023

Routine: WSB\_SSF-CalWater

Sampling Team: Field

Lab Sample#: 2302486-02 Sample Source: WSB\_SS08\_1-19 External ID:

Date Collected: 05/09/2023 11:00AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	71.2	mg/L	1	5	05/09/2023	2061226 PWARNER	
Nitrate as N	3.51	mg/L	0.34	0.4	05/09/2023	2061226 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	52.6	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	62.3	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Potassium, K	2.47	mg/L	0.04	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	74.5	mg/L	0.02	1	05/12/2023	2061453 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	278	mg/L	1.19	6	05/09/2023	2061286 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	127	mg/L		6	05/09/2023	2061289 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1060	µmhos/cm		1	05/09/2023	2061276 ABALALIO	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	374	mg/L	0.948	6	05/09/2023	2061290 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.51	pH			05/09/2023	2061271 ABALALIO	H1,H3
Temperature (°C)	18.1	°C			05/09/2023	2061271 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	599	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	>MCL

Lab Sample#: 2302486-03 Sample Source: WSB\_SS09\_1-20 External ID:

Date Collected: 05/09/2023 11:15AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	1.11	mg/L	0.34	0.4	05/09/2023	2061226 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	83.1	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	56.7	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Potassium, K	3.85	mg/L	0.04	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	91.6	mg/L	0.02	1	05/12/2023	2061453 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	215	mg/L	1.19	6	05/09/2023	2061286 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	141	mg/L		6	05/09/2023	2061289 ALEE	
<b>MBP_COND(SM 2510 B)</b>							

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302486**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SSF-CalWater

**Scheduled Sample Date:** 05/01/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1240	µmhos/cm		1	05/09/2023	2061276 ABALALIO	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	436	mg/L	0.948	6	05/09/2023	2061290 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.24	pH			05/09/2023	2061271 ABALALIO	H1,H3
Temperature (°C)	18.7	°C			05/09/2023	2061271 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	772	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	>MCL

**Lab Sample#: 2302486-03A**      **Sample Source:** WSB\_SS09\_1-20      **External ID:**

**Date Collected:** 05/09/2023 11:15AM      **Date Received:** 05/09/2023 12:13PM      **Sample Matrix:** Aqueous      **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	201	mg/L	2	10	05/10/2023	2061334 PWARNER	

**Lab Sample#: 2302486-04**      **Sample Source:** WSB\_SS10\_1-21      **External ID:**

**Date Collected:** 05/09/2023 10:35AM      **Date Received:** 05/09/2023 12:13PM      **Sample Matrix:** Aqueous      **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	116	mg/L	2	10	05/09/2023	2061226 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	82.1	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	30.1	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Potassium, K	4.33	mg/L	0.04	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	84.9	mg/L	0.02	1	05/12/2023	2061453 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	220	mg/L	1.19	6	05/09/2023	2061286 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	109	mg/L		6	05/09/2023	2061289 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1010	µmhos/cm		1	05/09/2023	2061276 ABALALIO	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	314	mg/L	0.948	6	05/09/2023	2061290 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.41	pH			05/09/2023	2061271 ABALALIO	H1,H3
Temperature (°C)	18.9	°C			05/09/2023	2061271 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	603	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302486**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/01/2023

Routine: WSB\_SSF-CalWater

Sampling Team: Field

Lab Sample#: **2302486-04A** Sample Source: WSB\_SS10\_1-21 External ID:

Date Collected: 05/09/2023 10:35AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))							
Nitrate as N	<0.04	mg/L	0.034	0.04	05/09/2023	2061226 PWARNER	

Lab Sample#: **2302486-05** Sample Source: WSB\_SS15\_1-22 External ID:

Date Collected: 05/09/2023 10:20AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))							
Sulfate	162	mg/L	2	10	05/09/2023	2061226 PWARNER	
SEM_200.7_DW(EPA 200.7)							
Calcium, Ca	100	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	39.2	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	100	mg/L	0.02	1	05/12/2023	2061453 BTRINH	
MBP_ALK(SM 2320 B)							
Alkalinity	239	mg/L	1.19	6	05/09/2023	2061286 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)							
Chloride	140	mg/L		6	05/09/2023	2061289 ALEE	
MBP_COND(SM 2510 B)							
Specific Conductance @25°C	1200	µmhos/cm		1	05/09/2023	2061276 ABALALIO	>MCL
MBP_HARDNESS_T(SM 2340 C)							
Hardness, Total, as CaCO3	404	mg/L	0.948	6	05/09/2023	2061290 ALEE	
MBP_PH(SM 4500-H+ B)							
pH	7.45	pH			05/09/2023	2061271 ABALALIO	H1,H3
Temperature (°C)	18.4	°C			05/09/2023	2061271 ABALALIO	
MBP_TDS(SM 2540 C)							
Total Dissolved Solids	719	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	>MCL

Lab Sample#: **2302486-05A** Sample Source: WSB\_SS15\_1-22 External ID:

Date Collected: 05/09/2023 10:20AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))							
Nitrate as N	0.738	mg/L	0.034	0.04	05/09/2023	2061226 PWARNER	

Lab Sample#: **2302486-05B** Sample Source: WSB\_SS15\_1-22 External ID:

Date Collected: 05/09/2023 10:20AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SEM_200.7_DW(EPA 200.7)							
Potassium, K	5.12	mg/L	0.12	0.6	05/12/2023	2061453 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302486**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/01/2023

Routine: WSB\_SSF-CalWater

Sampling Team: Field

Lab Sample#: 2302486-06 Sample Source: WSB\_SS16\_1-23 External ID:

Date Collected: 05/09/2023 10:15AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	118	mg/L	1	5	05/09/2023	2061226 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	82.1	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	35.8	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Potassium, K	4.91	mg/L	0.04	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	82.1	mg/L	0.02	1	05/12/2023	2061453 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	249	mg/L	1.19	6	05/09/2023	2061286 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	112	mg/L		6	05/09/2023	2061289 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1050	µmhos/cm		1	05/09/2023	2061276 ABALALIO	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	345	mg/L	0.948	6	05/09/2023	2061290 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.46	pH			05/09/2023	2061271 ABALALIO	H1,H3
Temperature (°C)	18.1	°C			05/09/2023	2061271 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	607	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	>MCL

Lab Sample#: 2302486-06A Sample Source: WSB\_SS16\_1-23 External ID:

Date Collected: 05/09/2023 10:15AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	0.92	mg/L	0.034	0.04	05/09/2023	2061226 PWARNER	

Lab Sample#: 2302486-07 Sample Source: WSB\_SS17\_1-24 External ID:

Date Collected: 05/09/2023 10:50AM Date Received: 05/09/2023 12:13PM Sample Matrix: Aqueous Location Desc:

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	110	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	49.6	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	91.8	mg/L	0.02	1	05/12/2023	2061453 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	242	mg/L	1.19	6	05/09/2023	2061286 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302486**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/01/2023

Routine: WSB\_SSF-CalWater

Sampling Team: Field

Chloride	157	mg/L	6	05/09/2023	2061289	ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	1310	µmhos/cm	1	05/09/2023	2061276	ABALALIO	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	466	mg/L	0.948	6	05/09/2023	2061290	ALEE
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
pH	7.41	pH			05/09/2023	2061271	ABALALIO H1,H3
Temperature (°C)	18.7	°C			05/09/2023	2061271	ABALALIO
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Total Dissolved Solids	801	mg/L	13.2	20	05/12/2023	2061285	DCARDONA >MCL
<b>Lab Sample#: 2302486-07A</b>	<b>Sample Source: WSB_SS17_1-24</b>			<b>External ID:</b>			
<b>Date Collected: 05/09/2023 10:50AM</b>	<b>Date Received: 05/09/2023 12:13PM</b>	<b>Sample Matrix: Aqueous</b>	<b>Location Desc:</b>				
<b>Test/Analyte</b>							
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Nitrate as N	<0.04	mg/L	0.034	0.04	05/09/2023	2061226	PWARNER
<b>Lab Sample#: 2302486-07B</b>	<b>Sample Source: WSB_SS17_1-24</b>			<b>External ID:</b>			
<b>Date Collected: 05/09/2023 10:50AM</b>	<b>Date Received: 05/09/2023 12:13PM</b>	<b>Sample Matrix: Aqueous</b>	<b>Location Desc:</b>				
<b>Test/Analyte</b>							
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Sulfate	199	mg/L	2	10	05/10/2023	2061334	PWARNER
<b>Lab Sample#: 2302486-07C</b>	<b>Sample Source: WSB_SS17_1-24</b>			<b>External ID:</b>			
<b>Date Collected: 05/09/2023 10:50AM</b>	<b>Date Received: 05/09/2023 12:13PM</b>	<b>Sample Matrix: Aqueous</b>	<b>Location Desc:</b>				
<b>Test/Analyte</b>							
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Potassium, K	5.26	mg/L	0.12	0.6	05/12/2023	2061453	BTRINH
<b>Lab Sample#: 2302486-08</b>	<b>Sample Source: WSB_SS_DUP</b>			<b>External ID:</b>			
<b>Date Collected: 05/09/2023 10:50AM</b>	<b>Date Received: 05/09/2023 12:13PM</b>	<b>Sample Matrix: Aqueous</b>	<b>Location Desc: DUP of WSB_SS17_1-24</b>				
<b>Test/Analyte</b>							
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Calcium, Ca	114	mg/L	0.04	1	05/12/2023	2061453	BTRINH
Magnesium, Mg	50.6	mg/L	0.007	0.2	05/12/2023	2061453	BTRINH
Sodium, Na	91.9	mg/L	0.02	1	05/12/2023	2061453	BTRINH
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	239	mg/L	1.19	6	05/09/2023	2061286	ALEE
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	155	mg/L		6	05/09/2023	2061289	ALEE
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	1310	µmhos/cm		1	05/09/2023	2061276	ABALALIO >MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302486**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SSF-CalWater

**Scheduled Sample Date:** 05/01/2023

**Sampling Team:** Field

<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	479	mg/L	0.948	6	05/09/2023	2061290 ALEE	
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.38	pH			05/09/2023	2061271 ABALALIO	H1,H3
Temperature (°C)	18.6	°C			05/09/2023	2061271 ABALALIO	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	802	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	>MCL

**Lab Sample#:** 2302486-08A **Sample Source:** WSB\_SS\_DUP **External ID:**

**Date Collected:** 05/09/2023 10:50AM **Date Received:** 05/09/2023 12:13PM **Sample Matrix:** Aqueous **Location Desc:** DUP of WSB\_SS17\_1-24

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Nitrate as N	<0.04	mg/L	0.034	0.04	05/09/2023	2061226 PWARNER	

**Lab Sample#:** 2302486-08B **Sample Source:** WSB\_SS\_DUP **External ID:**

**Date Collected:** 05/09/2023 10:50AM **Date Received:** 05/09/2023 12:13PM **Sample Matrix:** Aqueous **Location Desc:** DUP of WSB\_SS17\_1-24

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	198	mg/L	2	10	05/10/2023	2061334 PWARNER	

**Lab Sample#:** 2302486-08C **Sample Source:** WSB\_SS\_DUP **External ID:**

**Date Collected:** 05/09/2023 10:50AM **Date Received:** 05/09/2023 12:13PM **Sample Matrix:** Aqueous **Location Desc:** DUP of WSB\_SS17\_1-24

Test/Analyte

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Potassium, K	5.17	mg/L	0.12	0.6	05/12/2023	2061453 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302486**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SSF-CalWater

**Scheduled Sample Date:** 05/01/2023

**Sampling Team:** Field

**QC list for Run#: 2061226 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313705-01	MRL_CK	Sulfate		0.517	mg/L	103				
	MRL_CK	Nitrate as N		0.0414	mg/L	104				
QC2313705-02	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.198	mg/L	99				
QC2313705-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313705-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313705-05	LCS	Sulfate		1.42	mg/L	94				
	LCS	Nitrate as N		0.246	mg/L	98				
QC2313705-06	CCV	Sulfate		21.5	mg/L	107				
	CCV	Nitrate as N		1.68	mg/L	105				
QC2313705-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313705-08	SPK of 2302820-01	Sulfate	1.87	4.3	mg/L	97				Splt# 2302820-01 (1.87mg/L)
	SPK of 2302820-01	Nitrate as N	<0.04	0.226	mg/L	113				Splt# 2302820-01 (<0.04mg/L)
QC2313705-09	SPKD of 2302820-01	Sulfate	1.87	4.36	mg/L	99	1			Splt# 2302820-01 (1.87mg/L)
	SPKD of 2302820-01	Nitrate as N	<0.04	0.228	mg/L	114	0			Splt# 2302820-01 (<0.04mg/L)
QC2313705-10	SPK of 2302756-02	Sulfate	1.73	4.19	mg/L	98				Splt# 2302756-02 (1.73mg/L)
	SPK of 2302756-02	Nitrate as N	<0.04	0.225	mg/L	113				Splt# 2302756-02 (<0.04mg/L)
QC2313705-11	SPKD of 2302756-02	Sulfate	1.73	4.2	mg/L	98	0			Splt# 2302756-02 (1.73mg/L)
	SPKD of 2302756-02	Nitrate as N	<0.04	0.225	mg/L	113	0			Splt# 2302756-02 (<0.04mg/L)
QC2313705-12	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2313705-13	BLK	Sulfate		<0.5	mg/L			0.1	0.5	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302486**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/01/2023

**Routine:** WSB\_SSF-CalWater

**Sampling Team:** Field

Sample #	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
QC2313705-14	BLK	Nitrate as N	<0.04	mg/L			0.034	0.04	
	CCV	Sulfate	21.6	mg/L	108				
	CCV	Nitrate as N	1.68	mg/L	106				
QC2313705-15	BLK	Sulfate	<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2061271 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313735-04	ICV	pH	9.04		pH	99				
	ICV	Temperature (°C)	19.1		°C					
QC2313735-05	DUP of 2302744-01	pH	9.25	9.28	pH		0			Splt# 2302744-01 (9.25pH) H1,H3
	DUP of 2302744-01	Temperature (°C)	16.4	16.2	°C					Splt# 2302744-01 (16.4°C)
QC2313735-06	CCV	pH	9.04		pH	99				
	CCV	Temperature (°C)	18.8		°C					
QC2313735-07	CCV	pH	9.05		pH	100				
	CCV	Temperature (°C)	18.7		°C					

**QC list for Run#: 2061276 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313740-02	ICV	Specific Conductance @25°C	155		µmhos/cm	105				
QC2313740-03	BLK	Specific Conductance @25°C	<1		µmhos/cm				1	
QC2313740-04	MRL_CK	Specific Conductance @25°C	9.98		µmhos/cm	99				
QC2313740-05	DUP of 2302744-01	Specific Conductance @25°C	54.8	54.9	µmhos/cm		0		1	Splt# 2302744-01 (54.8µmhos/cm)
QC2313740-06	CCV	Specific Conductance @25°C	102		µmhos/cm	102				
QC2313740-07	CCV	Specific Conductance @25°C	1440		µmhos/cm	102				

**QC list for Run#: 2061285 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313745-01	BLK	Total Dissolved Solids	<20		mg/L			13.2	20	
QC2313745-02										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302486**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SSF-CalWater

**Scheduled Sample Date:** 05/01/2023

**Sampling Team:** Field

DUP of 2303429-01	Total Dissolved Solids	66	69	mg/L	4	13.2	20	Splt# 2303429-01 (66mg/L)
QC2313745-03								
DUP of 2302916-02	Total Dissolved Solids	443	444	mg/L	0	13.2	20	Splt# 2302916-02 (443mg/L)
QC2313745-04								
LCS	Total Dissolved Solids		89	mg/L		13.2	20	

**QC list for Run#: 2061286 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313746-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313746-02	MRL CK	Alkalinity		3.22	mg/L	107				
QC2313746-03	SPK of 2302766-03	Alkalinity	40.1	81.4	mg/L	103			3	Splt# 2302766-03 (40.1mg/L)
QC2313746-04	SPKD of 2302766-03	Alkalinity	40.1	81.8	mg/L	104	0		3	Splt# 2302766-03 (40.1mg/L)
QC2313746-05	DUP of 2302916-05	Alkalinity	184	191	mg/L		3	1.19	6	Splt# 2302916-05 (184mg/L)
QC2313746-06	LCS	Alkalinity		39.2	mg/L	97			3	

**QC list for Run#: 2061289 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313748-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2313748-02	MRL CK	Chloride		2.79	mg/L	93				
QC2313748-03	SPK of 2302766-03	Chloride	8.35	49.4	mg/L	103			3	Splt# 2302766-03 (8.35mg/L)
QC2313748-04	SPKD of 2302766-03	Chloride	8.35	49.4	mg/L	103	0		3	Splt# 2302766-03 (8.35mg/L)
QC2313748-05	DUP of 2302916-05	Chloride	125	129	mg/L		3		6	Splt# 2302916-05 (125mg/L)
QC2313748-06	LCS	Chloride		40.6	mg/L	101			3	

**QC list for Run#: 2061290 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313749-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2313749-02	MRL CK	Hardness, Total, as CaCO3		2.78	mg/L	92				
QC2313749-03	DUP of 2302766-03	Hardness, Total, as CaCO3	38.3	38.5	mg/L		0	0.474	3	Splt# 2302766-03 (38.3mg/L)
QC2313749-04										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302486**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SSF-CalWater

**Scheduled Sample Date:** 05/01/2023

**Sampling Team:** Field

LCS      Hardness, Total, as CaCO3      39.6      mg/L      98      3

**QC list for Run#: 2061334 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313782-01	MRL_CK	Sulfate		0.512	mg/L	102				
	MRL_CK	Nitrate as N		0.0415	mg/L	104				
QC2313782-02	CCV	Sulfate		2.4	mg/L	96				
	CCV	Nitrate as N		0.198	mg/L	99				
QC2313782-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313782-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313782-05	LCS	Sulfate		1.43	mg/L	95				
	LCS	Nitrate as N		0.25	mg/L	99				
QC2313782-06	CCV	Sulfate		21.5	mg/L	107				
	CCV	Nitrate as N		1.68	mg/L	105				
QC2313782-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313782-08	SPK of 2302759-03	Sulfate	13.1	15.8	mg/L	109				Splt# 2302759-03 (13.1mg/L)
	SPK of 2302759-03	Nitrate as N	<0.04	0.229	mg/L	115				Splt# 2302759-03 (<0.04mg/L)
QC2313782-09	SPKD of 2302759-03	Sulfate	13.1	15.9	mg/L	114	0			Splt# 2302759-03 (13.1mg/L)
	SPKD of 2302759-03	Nitrate as N	<0.04	0.231	mg/L	116	1			Splt# 2302759-03 (<0.04mg/L)
QC2313782-10	SPK of 2302774-04	Sulfate	8.82	11.4	mg/L	102				Splt# 2302774-04 (8.82mg/L)
	SPK of 2302774-04	Nitrate as N	0.12	0.318	mg/L	99				Splt# 2302774-04 (0.12mg/L)
QC2313782-11	SPKD of 2302774-04	Sulfate	8.82	11.4	mg/L	102	0			Splt# 2302774-04 (8.82mg/L)
	SPKD of 2302774-04	Nitrate as N	0.12	0.317	mg/L	98	0			Splt# 2302774-04 (0.12mg/L)
QC2313782-12	CCV	Sulfate		2.41	mg/L	96				
	CCV	Nitrate as N		0.197	mg/L	99				
QC2313782-13	BLK	Sulfate		<0.5	mg/L			0.1	0.5	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302486**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/01/2023

**Routine:** WSB\_SSF-CalWater

**Sampling Team:** Field

BLK Nitrate as N <0.04 mg/L 0.034 0.04

**QC list for Run#: 2061453 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313852-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2313852-02	LCS	Calcium, Ca		1.79	mg/L	89		0.04	1	
	LCS	Magnesium, Mg		2.02	mg/L	101		0.007	0.2	
	LCS	Potassium, K		2.03	mg/L	102		0.04	0.2	
	LCS	Sodium, Na		2.08	mg/L	104		0.02	1	
QC2313852-03	DUP of 2302486-02	Calcium, Ca	52.6	52.1	mg/L		0	0.04	1	Splt# 2302486-02 (52.6mg/L)
	DUP of 2302486-02	Magnesium, Mg	62.3	62.6	mg/L		0	0.007	0.2	Splt# 2302486-02 (62.3mg/L)
	DUP of 2302486-02	Potassium, K	2.47	2.53	mg/L		2	0.04	0.2	Splt# 2302486-02 (2.47mg/L)
	DUP of 2302486-02	Sodium, Na	74.5	73.5	mg/L		1	0.02	1	Splt# 2302486-02 (74.5mg/L)
QC2313852-04	SPK of 2302486-02	Calcium, Ca	52.6	54.6	mg/L	103		0.04	1	Splt# 2302486-02 (52.6mg/L) Spike too low
	SPK of 2302486-02	Magnesium, Mg	62.3	62.7	mg/L	16		0.007	0.2	Splt# 2302486-02 (62.3mg/L) Spike too low
	SPK of 2302486-02	Potassium, K	2.47	4.56	mg/L	104		0.04	0.2	Splt# 2302486-02 (2.47mg/L)
	SPK of 2302486-02	Sodium, Na	74.5	75.3	mg/L	35		0.02	1	Splt# 2302486-02 (74.5mg/L) Spike too low
QC2313852-05	SPKD of 2302486-02	Calcium, Ca	52.6	55.2	mg/L	130	0	0.04	1	Splt# 2302486-02 (52.6mg/L) Spike too low
	SPKD of 2302486-02	Magnesium, Mg	62.3	63.8	mg/L	72	1	0.007	0.2	Splt# 2302486-02 (62.3mg/L) Spike too low
	SPKD of 2302486-02	Potassium, K	2.47	4.69	mg/L	111	2	0.04	0.2	Splt# 2302486-02 (2.47mg/L)
	SPKD of 2302486-02	Sodium, Na	74.5	75	mg/L	22	0	0.02	1	Splt# 2302486-02 (74.5mg/L) Spike too low
QC2313852-06	MRL_CK	Calcium, Ca		<1	mg/L	N/A		0.04	1	
	MRL_CK	Magnesium, Mg		<0.2	mg/L	N/A		0.007	0.2	
	MRL_CK	Potassium, K		0.276	mg/L	110		0.04	0.2	
	MRL_CK	Sodium, Na		<1	mg/L	N/A		0.02	1	
QC2313874-01	ICV	Potassium, K		2.08	mg/L	104		0.03	0.2	
QC2313874-02	ICV	Calcium, Ca		9.61	mg/L	96		0.05	1	
	ICV	Magnesium, Mg		9.87	mg/L	98		0.01	0.2	
	ICV	Sodium, Na		10.1	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302486**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SSF-CalWater

**Scheduled Sample Date:** 05/01/2023

**Sampling Team:** Field

# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302488**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 04/24/2023

Routine: WSB\_San Bruno

Sampling Team: Field

Lab Sample#: 2302488-01 Sample Source: WSB\_SB05\_SB16 External ID:

Date Collected: 04/24/2023 08:45AM Date Received: 04/24/2023 09:39AM Sample Matrix: Aqueous Location Desc:

Test/Analyte							
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	91.6	mg/L	1	5	04/24/2023	2060435 PWARNER	
Nitrate as N	<0.4	mg/L	0.34	0.4	04/24/2023	2060435 PWARNER	
SEM_200.7_DW(EPA 200.7)							
Calcium, Ca	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	62.2	mg/L	0.04	1	05/05/2023	2061065 BTRINH	
Magnesium, Mg	41	mg/L	0.007	0.2	05/05/2023	2061065 BTRINH	
Potassium, K	3.25	mg/L	0.04	0.2	05/05/2023	2061065 BTRINH	
Sodium, Na	62.4	mg/L	0.02	1	05/05/2023	2061065 BTRINH	
MBP_CHLORIDE(SM 4500-CL- D)							
Chloride	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	122	mg/L		6	04/24/2023	2060458 ALEE	
MBP_COND(SM 2510 B)							
Specific Conductance @25°C	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	926	µmhos/cm		1	04/24/2023	2060436 DCARDONA	>MCL
MBP_HARDNESS_T(SM 2340 C)							
Hardness, Total, as CaCO3	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	317	mg/L	0.948	6	04/24/2023	2060466 ALEE	
MBP_PH(SM 4500-H+ B)							
pH	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.27	pH			04/24/2023	2060439 DCARDONA	H1,H3
Temperature (°C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Temperature (°C)	18.6	°C			04/24/2023	2060439 DCARDONA	
MBP_TDS(SM 2540 C)							
Total Dissolved Solids	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	540	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	>MCL

Lab Sample#: 2302488-01A Sample Source: WSB\_SB05\_SB16 External ID:

Date Collected: 04/24/2023 08:45AM Date Received: 04/24/2023 09:39AM Sample Matrix: Aqueous Location Desc:

Test/Analyte							
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	0.0903	mg/L	0.034	0.04	04/24/2023	2060435 PWARNER	

Lab Sample#: 2302488-01B Sample Source: WSB\_SB05\_SB16 External ID:

Date Collected: 04/24/2023 08:45AM Date Received: 04/24/2023 09:39AM Sample Matrix: Aqueous Location Desc:

Test/Analyte							
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	382	mg/L	1.19	6	04/24/2023	2060472 ALEE	

Lab Sample#: 2302488-02 Sample Source: WSB\_SB06\_SB17 External ID:

Date Collected: 04/24/2023 07:45AM Date Received: 04/24/2023 09:39AM Sample Matrix: Aqueous Location Desc:

Test/Analyte							
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	24.3	mg/L	0.5	2.5	04/24/2023	2060435 PWARNER	
Nitrate as N	1.64	mg/L	0.17	0.2	04/24/2023	2060435 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302488**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_San Bruno

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	32.2	mg/L	0.04	1	05/05/2023	2061065 BTRINH	
Magnesium, Mg	18.8	mg/L	0.007	0.2	05/05/2023	2061065 BTRINH	
Potassium, K	3.7	mg/L	0.04	0.2	05/05/2023	2061065 BTRINH	
Sodium, Na	47.5	mg/L	0.02	1	05/05/2023	2061065 BTRINH	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	57.3	mg/L		3	04/24/2023	2060458 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	538	µmhos/cm		1	04/24/2023	2060436 DCARDONA	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	155	mg/L	0.474	3	04/24/2023	2060466 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.49	pH			04/24/2023	2060439 DCARDONA	H1,H3
Temperature (°C)	18.2	°C			04/24/2023	2060439 DCARDONA	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	294	mg/L	13.2	20	04/28/2023	2060526 DCARDONA	

**Lab Sample#:** 2302488-02A **Sample Source:** WSB\_SB06\_SB17 **External ID:**

**Date Collected:** 04/24/2023 07:45AM **Date Received:** 04/24/2023 09:39AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	151	mg/L	0.593	3	04/24/2023	2060472 ALEE	

**Lab Sample#:** 2302488-03 **Sample Source:** WSB\_SB08\_SB20 **External ID:**

**Date Collected:** 04/24/2023 08:00AM **Date Received:** 04/24/2023 09:39AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	52.4	mg/L	0.5	2.5	04/24/2023	2060435 PWARNER	
Nitrate as N	0.336	mg/L	0.17	0.2	04/24/2023	2060435 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	40.6	mg/L	0.04	1	05/05/2023	2061065 BTRINH	
Magnesium, Mg	29.3	mg/L	0.007	0.2	05/05/2023	2061065 BTRINH	
Potassium, K	3.94	mg/L	0.04	0.2	05/05/2023	2061065 BTRINH	
Sodium, Na	67.3	mg/L	0.02	1	05/05/2023	2061065 BTRINH	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	84.2	mg/L		3	04/24/2023	2060458 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	743	µmhos/cm		1	04/24/2023	2060436 DCARDONA	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	217	mg/L	0.474	3	04/24/2023	2060466 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302488**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_San Bruno

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

<b>pH</b>	7.6	<b>pH</b>			04/24/2023	2060439	DCARDONA	H1,H3
<b>Temperature (°C)</b>	18.1	<b>°C</b>			04/24/2023	2060439	DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Total Dissolved Solids</b>	398	mg/L	13.2	20	04/28/2023	2060526	DCARDONA	

**Lab Sample#:** 2302488-03A **Sample Source:** WSB\_SB08\_SB20 **External ID:**  
**Date Collected:** 04/24/2023 08:00AM **Date Received:** 04/24/2023 09:39AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Alkalinity</b>	192	mg/L	0.593	3	04/24/2023	2060472	ALEE	

**Lab Sample#:** 2302488-04 **Sample Source:** WSB\_SB\_DUP **External ID:**  
**Date Collected:** 04/24/2023 08:10AM **Date Received:** 04/24/2023 09:39AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Sulfate</b>	52.6	mg/L	0.5	2.5	04/24/2023	2060435	PWARNER	
<b>Nitrate as N</b>	0.341	mg/L	0.17	0.2	04/24/2023	2060435	PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Calcium, Ca</b>	40.6	mg/L	0.04	1	05/05/2023	2061065	BTRINH	
<b>Magnesium, Mg</b>	28.9	mg/L	0.007	0.2	05/05/2023	2061065	BTRINH	
<b>Potassium, K</b>	3.96	mg/L	0.04	0.2	05/05/2023	2061065	BTRINH	
<b>Sodium, Na</b>	67.9	mg/L	0.02	1	05/05/2023	2061065	BTRINH	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Chloride</b>	84.4	mg/L		3	04/24/2023	2060458	ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Specific Conductance @25°C</b>	744	µmhos/cm		1	04/24/2023	2060436	DCARDONA	
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Hardness, Total, as CaCO3</b>	216	mg/L	0.474	3	04/24/2023	2060466	ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>pH</b>	7.6	pH			04/24/2023	2060439	DCARDONA	H1,H3
<b>Temperature (°C)</b>	18.1	°C			04/24/2023	2060439	DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Total Dissolved Solids</b>	379	mg/L	13.2	20	04/28/2023	2060526	DCARDONA	

**Lab Sample#:** 2302488-04A **Sample Source:** WSB\_SB\_DUP **External ID:**  
**Date Collected:** 04/24/2023 08:10AM **Date Received:** 04/24/2023 09:39AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>		<b>Flag/Comments</b>
<b>Alkalinity</b>	193	mg/L	0.593	3	04/24/2023	2060472	ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302488**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_San Bruno

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

**QC list for Run#: 2060435 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313134-01	MRL_CK	Sulfate		0.52	mg/L	104				
	MRL_CK	Nitrate as N		0.0396	mg/L	99				
QC2313134-02	CCV	Sulfate		2.42	mg/L	96				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2313134-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313134-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313134-05	LCS	Sulfate		2.42	mg/L	97				
	LCS	Nitrate as N		0.198	mg/L	99				
QC2313134-06	CCV	Sulfate		21.7	mg/L	109				
	CCV	Nitrate as N		1.68	mg/L	106				
QC2313134-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313134-08	SPK of 2302309-01	Sulfate	13.3	16.5	mg/L	127				Splt# 2302309-01 (13.3mg/L)
	SPK of 2302309-01	Nitrate as N	0.178	0.375	mg/L	98				Splt# 2302309-01 (0.178mg/L)
QC2313134-09	SPKD of 2302309-01	Sulfate	13.3	16.5	mg/L	126	0			Splt# 2302309-01 (13.3mg/L)
	SPKD of 2302309-01	Nitrate as N	0.178	0.382	mg/L	103	1			Splt# 2302309-01 (0.178mg/L)

**QC list for Run#: 2060436 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313136-02	ICV	Specific Conductance @25°C		155	µmhos/cm	106				
QC2313136-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313136-04	MRL_CK	Specific Conductance @25°C		10.1	µmhos/cm	101				
QC2313136-05	DUP of 2302279-01	Specific Conductance @25°C	149	149	µmhos/cm		0		1	Splt# 2302279-01 (149µmhos/cm)
QC2313136-06										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302488**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/24/2023

**Routine:** WSB\_San Bruno

**Sampling Team:** Field

CCV	Specific Conductance @25°C	102	µmhos/cm	102
QC2313136-07				
CCV	Specific Conductance @25°C	1420	µmhos/cm	101

**QC list for Run#: 2060439 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313140-04	ICV	pH	9		pH	99				
	ICV	Temperature (°C)	19.1		°C					
QC2313140-05	DUP of 2302279-01	pH	9.18	9.2	pH		0			Splt# 2302279-01 (9.18pH) H1,H3
	DUP of 2302279-01	Temperature (°C)	15.7	15.7	°C					Splt# 2302279-01 (15.7°C)
QC2313140-06	CCV	pH	9.01		pH	99				
	CCV	Temperature (°C)	18.6		°C					
QC2313140-07	CCV	pH	9.01		pH	99				
	CCV	Temperature (°C)	18.6		°C					

**QC list for Run#: 2060458 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313149-01	BLK	Chloride	<3		mg/L			1.16	3	
QC2313149-02	MRL_CK	Chloride	2.75		mg/L	91				
QC2313149-03	SPK of 2302694-01	Chloride	6.22	46.9	mg/L	102			3	Splt# 2302694-01 (6.22mg/L)
QC2313149-04	SPKD of 2302694-01	Chloride	6.22	47.4	mg/L	103	1		3	Splt# 2302694-01 (6.22mg/L)
QC2313149-05	DUP of 2302256-05	Chloride	44.4	41.5	mg/L		6		6	Splt# 2302256-05 (44.4mg/L)
QC2313149-06	LCS	Chloride	41		mg/L	103			3	

**QC list for Run#: 2060462 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313152-01	BLK	Alkalinity	<3		mg/L			0.593	3	
QC2313152-02	MRL_CK	Alkalinity	3.27		mg/L	109				
QC2313152-06	LCS	Alkalinity	37.5		mg/L	93			3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302488**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_San Bruno

**Scheduled Sample Date:** 04/24/2023

**Sampling Team:** Field

**QC list for Run#: 2060466 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313155-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2313155-02	MRL_CHK	Hardness, Total, as CaCO3		2.73	mg/L	91				
QC2313155-03	DUP of 2302488-04	Hardness, Total, as CaCO3	216	217	mg/L		0	0.474	3	Splt# 2302488-04 (216mg/L)
QC2313155-04	LCS	Hardness, Total, as CaCO3		38.9	mg/L	97			3	

**QC list for Run#: 2060472 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313160-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313160-02	MRL_CHK	Alkalinity		3.11	mg/L	104				
QC2313160-03	SPK of 2302488-01B	Alkalinity	382	230	mg/L	97			3	Splt# 2302488-01B (382mg/L)
QC2313160-04	SPKD of 2302488-01B	Alkalinity	382	229	mg/L	96	0		3	Splt# 2302488-01B (382mg/L)
QC2313160-06	LCS	Alkalinity		39.5	mg/L	98			3	

**QC list for Run#: 2060526 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313195-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2313195-02	DUP of 2302937-01	Total Dissolved Solids	79	78	mg/L		1	13.2	20	Splt# 2302937-01 (79mg/L)
QC2313195-03	DUP of 2302256-05	Total Dissolved Solids	265	268	mg/L		1	13.2	20	Splt# 2302256-05 (265mg/L)
QC2313195-04	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	

**QC list for Run#: 2061065 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313537-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2313537-02										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302488**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 04/24/2023

**Routine:** WSB\_San Bruno

**Sampling Team:** Field

LCS	Calcium, Ca	1.82	mg/L	91	0.04	1	
LCS	Magnesium, Mg	1.98	mg/L	98	0.007	0.2	
LCS	Potassium, K	2.07	mg/L	103	0.04	0.2	
LCS	Sodium, Na	2.09	mg/L	105	0.02	1	
QC2313537-03							
DUP of 2302250-04	Calcium, Ca	31.3	30.4	mg/L	3	0.04	1 Splt# 2302250-04 (31.3mg/L)
DUP of 2302250-04	Magnesium, Mg	47	45.1	mg/L	4	0.007	0.2 Splt# 2302250-04 (47mg/L)
DUP of 2302250-04	Potassium, K	3.16	3.06	mg/L	3	0.04	0.2 Splt# 2302250-04 (3.16mg/L)
DUP of 2302250-04	Sodium, Na	51.3	50.1	mg/L	2	0.02	1 Splt# 2302250-04 (51.3mg/L)
QC2313537-04							
SPK of 2302250-04	Calcium, Ca	31.3	32.3	mg/L	50	0.04	1 Splt# 2302250-04 (31.3mg/L)
SPK of 2302250-04	Magnesium, Mg	47	46.5	mg/L	0	0.007	0.2 Splt# 2302250-04 (47mg/L)
SPK of 2302250-04	Potassium, K	3.16	5.14	mg/L	99	0.04	0.2 Splt# 2302250-04 (3.16mg/L)
SPK of 2302250-04	Sodium, Na	51.3	52.1	mg/L	39	0.02	1 Splt# 2302250-04 (51.3mg/L)
QC2313537-05							
SPKD of 2302250-04	Calcium, Ca	31.3	32.8	mg/L	76	1	0.04 1 Splt# 2302250-04 (31.3mg/L)
SPKD of 2302250-04	Magnesium, Mg	47	47.7	mg/L	35	2	0.007 0.2 Splt# 2302250-04 (47mg/L)
SPKD of 2302250-04	Potassium, K	3.16	5.21	mg/L	102	1	0.04 0.2 Splt# 2302250-04 (3.16mg/L)
SPKD of 2302250-04	Sodium, Na	51.3	53	mg/L	85	1	0.02 1 Splt# 2302250-04 (51.3mg/L)
QC2313537-06							
MRL_CK	Calcium, Ca	<1	mg/L	N/A	0.04	1	
MRL_CK	Magnesium, Mg	<0.2	mg/L	N/A	0.007	0.2	
MRL_CK	Potassium, K	0.258	mg/L	103	0.04	0.2	
MRL_CK	Sodium, Na	<1	mg/L	N/A	0.02	1	
QC2313588-01							
ICV	Potassium, K	2.04	mg/L	102	0.03	0.2	
QC2313588-02							
ICV	Calcium, Ca	9.6	mg/L	96	0.05	1	
ICV	Magnesium, Mg	9.91	mg/L	99	0.01	0.2	
ICV	Sodium, Na	10.1	mg/L	103	0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/02/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302901-01	<b>Sample Source:</b> WSB_CM-23-230	<b>External ID:</b>
<b>Date Collected:</b> 05/01/2023 12:20PM	<b>Date Received:</b> 05/01/2023 03:13PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CM_CUP-23-230, TREASURE ISLAND TRAIL

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	64.1	mg/L	0.04	1	05/11/2023	2061391 BTRINH	
Magnesium, Mg	59.7	mg/L	0.007	0.2	05/11/2023	2061391 BTRINH	
Potassium, K	2.05	mg/L	0.04	0.2	05/11/2023	2061391 BTRINH	
Sodium, Na	62.5	mg/L	0.02	1	05/11/2023	2061391 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	323	mg/L	1.19	6	05/01/2023	2060824 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	90.4	mg/L		6	05/01/2023	2060830 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1020	µmhos/cm		1	05/01/2023	2060825 DCARDONA	>MCL

MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.06	pH			05/01/2023	2060826 DCARDONA	H1,H3
Temperature (°C)	15.1	°C			05/01/2023	2060826 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	566	mg/L	13.2	20	05/08/2023	2061025 ABALALIO	>MCL

<b>Lab Sample#:</b> 2302901-01A	<b>Sample Source:</b> WSB_CM-23-230	<b>External ID:</b>
<b>Date Collected:</b> 05/01/2023 12:20PM	<b>Date Received:</b> 05/01/2023 03:13PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CM_CUP-23-230, TREASURE ISLAND TRAIL

**Test/Analyte**

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	380	mg/L	0.948	6	05/01/2023	2060823 ALEE	

<b>Lab Sample#:</b> 2302901-01B	<b>Sample Source:</b> WSB_CM-23-230	<b>External ID:</b>
<b>Date Collected:</b> 05/01/2023 12:20PM	<b>Date Received:</b> 05/01/2023 03:13PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CM_CUP-23-230, TREASURE ISLAND TRAIL

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	39.3	mg/L	1	5	05/02/2023	2060862 DCARDONA	
Nitrate as N	8.82	mg/L	0.34	0.4	05/02/2023	2060862 DCARDONA	

<b>Lab Sample#:</b> 2302901-02	<b>Sample Source:</b> WSB_CM-23-440	<b>External ID:</b>
<b>Date Collected:</b> 05/01/2023 11:25AM	<b>Date Received:</b> 05/01/2023 03:13PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CM_CUP-23-440, TREASURE ISLAND TRAIL

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	20.1	mg/L	0.04	1	05/11/2023	2061391 BTRINH	
Magnesium, Mg	21	mg/L	0.007	0.2	05/11/2023	2061391 BTRINH	
Potassium, K	1.61	mg/L	0.04	0.2	05/11/2023	2061391 BTRINH	
Sodium, Na	34.2	mg/L	0.02	1	05/11/2023	2061391 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/02/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	122	mg/L	0.593	3	05/01/2023	2060824 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	59.1	mg/L		3	05/01/2023	2060830 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	451	µmhos/cm		1	05/01/2023	2060825 DCARDONA	
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	132	mg/L	0.474	3	05/01/2023	2060823 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.71	pH			05/01/2023	2060826 DCARDONA	H1,H3
Temperature (°C)	17.5	°C			05/01/2023	2060826 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	230	mg/L	13.2	20	05/08/2023	2061025 ABALALIO	

**Lab Sample#:** 2302901-02A **Sample Source:** WSB\_CM-23-440 **External ID:**

**Date Collected:** 05/01/2023 11:25AM **Date Received:** 05/01/2023 03:13PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-440, TREASURE ISLAND TRAIL

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	7.11	mg/L	0.1	0.5	05/02/2023	2060862 DCARDONA	
Nitrate as N	0.156	mg/L	0.034	0.04	05/02/2023	2060862 DCARDONA	

**Lab Sample#:** 2302901-03 **Sample Source:** WSB\_CM-23-515 **External ID:**

**Date Collected:** 05/01/2023 10:23AM **Date Received:** 05/01/2023 03:13PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-515, TREASURE ISLAND TRAIL

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	46.5	mg/L	0.04	1	05/11/2023	2061391 BTRINH	
Magnesium, Mg	33.9	mg/L	0.007	0.2	05/11/2023	2061391 BTRINH	
Potassium, K	3.37	mg/L	0.04	0.2	05/11/2023	2061391 BTRINH	
Sodium, Na	55.1	mg/L	0.02	1	05/11/2023	2061391 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	281	mg/L	1.19	6	05/01/2023	2060824 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	63	mg/L		6	05/01/2023	2060830 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	736	µmhos/cm		1	05/01/2023	2060825 DCARDONA	
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	241	mg/L	0.948	6	05/01/2023	2060823 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.21	pH			05/01/2023	2060826 DCARDONA	H1,H3
Temperature (°C)	15.4	°C			05/01/2023	2060826 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids							

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/02/2023

**Sampling Team:** Field

<b>Total Dissolved Solids</b>	<b>381</b>	<b>mg/L</b>	<b>13.2</b>	<b>20</b>	<b>05/08/2023</b>	<b>2061025</b>	<b>ABALALIO</b>
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**Lab Sample#:** 2302901-03B **Sample Source:** WSB\_CM-23-515 **External ID:**

**Date Collected:** 05/01/2023 10:23AM **Date Received:** 05/01/2023 03:13PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-515, TREASURE ISLAND TRAIL

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	5.57	mg/L	0.1	0.5	05/02/2023	2060862 DCARDONA	
Nitrate as N	<0.04	mg/L	0.034	0.04	05/02/2023	2060862 DCARDONA	

**Lab Sample#:** 2302901-04 **Sample Source:** WSB\_CM-23-600 **External ID:**

**Date Collected:** 05/01/2023 01:12PM **Date Received:** 05/01/2023 03:13PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-600, TREASURE ISLAND TRAIL

Test/Analyte

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	44.1	mg/L	0.04	1	05/11/2023	2061391 BTRINH	
Magnesium, Mg	47.1	mg/L	0.007	0.2	05/11/2023	2061391 BTRINH	
Potassium, K	2.21	mg/L	0.04	0.2	05/11/2023	2061391 BTRINH	
Sodium, Na	48.6	mg/L	0.02	1	05/11/2023	2061391 BTRINH	
<u>MBP_ALK(SM 2320 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	190	mg/L	1.19	6	05/01/2023	2060824 ALEE	
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	75.6	mg/L		6	05/01/2023	2060830 ALEE	
<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	836	µmhos/cm		1	05/01/2023	2060825 DCARDONA	
<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	288	mg/L	0.948	6	05/01/2023	2060823 ALEE	
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	6.84	pH			05/01/2023	2060826 DCARDONA	H1,H3
Temperature (°C)	15.6	°C			05/01/2023	2060826 DCARDONA	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	446	mg/L	13.2	20	05/08/2023	2061025 ABALALIO	

**Lab Sample#:** 2302901-04A **Sample Source:** WSB\_CM-23-600 **External ID:**

**Date Collected:** 05/01/2023 01:12PM **Date Received:** 05/01/2023 03:13PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-600, TREASURE ISLAND TRAIL

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	39.7	mg/L	2	10	05/02/2023	2060862 DCARDONA	
Nitrate as N	18.8	mg/L	0.68	0.8	05/02/2023	2060862 DCARDONA	>MCL

**Lab Sample#:** 2302901-05 **Sample Source:** WSB\_CM\_DUP **External ID:**

**Date Collected:** 05/01/2023 11:43AM **Date Received:** 05/01/2023 03:13PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-440, TREASURE ISLAND TRAIL

Test/Analyte

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/02/2023

**Sampling Team:** Field

<i>Calcium, Ca</i>	20	mg/L	0.04	1	05/11/2023	2061391	BTRINH	
<i>Magnesium, Mg</i>	21.3	mg/L	0.007	0.2	05/11/2023	2061391	BTRINH	
<i>Potassium, K</i>	1.7	mg/L	0.04	0.2	05/11/2023	2061391	BTRINH	
<i>Sodium, Na</i>	34.7	mg/L	0.02	1	05/11/2023	2061391	BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Alkalinity</i>	121	mg/L	0.593	3	05/01/2023	2060824	ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Chloride</i>	58.9	mg/L		3	05/01/2023	2060830	ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Specific Conductance @25°C</i>	448	µmhos/cm		1	05/01/2023	2060825	DCARDONA	
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Hardness, Total, as CaCO3</i>	131	mg/L	0.474	3	05/01/2023	2060823	ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>pH</i>	7.76	pH			05/01/2023	2060826	DCARDONA	H1,H3
<i>Temperature (°C)</i>	17.7	°C			05/01/2023	2060826	DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
<i>Total Dissolved Solids</i>	221	mg/L	13.2	20	05/08/2023	2061025	ABALALIO	

**Lab Sample#:** 2302901-05A **Sample Source:** WSB\_CM\_DUP **External ID:**

**Date Collected:** 05/01/2023 11:43AM **Date Received:** 05/01/2023 03:13PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-440, TREASURE ISLAND TRAIL

Test/Analyte

<u>Test/Analyte</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
<i>Sulfate</i>	7.5	mg/L	0.1	0.5	05/02/2023	2060862	DCARDONA
<i>Nitrate as N</i>	0.234	mg/L	0.034	0.04	05/02/2023	2060862	DCARDONA

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/02/2023

**Sampling Team:** Field

**QC list for Run#: 2060793 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313396-01	MRL_CK	Sulfate		0.526	mg/L	105				
	MRL_CK	Nitrate as N		0.0414	mg/L	104				
QC2313396-02	CCV	Sulfate		2.4	mg/L	95				
	CCV	Nitrate as N		0.197	mg/L	98				
QC2313396-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313396-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313396-05	LCS	Sulfate		2.35	mg/L	93				
	LCS	Nitrate as N		0.194	mg/L	96				
QC2313396-06	CCV	Sulfate		21.8	mg/L	109				
	CCV	Nitrate as N		1.69	mg/L	106				
QC2313396-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313396-08	SPK of 2302421-01	Sulfate	14.4	17.1	mg/L	107				Splt# 2302421-01 (14.4mg/L)
	SPK of 2302421-01	Nitrate as N	0.193	0.388	mg/L	98				Splt# 2302421-01 (0.193mg/L)
QC2313396-09	SPKD of 2302421-01	Sulfate	14.4	17.1	mg/L	109	0			Splt# 2302421-01 (14.4mg/L)
	SPKD of 2302421-01	Nitrate as N	0.193	0.39	mg/L	99	0			Splt# 2302421-01 (0.193mg/L)
QC2313396-10	CCV	Sulfate		2.41	mg/L	96				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2313396-11	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2060823 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313422-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2313422-02	MRL_CK	Hardness, Total, as CaCO3		2.7	mg/L	90				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/02/2023

**Sampling Team:** Field

QC2313422-03	DUP of 2302901-05	Hardness, Total, as CaCO3	131	132	mg/L	0	0.474	3	Splt# 2302901-05 (131mg/L)
QC2313422-04	LCS	Hardness, Total, as CaCO3		39.3	mg/L	98		3	

**QC list for Run#: 2060824 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313417-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313417-02	MRL_CHK	Alkalinity		3.16	mg/L	105				
QC2313417-03	SPK of 2302901-05	Alkalinity	121	159	mg/L	94			3	Splt# 2302901-05 (121mg/L)
QC2313417-04	SPKD of 2302901-05	Alkalinity	121	158	mg/L	91	0		3	Splt# 2302901-05 (121mg/L)
QC2313417-06	LCS	Alkalinity		36.2	mg/L	90			3	
QC2313417-07	DUP of 2302421-05	Alkalinity	39	38.9	mg/L		0	0.593	3	Splt# 2302421-05 (39mg/L)

**QC list for Run#: 2060825 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313418-02	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2313418-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313418-04	MRL_CHK	Specific Conductance @25°C		9.93	µmhos/cm	99				
QC2313418-05	DUP of 2302421-05	Specific Conductance @25°C	156	156	µmhos/cm		0		1	Splt# 2302421-05 (156µmhos/cm)
QC2313418-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2060826 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313420-04	ICV	pH		9	pH	99				
	ICV	Temperature (°C)		18.2	°C					
QC2313420-05	DUP of 2302421-05	pH	7.56	7.57	pH		0			Splt# 2302421-05 (7.56pH) H1,H3
	DUP of 2302421-05	Temperature (°C)	15.6	15.7	°C					Splt# 2302421-05 (15.6°C)
QC2313420-06	CCV	pH		9	pH	99				
	CCV	Temperature (°C)		18.1	°C					

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/02/2023

**Sampling Team:** Field

**QC list for Run#: 2060830 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313419-01	BLK	Chloride	<3		mg/L			1.16	3	
QC2313419-02	MRL_CK	Chloride	2.77		mg/L	92				
QC2313419-03	SPK of 2302901-05	Chloride	58.9	100	mg/L	104			3	Splt# 2302901-05 (58.9mg/L)
QC2313419-04	SPKD of 2302901-05	Chloride	58.9	101	mg/L	104	0		3	Splt# 2302901-05 (58.9mg/L)
QC2313419-05	DUP of 2302421-05	Chloride	12.6	12.7	mg/L		0		3	Splt# 2302421-05 (12.6mg/L)
QC2313419-06	LCS	Chloride	41.1		mg/L	103			3	

**QC list for Run#: 2060862 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313448-01	MRL_CK	Sulfate	<0		mg/L					
	MRL_CK	Nitrate as N	<0		mg/L					
QC2313448-02	CCV	Sulfate	2.4		mg/L	96				
	CCV	Nitrate as N	0.197		mg/L	98				
QC2313448-03	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2313448-04	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2313448-05	LCS	Sulfate	5.8		mg/L	96				
	LCS	Nitrate as N	0.976		mg/L	97				
QC2313448-06	CCV	Sulfate	21.5		mg/L	108				
	CCV	Nitrate as N	1.68		mg/L	105				
QC2313448-07	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2313448-08	SPK of 2303184-01	Sulfate	15.5	18.5	mg/L	120				Splt# 2303184-01 (15.5mg/L)
	SPK of 2303184-01	Nitrate as N	0.205	0.408	mg/L	102				Splt# 2303184-01 (0.205mg/L)
QC2313448-09										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/02/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Sample ID	Parameter	Unit	Value 1	Value 2	Unit	Flow (L)	Flow (L)	Notes
SPKD of 2303184-01	Sulfate	mg/L	15.5	18.2	mg/L	109	1	Splt# 2303184-01 (15.5mg/L)
SPKD of 2303184-01	Nitrate as N	mg/L	0.205	0.403	mg/L	99	1	Splt# 2303184-01 (0.205mg/L)
QC2313448-10								
MRL_CK	Sulfate	mg/L		0.525	mg/L	105		
MRL_CK	Nitrate as N	mg/L		0.0418	mg/L	105		
QC2313448-11								
SPK of 2302421-01A	Sulfate	mg/L	14.1	16.9	mg/L	113		Splt# 2302421-01A (14.1mg/L)
SPK of 2302421-01A	Nitrate as N	mg/L	0.188	0.384	mg/L	98		Splt# 2302421-01A (0.188mg/L)
QC2313448-12								
SPKD of 2302421-01A	Sulfate	mg/L	14.1	17.2	mg/L	125	1	Splt# 2302421-01A (14.1mg/L)
SPKD of 2302421-01A	Nitrate as N	mg/L	0.188	0.391	mg/L	102	1	Splt# 2302421-01A (0.188mg/L)
QC2313448-13								
CCV	Sulfate	mg/L		2.37	mg/L	94		
CCV	Nitrate as N	mg/L		0.194	mg/L	97		
QC2313448-14								
BLK	Sulfate	mg/L	<0.5		mg/L		0.1	0.5
BLK	Nitrate as N	mg/L	<0.04		mg/L		0.034	0.04
QC2313448-15								
CCV	Sulfate	mg/L		21.7	mg/L	108		
CCV	Nitrate as N	mg/L		1.69	mg/L	106		
QC2313448-16								
BLK	Sulfate	mg/L	<0.5		mg/L		0.1	0.5
BLK	Nitrate as N	mg/L	<0.04		mg/L		0.034	0.04
QC2313448-17								
SPK of 2302421-01A	Sulfate	mg/L	14.1	16.7	mg/L	107		Splt# 2302421-01A (14.1mg/L)
SPK of 2302421-01A	Nitrate as N	mg/L	0.188	0.38	mg/L	96		Splt# 2302421-01A (0.188mg/L)
QC2313448-18								
SPKD of 2302421-01A	Sulfate	mg/L	14.1	17.1	mg/L	120	1	Splt# 2302421-01A (14.1mg/L)
SPKD of 2302421-01A	Nitrate as N	mg/L	0.188	0.389	mg/L	101	2	Splt# 2302421-01A (0.188mg/L)
QC2313448-19								
CCV	Chloride	mg/L		2.46	mg/L	98		
CCV	Sulfate	mg/L		2.37	mg/L	94		
CCV	Nitrate as N	mg/L		0.195	mg/L	97		
QC2313448-20								
BLK	Chloride	mg/L	<1		mg/L		0.2	1
BLK	Sulfate	mg/L	<0.5		mg/L		0.1	0.5
BLK	Nitrate as N	mg/L	<0.04		mg/L		0.034	0.04

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/02/2023

**Sampling Team:** Field

**QC list for Run#: 2061025 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313556-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2313556-02	DUP of 2303184-01	Total Dissolved Solids	80	79	mg/L		1	13.2	20	Splt# 2303184-01 (80mg/L)
QC2313556-03	DUP of 2302914-01	Total Dissolved Solids	519	516	mg/L		0	13.2	20	Splt# 2302914-01 (519mg/L)
QC2313556-04	LCS	Total Dissolved Solids		84	mg/L	88		13.2	20	

**QC list for Run#: 2061391 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313772-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2313772-02	LCS	Calcium, Ca		1.78	mg/L	89		0.04	1	
	LCS	Magnesium, Mg		2.06	mg/L	103		0.007	0.2	
	LCS	Potassium, K		2.04	mg/L	102		0.04	0.2	
	LCS	Sodium, Na		2.07	mg/L	103		0.02	1	
QC2313772-03	DUP of 2302901-01	Calcium, Ca	64.1	65.1	mg/L		1	0.04	1	Splt# 2302901-01 (64.1mg/L)
	DUP of 2302901-01	Magnesium, Mg	59.7	59.1	mg/L		0	0.007	0.2	Splt# 2302901-01 (59.7mg/L)
	DUP of 2302901-01	Potassium, K	2.05	2.09	mg/L		1	0.04	0.2	Splt# 2302901-01 (2.05mg/L)
	DUP of 2302901-01	Sodium, Na	62.5	62.4	mg/L		0	0.02	1	Splt# 2302901-01 (62.5mg/L)
QC2313772-04	SPK of 2302901-01	Calcium, Ca	64.1	66.2	mg/L	103		0.04	1	Splt# 2302901-01 (64.1mg/L)
	SPK of 2302901-01	Magnesium, Mg	59.7	60.2	mg/L	21		0.007	0.2	Splt# 2302901-01 (59.7mg/L)
	SPK of 2302901-01	Potassium, K	2.05	4.07	mg/L	101		0.04	0.2	Splt# 2302901-01 (2.05mg/L)
	SPK of 2302901-01	Sodium, Na	62.5	63.7	mg/L	59		0.02	1	Splt# 2302901-01 (62.5mg/L)
QC2313772-05	SPKD of 2302901-01	Calcium, Ca	64.1	66.6	mg/L	122	0	0.04	1	Splt# 2302901-01 (64.1mg/L)
	SPKD of 2302901-01	Magnesium, Mg	59.7	60.6	mg/L	42	0	0.007	0.2	Splt# 2302901-01 (59.7mg/L)
	SPKD of 2302901-01	Potassium, K	2.05	4.24	mg/L	109	4	0.04	0.2	Splt# 2302901-01 (2.05mg/L)
	SPKD of 2302901-01	Sodium, Na	62.5	64.7	mg/L	109	1	0.02	1	Splt# 2302901-01 (62.5mg/L)
QC2313772-06	MRL_CK	Calcium, Ca		<1	mg/L	N/A		0.04	1	
	MRL_CK	Magnesium, Mg		<0.2	mg/L	N/A		0.007	0.2	
	MRL_CK	Potassium, K		0.229	mg/L	91		0.04	0.2	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302901**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/02/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

MRL_CHK	Parameter	Result	Unit	Method	Accuracy	Frequency
QC2313825-01	Sodium, Na	<1	mg/L	N/A	0.02	1
ICV	Potassium, K	1.95	mg/L	97	0.03	0.2
QC2313825-02	Calcium, Ca	9.82	mg/L	98	0.05	1
ICV	Magnesium, Mg	10.1	mg/L	101	0.01	0.2
ICV	Sodium, Na	10.1	mg/L	103	0.002	1

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302904**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/17/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302904-01	<b>Sample Source:</b> WSB_CAL-19-475	<b>External ID:</b>
<b>Date Collected:</b> 05/17/2023 09:30AM	<b>Date Received:</b> 05/17/2023 12:16PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CAL_CUP-19-475, ROW AT SERRAMONTE

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	49.8	mg/L	0.5	2.5	05/17/2023	2061682 PWARNER	
Nitrate as N	1.18	mg/L	0.17	0.2	05/17/2023	2061682 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	40.2	mg/L	0.04	1	05/31/2023	2062343 BTRINH	
Magnesium, Mg	37.4	mg/L	0.007	0.2	05/31/2023	2062343 BTRINH	
Potassium, K	2.51	mg/L	0.04	0.2	05/31/2023	2062343 BTRINH	
Sodium, Na	53.3	mg/L	0.02	1	05/31/2023	2062343 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	154	mg/L	1.19	6	05/17/2023	2061698 DCARDONA	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	109	mg/L		6	05/17/2023	2061699 DCARDONA	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	768	µmhos/cm		1	05/17/2023	2061693 ABALALIO	

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	247	mg/L	0.948	6	05/17/2023	2061694 DCARDONA	

MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.16	pH			05/17/2023	2061696 ABALALIO	H1,H3
Temperature (°C)	17.3	°C			05/17/2023	2061696 ABALALIO	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	403	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	

<b>Lab Sample#:</b> 2302904-02	<b>Sample Source:</b> WSB_CAL-19-600	<b>External ID:</b>
<b>Date Collected:</b> 05/17/2023 10:21AM	<b>Date Received:</b> 05/17/2023 12:16PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CAL_CUP-19-600, ROW AT SERRAMONTE

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	14	mg/L	0.1	0.5	05/17/2023	2061682 PWARNER	
Nitrate as N	<0.04	mg/L	0.034	0.04	05/17/2023	2061682 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	49.9	mg/L	0.04	1	05/31/2023	2062343 BTRINH	
Magnesium, Mg	41	mg/L	0.007	0.2	05/31/2023	2062343 BTRINH	
Potassium, K	2.53	mg/L	0.04	0.2	05/31/2023	2062343 BTRINH	
Sodium, Na	58.3	mg/L	0.02	1	05/31/2023	2062343 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	266	mg/L	1.19	6	05/17/2023	2061698 DCARDONA	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	96.1	mg/L		6	05/17/2023	2061699 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302904**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/17/2023

**Sampling Team:** Field

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	836	µmhos/cm		1	05/17/2023	2061693 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	289	mg/L	0.948	6	05/17/2023	2061694 DCARDONA	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.37	pH			05/17/2023	2061696 ABALALIO	H1,H3
Temperature (°C)	17	°C			05/17/2023	2061696 ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	441	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	

**Lab Sample#:** 2302904-03      **Sample Source:** WSB\_CAL-19-690      **External ID:**

**Date Collected:** 05/17/2023 09:24AM      **Date Received:** 05/17/2023 12:16PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-19-690, ROW AT SERRAMONTE

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	59.1	mg/L	0.5	2.5	05/17/2023	2061682 PWARNER	
Nitrate as N	6.5	mg/L	0.17	0.2	05/17/2023	2061682 PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	46.4	mg/L	0.04	1	05/31/2023	2062343 BTRINH	
Magnesium, Mg	38.1	mg/L	0.007	0.2	05/31/2023	2062343 BTRINH	
Potassium, K	2.39	mg/L	0.04	0.2	05/31/2023	2062343 BTRINH	
Sodium, Na	51.4	mg/L	0.02	1	05/31/2023	2062343 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	149	mg/L	1.19	6	05/17/2023	2061698 DCARDONA	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	97.4	mg/L		6	05/17/2023	2061699 DCARDONA	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	783	µmhos/cm		1	05/17/2023	2061693 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	259	mg/L	0.948	6	05/17/2023	2061694 DCARDONA	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.09	pH			05/17/2023	2061696 ABALALIO	H1,H3
Temperature (°C)	16.4	°C			05/17/2023	2061696 ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	418	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	

**Lab Sample#:** 2302904-04      **Sample Source:** WSB\_CAL\_DUP      **External ID:**

**Date Collected:** 05/17/2023 09:47AM      **Date Received:** 05/17/2023 12:16PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-19-475, ROW AT SERRAMONTE

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	49.3	mg/L	0.5	2.5	05/17/2023	2061682 PWARNER	
Nitrate as N	1.17	mg/L	0.17	0.2	05/17/2023	2061682 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302904**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/17/2023

**Sampling Team:** Field

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	40.3	mg/L	0.04	1	05/31/2023	2062343 BTRINH	
Magnesium, Mg	37.3	mg/L	0.007	0.2	05/31/2023	2062343 BTRINH	
Potassium, K	2.5	mg/L	0.04	0.2	05/31/2023	2062343 BTRINH	
Sodium, Na	53.1	mg/L	0.02	1	05/31/2023	2062343 BTRINH	
<u>MBP_ALK(SM 2320 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	153	mg/L	1.19	6	05/17/2023	2061698 DCARDONA	
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	109	mg/L		6	05/17/2023	2061699 DCARDONA	
<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	770	µmhos/cm		1	05/17/2023	2061693 ABALALIO	
<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	246	mg/L	0.948	6	05/17/2023	2061694 DCARDONA	
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.14	pH			05/17/2023	2061696 ABALALIO	H1,H3
Temperature (°C)	16.7	°C			05/17/2023	2061696 ABALALIO	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	429	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302904**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/17/2023

**Sampling Team:** Field

**QC list for Run#: 2061682 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314046-01	MRL_CK	Sulfate		0.516	mg/L	103				
	MRL_CK	Nitrate as N		0.0411	mg/L	103				
QC2314046-02	CCV	Sulfate		2.34	mg/L	93				
	CCV	Nitrate as N		0.192	mg/L	96				
QC2314046-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2314046-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2314046-05	LCS	Sulfate		1.43	mg/L	95				
	LCS	Nitrate as N		0.233	mg/L	93				
QC2314046-06	CCV	Sulfate		21	mg/L	105				
	CCV	Nitrate as N		1.63	mg/L	103				
QC2314046-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2314046-08	SPK of 2302775-05	Sulfate	9.38	12	mg/L	105				Splt# 2302775-05 (9.38mg/L)
	SPK of 2302775-05	Nitrate as N	0.0516	0.241	mg/L	95				Splt# 2302775-05 (0.0516mg/L)
QC2314046-09	SPKD of 2302775-05	Sulfate	9.38	11.2	mg/L	72	6			Splt# 2302775-05 (9.38mg/L)
	SPKD of 2302775-05	Nitrate as N	0.0516	0.174	mg/L	61	32			Splt# 2302775-05 (0.0516mg/L)
QC2314046-10	SPKD of 2302775-05	Sulfate	9.38	12.2	mg/L	115	2			Splt# 2302775-05 (9.38mg/L)
	SPKD of 2302775-05	Nitrate as N	0.0516	0.247	mg/L	98	2			Splt# 2302775-05 (0.0516mg/L)

**QC list for Run#: 2061693 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314050-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2314050-02	ICV	Specific Conductance @25°C		156	µmhos/cm	106				
QC2314050-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302904**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/17/2023

**Sampling Team:** Field

QC2314050-04	MRL_CK	Specific Conductance @25°C	10	µmhos/cm	100				
QC2314050-05	DUP of 2302775-01	Specific Conductance @25°C	189	190	µmhos/cm	0	1	Splt# 2302775-01 (189µmhos/cm)	
QC2314050-06	CCV	Specific Conductance @25°C	102	µmhos/cm	102				
QC2314050-07	CCV	Specific Conductance @25°C	1430	µmhos/cm	101				

**QC list for Run#: 2061694 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314051-01	BLK	Hardness, Total, as CaCO3	<3		mg/L			0.474	3	
QC2314051-02	MRL_CK	Hardness, Total, as CaCO3	2.63		mg/L	87				
QC2314051-03	DUP of 2302904-04	Hardness, Total, as CaCO3	246	250	mg/L		1	0.948	6	Splt# 2302904-04 (246mg/L)
QC2314051-04	LCS	Hardness, Total, as CaCO3	39.9		mg/L	99			3	

**QC list for Run#: 2061696 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314053-04	ICV	pH	9.02		pH	99				
	ICV	Temperature (°C)	18.8		°C					
QC2314053-05	DUP of 2302775-01	pH	8.94	8.95	pH		0			Splt# 2302775-01 (8.94pH) H1,H3
	DUP of 2302775-01	Temperature (°C)	16.3	16.2	°C					Splt# 2302775-01 (16.3°C)
QC2314053-06	CCV	pH	9.04		pH	99				
	CCV	Temperature (°C)	18.8		°C					
QC2314053-07	CCV	pH	9.03		pH	99				
	CCV	Temperature (°C)	18.7		°C					

**QC list for Run#: 2061698 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314055-01	BLK	Alkalinity	<3		mg/L			0.593	3	
QC2314055-02	MRL_CK	Alkalinity	3.13		mg/L	104				
QC2314055-03	SPK of 2302904-01	Alkalinity	154	231	mg/L	96			6	Splt# 2302904-01 (154mg/L)
QC2314055-04										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302904**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/17/2023

**Sampling Team:** Field

SPKD of 2302904-01	Alkalinity	154	232	mg/L	97	0	6	Splt# 2302904-01 (154mg/L)
QC2314055-06	LCS		39.1	mg/L	97		3	

**QC list for Run#: 2061699 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314056-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2314056-02	MRL_CK	Chloride		2.63	mg/L	87				
QC2314056-03	SPK of 2302904-01	Chloride	109	191	mg/L	102			6	Splt# 2302904-01 (109mg/L)
QC2314056-04	SPKD of 2302904-01	Chloride	109	191	mg/L	102	0		6	Splt# 2302904-01 (109mg/L)
QC2314056-06	LCS	Chloride		40.5	mg/L	101			3	

**QC list for Run#: 2061770 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314099-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2314099-02	LCS	Total Dissolved Solids		83	mg/L	87		13.2	20	
QC2314099-03	DUP of 2303599-01	Total Dissolved Solids	50	48	mg/L		4	13.2	20	Splt# 2303599-01 (50mg/L)
QC2314099-04	DUP of 2302904-03	Total Dissolved Solids	418	427	mg/L		2	13.2	20	Splt# 2302904-03 (418mg/L)

**QC list for Run#: 2062343 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314383-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2314383-02	LCS	Calcium, Ca		1.84	mg/L	91		0.04	1	
	LCS	Magnesium, Mg		1.99	mg/L	99		0.007	0.2	
	LCS	Potassium, K		2.03	mg/L	101		0.04	0.2	
	LCS	Sodium, Na		2.04	mg/L	102		0.02	1	
QC2314383-03	DUP of 2302904-01	Calcium, Ca	40.2	40.6	mg/L		1	0.04	1	Splt# 2302904-01 (40.2mg/L)
	DUP of 2302904-01	Magnesium, Mg	37.4	37.1	mg/L		0	0.007	0.2	Splt# 2302904-01 (37.4mg/L)
	DUP of 2302904-01	Potassium, K	2.51	2.5	mg/L		0	0.04	0.2	Splt# 2302904-01 (2.51mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302904**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/17/2023

**Sampling Team:** Field

DUP of 2302904-01	Sodium, Na	53.3	53.4	mg/L	0	0.02	1	Splt# 2302904-01 (53.3mg/L)
QC2314383-04								
SPK of 2302904-01	Calcium, Ca	40.2	41.4	mg/L	59	0.04	1	Splt# 2302904-01 (40.2mg/L)
SPK of 2302904-01	Magnesium, Mg	37.4	38.8	mg/L	71	0.007	0.2	Splt# 2302904-01 (37.4mg/L)
SPK of 2302904-01	Potassium, K	2.51	4.57	mg/L	103	0.04	0.2	Splt# 2302904-01 (2.51mg/L)
SPK of 2302904-01	Sodium, Na	53.3	53.9	mg/L	30	0.02	1	Splt# 2302904-01 (53.3mg/L)
QC2314383-05								
SPKD of 2302904-01	Calcium, Ca	40.2	42.4	mg/L	112	2	0.04	1 Splt# 2302904-01 (40.2mg/L)
SPKD of 2302904-01	Magnesium, Mg	37.4	39.4	mg/L	98	1	0.007	0.2 Splt# 2302904-01 (37.4mg/L)
SPKD of 2302904-01	Potassium, K	2.51	4.68	mg/L	109	2	0.04	0.2 Splt# 2302904-01 (2.51mg/L)
SPKD of 2302904-01	Sodium, Na	53.3	55.5	mg/L	107	2	0.02	1 Splt# 2302904-01 (53.3mg/L)
QC2314383-06								
MRL_CK	Calcium, Ca		<1	mg/L	N/A	0.04	1	
MRL_CK	Magnesium, Mg		<0.2	mg/L	N/A	0.007	0.2	
MRL_CK	Potassium, K		0.232	mg/L	92	0.04	0.2	
MRL_CK	Sodium, Na		<1	mg/L	N/A	0.02	1	
QC2314517-01								
ICV	Potassium, K		2.03	mg/L	101	0.03	0.2	
QC2314517-02								
ICV	Calcium, Ca		9.63	mg/L	96	0.05	1	
ICV	Magnesium, Mg		9.89	mg/L	98	0.01	0.2	
ICV	Sodium, Na		10.1	mg/L	103	0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302914**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/04/2023

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

Lab Sample#:	2302914-01	Sample Source:	WSB_CAL-22A-290	External ID:	
Date Collected:	05/04/2023 10:25AM	Date Received:	05/04/2023 11:48AM	Sample Matrix:	Aqueous
				Location Desc:	GSR_CAL_CUP-22A-290, ROW AT HICKEY BLVD

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	52.3	mg/L	1	5	05/04/2023	2061003 PWARNER	
Nitrate as N	8.15	mg/L	0.34	0.4	05/04/2023	2061003 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	58.3	mg/L	0.04	1	05/11/2023	2061391 BTRINH	
Magnesium, Mg	46.4	mg/L	0.007	0.2	05/11/2023	2061391 BTRINH	
Potassium, K	2.6	mg/L	0.04	0.2	05/11/2023	2061391 BTRINH	
Sodium, Na	62.1	mg/L	0.02	1	05/11/2023	2061391 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	312	mg/L	1.19	6	05/04/2023	2061030 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	104	mg/L		6	05/04/2023	2061035 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	934	µmhos/cm		1	05/04/2023	2061031 DCARDONA	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	329	mg/L	0.948	6	05/04/2023	2061039 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.18	pH			05/04/2023	2061033 DCARDONA	H1,H3
Temperature (°C)	17.1	°C			05/04/2023	2061033 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	519	mg/L	13.2	20	05/08/2023	2061025 ABALALIO	>MCL

Lab Sample#:	2302914-02	Sample Source:	WSB_CAL-22A-440	External ID:	
Date Collected:	05/04/2023 09:42AM	Date Received:	05/04/2023 11:48AM	Sample Matrix:	Aqueous
				Location Desc:	GSR_CAL_CUP-22A-440, ROW AT HICKEY BLVD

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	52.7	mg/L	1	5	05/04/2023	2061003 PWARNER	
Nitrate as N	7.01	mg/L	0.34	0.4	05/04/2023	2061003 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	56.8	mg/L	0.04	1	05/11/2023	2061391 BTRINH	
Magnesium, Mg	46	mg/L	0.007	0.2	05/11/2023	2061391 BTRINH	
Potassium, K	2.66	mg/L	0.04	0.2	05/11/2023	2061391 BTRINH	
Sodium, Na	63	mg/L	0.02	1	05/11/2023	2061391 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	244	mg/L	1.19	6	05/04/2023	2061030 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	97.9	mg/L		6	05/04/2023	2061035 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302914**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/04/2023

**Sampling Team:** Field

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	913	µmhos/cm		1	05/04/2023	2061031 DCARDONA	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	315	mg/L	0.948	6	05/04/2023	2061039 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.27	pH			05/04/2023	2061033 DCARDONA	H1,H3
Temperature (°C)	16.9	°C			05/04/2023	2061033 DCARDONA	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	508	mg/L	13.2	20	05/08/2023	2061025 ABALALIO	>MCL

**Lab Sample#:** 2302914-03 **Sample Source:** WSB\_CAL-22A-545 **External ID:**

**Date Collected:** 05/04/2023 09:31AM **Date Received:** 05/04/2023 11:48AM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-22A-545, ROW AT HICHEY BLVD

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	83.3	mg/L	1	5	05/04/2023	2061003 PWARNER	
Nitrate as N	5.51	mg/L	0.34	0.4	05/04/2023	2061003 PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	68	mg/L	0.04	1	05/11/2023	2061391 BTRINH	
Magnesium, Mg	52.5	mg/L	0.007	0.2	05/11/2023	2061391 BTRINH	
Potassium, K	3.09	mg/L	0.04	0.2	05/11/2023	2061391 BTRINH	
Sodium, Na	86.8	mg/L	0.02	1	05/11/2023	2061391 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	249	mg/L	1.19	6	05/04/2023	2061030 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	96.8	mg/L		6	05/04/2023	2061035 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1100	µmhos/cm		1	05/04/2023	2061031 DCARDONA	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	380	mg/L	0.948	6	05/04/2023	2061039 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.66	pH			05/04/2023	2061033 DCARDONA	H1,H3
Temperature (°C)	16.8	°C			05/04/2023	2061033 DCARDONA	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	613	mg/L	13.2	20	05/08/2023	2061025 ABALALIO	>MCL

**Lab Sample#:** 2302914-04 **Sample Source:** WSB\_CAL\_DUP **External ID:**

**Date Collected:** 05/04/2023 09:58AM **Date Received:** 05/04/2023 11:48AM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-22A-545, ROW AT HICHEY BLVD

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	84.6	mg/L	1	5	05/04/2023	2061003 PWARNER	
Nitrate as N	5.31	mg/L	0.34	0.4	05/04/2023	2061003 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302914**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/04/2023

**Sampling Team:** Field

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	68.7	mg/L	0.04	1	05/11/2023	2061391 BTRINH	
Magnesium, Mg	52.8	mg/L	0.007	0.2	05/11/2023	2061391 BTRINH	
Potassium, K	3.2	mg/L	0.04	0.2	05/11/2023	2061391 BTRINH	
Sodium, Na	88	mg/L	0.02	1	05/11/2023	2061391 BTRINH	
<u>MBP_ALK(SM 2320 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	308	mg/L	1.19	6	05/04/2023	2061030 ALEE	
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	102	mg/L		6	05/04/2023	2061035 ALEE	
<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	1090	µmhos/cm		1	05/04/2023	2061031 DCARDONA	>MCL
<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	380	mg/L	0.948	6	05/04/2023	2061039 ALEE	
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	6.7	pH			05/04/2023	2061033 DCARDONA	H1,H3
Temperature (°C)	17	°C			05/04/2023	2061033 DCARDONA	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	617	mg/L	13.2	20	05/08/2023	2061025 ABALALIO	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302914**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/04/2023

**Sampling Team:** Field

**QC list for Run#: 2061003 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313540-01	MRL_CK	Sulfate		0.52	mg/L	104				
	MRL_CK	Nitrate as N		0.0414	mg/L	104				
QC2313540-02	CCV	Sulfate		2.42	mg/L	96				
	CCV	Nitrate as N		0.198	mg/L	99				
QC2313540-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313540-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313540-05	LCS	Sulfate		1.5	mg/L	99				
	LCS	Nitrate as N		0.241	mg/L	96				
QC2313540-06	CCV	Sulfate		21.6	mg/L	108				
	CCV	Nitrate as N		1.68	mg/L	106				
QC2313540-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313540-08	SPK of 2302800-07	Sulfate	2.1	4.47	mg/L	94				Splt# 2302800-07 (2.1mg/L)
	SPK of 2302800-07	Nitrate as N	<0.04	0.22	mg/L	111				Splt# 2302800-07 (<0.04mg/L)
QC2313540-09	SPKD of 2302800-07	Sulfate	2.1	4.54	mg/L	97	1			Splt# 2302800-07 (2.1mg/L)
	SPKD of 2302800-07	Nitrate as N	<0.04	0.218	mg/L	109	1			Splt# 2302800-07 (<0.04mg/L)
QC2313540-10	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2313540-11	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313540-12	SPK of 2302833-09	Sulfate	2.27	4.69	mg/L	96				Splt# 2302833-09 (2.27mg/L)
	SPK of 2302833-09	Nitrate as N	<0.04	0.22	mg/L	110				Splt# 2302833-09 (<0.04mg/L)
QC2313540-13	SPKD of 2302833-09	Sulfate	2.27	4.78	mg/L	100	1			Splt# 2302833-09 (2.27mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302914**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/04/2023

**Sampling Team:** Field

SPKD of 2302833-09	Nitrate as N	<0.04	0.222	mg/L	112	1				Splt# 2302833-09 (<0.04mg/L)
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**QC list for Run#: 2061025 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313556-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2313556-02	DUP of 2303184-01	Total Dissolved Solids	80	79	mg/L		1	13.2	20	Splt# 2303184-01 (80mg/L)
QC2313556-03	DUP of 2302914-01	Total Dissolved Solids	519	516	mg/L		0	13.2	20	Splt# 2302914-01 (519mg/L)
QC2313556-04	LCS	Total Dissolved Solids		84	mg/L		88	13.2	20	

**QC list for Run#: 2061030 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313559-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313559-02	MRL CK	Alkalinity		3.1	mg/L		103			
QC2313559-03	SPK of 2302790-01	Alkalinity	42.5	81.6	mg/L		97		3	Splt# 2302790-01 (42.5mg/L)
QC2313559-04	SPKD of 2302790-01	Alkalinity	42.5	79.2	mg/L		91	3	3	Splt# 2302790-01 (42.5mg/L)
QC2313559-06	LCS	Alkalinity		36.7	mg/L		91		3	
QC2313559-07	DUP of 2302790-02	Alkalinity	42.7	43	mg/L		0	0.593	3	Splt# 2302790-02 (42.7mg/L)

**QC list for Run#: 2061031 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313557-01	CAL	Specific Conductance @25°C		1430	µmhos/cm		101			
QC2313557-02	ICV	Specific Conductance @25°C		155	µmhos/cm		105			
QC2313557-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313557-04	MRL CK	Specific Conductance @25°C		10	µmhos/cm		100			
QC2313557-05	DUP of 2302786-01	Specific Conductance @25°C	187	187	µmhos/cm		0		1	Splt# 2302786-01 (187µmhos/cm)
QC2313557-06	CCV	Specific Conductance @25°C		102	µmhos/cm		102			
QC2313557-07	CCV	Specific Conductance @25°C		1430	µmhos/cm		101			

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302914**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/04/2023

**Sampling Team:** Field

**QC list for Run#: 2061033 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313560-04	ICV	pH		9.02	pH	99				
	ICV	Temperature (°C)		17.9	°C					
QC2313560-05	DUP of 2302786-01	pH	8.96	8.98	pH		0			Splt# 2302786-01 (8.96pH) H1,H3
	DUP of 2302786-01	Temperature (°C)	16	15.6	°C					Splt# 2302786-01 (16°C)
QC2313560-06	CCV	pH		9.04	pH	99				
	CCV	Temperature (°C)		17.6	°C					
QC2313560-07	CCV	pH		9.03	pH	99				
	CCV	Temperature (°C)		17.7	°C					

**QC list for Run#: 2061035 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313562-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2313562-02	MRL_CK	Chloride		2.57	mg/L	85				
QC2313562-03	SPK of 2302790-01	Chloride	7.74	51.6	mg/L	110			3	Splt# 2302790-01 (7.74mg/L)
QC2313562-04	SPKD of 2302790-01	Chloride	7.74	50.1	mg/L	106	2		3	Splt# 2302790-01 (7.74mg/L)
QC2313562-06	LCS	Chloride		41.6	mg/L	104			3	
QC2313562-07	DUP of 2302790-02	Chloride	7.61	8.02	mg/L		5		3	Splt# 2302790-02 (7.61mg/L)

**QC list for Run#: 2061039 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313566-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2313566-02	MRL_CK	Hardness, Total, as CaCO3		2.74	mg/L	91				
QC2313566-03	DUP of 2302790-02	Hardness, Total, as CaCO3	41.9	41.8	mg/L		0	0.474	3	Splt# 2302790-02 (41.9mg/L)
QC2313566-04	LCS	Hardness, Total, as CaCO3		39.4	mg/L	98			3	

**QC list for Run#: 2061391 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302914**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/04/2023

**Sampling Team:** Field

Sample ID	Parameter	Result	Unit	Method	Flow	Flow Unit	Flow Unit	Flow Unit	Flow Unit	Flow Unit	Flow Unit	Flow Unit
QC2313772-01	BLK Calcium, Ca	<1	mg/L					0.04		1		
	BLK Magnesium, Mg	<0.2	mg/L					0.007		0.2		
	BLK Potassium, K	<0.2	mg/L					0.04		0.2		
	BLK Sodium, Na	<1	mg/L					0.02		1		
QC2313772-02	LCS Calcium, Ca	1.78	mg/L			89		0.04		1		
	LCS Magnesium, Mg	2.06	mg/L			103		0.007		0.2		
	LCS Potassium, K	2.04	mg/L			102		0.04		0.2		
	LCS Sodium, Na	2.07	mg/L			103		0.02		1		
QC2313772-03	DUP of 2302901-01	64.1	65.1	mg/L			1	0.04		1	Splt# 2302901-01 (64.1mg/L)	
	DUP of 2302901-01	59.7	59.1	mg/L			0	0.007		0.2	Splt# 2302901-01 (59.7mg/L)	
	DUP of 2302901-01	2.05	2.09	mg/L			1	0.04		0.2	Splt# 2302901-01 (2.05mg/L)	
	DUP of 2302901-01	62.5	62.4	mg/L			0	0.02		1	Splt# 2302901-01 (62.5mg/L)	
QC2313772-04	SPK of 2302901-01	64.1	66.2	mg/L		103		0.04		1	Splt# 2302901-01 (64.1mg/L)	
	SPK of 2302901-01	59.7	60.2	mg/L		21		0.007		0.2	Splt# 2302901-01 (59.7mg/L)	
	SPK of 2302901-01	2.05	4.07	mg/L		101		0.04		0.2	Splt# 2302901-01 (2.05mg/L)	
	SPK of 2302901-01	62.5	63.7	mg/L		59		0.02		1	Splt# 2302901-01 (62.5mg/L)	
QC2313772-05	SPKD of 2302901-01	64.1	66.6	mg/L		122	0	0.04		1	Splt# 2302901-01 (64.1mg/L)	
	SPKD of 2302901-01	59.7	60.6	mg/L		42	0	0.007		0.2	Splt# 2302901-01 (59.7mg/L)	
	SPKD of 2302901-01	2.05	4.24	mg/L		109	4	0.04		0.2	Splt# 2302901-01 (2.05mg/L)	
	SPKD of 2302901-01	62.5	64.7	mg/L		109	1	0.02		1	Splt# 2302901-01 (62.5mg/L)	
QC2313772-06	MRL_CK Calcium, Ca	<1	mg/L			N/A		0.04		1		
	MRL_CK Magnesium, Mg	<0.2	mg/L			N/A		0.007		0.2		
	MRL_CK Potassium, K	0.229	mg/L			91		0.04		0.2		
	MRL_CK Sodium, Na	<1	mg/L			N/A		0.02		1		
QC2313825-01	ICV Potassium, K	1.95	mg/L			97		0.03		0.2		
QC2313825-02	ICV Calcium, Ca	9.82	mg/L			98		0.05		1		
	ICV Magnesium, Mg	10.1	mg/L			101		0.01		0.2		
	ICV Sodium, Na	10.1	mg/L			103		0.002		1		

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302915**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/15/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302915-01	<b>Sample Source:</b> WSB_DC-10A-160	<b>External ID:</b>
<b>Date Collected:</b> 05/15/2023 09:28AM	<b>Date Received:</b> 05/15/2023 12:26PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_DC_CUP-10A-160, ROW AT SERRA BOWL

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	56.3	mg/L	2	10	05/15/2023	2061538 PWARNER	
Nitrate as N	9.13	mg/L	0.68	0.8	05/15/2023	2061538 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	63.4	mg/L	0.04	1	05/24/2023	2061962 BTRINH	
Magnesium, Mg	63.3	mg/L	0.007	0.2	05/24/2023	2061962 BTRINH	
Potassium, K	1.36	mg/L	0.04	0.2	05/24/2023	2061962 BTRINH	
Sodium, Na	76.4	mg/L	0.02	1	05/24/2023	2061962 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	303	mg/L	1.19	6	05/15/2023	2061553 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	127	mg/L		6	05/15/2023	2061558 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1140	µmhos/cm		1	05/15/2023	2061566 ABALALIO	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	415	mg/L	0.948	6	05/15/2023	2061561 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	6.76	pH			05/15/2023	2061567 ABALALIO	H1,H3
Temperature (°C)	17.5	°C			05/15/2023	2061567 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	631	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	>MCL

<b>Lab Sample#:</b> 2302915-03	<b>Sample Source:</b> WSB_DC-10A-500	<b>External ID:</b>
<b>Date Collected:</b> 05/15/2023 10:06AM	<b>Date Received:</b> 05/15/2023 12:26PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_DC_CUP-10A-500 ROW AT SERRA BOWL

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	74.9	mg/L	1	5	05/15/2023	2061538 PWARNER	
Nitrate as N	7.9	mg/L	0.34	0.4	05/15/2023	2061538 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	62.2	mg/L	0.04	1	05/24/2023	2061962 BTRINH	
Magnesium, Mg	63.4	mg/L	0.007	0.2	05/24/2023	2061962 BTRINH	
Potassium, K	1.39	mg/L	0.04	0.2	05/24/2023	2061962 BTRINH	
Sodium, Na	74.3	mg/L	0.02	1	05/24/2023	2061962 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	261	mg/L	1.19	6	05/15/2023	2061553 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	135	mg/L		6	05/15/2023	2061558 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302915**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/15/2023

**Sampling Team:** Field

<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	1130	µmhos/cm		1	05/15/2023	2061566 ABALALIO	>MCL
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	6.62	pH			05/15/2023	2061567 ABALALIO	H1,H3
Temperature (°C)	17.8	°C			05/15/2023	2061567 ABALALIO	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	640	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	>MCL

**Lab Sample#:** 2302915-03B **Sample Source:** WSB\_DC-10A-500 **External ID:**

**Date Collected:** 05/15/2023 10:06AM **Date Received:** 05/15/2023 12:26PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_DC\_CUP-10A-500 ROW AT SERRA BOWL

Test/Analyte

<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	406	mg/L	0.948	6	05/15/2023	2061561 ALEE	

**Lab Sample#:** 2302915-04 **Sample Source:** WSB\_DC-10A-710 **External ID:**

**Date Collected:** 05/15/2023 09:08AM **Date Received:** 05/15/2023 12:26PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_DC\_CUP-10A-710 ROW AT SERRA BOWL

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	84.6	mg/L	1	5	05/15/2023	2061538 PWARNER	
<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	72.3	mg/L	0.04	1	05/24/2023	2061962 BTRINH	
Magnesium, Mg	48.1	mg/L	0.007	0.2	05/24/2023	2061962 BTRINH	
Sodium, Na	98.4	mg/L	0.02	1	05/24/2023	2061962 BTRINH	
<u>MBP_ALK(SM 2320 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	232	mg/L	1.19	6	05/15/2023	2061553 ALEE	
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	188	mg/L		6	05/15/2023	2061558 ALEE	
<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	1200	µmhos/cm		1	05/15/2023	2061566 ABALALIO	>MCL
<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	379	mg/L	0.948	6	05/15/2023	2061561 ALEE	
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.1	pH			05/15/2023	2061567 ABALALIO	H1,H3
Temperature (°C)	16.8	°C			05/15/2023	2061567 ABALALIO	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	670	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	>MCL

**Lab Sample#:** 2302915-04A **Sample Source:** WSB\_DC-10A-710 **External ID:**

**Date Collected:** 05/15/2023 09:08AM **Date Received:** 05/15/2023 12:26PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_DC\_CUP-10A-710 ROW AT SERRA BOWL

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate							

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302915**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/15/2023

**Sampling Team:** Field

<i>Nitrate as N</i>	<0.04	mg/L	0.034	0.04	05/15/2023	2061538	PWARNER
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**Lab Sample#:** 2302915-04B **Sample Source:** WSB\_DC-10A-710 **External ID:**

**Date Collected:** 05/15/2023 09:08AM **Date Received:** 05/15/2023 12:26PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_DC\_CUP-10A-710 ROW AT SERRA BOWL

Test/Analyte

<i>SEM_200.7_DW(EPA 200.7)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Potassium, K</i>	4	mg/L	0.08	0.4	05/24/2023	2061962 BTRINH	

**Lab Sample#:** 2302915-05 **Sample Source:** WSB\_DC\_DUP **External ID:**

**Date Collected:** 05/15/2023 10:32AM **Date Received:** 05/15/2023 12:26PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_DC\_CUP-10A-500 ROW AT SERRA BOWL

Test/Analyte

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Sulfate</i>	75.3	mg/L	1	5	05/15/2023	2061538 PWARNER	
<i>Nitrate as N</i>	7.82	mg/L	0.34	0.4	05/15/2023	2061538 PWARNER	

<i>SEM_200.7_DW(EPA 200.7)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Calcium, Ca</i>	61.9	mg/L	0.04	1	05/24/2023	2061962 BTRINH	
<i>Magnesium, Mg</i>	62.7	mg/L	0.007	0.2	05/24/2023	2061962 BTRINH	
<i>Potassium, K</i>	1.4	mg/L	0.04	0.2	05/24/2023	2061962 BTRINH	
<i>Sodium, Na</i>	72.8	mg/L	0.02	1	05/24/2023	2061962 BTRINH	

<i>MBP_ALK(SM 2320 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Alkalinity</i>	261	mg/L	1.19	6	05/15/2023	2061553 ALEE	

<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Chloride</i>	134	mg/L		6	05/15/2023	2061558 ALEE	

<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Specific Conductance @25°C</i>	1130	µmhos/cm		1	05/15/2023	2061566 ABALALIO	>MCL

<i>MBP_HARDNESS_T(SM 2340 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Hardness, Total, as CaCO3</i>	414	mg/L	0.948	6	05/15/2023	2061561 ALEE	

<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>pH</i>	6.6	pH			05/15/2023	2061567 ABALALIO	H1,H3
<i>Temperature (°C)</i>	17.9	°C			05/15/2023	2061567 ABALALIO	

<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	649	mg/L	13.2	20	05/22/2023	2061770 DCARDONA	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302915**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/15/2023

**Sampling Team:** Field

**QC list for Run#: 2061538 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313936-01	MRL_CK	Sulfate		0.511	mg/L	102				
	MRL_CK	Nitrate as N		0.0412	mg/L	103				
QC2313936-02	CCV	Sulfate		2.41	mg/L	96				
	CCV	Nitrate as N		0.199	mg/L	99				
QC2313936-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313936-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313936-05	LCS	Sulfate		1.45	mg/L	96				
	LCS	Nitrate as N		0.24	mg/L	96				
QC2313936-06	CCV	Sulfate		21.7	mg/L	108				
	CCV	Nitrate as N		1.68	mg/L	106				
QC2313936-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313936-08	SPK of 2302753-05	Sulfate	12.9	15.7	mg/L	111				Splt# 2302753-05 (12.9mg/L)
	SPK of 2302753-05	Nitrate as N	<0.04	0.232	mg/L	117				Splt# 2302753-05 (<0.04mg/L)
QC2313936-09	SPKD of 2302753-05	Sulfate	12.9	15.6	mg/L	107	0			Splt# 2302753-05 (12.9mg/L)
	SPKD of 2302753-05	Nitrate as N	<0.04	0.229	mg/L	115	1			Splt# 2302753-05 (<0.04mg/L)

**QC list for Run#: 2061553 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313950-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313950-02	MRL_CK	Alkalinity		3.1	mg/L	103				
QC2313950-03	SPK of 2302753-05	Alkalinity	39.8	79.2	mg/L	98			3	Splt# 2302753-05 (39.8mg/L)
QC2313950-04	SPKD of 2302753-05	Alkalinity	39.8	79.3	mg/L	98	0		3	Splt# 2302753-05 (39.8mg/L)
QC2313950-05	DUP of 2303425-01	Alkalinity	10.5	10.4	mg/L		0	0.593	3	Splt# 2303425-01 (10.5mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302915**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/15/2023

**Sampling Team:** Field

QC2313950-06

LCS Alkalinity 39.4 mg/L 98 3

**QC list for Run#: 2061558 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313952-01	BLK	Chloride	<3		mg/L			1.16	3	
QC2313952-02	MRL_CHK	Chloride	2.74		mg/L	91				
QC2313952-03	SPK of 2302753-05	Chloride	12.9	54	mg/L	103			3	Splt# 2302753-05 (12.9mg/L)
QC2313952-04	SPKD of 2302753-05	Chloride	12.9	54.9	mg/L	105	1		3	Splt# 2302753-05 (12.9mg/L)
QC2313952-05	DUP of 2303425-01	Chloride	<3	<3	mg/L		N/A		3	Splt# 2303425-01 (<3mg/L)
QC2313952-06	LCS	Chloride	39.9		mg/L	99			3	

**QC list for Run#: 2061561 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313955-01	BLK	Hardness, Total, as CaCO3	<3		mg/L			0.474	3	
QC2313955-02	MRL_CHK	Hardness, Total, as CaCO3	2.8		mg/L	93				
QC2313955-03	DUP of 2303425-01	Hardness, Total, as CaCO3	9.55	9.48	mg/L		0	0.474	3	Splt# 2303425-01 (9.55mg/L)
QC2313955-04	LCS	Hardness, Total, as CaCO3	39.7		mg/L	99			3	

**QC list for Run#: 2061566 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313959-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2313959-02	ICV	Specific Conductance @25°C		156	µmhos/cm	106				
QC2313959-03	BLK	Specific Conductance @25°C	<1		µmhos/cm				1	
QC2313959-04	MRL_CHK	Specific Conductance @25°C		10.1	µmhos/cm	101				
QC2313959-05	DUP of 2302748-01	Specific Conductance @25°C	176	177	µmhos/cm		0		1	Splt# 2302748-01 (176µmhos/cm)
QC2313959-06	CCV	Specific Conductance @25°C		103	µmhos/cm	103				
QC2313959-07										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302915**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/15/2023

**Sampling Team:** Field

CCV Specific Conductance @25°C 1430 μmhos/cm 102

**QC list for Run#: 2061567 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313960-04	ICV	pH		9.03	pH	99				
	ICV	Temperature (°C)		19.3	°C					
QC2313960-05	DUP of 2302748-01	pH	8.96	8.99	pH	0				Splt# 2302748-01 (8.96pH) H1,H3
	DUP of 2302748-01	Temperature (°C)	15.2	14.6	°C					Splt# 2302748-01 (15.2°C)
QC2313960-06	CCV	pH		9.05	pH	100				
	CCV	Temperature (°C)		19	°C					
QC2313960-07	CCV	pH		9.03	pH	99				
	CCV	Temperature (°C)		19.2	°C					

**QC list for Run#: 2061770 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314099-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2314099-02	LCS	Total Dissolved Solids		83	mg/L	87		13.2	20	
QC2314099-03	DUP of 2303599-01	Total Dissolved Solids	50	48	mg/L	4		13.2	20	Splt# 2303599-01 (50mg/L)
QC2314099-04	DUP of 2302904-03	Total Dissolved Solids	418	427	mg/L	2		13.2	20	Splt# 2302904-03 (418mg/L)

**QC list for Run#: 2061962 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314180-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2314180-02	LCS	Calcium, Ca		1.77	mg/L	88		0.04	1	
	LCS	Magnesium, Mg		2.01	mg/L	101		0.007	0.2	
	LCS	Potassium, K		2.03	mg/L	102		0.04	0.2	
	LCS	Sodium, Na		2.06	mg/L	103		0.02	1	
QC2314180-03	DUP of 2302915-01	Calcium, Ca	63.4	64	mg/L	0		0.04	1	Splt# 2302915-01 (63.4mg/L)
	DUP of 2302915-01	Magnesium, Mg	63.3	63.1	mg/L	0		0.007	0.2	Splt# 2302915-01 (63.3mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302915**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/15/2023

**Sampling Team:** Field

DUP of 2302915-01	Potassium, K	1.36	1.41	mg/L	4	0.04	0.2	Splt# 2302915-01 (1.36mg/L)
DUP of 2302915-01	Sodium, Na	76.4	76.9	mg/L	0	0.02	1	Splt# 2302915-01 (76.4mg/L)
QC2314180-04								
SPK of 2302915-01	Calcium, Ca	63.4	65.8	mg/L	122	0.04	1	Splt# 2302915-01 (63.4mg/L)
SPK of 2302915-01	Magnesium, Mg	63.3	64.5	mg/L	57	0.007	0.2	Splt# 2302915-01 (63.3mg/L)
SPK of 2302915-01	Potassium, K	1.36	3.49	mg/L	107	0.04	0.2	Splt# 2302915-01 (1.36mg/L)
SPK of 2302915-01	Sodium, Na	76.4	78.1	mg/L	84	0.02	1	Splt# 2302915-01 (76.4mg/L)
QC2314180-05								
SPKD of 2302915-01	Calcium, Ca	63.4	66.6	mg/L	162	1	0.04	1 Splt# 2302915-01 (63.4mg/L)
SPKD of 2302915-01	Magnesium, Mg	63.3	65.2	mg/L	95	1	0.007	0.2 Splt# 2302915-01 (63.3mg/L)
SPKD of 2302915-01	Potassium, K	1.36	3.62	mg/L	113	3	0.04	0.2 Splt# 2302915-01 (1.36mg/L)
SPKD of 2302915-01	Sodium, Na	76.4	78.5	mg/L	103	0	0.02	1 Splt# 2302915-01 (76.4mg/L)
QC2314180-06								
MRL_CK	Calcium, Ca		<1	mg/L	N/A	0.04	1	
MRL_CK	Magnesium, Mg		<0.2	mg/L	N/A	0.007	0.2	
MRL_CK	Potassium, K		<0.2	mg/L	N/A	0.04	0.2	
MRL_CK	Sodium, Na		<1	mg/L	N/A	0.02	1	
QC2314243-01								
ICV	Potassium, K		1.92	mg/L	96	0.03	0.2	
QC2314243-02								
ICV	Calcium, Ca		9.68	mg/L	96	0.05	1	
ICV	Magnesium, Mg		9.91	mg/L	99	0.01	0.2	
ICV	Sodium, Na		9.81	mg/L	99	0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302916**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/09/2023

Routine: WSB\_SFPUC+Consult.B

Sampling Team: Field

Lab Sample#:	2302916-01	Sample Source:	WSB_CAL-18-230	External ID:	
Date Collected:	05/09/2023 12:10PM	Date Received:	05/09/2023 01:54PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_CAL_CUP-18-230, ROW AT COLMA BLVD

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	1.99	mg/L	0.17	0.2	05/10/2023	2061293 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	37.9	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	34.4	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Potassium, K	1.89	mg/L	0.04	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	67.4	mg/L	0.02	1	05/12/2023	2061453 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	178	mg/L	1.19	6	05/09/2023	2061286 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	117	mg/L		6	05/09/2023	2061289 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	801	µmhos/cm		1	05/09/2023	2061279 ABALALIO	
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	240	mg/L	0.948	6	05/09/2023	2061290 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	6.58	pH			05/09/2023	2061272 ABALALIO	H1,H3
Temperature (°C)	18.2	°C			05/09/2023	2061272 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	449	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	

Lab Sample#:	2302916-01A	Sample Source:	WSB_CAL-18-230	External ID:	
Date Collected:	05/09/2023 12:10PM	Date Received:	05/09/2023 01:54PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_CAL_CUP-18-230, ROW AT COLMA BLVD

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	36.2	mg/L	0.5	2.5	05/10/2023	2061334 PWARNER	

Lab Sample#:	2302916-02	Sample Source:	WSB_CAL-18-425	External ID:	
Date Collected:	05/09/2023 11:28AM	Date Received:	05/09/2023 01:54PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_CAL_CUP-18-425, ROW AT COLMA BLVD

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	2.02	mg/L	0.17	0.2	05/10/2023	2061293 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	38.9	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	34.9	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Potassium, K	1.88	mg/L	0.04	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	67.9	mg/L	0.02	1	05/12/2023	2061453 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/09/2023

**Sampling Team:** Field

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	176	mg/L	1.19	6	05/09/2023	2061286 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	116	mg/L		6	05/09/2023	2061289 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	804	µmhos/cm		1	05/09/2023	2061279 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	239	mg/L	0.948	6	05/09/2023	2061290 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.54	pH			05/09/2023	2061272 ABALALIO	H1,H3
Temperature (°C)	18	°C			05/09/2023	2061272 ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	443	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	

**Lab Sample#: 2302916-02A Sample Source: WSB\_CAL-18-425 External ID:**

**Date Collected:** 05/09/2023 11:28AM **Date Received:** 05/09/2023 01:54PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-18-425, ROW AT COLMA BLVD

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	36.7	mg/L	0.5	2.5	05/10/2023	2061334 PWARNER	

**Lab Sample#: 2302916-03 Sample Source: WSB\_CAL-18-490 External ID:**

**Date Collected:** 05/09/2023 10:12AM **Date Received:** 05/09/2023 01:54PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-18-490, ROW AT COLMA BLVD

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	1.98	mg/L	0.17	0.2	05/10/2023	2061293 PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	38	mg/L	0.04	1	05/12/2023	2061453 BTRINH	
Magnesium, Mg	34.1	mg/L	0.007	0.2	05/12/2023	2061453 BTRINH	
Potassium, K	1.89	mg/L	0.04	0.2	05/12/2023	2061453 BTRINH	
Sodium, Na	68.1	mg/L	0.02	1	05/12/2023	2061453 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	178	mg/L	1.19	6	05/09/2023	2061286 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	117	mg/L		6	05/09/2023	2061289 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	797	µmhos/cm		1	05/09/2023	2061279 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	234	mg/L	0.948	6	05/09/2023	2061290 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.61	pH			05/09/2023	2061272 ABALALIO	H1,H3

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/09/2023

**Sampling Team:** Field

Temperature (°C)	16.9	°C			05/09/2023	2061272	ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Total Dissolved Solids	427	mg/L	13.2	20	05/12/2023	2061285	DCARDONA	
<b>Lab Sample#: 2302916-03A    Sample Source: WSB_CAL-18-490    External ID:</b>								
<b>Date Collected:</b> 05/09/2023 10:12AM <b>Date Received:</b> 05/09/2023 01:54PM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> GSR_CAL_CUP-18-490, ROW AT COLMA BLVD								
<b>Test/Analyte</b>								
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Sulfate	37.7	mg/L	0.5	2.5	05/10/2023	2061334	PWARNER	
<b>Lab Sample#: 2302916-04    Sample Source: WSB_CAL-18-595    External ID:</b>								
<b>Date Collected:</b> 05/09/2023 10:49AM <b>Date Received:</b> 05/09/2023 01:54PM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> GSR_CAL_CUP-18-595, ROW AT COLMA BLVD								
<b>Test/Analyte</b>								
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Nitrate as N	1.83	mg/L	0.17	0.2	05/10/2023	2061293	PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Calcium, Ca	45.4	mg/L	0.04	1	05/16/2023	2061601	BTRINH	
Magnesium, Mg	40.4	mg/L	0.007	0.2	05/16/2023	2061601	BTRINH	
Potassium, K	2.16	mg/L	0.04	0.2	05/16/2023	2061601	BTRINH	
Sodium, Na	70.7	mg/L	0.02	1	05/16/2023	2061601	BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Alkalinity	186	mg/L	1.19	6	05/09/2023	2061286	ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Chloride	126	mg/L		6	05/09/2023	2061289	ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Specific Conductance @25°C	881	µmhos/cm		1	05/09/2023	2061279	ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Hardness, Total, as CaCO3	277	mg/L	0.948	6	05/09/2023	2061290	ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
pH	6.55	pH			05/09/2023	2061272	ABALALIO	H1,H3
Temperature (°C)	18.4	°C			05/09/2023	2061272	ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Total Dissolved Solids	488	mg/L	13.2	20	05/12/2023	2061285	DCARDONA	
<b>Lab Sample#: 2302916-04A    Sample Source: WSB_CAL-18-595    External ID:</b>								
<b>Date Collected:</b> 05/09/2023 10:49AM <b>Date Received:</b> 05/09/2023 01:54PM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> GSR_CAL_CUP-18-595, ROW AT COLMA BLVD								
<b>Test/Analyte</b>								
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments	
Sulfate	51.8	mg/L	0.5	2.5	05/10/2023	2061334	PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/09/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302916-05	<b>Sample Source:</b> WSB_CAL_DUP	<b>External ID:</b>
<b>Date Collected:</b> 05/09/2023 11:29AM	<b>Date Received:</b> 05/09/2023 01:54PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CAL_CUP-18-595, ROW AT COLMA BLVD

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	1.82	mg/L	0.17	0.2	05/10/2023	2061293 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	45.5	mg/L	0.04	1	05/16/2023	2061601 BTRINH	
Magnesium, Mg	40	mg/L	0.007	0.2	05/16/2023	2061601 BTRINH	
Potassium, K	2.13	mg/L	0.04	0.2	05/16/2023	2061601 BTRINH	
Sodium, Na	69	mg/L	0.02	1	05/16/2023	2061601 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	184	mg/L	1.19	6	05/09/2023	2061286 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	125	mg/L		6	05/09/2023	2061289 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	882	µmhos/cm		1	05/09/2023	2061279 ABALALIO	
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	275	mg/L	0.948	6	05/09/2023	2061290 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	6.54	pH			05/09/2023	2061272 ABALALIO	H1,H3
Temperature (°C)	18.6	°C			05/09/2023	2061272 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	476	mg/L	13.2	20	05/12/2023	2061285 DCARDONA	

<b>Lab Sample#:</b> 2302916-05A	<b>Sample Source:</b> WSB_CAL_DUP	<b>External ID:</b>
<b>Date Collected:</b> 05/09/2023 11:29AM	<b>Date Received:</b> 05/09/2023 01:54PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CAL_CUP-18-595, ROW AT COLMA BLVD

**Test/Analyte**

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	53	mg/L	0.5	2.5	05/10/2023	2061334 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/09/2023

**Sampling Team:** Field

**QC list for Run#: 2061272 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313736-04	ICV	pH		9.04	pH	99				
	ICV	Temperature (°C)		18.7	°C					
QC2313736-05	DUP of 2302916-01	pH	6.58	6.6	pH		0			Splt# 2302916-01 (6.58pH) H1,H3
	DUP of 2302916-01	Temperature (°C)	18.2	18.2	°C					Splt# 2302916-01 (18.2°C)
QC2313736-06	CCV	pH		9.03	pH	99				
	CCV	Temperature (°C)		18.7	°C					

**QC list for Run#: 2061279 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313742-02	ICV	Specific Conductance @25°C		155	µmhos/cm	106				
QC2313742-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313742-04	MRL_CK	Specific Conductance @25°C		9.97	µmhos/cm	99				
QC2313742-05	DUP of 2302916-01	Specific Conductance @25°C	801	803	µmhos/cm		0		1	Splt# 2302916-01 (801µmhos/cm)
QC2313742-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2061285 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313745-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2313745-02	DUP of 2303429-01	Total Dissolved Solids	66	69	mg/L		4	13.2	20	Splt# 2303429-01 (66mg/L)
QC2313745-03	DUP of 2302916-02	Total Dissolved Solids	443	444	mg/L		0	13.2	20	Splt# 2302916-02 (443mg/L)
QC2313745-04	LCS	Total Dissolved Solids		89	mg/L	93		13.2	20	

**QC list for Run#: 2061286 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313746-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313746-02	MRL_CK	Alkalinity		3.22	mg/L	107				
QC2313746-03										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/09/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

Sample #	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
SPK of 2302766-03	Alkalinity	40.1	81.4	mg/L	103				3 Splt# 2302766-03 (40.1mg/L)
QC2313746-04									
SPKD of 2302766-03	Alkalinity	40.1	81.8	mg/L	104	0			3 Splt# 2302766-03 (40.1mg/L)
QC2313746-05									
DUP of 2302916-05	Alkalinity	184	191	mg/L		3	1.19		6 Splt# 2302916-05 (184mg/L)
QC2313746-06									
LCS	Alkalinity		39.2	mg/L	97				3

**QC list for Run#: 2061289 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313748-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2313748-02	MRL_CK	Chloride		2.79	mg/L	93				
QC2313748-03	SPK of 2302766-03	Chloride	8.35	49.4	mg/L	103			3	Splt# 2302766-03 (8.35mg/L)
QC2313748-04	SPKD of 2302766-03	Chloride	8.35	49.4	mg/L	103	0		3	Splt# 2302766-03 (8.35mg/L)
QC2313748-05	DUP of 2302916-05	Chloride	125	129	mg/L		3		6	Splt# 2302916-05 (125mg/L)
QC2313748-06	LCS	Chloride		40.6	mg/L	101			3	

**QC list for Run#: 2061290 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313749-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2313749-02	MRL_CK	Hardness, Total, as CaCO3		2.78	mg/L	92				
QC2313749-03	DUP of 2302766-03	Hardness, Total, as CaCO3	38.3	38.5	mg/L		0	0.474	3	Splt# 2302766-03 (38.3mg/L)
QC2313749-04	LCS	Hardness, Total, as CaCO3		39.6	mg/L	98			3	

**QC list for Run#: 2061293 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313752-01	MRL_CK	Sulfate		0.512	mg/L	102				
	MRL_CK	Nitrate as N		0.0414	mg/L	104				
QC2313752-02	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2313752-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/09/2023

**Sampling Team:** Field

Sample ID	Method	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
QC2313752-04	BLK	Nitrate as N	<0.04	mg/L			0.034	0.04	
	BLK	Sulfate	1.16	mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04	mg/L			0.034	0.04	
QC2313752-05	LCS	Sulfate	1.42	mg/L	94				
	LCS	Nitrate as N	0.247	mg/L	98				
QC2313752-06	CCV	Sulfate	21.5	mg/L	107				
	CCV	Nitrate as N	1.68	mg/L	105				
QC2313752-07	BLK	Sulfate	<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04	mg/L			0.034	0.04	
QC2313752-08	SPK of 2303429-01	Sulfate	9.43	12.1 mg/L	108				Splt# 2303429-01 (9.43mg/L)
	SPK of 2303429-01	Nitrate as N	0.097	0.305 mg/L	104				Splt# 2303429-01 (0.097mg/L)
QC2313752-09	SPKD of 2303429-01	Sulfate	9.43	12.2 mg/L	112	0			Splt# 2303429-01 (9.43mg/L)
	SPKD of 2303429-01	Nitrate as N	0.097	0.307 mg/L	105	0			Splt# 2303429-01 (0.097mg/L)

**QC list for Run#: 2061334 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313782-01	MRL CK	Sulfate		0.512	mg/L	102				
	MRL CK	Nitrate as N		0.0415	mg/L	104				
QC2313782-02	CCV	Sulfate		2.4	mg/L	96				
	CCV	Nitrate as N		0.198	mg/L	99				
QC2313782-03	BLK	Sulfate		<0.5	mg/L		0.1	0.5		
	BLK	Nitrate as N		<0.04	mg/L		0.034	0.04		
QC2313782-04	BLK	Sulfate		<0.5	mg/L		0.1	0.5		
	BLK	Nitrate as N		<0.04	mg/L		0.034	0.04		
QC2313782-05	LCS	Sulfate		1.43	mg/L	95				
	LCS	Nitrate as N		0.25	mg/L	99				
QC2313782-06	CCV	Sulfate		21.5	mg/L	107				
	CCV	Nitrate as N		1.68	mg/L	105				
QC2313782-07	BLK	Sulfate		<0.5	mg/L		0.1	0.5		

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/09/2023

**Sampling Team:** Field

Sample ID	Method	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
QC2313782-08	BLK	Nitrate as N	<0.04	mg/L			0.034	0.04	
SPK of 2302759-03		Sulfate	13.1	mg/L	109				Splt# 2302759-03 (13.1mg/L)
SPK of 2302759-03		Nitrate as N	<0.04	mg/L	115				Splt# 2302759-03 (<0.04mg/L)
QC2313782-09									
SPKD of 2302759-03		Sulfate	13.1	mg/L	114	0			Splt# 2302759-03 (13.1mg/L)
SPKD of 2302759-03		Nitrate as N	<0.04	mg/L	116	1			Splt# 2302759-03 (<0.04mg/L)
QC2313782-10									
SPK of 2302774-04		Sulfate	8.82	mg/L	102				Splt# 2302774-04 (8.82mg/L)
SPK of 2302774-04		Nitrate as N	0.12	mg/L	99				Splt# 2302774-04 (0.12mg/L)
QC2313782-11									
SPKD of 2302774-04		Sulfate	8.82	mg/L	102	0			Splt# 2302774-04 (8.82mg/L)
SPKD of 2302774-04		Nitrate as N	0.12	mg/L	98	0			Splt# 2302774-04 (0.12mg/L)
QC2313782-12									
CCV		Sulfate	2.41	mg/L	96				
CCV		Nitrate as N	0.197	mg/L	99				
QC2313782-13									
BLK		Sulfate	<0.5	mg/L			0.1	0.5	
BLK		Nitrate as N	<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2061453 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313852-01	BLK	Calcium, Ca	<1		mg/L			0.04	1	
	BLK	Magnesium, Mg	<0.2		mg/L			0.007	0.2	
	BLK	Potassium, K	<0.2		mg/L			0.04	0.2	
	BLK	Sodium, Na	<1		mg/L			0.02	1	
QC2313852-02	LCS	Calcium, Ca	1.79		mg/L	89		0.04	1	
	LCS	Magnesium, Mg	2.02		mg/L	101		0.007	0.2	
	LCS	Potassium, K	2.03		mg/L	102		0.04	0.2	
	LCS	Sodium, Na	2.08		mg/L	104		0.02	1	
QC2313852-03	DUP of 2302486-02	Calcium, Ca	52.6	52.1	mg/L		0	0.04	1	Splt# 2302486-02 (52.6mg/L)
	DUP of 2302486-02	Magnesium, Mg	62.3	62.6	mg/L		0	0.007	0.2	Splt# 2302486-02 (62.3mg/L)
	DUP of 2302486-02	Potassium, K	2.47	2.53	mg/L		2	0.04	0.2	Splt# 2302486-02 (2.47mg/L)
	DUP of 2302486-02	Sodium, Na	74.5	73.5	mg/L		1	0.02	1	Splt# 2302486-02 (74.5mg/L)
QC2313852-04	SPK of 2302486-02	Calcium, Ca	52.6	54.6	mg/L	103		0.04	1	Splt# 2302486-02 (52.6mg/L) Spike too low
	SPK of 2302486-02	Magnesium, Mg	62.3	62.7	mg/L	16		0.007	0.2	Splt# 2302486-02 (62.3mg/L) Spike too low
	SPK of 2302486-02	Potassium, K	2.47	4.56	mg/L	104		0.04	0.2	Splt# 2302486-02 (2.47mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/09/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

Sample ID	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
SPK of 2302486-02	Sodium, Na	74.5	75.3 mg/L	35	0.02	1	Splt# 2302486-02 (74.5mg/L)	Spike too low
QC2313852-05								
SPKD of 2302486-02	Calcium, Ca	52.6	55.2 mg/L	130	0	0.04	1	Splt# 2302486-02 (52.6mg/L)
								Spike too low
SPKD of 2302486-02	Magnesium, Mg	62.3	63.8 mg/L	72	1	0.007	0.2	Splt# 2302486-02 (62.3mg/L)
								Spike too low
SPKD of 2302486-02	Potassium, K	2.47	4.69 mg/L	111	2	0.04	0.2	Splt# 2302486-02 (2.47mg/L)
SPKD of 2302486-02	Sodium, Na	74.5	75 mg/L	22	0	0.02	1	Splt# 2302486-02 (74.5mg/L)
								Spike too low
QC2313852-06								
MRL_CK	Calcium, Ca	<1	mg/L	N/A	0.04	1		
MRL_CK	Magnesium, Mg	<0.2	mg/L	N/A	0.007	0.2		
MRL_CK	Potassium, K	0.276	mg/L	110	0.04	0.2		
MRL_CK	Sodium, Na	<1	mg/L	N/A	0.02	1		
QC2313874-01								
ICV	Potassium, K		2.08 mg/L	104	0.03	0.2		
QC2313874-02								
ICV	Calcium, Ca		9.61 mg/L	96	0.05	1		
ICV	Magnesium, Mg		9.87 mg/L	98	0.01	0.2		
ICV	Sodium, Na		10.1 mg/L	103	0.002	1		

**QC list for Run#: 2061601 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313921-01										
	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2313921-02										
	LCS	Calcium, Ca		1.76	mg/L	88		0.04	1	
	LCS	Magnesium, Mg		2.01	mg/L	100		0.007	0.2	
	LCS	Potassium, K		2.07	mg/L	103		0.04	0.2	
	LCS	Sodium, Na		2.03	mg/L	101		0.02	1	
QC2313921-03										
	DUP of 2302916-04	Calcium, Ca	45.4	44.9	mg/L		1	0.04	1	Splt# 2302916-04 (45.4mg/L)
	DUP of 2302916-04	Magnesium, Mg	40.4	39.5	mg/L		2	0.007	0.2	Splt# 2302916-04 (40.4mg/L)
	DUP of 2302916-04	Potassium, K	2.16	2.13	mg/L		1	0.04	0.2	Splt# 2302916-04 (2.16mg/L)
	DUP of 2302916-04	Sodium, Na	70.7	68.9	mg/L		2	0.02	1	Splt# 2302916-04 (70.7mg/L)
QC2313921-04										
	SPK of 2302916-04	Calcium, Ca	45.4	47.4	mg/L	105		0.04	1	Splt# 2302916-04 (45.4mg/L)
										Spike too low
	SPK of 2302916-04	Magnesium, Mg	40.4	41.2	mg/L	41		0.007	0.2	Splt# 2302916-04 (40.4mg/L)
										Spike too low
	SPK of 2302916-04	Potassium, K	2.16	4.19	mg/L	102		0.04	0.2	Splt# 2302916-04 (2.16mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302916**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 05/09/2023

**Sampling Team:** Field

Sample ID	Parameter	Unit	Result 1	Result 2	Unit	Value	Filter	Flow	Volume	Notes
SPK of 2302916-04	Sodium, Na	mg/L	70.7	70.6	mg/L	0		0.02	1	Splt# 2302916-04 (70.7mg/L) Spike too low
QC2313921-05										
SPKD of 2302916-04	Calcium, Ca	mg/L	45.4	48	mg/L	130	1	0.04	1	Splt# 2302916-04 (45.4mg/L) Spike too low
SPKD of 2302916-04	Magnesium, Mg	mg/L	40.4	41.8	mg/L	71	1	0.007	0.2	Splt# 2302916-04 (40.4mg/L) Spike too low
SPKD of 2302916-04	Potassium, K	mg/L	2.16	4.19	mg/L	102	0	0.04	0.2	Splt# 2302916-04 (2.16mg/L)
SPKD of 2302916-04	Sodium, Na	mg/L	70.7	71.4	mg/L	34	1	0.02	1	Splt# 2302916-04 (70.7mg/L) Spike too low
QC2313921-06										
MRL CK	Calcium, Ca	mg/L	<1		mg/L	N/A		0.04	1	
MRL CK	Magnesium, Mg	mg/L	<0.2		mg/L	N/A		0.007	0.2	
MRL CK	Potassium, K	mg/L	0.218		mg/L	87		0.04	0.2	
MRL CK	Sodium, Na	mg/L	<1		mg/L	N/A		0.02	1	
QC2313987-01										
ICV	Potassium, K	mg/L		2.01	mg/L	101		0.03	0.2	
QC2313987-02										
ICV	Calcium, Ca	mg/L		9.72	mg/L	97		0.05	1	
ICV	Magnesium, Mg	mg/L		9.76	mg/L	97		0.01	0.2	
ICV	Sodium, Na	mg/L		9.81	mg/L	99		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2302917**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/10/2023

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

Lab Sample#: 2302917-01 Sample Source: WSB\_SF71\_PP195 External ID:

Date Collected: 05/10/2023 10:52AM Date Received: 05/10/2023 11:50AM Sample Matrix: Aqueous Location Desc: WSB\_SF71, PARK PLAZA MW195

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	152	mg/L	1	5	05/10/2023	2061334 PWARNER	
Nitrate as N	11.9	mg/L	0.34	0.4	05/10/2023	2061334 PWARNER	>MCL
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	102	mg/L	0.04	1	05/16/2023	2061601 BTRINH	
Magnesium, Mg	79.8	mg/L	0.007	0.2	05/16/2023	2061601 BTRINH	
Sodium, Na	81.5	mg/L	0.02	1	05/16/2023	2061601 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	331	mg/L	1.19	6	05/10/2023	2061349 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	163	mg/L		6	05/10/2023	2061350 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1460	µmhos/cm		1	05/10/2023	2061356 DCARDONA	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	572	mg/L	0.948	6	05/10/2023	2061352 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.1	pH			05/10/2023	2061355 DCARDONA	H1,H3
Temperature (°C)	17.9	°C			05/10/2023	2061355 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	840	mg/L	13.2	20	05/15/2023	2061451 ABALALIO	>MCL

Lab Sample#: 2302917-01A Sample Source: WSB\_SF71\_PP195 External ID:

Date Collected: 05/10/2023 10:52AM Date Received: 05/10/2023 11:50AM Sample Matrix: Aqueous Location Desc: WSB\_SF71, PARK PLAZA MW195

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Potassium, K	4.09	mg/L	0.12	0.6	05/16/2023	2061601 BTRINH	

Lab Sample#: 2302917-02 Sample Source: WSB\_SF50\_PP460 External ID:

Date Collected: 05/10/2023 07:45AM Date Received: 05/10/2023 11:50AM Sample Matrix: Aqueous Location Desc: SF#50 - PARK PLAZA MW460

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	56.7	mg/L	1	5	05/10/2023	2061334 PWARNER	
Nitrate as N	6.62	mg/L	0.34	0.4	05/10/2023	2061334 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	53	mg/L	0.04	1	05/16/2023	2061601 BTRINH	
Magnesium, Mg	54.1	mg/L	0.007	0.2	05/16/2023	2061601 BTRINH	
Potassium, K	2.24	mg/L	0.04	0.2	05/16/2023	2061601 BTRINH	
Sodium, Na	56.4	mg/L	0.02	1	05/16/2023	2061601 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302917**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/10/2023

**Sampling Team:** Field

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	313	mg/L	1.19	6	05/10/2023	2061349 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	64.3	mg/L		6	05/10/2023	2061350 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	916	µmhos/cm		1	05/10/2023	2061356 DCARDONA	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	358	mg/L	0.948	6	05/10/2023	2061352 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.19	pH			05/10/2023	2061355 DCARDONA	H1,H3
Temperature (°C)	17.3	°C			05/10/2023	2061355 DCARDONA	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	511	mg/L	13.2	20	05/15/2023	2061451 ABALALIO	>MCL

**Lab Sample#:** 2302917-03 **Sample Source:** WSB\_SF51\_PP620 **External ID:**

**Date Collected:** 05/10/2023 10:03AM **Date Received:** 05/10/2023 11:50AM **Sample Matrix:** Aqueous **Location Desc:** SF#51 - PARK PLAZA MW620

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	38.8	mg/L	0.04	1	05/16/2023	2061601 BTRINH	
Magnesium, Mg	33.8	mg/L	0.007	0.2	05/16/2023	2061601 BTRINH	
Potassium, K	2.32	mg/L	0.04	0.2	05/16/2023	2061601 BTRINH	
Sodium, Na	48.4	mg/L	0.02	1	05/16/2023	2061601 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	177	mg/L	0.593	3	05/10/2023	2061349 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	78	mg/L		3	05/10/2023	2061350 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	705	µmhos/cm		1	05/10/2023	2061356 DCARDONA	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	235	mg/L	0.474	3	05/10/2023	2061352 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.74	pH			05/10/2023	2061355 DCARDONA	H1,H3
Temperature (°C)	17.3	°C			05/10/2023	2061355 DCARDONA	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	395	mg/L	13.2	20	05/15/2023	2061451 ABALALIO	

**Lab Sample#:** 2302917-03A **Sample Source:** WSB\_SF51\_PP620 **External ID:**

**Date Collected:** 05/10/2023 10:03AM **Date Received:** 05/10/2023 11:50AM **Sample Matrix:** Aqueous **Location Desc:** SF#51 - PARK PLAZA MW620

**Test/Analyte**

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302917**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/10/2023

**Sampling Team:** Field

<i>Nitrate as N</i>	<0.04	mg/L	0.034	0.04	05/10/2023	2061334	PWARNER
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**Lab Sample#:** 2302917-03B **Sample Source:** WSB\_SF51\_PP620 **External ID:**

**Date Collected:** 05/10/2023 10:03AM **Date Received:** 05/10/2023 11:50AM **Sample Matrix:** Aqueous **Location Desc:** SF#51 - PARK PLAZA MW620

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Sulfate</i>	58.2	mg/L	0.5	2.5	05/15/2023	2061538	PWARNER

**Lab Sample#:** 2302917-04 **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 05/10/2023 10:01AM **Date Received:** 05/10/2023 11:50AM **Sample Matrix:** Aqueous **Location Desc:** SF#50 - PARK PLAZA MW460

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Sulfate</i>	55.4	mg/L	1	5	05/10/2023	2061334	PWARNER
<i>Nitrate as N</i>	6.52	mg/L	0.34	0.4	05/10/2023	2061334	PWARNER

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Calcium, Ca</i>	53.5	mg/L	0.04	1	05/16/2023	2061601	BTRINH
<i>Magnesium, Mg</i>	54.4	mg/L	0.007	0.2	05/16/2023	2061601	BTRINH
<i>Potassium, K</i>	2.23	mg/L	0.04	0.2	05/16/2023	2061601	BTRINH
<i>Sodium, Na</i>	57.5	mg/L	0.02	1	05/16/2023	2061601	BTRINH

<u>MBP_ALK(SM 2320 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Alkalinity</i>	313	mg/L	1.19	6	05/10/2023	2061349	ALEE

<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Chloride</i>	64.3	mg/L		6	05/10/2023	2061350	ALEE

<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Specific Conductance @25°C</i>	917	µmhos/cm		1	05/10/2023	2061356	DCARDONA >MCL

<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Hardness, Total, as CaCO3</i>	357	mg/L	0.948	6	05/10/2023	2061352	ALEE

<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>pH</i>	7.17	pH			05/10/2023	2061355	DCARDONA H1,H3
<i>Temperature (°C)</i>	17.4	°C			05/10/2023	2061355	DCARDONA

<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	510	mg/L	13.2	20	05/15/2023	2061451	ABALALIO >MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302917**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/10/2023

**Sampling Team:** Field

**QC list for Run#: 2061334 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313782-01	MRL_CK	Sulfate		0.512	mg/L	102				
	MRL_CK	Nitrate as N		0.0415	mg/L	104				
QC2313782-02	CCV	Sulfate		2.4	mg/L	96				
	CCV	Nitrate as N		0.198	mg/L	99				
QC2313782-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313782-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313782-05	LCS	Sulfate		1.43	mg/L	95				
	LCS	Nitrate as N		0.25	mg/L	99				
QC2313782-06	CCV	Sulfate		21.5	mg/L	107				
	CCV	Nitrate as N		1.68	mg/L	105				
QC2313782-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313782-08	SPK of 2302759-03	Sulfate	13.1	15.8	mg/L	109				Splt# 2302759-03 (13.1mg/L)
	SPK of 2302759-03	Nitrate as N	<0.04	0.229	mg/L	115				Splt# 2302759-03 (<0.04mg/L)
QC2313782-09	SPKD of 2302759-03	Sulfate	13.1	15.9	mg/L	114	0			Splt# 2302759-03 (13.1mg/L)
	SPKD of 2302759-03	Nitrate as N	<0.04	0.231	mg/L	116	1			Splt# 2302759-03 (<0.04mg/L)
QC2313782-10	SPK of 2302774-04	Sulfate	8.82	11.4	mg/L	102				Splt# 2302774-04 (8.82mg/L)
	SPK of 2302774-04	Nitrate as N	0.12	0.318	mg/L	99				Splt# 2302774-04 (0.12mg/L)
QC2313782-11	SPKD of 2302774-04	Sulfate	8.82	11.4	mg/L	102	0			Splt# 2302774-04 (8.82mg/L)
	SPKD of 2302774-04	Nitrate as N	0.12	0.317	mg/L	98	0			Splt# 2302774-04 (0.12mg/L)
QC2313782-12	CCV	Sulfate		2.41	mg/L	96				
	CCV	Nitrate as N		0.197	mg/L	99				
QC2313782-13	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302917**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/10/2023

**Sampling Team:** Field

**QC list for Run#: 2061349 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313790-01	BLK	Alkalinity	<3		mg/L			0.593	3	
QC2313790-02	MRL_CK	Alkalinity	3.18		mg/L	106				
QC2313790-03	SPK of 2303377-01	Alkalinity	37.6	79	mg/L	103			3	Splt# 2303377-01 (37.6mg/L)
QC2313790-04	SPKD of 2303377-01	Alkalinity	37.6	77.6	mg/L	100	1		3	Splt# 2303377-01 (37.6mg/L)
QC2313790-05	DUP of 2302917-04	Alkalinity	313	305	mg/L		2	1.19	6	Splt# 2302917-04 (313mg/L)
QC2313790-06	LCS	Alkalinity	39.3		mg/L	98			3	

**QC list for Run#: 2061350 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313791-01	BLK	Chloride	<3		mg/L			1.16	3	
QC2313791-02	MRL_CK	Chloride	2.67		mg/L	89				
QC2313791-03	SPK of 2303377-01	Chloride	9.55	50.4	mg/L	102			3	Splt# 2303377-01 (9.55mg/L)
QC2313791-04	SPKD of 2303377-01	Chloride	9.55	50.2	mg/L	102	0		3	Splt# 2303377-01 (9.55mg/L)
QC2313791-05	DUP of 2302917-04	Chloride	64.3	63.1	mg/L		1		6	Splt# 2302917-04 (64.3mg/L)
QC2313791-06	LCS	Chloride	41.1		mg/L	103			3	

**QC list for Run#: 2061352 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313793-01	BLK	Hardness, Total, as CaCO3	<3		mg/L			0.474	3	
QC2313793-02	MRL_CK	Hardness, Total, as CaCO3	2.59		mg/L	86				
QC2313793-03	DUP of 2302917-04	Hardness, Total, as CaCO3	357	359	mg/L		0	0.948	6	Splt# 2302917-04 (357mg/L)
QC2313793-04	LCS	Hardness, Total, as CaCO3	39.2		mg/L	98			3	

**QC list for Run#: 2061355 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313796-04										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302917**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/10/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

ICV	pH	9.04	pH	99		
ICV	Temperature (°C)	18.4	°C			
QC2313796-05						
DUP of 2302917-01	pH	7.1	7.11	pH	0	Splt# 2302917-01 (7.1pH) H1,H3
DUP of 2302917-01	Temperature (°C)	17.9	17.9	°C		Splt# 2302917-01 (17.9°C)
QC2313796-06						
CCV	pH	9.05	pH	100		
CCV	Temperature (°C)	18.3	°C			

**QC list for Run#: 2061356 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313797-02	ICV	Specific Conductance @25°C	156		µmhos/cm	106				
QC2313797-03	BLK	Specific Conductance @25°C	<1		µmhos/cm				1	
QC2313797-04	MRL_CHK	Specific Conductance @25°C	9.99		µmhos/cm	99				
QC2313797-05	DUP of 2302917-01	Specific Conductance @25°C	1460	1460	µmhos/cm	0			1	Splt# 2302917-01 (1460µmhos/cm)
QC2313797-06	CCV	Specific Conductance @25°C	102		µmhos/cm	102				

**QC list for Run#: 2061451 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313871-01	BLK	Total Dissolved Solids	<20		mg/L			13.2	20	
QC2313871-02	DUP of 2302917-03	Total Dissolved Solids	395	387	mg/L	2		13.2	20	Splt# 2302917-03 (395mg/L)
QC2313871-03	LCS	Total Dissolved Solids	90		mg/L	94		13.2	20	

**QC list for Run#: 2061538 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313936-01	MRL_CHK	Sulfate	0.511		mg/L	102				
	MRL_CHK	Nitrate as N	0.0412		mg/L	103				
QC2313936-02	CCV	Sulfate	2.41		mg/L	96				
	CCV	Nitrate as N	0.199		mg/L	99				
QC2313936-03	BLK	Sulfate	<0.5		mg/L			0.1	0.5	
	BLK	Nitrate as N	<0.04		mg/L			0.034	0.04	
QC2313936-04										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302917**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/10/2023

**Sampling Team:** Field

Sample ID	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
BLK	Sulfate		<0.5	mg/L			0.1	0.5	
BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313936-05									
LCS	Sulfate		1.45	mg/L	96				
LCS	Nitrate as N		0.24	mg/L	96				
QC2313936-06									
CCV	Sulfate		21.7	mg/L	108				
CCV	Nitrate as N		1.68	mg/L	106				
QC2313936-07									
BLK	Sulfate		<0.5	mg/L			0.1	0.5	
BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313936-08									
SPK of 2302753-05	Sulfate		12.9	15.7	mg/L	111			Splt# 2302753-05 (12.9mg/L)
SPK of 2302753-05	Nitrate as N		<0.04	0.232	mg/L	117			Splt# 2302753-05 (<0.04mg/L)
QC2313936-09									
SPKD of 2302753-05	Sulfate		12.9	15.6	mg/L	107	0		Splt# 2302753-05 (12.9mg/L)
SPKD of 2302753-05	Nitrate as N		<0.04	0.229	mg/L	115	1		Splt# 2302753-05 (<0.04mg/L)

**QC list for Run#: 2061601 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313921-01										
BLK	Calcium, Ca		<1		mg/L			0.04	1	
BLK	Magnesium, Mg		<0.2		mg/L			0.007	0.2	
BLK	Potassium, K		<0.2		mg/L			0.04	0.2	
BLK	Sodium, Na		<1		mg/L			0.02	1	
QC2313921-02										
LCS	Calcium, Ca		1.76		mg/L	88		0.04	1	
LCS	Magnesium, Mg		2.01		mg/L	100		0.007	0.2	
LCS	Potassium, K		2.07		mg/L	103		0.04	0.2	
LCS	Sodium, Na		2.03		mg/L	101		0.02	1	
QC2313921-03										
DUP of 2302916-04	Calcium, Ca		45.4	44.9	mg/L		1	0.04	1	Splt# 2302916-04 (45.4mg/L)
DUP of 2302916-04	Magnesium, Mg		40.4	39.5	mg/L		2	0.007	0.2	Splt# 2302916-04 (40.4mg/L)
DUP of 2302916-04	Potassium, K		2.16	2.13	mg/L		1	0.04	0.2	Splt# 2302916-04 (2.16mg/L)
DUP of 2302916-04	Sodium, Na		70.7	68.9	mg/L		2	0.02	1	Splt# 2302916-04 (70.7mg/L)
QC2313921-04										
SPK of 2302916-04	Calcium, Ca		45.4	47.4	mg/L	105		0.04	1	Splt# 2302916-04 (45.4mg/L) Spike too low
SPK of 2302916-04	Magnesium, Mg		40.4	41.2	mg/L	41		0.007	0.2	Splt# 2302916-04 (40.4mg/L) Spike too low
SPK of 2302916-04	Potassium, K		2.16	4.19	mg/L	102		0.04	0.2	Splt# 2302916-04 (2.16mg/L)
SPK of 2302916-04	Sodium, Na		70.7	70.6	mg/L	0		0.02	1	Splt# 2302916-04 (70.7mg/L) Spike too low

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302917**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/10/2023

**Sampling Team:** Field

QC2313921-05

SPKD of 2302916-04	Calcium, Ca	45.4	48	mg/L	130	1	0.04	1	Splt# 2302916-04 (45.4mg/L) Spike too low
SPKD of 2302916-04	Magnesium, Mg	40.4	41.8	mg/L	71	1	0.007	0.2	Splt# 2302916-04 (40.4mg/L) Spike too low
SPKD of 2302916-04	Potassium, K	2.16	4.19	mg/L	102	0	0.04	0.2	Splt# 2302916-04 (2.16mg/L)
SPKD of 2302916-04	Sodium, Na	70.7	71.4	mg/L	34	1	0.02	1	Splt# 2302916-04 (70.7mg/L) Spike too low

QC2313921-06

MRL_CK	Calcium, Ca	<1		mg/L	N/A		0.04	1	
MRL_CK	Magnesium, Mg	<0.2		mg/L	N/A		0.007	0.2	
MRL_CK	Potassium, K	0.218		mg/L	87		0.04	0.2	
MRL_CK	Sodium, Na	<1		mg/L	N/A		0.02	1	

QC2313987-01

ICV	Potassium, K	2.01		mg/L	101		0.03	0.2	
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QC2313987-02

ICV	Calcium, Ca	9.72		mg/L	97		0.05	1	
ICV	Magnesium, Mg	9.76		mg/L	97		0.01	0.2	
ICV	Sodium, Na	9.81		mg/L	99		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

<b>Lab Sample#:</b> 2302918-01	<b>Sample Source:</b> WSB_CAL-31A-145	<b>External ID:</b>
<b>Date Collected:</b> 05/11/2023 11:35AM	<b>Date Received:</b> 05/11/2023 12:33PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> GSR_CAL_CUP-31-145

**Test/Analyte**

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	54	mg/L	0.5	2.5	05/11/2023	2061396 WFCHEUNG	
Nitrate as N	0.891	mg/L	0.17	0.2	05/11/2023	2061396 WFCHEUNG	

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	70.1	mg/L	0.04	1	05/16/2023	2061601 BTRINH	
Magnesium, Mg	59.7	mg/L	0.007	0.2	05/16/2023	2061601 BTRINH	
Potassium, K	3.57	mg/L	0.04	0.2	05/16/2023	2061601 BTRINH	
Sodium, Na	80.9	mg/L	0.02	1	05/16/2023	2061601 BTRINH	

<u>MBO_524_VOC(EPA 524.2)</u>	<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Vinyl chloride	<0.5	µg/L	0.1	0.5	05/18/2023	2061749 GKWONG	
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.052	0.5	05/18/2023	2061749 GKWONG	
1,1-Dichloroethylene	<0.5	µg/L	0.075	0.5	05/18/2023	2061749 GKWONG	
Methylene chloride	<0.5	µg/L	0.058	0.5	05/18/2023	2061749 GKWONG	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L	0.114	0.5	05/18/2023	2061749 GKWONG	
trans-1,2-Dichloroethylene	<0.5	µg/L	0.099	0.5	05/18/2023	2061749 GKWONG	
Methyl t-butyl ether	<3	µg/L	0.106	3	05/18/2023	2061749 GKWONG	
1,1-Dichloroethane	<0.5	µg/L	0.192	0.5	05/18/2023	2061749 GKWONG	
cis-1,2-dichloroethylene	<0.5	µg/L	0.111	0.5	05/18/2023	2061749 GKWONG	
1,1,1-Trichloroethane	<0.5	µg/L	0.179	0.5	05/18/2023	2061749 GKWONG	
Carbon tetrachloride	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
Benzene	<0.5	µg/L	0.061	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichloroethane	<0.5	µg/L	0.115	0.5	05/18/2023	2061749 GKWONG	
Trichloroethylene	<0.5	µg/L	0.093	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichloropropane	<0.5	µg/L	0.073	0.5	05/18/2023	2061749 GKWONG	
cis-1,3-dichloropropene	<0.5	µg/L	0.07	0.5	05/18/2023	2061749 GKWONG	
Toluene	<0.5	µg/L	0.118	0.5	05/18/2023	2061749 GKWONG	
trans-1,3-Dichloropropene	<0.5	µg/L	0.213	0.5	05/18/2023	2061749 GKWONG	
1,1,2-Trichloroethane	<0.5	µg/L	0.052	0.5	05/18/2023	2061749 GKWONG	
Tetrachloroethylene	<0.5	µg/L	0.114	0.5	05/18/2023	2061749 GKWONG	
Chlorobenzene	<0.5	µg/L	0.185	0.5	05/18/2023	2061749 GKWONG	
Ethylbenzene	<0.5	µg/L	0.05	0.5	05/18/2023	2061749 GKWONG	
m,p-Xylene	<0.5	µg/L	0.151	0.5	05/18/2023	2061749 GKWONG	
o-Xylene	<0.5	µg/L	0.076	0.5	05/18/2023	2061749 GKWONG	
Styrene	<0.5	µg/L	0.053	0.5	05/18/2023	2061749 GKWONG	
1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
1,4-Dichlorobenzene	<0.5	µg/L	0.082	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichlorobenzene	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
1,2,4-Trichlorobenzene	<0.5	µg/L	0.084	0.5	05/18/2023	2061749 GKWONG	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	0.5	0.5	05/18/2023	2061749 GKWONG	
Xylene (total: p, m, o)	<0.5	µg/L		0.5	05/18/2023	2061749 GKWONG	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

Internal Standard(s)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Fluorobenzene (IS)	1	µg/L			05/18/2023	2061749 GKWONG	
Surrogate(s)							
p-Bromofluorobenzene (Surr.)	0.94	µg/L			05/18/2023	2061749 GKWONG	
1,2-Dichlorobenzene d- (Surr.)	0.9	µg/L			05/18/2023	2061749 GKWONG	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	462	mg/L	1.19	6	05/11/2023	2061420 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	46.7	mg/L		6	05/11/2023	2061422 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	1050	µmhos/cm		1	05/11/2023	2061418 DCARDONA	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	408	mg/L	0.948	6	05/11/2023	2061425 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
pH	6.72	pH			05/11/2023	2061421 DCARDONA	H1,H3
Temperature (°C)	18	°C			05/11/2023	2061421 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Total Dissolved Solids	597	mg/L	13.2	20	05/15/2023	2061451 ABALALIO	>MCL
<b>Lab Sample#:</b> 2302918-02	<b>Sample Source:</b> WSB_CAL-31A-280	<b>External ID:</b>					
<b>Date Collected:</b> 05/11/2023 10:57AM	<b>Date Received:</b> 05/11/2023 12:33PM	<b>Sample Matrix:</b> Aqueous	<b>Location Desc:</b> GSR_CAL_CUP-31-280				
<b>Test/Analyte</b>							
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Sulfate	71.4	mg/L	1	5	05/11/2023	2061396 WFCHEUNG	
Nitrate as N	3.57	mg/L	0.34	0.4	05/11/2023	2061396 WFCHEUNG	
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Calcium, Ca	51	mg/L	0.04	1	05/16/2023	2061601 BTRINH	
Magnesium, Mg	45.6	mg/L	0.007	0.2	05/16/2023	2061601 BTRINH	
Potassium, K	2.85	mg/L	0.04	0.2	05/16/2023	2061601 BTRINH	
Sodium, Na	72.1	mg/L	0.02	1	05/16/2023	2061601 BTRINH	
<b>MBO_524_VOC(EPA 524.2)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Vinyl chloride	<0.5	µg/L	0.1	0.5	05/18/2023	2061749 GKWONG	
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.052	0.5	05/18/2023	2061749 GKWONG	
1,1-Dichloroethylene	<0.5	µg/L	0.075	0.5	05/18/2023	2061749 GKWONG	
Methylene chloride	<0.5	µg/L	0.058	0.5	05/18/2023	2061749 GKWONG	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L	0.114	0.5	05/18/2023	2061749 GKWONG	
trans-1,2-Dichloroethylene	<0.5	µg/L	0.099	0.5	05/18/2023	2061749 GKWONG	
Methyl t-butyl ether	<3	µg/L	0.106	3	05/18/2023	2061749 GKWONG	
1,1-Dichloroethane	<0.5	µg/L	0.192	0.5	05/18/2023	2061749 GKWONG	
cis-1,2-dichloroethylene	<0.5	µg/L	0.111	0.5	05/18/2023	2061749 GKWONG	
1,1,1-Trichloroethane	<0.5	µg/L	0.179	0.5	05/18/2023	2061749 GKWONG	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

Parameter	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Carbon tetrachloride	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
Benzene	<0.5	µg/L	0.061	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichloroethane	<0.5	µg/L	0.115	0.5	05/18/2023	2061749 GKWONG	
Trichloroethylene	3.02	µg/L	0.093	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichloropropane	<0.5	µg/L	0.073	0.5	05/18/2023	2061749 GKWONG	
cis-1,3-dichloropropene	<0.5	µg/L	0.07	0.5	05/18/2023	2061749 GKWONG	
Toluene	<0.5	µg/L	0.118	0.5	05/18/2023	2061749 GKWONG	
trans-1,3-Dichloropropene	<0.5	µg/L	0.213	0.5	05/18/2023	2061749 GKWONG	
1,1,2-Trichloroethane	<0.5	µg/L	0.052	0.5	05/18/2023	2061749 GKWONG	
Chlorobenzene	<0.5	µg/L	0.185	0.5	05/18/2023	2061749 GKWONG	
Ethylbenzene	<0.5	µg/L	0.05	0.5	05/18/2023	2061749 GKWONG	
m,p-Xylene	<0.5	µg/L	0.151	0.5	05/18/2023	2061749 GKWONG	
o-Xylene	<0.5	µg/L	0.076	0.5	05/18/2023	2061749 GKWONG	
Styrene	<0.5	µg/L	0.053	0.5	05/18/2023	2061749 GKWONG	
1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
1,4-Dichlorobenzene	<0.5	µg/L	0.082	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichlorobenzene	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
1,2,4-Trichlorobenzene	<0.5	µg/L	0.084	0.5	05/18/2023	2061749 GKWONG	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	0.5	0.5	05/18/2023	2061749 GKWONG	
Xylene (total: p, m, o)	<0.5	µg/L		0.5	05/18/2023	2061749 GKWONG	
Internal Standard(s)							
Fluorobenzene (IS)	1	µg/L			05/18/2023	2061749 GKWONG	
Surrogate(s)							
p-Bromofluorobenzene (Surr.)	0.9	µg/L			05/18/2023	2061749 GKWONG	
1,2-Dichlorobenzene d- (Surr.)	0.93	µg/L			05/18/2023	2061749 GKWONG	

Parameter	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	327	mg/L	1.19	6	05/11/2023	2061420 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	47	mg/L		6	05/11/2023	2061422 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	905	µmhos/cm		1	05/11/2023	2061418 DCARDONA	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	320	mg/L	0.948	6	05/11/2023	2061425 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	6.97	pH			05/11/2023	2061421 DCARDONA	H1,H3
Temperature (°C)	17.3	°C			05/11/2023	2061421 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	509	mg/L	13.2	20	05/15/2023	2061451 ABALALIO	>MCL

**Lab Sample#:** 2302918-02A      **Sample Source:** WSB\_CAL-31A-280      **External ID:**

**Date Collected:** 05/11/2023 10:57AM      **Date Received:** 05/11/2023 12:33PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-31-280

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBO_524_VOC(EPA 524.2)							

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#	Analyst	Flag/Comments
Tetrachloroethylene	118	µg/L	1.14	5	05/19/2023	2061810	GKWONG	>MCL
Internal Standard(s)								
Fluorobenzene (IS)	1	µg/L			05/19/2023	2061810	GKWONG	
Surrogate(s)								
p-Bromofluorobenzene (Surr.)	0.88	µg/L			05/19/2023	2061810	GKWONG	
1,2-Dichlorobenzene d- (Surr.)	0.86	µg/L			05/19/2023	2061810	GKWONG	

**Lab Sample#:** 2302918-03 **Sample Source:** WSB\_CAL-31A-480 **External ID:**

**Date Collected:** 05/11/2023 10:15AM **Date Received:** 05/11/2023 12:33PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-31-480

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#	Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	<0.5	mg/L	0.1	0.5	05/11/2023	2061396	WFCHEUNG	
Nitrate as N	<0.04	mg/L	0.034	0.04	05/11/2023	2061396	WFCHEUNG	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#	Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	32.2	mg/L	0.04	1	05/16/2023	2061601	BTRINH	
Magnesium, Mg	41.3	mg/L	0.007	0.2	05/16/2023	2061601	BTRINH	
Sodium, Na	55.9	mg/L	0.02	1	05/16/2023	2061601	BTRINH	

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#	Analyst	Flag/Comments
<b>MBO_524_VOC(EPA 524.2)</b>								
Vinyl chloride	<0.5	µg/L	0.1	0.5	05/18/2023	2061749	GKWONG	
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.052	0.5	05/18/2023	2061749	GKWONG	
1,1-Dichloroethylene	<0.5	µg/L	0.075	0.5	05/18/2023	2061749	GKWONG	
Methylene chloride	<0.5	µg/L	0.058	0.5	05/18/2023	2061749	GKWONG	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L	0.114	0.5	05/18/2023	2061749	GKWONG	
trans-1,2-Dichloroethylene	<0.5	µg/L	0.099	0.5	05/18/2023	2061749	GKWONG	
Methyl t-butyl ether	<3	µg/L	0.106	3	05/18/2023	2061749	GKWONG	
1,1-Dichloroethane	<0.5	µg/L	0.192	0.5	05/18/2023	2061749	GKWONG	
cis-1,2-dichloroethylene	<0.5	µg/L	0.111	0.5	05/18/2023	2061749	GKWONG	
1,1,1-Trichloroethane	<0.5	µg/L	0.179	0.5	05/18/2023	2061749	GKWONG	
Carbon tetrachloride	<0.5	µg/L	0.066	0.5	05/18/2023	2061749	GKWONG	
Benzene	<0.5	µg/L	0.061	0.5	05/18/2023	2061749	GKWONG	
1,2-Dichloroethane	<0.5	µg/L	0.115	0.5	05/18/2023	2061749	GKWONG	
Trichloroethylene	<0.5	µg/L	0.093	0.5	05/18/2023	2061749	GKWONG	
1,2-Dichloropropane	<0.5	µg/L	0.073	0.5	05/18/2023	2061749	GKWONG	
cis-1,3-dichloropropene	<0.5	µg/L	0.07	0.5	05/18/2023	2061749	GKWONG	
Toluene	<0.5	µg/L	0.118	0.5	05/18/2023	2061749	GKWONG	
trans-1,3-Dichloropropene	<0.5	µg/L	0.213	0.5	05/18/2023	2061749	GKWONG	
1,1,2-Trichloroethane	<0.5	µg/L	0.052	0.5	05/18/2023	2061749	GKWONG	
Tetrachloroethylene	<0.5	µg/L	0.114	0.5	05/18/2023	2061749	GKWONG	
Chlorobenzene	<0.5	µg/L	0.185	0.5	05/18/2023	2061749	GKWONG	
Ethylbenzene	<0.5	µg/L	0.05	0.5	05/18/2023	2061749	GKWONG	
m,p-Xylene	<0.5	µg/L	0.151	0.5	05/18/2023	2061749	GKWONG	
o-Xylene	<0.5	µg/L	0.076	0.5	05/18/2023	2061749	GKWONG	
Styrene	<0.5	µg/L	0.053	0.5	05/18/2023	2061749	GKWONG	
1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.066	0.5	05/18/2023	2061749	GKWONG	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/11/2023

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
1,4-Dichlorobenzene	<0.5	µg/L	0.082	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichlorobenzene	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
1,2,4-Trichlorobenzene	<0.5	µg/L	0.084	0.5	05/18/2023	2061749 GKWONG	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	0.5	0.5	05/18/2023	2061749 GKWONG	
Xylene (total: p, m, o)	<0.5	µg/L		0.5	05/18/2023	2061749 GKWONG	
Internal Standard(s)							
Fluorobenzene (IS)	1	µg/L			05/18/2023	2061749 GKWONG	
Surrogate(s)							
p-Bromofluorobenzene (Surr.)	0.83	µg/L			05/18/2023	2061749 GKWONG	
1,2-Dichlorobenzene d- (Surr.)	0.79	µg/L			05/18/2023	2061749 GKWONG	

MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	372	mg/L	1.19	6	05/11/2023	2061420 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)							
Chloride	38.2	mg/L		6	05/11/2023	2061422 ALEE	
MBP_COND(SM 2510 B)							
Specific Conductance @25°C	779	µmhos/cm		1	05/11/2023	2061418 DCARDONA	
MBP_HARDNESS_T(SM 2340 C)							
Hardness, Total, as CaCO3	249	mg/L	0.948	6	05/11/2023	2061425 ALEE	
MBP_PH(SM 4500-H+ B)							
pH	7.32	pH			05/11/2023	2061421 DCARDONA	H1,H3
Temperature (°C)	17.1	°C			05/11/2023	2061421 DCARDONA	
MBP_TDS(SM 2540 C)							
Total Dissolved Solids	398	mg/L	13.2	20	05/15/2023	2061451 ABALALIO	

Lab Sample#: 2302918-03A Sample Source: WSB\_CAL-31A-480 External ID:

Date Collected: 05/11/2023 10:15AM Date Received: 05/11/2023 12:33PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-480

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SEM_200.7_DW(EPA 200.7)							
Potassium, K	11.9	mg/L	0.24	1.2	05/16/2023	2061601 BTRINH	

Lab Sample#: 2302918-04 Sample Source: WSB\_CAL-31A-595 External ID:

Date Collected: 05/11/2023 10:13AM Date Received: 05/11/2023 12:33PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-595

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))							
Sulfate	268	mg/L	2	10	05/11/2023	2061396 WFCHEUNG	>MCL
SEM_200.7_DW(EPA 200.7)							
Calcium, Ca	101	mg/L	0.04	1	05/16/2023	2061601 BTRINH	
Magnesium, Mg	65.9	mg/L	0.007	0.2	05/16/2023	2061601 BTRINH	
MBO_524_VOC(EPA 524.2)							
Vinyl chloride	<0.5	µg/L	0.1	0.5	05/18/2023	2061749 GKWONG	
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.052	0.5	05/18/2023	2061749 GKWONG	
1,1-Dichloroethylene	<0.5	µg/L	0.075	0.5	05/18/2023	2061749 GKWONG	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

Methylene chloride	<0.5	µg/L	0.058	0.5	05/18/2023	2061749	GKWONG	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L	0.114	0.5	05/18/2023	2061749	GKWONG	
trans-1,2-Dichloroethylene	<0.5	µg/L	0.099	0.5	05/18/2023	2061749	GKWONG	
Methyl t-butyl ether	<3	µg/L	0.106	3	05/18/2023	2061749	GKWONG	
1,1-Dichloroethane	<0.5	µg/L	0.192	0.5	05/18/2023	2061749	GKWONG	
cis-1,2-dichloroethylene	<0.5	µg/L	0.111	0.5	05/18/2023	2061749	GKWONG	
1,1,1-Trichloroethane	<0.5	µg/L	0.179	0.5	05/18/2023	2061749	GKWONG	
Carbon tetrachloride	<0.5	µg/L	0.066	0.5	05/18/2023	2061749	GKWONG	
Benzene	<0.5	µg/L	0.061	0.5	05/18/2023	2061749	GKWONG	
1,2-Dichloroethane	<0.5	µg/L	0.115	0.5	05/18/2023	2061749	GKWONG	
Trichloroethylene	<0.5	µg/L	0.093	0.5	05/18/2023	2061749	GKWONG	
1,2-Dichloropropane	<0.5	µg/L	0.073	0.5	05/18/2023	2061749	GKWONG	
cis-1,3-dichloropropene	<0.5	µg/L	0.07	0.5	05/18/2023	2061749	GKWONG	
Toluene	<0.5	µg/L	0.118	0.5	05/18/2023	2061749	GKWONG	
trans-1,3-Dichloropropene	<0.5	µg/L	0.213	0.5	05/18/2023	2061749	GKWONG	
1,1,2-Trichloroethane	<0.5	µg/L	0.052	0.5	05/18/2023	2061749	GKWONG	
Tetrachloroethylene	<0.5	µg/L	0.114	0.5	05/18/2023	2061749	GKWONG	
Chlorobenzene	<0.5	µg/L	0.185	0.5	05/18/2023	2061749	GKWONG	
Ethylbenzene	<0.5	µg/L	0.05	0.5	05/18/2023	2061749	GKWONG	
m,p-Xylene	<0.5	µg/L	0.151	0.5	05/18/2023	2061749	GKWONG	
o-Xylene	<0.5	µg/L	0.076	0.5	05/18/2023	2061749	GKWONG	
Styrene	<0.5	µg/L	0.053	0.5	05/18/2023	2061749	GKWONG	
1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.066	0.5	05/18/2023	2061749	GKWONG	
1,4-Dichlorobenzene	<0.5	µg/L	0.082	0.5	05/18/2023	2061749	GKWONG	
1,2-Dichlorobenzene	<0.5	µg/L	0.066	0.5	05/18/2023	2061749	GKWONG	
1,2,4-Trichlorobenzene	<0.5	µg/L	0.084	0.5	05/18/2023	2061749	GKWONG	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	0.5	0.5	05/18/2023	2061749	GKWONG	
Xylene (total: p, m, o)	<0.5	µg/L		0.5	05/18/2023	2061749	GKWONG	
Internal Standard(s)								
Fluorobenzene (IS)	1	µg/L			05/18/2023	2061749	GKWONG	
Surrogate(s)								
p-Bromofluorobenzene (Surr.)	0.98	µg/L			05/18/2023	2061749	GKWONG	
1,2-Dichlorobenzene d- (Surr.)	0.93	µg/L			05/18/2023	2061749	GKWONG	
<b>MBP_ALK(SM 2320 B)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Alkalinity	219	mg/L	1.19	6	05/11/2023	2061420 ALEE		
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Chloride	214	mg/L		6	05/11/2023	2061422 ALEE		
<b>MBP_COND(SM 2510 B)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Specific Conductance @25°C	1550	µmhos/cm		1	05/11/2023	2061418 DCARDONA	>MCL	
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Hardness, Total, as CaCO3	519	mg/L	0.948	6	05/11/2023	2061425 ALEE		
<b>MBP_PH(SM 4500-H+ B)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
pH	6.89	pH			05/11/2023	2061421 DCARDONA	H1,H3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

Temperature (°C)	17.5	°C			05/11/2023	2061421	DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Total Dissolved Solids	945	mg/L	13.2	20	05/15/2023	2061451 ABALALIO	>MCL	
<b>Lab Sample#:</b>	<b>2302918-04A</b>	<b>Sample Source:</b>	WSB_CAL-31A-595		<b>External ID:</b>			
<b>Date Collected:</b>	05/11/2023 10:13AM	<b>Date Received:</b>	05/11/2023 12:33PM	<b>Sample Matrix:</b>	Aqueous	<b>Location Desc:</b> GSR_CAL_CUP-31-595		
<b>Test/Analyte</b>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Nitrate as N	<0.04	mg/L	0.034	0.04	05/11/2023	2061396 WFCHEUNG		
<b>Lab Sample#:</b>	<b>2302918-04B</b>	<b>Sample Source:</b>	WSB_CAL-31A-595		<b>External ID:</b>			
<b>Date Collected:</b>	05/11/2023 10:13AM	<b>Date Received:</b>	05/11/2023 12:33PM	<b>Sample Matrix:</b>	Aqueous	<b>Location Desc:</b> GSR_CAL_CUP-31-595		
<b>Test/Analyte</b>								
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Potassium, K	5.09	mg/L	0.16	0.8	05/16/2023	2061601 BTRINH		
<b>Lab Sample#:</b>	<b>2302918-04C</b>	<b>Sample Source:</b>	WSB_CAL-31A-595		<b>External ID:</b>			
<b>Date Collected:</b>	05/11/2023 10:13AM	<b>Date Received:</b>	05/11/2023 12:33PM	<b>Sample Matrix:</b>	Aqueous	<b>Location Desc:</b> GSR_CAL_CUP-31-595		
<b>Test/Analyte</b>								
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Sodium, Na	108	mg/L	0.08	4	05/16/2023	2061601 BTRINH		
<b>Lab Sample#:</b>	<b>2302918-05</b>	<b>Sample Source:</b>	WSB_CAL_DUP		<b>External ID:</b>			
<b>Date Collected:</b>	05/11/2023 11:15AM	<b>Date Received:</b>	05/11/2023 12:33PM	<b>Sample Matrix:</b>	Aqueous	<b>Location Desc:</b> GSR_CAL_CUP-31-280		
<b>Test/Analyte</b>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Sulfate	72.7	mg/L	1	5	05/11/2023	2061396 WFCHEUNG		
Nitrate as N	3.53	mg/L	0.34	0.4	05/11/2023	2061396 WFCHEUNG		
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Calcium, Ca	52	mg/L	0.04	1	05/24/2023	2061962 BTRINH		
Magnesium, Mg	47.1	mg/L	0.007	0.2	05/24/2023	2061962 BTRINH		
Potassium, K	2.83	mg/L	0.04	0.2	05/24/2023	2061962 BTRINH		
Sodium, Na	75	mg/L	0.02	1	05/24/2023	2061962 BTRINH		
<b>MBO_524_VOC(EPA 524.2)</b>	<b>Result</b>	<b>Unit</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>	
Vinyl chloride	<0.5	µg/L	0.1	0.5	05/18/2023	2061749 GKWONG		
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.052	0.5	05/18/2023	2061749 GKWONG		
1,1-Dichloroethylene	<0.5	µg/L	0.075	0.5	05/18/2023	2061749 GKWONG		
Methylene chloride	<0.5	µg/L	0.058	0.5	05/18/2023	2061749 GKWONG		
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L	0.114	0.5	05/18/2023	2061749 GKWONG		
trans-1,2-Dichloroethylene	<0.5	µg/L	0.099	0.5	05/18/2023	2061749 GKWONG		
Methyl t-butyl ether	<3	µg/L	0.106	3	05/18/2023	2061749 GKWONG		
1,1-Dichloroethane	<0.5	µg/L	0.192	0.5	05/18/2023	2061749 GKWONG		
cis-1,2-dichloroethylene	<0.5	µg/L	0.111	0.5	05/18/2023	2061749 GKWONG		

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

1,1,1-Trichloroethane	<0.5	µg/L	0.179	0.5	05/18/2023	2061749	GKWONG	
Carbon tetrachloride	<0.5	µg/L	0.066	0.5	05/18/2023	2061749	GKWONG	
Benzene	<0.5	µg/L	0.061	0.5	05/18/2023	2061749	GKWONG	
1,2-Dichloroethane	<0.5	µg/L	0.115	0.5	05/18/2023	2061749	GKWONG	
Trichloroethylene	2.75	µg/L	0.093	0.5	05/18/2023	2061749	GKWONG	
1,2-Dichloropropane	<0.5	µg/L	0.073	0.5	05/18/2023	2061749	GKWONG	
cis-1,3-dichloropropene	<0.5	µg/L	0.07	0.5	05/18/2023	2061749	GKWONG	
Toluene	<0.5	µg/L	0.118	0.5	05/18/2023	2061749	GKWONG	
trans-1,3-Dichloropropene	<0.5	µg/L	0.213	0.5	05/18/2023	2061749	GKWONG	
1,1,2-Trichloroethane	<0.5	µg/L	0.052	0.5	05/18/2023	2061749	GKWONG	
Chlorobenzene	<0.5	µg/L	0.185	0.5	05/18/2023	2061749	GKWONG	
Ethylbenzene	<0.5	µg/L	0.05	0.5	05/18/2023	2061749	GKWONG	
m,p-Xylene	<0.5	µg/L	0.151	0.5	05/18/2023	2061749	GKWONG	
o-Xylene	<0.5	µg/L	0.076	0.5	05/18/2023	2061749	GKWONG	
Styrene	<0.5	µg/L	0.053	0.5	05/18/2023	2061749	GKWONG	
1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.066	0.5	05/18/2023	2061749	GKWONG	
1,4-Dichlorobenzene	<0.5	µg/L	0.082	0.5	05/18/2023	2061749	GKWONG	
1,2-Dichlorobenzene	<0.5	µg/L	0.066	0.5	05/18/2023	2061749	GKWONG	
1,2,4-Trichlorobenzene	<0.5	µg/L	0.084	0.5	05/18/2023	2061749	GKWONG	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	0.5	0.5	05/18/2023	2061749	GKWONG	
Xylene (total: p, m, o)	<0.5	µg/L		0.5	05/18/2023	2061749	GKWONG	
<b>Internal Standard(s)</b>								
Fluorobenzene (IS)	1	µg/L			05/18/2023	2061749	GKWONG	
<b>Surrogate(s)</b>								
p-Bromofluorobenzene (Surr.)	0.89	µg/L			05/18/2023	2061749	GKWONG	
1,2-Dichlorobenzene d- (Surr.)	0.76	µg/L			05/18/2023	2061749	GKWONG	
<b>MBP_ALK(SM 2320 B)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Alkalinity	334	mg/L	1.19	6	05/11/2023	2061420 ALEE		
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Chloride	47.9	mg/L		6	05/11/2023	2061422 ALEE		
<b>MBP_COND(SM 2510 B)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Specific Conductance @25°C	909	µmhos/cm		1	05/11/2023	2061418 DCARDONA	>MCL	
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Hardness, Total, as CaCO3	324	mg/L	0.948	6	05/11/2023	2061425 ALEE		
<b>MBP_PH(SM 4500-H+ B)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
pH	6.94	pH			05/11/2023	2061421 DCARDONA	H1,H3	
Temperature (°C)	17.9	°C			05/11/2023	2061421 DCARDONA		
<b>MBP_TDS(SM 2540 C)</b>								
<u>Result</u>	<u>Unit</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>		
Total Dissolved Solids	509	mg/L	13.2	20	05/15/2023	2061451 ABALALIO	>MCL	

**Lab Sample#:** 2302918-05A **Sample Source:** WSB\_CAL\_DUP **External ID:**

**Date Collected:** 05/11/2023 11:15AM **Date Received:** 05/11/2023 12:33PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-31-280

Test/Analyte

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

MBO_524_VOC(EPA 524.2)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Tetrachloroethylene	126	µg/L	1.14	5	05/19/2023	2061810 GKWONG	>MCL
Internal Standard(s)							
Fluorobenzene (IS)	1	µg/L			05/19/2023	2061810 GKWONG	
Surrogate(s)							
p-Bromofluorobenzene (Surr.)	0.89	µg/L			05/19/2023	2061810 GKWONG	
1,2-Dichlorobenzene d- (Surr.)	0.86	µg/L			05/19/2023	2061810 GKWONG	

**Lab Sample#:** 2302918-06 **Sample Source:** QC\_TRIP\_BLANK **External ID:**

**Date Collected:** 05/10/2023 02:00PM **Date Received:** 05/11/2023 12:33PM **Sample Matrix:** Aqueous **Location Desc:** TRIP\_BLANK\_GSR\_CAL\_CUP-31

Test/Analyte

MBO_524_VOC(EPA 524.2)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Vinyl chloride	<0.5	µg/L	0.1	0.5	05/18/2023	2061749 GKWONG	
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.052	0.5	05/18/2023	2061749 GKWONG	
1,1-Dichloroethylene	<0.5	µg/L	0.075	0.5	05/18/2023	2061749 GKWONG	
Methylene chloride	<0.5	µg/L	0.058	0.5	05/18/2023	2061749 GKWONG	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L	0.114	0.5	05/18/2023	2061749 GKWONG	
trans-1,2-Dichloroethylene	<0.5	µg/L	0.099	0.5	05/18/2023	2061749 GKWONG	
Methyl t-butyl ether	<3	µg/L	0.106	3	05/18/2023	2061749 GKWONG	
1,1-Dichloroethane	<0.5	µg/L	0.192	0.5	05/18/2023	2061749 GKWONG	
cis-1,2-dichloroethylene	<0.5	µg/L	0.111	0.5	05/18/2023	2061749 GKWONG	
1,1,1-Trichloroethane	<0.5	µg/L	0.179	0.5	05/18/2023	2061749 GKWONG	
Carbon tetrachloride	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
Benzene	<0.5	µg/L	0.061	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichloroethane	<0.5	µg/L	0.115	0.5	05/18/2023	2061749 GKWONG	
Trichloroethylene	<0.5	µg/L	0.093	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichloropropane	<0.5	µg/L	0.073	0.5	05/18/2023	2061749 GKWONG	
cis-1,3-dichloropropene	<0.5	µg/L	0.07	0.5	05/18/2023	2061749 GKWONG	
Toluene	<0.5	µg/L	0.118	0.5	05/18/2023	2061749 GKWONG	
trans-1,3-Dichloropropene	<0.5	µg/L	0.213	0.5	05/18/2023	2061749 GKWONG	
1,1,2-Trichloroethane	<0.5	µg/L	0.052	0.5	05/18/2023	2061749 GKWONG	
Tetrachloroethylene	<0.5	µg/L	0.114	0.5	05/18/2023	2061749 GKWONG	
Chlorobenzene	<0.5	µg/L	0.185	0.5	05/18/2023	2061749 GKWONG	
Ethylbenzene	<0.5	µg/L	0.05	0.5	05/18/2023	2061749 GKWONG	
m,p-Xylene	<0.5	µg/L	0.151	0.5	05/18/2023	2061749 GKWONG	
o-Xylene	<0.5	µg/L	0.076	0.5	05/18/2023	2061749 GKWONG	
Styrene	<0.5	µg/L	0.053	0.5	05/18/2023	2061749 GKWONG	
1,1,1,2-Tetrachloroethane	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
1,4-Dichlorobenzene	<0.5	µg/L	0.082	0.5	05/18/2023	2061749 GKWONG	
1,2-Dichlorobenzene	<0.5	µg/L	0.066	0.5	05/18/2023	2061749 GKWONG	
1,2,4-Trichlorobenzene	<0.5	µg/L	0.084	0.5	05/18/2023	2061749 GKWONG	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	0.5	0.5	05/18/2023	2061749 GKWONG	
Xylene (total: p, m, o)	<0.5	µg/L		0.5	05/18/2023	2061749 GKWONG	
Internal Standard(s)							
Fluorobenzene (IS)	1	µg/L			05/18/2023	2061749 GKWONG	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

FOLDER ID: 2302918

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Routine: WSB\_SFPUC+Consult.A

Scheduled Sample Date: 05/11/2023

Sampling Team: Field

Surrogate(s)

<i>p</i> -Bromofluorobenzene (Surr.)	1.02	µg/L	05/18/2023	2061749	GKWONG
1,2-Dichlorobenzene d- (Surr.)	0.97	µg/L	05/18/2023	2061749	GKWONG

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

**QC list for Run#: 2061396 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313826-01	MRL_CK	Sulfate		0.528	mg/L	106				
	MRL_CK	Nitrate as N		0.0433	mg/L	109				
QC2313826-02	CCV	Sulfate		2.43	mg/L	97				
	CCV	Nitrate as N		0.198	mg/L	99				
QC2313826-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313826-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313826-05	LCS	Sulfate		1.41	mg/L	94				
	LCS	Nitrate as N		0.233	mg/L	93				
QC2313826-06	CCV	Sulfate		21.8	mg/L	109				
	CCV	Nitrate as N		1.7	mg/L	107				
QC2313826-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313826-08	SPK of 2303438-01	Sulfate	14.9	18.6	mg/L	149				Splt# 2303438-01 (14.9mg/L)
	SPK of 2303438-01	Nitrate as N	0.635	0.895	mg/L	131				Splt# 2303438-01 (0.635mg/L)
QC2313826-09	SPKD of 2303438-01	Sulfate	14.9	18.1	mg/L	128	2			Splt# 2303438-01 (14.9mg/L)
	SPKD of 2303438-01	Nitrate as N	0.635	0.868	mg/L	117	2			Splt# 2303438-01 (0.635mg/L)
QC2313826-10	CCV	Sulfate		2.42	mg/L	96				
	CCV	Nitrate as N		0.197	mg/L	99				
QC2313826-11	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2313826-12	SPK of 2302828-01A	Sulfate	7.9	10.7	mg/L	113				Splt# 2302828-01A (7.9mg/L)
	SPK of 2302828-01A	Nitrate as N	0.107	0.309	mg/L	102				Splt# 2302828-01A (0.107mg/L)
QC2313826-13	SPKD of 2302828-01A	Sulfate	7.9	10.6	mg/L	109	0			Splt# 2302828-01A (7.9mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

Sample ID	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
SPKD of 2302828-01A	Nitrate as N		0.107	0.312 mg/L	103	0			Splt# 2302828-01A (0.107mg/L)
QC2313826-14	CCV	Sulfate		21.9 mg/L	110				
	CCV	Nitrate as N		1.7 mg/L	107				
QC2313826-15	BLK	Sulfate		<0.5 mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04 mg/L			0.034	0.04	

**QC list for Run#: 2061418 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313840-02	ICV	Specific Conductance @25°C		155	µmhos/cm	106				
QC2313840-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2313840-04	MRL_CHK	Specific Conductance @25°C		9.99	µmhos/cm	99				
QC2313840-05	DUP of 2302918-01	Specific Conductance @25°C	1050	1050	µmhos/cm		0		1	Splt# 2302918-01 (1050µmhos/cm)
QC2313840-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2061420 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313842-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2313842-02	MRL_CHK	Alkalinity		2.06	mg/L	103				
QC2313842-03	SPK of 2302791-01	Alkalinity	38.6	78.3	mg/L	99			3	Splt# 2302791-01 (38.6mg/L)
QC2313842-04	SPKD of 2302791-01	Alkalinity	38.6	80.5	mg/L	105	2		3	Splt# 2302791-01 (38.6mg/L)
QC2313842-05	DUP of 2302791-02	Alkalinity	36.2	36.5	mg/L		0	0.593	3	Splt# 2302791-02 (36.2mg/L)
QC2313842-06	LCS	Alkalinity		39.4	mg/L	98			3	

**QC list for Run#: 2061421 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313843-04	ICV	pH		9.03	pH	99				
	ICV	Temperature (°C)		18.6	°C					
QC2313843-05	DUP of 2302918-01	pH	6.72	6.74	pH		0			Splt# 2302918-01 (6.72pH) H1,H3

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

Sample ID	Parameter	Units	Result	Limit	Notes
DUP of 2302918-01	Temperature (°C)	°C	18	18	Splt# 2302918-01 (18°C)
QC2313843-06	CCV	pH	9.04	99	
	CCV	Temperature (°C)	18.5	°C	
QC2313843-07	CCV	pH	9.04	99	
	CCV	Temperature (°C)	18.6	°C	

**QC list for Run#: 2061422 and Test: MBP\_CHLORIDE (SM 4500-CL-D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313844-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2313844-02	MRL_CK	Chloride		1.96	mg/L	98				
QC2313844-03	SPK of 2302791-01	Chloride	8.59	49.6	mg/L	102			3	Splt# 2302791-01 (8.59mg/L)
QC2313844-04	SPKD of 2302791-01	Chloride	8.59	49.4	mg/L	102	0		3	Splt# 2302791-01 (8.59mg/L)
QC2313844-05	DUP of 2302791-02	Chloride	9.74	9.73	mg/L		0		3	Splt# 2302791-02 (9.74mg/L)
QC2313844-06	LCS	Chloride		43.4	mg/L	108			3	

**QC list for Run#: 2061425 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313847-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2313847-02	MRL_CK	Hardness, Total, as CaCO3		2.08	mg/L	104				
QC2313847-03	DUP of 2302791-02	Hardness, Total, as CaCO3	34.5	34	mg/L		1	0.474	3	Splt# 2302791-02 (34.5mg/L)
QC2313847-04	LCS	Hardness, Total, as CaCO3		39.2	mg/L	98			3	

**QC list for Run#: 2061451 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2313871-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2313871-02	DUP of 2302917-03	Total Dissolved Solids	395	387	mg/L		2	13.2	20	Splt# 2302917-03 (395mg/L)
QC2313871-03	LCS	Total Dissolved Solids		90	mg/L	94		13.2	20	

**QC list for Run#: 2061601 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

QC2313921-01

BLK	Calcium, Ca	<1	mg/L	0.04	1
BLK	Magnesium, Mg	<0.2	mg/L	0.007	0.2
BLK	Potassium, K	<0.2	mg/L	0.04	0.2
BLK	Sodium, Na	<1	mg/L	0.02	1

QC2313921-02

LCS	Calcium, Ca	1.76	mg/L	88	0.04	1
LCS	Magnesium, Mg	2.01	mg/L	100	0.007	0.2
LCS	Potassium, K	2.07	mg/L	103	0.04	0.2
LCS	Sodium, Na	2.03	mg/L	101	0.02	1

QC2313921-03

DUP of 2302916-04	Calcium, Ca	45.4	44.9	mg/L	1	0.04	1	Splt# 2302916-04 (45.4mg/L)
DUP of 2302916-04	Magnesium, Mg	40.4	39.5	mg/L	2	0.007	0.2	Splt# 2302916-04 (40.4mg/L)
DUP of 2302916-04	Potassium, K	2.16	2.13	mg/L	1	0.04	0.2	Splt# 2302916-04 (2.16mg/L)
DUP of 2302916-04	Sodium, Na	70.7	68.9	mg/L	2	0.02	1	Splt# 2302916-04 (70.7mg/L)

QC2313921-04

SPK of 2302916-04	Calcium, Ca	45.4	47.4	mg/L	105	0.04	1	Splt# 2302916-04 (45.4mg/L) Spike too low
SPK of 2302916-04	Magnesium, Mg	40.4	41.2	mg/L	41	0.007	0.2	Splt# 2302916-04 (40.4mg/L) Spike too low
SPK of 2302916-04	Potassium, K	2.16	4.19	mg/L	102	0.04	0.2	Splt# 2302916-04 (2.16mg/L)
SPK of 2302916-04	Sodium, Na	70.7	70.6	mg/L	0	0.02	1	Splt# 2302916-04 (70.7mg/L) Spike too low

QC2313921-05

SPKD of 2302916-04	Calcium, Ca	45.4	48	mg/L	130	1	0.04	1	Splt# 2302916-04 (45.4mg/L) Spike too low
SPKD of 2302916-04	Magnesium, Mg	40.4	41.8	mg/L	71	1	0.007	0.2	Splt# 2302916-04 (40.4mg/L) Spike too low
SPKD of 2302916-04	Potassium, K	2.16	4.19	mg/L	102	0	0.04	0.2	Splt# 2302916-04 (2.16mg/L)
SPKD of 2302916-04	Sodium, Na	70.7	71.4	mg/L	34	1	0.02	1	Splt# 2302916-04 (70.7mg/L) Spike too low

QC2313921-06

MRL_CK	Calcium, Ca	<1	mg/L	N/A	0.04	1
MRL_CK	Magnesium, Mg	<0.2	mg/L	N/A	0.007	0.2
MRL_CK	Potassium, K	0.218	mg/L	87	0.04	0.2
MRL_CK	Sodium, Na	<1	mg/L	N/A	0.02	1

QC2313987-01

ICV	Potassium, K	2.01	mg/L	101	0.03	0.2
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QC2313987-02

ICV	Calcium, Ca	9.72	mg/L	97	0.05	1
ICV	Magnesium, Mg	9.76	mg/L	97	0.01	0.2
ICV	Sodium, Na	9.81	mg/L	99	0.002	1

**QC list for Run#: 2061749 and Test: MBO\_524\_VOC (EPA 524.2)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						

QC2314088-01

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

	MRL_CK	m,p-Xylene	0.3	µg/L	75
<b>Internal Standard(s)</b>	MRL_CK	Fluorobenzene (IS)	1	µg/L	100
<b>Surrogate(s)</b>	MRL_CK	p-Bromofluorobenzene (Surr.)	0.85	µg/L	85
<b>Surrogate(s)</b>	MRL_CK	1,2-Dichlorobenzene d- (Surr.)	0.95	µg/L	95
QC2314088-02					
	MRL_CK	Vinyl chloride	0.52	µg/L	104
	MRL_CK	Trichlorofluoromethane (F-11)	0.5	µg/L	100
	MRL_CK	1,1-Dichloroethylene	0.55	µg/L	110
	MRL_CK	Methylene chloride	0.45	µg/L	90
	MRL_CK	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre	0.46	µg/L	92
	MRL_CK	trans-1,2-Dichloroethylene	0.49	µg/L	98
	MRL_CK	Methyl t-butyl ether	0.48	µg/L	96
	MRL_CK	1,1-Dichloroethane	0.53	µg/L	106
	MRL_CK	cis-1,2-dichloroethylene	0.63	µg/L	126
	MRL_CK	1,1,1-Trichloroethane	0.54	µg/L	108
	MRL_CK	Carbon tetrachloride	0.5	µg/L	100
	MRL_CK	Benzene	0.49	µg/L	98
	MRL_CK	1,2-Dichloroethane	0.44	µg/L	88
	MRL_CK	Trichloroethylene	0.58	µg/L	116
	MRL_CK	1,2-Dichloropropane	0.46	µg/L	92
	MRL_CK	cis-1,3-dichloropropene	0.43	µg/L	86
	MRL_CK	Toluene	0.44	µg/L	88
	MRL_CK	trans-1,3-Dichloropropene	0.48	µg/L	96
	MRL_CK	1,1,2-Trichloroethane	0.48	µg/L	96
	MRL_CK	Tetrachloroethylene	0.49	µg/L	98
	MRL_CK	Chlorobenzene	0.43	µg/L	86
	MRL_CK	Ethylbenzene	0.44	µg/L	88
	MRL_CK	m,p-Xylene	0.86	µg/L	86
	MRL_CK	o-Xylene	0.48	µg/L	96
	MRL_CK	Styrene	0.38	µg/L	76
	MRL_CK	1,1,2,2-Tetrachloroethane	0.47	µg/L	94
	MRL_CK	1,4-Dichlorobenzene	0.4	µg/L	80
	MRL_CK	1,2-Dichlorobenzene	0.42	µg/L	84
	MRL_CK	1,2,4-Trichlorobenzene	0.42	µg/L	84
<b>Internal Standard(s)</b>	MRL_CK	Fluorobenzene (IS)	1	µg/L	100
<b>Surrogate(s)</b>	MRL_CK	p-Bromofluorobenzene (Surr.)	0.86	µg/L	86
<b>Surrogate(s)</b>	MRL_CK	1,2-Dichlorobenzene d- (Surr.)	0.91	µg/L	91
QC2314088-03					
	CCV	Vinyl chloride	20	µg/L	99
	CCV	Trichlorofluoromethane (F-11)	20.6	µg/L	103

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

CCV	1,1-Dichloroethylene	19.6	µg/L	97			
CCV	Methylene chloride	19.9	µg/L	99			
CCV	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre	19.4	µg/L	96			
CCV	trans-1,2-Dichloroethylene	19.9	µg/L	99			
CCV	Methyl t-butyl ether	20.3	µg/L	102			
CCV	1,1-Dichloroethane	19.1	µg/L	95			
CCV	cis-1,2-dichloroethylene	20	µg/L	100			
CCV	1,1,1-Trichloroethane	20.1	µg/L	100			
CCV	Carbon tetrachloride	20.4	µg/L	102			
CCV	Benzene	18.3	µg/L	91			
CCV	1,2-Dichloroethane	19.3	µg/L	96			
CCV	Trichloroethylene	21.2	µg/L	106			
CCV	1,2-Dichloropropane	20.8	µg/L	104			
CCV	cis-1,3-dichloropropene	21	µg/L	105			
CCV	Toluene	20.8	µg/L	104			
CCV	trans-1,3-Dichloropropene	21.1	µg/L	105			
CCV	1,1,2-Trichloroethane	20.3	µg/L	101			
CCV	Tetrachloroethylene	21	µg/L	105			
CCV	Chlorobenzene	20.4	µg/L	102			
CCV	Ethylbenzene	20.6	µg/L	103			
CCV	m,p-Xylene	44.2	µg/L	110			
CCV	o-Xylene	21.3	µg/L	106			
CCV	Styrene	22	µg/L	110			
CCV	1,1,2,2-Tetrachloroethane	20.5	µg/L	102			
CCV	1,4-Dichlorobenzene	21	µg/L	105			
CCV	1,2-Dichlorobenzene	21.3	µg/L	106			
CCV	1,2,4-Trichlorobenzene	20.9	µg/L	105			
<b>Internal Standard(s)</b>	CCV	Fluorobenzene (IS)	1	µg/L	100		
<b>Surrogate(s)</b>	CCV	p-Bromofluorobenzene (Surr.)	1.05	µg/L	105		
<b>Surrogate(s)</b>	CCV	1,2-Dichlorobenzene d- (Surr.)	1.04	µg/L	104		
QC2314088-04							
LCS	Vinyl chloride	9.31	µg/L	93	0.1	0.5	
LCS	Trichlorofluoromethane (F-11)	10.1	µg/L	101	0.052	0.5	
LCS	1,1-Dichloroethylene	9.65	µg/L	96	0.075	0.5	
LCS	Methylene chloride	9.82	µg/L	98	0.058	0.5	
LCS	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre	8.66	µg/L	86	0.114	0.5	
LCS	trans-1,2-Dichloroethylene	9.32	µg/L	93	0.099	0.5	
LCS	Methyl t-butyl ether	9.5	µg/L	95	0.106	3	
LCS	1,1-Dichloroethane	9.51	µg/L	95	0.192	0.5	
LCS	cis-1,2-dichloroethylene	10.3	µg/L	103	0.111	0.5	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

LCS	1,1,1-Trichloroethane	9.51	µg/L	95	0.179	0.5			
LCS	Carbon tetrachloride	9.96	µg/L	99	0.066	0.5			
LCS	Benzene	9.36	µg/L	93	0.061	0.5			
LCS	1,2-Dichloroethane	9.39	µg/L	93	0.115	0.5			
LCS	Trichloroethylene	10.4	µg/L	104	0.093	0.5			
LCS	1,2-Dichloropropane	9.56	µg/L	95	0.073	0.5			
LCS	cis-1,3-dichloropropene	10	µg/L	100	0.07	0.5			
LCS	Toluene	9.89	µg/L	98	0.118	0.5			
LCS	trans-1,3-Dichloropropene	9.93	µg/L	99	0.213	0.5			
LCS	1,1,2-Trichloroethane	10.1	µg/L	101	0.052	0.5			
LCS	Tetrachloroethylene	9.96	µg/L	99	0.114	0.5			
LCS	Chlorobenzene	9.86	µg/L	98	0.185	0.5			
LCS	Ethylbenzene	9.83	µg/L	98	0.05	0.5			
LCS	m,p-Xylene	20.4	µg/L	102	0.151	0.5			
LCS	o-Xylene	10	µg/L	100	0.076	0.5			
LCS	Styrene	9.74	µg/L	97	0.053	0.5			
LCS	1,1,2,2-Tetrachloroethane	10.3	µg/L	103	0.066	0.5			
LCS	1,4-Dichlorobenzene	10.2	µg/L	102	0.082	0.5			
LCS	1,2-Dichlorobenzene	9.97	µg/L	99	0.066	0.5			
LCS	1,2,4-Trichlorobenzene	9.79	µg/L	97	0.084	0.5			
<b>Internal Standard(s)</b>	LCS	Fluorobenzene (IS)	1	µg/L	100				
<b>Surrogate(s)</b>	LCS	p-Bromofluorobenzene (Surr.)	1.1	µg/L	110				
<b>Surrogate(s)</b>	LCS	1,2-Dichlorobenzene d- (Surr.)	1.15	µg/L	115				
<b>QC2314088-05</b>									
LCSD of QC2314088-04	Vinyl chloride	9.31	9.69	µg/L	96	4	0.1	0.5	Splt# QC2314088-04 (9.31µg/L)
LCSD of QC2314088-04	Trichlorofluoromethane (F-11)	10.1	10.6	µg/L	106	4	0.052	0.5	Splt# QC2314088-04 (10.1µg/L)
LCSD of QC2314088-04	1,1-Dichloroethylene	9.65	9.85	µg/L	98	2	0.075	0.5	Splt# QC2314088-04 (9.65µg/L)
LCSD of QC2314088-04	Methylene chloride	9.82	9.82	µg/L	98	0	0.058	0.5	Splt# QC2314088-04 (9.82µg/L)
LCSD of QC2314088-04	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre	8.66	9.17	µg/L	91	5	0.114	0.5	Splt# QC2314088-04 (8.66µg/L)
LCSD of QC2314088-04	trans-1,2-Dichloroethylene	9.32	9.88	µg/L	98	5	0.099	0.5	Splt# QC2314088-04 (9.32µg/L)
LCSD of QC2314088-04	Methyl t-butyl ether	9.5	9.8	µg/L	98	3	0.106	3	Splt# QC2314088-04 (9.5µg/L)
LCSD of QC2314088-04	1,1-Dichloroethane	9.51	9.85	µg/L	98	3	0.192	0.5	Splt# QC2314088-04 (9.51µg/L)
LCSD of QC2314088-04	cis-1,2-dichloroethylene	10.3	10.7	µg/L	107	3	0.111	0.5	Splt# QC2314088-04 (10.3µg/L)
LCSD of QC2314088-04	1,1,1-Trichloroethane	9.51	9.93	µg/L	99	4	0.179	0.5	Splt# QC2314088-04 (9.51µg/L)
LCSD of QC2314088-04	Carbon tetrachloride	9.96	10.6	µg/L	106	6	0.066	0.5	Splt# QC2314088-04 (9.96µg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

LCSD of QC2314088-04	Benzene	9.36	9.69	µg/L	96	3	0.061	0.5	Splt# QC2314088-04 (9.36µg/L)
LCSD of QC2314088-04	1,2-Dichloroethane	9.39	10	µg/L	100	6	0.115	0.5	Splt# QC2314088-04 (9.39µg/L)
LCSD of QC2314088-04	Trichloroethylene	10.4	10.5	µg/L	105	1	0.093	0.5	Splt# QC2314088-04 (10.4µg/L)
LCSD of QC2314088-04	1,2-Dichloropropane	9.56	10.3	µg/L	103	7	0.073	0.5	Splt# QC2314088-04 (9.56µg/L)
LCSD of QC2314088-04	cis-1,3-dichloropropene	10	10.3	µg/L	103	2	0.07	0.5	Splt# QC2314088-04 (10µg/L)
LCSD of QC2314088-04	Toluene	9.89	10.3	µg/L	103	3	0.118	0.5	Splt# QC2314088-04 (9.89µg/L)
LCSD of QC2314088-04	trans-1,3-Dichloropropene	9.93	10.4	µg/L	104	5	0.213	0.5	Splt# QC2314088-04 (9.93µg/L)
LCSD of QC2314088-04	1,1,2-Trichloroethane	10.1	10	µg/L	100	0	0.052	0.5	Splt# QC2314088-04 (10.1µg/L)
LCSD of QC2314088-04	Tetrachloroethylene	9.96	10.8	µg/L	108	8	0.114	0.5	Splt# QC2314088-04 (9.96µg/L)
LCSD of QC2314088-04	Chlorobenzene	9.86	10.3	µg/L	103	3	0.185	0.5	Splt# QC2314088-04 (9.86µg/L)
LCSD of QC2314088-04	Ethylbenzene	9.83	9.94	µg/L	99	1	0.05	0.5	Splt# QC2314088-04 (9.83µg/L)
LCSD of QC2314088-04	m,p-Xylene	20.4	21.1	µg/L	106	3	0.151	0.5	Splt# QC2314088-04 (20.4µg/L)
LCSD of QC2314088-04	o-Xylene	10	10.5	µg/L	105	4	0.076	0.5	Splt# QC2314088-04 (10µg/L)
LCSD of QC2314088-04	Styrene	9.74	10.1	µg/L	101	3	0.053	0.5	Splt# QC2314088-04 (9.74µg/L)
LCSD of QC2314088-04	1,1,2,2-Tetrachloroethane	10.3	10.7	µg/L	107	4	0.066	0.5	Splt# QC2314088-04 (10.3µg/L)
LCSD of QC2314088-04	1,4-Dichlorobenzene	10.2	10.8	µg/L	108	6	0.082	0.5	Splt# QC2314088-04 (10.2µg/L)
LCSD of QC2314088-04	1,2-Dichlorobenzene	9.97	10.6	µg/L	106	5	0.066	0.5	Splt# QC2314088-04 (9.97µg/L)
LCSD of QC2314088-04	1,2,4-Trichlorobenzene	9.79	10.6	µg/L	106	8	0.084	0.5	Splt# QC2314088-04 (9.79µg/L)
<b>Internal Standard(s)</b>	Fluorobenzene (IS)	1	1	µg/L	100	0			Splt# QC2314088-04 (1µg/L)
<b>Surrogate(s)</b>	p-Bromofluorobenzene (Surr.)	1.1	1.02	µg/L	102	7			Splt# QC2314088-04 (1.1µg/L)
<b>Surrogate(s)</b>	1,2-Dichlorobenzene d- (Surr.)	1.15	0.98	µg/L	98	16			Splt# QC2314088-04 (1.15µg/L)
QC2314088-06									
BLK	Vinyl chloride		<0.5	µg/L			0.1	0.5	
BLK	Trichlorofluoromethane (F-11)		<0.5	µg/L			0.052	0.5	
BLK	1,1-Dichloroethylene		<0.5	µg/L			0.075	0.5	
BLK	Methylene chloride		<0.5	µg/L			0.058	0.5	
BLK	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre		<0.5	µg/L			0.114	0.5	
BLK	trans-1,2-Dichloroethylene		<0.5	µg/L			0.099	0.5	
BLK	Methyl t-butyl ether		<3	µg/L			0.106	3	
BLK	1,1-Dichloroethane		<0.5	µg/L			0.192	0.5	
BLK	cis-1,2-dichloroethylene		<0.5	µg/L			0.111	0.5	
BLK	1,1,1-Trichloroethane		<0.5	µg/L			0.179	0.5	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

BLK	Carbon tetrachloride	<0.5	µg/L	0.066	0.5
BLK	Benzene	<0.5	µg/L	0.061	0.5
BLK	1,2-Dichloroethane	<0.5	µg/L	0.115	0.5
BLK	Trichloroethylene	<0.5	µg/L	0.093	0.5
BLK	1,2-Dichloropropane	<0.5	µg/L	0.073	0.5
BLK	cis-1,3-dichloropropene	<0.5	µg/L	0.07	0.5
BLK	Toluene	<0.5	µg/L	0.118	0.5
BLK	trans-1,3-Dichloropropene	<0.5	µg/L	0.213	0.5
BLK	1,1,2-Trichloroethane	<0.5	µg/L	0.052	0.5
BLK	Tetrachloroethylene	<0.5	µg/L	0.114	0.5
BLK	Chlorobenzene	<0.5	µg/L	0.185	0.5
BLK	Ethylbenzene	<0.5	µg/L	0.05	0.5
BLK	m,p-Xylene	<0.5	µg/L	0.151	0.5
BLK	o-Xylene	<0.5	µg/L	0.076	0.5
BLK	Styrene	<0.5	µg/L	0.053	0.5
BLK	1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.066	0.5
BLK	1,4-Dichlorobenzene	<0.5	µg/L	0.082	0.5
BLK	1,2-Dichlorobenzene	<0.5	µg/L	0.066	0.5
BLK	1,2,4-Trichlorobenzene	<0.5	µg/L	0.084	0.5
<b>Internal Standard(s)</b>	BLK	Fluorobenzene (IS)	1	µg/L	100
<b>Surrogate(s)</b>	BLK	p-Bromofluorobenzene (Surr.)	0.96	µg/L	96
<b>Surrogate(s)</b>	BLK	1,2-Dichlorobenzene d- (Surr.)	0.86	µg/L	86

QC2314088-07

DUP of 2302918-01	Vinyl chloride	<0.5	<0.5	µg/L	0.1	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	Trichlorofluoromethane (F-11)	<0.5	<0.5	µg/L	0.052	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	1,1-Dichloroethylene	<0.5	<0.5	µg/L	0.075	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	Methylene chloride	<0.5	<0.5	µg/L	0.058	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre	<0.5	<0.5	µg/L	0.114	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	trans-1,2-Dichloroethylene	<0.5	<0.5	µg/L	0.099	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	Methyl t-butyl ether	<3	<3	µg/L	0.106	3	Splt# 2302918-01 (<3µg/L)	
DUP of 2302918-01	1,1-Dichloroethane	<0.5	<0.5	µg/L	0.192	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	cis-1,2-dichloroethylene	<0.5	<0.5	µg/L	0.111	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	1,1,1-Trichloroethane	<0.5	<0.5	µg/L	0.179	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	Carbon tetrachloride	<0.5	<0.5	µg/L	0.066	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	Benzene	<0.5	<0.5	µg/L	N/A	0.061	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	1,2-Dichloroethane	<0.5	<0.5	µg/L	0.115	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	Trichloroethylene	<0.5	<0.5	µg/L	0.093	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	1,2-Dichloropropane	<0.5	<0.5	µg/L	0.073	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	cis-1,3-dichloropropene	<0.5	<0.5	µg/L	0.07	0.5	Splt# 2302918-01 (<0.5µg/L)	
DUP of 2302918-01	Toluene	<0.5	<0.5	µg/L	0.118	0.5	Splt# 2302918-01 (<0.5µg/L)	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

DUP of 2302918-01	Analyte	Result	Units	MDL	MRL	Flag/Comments
DUP of 2302918-01	trans-1,3-Dichloropropene	<0.5	µg/L	0.213	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	1,1,2-Trichloroethane	<0.5	µg/L	0.052	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	Tetrachloroethylene	<0.5	µg/L	0.114	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	Chlorobenzene	<0.5	µg/L	0.185	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	Ethylbenzene	<0.5	µg/L	0.05	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	m,p-Xylene	<0.5	µg/L	0.151	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	o-Xylene	<0.5	µg/L	0.076	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	Styrene	<0.5	µg/L	0.053	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.066	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	1,4-Dichlorobenzene	<0.5	µg/L	0.082	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	1,2-Dichlorobenzene	<0.5	µg/L	0.066	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	1,2,4-Trichlorobenzene	<0.5	µg/L	0.084	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	N/A	0.5	Splt# 2302918-01 (<0.5µg/L)
DUP of 2302918-01	Xylene (total: p, m, o)	<0.5	µg/L	N/A	0.5	Splt# 2302918-01 (<0.5µg/L)
<b>Internal Standard(s)</b>	Fluorobenzene (IS)	1	µg/L	100		Splt# 2302918-01 (1µg/L)
<b>Surrogate(s)</b>	p-Bromofluorobenzene (Surr.)	0.94	µg/L	88		Splt# 2302918-01 (0.94µg/L)
<b>Surrogate(s)</b>	1,2-Dichlorobenzene d- (Surr.)	0.9	µg/L	79		Splt# 2302918-01 (0.9µg/L)

**QC list for Run#: 2061810 and Test: MBO\_524\_VOC (EPA 524.2)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314131-01	MRL_CK	m,p-Xylene		0.36	µg/L	90				
<b>Internal Standard(s)</b>	MRL_CK	Fluorobenzene (IS)		1	µg/L	100				
<b>Surrogate(s)</b>	MRL_CK	p-Bromofluorobenzene (Surr.)		0.92	µg/L	92				
<b>Surrogate(s)</b>	MRL_CK	1,2-Dichlorobenzene d- (Surr.)		0.93	µg/L	93				
QC2314131-02	MRL_CK	Vinyl chloride		0.52	µg/L	104				
	MRL_CK	Trichlorofluoromethane (F-11)		0.58	µg/L	116				
	MRL_CK	1,1-Dichloroethylene		0.58	µg/L	116				
	MRL_CK	Methylene chloride		0.64	µg/L	128				
	MRL_CK	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre		0.55	µg/L	110				
	MRL_CK	trans-1,2-Dichloroethylene		0.57	µg/L	114				
	MRL_CK	Methyl t-butyl ether		0.55	µg/L	110				
	MRL_CK	1,1-Dichloroethane		0.6	µg/L	120				
	MRL_CK	cis-1,2-dichloroethylene		0.68	µg/L	136				
	MRL_CK	1,1,1-Trichloroethane		0.57	µg/L	114				
	MRL_CK	Carbon tetrachloride		0.56	µg/L	112				
	MRL_CK	Benzene		0.58	µg/L	116				
	MRL_CK	1,2-Dichloroethane		0.53	µg/L	106				
	MRL_CK	Trichloroethylene		0.54	µg/L	108				
	MRL_CK	1,2-Dichloropropane		0.48	µg/L	96				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

MRL_CK	cis-1,3-dichloropropene	0.56	µg/L	112	
MRL_CK	Toluene	0.49	µg/L	98	
MRL_CK	trans-1,3-Dichloropropene	0.45	µg/L	90	
MRL_CK	1,1,2-Trichloroethane	0.51	µg/L	102	
MRL_CK	Tetrachloroethylene	0.47	µg/L	94	
MRL_CK	Chlorobenzene	0.52	µg/L	104	
MRL_CK	Ethylbenzene	0.5	µg/L	100	
MRL_CK	m,p-Xylene	0.94	µg/L	94	
MRL_CK	o-Xylene	0.47	µg/L	94	
MRL_CK	Styrene	0.45	µg/L	90	
MRL_CK	1,1,2,2-Tetrachloroethane	0.56	µg/L	112	
MRL_CK	1,4-Dichlorobenzene	0.46	µg/L	92	
MRL_CK	1,2-Dichlorobenzene	0.5	µg/L	100	
MRL_CK	1,2,4-Trichlorobenzene	0.42	µg/L	84	
<b>Internal Standard(s)</b>	MRL_CK	Fluorobenzene (IS)	1	µg/L	100
<b>Surrogate(s)</b>	MRL_CK	p-Bromofluorobenzene (Surr.)	0.98	µg/L	98
<b>Surrogate(s)</b>	MRL_CK	1,2-Dichlorobenzene d- (Surr.)	0.88	µg/L	88
<b>QC2314131-03</b>					
CCV	Vinyl chloride	10.2	µg/L	102	
CCV	Trichlorofluoromethane (F-11)	10.7	µg/L	107	
CCV	1,1-Dichloroethylene	10.2	µg/L	102	
CCV	Methylene chloride	10.1	µg/L	101	
CCV	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre	10	µg/L	100	
CCV	trans-1,2-Dichloroethylene	10.4	µg/L	104	
CCV	Methyl t-butyl ether	10.4	µg/L	104	
CCV	1,1-Dichloroethane	9.7	µg/L	97	
CCV	cis-1,2-dichloroethylene	10.3	µg/L	103	
CCV	1,1,1-Trichloroethane	10.4	µg/L	104	
CCV	Carbon tetrachloride	10.7	µg/L	107	
CCV	Benzene	9.16	µg/L	91	
CCV	1,2-Dichloroethane	9.95	µg/L	99	
CCV	Trichloroethylene	10.9	µg/L	109	
CCV	1,2-Dichloropropane	10.3	µg/L	103	
CCV	cis-1,3-dichloropropene	10.1	µg/L	101	
CCV	Toluene	10.2	µg/L	102	
CCV	trans-1,3-Dichloropropene	10.2	µg/L	102	
CCV	1,1,2-Trichloroethane	10.1	µg/L	101	
CCV	Tetrachloroethylene	10.5	µg/L	105	
CCV	Chlorobenzene	10.1	µg/L	101	
CCV	Ethylbenzene	9.96	µg/L	99	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

	CCV	m,p-Xylene	20.8	µg/L	104		
	CCV	o-Xylene	10.2	µg/L	102		
	CCV	Styrene	10.1	µg/L	101		
	CCV	1,1,2,2-Tetrachloroethane	10.5	µg/L	105		
	CCV	1,4-Dichlorobenzene	10.5	µg/L	105		
	CCV	1,2-Dichlorobenzene	10.3	µg/L	103		
	CCV	1,2,4-Trichlorobenzene	10.1	µg/L	101		
<b>Internal Standard(s)</b>	CCV	Fluorobenzene (IS)	1	µg/L	100		
<b>Surrogate(s)</b>	CCV	p-Bromofluorobenzene (Surr.)	1	µg/L	100		
<b>Surrogate(s)</b>	CCV	1,2-Dichlorobenzene d- (Surr.)	0.94	µg/L	94		
<b>QC2314131-04</b>							
	LCS	Vinyl chloride	9.81	µg/L	98	0.1	0.5
	LCS	Trichlorofluoromethane (F-11)	10.4	µg/L	104	0.052	0.5
	LCS	1,1-Dichloroethylene	10.3	µg/L	103	0.075	0.5
	LCS	Methylene chloride	10.7	µg/L	107	0.058	0.5
	LCS	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre	9.43	µg/L	94	0.114	0.5
	LCS	trans-1,2-Dichloroethylene	10.1	µg/L	101	0.099	0.5
	LCS	Methyl t-butyl ether	9.63	µg/L	96	0.106	3
	LCS	1,1-Dichloroethane	9.8	µg/L	98	0.192	0.5
	LCS	cis-1,2-dichloroethylene	10.4	µg/L	104	0.111	0.5
	LCS	1,1,1-Trichloroethane	10.2	µg/L	102	0.179	0.5
	LCS	Carbon tetrachloride	10.6	µg/L	106	0.066	0.5
	LCS	Benzene	9.63	µg/L	96	0.061	0.5
	LCS	1,2-Dichloroethane	10.4	µg/L	104	0.115	0.5
	LCS	Trichloroethylene	11.1	µg/L	111	0.093	0.5
	LCS	1,2-Dichloropropane	10.3	µg/L	103	0.073	0.5
	LCS	cis-1,3-dichloropropene	10.2	µg/L	102	0.07	0.5
	LCS	Toluene	10.3	µg/L	103	0.118	0.5
	LCS	trans-1,3-Dichloropropene	10.5	µg/L	105	0.213	0.5
	LCS	1,1,2-Trichloroethane	10.7	µg/L	107	0.052	0.5
	LCS	Tetrachloroethylene	10.9	µg/L	109	0.114	0.5
	LCS	Chlorobenzene	10.5	µg/L	105	0.185	0.5
	LCS	Ethylbenzene	10.1	µg/L	101	0.05	0.5
	LCS	m,p-Xylene	21.4	µg/L	107	0.151	0.5
	LCS	o-Xylene	10.3	µg/L	103	0.076	0.5
	LCS	Styrene	10.1	µg/L	101	0.053	0.5
	LCS	1,1,2,2-Tetrachloroethane	10.8	µg/L	108	0.066	0.5
	LCS	1,4-Dichlorobenzene	11	µg/L	110	0.082	0.5
	LCS	1,2-Dichlorobenzene	10.2	µg/L	102	0.066	0.5
	LCS	1,2,4-Trichlorobenzene	10.3	µg/L	103	0.084	0.5

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

Internal Standard(s)	LCS	Fluorobenzene (IS)	1	µg/L	100					
<b>Surrogate(s)</b>	LCS	p-Bromofluorobenzene (Surr.)	1.1	µg/L	110					
<b>Surrogate(s)</b>	LCS	1,2-Dichlorobenzene d- (Surr.)	0.9	µg/L	90					
QC2314131-05										
LCSD of QC2314131-04		Vinyl chloride	9.81	9.21	µg/L	92	6	0.1	0.5	Split# QC2314131-04 (9.81µg/L)
LCSD of QC2314131-04		Trichlorofluoromethane (F-11)	10.4	10	µg/L	100	4	0.052	0.5	Split# QC2314131-04 (10.4µg/L)
LCSD of QC2314131-04		1,1-Dichloroethylene	10.3	9.2	µg/L	92	11	0.075	0.5	Split# QC2314131-04 (10.3µg/L)
LCSD of QC2314131-04		Methylene chloride	10.7	9.8	µg/L	98	8	0.058	0.5	Split# QC2314131-04 (10.7µg/L)
LCSD of QC2314131-04		1,1,2-Trichloro-1,2,2-trifluoroethane (Fre	9.43	8.7	µg/L	87	8	0.114	0.5	Split# QC2314131-04 (9.43µg/L)
LCSD of QC2314131-04		trans-1,2-Dichloroethylene	10.1	9.46	µg/L	94	6	0.099	0.5	Split# QC2314131-04 (10.1µg/L)
LCSD of QC2314131-04		Methyl t-butyl ether	9.63	9.27	µg/L	92	3	0.106	3	Split# QC2314131-04 (9.63µg/L)
LCSD of QC2314131-04		1,1-Dichloroethane	9.8	9.26	µg/L	92	5	0.192	0.5	Split# QC2314131-04 (9.8µg/L)
LCSD of QC2314131-04		cis-1,2-dichloroethylene	10.4	9.87	µg/L	98	5	0.111	0.5	Split# QC2314131-04 (10.4µg/L)
LCSD of QC2314131-04		1,1,1-Trichloroethane	10.2	9.67	µg/L	96	5	0.179	0.5	Split# QC2314131-04 (10.2µg/L)
LCSD of QC2314131-04		Carbon tetrachloride	10.6	10.1	µg/L	101	4	0.066	0.5	Split# QC2314131-04 (10.6µg/L)
LCSD of QC2314131-04		Benzene	9.63	8.8	µg/L	88	9	0.061	0.5	Split# QC2314131-04 (9.63µg/L)
LCSD of QC2314131-04		1,2-Dichloroethane	10.4	9.49	µg/L	94	8	0.115	0.5	Split# QC2314131-04 (10.4µg/L)
LCSD of QC2314131-04		Trichloroethylene	11.1	9.88	µg/L	98	11	0.093	0.5	Split# QC2314131-04 (11.1µg/L)
LCSD of QC2314131-04		1,2-Dichloropropane	10.3	9.77	µg/L	97	5	0.073	0.5	Split# QC2314131-04 (10.3µg/L)
LCSD of QC2314131-04		cis-1,3-dichloropropene	10.2	9.6	µg/L	96	5	0.07	0.5	Split# QC2314131-04 (10.2µg/L)
LCSD of QC2314131-04		Toluene	10.3	9.49	µg/L	94	8	0.118	0.5	Split# QC2314131-04 (10.3µg/L)
LCSD of QC2314131-04		trans-1,3-Dichloropropene	10.5	9.45	µg/L	94	10	0.213	0.5	Split# QC2314131-04 (10.5µg/L)
LCSD of QC2314131-04		1,1,2-Trichloroethane	10.7	9.61	µg/L	96	10	0.052	0.5	Split# QC2314131-04 (10.7µg/L)
LCSD of QC2314131-04		Tetrachloroethylene	10.9	10.1	µg/L	101	7	0.114	0.5	Split# QC2314131-04 (10.9µg/L)
LCSD of QC2314131-04		Chlorobenzene	10.5	9.58	µg/L	95	9	0.185	0.5	Split# QC2314131-04 (10.5µg/L)
LCSD of QC2314131-04		Ethylbenzene	10.1	9.31	µg/L	93	8	0.05	0.5	Split# QC2314131-04 (10.1µg/L)
LCSD of QC2314131-04		m,p-Xylene	21.4	19.5	µg/L	97	9	0.151	0.5	Split# QC2314131-04 (21.4µg/L)
LCSD of QC2314131-04		o-Xylene	10.3	9.67	µg/L	96	6	0.076	0.5	Split# QC2314131-04 (10.3µg/L)
LCSD of QC2314131-04		Styrene	10.1	9.37	µg/L	93	7	0.053	0.5	Split# QC2314131-04 (10.1µg/L)
LCSD of QC2314131-04		1,1,2,2-Tetrachloroethane	10.8	10.1	µg/L	101	6	0.066	0.5	Split# QC2314131-04 (10.8µg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

Sample ID	Compound	Concentration	Units	Volume	Flow	Time	Temp	Depth	Notes
LCSD of QC2314131-04	1,4-Dichlorobenzene	11	10.1	µg/L	101	7	0.082	0.5	Splt# QC2314131-04 (11µg/L)
LCSD of QC2314131-04	1,2-Dichlorobenzene	10.2	9.96	µg/L	99	2	0.066	0.5	Splt# QC2314131-04 (10.2µg/L)
LCSD of QC2314131-04	1,2,4-Trichlorobenzene	10.3	10	µg/L	100	3	0.084	0.5	Splt# QC2314131-04 (10.3µg/L)
<b>Internal Standard(s)</b>	Fluorobenzene (IS)	1	1	µg/L	100	0			Splt# QC2314131-04 (1µg/L)
<b>Surrogate(s)</b>	p-Bromofluorobenzene (Surr.)	1.1	1.03	µg/L	103	6			Splt# QC2314131-04 (1.1µg/L)
<b>Surrogate(s)</b>	1,2-Dichlorobenzene d- (Surr.)	0.9	0.93	µg/L	93	3			Splt# QC2314131-04 (0.9µg/L)
QC2314131-06									
BLK	Vinyl chloride		<0.5	µg/L			0.1	0.5	
BLK	Trichlorofluoromethane (F-11)		<0.5	µg/L			0.052	0.5	
BLK	1,1-Dichloroethylene		<0.5	µg/L			0.075	0.5	
BLK	Methylene chloride		<0.5	µg/L			0.058	0.5	
BLK	1,1,2-Trichloro-1,2,2-trifluoroethane (Fre		<0.5	µg/L			0.114	0.5	
BLK	trans-1,2-Dichloroethylene		<0.5	µg/L			0.099	0.5	
BLK	Methyl t-butyl ether		<3	µg/L			0.106	3	
BLK	1,1-Dichloroethane		<0.5	µg/L			0.192	0.5	
BLK	cis-1,2-dichloroethylene		<0.5	µg/L			0.111	0.5	
BLK	1,1,1-Trichloroethane		<0.5	µg/L			0.179	0.5	
BLK	Carbon tetrachloride		<0.5	µg/L			0.066	0.5	
BLK	Benzene		<0.5	µg/L			0.061	0.5	
BLK	1,2-Dichloroethane		<0.5	µg/L			0.115	0.5	
BLK	Trichloroethylene		<0.5	µg/L			0.093	0.5	
BLK	1,2-Dichloropropane		<0.5	µg/L			0.073	0.5	
BLK	cis-1,3-dichloropropene		<0.5	µg/L			0.07	0.5	
BLK	Toluene		<0.5	µg/L			0.118	0.5	
BLK	trans-1,3-Dichloropropene		<0.5	µg/L			0.213	0.5	
BLK	1,1,2-Trichloroethane		<0.5	µg/L			0.052	0.5	
BLK	Tetrachloroethylene		<0.5	µg/L			0.114	0.5	
BLK	Chlorobenzene		<0.5	µg/L			0.185	0.5	
BLK	Ethylbenzene		<0.5	µg/L			0.05	0.5	
BLK	m,p-Xylene		<0.5	µg/L			0.151	0.5	
BLK	o-Xylene		<0.5	µg/L			0.076	0.5	
BLK	Styrene		<0.5	µg/L			0.053	0.5	
BLK	1,1,2,2-Tetrachloroethane		<0.5	µg/L			0.066	0.5	
BLK	1,4-Dichlorobenzene		<0.5	µg/L			0.082	0.5	
BLK	1,2-Dichlorobenzene		<0.5	µg/L			0.066	0.5	
BLK	1,2,4-Trichlorobenzene		<0.5	µg/L			0.084	0.5	
<b>Internal Standard(s)</b>	BLK Fluorobenzene (IS)		1	µg/L	100				
<b>Surrogate(s)</b>	BLK p-Bromofluorobenzene (Surr.)		0.94	µg/L	94				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 05/11/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Surrogate(s)	BLK	1,2-Dichlorobenzene d- (Surr.)	0.86	µg/L	86				
QC2314131-07									
DUP of 2302918-02A		Tetrachloroethylene	118	126	µg/L	6	1.14	5	Splt# 2302918-02A (118µg/L)
Internal Standard(s)		Fluorobenzene (IS)	1	1	µg/L	100			Splt# 2302918-02A (1µg/L)
Surrogate(s)		p-Bromofluorobenzene (Surr.)	0.88	8.3	µg/L	83			Splt# 2302918-02A (0.88µg/L)
Surrogate(s)		1,2-Dichlorobenzene d- (Surr.)	0.86	7.9	µg/L	79			Splt# 2302918-02A (0.86µg/L)

**QC list for Run#: 2061962 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314180-01										
	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2314180-02										
	LCS	Calcium, Ca		1.77	mg/L	88		0.04	1	
	LCS	Magnesium, Mg		2.01	mg/L	101		0.007	0.2	
	LCS	Potassium, K		2.03	mg/L	102		0.04	0.2	
	LCS	Sodium, Na		2.06	mg/L	103		0.02	1	
QC2314180-03										
	DUP of 2302915-01	Calcium, Ca	63.4	64	mg/L		0	0.04	1	Splt# 2302915-01 (63.4mg/L)
	DUP of 2302915-01	Magnesium, Mg	63.3	63.1	mg/L		0	0.007	0.2	Splt# 2302915-01 (63.3mg/L)
	DUP of 2302915-01	Potassium, K	1.36	1.41	mg/L		4	0.04	0.2	Splt# 2302915-01 (1.36mg/L)
	DUP of 2302915-01	Sodium, Na	76.4	76.9	mg/L		0	0.02	1	Splt# 2302915-01 (76.4mg/L)
QC2314180-04										
	SPK of 2302915-01	Calcium, Ca	63.4	65.8	mg/L	122		0.04	1	Splt# 2302915-01 (63.4mg/L)
	SPK of 2302915-01	Magnesium, Mg	63.3	64.5	mg/L	57		0.007	0.2	Splt# 2302915-01 (63.3mg/L)
	SPK of 2302915-01	Potassium, K	1.36	3.49	mg/L	107		0.04	0.2	Splt# 2302915-01 (1.36mg/L)
	SPK of 2302915-01	Sodium, Na	76.4	78.1	mg/L	84		0.02	1	Splt# 2302915-01 (76.4mg/L)
QC2314180-05										
	SPKD of 2302915-01	Calcium, Ca	63.4	66.6	mg/L	162	1	0.04	1	Splt# 2302915-01 (63.4mg/L)
	SPKD of 2302915-01	Magnesium, Mg	63.3	65.2	mg/L	95	1	0.007	0.2	Splt# 2302915-01 (63.3mg/L)
	SPKD of 2302915-01	Potassium, K	1.36	3.62	mg/L	113	3	0.04	0.2	Splt# 2302915-01 (1.36mg/L)
	SPKD of 2302915-01	Sodium, Na	76.4	78.5	mg/L	103	0	0.02	1	Splt# 2302915-01 (76.4mg/L)
QC2314180-06										
	MRL_CK	Calcium, Ca		<1	mg/L	N/A		0.04	1	
	MRL_CK	Magnesium, Mg		<0.2	mg/L	N/A		0.007	0.2	
	MRL_CK	Potassium, K		<0.2	mg/L	N/A		0.04	0.2	
	MRL_CK	Sodium, Na		<1	mg/L	N/A		0.02	1	
QC2314243-01										
	ICV	Potassium, K		1.92	mg/L	96		0.03	0.2	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2302918**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/11/2023

**Sampling Team:** Field

QC2314243-02

ICV	Calcium, Ca	9.68	mg/L	96	0.05	1
ICV	Magnesium, Mg	9.91	mg/L	99	0.01	0.2
ICV	Sodium, Na	9.81	mg/L	99	0.002	1

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303264**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 06/07/2023

**Sampling Team:** Field

**Lab Sample#:** 2303264-01 **Sample Source:** WSB\_SF69\_NWM3 **External ID:**

**Date Collected:** 06/07/2023 10:16AM **Date Received:** 06/07/2023 01:30PM **Sample Matrix:** Aqueous **Location Desc:** WSB\_SF69, GGP NWM-3

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	38.2	mg/L		3	06/07/2023	2062759 ABALALIO	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	436	µmhos/cm		1	06/07/2023	2062754 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	237	mg/L	13.2	20	06/12/2023	2062830 ABALALIO	

**Lab Sample#:** 2303264-02 **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 06/07/2023 10:34AM **Date Received:** 06/07/2023 01:30PM **Sample Matrix:** Aqueous **Location Desc:** WSB\_SF69, GGP NWM-3

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	38.6	mg/L		3	06/07/2023	2062759 ABALALIO	

MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	440	µmhos/cm		1	06/07/2023	2062754 DCARDONA	

MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	247	mg/L	13.2	20	06/12/2023	2062830 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303264**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 06/07/2023

**Sampling Team:** Field

**QC list for Run#: 2062754 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314782-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2314782-02	ICV	Specific Conductance @25°C		157	µmhos/cm	107				
QC2314782-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2314782-04	MRL_CHK	Specific Conductance @25°C		10	µmhos/cm	100				
QC2314782-05	DUP of 2303551-01	Specific Conductance @25°C	73.9	74.1	µmhos/cm		0		1	Splt# 2303551-01 (73.9µmhos/cm)
QC2314782-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2314782-07	CCV	Specific Conductance @25°C		1430	µmhos/cm	101				

**QC list for Run#: 2062759 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314786-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2314786-02	MRL_CHK	Chloride		2.78	mg/L	92				
QC2314786-03	SPK of 2304367-01	Chloride	7.54	46.9	mg/L	98			3	Splt# 2304367-01 (7.54mg/L)
QC2314786-04	SPKD of 2304367-01	Chloride	7.54	46.8	mg/L	98	0		3	Splt# 2304367-01 (7.54mg/L)
QC2314786-06	LCS	Chloride		39.5	mg/L	98			3	

**QC list for Run#: 2062830 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314834-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2314834-02	DUP of 2304267-01	Total Dissolved Solids	39	44	mg/L		12	13.2	20	Splt# 2304267-01 (39mg/L) M
QC2314834-03	LCS	Total Dissolved Solids		85	mg/L	89		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SEWPCP 1721

## Water Quality Laboratory

MILLBRAE 1449

**FOLDER ID: 2303267**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 05/16/2023

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

Lab Sample#:	2303267-01	Sample Source:	WSB_SB-44-1-580	External ID:	
Date Collected:	05/16/2023 11:01AM	Date Received:	05/16/2023 01:42PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SB_CUP-44-1-580, GG NATIONAL CEMETE

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Sulfate	376	mg/L	2	10	05/16/2023	2061622 PWARNER	>MCL
<b>SEM_200.7_DW(EPA 200.7)</b>							
Calcium, Ca	114	mg/L	0.04	1	05/24/2023	2061962 BTRINH	
Magnesium, Mg	96.7	mg/L	0.007	0.2	05/24/2023	2061962 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>							
Alkalinity	265	mg/L	2.96	15	05/16/2023	2061635 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>							
Chloride	197	mg/L		15	05/16/2023	2061637 ALEE	
<b>MBP_COND(SM 2510 B)</b>							
Specific Conductance @25°C	1730	µmhos/cm		1	05/16/2023	2061640 DCARDONA	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>							
Hardness, Total, as CaCO3	742	mg/L	2.37	15	05/16/2023	2061638 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>							
pH	7.44	pH			05/16/2023	2061642 DCARDONA	H1,H3
Temperature (°C)	18	°C			05/16/2023	2061642 DCARDONA	
<b>MBP_TDS(SM 2540 C)</b>							
Total Dissolved Solids	1060	mg/L	26.4	40	05/22/2023	2061770 DCARDONA	>MCL

Lab Sample#:	2303267-01A	Sample Source:	WSB_SB-44-1-580	External ID:	
Date Collected:	05/16/2023 11:01AM	Date Received:	05/16/2023 01:42PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SB_CUP-44-1-580, GG NATIONAL CEMETE

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>							
Nitrate as N	<0.04	mg/L	0.034	0.04	05/16/2023	2061622 PWARNER	

Lab Sample#:	2303267-01B	Sample Source:	WSB_SB-44-1-580	External ID:	
Date Collected:	05/16/2023 11:01AM	Date Received:	05/16/2023 01:42PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SB_CUP-44-1-580, GG NATIONAL CEMETE

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Potassium, K	5.44	mg/L	0.16	0.8	05/24/2023	2061962 BTRINH	

Lab Sample#:	2303267-01C	Sample Source:	WSB_SB-44-1-580	External ID:	
Date Collected:	05/16/2023 11:01AM	Date Received:	05/16/2023 01:42PM	Sample Matrix:	Aqueous
				Location Desc:	GSR_SB_CUP-44-1-580, GG NATIONAL CEMETE

Test/Analyte	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>							
Sodium, Na	103	mg/L	0.08	4	05/24/2023	2061962 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303267**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/16/2023

**Sampling Team:** Field

Lab Sample#:	2303267-02	Sample Source:	WSB_SB_DUP	External ID:			
Date Collected:	05/16/2023 11:30AM	Date Received:	05/16/2023 01:42PM	Sample Matrix:	Aqueous	Location Desc:	GSR_SB_CUP-44-1-580, GG NATIONAL CEMETE
<u>Test/Analyte</u>							
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	372	mg/L	2	10	05/16/2023	2061622 PWARNER	>MCL
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	111	mg/L	0.04	1	05/24/2023	2061962 BTRINH	
Magnesium, Mg	93.2	mg/L	0.007	0.2	05/24/2023	2061962 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	268	mg/L	2.96	15	05/16/2023	2061635 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	199	mg/L		15	05/16/2023	2061637 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1730	µmhos/cm		1	05/16/2023	2061640 DCARDONA	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	706	mg/L	2.37	15	05/16/2023	2061638 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.43	pH			05/16/2023	2061642 DCARDONA	H1,H3
Temperature (°C)	17.6	°C			05/16/2023	2061642 DCARDONA	
MBP_TDS(SM 2540 C)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	1090	mg/L	26.4	40	05/22/2023	2061770 DCARDONA	>MCL
Lab Sample#:	2303267-02A	Sample Source:	WSB_SB_DUP	External ID:			
Date Collected:	05/16/2023 11:30AM	Date Received:	05/16/2023 01:42PM	Sample Matrix:	Aqueous	Location Desc:	GSR_SB_CUP-44-1-580, GG NATIONAL CEMETE
<u>Test/Analyte</u>							
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	<0.04	mg/L	0.034	0.04	05/16/2023	2061622 PWARNER	
Lab Sample#:	2303267-02B	Sample Source:	WSB_SB_DUP	External ID:			
Date Collected:	05/16/2023 11:30AM	Date Received:	05/16/2023 01:42PM	Sample Matrix:	Aqueous	Location Desc:	GSR_SB_CUP-44-1-580, GG NATIONAL CEMETE
<u>Test/Analyte</u>							
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Potassium, K	5.46	mg/L	0.16	0.8	05/24/2023	2061962 BTRINH	
Lab Sample#:	2303267-02C	Sample Source:	WSB_SB_DUP	External ID:			
Date Collected:	05/16/2023 11:30AM	Date Received:	05/16/2023 01:42PM	Sample Matrix:	Aqueous	Location Desc:	GSR_SB_CUP-44-1-580, GG NATIONAL CEMETE
<u>Test/Analyte</u>							
SEM_200.7_DW(EPA 200.7)	Result	Unit	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sodium, Na	104	mg/L	0.08	4	05/24/2023	2061962 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303267**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/16/2023

**Sampling Team:** Field

**QC list for Run#: 2061622 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314002-01	MRL_CK	Sulfate		0.52	mg/L	104				
	MRL_CK	Nitrate as N		0.0416	mg/L	104				
QC2314002-02	CCV	Sulfate		2.34	mg/L	93				
	CCV	Nitrate as N		0.192	mg/L	96				
QC2314002-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2314002-04	BLK	Sulfate		0.705	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2314002-05	LCS	Sulfate		1.44	mg/L	95				
	LCS	Nitrate as N		0.237	mg/L	94				
QC2314002-06	CCV	Sulfate		21.2	mg/L	106				
	CCV	Nitrate as N		1.64	mg/L	103				
QC2314002-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2314002-08	SPK of 2302757-02	Sulfate	1.64	4.08	mg/L	97				Splt# 2302757-02 (1.64mg/L)
	SPK of 2302757-02	Nitrate as N	<0.04	0.221	mg/L	111				Splt# 2302757-02 (<0.04mg/L)
QC2314002-09	SPKD of 2302757-02	Sulfate	1.64	4.07	mg/L	97	0			Splt# 2302757-02 (1.64mg/L)
	SPKD of 2302757-02	Nitrate as N	<0.04	0.22	mg/L	111	0			Splt# 2302757-02 (<0.04mg/L)
QC2314002-10	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2061635 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314010-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2314010-02	MRL_CK	Alkalinity		3.08	mg/L	103				
QC2314010-03	SPK of 2302767-03	Alkalinity	28.7	68	mg/L	98			3	Splt# 2302767-03 (28.7mg/L)
QC2314010-04										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303267**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/16/2023

**Sampling Team:** Field

Sample #	Name	Analyte	Result	Units	% Rec	RPD	MDL	MRL	Flag/Comments
SPKD of 2302767-03	Alkalinity	28.7	68	mg/L	98	0		3	Splt# 2302767-03 (28.7mg/L)
QC2314010-05									
DUP of 2303267-02	Alkalinity	268	282	mg/L		5	2.96	15	Splt# 2303267-02 (268mg/L)
QC2314010-06									
LCS	Alkalinity		39.2	mg/L	98			3	

**QC list for Run#: 2061637 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314012-01	BLK	Chloride	<3		mg/L			1.16	3	
QC2314012-02	MRL_CK	Chloride	2.65		mg/L	88				
QC2314012-03	SPK of 2302767-03	Chloride	7.36	48.9	mg/L	104			3	Splt# 2302767-03 (7.36mg/L)
QC2314012-04	SPKD of 2302767-03	Chloride	7.36	48.5	mg/L	103	0		3	Splt# 2302767-03 (7.36mg/L)
QC2314012-05	DUP of 2303267-02	Chloride	199	211	mg/L		6		15	Splt# 2303267-02 (199mg/L)
QC2314012-06	LCS	Chloride	41.9		mg/L	105			3	

**QC list for Run#: 2061638 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314013-01	BLK	Hardness, Total, as CaCO3	<3		mg/L			0.474	3	
QC2314013-02	MRL_CK	Hardness, Total, as CaCO3	2.72		mg/L	90				
QC2314013-03	DUP of 2303267-02	Hardness, Total, as CaCO3	706	687	mg/L		2	2.37	15	Splt# 2303267-02 (706mg/L)
QC2314013-04	LCS	Hardness, Total, as CaCO3	40		mg/L	100			3	

**QC list for Run#: 2061640 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314015-02	ICV	Specific Conductance @25°C	156		µmhos/cm	106				
QC2314015-03	BLK	Specific Conductance @25°C	<1		µmhos/cm				1	
QC2314015-04	MRL_CK	Specific Conductance @25°C	10		µmhos/cm	100				
QC2314015-05	DUP of 2302745-01	Specific Conductance @25°C	55.8	56.1	µmhos/cm		0		1	Splt# 2302745-01 (55.8µmhos/cm)
QC2314015-06	CCV	Specific Conductance @25°C	102		µmhos/cm	102				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303267**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/16/2023

**Sampling Team:** Field

QC2314015-07

CCV Specific Conductance @25°C 1430 μmhos/cm 101

**QC list for Run#: 2061642 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314017-04	ICV	pH		9.02	pH	99				
	ICV	Temperature (°C)		19.4	°C					
QC2314017-05	DUP of 2302745-01	pH	9.22	9.29	pH		0			Splt# 2302745-01 (9.22pH) H1,H3
	DUP of 2302745-01	Temperature (°C)	17.1	17.2	°C					Splt# 2302745-01 (17.1°C)
QC2314017-06	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		19.4	°C					

**QC list for Run#: 2061770 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314099-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2314099-02	LCS	Total Dissolved Solids		83	mg/L	87		13.2	20	
QC2314099-03	DUP of 2303599-01	Total Dissolved Solids	50	48	mg/L		4	13.2	20	Splt# 2303599-01 (50mg/L)
QC2314099-04	DUP of 2302904-03	Total Dissolved Solids	418	427	mg/L		2	13.2	20	Splt# 2302904-03 (418mg/L)

**QC list for Run#: 2061962 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2314180-01	BLK	Calcium, Ca		<1	mg/L			0.04	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.007	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.04	0.2	
	BLK	Sodium, Na		<1	mg/L			0.02	1	
QC2314180-02	LCS	Calcium, Ca		1.77	mg/L	88		0.04	1	
	LCS	Magnesium, Mg		2.01	mg/L	101		0.007	0.2	
	LCS	Potassium, K		2.03	mg/L	102		0.04	0.2	
	LCS	Sodium, Na		2.06	mg/L	103		0.02	1	
QC2314180-03	DUP of 2302915-01	Calcium, Ca	63.4	64	mg/L		0	0.04	1	Splt# 2302915-01 (63.4mg/L)
	DUP of 2302915-01	Magnesium, Mg	63.3	63.1	mg/L		0	0.007	0.2	Splt# 2302915-01 (63.3mg/L)
	DUP of 2302915-01	Potassium, K	1.36	1.41	mg/L		4	0.04	0.2	Splt# 2302915-01 (1.36mg/L)
	DUP of 2302915-01	Sodium, Na	76.4	76.9	mg/L		0	0.02	1	Splt# 2302915-01 (76.4mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303267**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/16/2023

**Sampling Team:** Field

QC#	Sample ID	Parameter	Result 1	Result 2	Unit	Flow	Temp	Depth	Time	Notes
QC2314180-04	SPK of 2302915-01	Calcium, Ca	63.4	65.8	mg/L	122	0.04	1		Splt# 2302915-01 (63.4mg/L)
	SPK of 2302915-01	Magnesium, Mg	63.3	64.5	mg/L	57	0.007	0.2		Splt# 2302915-01 (63.3mg/L)
	SPK of 2302915-01	Potassium, K	1.36	3.49	mg/L	107	0.04	0.2		Splt# 2302915-01 (1.36mg/L)
	SPK of 2302915-01	Sodium, Na	76.4	78.1	mg/L	84	0.02	1		Splt# 2302915-01 (76.4mg/L)
QC2314180-05	SPKD of 2302915-01	Calcium, Ca	63.4	66.6	mg/L	162	1	0.04	1	Splt# 2302915-01 (63.4mg/L)
	SPKD of 2302915-01	Magnesium, Mg	63.3	65.2	mg/L	95	1	0.007	0.2	Splt# 2302915-01 (63.3mg/L)
	SPKD of 2302915-01	Potassium, K	1.36	3.62	mg/L	113	3	0.04	0.2	Splt# 2302915-01 (1.36mg/L)
	SPKD of 2302915-01	Sodium, Na	76.4	78.5	mg/L	103	0	0.02	1	Splt# 2302915-01 (76.4mg/L)
QC2314180-06	MRL_CK	Calcium, Ca	<1		mg/L	N/A	0.04	1		
	MRL_CK	Magnesium, Mg	<0.2		mg/L	N/A	0.007	0.2		
	MRL_CK	Potassium, K	<0.2		mg/L	N/A	0.04	0.2		
	MRL_CK	Sodium, Na	<1		mg/L	N/A	0.02	1		
QC2314243-01	ICV	Potassium, K	1.92		mg/L	96	0.03	0.2		
QC2314243-02	ICV	Calcium, Ca	9.68		mg/L	96	0.05	1		
	ICV	Magnesium, Mg	9.91		mg/L	99	0.01	0.2		
	ICV	Sodium, Na	9.81		mg/L	99	0.002	1		

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303267**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/16/2023

**Sampling Team:** Field

**Qualifiers Legend:**

**Flag**

Code	Description
B1	Target analyte detected in associated Method Blank.
B2	Target analyte detected in Travel/Trip Blank.
D	Result taken from the analysis of a dilution.
E1	Estimated value. Exceeds calibration range. Reanalysis not possible due to insufficient sample vol.
E2	Estimated value. Exceeds calibration range. Reanalysis not performed due to hold time requirement.
E3	EMPC (estimated maximum possible concentration)
H1	Sample analysis performed past the method specified hold time per client request.
H2	Initial analysis within hold time. Reanalysis for the required dilution was past hold time.
H3	Sample was received past hold time.
H4	Confirmatory analysis was past hold time.
H5	Confirmatory analysis was past hold time. Original result not confirmed.
H6	Filtration not completed within method specific time; Filtered in Lab. Filtration exceeded hold time.
I1	I.S. recovery or R.T. outside method limits. Interference confirmed by reanalysis/dilution. GC/GCMS
L1	LCS and/or LCSD is outside acceptance limits. Results might be low biased.
L2	LCS and/or LCSD is outside acceptance limits. Results might be high biased.
M	Matrix interference suspected.
M1	MS/MSD % rec. outside acceptable limits. Batch acceptance by LCS.
M2	MS/MSD RPD outside acceptable limits. Batch acceptance by LCS.
M3	Sample diluted due to matrix. MS recovery not useful. Batch acceptance by LCS.
NA	Not Analyzed
NC	Not for Compliance
NC1	Method specification(s) not met
NC2	Test/analyte is not accredited or accreditation is not available.
NP	Not provided
NS	Not sampled (or no sample received)
P1	Sample received and analyzed without chemical preservation.
P2	Sample received without chemical preservation but preserved by the laboratory.
P3	Sample received with inadequate chemical preservation, but preserved by the laboratory
P4	Sample was received outside recommended temperature range.
P5	Sample received in inappropriate sample container.
P6	Insufficient sample received to meet method requirements.
P7	Sample received with head space.
Q	%RPD between the 1st and 2nd column/detector is >40%. Lower value reported.
Q1	Minimum Reporting Limit (MRL) verification failed high, but target analyte was not detected.
R	Data rejected
S	Dilution due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
S1	Sample diluted due to matrix. Surrogate spike recovery provides no useful information.
S2	Surrogate recovery below acceptable limits. Results might be low biased.
S3	Surrogate recovery exceeds acceptable limits. Results might be high biased.
TIC	Tentatively Identified Compound
U	Analyzed but not detected

**RQualifier**

Code	Description
+	Positive
-	Negative

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2303267**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 05/16/2023

**Sampling Team:** Field

<	Less Than
=	Equals
>	Greater Than
A	Bacti result, absent
DNQ	Detected, but Not Quantified
E	Estimated value
I	Bacti result, Inconclusive value. Analyzed, but result is undetermined
ND	Non-detected
P	Bacti result, present
<b>QC Type</b>	
<b>Code</b>	<b>Description</b>
BLK	Method Blank Sample
CAL	Calibration Sample
CCV	Continuing Calibration Verification Sample
DUP	Duplicate Sample
ICV	Initial Calibration Verification Sample
LCS	Laboratory Control Standard Sample
LCSD	Laboratory Control Standard Duplicate Sample
MRL_CK	Method Reporting Level Check Sample
SPK	Matrix Spike Sample
SPKD	Matrix Spike Duplicate Sample

Please email [labfeedback@sfgwater.org](mailto:labfeedback@sfgwater.org) to report any comments, complaints, compliments or suggestions. Please provide detailed descriptions and attach documentation as necessary.

**Reported By:** Technical Manager



**Reported On:** 26-Sep-2023

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# **SAN FRANCISCO PUBLIC UTILITIES COMMISSION**

**Water Quality Laboratory**

**Analytical Report**

**PREPARED FOR:**

Stefani Harrison  
525 Golden Gate Avenue  
Project Management Bureau  
SAN FRANCISCO, CA 94102

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307373**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/02/2023

**Sampling Team:** Field

**Lab Sample#:** 2307373-01 **Sample Source:** WSB\_SF10\_LM3D **External ID:**

**Date Collected:** 10/02/2023 12:00PM **Date Received:** 10/02/2023 02:39PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	7.42	mg/L	1	0.1	0.5	10/02/2023	2068604 PWARNER	
Nitrate as N	<0.04	mg/L	1	0.034	0.04	10/02/2023	2068604 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	29.9	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
Magnesium, Mg	32.8	mg/L	1	0.021	0.2	10/12/2023	2069109 BTRINH	
Potassium, K	1.93	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	
Sodium, Na	45.7	mg/L	1	0.2	1	10/12/2023	2069109 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	193	mg/L	1	1.19	6	10/03/2023	2068597 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	65.7	mg/L	1		6	10/03/2023	2068598 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	595	µmhos/cm	1		1	10/02/2023	2068593 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	200	mg/L	1	0.948	6	10/03/2023	2068599 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	7.51	pH	1			10/02/2023	2068595 WHORNER	H1,H3
Temperature (°C)	16.8	°C	1			10/02/2023	2068595 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	315	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	

**Lab Sample#:** 2307373-02 **Sample Source:** WSB\_SF11\_LM3S **External ID:**

**Date Collected:** 10/02/2023 10:38AM **Date Received:** 10/02/2023 02:39PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	6.8	mg/L	1	0.1	0.5	10/02/2023	2068604 PWARNER	
Nitrate as N	<0.04	mg/L	1	0.034	0.04	10/02/2023	2068604 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	63.3	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
Magnesium, Mg	68.4	mg/L	1	0.021	0.2	10/12/2023	2069109 BTRINH	
Potassium, K	2.84	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307373**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC

**Scheduled Sample Date:** 10/02/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>Sodium, Na</b>	39	mg/L	1	0.2	1	10/12/2023	2069109 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>								
<b>Alkalinity</b>	397	mg/L	1	1.19	6	10/03/2023	2068597 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
<b>Chloride</b>	70	mg/L	1		6	10/03/2023	2068598 ALEE	
<b>MBP_COND(SM 2510 B)</b>								
<b>Specific Conductance @25°C</b>	951	µmhos/cm	1		1	10/02/2023	2068593 WHORNER	>MCL
<b>MBP_PH(SM 4500-H+ B)</b>								
<b>pH</b>	7.06	pH	1			10/02/2023	2068595 WHORNER	H1,H3
<b>Temperature (°C)</b>	14.9	°C	1			10/02/2023	2068595 WHORNER	
<b>MBP_TDS(SM 2540 C)</b>								
<b>Total Dissolved Solids</b>	505	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	>MCL

**Lab Sample#: 2307373-02A Sample Source: WSB\_SF11\_LM3S External ID:**

**Date Collected: 10/02/2023 10:38AM Date Received: 10/02/2023 02:39PM Sample Matrix: Aqueous Location Desc:**

**Test/Analyte**

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
<b>Hardness, Total, as CaCO3</b>	423	mg/L	1	2.37	15	10/03/2023	2068599 ALEE	

**Lab Sample#: 2307373-03 Sample Source: WSB\_SF15\_LM6D External ID:**

**Date Collected: 10/02/2023 02:00PM Date Received: 10/02/2023 02:39PM Sample Matrix: Aqueous Location Desc:**

**Test/Analyte**

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
<b>Sulfate</b>	27	mg/L	10	1	5	10/02/2023	2068604 PWARNER	
<b>Nitrate as N</b>	6.27	mg/L	10	0.34	0.4	10/02/2023	2068604 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
<b>Calcium, Ca</b>	32.6	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
<b>Magnesium, Mg</b>	34.7	mg/L	1	0.021	0.2	10/12/2023	2069109 BTRINH	
<b>Potassium, K</b>	1.75	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	
<b>Sodium, Na</b>	42.4	mg/L	1	0.2	1	10/12/2023	2069109 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
<b>Alkalinity</b>	178	mg/L	1	1.19	6	10/03/2023	2068597 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
<b>Chloride</b>	54.3	mg/L	1		6	10/03/2023	2068598 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307373**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/02/2023

**Routine:** WSB\_SFUC

**Sampling Team:** Field

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	625	µmhos/cm	1		1	10/02/2023	2068593 WHORNER	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	214	mg/L	1	0.948	6	10/03/2023	2068599 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.77	pH	1			10/02/2023	2068595 WHORNER	H1,H3
Temperature (°C)	18.5	°C	1			10/02/2023	2068595 WHORNER	
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	333	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	

**Lab Sample#:** 2307373-04 **Sample Source:** WSB\_SF\_DUP\_FULL **External ID:**

**Date Collected:** 10/02/2023 12:03PM **Date Received:** 10/02/2023 02:39PM **Sample Matrix:** Aqueous **Location Desc:** SF#10 - LMMW3D

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	7.6	mg/L	1	0.1	0.5	10/02/2023	2068604 PWARNER	
Nitrate as N	<0.04	mg/L	1	0.034	0.04	10/02/2023	2068604 PWARNER	
SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	29.9	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
Magnesium, Mg	32.9	mg/L	1	0.021	0.2	10/12/2023	2069109 BTRINH	
Potassium, K	1.91	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	
Sodium, Na	45.8	mg/L	1	0.2	1	10/12/2023	2069109 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	197	mg/L	1	1.19	6	10/03/2023	2068597 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	67.2	mg/L	1		6	10/03/2023	2068598 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	606	µmhos/cm	1		1	10/02/2023	2068593 WHORNER	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	201	mg/L	1	0.948	6	10/03/2023	2068599 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.47	pH	1			10/02/2023	2068595 WHORNER	H1,H3
Temperature (°C)	18.4	°C	1			10/02/2023	2068595 WHORNER	
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	314	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307373**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/02/2023

**Sampling Team:** Field

# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307373**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/02/2023

**Sampling Team:** Field

**QC list for Run#: 2068593 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318881-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2318881-02	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2318881-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2318881-04	MRL CK	Specific Conductance @25°C		9.94	µmhos/cm	99				
QC2318881-05	DUP of 2307373-01	Specific Conductance @25°C	595	605	µmhos/cm		1		1	Splt# 2307373-01 (595µmhos/cm)
QC2318881-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2318881-07	CCV	Specific Conductance @25°C		1430	µmhos/cm	101				

**QC list for Run#: 2068595 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318883-04	ICV	pH		9.02	pH	99				
	ICV	Temperature (°C)		20.7	°C					
QC2318883-05	DUP of 2307373-01	pH	7.51	7.5	pH		0			Splt# 2307373-01 (7.51pH)
	DUP of 2307373-01	Temperature (°C)	16.8	16.5	°C					Splt# 2307373-01 (16.8°C)
QC2318883-06	CCV	pH		9.03	pH	99				
	CCV	Temperature (°C)		20.4	°C					
QC2318883-07	CCV	pH		9.01	pH	99				
	CCV	Temperature (°C)		20.8	°C					

**QC list for Run#: 2068597 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318885-01	BLK	Alkalinity		<3	mg/L			0.593		3
QC2318885-02	MRL CK	Alkalinity		3.19	mg/L	106				
QC2318885-03	SPK of 2306844-06	Alkalinity	86.2	126	mg/L	99			3	Splt# 2306844-06 (86.2mg/L)
QC2318885-04	SPKD of 2306844-06	Alkalinity	86.2	127	mg/L	101	0		3	Splt# 2306844-06 (86.2mg/L)
QC2318885-05	DUP of 2307577-01	Alkalinity	23.1	23.2	mg/L		0	0.593	3	Splt# 2307577-01 (23.1mg/L)
QC2318885-06	LCS	Alkalinity		39.6	mg/L	99				3

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307373**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/02/2023

**Routine:** WSB\_SFUC

**Sampling Team:** Field

**QC list for Run#: 2068598 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318886-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2318886-02	MRL_CK	Chloride		2.76	mg/L	92				
QC2318886-03	SPK of 2306844-06	Chloride	5.76	43.7	mg/L	94			3	Splt# 2306844-06 (5.76mg/L)
QC2318886-04	SPKD of 2306844-06	Chloride	5.76	43.6	mg/L	94	0		3	Splt# 2306844-06 (5.76mg/L)
QC2318886-05	DUP of 2307577-01	Chloride	4.34	4.3	mg/L		0		3	Splt# 2307577-01 (4.34mg/L)
QC2318886-06	LCS	Chloride		38	mg/L	95			3	

**QC list for Run#: 2068599 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318887-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2318887-02	MRL_CK	Hardness, Total, as CaCO3		2.22	mg/L	74				
QC2318887-03	DUP of 2306844-06	Hardness, Total, as CaCO3	98	99	mg/L		1	0.474	3	Splt# 2306844-06 (98mg/L)
QC2318887-04	LCS	Hardness, Total, as CaCO3		39.3	mg/L	98			3	

**QC list for Run#: 2068604 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318889-01	MRL_CK	Fluoride		0.104	mg/L	104				
	MRL_CK	Sulfate		0.517	mg/L	103				
	MRL_CK	Nitrate as N		0.041	mg/L	103				
QC2318889-02	CCV	Fluoride		0.494	mg/L	98				
	CCV	Sulfate		2.36	mg/L	94				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2318889-03	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2318889-04	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2318889-05	LCS	Fluoride		0.938	mg/L	93				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307373**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/02/2023

**Routine:** WSB\_SFPUC

**Sampling Team:** Field

**QC list for Run#: 2068604 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	LCS	Sulfate		0.921	mg/L	92				
	LCS	Nitrate as N		0.216	mg/L	95				
QC2318889-06										
	CCV	Fluoride		4.25	mg/L	106				
	CCV	Sulfate		21.7	mg/L	109				
	CCV	Nitrate as N		1.71	mg/L	107				
QC2318889-07										
	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2318889-08										
	SPK of 2307373-01	Fluoride	<0.1	0.494	mg/L	98				Splt# 2307373-01 (<0.1mg/L)
	SPK of 2307373-01	Sulfate	7.42	10.1	mg/L	108				Splt# 2307373-01 (7.42mg/L)
	SPK of 2307373-01	Nitrate as N	<0.04	0.207	mg/L	104				Splt# 2307373-01 (<0.04mg/L)
QC2318889-09										
	SPKD of 2307373-01	Fluoride	<0.1	0.501	mg/L	100	1			Splt# 2307373-01 (<0.1mg/L)
	SPKD of 2307373-01	Sulfate	7.42	10.1	mg/L	109	0			Splt# 2307373-01 (7.42mg/L)
	SPKD of 2307373-01	Nitrate as N	<0.04	0.213	mg/L	107	2			Splt# 2307373-01 (<0.04mg/L)

**QC list for Run#: 2068795 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319025-01										
	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319025-02										
	DUP of 2307597-03	Total Dissolved Solids	43	40	mg/L		7	13.2	20	Splt# 2307597-03 (43mg/L)
QC2319025-03										
	DUP of 2307373-01	Total Dissolved Solids	315	307	mg/L		2	13.2	20	Splt# 2307373-01 (315mg/L)
QC2319025-04										
	LCS	Total Dissolved Solids		92	mg/L	96		13.2	20	

**QC list for Run#: 2069109 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319231-01										
	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2319231-02										
	LCS	Calcium, Ca		2.07	mg/L	104		0.04	1	
	LCS	Magnesium, Mg		2.13	mg/L	106		0.007	0.2	
	LCS	Potassium, K		1.99	mg/L	99		0.04	0.2	
	LCS	Sodium, Na		1.95	mg/L	97		0.02	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307373**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/02/2023

**Routine:** WSB\_SFPUC

**Sampling Team:** Field

**QC list for Run#: 2069109 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319231-03										
	DUP of 2307373-01	Calcium, Ca	29.9	29.7	mg/L		0	0.005	1	Splt# 2307373-01 (29.9mg/L)
	DUP of 2307373-01	Magnesium, Mg	32.8	32.7	mg/L		0	0.021	0.2	Splt# 2307373-01 (32.8mg/L)
	DUP of 2307373-01	Potassium, K	1.93	1.94	mg/L		0	0.06	0.2	Splt# 2307373-01 (1.93mg/L)
	DUP of 2307373-01	Sodium, Na	45.7	45.5	mg/L		0	0.2	1	Splt# 2307373-01 (45.7mg/L)
QC2319231-04										
	SPK of 2307373-01	Calcium, Ca	29.9	31.5	mg/L	78		0.04	1	Splt# 2307373-01 (29.9mg/L)
	SPK of 2307373-01	Magnesium, Mg	32.8	34.4	mg/L	76		0.007	0.2	Splt# 2307373-01 (32.8mg/L)
	SPK of 2307373-01	Potassium, K	1.93	3.97	mg/L	102		0.04	0.2	Splt# 2307373-01 (1.93mg/L)
	SPK of 2307373-01	Sodium, Na	45.7	46.9	mg/L	63		0.02	1	Splt# 2307373-01 (45.7mg/L)
QC2319231-05										
	SPKD of 2307373-01	Calcium, Ca	29.9	31.9	mg/L	101	1	0.04	1	Splt# 2307373-01 (29.9mg/L)
	SPKD of 2307373-01	Magnesium, Mg	32.8	34.9	mg/L	102	1	0.007	0.2	Splt# 2307373-01 (32.8mg/L)
	SPKD of 2307373-01	Potassium, K	1.93	4	mg/L	104	0	0.04	0.2	Splt# 2307373-01 (1.93mg/L)
	SPKD of 2307373-01	Sodium, Na	45.7	47.6	mg/L	98	1	0.02	1	Splt# 2307373-01 (45.7mg/L)
QC2319231-06										
	MRL_CK	Calcium, Ca		0.0128	mg/L	32		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0408	mg/L	81		0.021	0.021	
	MRL_CK	Potassium, K		0.14	mg/L	70		0.06	0.06	
	MRL_CK	Sodium, Na		<0.2	mg/L	N/A		0.2	0.2	
QC2319255-01										
	ICV	Calcium, Ca		10.4	mg/L	104		0.05	1	
	ICV	Magnesium, Mg		9.81	mg/L	98		0.01	0.2	
	ICV	Potassium, K		99.5	mg/L	99		0.03	0.2	
	ICV	Sodium, Na		10.1	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

**Lab Sample#:** 2307375-01 **Sample Source:** WSB\_SF07\_LM1S **External ID:**

**Date Collected:** 10/04/2023 11:21AM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	111	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
Potassium, K	3.7	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	245	mg/L	1	2.96	15	10/04/2023	2068740 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	574	mg/L	1		15	10/04/2023	2068741 ALEE	>MCL

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	2760	µmhos/cm	1		1	10/04/2023	2068743 WHORNER	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	923	mg/L	1	2.37	15	10/04/2023	2068744 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.42	pH	1			10/04/2023	2068742 WHORNER	H1,H3
Temperature (°C)	18.1	°C	1			10/04/2023	2068742 WHORNER	

**Lab Sample#:** 2307375-01B **Sample Source:** WSB\_SF07\_LM1S **External ID:**

**Date Collected:** 10/04/2023 11:21AM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	118	mg/L	50	5	25	10/05/2023	2068729 WFCHEUNG	
Nitrate as N	33.8	mg/L	50	1.7	2	10/05/2023	2068729 WFCHEUNG	>MCL

**Lab Sample#:** 2307375-01C **Sample Source:** WSB\_SF07\_LM1S **External ID:**

**Date Collected:** 10/04/2023 11:21AM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	1440	mg/L	1	26.4	40	10/09/2023	2068795 ABALALIO	>MCL

**Lab Sample#:** 2307375-01D **Sample Source:** WSB\_SF07\_LM1S **External ID:**

**Date Collected:** 10/04/2023 11:21AM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Magnesium, Mg	165	mg/L	5	0.105	1	10/12/2023	2069109 BTRINH	
Sodium, Na	199	mg/L	5	1	5	10/12/2023	2069109 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

**Lab Sample#:** 2307375-02      **Sample Source:** WSB\_SF08\_LM2D      **External ID:**

**Date Collected:** 10/04/2023 02:53PM      **Date Received:** 10/04/2023 03:41PM      **Sample Matrix:** Aqueous      **Location Desc:**

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	48.8	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
Magnesium, Mg	53.4	mg/L	1	0.021	0.2	10/12/2023	2069109 BTRINH	
Potassium, K	2.56	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	
Sodium, Na	61.8	mg/L	1	0.2	1	10/12/2023	2069109 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	213	mg/L	1	1.19	6	10/04/2023	2068740 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	128	mg/L	1		6	10/04/2023	2068741 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	931	µmhos/cm	1		1	10/04/2023	2068743 WHORNER	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	326	mg/L	1	0.948	6	10/04/2023	2068744 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.57	pH	1			10/04/2023	2068742 WHORNER	H1,H3
Temperature (°C)	20.2	°C	1			10/04/2023	2068742 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	485	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	

**Lab Sample#:** 2307375-02A      **Sample Source:** WSB\_SF08\_LM2D      **External ID:**

**Date Collected:** 10/04/2023 02:53PM      **Date Received:** 10/04/2023 03:41PM      **Sample Matrix:** Aqueous      **Location Desc:**

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	43.2	mg/L	10	1	5	10/04/2023	2068729 WFCHEUNG	
Nitrate as N	3.17	mg/L	10	0.34	0.4	10/04/2023	2068729 WFCHEUNG	

**Lab Sample#:** 2307375-03      **Sample Source:** WSB\_SF09\_LM2S      **External ID:**

**Date Collected:** 10/04/2023 02:37PM      **Date Received:** 10/04/2023 03:41PM      **Sample Matrix:** Aqueous      **Location Desc:**

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	72.8	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
Magnesium, Mg	74.3	mg/L	1	0.021	0.2	10/12/2023	2069109 BTRINH	
Potassium, K	2.73	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	249	mg/L	1	2.96	15	10/04/2023	2068740 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	242	mg/L	1		15	10/04/2023	2068741 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1410	µmhos/cm	1		1	10/04/2023	2068743 WHORNER	>MCL
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	456	mg/L	1	2.37	15	10/04/2023	2068744 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.4	pH	1			10/04/2023	2068742 WHORNER	H1,H3
Temperature (°C)	17.9	°C	1			10/04/2023	2068742 WHORNER	
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	767	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	>MCL

**Lab Sample#:** 2307375-03A **Sample Source:** WSB\_SF09\_LM2S **External ID:**

**Date Collected:** 10/04/2023 02:37PM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	61.9	mg/L	10	1	5	10/04/2023	2068729 WFCHEUNG	
Nitrate as N	6.66	mg/L	10	0.34	0.4	10/04/2023	2068729 WFCHEUNG	

**Lab Sample#:** 2307375-03B **Sample Source:** WSB\_SF09\_LM2S **External ID:**

**Date Collected:** 10/04/2023 02:37PM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sodium, Na	116	mg/L	4	0.8	4	10/12/2023	2069109 BTRINH	

**Lab Sample#:** 2307375-04 **Sample Source:** WSB\_SF63\_LM1D **External ID:**

**Date Collected:** 10/04/2023 11:35AM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	33.4	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
Magnesium, Mg	50.8	mg/L	1	0.021	0.2	10/12/2023	2069109 BTRINH	
Potassium, K	2.95	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	
Sodium, Na	50.7	mg/L	1	0.2	1	10/12/2023	2069109 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	170	mg/L	1	1.19	6	10/04/2023	2068740 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	104	mg/L	1		6	10/04/2023	2068741 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	800	µmhos/cm	1		1	10/04/2023	2068743 WHORNER	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.85	pH	1			10/04/2023	2068742 WHORNER	H1,H3
Temperature (°C)	16.9	°C	1			10/04/2023	2068742 WHORNER	
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	425	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	

**Lab Sample#: 2307375-04A Sample Source: WSB\_SF63\_LM1D External ID:**

**Date Collected: 10/04/2023 11:35AM Date Received: 10/04/2023 03:41PM Sample Matrix: Aqueous Location Desc:**

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	24.9	mg/L	10	1	5	10/04/2023	2068729 WFCHEUNG	
Nitrate as N	9.4	mg/L	10	0.34	0.4	10/04/2023	2068729 WFCHEUNG	

**Lab Sample#: 2307375-04B Sample Source: WSB\_SF63\_LM1D External ID:**

**Date Collected: 10/04/2023 11:35AM Date Received: 10/04/2023 03:41PM Sample Matrix: Aqueous Location Desc:**

Test/Analyte

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	277	mg/L	1	0.948	6	10/05/2023	2068797 ALEE	

**Lab Sample#: 2307375-05 Sample Source: WSB\_SF\_DUP\_FULL External ID:**

**Date Collected: 10/04/2023 02:39PM Date Received: 10/04/2023 03:41PM Sample Matrix: Aqueous Location Desc: SF#09 - LMMW2S**

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	69.8	mg/L	1	0.005	1	10/12/2023	2069109 BTRINH	
Magnesium, Mg	71.3	mg/L	1	0.021	0.2	10/12/2023	2069109 BTRINH	
Potassium, K	2.63	mg/L	1	0.06	0.2	10/12/2023	2069109 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	249	mg/L	1	2.96	15	10/04/2023	2068740 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	242	mg/L	1		15	10/04/2023	2068741 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1440	µmhos/cm	1		1	10/04/2023	2068743 WHORNER	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	457	mg/L	1	2.37	15	10/04/2023	2068744 ALEE	

<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.42	pH	1			10/04/2023	2068742 WHORNER	H1,H3
Temperature (°C)	18	°C	1			10/04/2023	2068742 WHORNER	

<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	763	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	>MCL

**Lab Sample#:** 2307375-05A **Sample Source:** WSB\_SF\_DUP\_FULL **External ID:**

**Date Collected:** 10/04/2023 02:39PM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:** SF#09 - LMMW2S

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	62	mg/L	10	1	5	10/04/2023	2068729 WFCHEUNG	
Nitrate as N	6.69	mg/L	10	0.34	0.4	10/04/2023	2068729 WFCHEUNG	

**Lab Sample#:** 2307375-05B **Sample Source:** WSB\_SF\_DUP\_FULL **External ID:**

**Date Collected:** 10/04/2023 02:39PM **Date Received:** 10/04/2023 03:41PM **Sample Matrix:** Aqueous **Location Desc:** SF#09 - LMMW2S

Test/Analyte

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sodium, Na	114	mg/L	4	0.8	4	10/12/2023	2069109 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

**QC list for Run#: 2068729 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318974-01	MRL_CK	Sulfate		0.517	mg/L	103				
	MRL_CK	Nitrate as N		0.041	mg/L	103				
QC2318974-02	CCV	Sulfate		2.35	mg/L	94				
	CCV	Nitrate as N		0.193	mg/L	96				
QC2318974-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2318974-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2318974-05	LCS	Sulfate		1	mg/L	100				
	LCS	Nitrate as N		0.229	mg/L	101				
QC2318974-06	CCV	Chloride		19.7	mg/L	98				
	CCV	Sulfate		22	mg/L	110				
	CCV	Nitrate as N		1.7	mg/L	106				
QC2318974-07	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2318974-08	SPK of 2306828-04	Sulfate	4.78	7.46	mg/L	107				Splt# 2306828-04 (4.78mg/L)
	SPK of 2306828-04	Nitrate as N	0.122	0.325	mg/L	102				Splt# 2306828-04 (0.122mg/L)
QC2318974-09	SPKD of 2306828-04	Sulfate	4.78	7.81	mg/L	121	4			Splt# 2306828-04 (4.78mg/L) M1
	SPKD of 2306828-04	Nitrate as N	0.122	0.348	mg/L	113	6			Splt# 2306828-04 (0.122mg/L)
QC2318974-10	CCV	Chloride		2.44	mg/L	97				
	CCV	Sulfate		2.37	mg/L	94				
	CCV	Nitrate as N		0.193	mg/L	96				
QC2318974-11	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2318974-12	SPKD of 2306828-04	Sulfate	4.78	7.76	mg/L	119	3			Splt# 2306828-04 (4.78mg/L)
	SPKD of 2306828-04	Nitrate as N	0.122	0.34	mg/L	109	4			Splt# 2306828-04 (0.122mg/L)
QC2318974-13										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

**QC list for Run#: 2068729 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	CCV	Chloride		2.42	mg/L	96				
	CCV	Sulfate		2.35	mg/L	94				
	CCV	Nitrate as N		0.191	mg/L	95				
QC2318974-14	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2318974-15	CCV	Chloride		19.6	mg/L	98				
	CCV	Sulfate		21.9	mg/L	110				
	CCV	Nitrate as N		1.69	mg/L	106				
QC2318974-16	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2068740 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318984-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2318984-02	MRL_CK	Alkalinity		3.25	mg/L	108				
QC2318984-03	SPK of 2307375-01	Alkalinity	245	449	mg/L	102			15	Splt# 2307375-01 (245mg/L)
QC2318984-04	SPKD of 2307375-01	Alkalinity	245	440	mg/L	97	2		15	Splt# 2307375-01 (245mg/L)
QC2318984-05	DUP of 2307375-05	Alkalinity	249	249	mg/L		0	2.96	15	Splt# 2307375-05 (249mg/L)
QC2318984-06	LCS	Alkalinity		39.7	mg/L	99			3	

**QC list for Run#: 2068741 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318981-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2318981-02	MRL_CK	Chloride		2.62	mg/L	87				
QC2318981-03	SPK of 2307375-01	Chloride	574	771	mg/L	98			15	Splt# 2307375-01 (574mg/L)
QC2318981-04	SPKD of 2307375-01	Chloride	574	755	mg/L	90	2		15	Splt# 2307375-01 (574mg/L)
QC2318981-05	DUP of 2307375-05	Chloride	242	241	mg/L		0		15	Splt# 2307375-05 (242mg/L)
QC2318981-06										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/04/2023

**Routine:** WSB\_SFPUC

**Sampling Team:** Field

**QC list for Run#: 2068741 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
LCS		Chloride		37.4	mg/L	93			3	

**QC list for Run#: 2068742 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318982-04	ICV	pH		9.01	pH	99				
	ICV	Temperature (°C)		21.9	°C					
QC2318982-05	DUP of 2307375-01	pH	6.42	6.43	pH		0			Splt# 2307375-01 (6.42pH)
	DUP of 2307375-01	Temperature (°C)	18.1	17.6	°C					Splt# 2307375-01 (18.1°C)
QC2318982-06	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		21.6	°C					

**QC list for Run#: 2068743 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318983-02	ICV	Specific Conductance @25°C		151	µmhos/cm	103				
QC2318983-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2318983-04	MRL_CK	Specific Conductance @25°C		9.73	µmhos/cm	97				
QC2318983-05	DUP of 2307375-01	Specific Conductance @25°C	2760	2780	µmhos/cm		0		1	Splt# 2307375-01 (2760µmhos/cm)
QC2318983-06	CCV	Specific Conductance @25°C		101	µmhos/cm	101				

**QC list for Run#: 2068744 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2318985-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2318985-02	MRL_CK	Hardness, Total, as CaCO3		2.3	mg/L	76				
QC2318985-03	DUP of 2307375-05	Hardness, Total, as CaCO3	457	454	mg/L		0	2.37	15	Splt# 2307375-05 (457mg/L)
QC2318985-04	LCS	Hardness, Total, as CaCO3		38.6	mg/L	96			3	

**QC list for Run#: 2068795 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319025-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319025-02	DUP of 2307597-03	Total Dissolved Solids	43	40	mg/L		7	13.2	20	Splt# 2307597-03 (43mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

**QC list for Run#: 2068795 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319025-03	DUP of 2307373-01	Total Dissolved Solids	315	307	mg/L		2	13.2	20	Splt# 2307373-01 (315mg/L)
QC2319025-04	LCS	Total Dissolved Solids		92	mg/L	96		13.2	20	

**QC list for Run#: 2068797 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319026-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2319026-02	MRL CK	Hardness, Total, as CaCO3		2.35	mg/L	78				
QC2319026-03	DUP of 2306834-02	Hardness, Total, as CaCO3	19.2	19	mg/L		0	0.474	3	Splt# 2306834-02 (19.2mg/L)
QC2319026-04	LCS	Hardness, Total, as CaCO3		39	mg/L	97			3	

**QC list for Run#: 2069109 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319231-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2319231-02	LCS	Calcium, Ca		2.07	mg/L	104		0.04	1	
	LCS	Magnesium, Mg		2.13	mg/L	106		0.007	0.2	
	LCS	Potassium, K		1.99	mg/L	99		0.04	0.2	
	LCS	Sodium, Na		1.95	mg/L	97		0.02	1	
QC2319231-03	DUP of 2307373-01	Calcium, Ca	29.9	29.7	mg/L		0	0.005	1	Splt# 2307373-01 (29.9mg/L)
	DUP of 2307373-01	Magnesium, Mg	32.8	32.7	mg/L		0	0.021	0.2	Splt# 2307373-01 (32.8mg/L)
	DUP of 2307373-01	Potassium, K	1.93	1.94	mg/L		0	0.06	0.2	Splt# 2307373-01 (1.93mg/L)
	DUP of 2307373-01	Sodium, Na	45.7	45.5	mg/L		0	0.2	1	Splt# 2307373-01 (45.7mg/L)
QC2319231-04	SPK of 2307373-01	Calcium, Ca	29.9	31.5	mg/L	78		0.04	1	Splt# 2307373-01 (29.9mg/L)
	SPK of 2307373-01	Magnesium, Mg	32.8	34.4	mg/L	76		0.007	0.2	Splt# 2307373-01 (32.8mg/L)
	SPK of 2307373-01	Potassium, K	1.93	3.97	mg/L	102		0.04	0.2	Splt# 2307373-01 (1.93mg/L)
	SPK of 2307373-01	Sodium, Na	45.7	46.9	mg/L	63		0.02	1	Splt# 2307373-01 (45.7mg/L)
QC2319231-05	SPKD of 2307373-01	Calcium, Ca	29.9	31.9	mg/L	101	1	0.04	1	Splt# 2307373-01 (29.9mg/L)
	SPKD of 2307373-01	Magnesium, Mg	32.8	34.9	mg/L	102	1	0.007	0.2	Splt# 2307373-01 (32.8mg/L)
	SPKD of 2307373-01	Potassium, K	1.93	4	mg/L	104	0	0.04	0.2	Splt# 2307373-01 (1.93mg/L)
	SPKD of 2307373-01	Sodium, Na	45.7	47.6	mg/L	98	1	0.02	1	Splt# 2307373-01 (45.7mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307375**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/04/2023

**Sampling Team:** Field

**QC list for Run#: 2069109 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319231-06	MRL_CK	Calcium, Ca		0.0128	mg/L	32		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0408	mg/L	81		0.021	0.021	
	MRL_CK	Potassium, K		0.14	mg/L	70		0.06	0.06	
	MRL_CK	Sodium, Na		<0.2	mg/L	N/A		0.2	0.2	
QC2319255-01	ICV	Calcium, Ca		10.4	mg/L	104		0.05	1	
	ICV	Magnesium, Mg		9.81	mg/L	98		0.01	0.2	
	ICV	Potassium, K		99.5	mg/L	99		0.03	0.2	
	ICV	Sodium, Na		10.1	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307376**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC

**Scheduled Sample Date:** 10/05/2023

**Sampling Team:** Field

**Lab Sample#:** 2307376-01 **Sample Source:** WSB\_SF57\_SWD57 **External ID:**

**Date Collected:** 10/05/2023 12:04PM **Date Received:** 10/05/2023 01:13PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	220	mg/L	1		15	10/05/2023	2068793 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	1430	µmhos/cm	1		1	10/05/2023	2068799 WHORNER	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	749	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	>MCL

**Lab Sample#:** 2307376-02 **Sample Source:** WSB\_SF58\_SWD140 **External ID:**

**Date Collected:** 10/05/2023 11:42AM **Date Received:** 10/05/2023 01:13PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	63.2	mg/L	1		6	10/05/2023	2068793 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	768	µmhos/cm	1		1	10/05/2023	2068799 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	410	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	

**Lab Sample#:** 2307376-03 **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 10/05/2023 12:05PM **Date Received:** 10/05/2023 01:13PM **Sample Matrix:** Aqueous **Location Desc:** SF#57 - USGS SOUTH WINDMILL MW57

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	221	mg/L	1		15	10/05/2023	2068793 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	1430	µmhos/cm	1		1	10/05/2023	2068799 WHORNER	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	761	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	>MCL

**Lab Sample#:** 2307376-04 **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 10/05/2023 10:40AM **Date Received:** 10/05/2023 01:13PM **Sample Matrix:** Aqueous **Location Desc:** WSB\_SF70, GGP SWM-3

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	52.2	mg/L	1		3	10/05/2023	2068793 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307376**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/05/2023

**Routine:** WSB\_SFPUC

**Sampling Team:** Field

<i>Specific Conductance @25°C</i>	579	µmhos/cm	1	1	10/05/2023	2068799	WHORNER
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<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	315	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	

<b>Lab Sample#:</b> 2307376-05	<b>Sample Source:</b> WSB_SF70_SWM3	<b>External ID:</b>
<b>Date Collected:</b> 10/05/2023 10:35AM	<b>Date Received:</b> 10/05/2023 01:13PM	<b>Sample Matrix:</b> Aqueous
<b>Location Desc:</b>		

<u>Test/Analyte</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>MBP_CHLORIDE(SM 4500-CL- D)</i>								
<i>Chloride</i>	52.3	mg/L	1		3	10/05/2023	2068793 ALEE	

<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Specific Conductance @25°C</i>	578	µmhos/cm	1		1	10/05/2023	2068799 WHORNER	

<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	308	mg/L	1	13.2	20	10/09/2023	2068795 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307376**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/05/2023

**Routine:** WSB\_SFUC

**Sampling Team:** Field

**QC list for Run#: 2068793 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319021-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2319021-02	MRL_CK	Chloride		2.76	mg/L	92				
QC2319021-03	SPK of 2306834-01	Chloride	6.34	46.2	mg/L	99			3	Splt# 2306834-01 (6.34mg/L)
QC2319021-04	SPKD of 2306834-01	Chloride	6.34	44	mg/L	94	4		3	Splt# 2306834-01 (6.34mg/L)
QC2319021-05	DUP of 2306834-02	Chloride	5.26	5.29	mg/L		0		3	Splt# 2306834-02 (5.26mg/L)
QC2319021-06	LCS	Chloride		38	mg/L	95			3	

**QC list for Run#: 2068795 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319025-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319025-02	DUP of 2307597-03	Total Dissolved Solids	43	40	mg/L		7	13.2	20	Splt# 2307597-03 (43mg/L)
QC2319025-03	DUP of 2307373-01	Total Dissolved Solids	315	307	mg/L		2	13.2	20	Splt# 2307373-01 (315mg/L)
QC2319025-04	LCS	Total Dissolved Solids		92	mg/L	96		13.2	20	

**QC list for Run#: 2068799 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319028-01	CAL	Specific Conductance @25°C		1420	µmhos/cm	101				
QC2319028-02	ICV	Specific Conductance @25°C		154	µmhos/cm	104				
QC2319028-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2319028-04	MRL_CK	Specific Conductance @25°C		9.8	µmhos/cm	98				
QC2319028-05	DUP of 2306838-01	Specific Conductance @25°C	81.7	81.5	µmhos/cm		0		1	Splt# 2306838-01 (81.7µmhos/cm)
QC2319028-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2319028-07	CCV	Specific Conductance @25°C		1420	µmhos/cm	101				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307377**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/10/2023

**Routine:** WSB\_SFUC

**Sampling Team:** Field

**Lab Sample#:** 2307377-01 **Sample Source:** WSB\_SF34\_KIR130 **External ID:**

**Date Collected:** 10/10/2023 11:35AM **Date Received:** 10/10/2023 01:58PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	30.9	mg/L	1		3	10/10/2023	2068996 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	405	µmhos/cm	1		1	10/10/2023	2069011 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	224	mg/L	1	13.2	20	10/16/2023	2069130 DCARDONA	

**Lab Sample#:** 2307377-02 **Sample Source:** WSB\_SF35\_KIR255 **External ID:**

**Date Collected:** 10/10/2023 11:45AM **Date Received:** 10/10/2023 01:58PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	37.3	mg/L	1		3	10/10/2023	2068996 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	476	µmhos/cm	1		1	10/10/2023	2069011 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	258	mg/L	1	13.2	20	10/16/2023	2069130 DCARDONA	

**Lab Sample#:** 2307377-03 **Sample Source:** WSB\_SF36\_KIR385 **External ID:**

**Date Collected:** 10/10/2023 11:06AM **Date Received:** 10/10/2023 01:58PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	35.1	mg/L	1		3	10/10/2023	2068996 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	470	µmhos/cm	1		1	10/10/2023	2069011 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	287	mg/L	1	13.2	20	10/16/2023	2069130 DCARDONA	

**Lab Sample#:** 2307377-04 **Sample Source:** WSB\_SF37\_KIR435 **External ID:**

**Date Collected:** 10/10/2023 10:54AM **Date Received:** 10/10/2023 01:58PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	27.8	mg/L	1		3	10/10/2023	2068996 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307377**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/10/2023

**Sampling Team:** Field

<i>Specific Conductance @25°C</i>	434	µmhos/cm	1	1	10/10/2023	2069011	WHORNER
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<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	257	mg/L	1	13.2	20	10/16/2023	2069130	DCARDONA

<b>Lab Sample#:</b> 2307377-05	<b>Sample Source:</b> WSB_SF_DUP	<b>External ID:</b>
<b>Date Collected:</b> 10/10/2023 11:46AM	<b>Date Received:</b> 10/10/2023 01:58PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#35 - GRT HWY/KIRKHAM MW255

Test/Analyte

<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Chloride</i>	37.5	mg/L	1		3	10/10/2023	2068996	ALEE

<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Specific Conductance @25°C</i>	475	µmhos/cm	1		1	10/10/2023	2069011	WHORNER

<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	261	mg/L	1	13.2	20	10/16/2023	2069130	DCARDONA

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307377**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/10/2023

**Routine:** WSB\_SFUC

**Sampling Team:** Field

**QC list for Run#: 2068996 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319169-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2319169-02	MRL_CK	Chloride		2.7	mg/L	90				
QC2319169-03	SPK of 2307742-05	Chloride	6.01	43.4	mg/L	93			3	Splt# 2307742-05 (6.01mg/L)
QC2319169-04	SPKD of 2307742-05	Chloride	6.01	43.6	mg/L	93	0		3	Splt# 2307742-05 (6.01mg/L)
QC2319169-05	DUP of 2307056-08	Chloride	5.23	5.12	mg/L		2		3	Splt# 2307056-08 (5.23mg/L)
QC2319169-06	LCS	Chloride		37.2	mg/L	93			3	

**QC list for Run#: 2069011 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319182-02	ICV	Specific Conductance @25°C		152	µmhos/cm	104				
QC2319182-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2319182-04	MRL_CK	Specific Conductance @25°C		9.83	µmhos/cm	98				
QC2319182-05	DUP of 2307377-01	Specific Conductance @25°C	405	406	µmhos/cm		0		1	Splt# 2307377-01 (405µmhos/cm)
QC2319182-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2069130 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319269-01	DUP of 2307745-03	Total Dissolved Solids	42	40	mg/L		4	13.2	20	Splt# 2307745-03 (42mg/L)
QC2319269-02	DUP of 2307378-03	Total Dissolved Solids	151	155	mg/L		2	13.2	20	Splt# 2307378-03 (151mg/L)
QC2319269-03	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319269-04	LCS	Total Dissolved Solids		89	mg/L	93		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307378**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/12/2023

**Routine:** WSB\_SF30

**Sampling Team:** Field

**Lab Sample#:** 2307378-01 **Sample Source:** WSB\_SF30\_ORT125 **External ID:**

**Date Collected:** 10/12/2023 12:24PM **Date Received:** 10/12/2023 01:26PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	31.5	mg/L	1		3	10/12/2023	2069125 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	460	µmhos/cm	1		1	10/12/2023	2069128 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	254	mg/L	1	13.2	20	10/16/2023	2069130 DCARDONA	

**Lab Sample#:** 2307378-02 **Sample Source:** WSB\_SF31\_ORT265 **External ID:**

**Date Collected:** 10/12/2023 12:21PM **Date Received:** 10/12/2023 01:26PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	25.6	mg/L	1		3	10/12/2023	2069125 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	316	µmhos/cm	1		1	10/12/2023	2069128 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	176	mg/L	1	13.2	20	10/16/2023	2069130 DCARDONA	

**Lab Sample#:** 2307378-03 **Sample Source:** WSB\_SF32\_ORT400 **External ID:**

**Date Collected:** 10/12/2023 11:25AM **Date Received:** 10/12/2023 01:26PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	22.8	mg/L	1		3	10/12/2023	2069125 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	266	µmhos/cm	1		1	10/12/2023	2069128 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	151	mg/L	1	13.2	20	10/16/2023	2069130 DCARDONA	

**Lab Sample#:** 2307378-04 **Sample Source:** WSB\_SF33\_ORT475 **External ID:**

**Date Collected:** 10/12/2023 11:09AM **Date Received:** 10/12/2023 01:26PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	27.4	mg/L	1		3	10/12/2023	2069125 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307378**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC

**Scheduled Sample Date:** 10/12/2023

**Sampling Team:** Field

<i>Specific Conductance @25°C</i>	296	µmhos/cm	1	1	10/12/2023	2069128	WHORNER
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<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	169	mg/L	1	13.2	20	10/16/2023	2069130	DCARDONA

**Lab Sample#:** 2307378-05      **Sample Source:** WSB\_SF\_DUP      **External ID:**  
**Date Collected:** 10/12/2023 12:23PM      **Date Received:** 10/12/2023 01:26PM      **Sample Matrix:** Aqueous      **Location Desc:** SF#31 - GRT HWY/ORTEGA MW265

Test/Analyte

<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Chloride</i>	25.7	mg/L	1		3	10/12/2023	2069125	ALEE

<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Specific Conductance @25°C</i>	322	µmhos/cm	1		1	10/12/2023	2069128	WHORNER

<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	182	mg/L	1	13.2	20	10/16/2023	2069130	DCARDONA

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307378**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/12/2023

**Routine:** WSB\_SFUC

**Sampling Team:** Field

**QC list for Run#: 2069125 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319265-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2319265-02	MRL_CK	Chloride		2.67	mg/L	89				
QC2319265-03	SPK of 2307100-01	Chloride	5.61	43.5	mg/L	94			3	Splt# 2307100-01 (5.61mg/L)
QC2319265-04	SPKD of 2307100-01	Chloride	5.61	43.4	mg/L	94	0		3	Splt# 2307100-01 (5.61mg/L)
QC2319265-05	DUP of 2307100-02	Chloride	6.22	5.95	mg/L		4		3	Splt# 2307100-02 (6.22mg/L)
QC2319265-06	LCS	Chloride		37.9	mg/L	94			3	

**QC list for Run#: 2069128 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319267-02	ICV	Specific Conductance @25°C		153	µmhos/cm	104				
QC2319267-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2319267-04	MRL_CK	Specific Conductance @25°C		9.81	µmhos/cm	98				
QC2319267-05	DUP of 2307378-01	Specific Conductance @25°C	460	463	µmhos/cm		0		1	Splt# 2307378-01 (460µmhos/cm)
QC2319267-06	CCV	Specific Conductance @25°C		101	µmhos/cm	101				

**QC list for Run#: 2069130 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319269-01	DUP of 2307745-03	Total Dissolved Solids	42	40	mg/L		4	13.2	20	Splt# 2307745-03 (42mg/L)
QC2319269-02	DUP of 2307378-03	Total Dissolved Solids	151	155	mg/L		2	13.2	20	Splt# 2307378-03 (151mg/L)
QC2319269-03	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319269-04	LCS	Total Dissolved Solids		89	mg/L	93		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307379**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.B

**Scheduled Sample Date:** 12/12/2023

**Sampling Team:** Field

**Lab Sample#:** 2307379-01 **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 12/12/2023 02:18PM **Date Received:** 12/12/2023 03:21PM **Sample Matrix:** Aqueous **Location Desc:** WSB\_SF68, GGP NORTH LAKE ROAD NL-1

Test/Analyte

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	448	µmhos/cm	1		1	12/12/2023	2072105 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	246	mg/L	1	13.2	20	12/15/2023	2072157 ABALALIO	

**Lab Sample#:** 2307379-01A **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 12/12/2023 02:18PM **Date Received:** 12/12/2023 03:21PM **Sample Matrix:** Aqueous **Location Desc:** WSB\_SF68, GGP NORTH LAKE ROAD NL-1

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	26.2	mg/L	1		3	12/13/2023	2072159 ALEE	

**Lab Sample#:** 2307379-02 **Sample Source:** WSB\_SF67\_GGSPF1 **External ID:**

**Date Collected:** 12/12/2023 10:12AM **Date Received:** 12/12/2023 03:21PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	545	µmhos/cm	1		1	12/12/2023	2072105 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	285	mg/L	1	13.2	20	12/15/2023	2072157 ABALALIO	

**Lab Sample#:** 2307379-02A **Sample Source:** WSB\_SF67\_GGSPF1 **External ID:**

**Date Collected:** 12/12/2023 10:12AM **Date Received:** 12/12/2023 03:21PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	39.5	mg/L	1		3	12/13/2023	2072159 ALEE	

**Lab Sample#:** 2307379-03 **Sample Source:** WSB\_SF68\_GGPNL1 **External ID:**

**Date Collected:** 12/12/2023 02:06PM **Date Received:** 12/12/2023 03:21PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	445	µmhos/cm	1		1	12/12/2023	2072105 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	236	mg/L	1	13.2	20	12/15/2023	2072157 ABALALIO	

**Lab Sample#:** 2307379-03A **Sample Source:** WSB\_SF68\_GGPNL1 **External ID:**

**Date Collected:** 12/12/2023 02:06PM **Date Received:** 12/12/2023 03:21PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307379**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCConsult.B

**Scheduled Sample Date:** 12/12/2023

**Sampling Team:** Field

<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	26.1	mg/L	1		3	12/13/2023	2072159 ALEE	

**Lab Sample#:** 2307379-04 **Sample Source:** WSB\_SF69\_NWM3 **External ID:**

**Date Collected:** 12/12/2023 11:20AM **Date Received:** 12/12/2023 03:21PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	410	µmhos/cm	1		1	12/12/2023	2072105 WHORNER	

<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	222	mg/L	1	13.2	20	12/15/2023	2072157 ABALALIO	

**Lab Sample#:** 2307379-04A **Sample Source:** WSB\_SF69\_NWM3 **External ID:**

**Date Collected:** 12/12/2023 11:20AM **Date Received:** 12/12/2023 03:21PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	38.2	mg/L	1		3	12/13/2023	2072159 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307379**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 12/12/2023

**Routine:** WSB\_SFPUCC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2072092 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321403-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2321403-02	MRL_CK	Chloride		3.08	mg/L	103				
QC2321403-03	SPK of 2308744-03	Chloride	9.78	37.6	mg/L	69			3	Splt# 2308744-03 (9.78mg/L)
QC2321403-04	SPKD of 2308744-03	Chloride	9.78	37.8	mg/L	69	0		3	Splt# 2308744-03 (9.78mg/L)
QC2321403-05	DUP of 2308742-08	Chloride	15	15.4	mg/L		2		3	Splt# 2308742-08 (15mg/L)
QC2321403-06	LCS	Chloride		30.4	mg/L	76			3	

**QC list for Run#: 2072105 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321411-02	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2321411-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2321411-04	MRL_CK	Specific Conductance @25°C		10.9	µmhos/cm	109				
QC2321411-05	DUP of 2308744-01	Specific Conductance @25°C	116	116	µmhos/cm		0		1	Splt# 2308744-01 (116µmhos/cm)
QC2321411-06	CCV	Specific Conductance @25°C		103	µmhos/cm	103				
QC2321411-07	CCV	Specific Conductance @25°C		1440	µmhos/cm	102				

**QC list for Run#: 2072157 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321444-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2321444-02	DUP of 2309468-01	Total Dissolved Solids	92	91	mg/L		1	13.2	20	Splt# 2309468-01 (92mg/L)
QC2321444-03	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	

**QC list for Run#: 2072159 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321446-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2321446-02	MRL_CK	Chloride		3.28	mg/L	109				
QC2321446-03										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307379**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 12/12/2023

**Sampling Team:** Field

**QC list for Run#: 2072159 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	SPK of 2308742-01B	Chloride	16.6	54.4	mg/L	94			3	Splt# 2308742-01B (16.6mg/L)
QC2321446-04	SPKD of 2308742-01B	Chloride	16.6	54.7	mg/L	95	0		3	Splt# 2308742-01B (16.6mg/L)
QC2321446-05	DUP of 2308744-03B	Chloride	9.45	9.55	mg/L		1		3	Splt# 2308744-03B (9.45mg/L)
QC2321446-06	LCS	Chloride		38.4	mg/L	96			3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307380**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.B

**Scheduled Sample Date:** 10/26/2023

**Sampling Team:** Field

**Lab Sample#:** 2307380-01 **Sample Source:** WSB\_SF41\_WSPLAY **External ID:**

**Date Collected:** 10/26/2023 11:24AM **Date Received:** 10/26/2023 01:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	41.1	mg/L	10	1	5	10/26/2023	2069825 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	11.2	mg/L	1	0.005	1	11/03/2023	2070201 BTRINH	
Magnesium, Mg	40.7	mg/L	1	0.021	0.2	11/03/2023	2070201 BTRINH	
Potassium, K	1.16	mg/L	1	0.06	0.2	11/03/2023	2070201 BTRINH	
Sodium, Na	37.2	mg/L	1	0.2	1	11/03/2023	2070201 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	163	mg/L	1	0.593	3	10/26/2023	2069826 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	42.5	mg/L	1		3	10/26/2023	2069827 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	540	µmhos/cm	1		1	10/26/2023	2069808 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	193	mg/L	1	0.474	3	10/26/2023	2069828 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	8.47	pH	1			10/26/2023	2069809 WHORNER	H1,H3
Temperature (°C)	16.9	°C	1			10/26/2023	2069809 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	245	mg/L	1	13.2	20	10/29/2023	2069822 ABALALIO	

**Lab Sample#:** 2307380-01A **Sample Source:** WSB\_SF41\_WSPLAY **External ID:**

**Date Collected:** 10/26/2023 11:24AM **Date Received:** 10/26/2023 01:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Nitrate as N	<0.04	mg/L	1	0.034	0.04	10/26/2023	2069825 PWARNER	

**Lab Sample#:** 2307380-02 **Sample Source:** WSB\_SF\_DUP\_FULL **External ID:**

**Date Collected:** 10/26/2023 11:50AM **Date Received:** 10/26/2023 01:41PM **Sample Matrix:** Aqueous **Location Desc:** SF#41 - WEST SUNSET PLAYGROUND

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	41.2	mg/L	10	1	5	10/26/2023	2069825 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307380**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/26/2023

**Routine:** WSB\_SFPUCC+Consult.B

**Sampling Team:** Field

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	11.4	mg/L	1	0.005	1	11/03/2023	2070201 BTRINH	
Magnesium, Mg	41.4	mg/L	1	0.021	0.2	11/03/2023	2070201 BTRINH	
Potassium, K	1.19	mg/L	1	0.06	0.2	11/03/2023	2070201 BTRINH	
Sodium, Na	37.6	mg/L	1	0.2	1	11/03/2023	2070201 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	163	mg/L	1	0.593	3	10/26/2023	2069826 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	42.8	mg/L	1		3	10/26/2023	2069827 ALEE	
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	541	µmhos/cm	1		1	10/26/2023	2069808 WHORNER	
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	194	mg/L	1	0.474	3	10/26/2023	2069828 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	8.42	pH	1			10/26/2023	2069809 WHORNER	H1,H3
Temperature (°C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Temperature (°C)	18.3	°C	1			10/26/2023	2069809 WHORNER	
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	249	mg/L	1	13.2	20	10/29/2023	2069822 ABALALIO	

**Lab Sample#:** 2307380-02A **Sample Source:** WSB\_SF\_DUP\_FULL **External ID:**

**Date Collected:** 10/26/2023 11:50AM **Date Received:** 10/26/2023 01:41PM **Sample Matrix:** Aqueous **Location Desc:** SF#41 - WEST SUNSET PLAYGROUND

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	<0.04	mg/L	1	0.034	0.04	10/26/2023	2069825 PWARNER	

**Lab Sample#:** 2307380-03 **Sample Source:** WSB\_SB-M-1 **External ID:**

**Date Collected:** 10/26/2023 09:33AM **Date Received:** 10/26/2023 01:41PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	20.4	mg/L	10	1	5	10/26/2023	2069825 PWARNER	
Nitrate as N	4.77	mg/L	10	0.34	0.4	10/26/2023	2069825 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	28.5	mg/L	1	0.005	1	11/03/2023	2070201 BTRINH	
Magnesium, Mg	20.3	mg/L	1	0.021	0.2	11/03/2023	2070201 BTRINH	
Potassium, K	1.64	mg/L	1	0.06	0.2	11/03/2023	2070201 BTRINH	
Sodium, Na	31	mg/L	1	0.2	1	11/03/2023	2070201 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307380**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 10/26/2023

**Sampling Team:** Field

<u>MBP_ALK(SM 2320 B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	123	mg/L	1	0.593	3	10/26/2023	2069826 ALEE	
<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	35.9	mg/L	1		3	10/26/2023	2069827 ALEE	
<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	452	µmhos/cm	1		1	10/26/2023	2069808 WHORNER	
<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	150	mg/L	1	0.474	3	10/26/2023	2069828 ALEE	
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	6.81	pH	1			10/26/2023	2069809 WHORNER	H1,H3
Temperature (°C)	16.1	°C	1			10/26/2023	2069809 WHORNER	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	248	mg/L	1	13.2	20	10/29/2023	2069822 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307380**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/26/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2069808 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319737-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2319737-02	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2319737-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2319737-04	MRL_CK	Specific Conductance @25°C		10.2	µmhos/cm	102				
QC2319737-05	DUP of 2307500-01	Specific Conductance @25°C	96.7	96.3	µmhos/cm		0		1	Splt# 2307500-01 (96.7µmhos/cm)
QC2319737-06	CCV	Specific Conductance @25°C		103	µmhos/cm	103				
QC2319737-07	CCV	Specific Conductance @25°C		1430	µmhos/cm	102				

**QC list for Run#: 2069809 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319738-01	CAL	pH		4.01	pH	100				
	CAL	Temperature (°C)		18.9	°C					
QC2319738-02	CAL	pH		7.12	pH	102				
	CAL	Temperature (°C)		19.1	°C					
QC2319738-03	CAL	pH		10.1	pH	101				
	CAL	Temperature (°C)		18.8	°C					
QC2319738-04	ICV	pH		8.98	pH	99				
	ICV	Temperature (°C)		18.8	°C					
QC2319738-05	DUP of 2307500-01	pH	8.87	8.87	pH		0			Splt# 2307500-01 (8.87pH)
	DUP of 2307500-01	Temperature (°C)	18.1	18.1	°C					H1,H3 Splt# 2307500-01 (18.1°C)
QC2319738-06	CCV	pH		9	pH	99				
	CCV	Temperature (°C)		18.9	°C					
QC2319738-07	CCV	pH		9	pH	99				
	CCV	Temperature (°C)		18.9	°C					

**QC list for Run#: 2069822 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319743-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307380**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/26/2023

**Routine:** WSB\_SFUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2069822 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319743-02	DUP of 2308228-03	Total Dissolved Solids	40	42	mg/L		4	13.2	20	Splt# 2308228-03 (40mg/L)
QC2319743-03	LCS	Total Dissolved Solids		89	mg/L	93		13.2	20	

**QC list for Run#: 2069825 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319745-01	MRL_CK	Sulfate		0.501	mg/L	100				
	MRL_CK	Nitrate as N		0.0396	mg/L	99				
QC2319745-02	CCV	Sulfate		2.28	mg/L	91				
	CCV	Nitrate as N		0.186	mg/L	93				
QC2319745-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2319745-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2319745-05	LCS	Sulfate		0.931	mg/L	93				
	LCS	Nitrate as N		0.209	mg/L	92				
QC2319745-06	CCV	Sulfate		21.1	mg/L	105				
	CCV	Nitrate as N		1.63	mg/L	102				
QC2319745-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2319745-08	SPK of 2307516-09	Sulfate	6.84	9.47	mg/L	105				Splt# 2307516-09 (6.84mg/L)
	SPK of 2307516-09	Nitrate as N	0.118	0.316	mg/L	99				Splt# 2307516-09 (0.118mg/L)
QC2319745-09	SPKD of 2307516-09	Sulfate	6.84	9.71	mg/L	115	2			Splt# 2307516-09 (6.84mg/L)
	SPKD of 2307516-09	Nitrate as N	0.118	0.328	mg/L	105	3			Splt# 2307516-09 (0.118mg/L)

**QC list for Run#: 2069826 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319746-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2319746-02	MRL_CK	Alkalinity		3.16	mg/L	105				
QC2319746-03	SPK of 2307500-01	Alkalinity	24	64.3	mg/L	101			3	Splt# 2307500-01 (24mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307380**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/26/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2069826 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319746-04	SPKD of 2307500-01	Alkalinity	24	65	mg/L	103	1		3	Splt# 2307500-01 (24mg/L)
QC2319746-05	DUP of 2307500-02	Alkalinity	26	26.1	mg/L		0	0.593	3	Splt# 2307500-02 (26mg/L)
QC2319746-06	LCS	Alkalinity		40	mg/L	99			3	

**QC list for Run#: 2069827 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319747-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2319747-02	MRL CK	Chloride		2.92	mg/L	97				
QC2319747-03	SPK of 2307500-01	Chloride	6.84	44.8	mg/L	94			3	Splt# 2307500-01 (6.84mg/L)
QC2319747-04	SPKD of 2307500-01	Chloride	6.84	45.3	mg/L	96	1		3	Splt# 2307500-01 (6.84mg/L)
QC2319747-05	DUP of 2307500-02	Chloride	6.35	6.33	mg/L		0		3	Splt# 2307500-02 (6.35mg/L)
QC2319747-06	LCS	Chloride		38.4	mg/L	96			3	

**QC list for Run#: 2069828 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319748-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2319748-02	MRL CK	Hardness, Total, as CaCO3		2.39	mg/L	79				
QC2319748-03	DUP of 2307500-02	Hardness, Total, as CaCO3	22.9	22.9	mg/L		0	0.474	3	Splt# 2307500-02 (22.9mg/L)
QC2319748-04	LCS	Hardness, Total, as CaCO3		39.4	mg/L	98			3	

**QC list for Run#: 2070201 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319984-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2319984-02	LCS	Calcium, Ca		2.02	mg/L	101		0.04	1	
	LCS	Magnesium, Mg		2.03	mg/L	102		0.007	0.2	
	LCS	Potassium, K		1.99	mg/L	99		0.04	0.2	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307380**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 10/26/2023

**Sampling Team:** Field

**QC list for Run#: 2070201 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	LCS	Sodium, Na		2.19	mg/L	110		0.02	1	
QC2319984-03	DUP of 2307380-01	Calcium, Ca	11.2	11.2	mg/L		0	0.005	1	Splt# 2307380-01 (11.2mg/L)
	DUP of 2307380-01	Magnesium, Mg	40.7	40.5	mg/L		0	0.021	0.2	Splt# 2307380-01 (40.7mg/L)
	DUP of 2307380-01	Potassium, K	1.16	1.19	mg/L		2	0.06	0.2	Splt# 2307380-01 (1.16mg/L)
	DUP of 2307380-01	Sodium, Na	37.2	36.9	mg/L		0	0.2	1	Splt# 2307380-01 (37.2mg/L)
QC2319984-04	SPK of 2307380-01	Calcium, Ca	11.2	13.2	mg/L	99		0.04	1	Splt# 2307380-01 (11.2mg/L)
	SPK of 2307380-01	Magnesium, Mg	40.7	42.8	mg/L	101		0.007	0.2	Splt# 2307380-01 (40.7mg/L)
	SPK of 2307380-01	Potassium, K	1.16	3.22	mg/L	103		0.04	0.2	Splt# 2307380-01 (1.16mg/L)
	SPK of 2307380-01	Sodium, Na	37.2	39.1	mg/L	98		0.02	1	Splt# 2307380-01 (37.2mg/L)
QC2319984-05	SPKD of 2307380-01	Calcium, Ca	11.2	13.4	mg/L	106	1	0.04	1	Splt# 2307380-01 (11.2mg/L)
	SPKD of 2307380-01	Magnesium, Mg	40.7	43.2	mg/L	124	1	0.007	0.2	Splt# 2307380-01 (40.7mg/L)
	SPKD of 2307380-01	Potassium, K	1.16	3.24	mg/L	104	0	0.04	0.2	Splt# 2307380-01 (1.16mg/L)
	SPKD of 2307380-01	Sodium, Na	37.2	39.5	mg/L	119	1	0.02	1	Splt# 2307380-01 (37.2mg/L)
QC2319984-06	MRL_CK	Calcium, Ca		<0.005	mg/L	N/A		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0231	mg/L	46		0.021	0.021	
	MRL_CK	Potassium, K		0.16	mg/L	80		0.06	0.06	
	MRL_CK	Sodium, Na		0.334	mg/L	167		0.2	0.2	
QC2320008-01	ICV	Calcium, Ca		10.2	mg/L	102		0.05	1	
	ICV	Magnesium, Mg		9.9	mg/L	98		0.01	0.2	
	ICV	Potassium, K		100	mg/L	100		0.03	0.2	
	ICV	Sodium, Na		10.1	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307381**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.B

**Scheduled Sample Date:** 10/30/2023

**Sampling Team:** Field

**Lab Sample#:** 2307381-01 **Sample Source:** WSB\_SF26\_TAR145 **External ID:**

**Date Collected:** 10/30/2023 10:41AM **Date Received:** 10/30/2023 12:57PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	40.9	mg/L	1		3	10/30/2023	2069964 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	498	µmhos/cm	1		1	10/30/2023	2069954 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	259	mg/L	1	13.2	20	11/02/2023	2070035 ABALALIO	

**Lab Sample#:** 2307381-02 **Sample Source:** WSB\_SF27\_TAR240 **External ID:**

**Date Collected:** 10/30/2023 10:40AM **Date Received:** 10/30/2023 12:57PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	31.6	mg/L	1		3	10/30/2023	2069964 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	393	µmhos/cm	1		1	10/30/2023	2069954 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	208	mg/L	1	13.2	20	11/02/2023	2070035 ABALALIO	

**Lab Sample#:** 2307381-03 **Sample Source:** WSB\_SF28\_TAR400 **External ID:**

**Date Collected:** 10/30/2023 10:02AM **Date Received:** 10/30/2023 12:57PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	27.1	mg/L	1		3	10/30/2023	2069964 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	328	µmhos/cm	1		1	10/30/2023	2069954 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	177	mg/L	1	13.2	20	11/02/2023	2070035 ABALALIO	

**Lab Sample#:** 2307381-04 **Sample Source:** WSB\_SF29\_TAR530 **External ID:**

**Date Collected:** 10/30/2023 10:10AM **Date Received:** 10/30/2023 12:57PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	23.7	mg/L	1		3	10/30/2023	2069964 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307381**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 10/30/2023

**Sampling Team:** Field

<i>Specific Conductance @25°C</i>	378	µmhos/cm	1	1	10/30/2023	2069954	WHORNER
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<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	206	mg/L	1	13.2	20	11/02/2023	2070035 ABALALIO	

<b>Lab Sample#:</b> 2307381-05	<b>Sample Source:</b> WSB_SF_DUP	<b>External ID:</b>
<b>Date Collected:</b> 10/30/2023 10:47AM	<b>Date Received:</b> 10/30/2023 12:57PM	<b>Sample Matrix:</b> Aqueous
		<b>Location Desc:</b> SF#27 - GRT HWY/TARAVAL MW240

Test/Analyte

<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Chloride</i>	32.1	mg/L	1		3	10/30/2023	2069964 PWARNER	

<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Specific Conductance @25°C</i>	396	µmhos/cm	1		1	10/30/2023	2069954 WHORNER	

<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	207	mg/L	1	13.2	20	11/02/2023	2070035 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307381**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/30/2023

**Routine:** WSB\_SFPUCC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2069954 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319841-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2319841-02	ICV	Specific Conductance @25°C		156	µmhos/cm	106				
QC2319841-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2319841-04	MRL CK	Specific Conductance @25°C		10.5	µmhos/cm	105				
QC2319841-05	DUP of 2307690-01	Specific Conductance @25°C	95	95.2	µmhos/cm		0		1	Splt# 2307690-01 (95µmhos/cm)
QC2319841-06	CCV	Specific Conductance @25°C		105	µmhos/cm	105				
QC2319841-07	CCV	Specific Conductance @25°C		1460	µmhos/cm	103				

**QC list for Run#: 2069964 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319848-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2319848-02	MRL CK	Chloride		3.05	mg/L	102				
QC2319848-03	SPK of 2307381-01	Chloride	40.9	78.8	mg/L	94			3	Splt# 2307381-01 (40.9mg/L)
QC2319848-04	SPKD of 2307381-01	Chloride	40.9	79.2	mg/L	95	0		3	Splt# 2307381-01 (40.9mg/L)
QC2319848-06	LCS	Chloride		29.1	mg/L	72			3	
QC2319848-07	LCS	Chloride		38	mg/L	95			3	

**QC list for Run#: 2070035 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319897-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319897-02	DUP of 2308351-01	Total Dissolved Solids	44	47	mg/L		6	13.2	20	Splt# 2308351-01 (44mg/L)
QC2319897-03	DUP of 2307382-03	Total Dissolved Solids	533	534	mg/L		0	13.2	20	Splt# 2307382-03 (533mg/L)
QC2319897-04	LCS	Total Dissolved Solids		98	mg/L	103		13.2	20	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307382**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/31/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**Lab Sample#:** 2307382-01 **Sample Source:** WSB\_SB-44-1-190 **External ID:**

**Date Collected:** 10/31/2023 10:57AM **Date Received:** 10/31/2023 12:34PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	95.2	mg/L	10	1	5	11/01/2023	2070019 PWARNER	
Nitrate as N	5.36	mg/L	10	0.34	0.4	11/01/2023	2070019 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	48.2	mg/L	1	0.005	1	11/03/2023	2070201 BTRINH	
Magnesium, Mg	34.6	mg/L	1	0.021	0.2	11/03/2023	2070201 BTRINH	
Potassium, K	1.39	mg/L	1	0.06	0.2	11/03/2023	2070201 BTRINH	
Sodium, Na	129	mg/L	1	0.2	1	11/03/2023	2070201 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	275	mg/L	1	2.96	15	10/31/2023	2070036 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	90.8	mg/L	1		15	10/31/2023	2070037 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	1070	µmhos/cm	1		1	10/31/2023	2070023 WHORNER	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	259	mg/L	1	2.37	15	10/31/2023	2070043 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	6.46	pH	1			10/31/2023	2070032 WHORNER	H1,H3
Temperature (°C)	18.6	°C	1			10/31/2023	2070032 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	623	mg/L	1	13.2	20	11/02/2023	2070035 ABALALIO	>MCL

**Lab Sample#:** 2307382-02 **Sample Source:** WSB\_SB-44-1-300 **External ID:**

**Date Collected:** 10/31/2023 11:51AM **Date Received:** 10/31/2023 12:34PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	92.9	mg/L	10	1	5	11/01/2023	2070019 PWARNER	
Nitrate as N	5.18	mg/L	10	0.34	0.4	11/01/2023	2070019 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	49.1	mg/L	1	0.005	1	11/03/2023	2070201 BTRINH	
Magnesium, Mg	34.7	mg/L	1	0.021	0.2	11/03/2023	2070201 BTRINH	
Potassium, K	1.47	mg/L	1	0.06	0.2	11/03/2023	2070201 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307382**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 10/31/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sodium, Na	126	mg/L	1	0.2	1	11/03/2023	2070201 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	279	mg/L	1	2.96	15	10/31/2023	2070036 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	90.7	mg/L	1		15	10/31/2023	2070037 ALEE	
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	1070	µmhos/cm	1		1	10/31/2023	2070023 WHORNER	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	260	mg/L	1	2.37	15	10/31/2023	2070043 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	6.49	pH	1			10/31/2023	2070032 WHORNER	H1,H3
Temperature (°C)	18.5	°C	1			10/31/2023	2070032 WHORNER	
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	589	mg/L	1	13.2	20	11/02/2023	2070035 ABALALIO	>MCL

**Lab Sample#:** 2307382-03 **Sample Source:** WSB\_SB-44-1-460 **External ID:**

**Date Collected:** 10/31/2023 10:27AM **Date Received:** 10/31/2023 12:34PM **Sample Matrix:** Aqueous **Location Desc:**

**Test/Analyte**

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	96.1	mg/L	10	1	5	11/01/2023	2070019 PWARNER	
Nitrate as N	0.644	mg/L	10	0.34	0.4	11/01/2023	2070019 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	54.8	mg/L	1	0.005	1	11/03/2023	2070201 BTRINH	
Magnesium, Mg	46	mg/L	1	0.021	0.2	11/03/2023	2070201 BTRINH	
Potassium, K	3.08	mg/L	1	0.06	0.2	11/03/2023	2070201 BTRINH	
Sodium, Na	65.6	mg/L	1	0.2	1	11/03/2023	2070201 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	170	mg/L	1	2.96	15	10/31/2023	2070036 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	127	mg/L	1		15	10/31/2023	2070037 ALEE	
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	955	µmhos/cm	1		1	10/31/2023	2070023 WHORNER	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>								

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307382**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 10/31/2023

**Sampling Team:** Field

<i>Hardness, Total, as CaCO3</i>	315	mg/L	1	2.37	15	10/31/2023	2070043	ALEE	
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<i>MBP_PH(SM 4500-H+ B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>pH</i>	6.48	pH	1			10/31/2023	2070032 WHORNER	H1,H3
<i>Temperature (°C)</i>	17.9	°C	1			10/31/2023	2070032 WHORNER	

<i>MBP_TDS(SM 2540 C)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Total Dissolved Solids</i>	533	mg/L	1	13.2	20	11/02/2023	2070035 ABALALIO	>MCL

**Lab Sample#:** 2307382-04    **Sample Source:** WSB\_SB-44-1-580    **External ID:**  
**Date Collected:** 10/31/2023 09:53AM    **Date Received:** 10/31/2023 12:34PM    **Sample Matrix:** Aqueous    **Location Desc:**

Test/Analyte

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Nitrate as N</i>	<0.04	mg/L	1	0.034	0.04	11/01/2023	2070019 PWARNER	

<i>SEM_200.7_DW(EPA 200.7)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Calcium, Ca</i>	116	mg/L	1	0.005	1	11/03/2023	2070201 BTRINH	
<i>Magnesium, Mg</i>	98.3	mg/L	1	0.021	0.2	11/03/2023	2070201 BTRINH	
<i>Potassium, K</i>	5.52	mg/L	1	0.06	0.2	11/03/2023	2070201 BTRINH	
<i>Sodium, Na</i>	110	mg/L	1	0.2	1	11/03/2023	2070201 BTRINH	

<i>MBP_ALK(SM 2320 B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Alkalinity</i>	263	mg/L	1	2.96	15	10/31/2023	2070036 ALEE	

<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Chloride</i>	189	mg/L	1		15	10/31/2023	2070037 ALEE	

<i>MBP_COND(SM 2510 B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Specific Conductance @25°C</i>	1720	µmhos/cm	1		1	10/31/2023	2070023 WHORNER	>MCL

<i>MBP_HARDNESS_T(SM 2340 C)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Hardness, Total, as CaCO3</i>	673	mg/L	1	2.37	15	10/31/2023	2070043 ALEE	

<i>MBP_PH(SM 4500-H+ B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>pH</i>	7.48	pH	1			10/31/2023	2070032 WHORNER	H1,H3
<i>Temperature (°C)</i>	18	°C	1			10/31/2023	2070032 WHORNER	

**Lab Sample#:** 2307382-04A    **Sample Source:** WSB\_SB-44-1-580    **External ID:**  
**Date Collected:** 10/31/2023 09:53AM    **Date Received:** 10/31/2023 12:34PM    **Sample Matrix:** Aqueous    **Location Desc:**

Test/Analyte

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Sulfate</i>	350	mg/L	20	2	10	11/01/2023	2070019 PWARNER	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307382**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 10/31/2023

**Sampling Team:** Field

**Lab Sample#:** 2307382-04B **Sample Source:** WSB\_SB-44-1-580 **External ID:**

**Date Collected:** 10/31/2023 09:53AM **Date Received:** 10/31/2023 12:34PM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	1090	mg/L	1	26.4	40	11/02/2023	2070035 ABALALIO	>MCL

**Lab Sample#:** 2307382-05 **Sample Source:** WSB\_SB\_DUP **External ID:**

**Date Collected:** 10/31/2023 11:15AM **Date Received:** 10/31/2023 12:34PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SB\_CUP-44-1-190, GG NATIONAL CEMETE

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	92.1	mg/L	20	2	10	11/01/2023	2070019 PWARNER	
Nitrate as N	5.28	mg/L	20	0.68	0.8	11/01/2023	2070019 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	47.5	mg/L	1	0.005	1	11/03/2023	2070201 BTRINH	
Magnesium, Mg	34.1	mg/L	1	0.021	0.2	11/03/2023	2070201 BTRINH	
Potassium, K	1.37	mg/L	1	0.06	0.2	11/03/2023	2070201 BTRINH	
Sodium, Na	127	mg/L	1	0.2	1	11/03/2023	2070201 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	286	mg/L	1	2.96	15	10/31/2023	2070036 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	94.2	mg/L	1		15	10/31/2023	2070037 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1060	µmhos/cm	1		1	10/31/2023	2070023 WHORNER	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	253	mg/L	1	2.37	15	10/31/2023	2070043 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.47	pH	1			10/31/2023	2070032 WHORNER	H1,H3
Temperature (°C)	18.5	°C	1			10/31/2023	2070032 WHORNER	

**Lab Sample#:** 2307382-05B **Sample Source:** WSB\_SB\_DUP **External ID:**

**Date Collected:** 10/31/2023 11:15AM **Date Received:** 10/31/2023 12:34PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SB\_CUP-44-1-190, GG NATIONAL CEMETE

Test/Analyte

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	640	mg/L	1	13.2	20	11/05/2023	2070172 DCARDONA	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307382**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 10/31/2023

**Sampling Team:** Field

**QC list for Run#: 2070019 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319886-01	MRL_CK	Sulfate		0.511	mg/L	102				
	MRL_CK	Nitrate as N		0.0401	mg/L	100				
QC2319886-02	CCV	Sulfate		2.42	mg/L	96				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2319886-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2319886-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2319886-05	LCS	Sulfate		0.942	mg/L	94				
	LCS	Nitrate as N		0.214	mg/L	94				
QC2319886-06	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2319886-07	CCV	Sulfate		2.41	mg/L	96				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2319886-08	SPKD of 2307715-01	Sulfate	5.86	8.91	mg/L	122	2			Splt# 2307715-01 (5.86mg/L)
	SPKD of 2307715-01	Nitrate as N	0.101	0.319	mg/L	109	4			Splt# 2307715-01 (0.101mg/L)
QC2319886-09	SPK of 2307715-01	Sulfate	5.86	8.68	mg/L	113				Splt# 2307715-01 (5.86mg/L)
	SPK of 2307715-01	Nitrate as N	0.101	0.304	mg/L	102				Splt# 2307715-01 (0.101mg/L)
QC2319886-10	CCV	Nitrate as N		1.72	mg/L	107				
QC2319886-11	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2319886-12	SPK of 2307718-03	Nitrate as N	0.106	0.309	mg/L	101				Splt# 2307718-03 (0.106mg/L)
QC2319886-13	SPKD of 2307718-03	Nitrate as N	0.106	0.317	mg/L	105	2			Splt# 2307718-03 (0.106mg/L)

**QC list for Run#: 2070023 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319887-02	ICV	Specific Conductance @25°C		153	µmhos/cm	104				
QC2319887-03	BLK	Specific Conductance @25°C		<1	µmhos/cm					1

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307382**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/31/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070023 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319887-04	MRL_CK	Specific Conductance @25°C		10.3	µmhos/cm	103				
QC2319887-05		Specific Conductance @25°C		<1	µmhos/cm		0		1	or: No Pare
QC2319887-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2319887-07	CCV	Specific Conductance @25°C		1420	µmhos/cm	101				

**QC list for Run#: 2070032 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319894-04	ICV	pH		9.01	pH	99				
	ICV	Temperature (°C)		19.4	°C					
QC2319894-05	DUP of 2307691-01	pH	9.11	9.11	pH		0			Splt# 2307691-01 (9.11pH) H1,H3
	DUP of 2307691-01	Temperature (°C)	18.5	18.5	°C					Splt# 2307691-01 (18.5°C)
QC2319894-06	CCV	pH		9.01	pH	99				
	CCV	Temperature (°C)		19.5	°C					
QC2319894-07	CCV	pH		9.01	pH	99				
	CCV	Temperature (°C)		19.8	°C					

**QC list for Run#: 2070035 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319897-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319897-02	DUP of 2308351-01	Total Dissolved Solids	44	47	mg/L		6	13.2	20	Splt# 2308351-01 (44mg/L)
QC2319897-03	DUP of 2307382-03	Total Dissolved Solids	533	534	mg/L		0	13.2	20	Splt# 2307382-03 (533mg/L)
QC2319897-04	LCS	Total Dissolved Solids		98	mg/L	103		13.2	20	

**QC list for Run#: 2070036 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319898-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2319898-02	MRL_CK	Alkalinity		3.22	mg/L	107				
QC2319898-03	SPK of 2307691-03	Alkalinity	25.4	65.5	mg/L	100			3	Splt# 2307691-03 (25.4mg/L)
QC2319898-04										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307382**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/31/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070036 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319898-05	SPKD of 2307691-03	Alkalinity	25.4	68.3	mg/L	107	4		3	Splt# 2307691-03 (25.4mg/L)
QC2319898-06	DUP of 2307689-08	Alkalinity	25.3	25.7	mg/L		1	0.593	3	Splt# 2307689-08 (25.3mg/L)
	LCS	Alkalinity		40.2	mg/L	100			3	

**QC list for Run#: 2070037 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319899-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2319899-02	MRL_CK	Chloride		2.84	mg/L	94				
QC2319899-03	SPK of 2307691-03	Chloride	6.24	44	mg/L	94			3	Splt# 2307691-03 (6.24mg/L)
QC2319899-04	SPKD of 2307691-03	Chloride	6.24	43.7	mg/L	93	0		3	Splt# 2307691-03 (6.24mg/L)
QC2319899-05	DUP of 2307689-08	Chloride	5.47	5.43	mg/L		0		3	Splt# 2307689-08 (5.47mg/L)
QC2319899-06	LCS	Chloride		38.2	mg/L	95			3	

**QC list for Run#: 2070043 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319901-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2319901-02	MRL_CK	Hardness, Total, as CaCO3		2.38	mg/L	79				
QC2319901-03	DUP of 2307689-08	Hardness, Total, as CaCO3	23	22.9	mg/L		0	0.474	3	Splt# 2307689-08 (23mg/L)
QC2319901-04	LCS	Hardness, Total, as CaCO3		39.1	mg/L	97			3	

**QC list for Run#: 2070172 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319982-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319982-02	LCS	Total Dissolved Solids		103	mg/L	108		13.2	20	
QC2319982-03	DUP of 2307383-01	Total Dissolved Solids	287	290	mg/L		1	13.2	20	Splt# 2307383-01 (287mg/L)

**QC list for Run#: 2070201 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319984-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307382**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 10/31/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070201 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2319984-02	LCS	Calcium, Ca		2.02	mg/L	101		0.04	1	
	LCS	Magnesium, Mg		2.03	mg/L	102		0.007	0.2	
	LCS	Potassium, K		1.99	mg/L	99		0.04	0.2	
	LCS	Sodium, Na		2.19	mg/L	110		0.02	1	
QC2319984-03	DUP of 2307380-01	Calcium, Ca	11.2	11.2	mg/L		0	0.005	1	Splt# 2307380-01 (11.2mg/L)
	DUP of 2307380-01	Magnesium, Mg	40.7	40.5	mg/L		0	0.021	0.2	Splt# 2307380-01 (40.7mg/L)
	DUP of 2307380-01	Potassium, K	1.16	1.19	mg/L		2	0.06	0.2	Splt# 2307380-01 (1.16mg/L)
	DUP of 2307380-01	Sodium, Na	37.2	36.9	mg/L		0	0.2	1	Splt# 2307380-01 (37.2mg/L)
QC2319984-04	SPK of 2307380-01	Calcium, Ca	11.2	13.2	mg/L	99		0.04	1	Splt# 2307380-01 (11.2mg/L)
	SPK of 2307380-01	Magnesium, Mg	40.7	42.8	mg/L	101		0.007	0.2	Splt# 2307380-01 (40.7mg/L)
	SPK of 2307380-01	Potassium, K	1.16	3.22	mg/L	103		0.04	0.2	Splt# 2307380-01 (1.16mg/L)
	SPK of 2307380-01	Sodium, Na	37.2	39.1	mg/L	98		0.02	1	Splt# 2307380-01 (37.2mg/L)
QC2319984-05	SPKD of 2307380-01	Calcium, Ca	11.2	13.4	mg/L	106	1	0.04	1	Splt# 2307380-01 (11.2mg/L)
	SPKD of 2307380-01	Magnesium, Mg	40.7	43.2	mg/L	124	1	0.007	0.2	Splt# 2307380-01 (40.7mg/L)
	SPKD of 2307380-01	Potassium, K	1.16	3.24	mg/L	104	0	0.04	0.2	Splt# 2307380-01 (1.16mg/L)
	SPKD of 2307380-01	Sodium, Na	37.2	39.5	mg/L	119	1	0.02	1	Splt# 2307380-01 (37.2mg/L)
QC2319984-06	MRL_CK	Calcium, Ca		<0.005	mg/L	N/A		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0231	mg/L	46		0.021	0.021	
	MRL_CK	Potassium, K		0.16	mg/L	80		0.06	0.06	
	MRL_CK	Sodium, Na		0.334	mg/L	167		0.2	0.2	
QC2320008-01	ICV	Calcium, Ca		10.2	mg/L	102		0.05	1	
	ICV	Magnesium, Mg		9.9	mg/L	98		0.01	0.2	
	ICV	Potassium, K		100	mg/L	100		0.03	0.2	
	ICV	Sodium, Na		10.1	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307383**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCConsult.B

**Scheduled Sample Date:** 11/01/2023

**Sampling Team:** Field

**Lab Sample#:** 2307383-01 **Sample Source:** WSB\_SF42\_ZOO275 **External ID:**

**Date Collected:** 11/01/2023 09:30AM **Date Received:** 11/01/2023 11:09AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	72.1	mg/L	1		3	11/01/2023	2070101 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	535	µmhos/cm	1		1	11/01/2023	2070105 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	287	mg/L	1	13.2	20	11/05/2023	2070172 DCARDONA	

**Lab Sample#:** 2307383-02 **Sample Source:** WSB\_SF43\_ZOO450 **External ID:**

**Date Collected:** 11/01/2023 09:29AM **Date Received:** 11/01/2023 11:09AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	50.5	mg/L	1		3	11/01/2023	2070101 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	590	µmhos/cm	1		1	11/01/2023	2070105 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	343	mg/L	1	13.2	20	11/05/2023	2070172 DCARDONA	

**Lab Sample#:** 2307383-03 **Sample Source:** WSB\_SF45\_ZOO565 **External ID:**

**Date Collected:** 11/01/2023 10:17AM **Date Received:** 11/01/2023 11:09AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	45.5	mg/L	1		3	11/01/2023	2070101 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	426	µmhos/cm	1		1	11/01/2023	2070105 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	228	mg/L	1	13.2	20	11/05/2023	2070172 DCARDONA	

**Lab Sample#:** 2307383-04 **Sample Source:** WSB\_SF\_DUP **External ID:**

**Date Collected:** 11/01/2023 09:35AM **Date Received:** 11/01/2023 11:09AM **Sample Matrix:** Aqueous **Location Desc:** SF#43 - ZOO MW450

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	50.5	mg/L	1		3	11/01/2023	2070101 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307383**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/01/2023

**Routine:** WSB\_SFUC+Consult.B

**Sampling Team:** Field

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	589	µmhos/cm	1	1		11/01/2023	2070105	ABALALIO
MBP_TDS(SM 2540 C)	<b>338</b>	mg/L	1	13.2	20	11/05/2023	2070172	DCARDONA
Total Dissolved Solids								

**QC list for Run#: 2070101 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319936-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2319936-02	MRL_CK	Chloride		2.88	mg/L	96				
QC2319936-03	SPK of 2308388-01	Chloride	5.33	43.2	mg/L	94			3	Splt# 2308388-01 (5.33mg/L)
QC2319936-04	SPKD of 2308388-01	Chloride	5.33	43.4	mg/L	95	0		3	Splt# 2308388-01 (5.33mg/L)
QC2319936-05	DUP of 2307383-04	Chloride	50.5	50.5	mg/L		0		3	Splt# 2307383-04 (50.5mg/L)
QC2319936-06	LCS	Chloride		38.1	mg/L	95			3	

**QC list for Run#: 2070105 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319939-02	ICV	Specific Conductance @25°C		154	µmhos/cm	105				
QC2319939-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2319939-04	MRL_CK	Specific Conductance @25°C		10.3	µmhos/cm	103				
QC2319939-05	DUP of 2308227-01	Specific Conductance @25°C	94.1	93.9	µmhos/cm		0		1	Splt# 2308227-01 (94.1µmhos/cm)
QC2319939-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2070172 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2319982-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2319982-02	LCS	Total Dissolved Solids		103	mg/L	108		13.2	20	
QC2319982-03	DUP of 2307383-01	Total Dissolved Solids	287	290	mg/L		1	13.2	20	Splt# 2307383-01 (287mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/11/2024

**Sampling Team:** Field

**Lab Sample#:** 2307384-01 **Sample Source:** WSB\_SS-36-1-160 **External ID:**

**Date Collected:** 01/11/2024 10:17AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Nitrate as N	9.83	mg/L	10	0.34	0.4	01/11/2024	2073575 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	65.6	mg/L	1	0.005	1	01/19/2024	2073970 BTRINH	
Magnesium, Mg	33	mg/L	1	0.021	0.2	01/19/2024	2073970 BTRINH	
Potassium, K	2.39	mg/L	1	0.06	0.2	01/19/2024	2073970 BTRINH	
Sodium, Na	92.2	mg/L	1	0.2	1	01/19/2024	2073970 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	459	mg/L	1	1.19	6	01/11/2024	2073607 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	179	mg/L	1		6	01/11/2024	2073609 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	1010	µmhos/cm	1		1	01/11/2024	2073592 WHORNER	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	6.99	pH	1			01/11/2024	2073597 WHORNER	H1,H3
Temperature (°C)	16.9	°C	1			01/11/2024	2073597 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	608	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	>MCL

**Lab Sample#:** 2307384-01A **Sample Source:** WSB\_SS-36-1-160 **External ID:**

**Date Collected:** 01/11/2024 10:17AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	285	mg/L	1	0.948	6	01/12/2024	2073660 DCARDONA	

**Lab Sample#:** 2307384-01B **Sample Source:** WSB\_SS-36-1-160 **External ID:**

**Date Collected:** 01/11/2024 10:17AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	104	mg/L	10	1	5	01/16/2024	2073778 PWARNER	

**Lab Sample#:** 2307384-02 **Sample Source:** WSB\_SS-36-1-270 **External ID:**

**Date Collected:** 01/11/2024 10:03AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/11/2024

**Sampling Team:** Field

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Nitrate as N	1.91	mg/L	5	0.17	0.2	01/11/2024	2073575 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	34.1	mg/L	1	0.005	1	01/19/2024	2073970 BTRINH	
Magnesium, Mg	30.2	mg/L	1	0.021	0.2	01/19/2024	2073970 BTRINH	
Potassium, K	2.24	mg/L	1	0.06	0.2	01/19/2024	2073970 BTRINH	
Sodium, Na	56.6	mg/L	1	0.2	1	01/19/2024	2073970 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	135	mg/L	1	1.19	6	01/11/2024	2073607 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	118	mg/L	1		6	01/11/2024	2073609 ALEE	
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	721	µmhos/cm	1		1	01/11/2024	2073592 WHORNER	
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	7.41	pH	1			01/11/2024	2073597 WHORNER	H1,H3
Temperature (°C)	16.8	°C	1			01/11/2024	2073597 WHORNER	
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	396	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	

**Lab Sample#:** 2307384-02A **Sample Source:** WSB\_SS-36-1-270 **External ID:**

**Date Collected:** 01/11/2024 10:03AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	199	mg/L	1	0.948	6	01/12/2024	2073660 DCARDONA	

**Lab Sample#:** 2307384-02B **Sample Source:** WSB\_SS-36-1-270 **External ID:**

**Date Collected:** 01/11/2024 10:03AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	21.4	mg/L	5	0.5	2.5	01/16/2024	2073778 PWARNER	

**Lab Sample#:** 2307384-03 **Sample Source:** WSB\_SS-36-1-455 **External ID:**

**Date Collected:** 01/11/2024 09:02AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:**

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Nitrate as N	<0.04	mg/L	1	0.034	0.04	01/11/2024	2073575 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/11/2024

**Routine:** WSB\_SFPC+Consult.A

**Sampling Team:** Field

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	41	mg/L	1	0.005	1	01/19/2024	2073970 BTRINH	
Magnesium, Mg	24.5	mg/L	1	0.021	0.2	01/19/2024	2073970 BTRINH	
Potassium, K	4.88	mg/L	1	0.06	0.2	01/19/2024	2073970 BTRINH	
Sodium, Na	62.3	mg/L	1	0.2	1	01/19/2024	2073970 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	224	mg/L	1	1.19	6	01/11/2024	2073607 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	85.1	mg/L	1		6	01/11/2024	2073609 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	718	µmhos/cm	1		1	01/11/2024	2073592 WHORNER	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.2	pH	1			01/11/2024	2073597 WHORNER	H1,H3
Temperature (°C)	16.3	°C	1			01/11/2024	2073597 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	356	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	

<b>Lab Sample#:</b> 2307384-03A	<b>Sample Source:</b> WSB_SS-36-1-455	<b>External ID:</b>						
<b>Date Collected:</b> 01/11/2024 09:02AM	<b>Date Received:</b> 01/11/2024 11:22AM	<b>Sample Matrix:</b> Aqueous						
<b>Location Desc:</b>								
<b>Test/Analyte</b>								
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	193	mg/L	1	0.948	6	01/12/2024	2073660 DCARDONA	

<b>Lab Sample#:</b> 2307384-03B	<b>Sample Source:</b> WSB_SS-36-1-455	<b>External ID:</b>						
<b>Date Collected:</b> 01/11/2024 09:02AM	<b>Date Received:</b> 01/11/2024 11:22AM	<b>Sample Matrix:</b> Aqueous						
<b>Location Desc:</b>								
<b>Test/Analyte</b>								
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	<0.5	mg/L	1	0.1	0.5	01/16/2024	2073778 PWARNER	

<b>Lab Sample#:</b> 2307384-04	<b>Sample Source:</b> WSB_SS-36-1-585	<b>External ID:</b>						
<b>Date Collected:</b> 01/11/2024 09:18AM	<b>Date Received:</b> 01/11/2024 11:22AM	<b>Sample Matrix:</b> Aqueous						
<b>Location Desc:</b>								
<b>Test/Analyte</b>								
SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	86.1	mg/L	1	0.005	1	01/19/2024	2073970 BTRINH	
Magnesium, Mg	51	mg/L	1	0.021	0.2	01/19/2024	2073970 BTRINH	
Potassium, K	4.01	mg/L	1	0.06	0.2	01/19/2024	2073970 BTRINH	
Sodium, Na	64.4	mg/L	1	0.2	1	01/19/2024	2073970 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.A

**Scheduled Sample Date:** 01/11/2024

**Sampling Team:** Field

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	203	mg/L	1	1.19	6	01/11/2024	2073607 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	142	mg/L	1		6	01/11/2024	2073609 ALEE	
<b>MBP_COND(SM 2510 B)</b>								
MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1150	µmhos/cm	1		1	01/11/2024	2073592 WHORNER	>MCL
<b>MBP_PH(SM 4500-H+ B)</b>								
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.94	pH	1			01/11/2024	2073597 WHORNER	H1,H3
Temperature (°C)	16.4	°C	1			01/11/2024	2073597 WHORNER	
<b>MBP_TDS(SM 2540 C)</b>								
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	661	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	>MCL
<b>Lab Sample#: 2307384-04A Sample Source: WSB_SS-36-1-585 External ID:</b>								
<b>Date Collected:</b> 01/11/2024 09:18AM <b>Date Received:</b> 01/11/2024 11:22AM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b>								
<b>Test/Analyte</b>								
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	<0.04	mg/L	1	0.034	0.04	01/11/2024	2073575 PWARNER	
<b>Lab Sample#: 2307384-04C Sample Source: WSB_SS-36-1-585 External ID:</b>								
<b>Date Collected:</b> 01/11/2024 09:18AM <b>Date Received:</b> 01/11/2024 11:22AM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b>								
<b>Test/Analyte</b>								
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	411	mg/L	1	0.948	6	01/12/2024	2073660 DCARDONA	
<b>Lab Sample#: 2307384-04D Sample Source: WSB_SS-36-1-585 External ID:</b>								
<b>Date Collected:</b> 01/11/2024 09:18AM <b>Date Received:</b> 01/11/2024 11:22AM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b>								
<b>Test/Analyte</b>								
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	171	mg/L	10	1	5	01/16/2024	2073778 PWARNER	
<b>Lab Sample#: 2307384-05 Sample Source: WSB_SS_DUP External ID:</b>								
<b>Date Collected:</b> 01/11/2024 10:36AM <b>Date Received:</b> 01/11/2024 11:22AM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> GSR_SS_CUP-36-1-160, ROW AT FUNERAL HOM								
<b>Test/Analyte</b>								
MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	8.92	mg/L	10	0.34	0.4	01/11/2024	2073575 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>								
SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	65.5	mg/L	1	0.005	1	01/19/2024	2073970 BTRINH	
Magnesium, Mg	32.9	mg/L	1	0.021	0.2	01/19/2024	2073970 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/11/2024

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

Potassium, K	2.47	mg/L	1	0.06	0.2	01/19/2024	2073970	BTRINH
Sodium, Na	91.9	mg/L	1	0.2	1	01/19/2024	2073970	BTRINH

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	236	mg/L	1	1.19	6	01/11/2024	2073607 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	92.4	mg/L	1		6	01/11/2024	2073609 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1020	µmhos/cm	1		1	01/11/2024	2073592 WHORNER	>MCL

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.98	pH	1			01/11/2024	2073597 WHORNER	H1,H3
Temperature (°C)	17.5	°C	1			01/11/2024	2073597 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	610	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	>MCL

**Lab Sample#:** 2307384-05A **Sample Source:** WSB\_SS\_DUP **External ID:**

**Date Collected:** 01/11/2024 10:36AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SS\_CUP-36-1-160, ROW AT FUNERAL HOM

Test/Analyte

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	284	mg/L	1	0.948	6	01/12/2024	2073660 DCARDONA	

**Lab Sample#:** 2307384-05B **Sample Source:** WSB\_SS\_DUP **External ID:**

**Date Collected:** 01/11/2024 10:36AM **Date Received:** 01/11/2024 11:22AM **Sample Matrix:** Aqueous **Location Desc:** GSR\_SS\_CUP-36-1-160, ROW AT FUNERAL HOM

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	104	mg/L	10	1	5	01/16/2024	2073778 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/11/2024

**Sampling Team:** Field

**QC list for Run#: 2073575 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422492-01	MRL_CK	Chloride		0.482	mg/L	96				
	MRL_CK	Sulfate		0.516	mg/L	103				
	MRL_CK	Nitrate as N		0.0403	mg/L	101				
QC2422492-02	CCV	Chloride		2.54	mg/L	102				
	CCV	Sulfate		2.51	mg/L	100				
	CCV	Nitrate as N		0.205	mg/L	103				
QC2422492-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422492-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422492-05	LCS	Chloride		0.496	mg/L	99				
	LCS	Sulfate		1.56	mg/L	104				
	LCS	Nitrate as N		0.265	mg/L	106				
QC2422492-06	CCV	Chloride		20.3	mg/L	101				
	CCV	Sulfate		21.9	mg/L	110				
	CCV	Nitrate as N		1.71	mg/L	107				
QC2422492-07	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422492-08	SPK of 2309859-01	Sulfate	19.5	20.6	mg/L	45				Splt# 2309859-01 (19.5mg/L)
	SPK of 2309859-01	Nitrate as N	0.117	0.29	mg/L	87				Splt# 2309859-01 (0.117mg/L) M1,M2
QC2422492-09	SPKD of 2309859-01	Sulfate	19.5	22.8	mg/L	135	10			Splt# 2309859-01 (19.5mg/L)
	SPKD of 2309859-01	Nitrate as N	0.117	0.339	mg/L	111	15			Splt# 2309859-01 (0.117mg/L) M1,M2
QC2422492-10	SPK of 2309859-03	Sulfate	16.8	20.1	mg/L	132				Splt# 2309859-03 (16.8mg/L) M1
	SPK of 2309859-03	Nitrate as N	0.0738	0.305	mg/L	116				Splt# 2309859-03 (0.0738mg/L)
QC2422492-11	SPKD of 2309859-03	Sulfate	16.8	18.2	mg/L	58	9			Splt# 2309859-03 (16.8mg/L) M1
	SPKD of 2309859-03	Nitrate as N	0.0738	0.289	mg/L	108	5			Splt# 2309859-03 (0.0738mg/L)
QC2422492-12										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/11/2024

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073575 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	CCV	Chloride		2.61	mg/L	104				
	CCV	Sulfate		2.57	mg/L	103				
	CCV	Nitrate as N		0.21	mg/L	106				
QC2422492-13	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422492-14	LCSD of QC2422492-05	Chloride	0.496	0.509	mg/L	102	2			Splt# QC2422492-05 (0.496mg/L)
	LCSD of QC2422492-05	Sulfate	1.56	1.59	mg/L	106	1			Splt# QC2422492-05 (1.56mg/L)
	LCSD of QC2422492-05	Nitrate as N	0.265	0.268	mg/L	107	1			Splt# QC2422492-05 (0.265mg/L)

**QC list for Run#: 2073592 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422499-02	ICV	Specific Conductance @25°C		149	µmhos/cm	101				
QC2422499-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2422499-04	MRL_CK	Specific Conductance @25°C		9.89	µmhos/cm	98				
QC2422499-05	DUP of 2307384-01	Specific Conductance @25°C	1010	1000	µmhos/cm		1		1	Splt# 2307384-01 (1010µmhos/cm)
QC2422499-06	CCV	Specific Conductance @25°C		103	µmhos/cm	103				

**QC list for Run#: 2073597 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422504-04	ICV	pH		9.04	pH	99				
	ICV	Temperature (°C)		18.9	°C					
QC2422504-05	DUP of 2307384-01	pH	6.99	6.98	pH		0			Splt# 2307384-01 (6.99pH) H1,H3
	DUP of 2307384-01	Temperature (°C)	16.9	16.9	°C					Splt# 2307384-01 (16.9°C)
QC2422504-06	CCV	pH		9.04	pH	99				
	CCV	Temperature (°C)		18.9	°C					

**QC list for Run#: 2073607 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422512-01	BLK	Alkalinity		<3	mg/L			0.593	3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/11/2024

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073607 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422512-02	MRL_CK	Alkalinity		3.2	mg/L	107				
QC2422512-03	SPK of 2309869-01	Alkalinity	62.4	101	mg/L	97		3	Splt# 2309869-01 (62.4mg/L)	
QC2422512-04	SPKD of 2309869-01	Alkalinity	62.4	101	mg/L	97	0	3	Splt# 2309869-01 (62.4mg/L)	
QC2422512-05	DUP of 2309869-02	Alkalinity	64.8	65.5	mg/L		1	0.593	3	Splt# 2309869-02 (64.8mg/L)
QC2422512-06	LCS	Alkalinity		40.7	mg/L	102			3	

**QC list for Run#: 2073608 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422513-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2422513-02	DUP of 2410274-01	Total Dissolved Solids	117	120	mg/L		2	13.2	20	Splt# 2410274-01 (117mg/L)
QC2422513-03	DUP of 2307384-02	Total Dissolved Solids	396	401	mg/L		1	13.2	20	Splt# 2307384-02 (396mg/L)
QC2422513-04	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	

**QC list for Run#: 2073609 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422514-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2422514-02	MRL_CK	Chloride		3.15	mg/L	105				
QC2422514-03	SPK of 2309869-01	Chloride	16.7	54.7	mg/L	95			3	Splt# 2309869-01 (16.7mg/L)
QC2422514-04	SPKD of 2309869-01	Chloride	16.7	54.7	mg/L	95	0		3	Splt# 2309869-01 (16.7mg/L)
QC2422514-05	DUP of 2309869-02	Chloride	17	22.2	mg/L		26		3	Splt# 2309869-02 (17mg/L)
QC2422514-06	LCS	Chloride		41.2	mg/L	103			3	

**QC list for Run#: 2073610 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422515-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2422515-02	MRL_CK	Hardness, Total, as CaCO3		2.69	mg/L	89				
QC2422515-03	DUP of 2309869-02	Hardness, Total, as CaCO3	66.9	66.7	mg/L		0	0.474	3	Splt# 2309869-02 (66.9mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/11/2024

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073610 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422515-04	LCS	Hardness, Total, as CaCO3		40.5	mg/L	101			3	

**QC list for Run#: 2073660 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422554-01	BLK	Hardness, Total, as CaCO3		<3	mg/L		0.474		3	
QC2422554-02	MRL CK	Hardness, Total, as CaCO3		2.65	mg/L	88				
QC2422554-03	DUP of 2309826-06	Hardness, Total, as CaCO3	107	107	mg/L		0	0.474	3	Splt# 2309826-06 (107mg/L)
QC2422554-04	LCS	Hardness, Total, as CaCO3		40.6	mg/L	101			3	

**QC list for Run#: 2073778 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422651-01	MRL CK	Chloride		0.461	mg/L	92				
	MRL CK	Sulfate		0.492	mg/L	98				
	MRL CK	Nitrate as N		0.04	mg/L	100				
QC2422651-02	CCV	Chloride		2.44	mg/L	97				
	CCV	Sulfate		2.41	mg/L	96				
	CCV	Nitrate as N		0.197	mg/L	99				
QC2422651-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422651-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422651-05	LCS	Chloride		0.473	mg/L	94				
	LCS	Sulfate		1.5	mg/L	99				
	LCS	Nitrate as N		0.259	mg/L	103				
QC2422651-06	CCV	Chloride		18.9	mg/L	94				
	CCV	Sulfate		20.1	mg/L	101				
	CCV	Nitrate as N		1.59	mg/L	99				
QC2422651-07	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/11/2024

**Sampling Team:** Field

**QC list for Run#: 2073778 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422651-08	SPK of 2309820-01	Sulfate	46.2	44.7	mg/L	0				Splt# 2309820-01 (46.2mg/L)
	SPK of 2309820-01	Nitrate as N	0.298	0.469	mg/L	86				Splt# 2309820-01 (0.298mg/L)
QC2422651-09	SPKD of 2309820-01	Sulfate	46.2	49.1	mg/L	116	9			Splt# 2309820-01 (46.2mg/L)
	SPKD of 2309820-01	Nitrate as N	0.298	0.508	mg/L	105	7			Splt# 2309820-01 (0.298mg/L)
QC2422651-10	SPK of 2410579-01	Sulfate	18.4	19	mg/L	22				Splt# 2410579-01 (18.4mg/L)
	SPK of 2410579-01	Nitrate as N	0.161	0.33	mg/L	84				Splt# 2410579-01 (0.161mg/L)
QC2422651-11	SPKD of 2410579-01	Sulfate	18.4	21.3	mg/L	113	11			Splt# 2410579-01 (18.4mg/L)
	SPKD of 2410579-01	Nitrate as N	0.161	0.378	mg/L	109	13			Splt# 2410579-01 (0.161mg/L)
QC2422651-12	CCV	Chloride		2.47	mg/L	98				
	CCV	Sulfate		2.46	mg/L	98				
	CCV	Nitrate as N		0.198	mg/L	99				
QC2422651-13	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422651-14	SPK of 2309820-01	Sulfate	46.2	48.5	mg/L	91				Splt# 2309820-01 (46.2mg/L)
	SPK of 2309820-01	Nitrate as N	0.298	0.517	mg/L	110				Splt# 2309820-01 (0.298mg/L)
QC2422651-15	CCV	Chloride		20	mg/L	99				
	CCV	Sulfate		21.7	mg/L	109				
	CCV	Nitrate as N		1.69	mg/L	106				
QC2422651-16	CCV	Chloride		2.5	mg/L	100				
	CCV	Sulfate		2.46	mg/L	98				
	CCV	Nitrate as N		0.199	mg/L	99				
QC2422651-17	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422651-18	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422651-19										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/11/2024

**Routine:** WSB\_SFUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073778 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	SPK of 2410579-01	Sulfate	18.4	21.7	mg/L	129				Splt# 2410579-01 (18.4mg/L)
	SPK of 2410579-01	Nitrate as N	0.161	0.421	mg/L	131				Splt# 2410579-01 (0.161mg/L)
QC2422651-20										
	SPKD of 2410579-01	Sulfate	18.4	20.7	mg/L	89	4			Splt# 2410579-01 (18.4mg/L)
	SPKD of 2410579-01	Nitrate as N	0.161	0.362	mg/L	101	15			Splt# 2410579-01 (0.161mg/L)
QC2422651-21										
	CCV	Chloride		20.2	mg/L	101				
	CCV	Sulfate		22	mg/L	110				
	CCV	Nitrate as N		1.72	mg/L	108				
QC2422651-22										
	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2073970 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422745-01										
	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2422745-02										
	LCS	Calcium, Ca		2.05	mg/L	102		0.04	1	
	LCS	Magnesium, Mg		2.06	mg/L	103		0.007	0.2	
	LCS	Potassium, K		1.99	mg/L	99		0.04	0.2	
	LCS	Sodium, Na		2.27	mg/L	113		0.02	1	
QC2422745-03										
	DUP of 2307384-01	Calcium, Ca	65.6	65.8	mg/L		0	0.005	1	Splt# 2307384-01 (65.6mg/L)
	DUP of 2307384-01	Magnesium, Mg	33	33.1	mg/L		0	0.021	0.2	Splt# 2307384-01 (33mg/L)
	DUP of 2307384-01	Potassium, K	2.39	2.44	mg/L		2	0.06	0.2	Splt# 2307384-01 (2.39mg/L)
	DUP of 2307384-01	Sodium, Na	92.2	92.2	mg/L		0	0.2	1	Splt# 2307384-01 (92.2mg/L)
QC2422745-04										
	SPK of 2307384-01	Calcium, Ca	65.6	67.9	mg/L	112		0.04	1	Splt# 2307384-01 (65.6mg/L)
	SPK of 2307384-01	Magnesium, Mg	33	35.2	mg/L	107		0.007	0.2	Splt# 2307384-01 (33mg/L)
	SPK of 2307384-01	Potassium, K	2.39	4.55	mg/L	108		0.04	0.2	Splt# 2307384-01 (2.39mg/L)
	SPK of 2307384-01	Sodium, Na	92.2	94.4	mg/L	109		0.02	1	Splt# 2307384-01 (92.2mg/L)
QC2422745-05										
	SPKD of 2307384-01	Calcium, Ca	65.6	69	mg/L	167	1	0.04	1	Splt# 2307384-01 (65.6mg/L)
	SPKD of 2307384-01	Magnesium, Mg	33	35.7	mg/L	133	1	0.007	0.2	Splt# 2307384-01 (33mg/L)
	SPKD of 2307384-01	Potassium, K	2.39	4.61	mg/L	111	1	0.04	0.2	Splt# 2307384-01 (2.39mg/L)
	SPKD of 2307384-01	Sodium, Na	92.2	95.8	mg/L	184	1	0.02	1	Splt# 2307384-01 (92.2mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307384**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/11/2024

**Sampling Team:** Field

**QC list for Run#:** 2073970 and Test: SEM\_200.7\_DW (EPA 200.7)

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422745-06	MRL_CK	Calcium, Ca		0.0283	mg/L	70		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0527	mg/L	105		0.021	0.021	
	MRL_CK	Potassium, K		0.13	mg/L	65		0.06	0.06	
	MRL_CK	Sodium, Na		0.403	mg/L	202		0.2	0.2	
QC2422792-01	ICV	Calcium, Ca		10.2	mg/L	102		0.05	1	
	ICV	Magnesium, Mg		9.99	mg/L	99		0.01	0.2	
	ICV	Potassium, K		99.6	mg/L	99		0.03	0.2	
	ICV	Sodium, Na		10.2	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/08/2024

**Sampling Team:** Field

**Lab Sample#:** 2307436-01 **Sample Source:** WSB\_SS11SSLP120 **External ID:**

**Date Collected:** 01/08/2024 10:43AM **Date Received:** 01/08/2024 12:11PM **Sample Matrix:** Aqueous **Location Desc:** SS#11 - SS LINEAR PARK MW-120

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	61.6	mg/L	5	0.5	2.5	01/08/2024	2073367 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	63.1	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	44.9	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	3.07	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	92.5	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	290	mg/L	1	1.19	6	01/08/2024	2073371 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	131	mg/L	1		6	01/08/2024	2073373 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	1090	µmhos/cm	1		1	01/08/2024	2073378 ABALALIO	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	332	mg/L	1	0.948	6	01/08/2024	2073375 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	7.15	pH	1			01/08/2024	2073377 ABALALIO	H1,H3
Temperature (°C)	17.9	°C	1			01/08/2024	2073377 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	611	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	>MCL

**Lab Sample#:** 2307436-01A **Sample Source:** WSB\_SS11SSLP120 **External ID:**

**Date Collected:** 01/08/2024 10:43AM **Date Received:** 01/08/2024 12:11PM **Sample Matrix:** Aqueous **Location Desc:** SS#11 - SS LINEAR PARK MW-120

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Nitrate as N	1.24	mg/L	1	0.034	0.04	01/08/2024	2073367 PWARNER	

**Lab Sample#:** 2307436-02 **Sample Source:** WSB\_SS12SSLP220 **External ID:**

**Date Collected:** 01/08/2024 10:38AM **Date Received:** 01/08/2024 12:11PM **Sample Matrix:** Aqueous **Location Desc:** SS#12 - SS LINEAR PARK MW-220

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	21	mg/L	2	0.2	1	01/08/2024	2073367 PWARNER	
Nitrate as N	0.93	mg/L	2	0.068	0.08	01/08/2024	2073367 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/08/2024

**Sampling Team:** Field

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	31.1	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	27.3	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	2.14	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	53.9	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	134	mg/L	1	0.593	3	01/08/2024	2073371 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	102	mg/L	1		3	01/08/2024	2073373 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	662	µmhos/cm	1		1	01/08/2024	2073378 ABALALIO	

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	181	mg/L	1	0.474	3	01/08/2024	2073375 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.14	pH	1			01/08/2024	2073377 ABALALIO	H1,H3
Temperature (°C)	17.5	°C	1			01/08/2024	2073377 ABALALIO	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	365	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	

**Lab Sample#:** 2307436-03      **Sample Source:** WSB\_SS13SSLP440      **External ID:**

**Date Collected:** 01/08/2024 09:28AM      **Date Received:** 01/08/2024 12:11PM      **Sample Matrix:** Aqueous      **Location Desc:** SS#13 - SS LINEAR PARK MW-440

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	<0.5	mg/L	1	0.1	0.5	01/08/2024	2073367 PWARNER	
Nitrate as N	<0.04	mg/L	1	0.034	0.04	01/08/2024	2073367 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	30.4	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	26.3	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	5.54	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	57	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	220	mg/L	1	0.593	3	01/08/2024	2073371 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	66.4	mg/L	1		3	01/08/2024	2073373 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCC+Consult.A

**Scheduled Sample Date:** 01/08/2024

**Sampling Team:** Field

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	643	µmhos/cm	1		1	01/08/2024	2073378 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	177	mg/L	1	0.474	3	01/08/2024	2073375 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.35	pH	1			01/08/2024	2073377 ABALALIO	H1,H3
Temperature (°C)	17.1	°C	1			01/08/2024	2073377 ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	311	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	

**Lab Sample#:** 2307436-04      **Sample Source:** WSB\_SS14SSLP520      **External ID:**  
**Date Collected:** 01/08/2024 09:38AM      **Date Received:** 01/08/2024 12:11PM      **Sample Matrix:** Aqueous      **Location Desc:** SS#14 - SS LINEAR PARK MW-520

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))								
Sulfate	28.6	mg/L	5	0.5	2.5	01/08/2024	2073367 PWARNER	
SEM_200.7_DW(EPA 200.7)								
Calcium, Ca	37.8	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	13.7	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	3.35	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	87.8	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	205	mg/L	1	0.593	3	01/08/2024	2073371 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	75.9	mg/L	1		3	01/08/2024	2073373 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	718	µmhos/cm	1		1	01/08/2024	2073378 ABALALIO	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	147	mg/L	1	0.474	3	01/08/2024	2073375 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.31	pH	1			01/08/2024	2073377 ABALALIO	H1,H3
Temperature (°C)	16.9	°C	1			01/08/2024	2073377 ABALALIO	
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	391	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/08/2024

**Sampling Team:** Field

**Lab Sample#:** 2307436-04A **Sample Source:** WSB\_SS14SSLP520 **External ID:**

**Date Collected:** 01/08/2024 09:38AM **Date Received:** 01/08/2024 12:11PM **Sample Matrix:** Aqueous **Location Desc:** SS#14 - SS LINEAR PARK MW-520

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Nitrate as N	<0.04	mg/L	1	0.034	0.04	01/08/2024	2073367 PWARNER	

**Lab Sample#:** 2307436-05 **Sample Source:** WSB\_SS\_DUP **External ID:**

**Date Collected:** 01/08/2024 09:47AM **Date Received:** 01/08/2024 12:11PM **Sample Matrix:** Aqueous **Location Desc:** SS#13 - SS LINEAR PARK MW-440

Test/Analyte

<u>MBI_IC_ANIONS_A(EPA 300.0 (A))</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Sulfate	<0.5	mg/L	1	0.1	0.5	01/08/2024	2073367 PWARNER	
Nitrate as N	<0.04	mg/L	1	0.034	0.04	01/08/2024	2073367 PWARNER	

<u>SEM_200.7_DW(EPA 200.7)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Calcium, Ca	29.8	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	25.8	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	5.43	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	56.2	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	

<u>MBP_ALK(SM 2320 B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Alkalinity	220	mg/L	1	0.593	3	01/08/2024	2073371 ALEE	

<u>MBP_CHLORIDE(SM 4500-CL- D)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Chloride	66.2	mg/L	1		3	01/08/2024	2073373 ALEE	

<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	643	µmhos/cm	1		1	01/08/2024	2073378 ABALALIO	

<u>MBP_HARDNESS_T(SM 2340 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Hardness, Total, as CaCO3	176	mg/L	1	0.474	3	01/08/2024	2073375 ALEE	

<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.46	pH	1			01/08/2024	2073377 ABALALIO	H1,H3
Temperature (°C)	17.6	°C	1			01/08/2024	2073377 ABALALIO	

<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	319	mg/L	1	13.2	20	01/17/2024	2073608 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/08/2024

**Sampling Team:** Field

**QC list for Run#: 2073367 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422338-01	MRL_CK	Chloride		0.466	mg/L	93				
	MRL_CK	Sulfate		0.502	mg/L	100				
	MRL_CK	Nitrate as N		0.0388	mg/L	97				
QC2422338-02	CCV	Chloride		2.53	mg/L	101				
	CCV	Sulfate		2.51	mg/L	100				
	CCV	Nitrate as N		0.203	mg/L	102				
QC2422338-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422338-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422338-05	LCS	Chloride		0.468	mg/L	93				
	LCS	Sulfate		1.46	mg/L	97				
	LCS	Nitrate as N		0.238	mg/L	95				
QC2422338-06	CCV	Chloride		2.34	mg/L	93				
	CCV	Sulfate		2.32	mg/L	92				
	CCV	Nitrate as N		0.188	mg/L	94				
QC2422338-07	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422338-08	SPK of 2309537-10A	Sulfate	16.2	18.9	mg/L	107				Splt# 2309537-10A (16.2mg/L)
	SPK of 2309537-10A	Nitrate as N	0.104	0.3	mg/L	98				Splt# 2309537-10A (0.104mg/L)
QC2422338-09	SPKD of 2309537-10A	Sulfate	16.2	19.2	mg/L	119	1			Splt# 2309537-10A (16.2mg/L)
	SPKD of 2309537-10A	Nitrate as N	0.104	0.308	mg/L	103	2			Splt# 2309537-10A (0.104mg/L)
QC2422338-10	SPK of 2309401-04A	Sulfate	26.9	29.7	mg/L	110				Splt# 2309401-04A (26.9mg/L)
	SPK of 2309401-04A	Nitrate as N	0.18	0.378	mg/L	99				Splt# 2309401-04A (0.18mg/L)
QC2422338-11	SPKD of 2309401-04A	Sulfate	26.9	30.1	mg/L	127	1			Splt# 2309401-04A (26.9mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/08/2024

**Sampling Team:** Field

**QC list for Run#: 2073367 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	SPKD of 2309401-04A	Nitrate as N	0.18	0.384	mg/L	102	1			Splt# 2309401-04A (0.18mg/L)
QC2422338-12	CCV	Chloride		2.57	mg/L	103				
	CCV	Sulfate		2.53	mg/L	101				
	CCV	Nitrate as N		0.204	mg/L	102				
QC2422338-13	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2073371 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422342-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2422342-02	MRL_CK	Alkalinity		3.14	mg/L	105				
QC2422342-03	SPK of 2309512-05	Alkalinity	47.6	87.5	mg/L	99			3	Splt# 2309512-05 (47.6mg/L)
QC2422342-04	SPKD of 2309512-05	Alkalinity	47.6	86.9	mg/L	98	0		3	Splt# 2309512-05 (47.6mg/L)
QC2422342-05	DUP of 2307436-05	Alkalinity	220	216	mg/L		1	0.593	3	Splt# 2307436-05 (220mg/L)
QC2422342-06	LCS	Alkalinity		40.1	mg/L	100			3	

**QC list for Run#: 2073373 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422343-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2422343-02	MRL_CK	Chloride		3.09	mg/L	103				
QC2422343-03	SPK of 2309512-05	Chloride	12.8	50.8	mg/L	95			3	Splt# 2309512-05 (12.8mg/L)
QC2422343-04	SPKD of 2309512-05	Chloride	12.8	51.1	mg/L	95	0		3	Splt# 2309512-05 (12.8mg/L)
QC2422343-05	DUP of 2307436-05	Chloride	66.2	65.2	mg/L		1		3	Splt# 2307436-05 (66.2mg/L)
QC2422343-06	LCS	Chloride		39	mg/L	97			3	

**QC list for Run#: 2073375 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422344-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/08/2024

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073375 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422344-02	MRL_CK	Hardness, Total, as CaCO3		2.41	mg/L	80				
QC2422344-03	DUP of 2410239-01	Hardness, Total, as CaCO3	53.9	54.5	mg/L		1	0.474	3	Splt# 2410239-01 (53.9mg/L)
QC2422344-04	LCS	Hardness, Total, as CaCO3		40.6	mg/L	102			3	

**QC list for Run#: 2073377 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422346-01	CAL	pH		4.09	pH	102				
	CAL	Temperature (°C)		19.5	°C					
QC2422346-02	CAL	pH		7.1	pH	101				
	CAL	Temperature (°C)		19.1	°C					
QC2422346-03	CAL	pH		10.1	pH	101				
	CAL	Temperature (°C)		19	°C					
QC2422346-04	ICV	pH		9.03	pH	99				
	ICV	Temperature (°C)		18.9	°C					
QC2422346-05	DUP of 2309532-01	pH	9.07	9.09	pH		0			Splt# 2309532-01 (9.07pH) H1,H3
	DUP of 2309532-01	Temperature (°C)	13.7	13.6	°C					Splt# 2309532-01 (13.7°C)
QC2422346-06	CCV	pH		9.05	pH	100				
	CCV	Temperature (°C)		18.7	°C					
QC2422346-07	CCV	pH		9.04	pH	99				
	CCV	Temperature (°C)		18.7	°C					

**QC list for Run#: 2073378 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422347-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2422347-02	ICV	Specific Conductance @25°C		149	µmhos/cm	101				
QC2422347-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2422347-04	MRL_CK	Specific Conductance @25°C		9.79	µmhos/cm	97				
QC2422347-05	DUP of 2309532-01	Specific Conductance @25°C	211	211	µmhos/cm		0		1	Splt# 2309532-01 (211µmhos/cm)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/08/2024

**Routine:** WSB\_SFUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073378 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422347-06	CCV	Specific Conductance @25°C		103	µmhos/cm	103				
QC2422347-07	CCV	Specific Conductance @25°C		1440	µmhos/cm	102				

**QC list for Run#: 2073608 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422513-01	BLK	Total Dissolved Solids		<20	mg/L		13.2	20		
QC2422513-02	DUP of 2410274-01	Total Dissolved Solids	117	120	mg/L		2	13.2	20	Splt# 2410274-01 (117mg/L)
QC2422513-03	DUP of 2307384-02	Total Dissolved Solids	396	401	mg/L		1	13.2	20	Splt# 2307384-02 (396mg/L)
QC2422513-04	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	

**QC list for Run#: 2073644 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422488-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2422488-02	LCS	Calcium, Ca		2.06	mg/L	103		0.04	1	
	LCS	Magnesium, Mg		2.07	mg/L	104		0.007	0.2	
	LCS	Potassium, K		1.98	mg/L	99		0.04	0.2	
	LCS	Sodium, Na		2.26	mg/L	113		0.02	1	
QC2422488-03	DUP of 2307447-01	Calcium, Ca	103	103	mg/L		0	0.005	1	Splt# 2307447-01 (103mg/L)
	DUP of 2307447-01	Magnesium, Mg	82.2	82.6	mg/L		0	0.021	0.2	Splt# 2307447-01 (82.2mg/L)
	DUP of 2307447-01	Potassium, K	3.88	3.93	mg/L		1	0.06	0.2	Splt# 2307447-01 (3.88mg/L)
	DUP of 2307447-01	Sodium, Na	78.1	78.8	mg/L		0	0.2	1	Splt# 2307447-01 (78.1mg/L)
QC2422488-04	SPK of 2307447-01	Calcium, Ca	103	104	mg/L	83		0.04	1	Splt# 2307447-01 (103mg/L)
	SPK of 2307447-01	Magnesium, Mg	82.2	83.8	mg/L	78		0.007	0.2	Splt# 2307447-01 (82.2mg/L)
	SPK of 2307447-01	Potassium, K	3.88	6.02	mg/L	107		0.04	0.2	Splt# 2307447-01 (3.88mg/L)
	SPK of 2307447-01	Sodium, Na	78.1	80.1	mg/L	96		0.02	1	Splt# 2307447-01 (78.1mg/L)
QC2422488-05	SPKD of 2307447-01	Calcium, Ca	103	106	mg/L	180	1	0.04	1	Splt# 2307447-01 (103mg/L)
	SPKD of 2307447-01	Magnesium, Mg	82.2	85.4	mg/L	161	1	0.007	0.2	Splt# 2307447-01 (82.2mg/L)
	SPKD of 2307447-01	Potassium, K	3.88	6.15	mg/L	114	2	0.04	0.2	Splt# 2307447-01 (3.88mg/L)
	SPKD of 2307447-01	Sodium, Na	78.1	81.5	mg/L	165	1	0.02	1	Splt# 2307447-01 (78.1mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307436**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/08/2024

**Sampling Team:** Field

**QC list for Run#: 2073644 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422488-06	MRL_CK	Calcium, Ca		0.0343	mg/L	85		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0583	mg/L	117		0.021	0.021	
	MRL_CK	Potassium, K		0.18	mg/L	90		0.06	0.06	
	MRL_CK	Sodium, Na		0.325	mg/L	163		0.2	0.2	
QC2422545-01	ICV	Calcium, Ca		10.2	mg/L	102		0.05	1	
	ICV	Magnesium, Mg		9.91	mg/L	99		0.01	0.2	
	ICV	Potassium, K		99.8	mg/L	99		0.03	0.2	
	ICV	Sodium, Na		10.2	mg/L	104		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/07/2023

**Sampling Team:** Field

**Lab Sample#:** 2307437-01      **Sample Source:** WSB\_CM-23-230      **External ID:**  
**Date Collected:** 11/07/2023 12:25PM      **Date Received:** 11/07/2023 02:23PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CM\_CUP-23-230, TREASURE ISLAND TRAIL

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	63.3	mg/L	1	0.005	1	11/16/2023	2070844 BTRINH	
Magnesium, Mg	56.8	mg/L	1	0.021	0.2	11/16/2023	2070844 BTRINH	
Potassium, K	1.86	mg/L	1	0.06	0.2	11/16/2023	2070844 BTRINH	
Sodium, Na	61.2	mg/L	1	0.2	1	11/16/2023	2070844 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	314	mg/L	1	1.19	6	11/07/2023	2070420 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	87.2	mg/L	1		6	11/07/2023	2070423 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1000	µmhos/cm	1		1	11/07/2023	2070419 WHORNER	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	384	mg/L	1	0.948	6	11/07/2023	2070425 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.07	pH	1			11/07/2023	2070417 WHORNER	H1,H3
Temperature (°C)	18.6	°C	1			11/07/2023	2070417 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	548	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	>MCL

**Lab Sample#:** 2307437-01A      **Sample Source:** WSB\_CM-23-230      **External ID:**  
**Date Collected:** 11/07/2023 12:25PM      **Date Received:** 11/07/2023 02:23PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CM\_CUP-23-230, TREASURE ISLAND TRAIL

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	36	mg/L	10	1	5	11/08/2023	2070457 PWARNER	
Nitrate as N	8.27	mg/L	10	0.34	0.4	11/08/2023	2070457 PWARNER	

**Lab Sample#:** 2307437-02      **Sample Source:** WSB\_CM-23-440      **External ID:**  
**Date Collected:** 11/07/2023 11:47AM      **Date Received:** 11/07/2023 02:23PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CM\_CUP-23-440, TREASURE ISLAND TRAIL

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	26.5	mg/L	1	0.005	1	11/16/2023	2070844 BTRINH	
Magnesium, Mg	26.9	mg/L	1	0.021	0.2	11/16/2023	2070844 BTRINH	
Potassium, K	1.8	mg/L	1	0.06	0.2	11/16/2023	2070844 BTRINH	
Sodium, Na	40.3	mg/L	1	0.2	1	11/16/2023	2070844 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.A

**Scheduled Sample Date:** 11/07/2023

**Sampling Team:** Field

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	156	mg/L	1	1.19	6	11/07/2023	2070420 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	60	mg/L	1		6	11/07/2023	2070423 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	532	µmhos/cm	1		1	11/07/2023	2070419 WHORNER	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	173	mg/L	1	0.948	6	11/07/2023	2070425 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.93	pH	1			11/07/2023	2070417 WHORNER	H1,H3
Temperature (°C)	17.1	°C	1			11/07/2023	2070417 WHORNER	
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	272	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	

**Lab Sample#:** 2307437-02A **Sample Source:** WSB\_CM-23-440 **External ID:**

**Date Collected:** 11/07/2023 11:47AM **Date Received:** 11/07/2023 02:23PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-440, TREASURE ISLAND TRAIL

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Fluoride	<0.1	mg/L	1	0.02	0.1	11/08/2023	2070457 PWARNER	
Sulfate	14.9	mg/L	1	0.1	0.5	11/08/2023	2070457 PWARNER	
Nitrate as N	0.889	mg/L	1	0.034	0.04	11/08/2023	2070457 PWARNER	

**Lab Sample#:** 2307437-03 **Sample Source:** WSB\_CM-23-515 **External ID:**

**Date Collected:** 11/07/2023 10:41AM **Date Received:** 11/07/2023 02:23PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-515, TREASURE ISLAND TRAIL

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	48.7	mg/L	1	0.005	1	11/16/2023	2070844 BTRINH	
Magnesium, Mg	38.2	mg/L	1	0.021	0.2	11/16/2023	2070844 BTRINH	
Potassium, K	3.45	mg/L	1	0.06	0.2	11/16/2023	2070844 BTRINH	
Sodium, Na	56.6	mg/L	1	0.2	1	11/16/2023	2070844 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	272	mg/L	1	1.19	6	11/07/2023	2070420 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	61.5	mg/L	1		6	11/07/2023	2070423 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/07/2023

**Routine:** WSB\_SFUC+Consult.A

**Sampling Team:** Field

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	771	µmhos/cm	1		1	11/07/2023	2070419 WHORNER	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	274	mg/L	1	0.948	6	11/07/2023	2070425 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.18	pH	1			11/07/2023	2070417 WHORNER	H1,H3
Temperature (°C)	16.6	°C	1			11/07/2023	2070417 WHORNER	
MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	431	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	

**Lab Sample#:** 2307437-03A **Sample Source:** WSB\_CM-23-515 **External ID:**

**Date Collected:** 11/07/2023 10:41AM **Date Received:** 11/07/2023 02:23PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-515, TREASURE ISLAND TRAIL

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	28.4	mg/L	1	0.1	0.5	11/08/2023	2070457 PWARNER	
Nitrate as N	<0.04	mg/L	1	0.034	0.04	11/08/2023	2070457 PWARNER	

**Lab Sample#:** 2307437-04 **Sample Source:** WSB\_CM-23-600 **External ID:**

**Date Collected:** 11/07/2023 11:17AM **Date Received:** 11/07/2023 02:23PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CM\_CUP-23-600, TREASURE ISLAND TRAIL

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	46.6	mg/L	1	0.005	1	11/16/2023	2070844 BTRINH	
Magnesium, Mg	49.1	mg/L	1	0.021	0.2	11/16/2023	2070844 BTRINH	
Potassium, K	2.15	mg/L	1	0.06	0.2	11/16/2023	2070844 BTRINH	
Sodium, Na	50.4	mg/L	1	0.2	1	11/16/2023	2070844 BTRINH	
MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	198	mg/L	1	1.19	6	11/07/2023	2070420 ALEE	
MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	74.4	mg/L	1		6	11/07/2023	2070423 ALEE	
MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	870	µmhos/cm	1		1	11/07/2023	2070419 WHORNER	
MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	315	mg/L	1	0.948	6	11/07/2023	2070425 ALEE	
MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.09	pH	1			11/07/2023	2070417 WHORNER	H1,H3

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/07/2023

**Sampling Team:** Field

Temperature (°C)	16.3	°C	1			11/07/2023	2070417	WHORNER	
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MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	481	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	

**Lab Sample#:** 2307437-04A    **Sample Source:** WSB\_CM-23-600    **External ID:**  
**Date Collected:** 11/07/2023 11:17AM    **Date Received:** 11/07/2023 02:23PM    **Sample Matrix:** Aqueous    **Location Desc:** GSR\_CM\_CUP-23-600, TREASURE ISLAND TRAIL

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	43.2	mg/L	20	2	10	11/08/2023	2070457 PWARNER	
Nitrate as N	21	mg/L	20	0.68	0.8	11/08/2023	2070457 PWARNER	>MCL

**Lab Sample#:** 2307437-05    **Sample Source:** WSB\_CM\_DUP    **External ID:**  
**Date Collected:** 11/07/2023 10:59AM    **Date Received:** 11/07/2023 02:23PM    **Sample Matrix:** Aqueous    **Location Desc:** GSR\_CM\_CUP-23-515, TREASURE ISLAND TRAIL

Test/Analyte

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	48.3	mg/L	1	0.005	1	11/16/2023	2070844 BTRINH	
Magnesium, Mg	37.7	mg/L	1	0.021	0.2	11/16/2023	2070844 BTRINH	
Potassium, K	3.41	mg/L	1	0.06	0.2	11/16/2023	2070844 BTRINH	
Sodium, Na	56.2	mg/L	1	0.2	1	11/16/2023	2070844 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	281	mg/L	1	1.19	6	11/07/2023	2070420 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	60.9	mg/L	1		6	11/07/2023	2070423 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	775	µmhos/cm	1		1	11/07/2023	2070419 WHORNER	

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	274	mg/L	1	0.948	6	11/07/2023	2070425 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.2	pH	1			11/07/2023	2070417 WHORNER	H1,H3
Temperature (°C)	16.8	°C	1			11/07/2023	2070417 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	425	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	

**Lab Sample#:** 2307437-05A    **Sample Source:** WSB\_CM\_DUP    **External ID:**  
**Date Collected:** 11/07/2023 10:59AM    **Date Received:** 11/07/2023 02:23PM    **Sample Matrix:** Aqueous    **Location Desc:** GSR\_CM\_CUP-23-515, TREASURE ISLAND TRAIL

Test/Analyte

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/07/2023

**Sampling Team:** Field

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
<i>Sulfate</i>	25.3	mg/L	1	0.1	0.5	11/08/2023	2070457 PWARNER	
<i>Nitrate as N</i>	<0.04	mg/L	1	0.034	0.04	11/08/2023	2070457 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/07/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070403 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320155-01	MRL_CK	Fluoride		0.0971	mg/L	97				
	MRL_CK	Sulfate		0.508	mg/L	102				
	MRL_CK	Nitrate as N		0.0398	mg/L	99				
QC2320155-02	CCV	Fluoride		0.524	mg/L	105				
	CCV	Sulfate		2.47	mg/L	98				
	CCV	Nitrate as N		0.201	mg/L	101				
QC2320155-03	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320155-04	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320155-05	LCS	Fluoride		0.988	mg/L	98				
	LCS	Sulfate		0.991	mg/L	99				
	LCS	Nitrate as N		0.237	mg/L	105				
QC2320155-06	CCV	Fluoride		4.31	mg/L	108				
	CCV	Sulfate		23.1	mg/L	116				
	CCV	Nitrate as N		1.78	mg/L	111				
QC2320155-07	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320155-08	SPK of 2308536-02	Fluoride	0.609	1.22	mg/L	122				Splt# 2308536-02 (0.609mg/L)
	SPK of 2308536-02	Sulfate	6.05	9.69	mg/L	145				Splt# 2308536-02 (6.05mg/L)
	SPK of 2308536-02	Nitrate as N	0.11	0.347	mg/L	119				Splt# 2308536-02 (0.11mg/L)
QC2320155-09	SPKD of 2308536-02	Fluoride	0.609	1.17	mg/L	112	4			Splt# 2308536-02 (0.609mg/L)
	SPKD of 2308536-02	Sulfate	6.05	9.32	mg/L	131	3			Splt# 2308536-02 (6.05mg/L)
	SPKD of 2308536-02	Nitrate as N	0.11	0.339	mg/L	115	2			Splt# 2308536-02 (0.11mg/L)
QC2320155-10	SPK of 2307437-02	Fluoride	<0.1	0.548	mg/L	110				Splt# 2307437-02 (<0.1mg/L)
	SPK of 2307437-02	Sulfate	13.7	17.3	mg/L	144				Splt# 2307437-02 (13.7mg/L)
	SPK of 2307437-02	Nitrate as N	0.82	1.08	mg/L	127				Splt# 2307437-02 (0.82mg/L)
QC2320155-11										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/07/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070403 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
SPKD of 2307437-02		Fluoride	<0.1	0.554	mg/L	111	1			Splt# 2307437-02 (<0.1mg/L)
SPKD of 2307437-02		Sulfate	13.7	17.6	mg/L	155	1			Splt# 2307437-02 (13.7mg/L)
SPKD of 2307437-02		Nitrate as N	0.82	1.09	mg/L	136	1			Splt# 2307437-02 (0.82mg/L)
QC2320155-12	CCV	Fluoride		0.511	mg/L	102				
	CCV	Sulfate		2.42	mg/L	96				
	CCV	Nitrate as N		0.197	mg/L	98				
QC2320155-13	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2070417 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320166-04	ICV	pH		9.01	pH	99				
	ICV	Temperature (°C)		19.9	°C					
QC2320166-05	DUP of 2307819-01	pH	9.01	9.02	pH		0			Splt# 2307819-01 (9.01pH) H1,H3
	DUP of 2307819-01	Temperature (°C)	17.7	17.7	°C					Splt# 2307819-01 (17.7°C)
QC2320166-06	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		19.9	°C					
QC2320166-07	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		19.8	°C					

**QC list for Run#: 2070419 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320165-02	ICV	Specific Conductance @25°C		152	µmhos/cm	104				
QC2320165-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2320165-04	MRL_CK	Specific Conductance @25°C		10.2	µmhos/cm	102				
QC2320165-05	DUP of 2307819-01	Specific Conductance @25°C	96.6	96	µmhos/cm		0		1	Splt# 2307819-01 (96.6µmhos/cm)
QC2320165-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2320165-07	CCV	Specific Conductance @25°C		1420	µmhos/cm	101				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/07/2023

**Routine:** WSB\_SFPUCC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070420 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320168-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2320168-02	MRL_CK	Alkalinity		3.25	mg/L	108				
QC2320168-03	SPK of 2307819-03	Alkalinity	25.5	66.7	mg/L	103			3	Splt# 2307819-03 (25.5mg/L)
QC2320168-04	SPKD of 2307819-03	Alkalinity	25.5	65.1	mg/L	99	2		3	Splt# 2307819-03 (25.5mg/L)
QC2320168-05	DUP of 2307813-08	Alkalinity	25.4	25.1	mg/L		1	0.593	3	Splt# 2307813-08 (25.4mg/L)
QC2320168-06	LCS	Alkalinity		39.9	mg/L	99			3	

**QC list for Run#: 2070423 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320170-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2320170-02	MRL_CK	Chloride		2.82	mg/L	94				
QC2320170-03	SPK of 2307819-03	Chloride	6.17	45.4	mg/L	98			3	Splt# 2307819-03 (6.17mg/L)
QC2320170-04	SPKD of 2307819-03	Chloride	6.17	47.6	mg/L	104	4		3	Splt# 2307819-03 (6.17mg/L)
QC2320170-05	DUP of 2307813-08	Chloride	5.29	5.38	mg/L		1		3	Splt# 2307813-08 (5.29mg/L)
QC2320170-06	LCS	Chloride		40.4	mg/L	101			3	

**QC list for Run#: 2070425 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320171-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2320171-02	MRL_CK	Hardness, Total, as CaCO3		2.3	mg/L	76				
QC2320171-03	DUP of 2307813-08	Hardness, Total, as CaCO3	22.2	22.1	mg/L		0	0.474	3	Splt# 2307813-08 (22.2mg/L)
QC2320171-04	LCS	Hardness, Total, as CaCO3		38.2	mg/L	95			3	

**QC list for Run#: 2070457 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320198-01	MRL_CK	Fluoride		0.097	mg/L	97				
	MRL_CK	Sulfate		0.516	mg/L	103				
	MRL_CK	Nitrate as N		0.0398	mg/L	99				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/07/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070457 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320198-02	CCV	Fluoride		0.503	mg/L	101				
	CCV	Sulfate		2.35	mg/L	94				
	CCV	Nitrate as N		0.188	mg/L	94				
QC2320198-03	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-04	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-05	LCS	Fluoride		1.04	mg/L	104				
	LCS	Sulfate		1.1	mg/L	110				
	LCS	Nitrate as N		0.242	mg/L	107				
QC2320198-06	CCV	Fluoride		0.463	mg/L	92				
	CCV	Sulfate		2.29	mg/L	91				
	CCV	Nitrate as N		0.184	mg/L	91				
QC2320198-07	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-08	SPK of 2307845-04A	Fluoride	0.681	1.08	mg/L	80				Splt# 2307845-04A (0.681mg/L)
	SPK of 2307845-04A	Sulfate	6.85	8.71	mg/L	74				Splt# 2307845-04A (6.85mg/L)
	SPK of 2307845-04A	Nitrate as N	0.133	0.328	mg/L	97				Splt# 2307845-04A (0.133mg/L)
QC2320198-09	SPKD of 2307845-04A	Fluoride	0.681	1.15	mg/L	94	6			Splt# 2307845-04A (0.681mg/L)
	SPKD of 2307845-04A	Sulfate	6.85	9.27	mg/L	96	6			Splt# 2307845-04A (6.85mg/L)
	SPKD of 2307845-04A	Nitrate as N	0.133	0.34	mg/L	104	3			Splt# 2307845-04A (0.133mg/L)
QC2320198-10	SPK of 2307837-07	Fluoride	0.642	1.22	mg/L	116				Splt# 2307837-07 (0.642mg/L)
	SPK of 2307837-07	Sulfate	5.95	9.31	mg/L	134				Splt# 2307837-07 (5.95mg/L)
	SPK of 2307837-07	Nitrate as N	0.101	0.338	mg/L	119				Splt# 2307837-07 (0.101mg/L)
QC2320198-11	SPKD of 2307837-07	Fluoride	0.642	1.15	mg/L	103	5			Splt# 2307837-07 (0.642mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/07/2023

**Sampling Team:** Field

**QC list for Run#: 2070457 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	SPKD of 2307837-07	Sulfate	5.95	8.7	mg/L	110	6			Splt# 2307837-07 (5.95mg/L)
	SPKD of 2307837-07	Nitrate as N	0.101	0.352	mg/L	126	4			Splt# 2307837-07 (0.101mg/L)
QC2320198-12	CCV	Fluoride		0.528	mg/L	106				
	CCV	Sulfate		2.5	mg/L	100				
	CCV	Nitrate as N		0.201	mg/L	100				
QC2320198-13	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-14	SPKD of 2307845-04A	Fluoride	0.681	1.11	mg/L	86	2			Splt# 2307845-04A (0.681mg/L)
	SPKD of 2307845-04A	Sulfate	6.85	8.87	mg/L	80	1			Splt# 2307845-04A (6.85mg/L)
	SPKD of 2307845-04A	Nitrate as N	0.133	0.321	mg/L	93	2			Splt# 2307845-04A (0.133mg/L)
QC2320198-15	CCV	Fluoride		0.477	mg/L	95				
	CCV	Sulfate		2.26	mg/L	90				
	CCV	Nitrate as N		0.182	mg/L	91				
QC2320198-16	CCV	Fluoride		0.498	mg/L	99				
	CCV	Sulfate		2.32	mg/L	92				
	CCV	Nitrate as N		0.186	mg/L	93				
QC2320198-17	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-18	BLK	Fluoride		<0.1	mg/L			0.02	0.1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-19	SPKD of 2307837-07	Fluoride	0.642	1.19	mg/L	109	0			Splt# 2307837-07 (0.642mg/L)
	SPKD of 2307837-07	Sulfate	5.95	9.03	mg/L	123	0			Splt# 2307837-07 (5.95mg/L)
	SPKD of 2307837-07	Nitrate as N	0.101	0.328	mg/L	114	3			Splt# 2307837-07 (0.101mg/L)
QC2320198-20	SPK of 2307837-07	Fluoride	0.642	1.18	mg/L	108				Splt# 2307837-07 (0.642mg/L)
	SPK of 2307837-07	Sulfate	5.95	8.96	mg/L	120				Splt# 2307837-07 (5.95mg/L)
	SPK of 2307837-07	Nitrate as N	0.101	0.318	mg/L	109				Splt# 2307837-07 (0.101mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/07/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070539 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320261-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2320261-02	DUP of 2308536-01	Total Dissolved Solids	51	50	mg/L		1	13.2	20	Splt# 2308536-01 (51mg/L)
QC2320261-03	DUP of 2307443-03	Total Dissolved Solids	429	424	mg/L		1	13.2	20	Splt# 2307443-03 (429mg/L)
QC2320261-04	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	

**QC list for Run#: 2070844 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320452-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2320452-02	LCS	Calcium, Ca		2.05	mg/L	103		0.04	1	
	LCS	Magnesium, Mg		2.08	mg/L	104		0.007	0.2	
	LCS	Potassium, K		2.01	mg/L	100		0.04	0.2	
	LCS	Sodium, Na		2.21	mg/L	111		0.02	1	
QC2320452-03	DUP of 2307437-01	Calcium, Ca	63.3	63.7	mg/L		0	0.005	1	Splt# 2307437-01 (63.3mg/L)
	DUP of 2307437-01	Magnesium, Mg	56.8	57.2	mg/L		0	0.021	0.2	Splt# 2307437-01 (56.8mg/L)
	DUP of 2307437-01	Potassium, K	1.86	1.92	mg/L		3	0.06	0.2	Splt# 2307437-01 (1.86mg/L)
	DUP of 2307437-01	Sodium, Na	61.2	61.5	mg/L		0	0.2	1	Splt# 2307437-01 (61.2mg/L)
QC2320452-04	SPK of 2307437-01	Calcium, Ca	63.3	65	mg/L	82		0.04	1	Splt# 2307437-01 (63.3mg/L)
	SPK of 2307437-01	Magnesium, Mg	56.8	58.6	mg/L	85		0.007	0.2	Splt# 2307437-01 (56.8mg/L)
	SPK of 2307437-01	Potassium, K	1.86	3.96	mg/L	105		0.04	0.2	Splt# 2307437-01 (1.86mg/L)
	SPK of 2307437-01	Sodium, Na	61.2	62.7	mg/L	78		0.02	1	Splt# 2307437-01 (61.2mg/L)
QC2320452-05	SPKD of 2307437-01	Calcium, Ca	63.3	66.7	mg/L	170	2	0.04	1	Splt# 2307437-01 (63.3mg/L)
	SPKD of 2307437-01	Magnesium, Mg	56.8	60	mg/L	160	2	0.007	0.2	Splt# 2307437-01 (56.8mg/L)
	SPKD of 2307437-01	Potassium, K	1.86	4.07	mg/L	110	2	0.04	0.2	Splt# 2307437-01 (1.86mg/L)
	SPKD of 2307437-01	Sodium, Na	61.2	64.4	mg/L	162	2	0.02	1	Splt# 2307437-01 (61.2mg/L)
QC2320452-06	MRL_CK	Calcium, Ca		0.0341	mg/L	85		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0677	mg/L	135		0.021	0.021	
	MRL_CK	Potassium, K		0.15	mg/L	75		0.06	0.06	
	MRL_CK	Sodium, Na		0.349	mg/L	175		0.2	0.2	
QC2320489-01										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307437**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/07/2023

**Sampling Team:** Field

**QC list for Run#:** 2070844 and Test: SEM\_200.7\_DW (EPA 200.7)

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
ICV		Calcium, Ca		10.3	mg/L	103		0.05		1
ICV		Magnesium, Mg		9.99	mg/L	99		0.01		0.2
ICV		Potassium, K		99.4	mg/L	99		0.03		0.2
ICV		Sodium, Na		10.1	mg/L	103		0.002		1

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307443**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 11/08/2023

**Sampling Team:** Field

**Lab Sample#:** 2307443-01 **Sample Source:** WSB\_CAL-19-475 **External ID:**

**Date Collected:** 11/08/2023 10:57AM **Date Received:** 11/08/2023 02:05PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-19-475, ROW AT SERRAMONTE

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	51.1	mg/L	5	0.5	2.5	11/08/2023	2070457 PWARNER	
Nitrate as N	1.48	mg/L	5	0.17	0.2	11/08/2023	2070457 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	42	mg/L	1	0.005	1	11/20/2023	2070932 BTRINH	M1
Magnesium, Mg	39.1	mg/L	1	0.021	0.2	11/20/2023	2070932 BTRINH	M1
Potassium, K	2.43	mg/L	1	0.06	0.2	11/20/2023	2070932 BTRINH	
Sodium, Na	53.2	mg/L	1	0.2	1	11/20/2023	2070932 BTRINH	M1

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	157	mg/L	1	1.19	6	11/08/2023	2070491 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	108	mg/L	1		6	11/08/2023	2070492 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	790	µmhos/cm	1		1	11/08/2023	2070488 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	260	mg/L	1	0.948	6	11/08/2023	2070493 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	7.24	pH	1			11/08/2023	2070486 ABALALIO	H1,H3
Temperature (°C)	18.8	°C	1			11/08/2023	2070486 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	430	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	

**Lab Sample#:** 2307443-02 **Sample Source:** WSB\_CAL-19-600 **External ID:**

**Date Collected:** 11/08/2023 10:15AM **Date Received:** 11/08/2023 02:05PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-19-600, ROW AT SERRAMONTE

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	18.7	mg/L	1	0.1	0.5	11/08/2023	2070457 PWARNER	
Nitrate as N	<0.04	mg/L	1	0.034	0.04	11/08/2023	2070457 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	50.4	mg/L	1	0.005	1	11/20/2023	2070932 BTRINH	M1
Magnesium, Mg	41.4	mg/L	1	0.021	0.2	11/20/2023	2070932 BTRINH	M1
Potassium, K	2.41	mg/L	1	0.06	0.2	11/20/2023	2070932 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307443**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 11/08/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sodium, Na	57.9	mg/L	1	0.2	1	11/20/2023	2070932 BTRINH	M1
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	264	mg/L	1	1.19	6	11/08/2023	2070491 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	96.8	mg/L	1		6	11/08/2023	2070492 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	835	µmhos/cm	1		1	11/08/2023	2070488 ABALALIO	
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	286	mg/L	1	0.948	6	11/08/2023	2070493 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
pH	7.38	pH	1			11/08/2023	2070486 ABALALIO	H1,H3
Temperature (°C)	17.8	°C	1			11/08/2023	2070486 ABALALIO	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Total Dissolved Solids	448	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	

**Lab Sample#:** 2307443-03 **Sample Source:** WSB\_CAL-19-690 **External ID:**

**Date Collected:** 11/08/2023 10:12AM **Date Received:** 11/08/2023 02:05PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-19-690, ROW AT SERRAMONTE

**Test/Analyte**

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Sulfate	48.4	mg/L	10	1	5	11/08/2023	2070457 PWARNER	
Nitrate as N	6.51	mg/L	10	0.34	0.4	11/08/2023	2070457 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Calcium, Ca	43.9	mg/L	1	0.005	1	11/20/2023	2070932 BTRINH	M1
Magnesium, Mg	38.8	mg/L	1	0.021	0.2	11/20/2023	2070932 BTRINH	M1
Potassium, K	2.24	mg/L	1	0.06	0.2	11/20/2023	2070932 BTRINH	
Sodium, Na	49.7	mg/L	1	0.2	1	11/20/2023	2070932 BTRINH	M1
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	152	mg/L	1	1.19	6	11/08/2023	2070491 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	94.7	mg/L	1		6	11/08/2023	2070492 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	780	µmhos/cm	1		1	11/08/2023	2070488 ABALALIO	
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307443**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.B

**Scheduled Sample Date:** 11/08/2023

**Sampling Team:** Field

<i>Hardness, Total, as CaCO3</i>	259	mg/L	1	0.948	6	11/08/2023	2070493	ALEE	
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<i>MBP_PH(SM 4500-H+ B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>pH</i>	7.28	pH	1			11/08/2023	2070486 ABALALIO	H1,H3
<i>Temperature (°C)</i>	17.9	°C	1			11/08/2023	2070486 ABALALIO	

<i>MBP_TDS(SM 2540 C)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Total Dissolved Solids</i>	429	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	

**Lab Sample#:** 2307443-04      **Sample Source:** WSB\_CAL\_DUP      **External ID:**

**Date Collected:** 11/08/2023 11:16AM      **Date Received:** 11/08/2023 02:05PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-19-475, ROW AT SERRAMONTE

<i>Test/Analyte</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>								
<i>Sulfate</i>	52.2	mg/L	5	0.5	2.5	11/08/2023	2070457 PWARNER	
<i>Nitrate as N</i>	1.43	mg/L	5	0.17	0.2	11/08/2023	2070457 PWARNER	

<i>SEM_200.7_DW(EPA 200.7)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Calcium, Ca</i>	41.9	mg/L	1	0.005	1	11/20/2023	2070932 BTRINH	M1
<i>Magnesium, Mg</i>	39.1	mg/L	1	0.021	0.2	11/20/2023	2070932 BTRINH	M1
<i>Potassium, K</i>	2.47	mg/L	1	0.06	0.2	11/20/2023	2070932 BTRINH	
<i>Sodium, Na</i>	53.5	mg/L	1	0.2	1	11/20/2023	2070932 BTRINH	M1

<i>MBP_ALK(SM 2320 B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Alkalinity</i>	158	mg/L	1	1.19	6	11/08/2023	2070491 ALEE	

<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Chloride</i>	108	mg/L	1		6	11/08/2023	2070492 ALEE	

<i>MBP_COND(SM 2510 B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Specific Conductance @25°C</i>	780	µmhos/cm	1		1	11/08/2023	2070488 ABALALIO	

<i>MBP_HARDNESS_T(SM 2340 C)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Hardness, Total, as CaCO3</i>	254	mg/L	1	0.948	6	11/08/2023	2070493 ALEE	

<i>MBP_PH(SM 4500-H+ B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>pH</i>	7.34	pH	1			11/08/2023	2070486 ABALALIO	H1,H3
<i>Temperature (°C)</i>	18.3	°C	1			11/08/2023	2070486 ABALALIO	

<i>MBP_TDS(SM 2540 C)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Total Dissolved Solids</i>	420	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307443**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 11/08/2023

**Sampling Team:** Field

**QC list for Run#: 2070457 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320198-01	MRL_CK	Sulfate		0.516	mg/L	103				
	MRL_CK	Nitrate as N		0.0398	mg/L	99				
QC2320198-02	CCV	Sulfate		2.35	mg/L	94				
	CCV	Nitrate as N		0.188	mg/L	94				
QC2320198-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-05	LCS	Sulfate		1.1	mg/L	110				
	LCS	Nitrate as N		0.242	mg/L	107				
QC2320198-06	CCV	Sulfate		2.29	mg/L	91				
	CCV	Nitrate as N		0.184	mg/L	91				
QC2320198-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-08	SPK of 2307845-04A	Sulfate	6.85	8.71	mg/L	74				Splt# 2307845-04A (6.85mg/L)
	SPK of 2307845-04A	Nitrate as N	0.133	0.328	mg/L	97				Splt# 2307845-04A (0.133mg/L)
QC2320198-09	SPKD of 2307845-04A	Sulfate	6.85	9.27	mg/L	96	6			Splt# 2307845-04A (6.85mg/L)
	SPKD of 2307845-04A	Nitrate as N	0.133	0.34	mg/L	104	3			Splt# 2307845-04A (0.133mg/L)
QC2320198-10	SPK of 2307837-07	Sulfate	5.95	9.31	mg/L	134				Splt# 2307837-07 (5.95mg/L)
	SPK of 2307837-07	Nitrate as N	0.101	0.338	mg/L	119				Splt# 2307837-07 (0.101mg/L)
QC2320198-11	SPKD of 2307837-07	Sulfate	5.95	8.7	mg/L	110	6			Splt# 2307837-07 (5.95mg/L)
	SPKD of 2307837-07	Nitrate as N	0.101	0.352	mg/L	126	4			Splt# 2307837-07 (0.101mg/L)
QC2320198-12	CCV	Sulfate		2.5	mg/L	100				
	CCV	Nitrate as N		0.201	mg/L	100				
QC2320198-13	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-14										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307443**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/08/2023

**Routine:** WSB\_SFUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2070457 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	SPKD of 2307845-04A	Sulfate	6.85	8.87	mg/L	80	1			Splt# 2307845-04A (6.85mg/L)
	SPKD of 2307845-04A	Nitrate as N	0.133	0.321	mg/L	93	2			Splt# 2307845-04A (0.133mg/L)
QC2320198-15	CCV	Sulfate		2.26	mg/L	90				
	CCV	Nitrate as N		0.182	mg/L	91				
QC2320198-16	CCV	Sulfate		2.32	mg/L	92				
	CCV	Nitrate as N		0.186	mg/L	93				
QC2320198-17	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-18	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320198-19	SPKD of 2307837-07	Sulfate	5.95	9.03	mg/L	123	0			Splt# 2307837-07 (5.95mg/L)
	SPKD of 2307837-07	Nitrate as N	0.101	0.328	mg/L	114	3			Splt# 2307837-07 (0.101mg/L)
QC2320198-20	SPK of 2307837-07	Sulfate	5.95	8.96	mg/L	120				Splt# 2307837-07 (5.95mg/L)
	SPK of 2307837-07	Nitrate as N	0.101	0.318	mg/L	109				Splt# 2307837-07 (0.101mg/L)

**QC list for Run#: 2070486 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320219-04	ICV	pH		9.02	pH	99				
	ICV	Temperature (°C)		19.8	°C					
QC2320219-05	DUP of 2307822-01	pH	9.17	9.19	pH		0			Splt# 2307822-01 (9.17pH) H1,H3
	DUP of 2307822-01	Temperature (°C)	17.8	17.8	°C					Splt# 2307822-01 (17.8°C)
QC2320219-06	CCV	pH		9.03	pH	99				
	CCV	Temperature (°C)		19.6	°C					
QC2320219-07	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		19.6	°C					

**QC list for Run#: 2070488 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320220-01	CAL	Specific Conductance @25°C		1420	µmhos/cm	101				
QC2320220-02										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307443**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/08/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2070488 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320220-03	ICV	Specific Conductance @25°C		153	µmhos/cm	104				
QC2320220-04	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2320220-05	MRL CK	Specific Conductance @25°C		10.2	µmhos/cm	102				
QC2320220-06	DUP of 2307822-01	Specific Conductance @25°C	93.9	94.4	µmhos/cm		0		1	Splt# 2307822-01 (93.9µmhos/cm)
QC2320220-07	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2320220-07	CCV	Specific Conductance @25°C		1420	µmhos/cm	101				

**QC list for Run#: 2070491 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320223-01	BLK	Alkalinity		<3	mg/L		0.593		3	
QC2320223-02	MRL CK	Alkalinity		3.27	mg/L	109				
QC2320223-03	SPK of 2307443-02	Alkalinity	264	336	mg/L	89			6	Splt# 2307443-02 (264mg/L)
QC2320223-04	SPKD of 2307443-02	Alkalinity	264	340	mg/L	94	1		6	Splt# 2307443-02 (264mg/L)
QC2320223-06	LCS	Alkalinity		39.2	mg/L	98			3	

**QC list for Run#: 2070492 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320224-01	BLK	Chloride		<3	mg/L		1.16		3	
QC2320224-02	MRL CK	Chloride		2.87	mg/L	95				
QC2320224-03	SPK of 2307443-02	Chloride	96.8	174	mg/L	96			6	Splt# 2307443-02 (96.8mg/L)
QC2320224-04	SPKD of 2307443-02	Chloride	96.8	175	mg/L	98	0		6	Splt# 2307443-02 (96.8mg/L)
QC2320224-06	LCS	Chloride		38.4	mg/L	96			3	

**QC list for Run#: 2070493 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320225-01	BLK	Hardness, Total, as CaCO3		<3	mg/L		0.474		3	
QC2320225-02	MRL CK	Hardness, Total, as CaCO3		2.48	mg/L	82				
QC2320225-03										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307443**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/08/2023

**Routine:** WSB\_SFPUCC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2070493 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
DUP of 2307443-04		Hardness, Total, as CaCO3	254	257	mg/L		1	0.948	6	Splt# 2307443-04 (254mg/L)
QC2320225-04	LCS	Hardness, Total, as CaCO3		38.3	mg/L	95			3	

**QC list for Run#: 2070539 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320261-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2320261-02	DUP of 2308536-01	Total Dissolved Solids	51	50	mg/L		1	13.2	20	Splt# 2308536-01 (51mg/L)
QC2320261-03	DUP of 2307443-03	Total Dissolved Solids	429	424	mg/L		1	13.2	20	Splt# 2307443-03 (429mg/L)
QC2320261-04	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	

**QC list for Run#: 2070932 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320522-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2320522-02	LCS	Calcium, Ca		2.05	mg/L	103		0.04	1	
	LCS	Magnesium, Mg		2.06	mg/L	103		0.007	0.2	
	LCS	Potassium, K		2.05	mg/L	102		0.04	0.2	
	LCS	Sodium, Na		2.21	mg/L	110		0.02	1	
QC2320522-03	DUP of 2307443-01	Calcium, Ca	42	42.2	mg/L		0	0.005	1	Splt# 2307443-01 (42mg/L)
	DUP of 2307443-01	Magnesium, Mg	39.1	39.3	mg/L		0	0.021	0.2	Splt# 2307443-01 (39.1mg/L)
	DUP of 2307443-01	Potassium, K	2.43	2.46	mg/L		1	0.06	0.2	Splt# 2307443-01 (2.43mg/L)
	DUP of 2307443-01	Sodium, Na	53.2	53.4	mg/L		0	0.2	1	Splt# 2307443-01 (53.2mg/L)
QC2320522-04	SPK of 2307443-01	Calcium, Ca	42	43.8	mg/L	89		0.04	1	Splt# 2307443-01 (42mg/L)
	SPK of 2307443-01	Magnesium, Mg	39.1	41	mg/L	92		0.007	0.2	Splt# 2307443-01 (39.1mg/L)
	SPK of 2307443-01	Potassium, K	2.43	4.4	mg/L	98		0.04	0.2	Splt# 2307443-01 (2.43mg/L)
	SPK of 2307443-01	Sodium, Na	53.2	54.9	mg/L	82		0.02	1	Splt# 2307443-01 (53.2mg/L)
QC2320522-05	SPKD of 2307443-01	Calcium, Ca	42	44.6	mg/L	130	1	0.04	1	Splt# 2307443-01 (42mg/L)
	SPKD of 2307443-01	Magnesium, Mg	39.1	41.7	mg/L	131	1	0.007	0.2	Splt# 2307443-01 (39.1mg/L)
	SPKD of 2307443-01	Potassium, K	2.43	4.52	mg/L	104	2	0.04	0.2	Splt# 2307443-01 (2.43mg/L)
	SPKD of 2307443-01	Sodium, Na	53.2	55.9	mg/L	132	1	0.02	1	Splt# 2307443-01 (53.2mg/L)
QC2320522-06										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307443**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 11/08/2023

**Sampling Team:** Field

**QC list for Run#:** 2070932 and Test: SEM\_200.7\_DW (EPA 200.7)

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	MRL_CK	Calcium, Ca		0.0373	mg/L	93		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0425	mg/L	85		0.021	0.021	
	MRL_CK	Potassium, K		0.18	mg/L	90		0.06	0.06	
	MRL_CK	Sodium, Na		0.322	mg/L	161		0.2	0.2	
QC2320554-01	ICV	Calcium, Ca		10.3	mg/L	103		0.05	1	
	ICV	Magnesium, Mg		9.97	mg/L	99		0.01	0.2	
	ICV	Potassium, K		99.3	mg/L	99		0.03	0.2	
	ICV	Sodium, Na		10.2	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307444**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/09/2023

**Sampling Team:** Field

**Lab Sample#:** 2307444-01 **Sample Source:** WSB\_CAL-22A-290 **External ID:**

**Date Collected:** 11/09/2023 10:21AM **Date Received:** 11/09/2023 01:36PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-22A-290, ROW AT HICKEY BL

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	44.5	mg/L	10	1	5	11/09/2023	2070556 PWARNER	
Nitrate as N	7.19	mg/L	10	0.34	0.4	11/09/2023	2070556 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	59.6	mg/L	1	0.005	1	11/20/2023	2070932 BTRINH	M1
Magnesium, Mg	46.1	mg/L	1	0.021	0.2	11/20/2023	2070932 BTRINH	M1
Potassium, K	2.56	mg/L	1	0.06	0.2	11/20/2023	2070932 BTRINH	
Sodium, Na	63.1	mg/L	1	0.2	1	11/20/2023	2070932 BTRINH	M1

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	203	mg/L	1	2.96	15	11/02/2023	2070541 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	70.1	mg/L	1		15	11/09/2023	2070546 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	937	µmhos/cm	1		1	11/09/2023	2070549 GKWONG	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	253	mg/L	1	2.37	15	11/09/2023	2070547 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	7.22	pH	1			11/09/2023	2070548 GKWONG	
Temperature (°C)	18.1	°C	1			11/09/2023	2070548 GKWONG	H1,H3

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	501	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	>MCL

**Lab Sample#:** 2307444-02 **Sample Source:** WSB\_CAL-22A-440 **External ID:**

**Date Collected:** 11/09/2023 09:41AM **Date Received:** 11/09/2023 01:36PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-22A-440, ROW AT HICKEY BL

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	48.3	mg/L	10	1	5	11/09/2023	2070556 PWARNER	
Nitrate as N	6.77	mg/L	10	0.34	0.4	11/09/2023	2070556 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	57.6	mg/L	1	0.005	1	11/20/2023	2070932 BTRINH	M1
Magnesium, Mg	45	mg/L	1	0.021	0.2	11/20/2023	2070932 BTRINH	M1
Potassium, K	2.58	mg/L	1	0.06	0.2	11/20/2023	2070932 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307444**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/09/2023

**Sampling Team:** Field

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sodium, Na	61.7	mg/L	1	0.2	1	11/20/2023	2070932 BTRINH	M1
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	203	mg/L	1	2.96	15	11/02/2023	2070541 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	70.8	mg/L	1		15	11/09/2023	2070546 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	918	µmhos/cm	1		1	11/09/2023	2070549 GWKONG	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	258	mg/L	1	2.37	15	11/09/2023	2070547 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
pH	7.26	pH	1			11/09/2023	2070548 GWKONG	
Temperature (°C)	17.1	°C	1			11/09/2023	2070548 GWKONG	H1,H3
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Total Dissolved Solids	503	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	>MCL

**Lab Sample#:** 2307444-03      **Sample Source:** WSB\_CAL-22A-545      **External ID:**  
**Date Collected:** 11/09/2023 09:25AM      **Date Received:** 11/09/2023 01:36PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-22A-545, ROW AT HICKEY BL

**Test/Analyte**

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Sulfate	79.6	mg/L	10	1	5	11/09/2023	2070556 PWARNER	
Nitrate as N	4.38	mg/L	10	0.34	0.4	11/09/2023	2070556 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Calcium, Ca	71.5	mg/L	1	0.005	1	11/20/2023	2070932 BTRINH	M1
Magnesium, Mg	53.6	mg/L	1	0.021	0.2	11/20/2023	2070932 BTRINH	M1
Potassium, K	3.09	mg/L	1	0.06	0.2	11/20/2023	2070932 BTRINH	
Sodium, Na	88.4	mg/L	1	0.2	1	11/20/2023	2070932 BTRINH	M1
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	258	mg/L	1	2.96	15	11/02/2023	2070541 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	71.8	mg/L	1		15	11/09/2023	2070546 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	1110	µmhos/cm	1		1	11/09/2023	2070549 GWKONG	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307444**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.A

**Scheduled Sample Date:** 11/09/2023

**Sampling Team:** Field

<i>Hardness, Total, as CaCO3</i>	327	mg/L	1	2.37	15	11/09/2023	2070547	ALEE	
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<i>MBP_PH(SM 4500-H+ B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>pH</i>	6.74	pH	1			11/09/2023	2070548 GKWONG	
<i>Temperature (°C)</i>	16.6	°C	1			11/09/2023	2070548 GKWONG	H1,H3

<i>MBP_TDS(SM 2540 C)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Total Dissolved Solids</i>	637	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	>MCL

**Lab Sample#:** 2307444-04      **Sample Source:** WSB\_CAL\_DUP      **External ID:**  
**Date Collected:** 11/09/2023 09:40AM      **Date Received:** 11/09/2023 01:36PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-22A-545, ROW AT HICKEY BL

<i>Test/Analyte</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>								
<i>Sulfate</i>	83.5	mg/L	10	1	5	11/09/2023	2070556 PWARNER	
<i>Nitrate as N</i>	4.51	mg/L	10	0.34	0.4	11/09/2023	2070556 PWARNER	

<i>SEM_200.7_DW(EPA 200.7)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Calcium, Ca</i>	69.8	mg/L	1	0.005	1	11/20/2023	2070932 BTRINH	M1
<i>Magnesium, Mg</i>	52.3	mg/L	1	0.021	0.2	11/20/2023	2070932 BTRINH	M1
<i>Potassium, K</i>	3.05	mg/L	1	0.06	0.2	11/20/2023	2070932 BTRINH	
<i>Sodium, Na</i>	86.4	mg/L	1	0.2	1	11/20/2023	2070932 BTRINH	M1

<i>MBP_ALK(SM 2320 B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Alkalinity</i>	294	mg/L	1	2.96	15	11/02/2023	2070541 ALEE	

<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Chloride</i>	84.2	mg/L	1		15	11/09/2023	2070546 ALEE	

<i>MBP_COND(SM 2510 B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Specific Conductance @25°C</i>	1120	µmhos/cm	1		1	11/09/2023	2070549 GKWONG	>MCL

<i>MBP_HARDNESS_T(SM 2340 C)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Hardness, Total, as CaCO3</i>	294	mg/L	1	2.37	15	11/09/2023	2070547 ALEE	

<i>MBP_PH(SM 4500-H+ B)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>pH</i>	6.74	pH	1			11/09/2023	2070548 GKWONG	
<i>Temperature (°C)</i>	17.5	°C	1			11/09/2023	2070548 GKWONG	H1,H3

<i>MBP_TDS(SM 2540 C)</i>	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<i>Total Dissolved Solids</i>	635	mg/L	1	13.2	20	11/14/2023	2070539 ABALALIO	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307444**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/09/2023

**Sampling Team:** Field

**QC list for Run#: 2070539 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320261-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2320261-02	DUP of 2308536-01	Total Dissolved Solids	51	50	mg/L		1	13.2	20	Splt# 2308536-01 (51mg/L)
QC2320261-03	DUP of 2307443-03	Total Dissolved Solids	429	424	mg/L		1	13.2	20	Splt# 2307443-03 (429mg/L)
QC2320261-04	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	

**QC list for Run#: 2070541 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320263-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2320263-02	MRL_CK	Alkalinity		2.84	mg/L	94				
QC2320263-03	SPK of 2307853-01	Alkalinity	28.5	67.7	mg/L	98			3	Splt# 2307853-01 (28.5mg/L)
QC2320263-04	SPKD of 2307853-01	Alkalinity	28.5	67.5	mg/L	97	0		3	Splt# 2307853-01 (28.5mg/L)
QC2320263-05	DUP of 2307853-02	Alkalinity	25.5	25.6	mg/L		0	0.593	3	Splt# 2307853-02 (25.5mg/L)
QC2320263-06	LCS	Alkalinity		41.7	mg/L	104			3	

**QC list for Run#: 2070546 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320264-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2320264-02	MRL_CK	Chloride		3.05	mg/L	102				
QC2320264-03	SPK of 2307853-01	Chloride	5.74	43.8	mg/L	95			3	Splt# 2307853-01 (5.74mg/L)
QC2320264-04	SPKD of 2307853-01	Chloride	5.74	43.3	mg/L	93	1		3	Splt# 2307853-01 (5.74mg/L)
QC2320264-05	DUP of 2307853-02	Chloride	5.94	5.91	mg/L		0		3	Splt# 2307853-02 (5.94mg/L)
QC2320264-06	LCS	Chloride		38.4	mg/L	96			3	

**QC list for Run#: 2070547 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320265-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2320265-02	MRL_CK	Hardness, Total, as CaCO3		2.41	mg/L	80				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307444**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 11/09/2023

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2070547 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320265-03	DUP of 2307853-02	Hardness, Total, as CaCO3	22.8	22.7	mg/L		0	0.474	3	Splt# 2307853-02 (22.8mg/L)
QC2320265-04	LCS	Hardness, Total, as CaCO3		38.7	mg/L	96			3	

**QC list for Run#: 2070548 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320266-01	CAL	pH		4.01	pH	100				
	CAL	Temperature (°C)		19.9	°C					
QC2320266-02	CAL	pH		7.13	pH	102				
	CAL	Temperature (°C)		19.9	°C					
QC2320266-03	CAL	pH		10.1	pH	101				
	CAL	Temperature (°C)		20.1	°C					
QC2320266-04	ICV	pH		8.99	pH	99				
	ICV	Temperature (°C)		20.1	°C					
QC2320266-05	DUP of 2307852-01	pH	9.24	9.32	pH		0			Splt# 2307852-01 (9.24pH)
	DUP of 2307852-01	Temperature (°C)	17.8	17.4	°C					Splt# 2307852-01 (17.8°C) H1,H3
QC2320266-06	CCV	pH		9.02	pH	100				
	CCV	Temperature (°C)		19.7	°C					
QC2320266-07	CCV	pH		9.01	pH	100				
	CCV	Temperature (°C)		19.7	°C					

**QC list for Run#: 2070549 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320267-01	CAL	Specific Conductance @25°C		1420	µmhos/cm	101				
QC2320267-02	ICV	Specific Conductance @25°C		152	µmhos/cm	104				
QC2320267-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2320267-04	MRL_CK	Specific Conductance @25°C		10.3	µmhos/cm	103				
QC2320267-05	DUP of 2307852-01	Specific Conductance @25°C	95.2	95.3	µmhos/cm		0		1	Splt# 2307852-01 (95.2µmhos/cm)
QC2320267-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307444**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.A

**Scheduled Sample Date:** 11/09/2023

**Sampling Team:** Field

**QC list for Run#: 2070549 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320267-07	CCV	Specific Conductance @25°C		1420	µmhos/cm	101				

**QC list for Run#: 2070556 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320272-01	MRL_CK	Sulfate		0.508	mg/L	102				
	MRL_CK	Nitrate as N		0.0383	mg/L	95				
QC2320272-02	CCV	Sulfate		2.41	mg/L	96				
	CCV	Nitrate as N		0.194	mg/L	97				
QC2320272-03	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320272-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320272-05	LCS	Sulfate		1	mg/L	100				
	LCS	Nitrate as N		0.221	mg/L	97				
QC2320272-06	CCV	Sulfate		2.29	mg/L	91				
	CCV	Nitrate as N		0.184	mg/L	92				
QC2320272-07	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2320272-08	SPK of 2307856-09	Sulfate	5.91	8.32	mg/L	96				Splt# 2307856-09 (5.91mg/L)
	SPK of 2307856-09	Nitrate as N	0.107	0.318	mg/L	105				Splt# 2307856-09 (0.107mg/L)
QC2320272-09	SPKD of 2307856-09	Sulfate	5.91	8.22	mg/L	92	1			Splt# 2307856-09 (5.91mg/L)
	SPKD of 2307856-09	Nitrate as N	0.107	0.341	mg/L	117	7			Splt# 2307856-09 (0.107mg/L)

**QC list for Run#: 2070932 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2320522-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2320522-02	LCS	Calcium, Ca		2.05	mg/L	103		0.04	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307444**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 11/09/2023

**Sampling Team:** Field

**QC list for Run#: 2070932 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	LCS	Magnesium, Mg		2.06	mg/L	103		0.007	0.2	
	LCS	Potassium, K		2.05	mg/L	102		0.04	0.2	
	LCS	Sodium, Na		2.21	mg/L	110		0.02	1	
QC2320522-03										
	DUP of 2307443-01	Calcium, Ca	42	42.2	mg/L		0	0.005	1	Splt# 2307443-01 (42mg/L)
	DUP of 2307443-01	Magnesium, Mg	39.1	39.3	mg/L		0	0.021	0.2	Splt# 2307443-01 (39.1mg/L)
	DUP of 2307443-01	Potassium, K	2.43	2.46	mg/L		1	0.06	0.2	Splt# 2307443-01 (2.43mg/L)
	DUP of 2307443-01	Sodium, Na	53.2	53.4	mg/L		0	0.2	1	Splt# 2307443-01 (53.2mg/L)
QC2320522-04										
	SPK of 2307443-01	Calcium, Ca	42	43.8	mg/L	89		0.04	1	Splt# 2307443-01 (42mg/L)
	SPK of 2307443-01	Magnesium, Mg	39.1	41	mg/L	92		0.007	0.2	Splt# 2307443-01 (39.1mg/L)
	SPK of 2307443-01	Potassium, K	2.43	4.4	mg/L	98		0.04	0.2	Splt# 2307443-01 (2.43mg/L)
	SPK of 2307443-01	Sodium, Na	53.2	54.9	mg/L	82		0.02	1	Splt# 2307443-01 (53.2mg/L)
QC2320522-05										
	SPKD of 2307443-01	Calcium, Ca	42	44.6	mg/L	130	1	0.04	1	Splt# 2307443-01 (42mg/L)
	SPKD of 2307443-01	Magnesium, Mg	39.1	41.7	mg/L	131	1	0.007	0.2	Splt# 2307443-01 (39.1mg/L)
	SPKD of 2307443-01	Potassium, K	2.43	4.52	mg/L	104	2	0.04	0.2	Splt# 2307443-01 (2.43mg/L)
	SPKD of 2307443-01	Sodium, Na	53.2	55.9	mg/L	132	1	0.02	1	Splt# 2307443-01 (53.2mg/L)
QC2320522-06										
	MRL_CK	Calcium, Ca		0.0373	mg/L	93		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0425	mg/L	85		0.021	0.021	
	MRL_CK	Potassium, K		0.18	mg/L	90		0.06	0.06	
	MRL_CK	Sodium, Na		0.322	mg/L	161		0.2	0.2	
QC2320554-01										
	ICV	Calcium, Ca		10.3	mg/L	103		0.05	1	
	ICV	Magnesium, Mg		9.97	mg/L	99		0.01	0.2	
	ICV	Potassium, K		99.3	mg/L	99		0.03	0.2	
	ICV	Sodium, Na		10.2	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307445**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPU+Consult.A

**Scheduled Sample Date:** 12/14/2023

**Sampling Team:** Field

**Lab Sample#:** 2307445-01 **Sample Source:** WSB\_DC-10A-160 **External ID:**

**Date Collected:** 12/14/2023 10:09AM **Date Received:** 12/14/2023 01:54PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_DC\_CUP-10A-160, ROW AT SERRA BOWL

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	64.8	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
Magnesium, Mg	63.6	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
Potassium, K	1.34	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	
Sodium, Na	74	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	322	mg/L	1	2.96	15	12/14/2023	2072231 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	126	mg/L	1		15	12/14/2023	2072233 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1140	µmhos/cm	1		1	12/14/2023	2072247 ALEE	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	417	mg/L	1	2.37	15	12/14/2023	2072234 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.74	pH	1			12/14/2023	2072246 ALEE	H1,H3
Temperature (°C)	18.2	°C	1			12/14/2023	2072246 ALEE	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	620	mg/L	1	13.2	20	12/24/2023	2072475 ABALALIO	>MCL

SUB_300.0A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	62	mg/L			1.3	12/15/2023	5901888 SUB	
Nitrate as N	8.8	mg/L			0.25	12/15/2023	5901888 SUB	

**Lab Sample#:** 2307445-02 **Sample Source:** WSB\_DC-10A-500 **External ID:**

**Date Collected:** 12/14/2023 10:55AM **Date Received:** 12/14/2023 01:54PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_DC\_CUP-10A-500 ROW AT SERRA BOWL

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	62.5	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
Magnesium, Mg	63.3	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
Potassium, K	1.36	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	
Sodium, Na	71.6	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments

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ELAP Cert #:

SEWPCP 1721  
SUB\_LAB 2813  
MILLBRAE 1449

# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307445**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 12/14/2023

**Sampling Team:** Field

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	267	mg/L	1	2.96	15	12/14/2023	2072231 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	129	mg/L	1		15	12/14/2023	2072233 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	1120	µmhos/cm	1		1	12/14/2023	2072247 ALEE	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	407	mg/L	1	2.37	15	12/14/2023	2072234 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
pH	6.74	pH	1			12/14/2023	2072246 ALEE	H1,H3
Temperature (°C)	17.2	°C	1			12/14/2023	2072246 ALEE	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Total Dissolved Solids	630	mg/L	1	13.2	20	12/24/2023	2072475 ABALALIO	>MCL
<b>SUB_300.0A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Sulfate	81	mg/L			1.3	12/15/2023	5901888 SUB	
Nitrate as N	7.6	mg/L			0.25	12/15/2023	5901888 SUB	

**Lab Sample#:** 2307445-03    **Sample Source:** WSB\_DC-10A-710    **External ID:** \_\_\_\_\_  
**Date Collected:** 12/14/2023 09:54AM    **Date Received:** 12/14/2023 01:54PM    **Sample Matrix:** Aqueous    **Location Desc:** GSR\_DC\_CUP-10A-710 ROW AT SERRA BOWL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Calcium, Ca	71.9	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
Magnesium, Mg	47.6	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
Potassium, K	3.87	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	
Sodium, Na	92.2	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	235	mg/L	1	2.96	15	12/14/2023	2072231 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	183	mg/L	1		15	12/14/2023	2072233 ALEE	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	1200	µmhos/cm	1		1	12/14/2023	2072247 ALEE	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	383	mg/L	1	2.37	15	12/14/2023	2072234 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307445**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 12/14/2023

**Sampling Team:** Field

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	7.2	pH	1			12/14/2023	2072246 ALEE	H1,H3
Temperature (°C)	16.5	°C	1			12/14/2023	2072246 ALEE	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	625	mg/L	1	13.2	20	12/24/2023	2072475 ABALALIO	>MCL

SUB_300.0A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	87	mg/L			1.3	12/15/2023	5901888 SUB	
Nitrate as N	<0.25	mg/L			0.25	12/15/2023	5901888 SUB	

**Lab Sample#:** 2307445-04 **Sample Source:** WSB\_DC\_DUP **External ID:**

**Date Collected:** 12/14/2023 10:34AM **Date Received:** 12/14/2023 01:54PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_DC\_CUP-10A-160, ROW AT SERRA BOWL

**Test/Analyte**

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	65.5	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
Magnesium, Mg	64.2	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
Potassium, K	1.35	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	
Sodium, Na	74.6	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	310	mg/L	1	2.96	15	12/14/2023	2072231 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	119	mg/L	1		15	12/14/2023	2072233 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1140	µmhos/cm	1		1	12/14/2023	2072247 ALEE	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	430	mg/L	1	2.37	15	12/14/2023	2072234 ALEE	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.99	pH	1			12/14/2023	2072246 ALEE	H1,H3
Temperature (°C)	17.7	°C	1			12/14/2023	2072246 ALEE	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	620	mg/L	1	13.2	20	12/24/2023	2072475 ABALALIO	>MCL

SUB_300.0A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	62	mg/L			1.3	12/15/2023	5901888 SUB	
Nitrate as N	8.8	mg/L			0.25	12/15/2023	5901888 SUB	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

Water Quality Laboratory

ELAP Cert #:

SEWPCP 1721

SUB\_LAB 2813

MILLBRAE 1449

**FOLDER ID: 2307445**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 12/14/2023

**Sampling Team:** Field

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ELAP Cert #:

SEWPCP 1721

SUB\_LAB 2813

MILLBRAE 1449

# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307445**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCC+Consult.A

**Scheduled Sample Date:** 12/14/2023

**Sampling Team:** Field

**QC list for Run#: 2072231 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321499-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2321499-02	MRL_CK	Alkalinity		3.14	mg/L	105				
QC2321499-03	SPK of 2308941-01	Alkalinity	43.5	83.2	mg/L	99			3	Splt# 2308941-01 (43.5mg/L)
QC2321499-04	SPKD of 2308941-01	Alkalinity	43.5	84.2	mg/L	102	1		3	Splt# 2308941-01 (43.5mg/L)
QC2321499-05	DUP of 2308941-02	Alkalinity	40.3	40.5	mg/L		0	0.593	3	Splt# 2308941-02 (40.3mg/L)
QC2321499-06	LCS	Alkalinity		40.4	mg/L	101			3	

**QC list for Run#: 2072233 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321500-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2321500-02	MRL_CK	Chloride		2.96	mg/L	98				
QC2321500-03	SPK of 2308941-01	Chloride	12.2	51.2	mg/L	97			3	Splt# 2308941-01 (12.2mg/L)
QC2321500-04	SPKD of 2308941-01	Chloride	12.2	50.2	mg/L	95	1		3	Splt# 2308941-01 (12.2mg/L)
QC2321500-05	DUP of 2308941-02	Chloride	12.2	12.3	mg/L		0		3	Splt# 2308941-02 (12.2mg/L)
QC2321500-06	LCS	Chloride		40.3	mg/L	101			3	

**QC list for Run#: 2072234 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321504-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2321504-02	MRL_CK	Hardness, Total, as CaCO3		2.36	mg/L	78				
QC2321504-03	DUP of 2308941-02	Hardness, Total, as CaCO3	40.6	40.8	mg/L		0	0.474	3	Splt# 2308941-02 (40.6mg/L)
QC2321504-04	LCS	Hardness, Total, as CaCO3		42.7	mg/L	107			3	

**QC list for Run#: 2072246 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321510-04	ICV	pH		9.01	pH	99				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307445**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCC+Consult.A

**Scheduled Sample Date:** 12/14/2023

**Sampling Team:** Field

**QC list for Run#: 2072246 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	ICV	Temperature (°C)		19.2	°C					
QC2321510-05	DUP of 2307445-01	pH	6.74	6.77	pH		0			Splt# 2307445-01 (6.74pH) H1,H3
	DUP of 2307445-01	Temperature (°C)	18.2	17.9	°C					Splt# 2307445-01 (18.2°C)
QC2321510-06	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		19.3	°C					

**QC list for Run#: 2072247 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321511-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2321511-04	MRL_CK	Specific Conductance @25°C		9.95	µmhos/cm	99				
QC2321511-05	DUP of 2307445-04	Specific Conductance @25°C	1140	1140	µmhos/cm		0		1	Splt# 2307445-04 (1140µmhos/cm)
QC2321511-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2072475 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321678-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2321678-02	DUP of 2309686-01	Total Dissolved Solids	96	101	mg/L		5	13.2	20	Splt# 2309686-01 (96mg/L)
QC2321678-03	LCS	Total Dissolved Solids		87	mg/L	91		13.2	20	

**QC list for Run#: 2073115 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422089-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2422089-02	LCS	Calcium, Ca		2.07	mg/L	103		0.04	1	
	LCS	Magnesium, Mg		2.09	mg/L	104		0.007	0.2	
	LCS	Potassium, K		2.08	mg/L	104		0.04	0.2	
	LCS	Sodium, Na		2.22	mg/L	111		0.02	1	
QC2422089-03										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307445**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCC+Consult.A

**Scheduled Sample Date:** 12/14/2023

**Sampling Team:** Field

**QC list for Run#: 2073115 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
DUP of 2307445-01		Calcium, Ca	64.8	65.8	mg/L		1	0.005	1	Splt# 2307445-01 (64.8mg/L)
DUP of 2307445-01		Magnesium, Mg	63.6	64.7	mg/L		1	0.021	0.2	Splt# 2307445-01 (63.6mg/L)
DUP of 2307445-01		Potassium, K	1.34	1.37	mg/L		2	0.06	0.2	Splt# 2307445-01 (1.34mg/L)
DUP of 2307445-01		Sodium, Na	74	75.1	mg/L		1	0.2	1	Splt# 2307445-01 (74mg/L)
QC2422089-04										
SPK of 2307445-01		Calcium, Ca	64.8	67.5	mg/L	136		0.04	1	Splt# 2307445-01 (64.8mg/L)
SPK of 2307445-01		Magnesium, Mg	63.6	66.3	mg/L	136		0.007	0.2	Splt# 2307445-01 (63.6mg/L)
SPK of 2307445-01		Potassium, K	1.34	3.46	mg/L	106		0.04	0.2	Splt# 2307445-01 (1.34mg/L)
SPK of 2307445-01		Sodium, Na	74	76.7	mg/L	132		0.02	1	Splt# 2307445-01 (74mg/L)
QC2422089-05										
SPKD of 2307445-01		Calcium, Ca	64.8	68.2	mg/L	172	1	0.04	1	Splt# 2307445-01 (64.8mg/L)
SPKD of 2307445-01		Magnesium, Mg	63.6	67.1	mg/L	174	1	0.007	0.2	Splt# 2307445-01 (63.6mg/L)
SPKD of 2307445-01		Potassium, K	1.34	3.47	mg/L	106	0	0.04	0.2	Splt# 2307445-01 (1.34mg/L)
SPKD of 2307445-01		Sodium, Na	74	77.4	mg/L	170	0	0.02	1	Splt# 2307445-01 (74mg/L)
QC2422089-06										
	MRL_CK	Calcium, Ca		0.035	mg/L	87		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0539	mg/L	108		0.021	0.021	
	MRL_CK	Potassium, K		0.23	mg/L	115		0.06	0.06	
	MRL_CK	Sodium, Na		0.298	mg/L	149		0.2	0.2	
QC2422153-01										
	ICV	Calcium, Ca		10.2	mg/L	102		0.05	1	
	ICV	Magnesium, Mg		9.94	mg/L	99		0.01	0.2	
	ICV	Potassium, K		97.9	mg/L	98		0.03	0.2	
	ICV	Sodium, Na		10.1	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 12/18/2023

**Sampling Team:** Field

**Lab Sample#:** 2307446-01 **Sample Source:** WSB\_CAL-18-230 **External ID:**

**Date Collected:** 12/21/2023 11:41AM **Date Received:** 12/21/2023 02:41PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-18-230, ROW AT COLMA BLVD

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	40.6	mg/L	5	0.5	2.5	12/21/2023	2072582 PWARNER	
Nitrate as N	2.95	mg/L	5	0.17	0.2	12/21/2023	2072582 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	38.9	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
Magnesium, Mg	35.6	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
Potassium, K	1.83	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	
Sodium, Na	68.4	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	170	mg/L	1	1.19	6	12/21/2023	2072616 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	115	mg/L	1		6	12/21/2023	2072617 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	810	µmhos/cm	1		1	12/21/2023	2072589 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	234	mg/L	1	0.948	6	12/21/2023	2072615 ABALALIO	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	6.67	pH	1			12/21/2023	2072588 WHORNER	H1,H3
Temperature (°C)	16.1	°C	1			12/21/2023	2072588 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	443	mg/L	1	13.2	20	12/29/2023	2072853 ALEE	

**Lab Sample#:** 2307446-02 **Sample Source:** WSB\_CAL-18-425 **External ID:**

**Date Collected:** 12/21/2023 11:05AM **Date Received:** 12/21/2023 02:41PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-18-425, ROW AT COLMA BLVD

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	40.9	mg/L	5	0.5	2.5	12/21/2023	2072582 PWARNER	
Nitrate as N	3.02	mg/L	5	0.17	0.2	12/21/2023	2072582 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	38.8	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
Magnesium, Mg	35.6	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
Potassium, K	1.81	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFUC+Consult.B

**Scheduled Sample Date:** 12/18/2023

**Sampling Team:** Field

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sodium, Na	68.2	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	168	mg/L	1	1.19	6	12/21/2023	2072616 ABALALIO	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	115	mg/L	1		6	12/21/2023	2072617 ABALALIO	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	801	µmhos/cm	1		1	12/21/2023	2072589 WHORNER	
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Hardness, Total, as CaCO3	233	mg/L	1	0.948	6	12/21/2023	2072615 ABALALIO	
<b>MBP_PH(SM 4500-H+ B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
pH	6.6	pH	1			12/21/2023	2072588 WHORNER	H1,H3
Temperature (°C)	14.5	°C	1			12/21/2023	2072588 WHORNER	
<b>MBP_TDS(SM 2540 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Total Dissolved Solids	442	mg/L	1	13.2	20	12/29/2023	2072853 ALEE	

**Lab Sample#:** 2307446-03      **Sample Source:** WSB\_CAL-18-490      **External ID:**  
**Date Collected:** 12/21/2023 10:17AM      **Date Received:** 12/21/2023 02:41PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-18-490, ROW AT COLMA BLVD

**Test/Analyte**

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Sulfate	41.4	mg/L	5	0.5	2.5	12/21/2023	2072582 PWARNER	
Nitrate as N	3.08	mg/L	5	0.17	0.2	12/21/2023	2072582 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Calcium, Ca	39	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
Magnesium, Mg	35.7	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
Potassium, K	1.85	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	
Sodium, Na	67.3	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	
<b>MBP_ALK(SM 2320 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Alkalinity	170	mg/L	1	1.19	6	12/21/2023	2072616 ABALALIO	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Chloride	113	mg/L	1		6	12/21/2023	2072617 ABALALIO	
<b>MBP_COND(SM 2510 B)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>
Specific Conductance @25°C	807	µmhos/cm	1		1	12/21/2023	2072589 WHORNER	
<b>MBP_HARDNESS_T(SM 2340 C)</b>	<b>Result</b>	<b>Unit</b>	<b>Dilution</b>	<b>MDL</b>	<b>MRL</b>	<b>Analysis Date</b>	<b>Run#/Analyst</b>	<b>Flag/Comments</b>

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 12/18/2023

**Sampling Team:** Field

<i>Hardness, Total, as CaCO3</i>	<b>234</b>	mg/L	1	0.948	6	12/21/2023	2072615	ABALALIO	
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<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>pH</i>	6.63	pH	1			12/21/2023	2072588 WHORNER	H1,H3
<i>Temperature (°C)</i>	14.5	°C	1			12/21/2023	2072588 WHORNER	

<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	443	mg/L	1	13.2	20	12/29/2023	2072853 ALEE	

**Lab Sample#:** 2307446-04      **Sample Source:** WSB\_CAL-18-595      **External ID:**  
**Date Collected:** 12/21/2023 10:28AM      **Date Received:** 12/21/2023 02:41PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-18-595, ROW AT COLMA BLVD

Test/Analyte

<i>MBI_IC_ANIONS_A(EPA 300.0 (A))</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Nitrate as N</i>	1.69	mg/L	5	0.17	0.2	12/21/2023	2072582 PWARNER	

<i>SEM_200.7_DW(EPA 200.7)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Calcium, Ca</i>	65.4	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
<i>Magnesium, Mg</i>	55.4	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
<i>Potassium, K</i>	2.64	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	
<i>Sodium, Na</i>	74.7	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	

<i>MBP_ALK(SM 2320 B)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Alkalinity</i>	213	mg/L	1	1.19	6	12/21/2023	2072616 ABALALIO	

<i>MBP_CHLORIDE(SM 4500-CL- D)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Chloride</i>	152	mg/L	1		6	12/21/2023	2072617 ABALALIO	

<i>MBP_COND(SM 2510 B)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Specific Conductance @25°C</i>	1100	µmhos/cm	1		1	12/21/2023	2072589 WHORNER	>MCL

<i>MBP_HARDNESS_T(SM 2340 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Hardness, Total, as CaCO3</i>	375	mg/L	1	0.948	6	12/21/2023	2072615 ABALALIO	

<i>MBP_PH(SM 4500-H+ B)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>pH</i>	6.73	pH	1			12/21/2023	2072588 WHORNER	H1,H3
<i>Temperature (°C)</i>	14.6	°C	1			12/21/2023	2072588 WHORNER	

<i>MBP_TDS(SM 2540 C)</i>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
<i>Total Dissolved Solids</i>	605	mg/L	1	13.2	20	12/29/2023	2072853 ALEE	>MCL

**Lab Sample#:** 2307446-04A      **Sample Source:** WSB\_CAL-18-595      **External ID:**  
**Date Collected:** 12/21/2023 10:28AM      **Date Received:** 12/21/2023 02:41PM      **Sample Matrix:** Aqueous      **Location Desc:** GSR\_CAL\_CUP-18-595, ROW AT COLMA BLVD

Test/Analyte

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCC+Consult.B

**Scheduled Sample Date:** 12/18/2023

**Sampling Team:** Field

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	131	mg/L	10	1	5	12/26/2023	2072778 PWARNER	

**Lab Sample#:** 2307446-05 **Sample Source:** WSB\_CAL\_DUP **External ID:**

**Date Collected:** 12/21/2023 11:24AM **Date Received:** 12/21/2023 02:41PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-18-595, ROW AT COLMA BLVD

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	1.69	mg/L	5	0.17	0.2	12/21/2023	2072582 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	65	mg/L	1	0.005	1	01/03/2024	2073115 BTRINH	
Magnesium, Mg	55	mg/L	1	0.021	0.2	01/03/2024	2073115 BTRINH	
Potassium, K	2.66	mg/L	1	0.06	0.2	01/03/2024	2073115 BTRINH	
Sodium, Na	74	mg/L	1	0.2	1	01/03/2024	2073115 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	219	mg/L	1	1.19	6	12/21/2023	2072616 ABALALIO	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	156	mg/L	1		6	12/21/2023	2072617 ABALALIO	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1110	µmhos/cm	1		1	12/21/2023	2072589 WHORNER	>MCL

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	378	mg/L	1	0.948	6	12/21/2023	2072615 ABALALIO	

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.71	pH	1			12/21/2023	2072588 WHORNER	H1,H3
Temperature (°C)	16	°C	1			12/21/2023	2072588 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	607	mg/L	1	13.2	20	12/29/2023	2072853 ALEE	>MCL

**Lab Sample#:** 2307446-05A **Sample Source:** WSB\_CAL\_DUP **External ID:**

**Date Collected:** 12/21/2023 11:24AM **Date Received:** 12/21/2023 02:41PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-18-595, ROW AT COLMA BLVD

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	129	mg/L	10	1	5	12/26/2023	2072778 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 12/18/2023

**Sampling Team:** Field

**QC list for Run#: 2072582 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321756-01	MRL_CK	Chloride		0.511	mg/L	102				
	MRL_CK	Sulfate		0.54	mg/L	108				
	MRL_CK	Nitrate as N		0.0418	mg/L	105				
QC2321756-02	CCV	Chloride		2.58	mg/L	103				
	CCV	Sulfate		2.45	mg/L	98				
	CCV	Nitrate as N		0.201	mg/L	101				
QC2321756-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321756-04	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321756-05	LCS	Chloride		0.0749	mg/L	120				
	LCS	Sulfate		0.252	mg/L	134				
	LCS	Nitrate as N		0.0329	mg/L	105				
QC2321756-06	CCV	Chloride		20.1	mg/L	101				
	CCV	Sulfate		22	mg/L	110				
	CCV	Nitrate as N		1.71	mg/L	107				
QC2321756-07	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321756-08	SPK of 2309035-03	Nitrate as N	0.0655	0.25	mg/L	92				Splt# 2309035-03 (0.0655mg/L)
QC2321756-09	SPKD of 2309035-03	Nitrate as N	0.0655	0.294	mg/L	115	16			Splt# 2309035-03 (0.0655mg/L)
QC2321756-10	LCS	Chloride		0.532	mg/L	106				
	LCS	Sulfate		1.59	mg/L	106				
	LCS	Nitrate as N		0.258	mg/L	103				
QC2321756-11	SPK of 2309140-03	Nitrate as N	0.171	0.383	mg/L	107				Splt# 2309140-03 (0.171mg/L)
QC2321756-12	SPKD of 2309140-03	Nitrate as N	0.171	0.402	mg/L	116	4			Splt# 2309140-03 (0.171mg/L)
QC2321756-13										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 12/18/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2072582 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	CCV	Chloride		2.6	mg/L	104				
	CCV	Sulfate		2.46	mg/L	98				
	CCV	Nitrate as N		0.201	mg/L	101				
QC2321756-14	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321756-15	SPK of 2309035-03	Nitrate as N	0.0655	0.285	mg/L	110				Splt# 2309035-03 (0.0655mg/L)
QC2321756-16	SPKD of 2309035-03	Nitrate as N	0.0655	0.294	mg/L	115	3			Splt# 2309035-03 (0.0655mg/L)

**QC list for Run#: 2072588 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321767-01	CAL	pH		4.01	pH	100				
	CAL	Temperature (°C)		20	°C					
QC2321767-02	CAL	pH		7.09	pH	101				
	CAL	Temperature (°C)		20	°C					
QC2321767-03	CAL	pH		10.1	pH	101				
	CAL	Temperature (°C)		20	°C					
QC2321767-04	ICV	pH		9	pH	99				
	ICV	Temperature (°C)		19.9	°C					
QC2321767-05	DUP of 2309134-01	pH	8.77	8.81	pH		0			Splt# 2309134-01 (8.77pH) H1,H3
	DUP of 2309134-01	Temperature (°C)	17.2	17.2	°C					Splt# 2309134-01 (17.2°C)
QC2321767-06	CCV	pH		9.03	pH	99				
	CCV	Temperature (°C)		19.6	°C					
QC2321767-07	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		19.5	°C					

**QC list for Run#: 2072589 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321764-01	CAL	Specific Conductance @25°C		1430	µmhos/cm	101				
QC2321764-02	ICV	Specific Conductance @25°C		153	µmhos/cm	104				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 12/18/2023

**Sampling Team:** Field

**QC list for Run#: 2072589 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321764-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2321764-04	MRL_CK	Specific Conductance @25°C		9.72	µmhos/cm	97				
QC2321764-05	DUP of 2309134-01	Specific Conductance @25°C	158	158	µmhos/cm		0		1	Splt# 2309134-01 (158µmhos/cm)
QC2321764-06	CCV	Specific Conductance @25°C		103	µmhos/cm	103				
QC2321764-07	CCV	Specific Conductance @25°C		1420	µmhos/cm	101				

**QC list for Run#: 2072615 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321779-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2321779-02	MRL_CK	Hardness, Total, as CaCO3		2.4	mg/L	80				
QC2321779-03	DUP of 2309134-01	Hardness, Total, as CaCO3	38.1	38.4	mg/L		0	0.474	3	Splt# 2309134-01 (38.1mg/L)
QC2321779-04	LCS	Hardness, Total, as CaCO3		39.7	mg/L	99			3	

**QC list for Run#: 2072616 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321780-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2321780-02	MRL_CK	Alkalinity		3.19	mg/L	106				
QC2321780-03	SPK of 2309134-01	Alkalinity	41.3	80.8	mg/L	98			3	Splt# 2309134-01 (41.3mg/L)
QC2321780-04	SPKD of 2309134-01	Alkalinity	41.3	81	mg/L	99	0		3	Splt# 2309134-01 (41.3mg/L)
QC2321780-05	DUP of 2309150-05	Alkalinity	99.8	99.9	mg/L		0	0.593	3	Splt# 2309150-05 (99.8mg/L)
QC2321780-06	LCS	Alkalinity		39.7	mg/L	99			3	

**QC list for Run#: 2072617 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321781-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2321781-02	MRL_CK	Chloride		3.06	mg/L	102				
QC2321781-03	SPK of 2309134-01	Chloride	12.4	51.1	mg/L	96			3	Splt# 2309134-01 (12.4mg/L)

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 12/18/2023

**Routine:** WSB\_SFUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2072617 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321781-04	SPKD of 2309134-01	Chloride	12.4	50.6	mg/L	95	1		3	Splt# 2309134-01 (12.4mg/L)
QC2321781-06	LCS	Chloride		38.3	mg/L	95			3	

**QC list for Run#: 2072778 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321897-01	MRL_CK	Chloride		0.489	mg/L	97				
	MRL_CK	Sulfate		0.518	mg/L	104				
	MRL_CK	Nitrate as N		0.042	mg/L	105				
QC2321897-02	CCV	Chloride		2.41	mg/L	96				
	CCV	Sulfate		2.38	mg/L	95				
	CCV	Nitrate as N		0.195	mg/L	98				
QC2321897-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321897-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321897-05	LCS	Chloride		0.493	mg/L	98				
	LCS	Sulfate		1.54	mg/L	103				
	LCS	Nitrate as N		0.256	mg/L	102				
QC2321897-06	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321897-07	CCV	Chloride		2.48	mg/L	99				
	CCV	Sulfate		2.44	mg/L	97				
	CCV	Nitrate as N		0.199	mg/L	100				
QC2321897-08	SPKD of 2309936-03	Sulfate	15.6	19.6	mg/L	160	1			Splt# 2309936-03 (15.6mg/L)
	SPKD of 2309936-03	Nitrate as N	0.142	0.447	mg/L	154	17			Splt# 2309936-03 (0.142mg/L)
QC2321897-09	SPK of 2309936-03	Sulfate	15.6	19.3	mg/L	148				Splt# 2309936-03 (15.6mg/L)
	SPK of 2309936-03	Nitrate as N	0.142	0.376	mg/L	118				Splt# 2309936-03 (0.142mg/L)
QC2321897-10	CCV	Chloride		20.7	mg/L	104				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 12/18/2023

**Routine:** WSB\_SFPUC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2072778 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	CCV	Sulfate		22.5	mg/L	113				
	CCV	Nitrate as N		1.74	mg/L	109				
QC2321897-11										
	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321897-12										
	SPK of 2309167-04	Sulfate	16.1	19.1	mg/L	119				Splt# 2309167-04 (16.1mg/L)
	SPK of 2309167-04	Nitrate as N	0.0946	0.37	mg/L	138				Splt# 2309167-04 (0.0946mg/L)
QC2321897-13										
	SPKD of 2309167-04	Sulfate	16.1	19.5	mg/L	138	2			Splt# 2309167-04 (16.1mg/L)
	SPKD of 2309167-04	Nitrate as N	0.0946	0.352	mg/L	129	4			Splt# 2309167-04 (0.0946mg/L)
QC2321897-14										
	CCV	Chloride		2.46	mg/L	98				
	CCV	Sulfate		2.45	mg/L	98				
	CCV	Nitrate as N		0.199	mg/L	100				
QC2321897-15										
	CCV	Chloride		2.45	mg/L	98				
	CCV	Sulfate		2.42	mg/L	96				
	CCV	Nitrate as N		0.199	mg/L	99				
QC2321897-16										
	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321897-17										
	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2321897-18										
	SPK of 2309936-03	Sulfate	15.6	19.7	mg/L	167				Splt# 2309936-03 (15.6mg/L) M1
	SPK of 2309936-03	Nitrate as N	0.142	0.384	mg/L	122				Splt# 2309936-03 (0.142mg/L) M1
QC2321897-19										
	SPKD of 2309936-03	Sulfate	15.6	19	mg/L	137	3			Splt# 2309936-03 (15.6mg/L) M1
	SPKD of 2309936-03	Nitrate as N	0.142	0.368	mg/L	114	4			Splt# 2309936-03 (0.142mg/L)
QC2321897-20										
	SPK of 2309167-04	Sulfate	16.1	19	mg/L	114				Splt# 2309167-04 (16.1mg/L)
	SPK of 2309167-04	Nitrate as N	0.0946	0.308	mg/L	107				Splt# 2309167-04 (0.0946mg/L)
QC2321897-21										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 12/18/2023

**Routine:** WSB\_SFPUCC+Consult.B

**Sampling Team:** Field

**QC list for Run#: 2072778 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
SPKD of 2309167-04		Sulfate	16.1	16.9	mg/L	32	11			Splt# 2309167-04 (16.1mg/L) M1,M2
SPKD of 2309167-04		Nitrate as N	0.0946	0.294	mg/L	100	4			Splt# 2309167-04 (0.0946mg/L)

**QC list for Run#: 2072853 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2321952-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2321952-02	LCS	Total Dissolved Solids		89	mg/L	93		13.2	20	
QC2321952-03	DUP of 2307446-05	Total Dissolved Solids	607	619	mg/L		1	13.2	20	Splt# 2307446-05 (607mg/L)

**QC list for Run#: 2073115 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422089-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2422089-02	LCS	Calcium, Ca		2.07	mg/L	103		0.04	1	
	LCS	Magnesium, Mg		2.09	mg/L	104		0.007	0.2	
	LCS	Potassium, K		2.08	mg/L	104		0.04	0.2	
	LCS	Sodium, Na		2.22	mg/L	111		0.02	1	
QC2422089-03	DUP of 2307445-01	Calcium, Ca	64.8	65.8	mg/L		1	0.005	1	Splt# 2307445-01 (64.8mg/L)
	DUP of 2307445-01	Magnesium, Mg	63.6	64.7	mg/L		1	0.021	0.2	Splt# 2307445-01 (63.6mg/L)
	DUP of 2307445-01	Potassium, K	1.34	1.37	mg/L		2	0.06	0.2	Splt# 2307445-01 (1.34mg/L)
	DUP of 2307445-01	Sodium, Na	74	75.1	mg/L		1	0.2	1	Splt# 2307445-01 (74mg/L)
QC2422089-04	SPK of 2307445-01	Calcium, Ca	64.8	67.5	mg/L	136		0.04	1	Splt# 2307445-01 (64.8mg/L)
	SPK of 2307445-01	Magnesium, Mg	63.6	66.3	mg/L	136		0.007	0.2	Splt# 2307445-01 (63.6mg/L)
	SPK of 2307445-01	Potassium, K	1.34	3.46	mg/L	106		0.04	0.2	Splt# 2307445-01 (1.34mg/L)
	SPK of 2307445-01	Sodium, Na	74	76.7	mg/L	132		0.02	1	Splt# 2307445-01 (74mg/L)
QC2422089-05	SPKD of 2307445-01	Calcium, Ca	64.8	68.2	mg/L	172	1	0.04	1	Splt# 2307445-01 (64.8mg/L)
	SPKD of 2307445-01	Magnesium, Mg	63.6	67.1	mg/L	174	1	0.007	0.2	Splt# 2307445-01 (63.6mg/L)
	SPKD of 2307445-01	Potassium, K	1.34	3.47	mg/L	106	0	0.04	0.2	Splt# 2307445-01 (1.34mg/L)
	SPKD of 2307445-01	Sodium, Na	74	77.4	mg/L	170	0	0.02	1	Splt# 2307445-01 (74mg/L)
QC2422089-06	MRL_CK	Calcium, Ca		0.035	mg/L	87		0.005	0.005	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307446**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.B

**Scheduled Sample Date:** 12/18/2023

**Sampling Team:** Field

**QC list for Run#:** 2073115 and Test: SEM\_200.7\_DW (EPA 200.7)

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	MRL_CK	Magnesium, Mg		0.0539	mg/L	108		0.021	0.021	
	MRL_CK	Potassium, K		0.23	mg/L	115		0.06	0.06	
	MRL_CK	Sodium, Na		0.298	mg/L	149		0.2	0.2	
QC2422153-01	ICV	Calcium, Ca		10.2	mg/L	102		0.05	1	
	ICV	Magnesium, Mg		9.94	mg/L	99		0.01	0.2	
	ICV	Potassium, K		97.9	mg/L	98		0.03	0.2	
	ICV	Sodium, Na		10.1	mg/L	103		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/04/2024

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**Lab Sample#:** 2307447-01 **Sample Source:** WSB\_SF71\_PP195 **External ID:**

**Date Collected:** 01/04/2024 10:13AM **Date Received:** 01/04/2024 12:45PM **Sample Matrix:** Aqueous **Location Desc:** SF #71 - PARK PLAZA MW195

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Sulfate	191	mg/L	10	1	5	01/04/2024	2073186 PWARNER	
Nitrate as N	12.4	mg/L	10	0.34	0.4	01/04/2024	2073186 PWARNER	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	103	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	82.2	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	3.88	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	78.1	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	329	mg/L	1	2.96	15	01/04/2024	2073236 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	152	mg/L	1		15	01/04/2024	2073237 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	1480	µmhos/cm	1		1	01/04/2024	2073241 GWKONG	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	582	mg/L	1	2.37	15	01/04/2024	2073239 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	7.24	pH	1			01/04/2024	2073238 GWKONG	H1,H3
Temperature (°C)	18.1	°C	1			01/04/2024	2073238 GWKONG	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	846	mg/L	1	13.2	20	01/08/2024	2073235 ABALALIO	>MCL

**Lab Sample#:** 2307447-02 **Sample Source:** WSB\_SF50\_PP460 **External ID:**

**Date Collected:** 01/04/2024 09:23AM **Date Received:** 01/04/2024 12:45PM **Sample Matrix:** Aqueous **Location Desc:** SF#50 - PARK PLAZA MW460

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	49.5	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	51.2	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	2.02	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	54.1	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	281	mg/L	1	1.19	6	01/04/2024	2073236 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/04/2024

**Routine:** WSB\_SFUC+Consult.A

**Sampling Team:** Field

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b> Chloride	61.5	mg/L	1		6	01/04/2024	2073237 ALEE	
<b>MBP_COND(SM 2510 B)</b> Specific Conductance @25°C	872	µmhos/cm	1		1	01/04/2024	2073241 GKWONG	
<b>MBP_HARDNESS_T(SM 2340 C)</b> Hardness, Total, as CaCO3	323	mg/L	1	0.948	6	01/04/2024	2073239 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b> pH	7.21	pH	1			01/04/2024	2073238 GKWONG	H1,H3
Temperature (°C)	17.9	°C	1			01/04/2024	2073238 GKWONG	
<b>MBP_TDS(SM 2540 C)</b> Total Dissolved Solids	473	mg/L	1	13.2	20	01/08/2024	2073235 ABALALIO	
<b>Lab Sample#: 2307447-02A Sample Source: WSB_SF50_PP460 External ID:</b>								
<b>Date Collected:</b> 01/04/2024 09:23AM <b>Date Received:</b> 01/04/2024 12:45PM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> SF#50 - PARK PLAZA MW460								
<b>Test/Analyte</b>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b> Nitrate as N	6.7	mg/L	10	0.34	0.4	01/04/2024	2073186 PWARNER	
<b>Lab Sample#: 2307447-02B Sample Source: WSB_SF50_PP460 External ID:</b>								
<b>Date Collected:</b> 01/04/2024 09:23AM <b>Date Received:</b> 01/04/2024 12:45PM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> SF#50 - PARK PLAZA MW460								
<b>Test/Analyte</b>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b> Sulfate	49.7	mg/L	10	1	5	01/08/2024	2073367 PWARNER	
<b>Lab Sample#: 2307447-03 Sample Source: WSB_SF51_PP620 External ID:</b>								
<b>Date Collected:</b> 01/04/2024 09:23AM <b>Date Received:</b> 01/04/2024 12:45PM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> SF#51 - PARK PLAZA MW620								
<b>Test/Analyte</b>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b> Sulfate	62.4	mg/L	5	0.5	2.5	01/04/2024	2073186 PWARNER	
<b>SEM_200.7_DW(EPA 200.7)</b> Calcium, Ca	39.5	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	34.5	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	2.25	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	50.2	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	
<b>MBP_ALK(SM 2320 B)</b> Alkalinity	177	mg/L	1	1.19	6	01/04/2024	2073236 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/04/2024

**Routine:** WSB\_SFUC+Consult.A

**Sampling Team:** Field

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b> Chloride	74.9	mg/L	1		6	01/04/2024	2073237 ALEE	
<b>MBP_COND(SM 2510 B)</b> Specific Conductance @25°C	708	µmhos/cm	1		1	01/04/2024	2073241 GKWONG	
<b>MBP_HARDNESS_T(SM 2340 C)</b> Hardness, Total, as CaCO3	230	mg/L	1	0.948	6	01/04/2024	2073239 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b> pH	7.79	pH	1			01/04/2024	2073238 GKWONG	H1,H3
Temperature (°C)	18.6	°C	1			01/04/2024	2073238 GKWONG	
<b>MBP_TDS(SM 2540 C)</b> Total Dissolved Solids	382	mg/L	1	13.2	20	01/08/2024	2073235 ABALALIO	
<b>Lab Sample#: 2307447-03A Sample Source: WSB_SF51_PP620 External ID:</b>								
<b>Date Collected:</b> 01/04/2024 09:23AM <b>Date Received:</b> 01/04/2024 12:45PM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> SF#51 - PARK PLAZA MW620								
<b>Test/Analyte</b>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b> Nitrate as N	0.0447	mg/L	1	0.034	0.04	01/04/2024	2073186 PWARNER	
<b>Lab Sample#: 2307447-04 Sample Source: WSB_SF_DUP External ID:</b>								
<b>Date Collected:</b> 01/04/2024 10:37AM <b>Date Received:</b> 01/04/2024 12:45PM <b>Sample Matrix:</b> Aqueous <b>Location Desc:</b> SF #71 - PARK PLAZA MW195								
<b>Test/Analyte</b>								
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b> Sulfate	182	mg/L	10	1	5	01/04/2024	2073186 PWARNER	
Nitrate as N	11.9	mg/L	10	0.34	0.4	01/04/2024	2073186 PWARNER	>MCL
<b>SEM_200.7_DW(EPA 200.7)</b> Calcium, Ca	104	mg/L	1	0.005	1	01/12/2024	2073644 BTRINH	
Magnesium, Mg	83.5	mg/L	1	0.021	0.2	01/12/2024	2073644 BTRINH	
Potassium, K	3.97	mg/L	1	0.06	0.2	01/12/2024	2073644 BTRINH	
Sodium, Na	79.2	mg/L	1	0.2	1	01/12/2024	2073644 BTRINH	
<b>MBP_ALK(SM 2320 B)</b> Alkalinity	350	mg/L	1	2.96	15	01/04/2024	2073236 ALEE	
<b>MBP_CHLORIDE(SM 4500-CL- D)</b> Chloride	147	mg/L	1		15	01/04/2024	2073237 ALEE	
<b>MBP_COND(SM 2510 B)</b>								

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/04/2024

**Sampling Team:** Field

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	1440	µmhos/cm	1			01/04/2024	2073241 GKWONG	>MCL
<b>MBP_HARDNESS_T(SM 2340 C)</b>								
Hardness, Total, as CaCO3	586	mg/L	1	2.37	15	01/04/2024	2073239 ALEE	
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	7.06	pH	1			01/04/2024	2073238 GKWONG	H1,H3
Temperature (°C)	18.8	°C	1			01/04/2024	2073238 GKWONG	
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	826	mg/L	1	13.2	20	01/08/2024	2073235 ABALALIO	>MCL

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/04/2024

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073186 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422204-01	MRL_CK	Chloride		0.66	mg/L	132				
	MRL_CK	Sulfate		0.452	mg/L	90				
	MRL_CK	Nitrate as N		0.0348	mg/L	87				
QC2422204-02	CCV	Chloride		2.4	mg/L	95				
	CCV	Sulfate		2.39	mg/L	95				
	CCV	Nitrate as N		0.192	mg/L	96				
QC2422204-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422204-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422204-05	LCS	Chloride		0.473	mg/L	94				
	LCS	Sulfate		1.49	mg/L	99				
	LCS	Nitrate as N		0.242	mg/L	96				
QC2422204-06	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422204-07	CCV	Chloride		19.5	mg/L	97				
	CCV	Sulfate		20.9	mg/L	105				
	CCV	Nitrate as N		1.62	mg/L	101				
QC2422204-08	SPKD of 2309401-04	Sulfate	27.6	30.1	mg/L	104	12			Splt# 2309401-04 (27.6mg/L)
	SPKD of 2309401-04	Nitrate as N	0.18	0.373	mg/L	97	4			Splt# 2309401-04 (0.18mg/L)
QC2422204-09	SPK of 2309401-04	Sulfate	27.6	26.7	mg/L	0				Splt# 2309401-04 (27.6mg/L)
	SPK of 2309401-04	Nitrate as N	0.18	0.356	mg/L	88				Splt# 2309401-04 (0.18mg/L)
QC2422204-10	CCV	Chloride		2.47	mg/L	98				
	CCV	Sulfate		2.45	mg/L	98				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2422204-11	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422204-12										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/04/2024

**Routine:** WSB\_SFUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073186 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	SPK of 2309401-02	Sulfate	15.6	19.3	mg/L	149				Splt# 2309401-02 (15.6mg/L) M
	SPK of 2309401-02	Nitrate as N	0.223	0.461	mg/L	120				Splt# 2309401-02 (0.223mg/L)
QC2422204-13										
	SPKD of 2309401-02	Sulfate	15.6	18.8	mg/L	127	2			Splt# 2309401-02 (15.6mg/L) M
	SPKD of 2309401-02	Nitrate as N	0.223	0.461	mg/L	119	0			Splt# 2309401-02 (0.223mg/L)
QC2422204-14										
	MRL_CK	Chloride		0.45	mg/L	90				
	MRL_CK	Sulfate		0.484	mg/L	96				
	MRL_CK	Nitrate as N		0.0378	mg/L	94				
QC2422204-15										
	CCV	Chloride		19.6	mg/L	97				
	CCV	Sulfate		20.9	mg/L	104				
	CCV	Nitrate as N		1.61	mg/L	101				
QC2422204-16										
	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2073235 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422237-01										
	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2422237-02										
	DUP of 2410139-03	Total Dissolved Solids	99	97	mg/L		2	13.2	20	Splt# 2410139-03 (99mg/L)
QC2422237-03										
	LCS	Total Dissolved Solids		84	mg/L	88		13.2	20	

**QC list for Run#: 2073236 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422238-01										
	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2422238-02										
	MRL_CK	Alkalinity		3.3	mg/L	110				
QC2422238-03										
	SPK of 2309415-01	Alkalinity	56.4	95.7	mg/L	98			3	Splt# 2309415-01 (56.4mg/L)
QC2422238-04										
	SPKD of 2309415-01	Alkalinity	56.4	96.2	mg/L	99	0		3	Splt# 2309415-01 (56.4mg/L)
QC2422238-05										
	DUP of 2309415-02	Alkalinity	56.3	56.7	mg/L		0	0.593	3	Splt# 2309415-02 (56.3mg/L)
QC2422238-06										
	LCS	Alkalinity		39.6	mg/L	99			3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/04/2024

**Sampling Team:** Field

**QC list for Run#: 2073237 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422239-01	BLK	Chloride		<3	mg/L			1.16	3	
QC2422239-02	MRL_CK	Chloride		2.99	mg/L	99				
QC2422239-03	SPK of 2309415-01	Chloride	16.8	54.8	mg/L	95			3	Splt# 2309415-01 (16.8mg/L)
QC2422239-04	SPKD of 2309415-01	Chloride	16.8	55	mg/L	95	0		3	Splt# 2309415-01 (16.8mg/L)
QC2422239-05	DUP of 2309415-02	Chloride	15.7	15.4	mg/L		2		3	Splt# 2309415-02 (15.7mg/L)
QC2422239-06	LCS	Chloride		38.3	mg/L	95			3	

**QC list for Run#: 2073238 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422240-01	CAL	pH		4.11	pH	103				
	CAL	Temperature (°C)		20.2	°C					
QC2422240-02	CAL	pH		7.12	pH	102				
	CAL	Temperature (°C)		20.1	°C					
QC2422240-03	CAL	pH		10.1	pH	101				
	CAL	Temperature (°C)		20.1	°C					
QC2422240-04	ICV	pH		9	pH	99				
	ICV	Temperature (°C)		20.1	°C					
QC2422240-05	DUP of 2309414-01	pH	8.96	9.02	pH		0			Splt# 2309414-01 (8.96pH) H1,H3
	DUP of 2309414-01	Temperature (°C)	17.9	17.9	°C					Splt# 2309414-01 (17.9°C)
QC2422240-06	CCV	pH		9.01	pH	99				
	CCV	Temperature (°C)		20	°C					
QC2422240-07	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		20	°C					

**QC list for Run#: 2073239 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422241-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2422241-02	MRL_CK	Hardness, Total, as CaCO3		2.54	mg/L	84				
QC2422241-03										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/04/2024

**Routine:** WSB\_SFPUCC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073239 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	DUP of 2309415-02	Hardness, Total, as CaCO3	55.2	55	mg/L		0	0.474	3	Splt# 2309415-02 (55.2mg/L)
QC2422241-04	LCS	Hardness, Total, as CaCO3		39.4	mg/L	98			3	

**QC list for Run#: 2073241 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422244-01	CAL	Specific Conductance @25°C		1420	µmhos/cm	101				
QC2422244-02	ICV	Specific Conductance @25°C		148	µmhos/cm	101				
QC2422244-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2422244-04	MRL_CK	Specific Conductance @25°C		9.97	µmhos/cm	99				
QC2422244-05	DUP of 2309414-01	Specific Conductance @25°C	210	209	µmhos/cm		0		1	Splt# 2309414-01 (210µmhos/cm)
QC2422244-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				
QC2422244-07	CCV	Specific Conductance @25°C		1440	µmhos/cm	102				

**QC list for Run#: 2073367 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422338-01	MRL_CK	Chloride		0.466	mg/L	93				
	MRL_CK	Sulfate		0.502	mg/L	100				
	MRL_CK	Nitrate as N		0.0388	mg/L	97				
QC2422338-02	CCV	Chloride		2.53	mg/L	101				
	CCV	Sulfate		2.51	mg/L	100				
	CCV	Nitrate as N		0.203	mg/L	102				
QC2422338-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422338-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422338-05	LCS	Chloride		0.468	mg/L	93				
	LCS	Sulfate		1.46	mg/L	97				
	LCS	Nitrate as N		0.238	mg/L	95				
QC2422338-06										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

MILLBRAE 1449

## Water Quality Laboratory

SEWPCP 1721

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Scheduled Sample Date:** 01/04/2024

**Routine:** WSB\_SFPUC+Consult.A

**Sampling Team:** Field

**QC list for Run#: 2073367 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	CCV	Chloride		2.34	mg/L	93				
	CCV	Sulfate		2.32	mg/L	92				
	CCV	Nitrate as N		0.188	mg/L	94				
QC2422338-07	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422338-08	SPK of 2309537-10A	Sulfate	16.2	18.9	mg/L	107				Splt# 2309537-10A (16.2mg/L)
	SPK of 2309537-10A	Nitrate as N	0.104	0.3	mg/L	98				Splt# 2309537-10A (0.104mg/L)
QC2422338-09	SPKD of 2309537-10A	Sulfate	16.2	19.2	mg/L	119	1			Splt# 2309537-10A (16.2mg/L)
	SPKD of 2309537-10A	Nitrate as N	0.104	0.308	mg/L	103	2			Splt# 2309537-10A (0.104mg/L)
QC2422338-10	SPK of 2309401-04A	Sulfate	26.9	29.7	mg/L	110				Splt# 2309401-04A (26.9mg/L)
	SPK of 2309401-04A	Nitrate as N	0.18	0.378	mg/L	99				Splt# 2309401-04A (0.18mg/L)
QC2422338-11	SPKD of 2309401-04A	Sulfate	26.9	30.1	mg/L	127	1			Splt# 2309401-04A (26.9mg/L)
	SPKD of 2309401-04A	Nitrate as N	0.18	0.384	mg/L	102	1			Splt# 2309401-04A (0.18mg/L)
QC2422338-12	CCV	Chloride		2.57	mg/L	103				
	CCV	Sulfate		2.53	mg/L	101				
	CCV	Nitrate as N		0.204	mg/L	102				
QC2422338-13	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

**QC list for Run#: 2073644 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422488-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2422488-02	LCS	Calcium, Ca		2.06	mg/L	103		0.04	1	
	LCS	Magnesium, Mg		2.07	mg/L	104		0.007	0.2	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307447**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/04/2024

**Sampling Team:** Field

**QC list for Run#: 2073644 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	LCS	Potassium, K		1.98	mg/L	99		0.04	0.2	
	LCS	Sodium, Na		2.26	mg/L	113		0.02	1	
QC2422488-03										
	DUP of 2307447-01	Calcium, Ca	103	103	mg/L		0	0.005	1	Splt# 2307447-01 (103mg/L)
	DUP of 2307447-01	Magnesium, Mg	82.2	82.6	mg/L		0	0.021	0.2	Splt# 2307447-01 (82.2mg/L)
	DUP of 2307447-01	Potassium, K	3.88	3.93	mg/L		1	0.06	0.2	Splt# 2307447-01 (3.88mg/L)
	DUP of 2307447-01	Sodium, Na	78.1	78.8	mg/L		0	0.2	1	Splt# 2307447-01 (78.1mg/L)
QC2422488-04										
	SPK of 2307447-01	Calcium, Ca	103	104	mg/L	83		0.04	1	Splt# 2307447-01 (103mg/L)
	SPK of 2307447-01	Magnesium, Mg	82.2	83.8	mg/L	78		0.007	0.2	Splt# 2307447-01 (82.2mg/L)
	SPK of 2307447-01	Potassium, K	3.88	6.02	mg/L	107		0.04	0.2	Splt# 2307447-01 (3.88mg/L)
	SPK of 2307447-01	Sodium, Na	78.1	80.1	mg/L	96		0.02	1	Splt# 2307447-01 (78.1mg/L)
QC2422488-05										
	SPKD of 2307447-01	Calcium, Ca	103	106	mg/L	180	1	0.04	1	Splt# 2307447-01 (103mg/L)
	SPKD of 2307447-01	Magnesium, Mg	82.2	85.4	mg/L	161	1	0.007	0.2	Splt# 2307447-01 (82.2mg/L)
	SPKD of 2307447-01	Potassium, K	3.88	6.15	mg/L	114	2	0.04	0.2	Splt# 2307447-01 (3.88mg/L)
	SPKD of 2307447-01	Sodium, Na	78.1	81.5	mg/L	165	1	0.02	1	Splt# 2307447-01 (78.1mg/L)
QC2422488-06										
	MRL_CK	Calcium, Ca		0.0343	mg/L	85		0.005	0.005	
	MRL_CK	Magnesium, Mg		0.0583	mg/L	117		0.021	0.021	
	MRL_CK	Potassium, K		0.18	mg/L	90		0.06	0.06	
	MRL_CK	Sodium, Na		0.325	mg/L	163		0.2	0.2	
QC2422545-01										
	ICV	Calcium, Ca		10.2	mg/L	102		0.05	1	
	ICV	Magnesium, Mg		9.91	mg/L	99		0.01	0.2	
	ICV	Potassium, K		99.8	mg/L	99		0.03	0.2	
	ICV	Sodium, Na		10.2	mg/L	104		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCConsult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

**Lab Sample#:** 2307448-01 **Sample Source:** WSB\_CAL-31A-145 **External ID:**

**Date Collected:** 01/17/2024 10:41AM **Date Received:** 01/17/2024 01:09PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-31-145

**Test/Analyte**

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBI_IC_ANIONS_A(EPA 300.0 (A))</b>								
Nitrate as N	0.716	mg/L	5	0.17	0.2	01/18/2024	2073922 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SEM_200.7_DW(EPA 200.7)</b>								
Calcium, Ca	69.7	mg/L	1	0.005	1	02/02/2024	2074757 BTRINH	
Magnesium, Mg	60.4	mg/L	1	0.021	0.2	02/02/2024	2074757 BTRINH	
Potassium, K	3.8	mg/L	1	0.06	0.2	02/02/2024	2074757 BTRINH	
Sodium, Na	77.1	mg/L	1	0.2	1	02/02/2024	2074757 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_ALK(SM 2320 B)</b>								
Alkalinity	459	mg/L	1	1.19	6	01/17/2024	2073878 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_CHLORIDE(SM 4500-CL- D)</b>								
Chloride	46.1	mg/L	1		6	01/17/2024	2073879 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_COND(SM 2510 B)</b>								
Specific Conductance @25°C	1060	µmhos/cm	1		1	01/17/2024	2073868 WHORNER	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_PH(SM 4500-H+ B)</b>								
pH	6.78	pH	1			01/17/2024	2073872 WHORNER	H1,H3
Temperature (°C)	18.2	°C	1			01/17/2024	2073872 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>MBP_TDS(SM 2540 C)</b>								
Total Dissolved Solids	599	mg/L	1	13.2	20	01/22/2024	2073945 ABALALIO	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
<b>SUB_524_T22(EPA 524.2)</b>								
1,1,1-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2,2-Tetrachloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1-Dichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1-Dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2,4-Trichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichloropropane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,4-Dichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	

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ELAP Cert #:

# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

Compound	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Benzene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Carbon tetrachloride	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Chlorobenzene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
cis-1,2-dichloroethylene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Ethylbenzene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Methyl t-butyl ether	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Methylene chloride	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Styrene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Tetrachloroethylene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Toluene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Vinyl chloride	<0.3	µg/L	0.3	0.1	0.3	01/22/2024	5904888	SUB
Xylene (total: p, m, o)	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
trans-1,2-Dichloroethylene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
Trichloroethylene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
cis-1,3-dichloropropene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
trans-1,3-Dichloropropene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
m,p-Xylene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB
o-Xylene	<0.5	µg/L	0.5	0.1	0.5	01/22/2024	5904888	SUB

Lab Sample#: 2307448-01A Sample Source: WSB\_CAL-31A-145 External ID:

Date Collected: 01/17/2024 10:41AM Date Received: 01/17/2024 01:09PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-145

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_HARDNESS_T(SM 2340 C)								
Hardness, Total, as CaCO3	414	mg/L	1	0.948	6	01/17/2024	2073885 ALEE	

Lab Sample#: 2307448-01C Sample Source: WSB\_CAL-31A-145 External ID:

Date Collected: 01/17/2024 10:41AM Date Received: 01/17/2024 01:09PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-145

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))								
Sulfate	58.4	mg/L	5	0.5	2.5	01/28/2024	2074421 PWARNER	

Lab Sample#: 2307448-02 Sample Source: WSB\_CAL-31A-280 External ID:

Date Collected: 01/17/2024 10:34AM Date Received: 01/17/2024 01:09PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-280

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))								
Nitrate as N	3.7	mg/L	10	0.34	0.4	01/18/2024	2073922 PWARNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SEM_200.7_DW(EPA 200.7)								
Calcium, Ca	51.9	mg/L	1	0.005	1	02/02/2024	2074757 BTRINH	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUCC+Consult.A

Sampling Team: Field

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Magnesium, Mg	47.5	mg/L	1	0.021	0.2	02/02/2024	2074757 BTRINH	
Potassium, K	2.7	mg/L	1	0.06	0.2	02/02/2024	2074757 BTRINH	
Sodium, Na	73.7	mg/L	1	0.2	1	02/02/2024	2074757 BTRINH	

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_ALK(SM 2320 B) Alkalinity	328	mg/L	1	1.19	6	01/17/2024	2073878 ALEE	

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D) Chloride	45.7	mg/L	1		6	01/17/2024	2073879 ALEE	

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B) Specific Conductance @25°C	917	µmhos/cm	1		1	01/17/2024	2073868 WHORNER	>MCL

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_PH(SM 4500-H+ B) pH	6.97	pH	1			01/17/2024	2073872 WHORNER	H1,H3
Temperature (°C)	17.9	°C	1			01/17/2024	2073872 WHORNER	

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C) Total Dissolved Solids	531	mg/L	1	13.2	20	01/22/2024	2073945 ABALALIO	>MCL

Parameter	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SUB_524_T22(EPA 524.2)								
1,1,1-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2,2-Tetrachloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1-Dichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1-Dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2,4-Trichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichloropropane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,4-Dichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Benzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Carbon tetrachloride	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Chlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
cis-1,2-dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Ethylbenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Methyl t-butyl ether	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Methylene chloride	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Styrene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	

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**ELAP Cert #:**  
**SUB\_LAB** 2813  
**SEWPCP** 1721  
**MILLBRAE** 1449

# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCC+Consult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

Compound	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Tetrachloroethylene	170	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	E
Toluene	<0.5	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	
Vinyl chloride	<0.3	µg/L	0.3	0.3	0.3	01/22/2024	5904888 SUB	
Xylene (total: p, m, o)	<0.5	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	
trans-1,2-Dichloroethylene	<0.5	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	
Trichloroethylene	2.8	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	
cis-1,3-dichloropropene	<0.5	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	
trans-1,3-Dichloropropene	<0.5	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	
m,p-Xylene	<0.5	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	
o-Xylene	<0.5	µg/L	0.5	0.5	0.5	01/22/2024	5904888 SUB	

**Lab Sample#: 2307448-02A**    **Sample Source:** WSB\_CAL-31A-280    **External ID:**

**Date Collected:** 01/17/2024 10:34AM    **Date Received:** 01/17/2024 01:09PM    **Sample Matrix:** Aqueous    **Location Desc:** GSR\_CAL\_CUP-31-280

Test/Analyte

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	318	mg/L	1	0.948	6	01/17/2024	2073885 ALEE	

**Lab Sample#: 2307448-02C**    **Sample Source:** WSB\_CAL-31A-280    **External ID:**

**Date Collected:** 01/17/2024 10:34AM    **Date Received:** 01/17/2024 01:09PM    **Sample Matrix:** Aqueous    **Location Desc:** GSR\_CAL\_CUP-31-280

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	76.6	mg/L	10	1	5	01/28/2024	2074421 PWARNER	

**Lab Sample#: 2307448-03**    **Sample Source:** WSB\_CAL-31A-480    **External ID:**

**Date Collected:** 01/17/2024 09:39AM    **Date Received:** 01/17/2024 01:09PM    **Sample Matrix:** Aqueous    **Location Desc:** GSR\_CAL\_CUP-31-480

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	<0.04	mg/L	1	0.034	0.04	01/18/2024	2073922 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	31.8	mg/L	1	0.005	1	02/02/2024	2074757 BTRINH	
Magnesium, Mg	41.6	mg/L	1	0.021	0.2	02/02/2024	2074757 BTRINH	
Potassium, K	11.6	mg/L	1	0.06	0.2	02/02/2024	2074757 BTRINH	
Sodium, Na	56.5	mg/L	1	0.2	1	02/02/2024	2074757 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	354	mg/L	1	1.19	6	01/17/2024	2073878 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	36.8	mg/L	1		6	01/17/2024	2073879 ALEE	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

<u>MBP_COND(SM 2510 B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Specific Conductance @25°C	773	µmhos/cm	1		1	01/17/2024	2073868 WHORNER	
<u>MBP_PH(SM 4500-H+ B)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
pH	7.4	pH	1			01/17/2024	2073872 WHORNER	H1,H3
Temperature (°C)	17.8	°C	1			01/17/2024	2073872 WHORNER	
<u>MBP_TDS(SM 2540 C)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
Total Dissolved Solids	409	mg/L	1	13.2	20	01/22/2024	2073945 ABALALIO	
<u>SUB_524_T22(EPA 524.2)</u>	<u>Result</u>	<u>Unit</u>	<u>Dilution</u>	<u>MDL</u>	<u>MRL</u>	<u>Analysis Date</u>	<u>Run#/Analyst</u>	<u>Flag/Comments</u>
1,1,1-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2,2-Tetrachloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1-Dichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1-Dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2,4-Trichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichloropropane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,4-Dichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Benzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Carbon tetrachloride	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Chlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
cis-1,2-dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Ethylbenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Methyl t-butyl ether	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Methylene chloride	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Styrene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Tetrachloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Toluene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Trichlorofluoromethane (F-11)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Vinyl chloride	<0.3	µg/L			0.3	01/22/2024	5904888 SUB	
Xylene (total: p, m, o)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
trans-1,2-Dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Trichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
cis-1,3-dichloropropene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
trans-1,3-Dichloropropene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
m,p-Xylene	<0.5	µg/L		0.5		01/22/2024	5904888 SUB	
o-Xylene	<0.5	µg/L		0.5		01/22/2024	5904888 SUB	

**Lab Sample#:** 2307448-03A **Sample Source:** WSB\_CAL-31A-480 **External ID:**

**Date Collected:** 01/17/2024 09:39AM **Date Received:** 01/17/2024 01:09PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-31-480

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_HARDNESS_T(SM 2340 C)								
Hardness, Total, as CaCO3	245	mg/L	1	0.948	6	01/17/2024	2073885 ALEE	

**Lab Sample#:** 2307448-03C **Sample Source:** WSB\_CAL-31A-480 **External ID:**

**Date Collected:** 01/17/2024 09:39AM **Date Received:** 01/17/2024 01:09PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-31-480

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A))								
Sulfate	<0.5	mg/L	1	0.1	0.5	01/28/2024	2074421 PWARNER	

**Lab Sample#:** 2307448-04 **Sample Source:** WSB\_CAL-31A-595 **External ID:**

**Date Collected:** 01/17/2024 09:35AM **Date Received:** 01/17/2024 01:09PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-31-595

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SEM_200.7_DW(EPA 200.7)								
Calcium, Ca	109	mg/L	1	0.005	1	02/02/2024	2074757 BTRINH	
Magnesium, Mg	70.4	mg/L	1	0.021	0.2	02/02/2024	2074757 BTRINH	
Potassium, K	4.6	mg/L	1	0.06	0.2	02/02/2024	2074757 BTRINH	
Sodium, Na	117	mg/L	1	0.2	1	02/02/2024	2074757 BTRINH	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_ALK(SM 2320 B)								
Alkalinity	206	mg/L	1	1.19	6	01/17/2024	2073878 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_CHLORIDE(SM 4500-CL- D)								
Chloride	209	mg/L	1		6	01/17/2024	2073879 ALEE	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_COND(SM 2510 B)								
Specific Conductance @25°C	1590	µmhos/cm	1		1	01/17/2024	2073868 WHORNER	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_PH(SM 4500-H+ B)								
pH	7.04	pH	1			01/17/2024	2073872 WHORNER	H1,H3
Temperature (°C)	17.9	°C	1			01/17/2024	2073872 WHORNER	

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_TDS(SM 2540 C)								
Total Dissolved Solids	959	mg/L	1	13.2	20	01/22/2024	2073945 ABALALIO	>MCL

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SUB_524_T22(EPA 524.2)								

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

Compound Name	Concentration	Unit	Volume	Date	Lab ID	Result
1,1,1-Trichloroethane	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,1,2-Trichloroethane	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,1-Dichloroethane	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,1-Dichloroethylene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,2,4-Trichlorobenzene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,2-Dichlorobenzene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,2-Dichloroethane	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,2-Dichloropropane	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
1,4-Dichlorobenzene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Benzene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Carbon tetrachloride	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Chlorobenzene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
cis-1,2-dichloroethylene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Ethylbenzene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Methyl t-butyl ether	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Methylene chloride	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Styrene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Tetrachloroethylene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Toluene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Vinyl chloride	<0.3	µg/L	0.3	01/22/2024	5904888	SUB
Xylene (total: p, m, o)	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
trans-1,2-Dichloroethylene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
Trichloroethylene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
cis-1,3-dichloropropene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
trans-1,3-Dichloropropene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
m,p-Xylene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB
o-Xylene	<0.5	µg/L	0.5	01/22/2024	5904888	SUB

Lab Sample#: 2307448-04A Sample Source: WSB\_CAL-31A-595 External ID:   
 Date Collected: 01/17/2024 09:35AM Date Received: 01/17/2024 01:09PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-595

**Test/Analyte**

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBI_IC_ANIONS_A(EPA 300.0 (A)) Nitrate as N	<0.04	mg/L	1	0.034	0.04	01/18/2024	2073922 PWARNER	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUCC+Consult.A

Sampling Team: Field

Lab Sample#: 2307448-04C Sample Source: WSB\_CAL-31A-595 External ID:

Date Collected: 01/17/2024 09:35AM Date Received: 01/17/2024 01:09PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-595

Test/Analyte

MBP_HARDNESS_T(SM 2340 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Hardness, Total, as CaCO3	546	mg/L	1	0.948	6	01/18/2024	2073954 ALEE	

Lab Sample#: 2307448-04F Sample Source: WSB\_CAL-31A-595 External ID:

Date Collected: 01/17/2024 09:35AM Date Received: 01/17/2024 01:09PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-595

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	292	mg/L	20	2	10	01/28/2024	2074421 PWARNER	>MCL

Lab Sample#: 2307448-05 Sample Source: WSB\_CAL\_DUP External ID:

Date Collected: 01/17/2024 10:49AM Date Received: 01/17/2024 01:09PM Sample Matrix: Aqueous Location Desc: GSR\_CAL\_CUP-31-280

Test/Analyte

MBI_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Nitrate as N	3.57	mg/L	10	0.34	0.4	01/18/2024	2073922 PWARNER	

SEM_200.7_DW(EPA 200.7)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Calcium, Ca	52.8	mg/L	1	0.005	1	02/02/2024	2074757 BTRINH	
Magnesium, Mg	48.1	mg/L	1	0.021	0.2	02/02/2024	2074757 BTRINH	
Potassium, K	2.74	mg/L	1	0.06	0.2	02/02/2024	2074757 BTRINH	
Sodium, Na	74.8	mg/L	1	0.2	1	02/02/2024	2074757 BTRINH	

MBP_ALK(SM 2320 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Alkalinity	330	mg/L	1	1.19	6	01/17/2024	2073878 ALEE	

MBP_CHLORIDE(SM 4500-CL- D)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Chloride	46.7	mg/L	1		6	01/17/2024	2073879 ALEE	

MBP_COND(SM 2510 B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Specific Conductance @25°C	919	µmhos/cm	1		1	01/17/2024	2073868 WHORNER	>MCL

MBP_PH(SM 4500-H+ B)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
pH	6.95	pH	1			01/17/2024	2073872 WHORNER	H1,H3
Temperature (°C)	18.6	°C	1			01/17/2024	2073872 WHORNER	

MBP_TDS(SM 2540 C)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Total Dissolved Solids	527	mg/L	1	13.2	20	01/22/2024	2073945 ABALALIO	>MCL

SUB_524_T22(EPA 524.2)	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
1,1,1-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCC+Consult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

Chemical Name	Concentration	Unit	MDL	MRL	Analysis Date	Run#	Analyst	Flag/Comments
1,1,2,2-Tetrachloroethane	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,1,2-Trichloroethane	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,1-Dichloroethane	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,1-Dichloroethylene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,2,4-Trichlorobenzene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,2-Dichlorobenzene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,2-Dichloroethane	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,2-Dichloropropane	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
1,4-Dichlorobenzene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Benzene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Carbon tetrachloride	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Chlorobenzene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
cis-1,2-dichloroethylene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Ethylbenzene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Methyl t-butyl ether	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Methylene chloride	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Styrene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Tetrachloroethylene	170	µg/L	0.5	0.5	01/22/2024	5904888	SUB	E
Toluene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Trichlorofluoromethane (F-11)	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Vinyl chloride	<0.3	µg/L	0.3	0.3	01/22/2024	5904888	SUB	
Xylene (total: p, m, o)	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
trans-1,2-Dichloroethylene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
Trichloroethylene	2.7	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
cis-1,3-dichloropropene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
trans-1,3-Dichloropropene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
m,p-Xylene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	
o-Xylene	<0.5	µg/L	0.5	0.5	01/22/2024	5904888	SUB	

**Lab Sample#:** 2307448-05A **Sample Source:** WSB\_CAL\_DUP **External ID:**

**Date Collected:** 01/17/2024 10:49AM **Date Received:** 01/17/2024 01:09PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-31-280

Test/Analyte

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
MBP_HARDNESS_T(SM 2340 C)								
Hardness, Total, as CaCO3	324	mg/L	1	0.948	6	01/17/2024	2073885 ALEE	

**Lab Sample#:** 2307448-05C **Sample Source:** WSB\_CAL\_DUP **External ID:**

**Date Collected:** 01/17/2024 10:49AM **Date Received:** 01/17/2024 01:09PM **Sample Matrix:** Aqueous **Location Desc:** GSR\_CAL\_CUP-31-280

Test/Analyte

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

MBL_IC_ANIONS_A(EPA 300.0 (A))	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
Sulfate	81.7	mg/L	10	1	5	01/28/2024	2074421 PWARNER	

Lab Sample#: 2307448-06 Sample Source: QC\_TRIP\_BLANK External ID:

Date Collected: 01/17/2024 09:35AM Date Received: 01/17/2024 01:09PM Sample Matrix: Aqueous Location Desc: TRIP\_BLANK\_GSR\_CAL\_CUP-31

Test/Analyte	Result	Unit	Dilution	MDL	MRL	Analysis Date	Run#/Analyst	Flag/Comments
SUB_524_T22(EPA 524.2)								
1,1,1-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2,2-Tetrachloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1,2-Trichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1-Dichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,1-Dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2,4-Trichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichloroethane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,2-Dichloropropane	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,3-Dichloropropene Total (cis+ trans)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
1,4-Dichlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Benzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Carbon tetrachloride	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Chlorobenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
cis-1,2-dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Ethylbenzene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Methyl t-butyl ether	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Methylene chloride	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Styrene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Tetrachloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Toluene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Trichlorofluoromethane (F-11)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Vinyl chloride	<0.3	µg/L			0.3	01/22/2024	5904888 SUB	
Xylene (total: p, m, o)	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
trans-1,2-Dichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
Trichloroethylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
cis-1,3-dichloropropene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
trans-1,3-Dichloropropene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
m,p-Xylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	
o-Xylene	<0.5	µg/L			0.5	01/22/2024	5904888 SUB	

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ELAP Cert #:

SUB\_LAB 2813

SEWPCP 1721

MILLBRAE 1449

# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUC+Consult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

**QC list for Run#: 2073868 and Test: MBP\_COND (SM 2510 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422718-02	ICV	Specific Conductance @25°C		147	µmhos/cm	100				
QC2422718-03	BLK	Specific Conductance @25°C		<1	µmhos/cm				1	
QC2422718-04	MRL_CK	Specific Conductance @25°C		9.76	µmhos/cm	97				
QC2422718-05	DUP of 2307448-01	Specific Conductance @25°C	1060	1060	µmhos/cm		0		1	Splt# 2307448-01 (1060µmhos/cm)
QC2422718-06	CCV	Specific Conductance @25°C		102	µmhos/cm	102				

**QC list for Run#: 2073872 and Test: MBP\_PH (SM 4500-H+ B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422721-04	ICV	pH		9.02	pH	99				
	ICV	Temperature (°C)		19.8	°C					
QC2422721-05	DUP of 2307448-01	pH	6.78	6.79	pH		0			Splt# 2307448-01 (6.78pH) H1,H3
	DUP of 2307448-01	Temperature (°C)	18.2	18.2	°C					Splt# 2307448-01 (18.2°C)
QC2422721-06	CCV	pH		9.02	pH	99				
	CCV	Temperature (°C)		19.6	°C					

**QC list for Run#: 2073878 and Test: MBP\_ALK (SM 2320 B)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422726-01	BLK	Alkalinity		<3	mg/L			0.593	3	
QC2422726-02	MRL_CK	Alkalinity		3.26	mg/L	109				
QC2422726-03	SPK of 2410593-01	Alkalinity	57.4	96.2	mg/L	97			3	Splt# 2410593-01 (57.4mg/L)
QC2422726-04	SPKD of 2410593-01	Alkalinity	57.4	96.8	mg/L	98	0		3	Splt# 2410593-01 (57.4mg/L)
QC2422726-05	DUP of 2307448-05	Alkalinity	330	325	mg/L		1	1.19	6	Splt# 2307448-05 (330mg/L)
QC2422726-06	LCS	Alkalinity		39.6	mg/L	99			3	

**QC list for Run#: 2073879 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422727-01	BLK	Chloride		<3	mg/L			1.16	3	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

## Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUCC+Consult.A

Sampling Team: Field

**QC list for Run#: 2073879 and Test: MBP\_CHLORIDE (SM 4500-CL- D)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422727-02	MRL_CK	Chloride		2.96	mg/L	98				
QC2422727-03	SPK of 2410593-01	Chloride	17	56.5	mg/L	98			3	Splt# 2410593-01 (17mg/L)
QC2422727-04	SPKD of 2410593-01	Chloride	17	56.1	mg/L	97	0		3	Splt# 2410593-01 (17mg/L)
QC2422727-05	DUP of 2307448-05	Chloride	46.7	45.9	mg/L		1		6	Splt# 2307448-05 (46.7mg/L)
QC2422727-06	LCS	Chloride		39.4	mg/L	98			3	

**QC list for Run#: 2073880 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422728-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2422728-02	MRL_CK	Hardness, Total, as CaCO3		2.39	mg/L	79				
QC2422728-04	LCS	Hardness, Total, as CaCO3		38.6	mg/L	96			3	
QC2422728-05	DUP of 2307448-05	Hardness, Total, as CaCO3	320	320	mg/L		0	0.948	6	Splt# 2307448-05 (320mg/L)

**QC list for Run#: 2073885 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422731-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2422731-02	MRL_CK	Hardness, Total, as CaCO3		2.36	mg/L	78				
QC2422731-03	DUP of 2307448-05A	Hardness, Total, as CaCO3	324	321	mg/L		0	0.948	6	Splt# 2307448-05A (324mg/L)
QC2422731-04	LCS	Hardness, Total, as CaCO3		38.5	mg/L	96			3	

**QC list for Run#: 2073922 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422755-01	MRL_CK	Chloride		0.478	mg/L	95				
	MRL_CK	Sulfate		0.504	mg/L	101				
	MRL_CK	Nitrate as N		0.041	mg/L	103				
QC2422755-02	CCV	Chloride		2.46	mg/L	98				
	CCV	Sulfate		2.44	mg/L	97				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCC+Consult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

**QC list for Run#: 2073922 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	CCV	Nitrate as N		0.2	mg/L	100				
QC2422755-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422755-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422755-05	LCS	Chloride		0.497	mg/L	99				
	LCS	Sulfate		1.54	mg/L	103				
	LCS	Nitrate as N		0.264	mg/L	106				
QC2422755-06	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422755-07	CCV	Chloride		20.3	mg/L	101				
	CCV	Sulfate		22.1	mg/L	111				
	CCV	Nitrate as N		1.73	mg/L	109				
QC2422755-08	SPKD of 2309823-03A	Sulfate	16.6	19.3	mg/L	110	1			Splt# 2309823-03A (16.6mg/L)
	SPKD of 2309823-03A	Nitrate as N	0.0537	0.285	mg/L	116	3			Splt# 2309823-03A (0.0537mg/L)
QC2422755-09	SPK of 2309823-03A	Sulfate	16.6	19.5	mg/L	118				Splt# 2309823-03A (16.6mg/L)
	SPK of 2309823-03A	Nitrate as N	0.0537	0.277	mg/L	112				Splt# 2309823-03A (0.0537mg/L)
QC2422755-10	CCV	Chloride		2.49	mg/L	99				
	CCV	Sulfate		2.52	mg/L	101				
	CCV	Nitrate as N		0.202	mg/L	101				
QC2422755-11	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422755-12	SPK of 2309860-01	Sulfate	20.3	23.2	mg/L	117				Splt# 2309860-01 (20.3mg/L)
	SPK of 2309860-01	Nitrate as N	0.119	0.331	mg/L	107				Splt# 2309860-01 (0.119mg/L)
QC2422755-13										

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

## Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUC+Consult.A

Sampling Team: Field

**QC list for Run#: 2073922 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
SPKD of 2309860-01		Sulfate	20.3	23.2	mg/L	115	0			Splt# 2309860-01 (20.3mg/L)
SPKD of 2309860-01		Nitrate as N	0.119	0.358	mg/L	120	7			Splt# 2309860-01 (0.119mg/L)

**QC list for Run#: 2073945 and Test: MBP\_TDS (SM 2540 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422770-01	BLK	Total Dissolved Solids		<20	mg/L			13.2	20	
QC2422770-02	DUP of 2410580-01	Total Dissolved Solids	107	111	mg/L		3	13.2	20	Splt# 2410580-01 (107mg/L)
QC2422770-03	LCS	Total Dissolved Solids		94	mg/L	98		13.2	20	
QC2422770-04	DUP of 2410580-03	Total Dissolved Solids	121	117	mg/L		3	13.2	20	Splt# 2410580-03 (121mg/L)

**QC list for Run#: 2073954 and Test: MBP\_HARDNESS\_T (SM 2340 C)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422776-01	BLK	Hardness, Total, as CaCO3		<3	mg/L			0.474	3	
QC2422776-02	MRL_CK	Hardness, Total, as CaCO3		2.37	mg/L	79				
QC2422776-03	DUP of 2309870-02	Hardness, Total, as CaCO3	59	59	mg/L		0	0.474	3	Splt# 2309870-02 (59mg/L)
QC2422776-04	LCS	Hardness, Total, as CaCO3		39	mg/L	97				

**QC list for Run#: 2074151 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422922-01	MRL_CK	Chloride		0.547	mg/L	109				
	MRL_CK	Sulfate		0.517	mg/L	103				
	MRL_CK	Nitrate as N		0.0404	mg/L	101				
QC2422922-02	CCV	Chloride		2.5	mg/L	99				
	CCV	Sulfate		2.48	mg/L	99				
	CCV	Nitrate as N		0.202	mg/L	102				
QC2422922-03	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422922-04	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUCC+Consult.A

Sampling Team: Field

QC list for Run#: 2074151 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422922-05	LCS	Chloride		0.518	mg/L	104				
	LCS	Sulfate		1.44	mg/L	96				
	LCS	Nitrate as N		0.238	mg/L	95				
QC2422922-06	CCV	Chloride		21.5	mg/L	108				
	CCV	Sulfate		22.8	mg/L	114				
	CCV	Nitrate as N		1.74	mg/L	109				
QC2422922-07	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422922-08	SPK of 2410744-02	Sulfate	18.8	21.6	mg/L	113				Splt# 2410744-02 (18.8mg/L)
	SPK of 2410744-02	Nitrate as N	0.15	0.362	mg/L	107				Splt# 2410744-02 (0.15mg/L)
QC2422922-09	SPKD of 2410744-02	Sulfate	18.8	21.8	mg/L	119	0			Splt# 2410744-02 (18.8mg/L)
	SPKD of 2410744-02	Nitrate as N	0.15	0.361	mg/L	106	0			Splt# 2410744-02 (0.15mg/L)
QC2422922-10	SPK of 2310074-02	Sulfate	48.4	46.3	mg/L	0				Splt# 2310074-02 (48.4mg/L) A1,M1
	SPK of 2310074-02	Nitrate as N	0.297	0.473	mg/L	88				Splt# 2310074-02 (0.297mg/L)
QC2422922-11	SPKD of 2310074-02	Sulfate	48.4	49.7	mg/L	52	8			Splt# 2310074-02 (48.4mg/L) A1,M1
	SPKD of 2310074-02	Nitrate as N	0.297	0.51	mg/L	107	6			Splt# 2310074-02 (0.297mg/L)
QC2422922-12	CCV	Chloride		21.5	mg/L	107				
	CCV	Sulfate		22.6	mg/L	113				
	CCV	Nitrate as N		1.74	mg/L	109				
QC2422922-13	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	
QC2422922-14	SPK of 2310074-02	Sulfate	48.4	45.6	mg/L	0				Splt# 2310074-02 (48.4mg/L) A1,M1
	SPK of 2310074-02	Nitrate as N	0.297	0.476	mg/L	89				Splt# 2310074-02 (0.297mg/L)
QC2422922-15	CCV	Chloride		2.4	mg/L	96				
	CCV	Sulfate		2.52	mg/L	101				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

## Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUCC+Consult.A

Sampling Team: Field

QC list for Run#: 2074151 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2422922-16	CCV	Nitrate as N		0.202	mg/L	101				
	CCV	Chloride		21.2	mg/L	106				
	CCV	Sulfate		22.4	mg/L	112				
QC2422922-17	CCV	Nitrate as N		1.72	mg/L	108				
	BLK	Chloride		<1	mg/L		0.2	1		
	BLK	Sulfate		<0.5	mg/L		0.1	0.5		
QC2422922-18	BLK	Nitrate as N		<0.04	mg/L		0.034	0.04		
	BLK	Chloride		<1	mg/L		0.2	1		
	BLK	Sulfate		<0.5	mg/L		0.1	0.5		
	BLK	Nitrate as N		<0.04	mg/L		0.034	0.04		

QC list for Run#: 2074421 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2423105-01	MRL_CK	Chloride		0.512	mg/L	102				
	MRL_CK	Sulfate		0.48	mg/L	96				
	MRL_CK	Nitrate as N		0.0378	mg/L	94				
QC2423105-02	CCV	Chloride		2.42	mg/L	96				
	CCV	Sulfate		2.47	mg/L	98				
	CCV	Nitrate as N		0.196	mg/L	98				
QC2423105-03	BLK	Chloride		<1	mg/L		0.2	1		
	BLK	Sulfate		<0.5	mg/L		0.1	0.5		
	BLK	Nitrate as N		<0.04	mg/L		0.034	0.04		
QC2423105-04	BLK	Sulfate		<0.5	mg/L		0.1	0.5		
QC2423105-05	LCS	Chloride		0.539	mg/L	108				
	LCS	Sulfate		1.43	mg/L	95				
	LCS	Nitrate as N		0.23	mg/L	92				
QC2423105-06	BLK	Chloride		<1	mg/L		0.2	1		
	BLK	Sulfate		<0.5	mg/L		0.1	0.5		
	BLK	Nitrate as N		<0.04	mg/L		0.034	0.04		
QC2423105-08	CCV	Chloride		2.47	mg/L	99				
	CCV	Sulfate		2.51	mg/L	100				

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB LAB 2813

Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Scheduled Sample Date: 01/17/2024

Routine: WSB\_SFPUCC+Consult.A

Sampling Team: Field

QC list for Run#: 2074421 and Test: MBI\_IC\_ANIONS\_A (EPA 300.0 (A))

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
	CCV	Nitrate as N		0.2	mg/L	100				
QC2423105-10	SPKD of 2310069-07	Sulfate	47.8	50	mg/L	89	0			Splt# 2310069-07 (47.8mg/L)
QC2423105-11	SPKD of 2410474-06	Sulfate	18.9	22.5	mg/L	143	7			Splt# 2410474-06 (18.9mg/L)
QC2423105-12	SPK of 2310069-07	Sulfate	47.8	50.5	mg/L	108				Splt# 2310069-07 (47.8mg/L)
QC2423105-13	SPK of 2410474-06	Sulfate	18.9	20.8	mg/L	75				Splt# 2410474-06 (18.9mg/L)
QC2423105-14	CCV	Chloride		21	mg/L	105				
	CCV	Sulfate		21.9	mg/L	110				
	CCV	Nitrate as N		1.68	mg/L	105				
QC2423105-15	BLK	Chloride		<1	mg/L			0.2	1	
	BLK	Sulfate		<0.5	mg/L			0.1	0.5	
	BLK	Nitrate as N		<0.04	mg/L			0.034	0.04	

QC list for Run#: 2074757 and Test: SEM\_200.7\_DW (EPA 200.7)

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
QC2423303-01	BLK	Calcium, Ca		<1	mg/L			0.005	1	
	BLK	Magnesium, Mg		<0.2	mg/L			0.021	0.2	
	BLK	Potassium, K		<0.2	mg/L			0.06	0.2	
	BLK	Sodium, Na		<1	mg/L			0.2	1	
QC2423303-02	LCS	Calcium, Ca		1.81	mg/L	90		0.04	1	
	LCS	Magnesium, Mg		1.8	mg/L	90		0.007	0.2	
	LCS	Potassium, K		2.03	mg/L	102		0.04	0.2	
	LCS	Sodium, Na		1.94	mg/L	96		0.02	1	
QC2423303-03	DUP of 2307448-01	Calcium, Ca	69.7	71.3	mg/L		2	0.005	1	Splt# 2307448-01 (69.7mg/L)
	DUP of 2307448-01	Magnesium, Mg	60.4	61.7	mg/L		2	0.021	0.2	Splt# 2307448-01 (60.4mg/L)
	DUP of 2307448-01	Potassium, K	3.8	3.89	mg/L		2	0.06	0.2	Splt# 2307448-01 (3.8mg/L)
	DUP of 2307448-01	Sodium, Na	77.1	78.7	mg/L		2	0.2	1	Splt# 2307448-01 (77.1mg/L)
QC2423303-04	SPK of 2307448-01	Calcium, Ca	69.7	71.6	mg/L	92		0.04	1	Splt# 2307448-01 (69.7mg/L)
	SPK of 2307448-01	Magnesium, Mg	60.4	62.2	mg/L	89		0.007	0.2	Splt# 2307448-01 (60.4mg/L)
	SPK of 2307448-01	Potassium, K	3.8	5.8	mg/L	100		0.04	0.2	Splt# 2307448-01 (3.8mg/L)
	SPK of 2307448-01	Sodium, Na	77.1	79	mg/L	94		0.02	1	Splt# 2307448-01 (77.1mg/L)
QC2423303-05										

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**ELAP Cert #:**  
**SUB\_LAB**            **2813**  
**SEWPCP**            **1721**  
**MILLBRAE**        **1449**

# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCConsult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

**QC list for Run#: 2074757 and Test: SEM\_200.7\_DW (EPA 200.7)**

Sample #	Name	Analyte	Result		Units	% Rec	RPD	MDL	MRL	Flag/Comments
			Parent	Current						
SPKD of 2307448-01		Calcium, Ca	69.7	74.1	mg/L	217	3	0.04	1	Splt# 2307448-01 (69.7mg/L)
SPKD of 2307448-01		Magnesium, Mg	60.4	64.4	mg/L	197	3	0.007	0.2	Splt# 2307448-01 (60.4mg/L)
SPKD of 2307448-01		Potassium, K	3.8	6.04	mg/L	112	4	0.04	0.2	Splt# 2307448-01 (3.8mg/L)
SPKD of 2307448-01		Sodium, Na	77.1	81.5	mg/L	218	3	0.02	1	Splt# 2307448-01 (77.1mg/L)
QC2423303-06	MRL_CK	Calcium, Ca		<0.005	mg/L	N/A		0.005	0.005	
	MRL_CK	Magnesium, Mg		<0.021	mg/L	N/A		0.021	0.021	
	MRL_CK	Potassium, K		0.18	mg/L	90		0.06	0.06	
	MRL_CK	Sodium, Na		<0.2	mg/L	N/A		0.2	0.2	
QC2423356-01	ICV	Calcium, Ca		10	mg/L	102		0.05	1	
	ICV	Magnesium, Mg		9.76	mg/L	98		0.01	0.2	
	ICV	Potassium, K		98	mg/L	99		0.03	0.2	
	ICV	Sodium, Na		10	mg/L	100		0.002	1	

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

SUB\_LAB 2813

Water Quality Laboratory

SEWPCP 1721

MILLBRAE 1449

**FOLDER ID: 2307448**

Client: SF\_PUC\_PLANNING

Project: WESTSIDE\_BASIN

Routine: WSB\_SFPUC+Consult.A

Scheduled Sample Date: 01/17/2024

Sampling Team: Field

**Qualifiers Legend:**

**Flag**

Code	Description
A1	See case narrative, notes, or comments.
B1	Target analyte detected in associated Method Blank.
B2	Target analyte detected in Travel/Trip/Equipment Blank.
E1	Estimated value. Exceeds calibration range. Reanalysis not possible due to insufficient sample vol.
E2	Estimated value. Exceeds calibration range. Reanalysis not performed due to hold time requirement.
E3	EMPC (estimated maximum possible concentration)
H1	Sample analysis performed past the method specified hold time per client request.
H2	Initial analysis within hold time. Reanalysis for the required dilution was past hold time.
H3	Sample was received past hold time.
H4	Confirmatory analysis was past hold time.
H5	Confirmatory analysis was past hold time. Original result not confirmed.
H6	Filtration not completed within method specific time; Filtered in Lab. Filtration exceeded hold time.
I1	I.S. recovery or R.T. outside method limits. Interference confirmed by reanalysis/dilution. GC/GCMS
L1	LCS and/or LCSD is outside acceptance limits. Results might be low biased.
L2	LCS and/or LCSD is outside acceptance limits. Results might be high biased.
M	Matrix interference suspected.
M1	MS/MSD % rec. outside acceptable limits. Batch acceptance by LCS.
M2	MS/MSD RPD outside acceptable limits. Batch acceptance by LCS.
M3	Sample diluted due to matrix. MS recovery not useful. Batch acceptance by LCS.
NA	Not Analyzed
NC	Not for Compliance
NC1	Method specification(s) not met
NC2	Test/analyte is not accredited or accreditation is not available.
NP	Not provided
NS	Not sampled (or no sample received)
P1	Sample received and analyzed without chemical preservation.
P2	Sample received without chemical preservation but preserved by the laboratory.
P3	Sample received with inadequate chemical preservation, but preserved by the laboratory
P4	Sample was received outside recommended temperature range.
P5	Sample received in inappropriate sample container.
P6	Insufficient sample received to meet method requirements.
P7	Sample received with head space.
Q	%D (difference) between the 1st and 2nd column/detector is >50%. Lower value reported.
Q1	Minimum Reporting Limit (MRL) verification failed high, but target analyte was not detected.
R	Data rejected
S	Dilution due to sample matrix effects, the surrogate recovery was outside the acceptance limits.
S1	Sample diluted due to matrix. Surrogate spike recovery provides no useful information.
S2	Surrogate recovery below acceptable limits. Results might be low biased.
S3	Surrogate recovery exceeds acceptable limits. Results might be high biased.
TIC	Tentatively Identified Compound
U	Analyzed but not detected

**RQualifier**

Code	Description
+	Positive
-	Negative

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# SAN FRANCISCO PUBLIC UTILITIES COMMISSION

## Water Quality Laboratory

**FOLDER ID: 2307448**

**Client:** SF\_PUC\_PLANNING

**Project:** WESTSIDE\_BASIN

**Routine:** WSB\_SFPUCConsult.A

**Scheduled Sample Date:** 01/17/2024

**Sampling Team:** Field

<	Less Than
=	Equals
>	Greater Than
A	Bacti result, absent
DNQ	Detected, but Not Quantified
E	Estimated value
I	Bacti result, Inconclusive value. Analyzed, but result is undetermined
ND	Non-detected
P	Bacti result, present

**QC Type**

Code	Description
BLK	Method Blank Sample
CAL	Calibration Sample
CCV	Continuing Calibration Verification Sample
DUP	Duplicate Sample
ICV	Initial Calibration Verification Sample
LCS	Laboratory Control Standard Sample
LCSD	Laboratory Control Standard Duplicate Sample
MRL_CK	Method Reporting Level Check Sample
SPK	Matrix Spike Sample
SPKD	Matrix Spike Duplicate Sample

Please email [labfeedback@sfwater.org](mailto:labfeedback@sfwater.org) to report any comments, complaints, compliments or suggestions. Please provide detailed descriptions and attach documentation as necessary.

**Reported By:** Megan Tran  
Technical Manager

**Reported On:** 5-Mar-2024

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**Bay Side Groundwater Monitoring Laboratory Analytical Results**

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*alpha*

Alpha Analytical Laboratories, Inc.

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Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

13 April 2023

San Bruno, City of - DW

Attn: Steve Salazar

225 Huntington Avenue

San Bruno, CA 94066

RE: SF Intrusion Project

Work Order: 23C3292

Enclosed are the results of analyses for samples received by the laboratory on 03/21/23 09:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbie C. Phillips

Project Manager



Alpha Analytical Laboratories, Inc.

email: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)

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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
04/13/23 12:01

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728  
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922  
North Bay: 737 Southpoint Blvd Unit D | Petaluma, CA 94954 | 707-769-3128 | ELAP# 2303  
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055  
Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SFO-D	23C3292-01	Water	03/20/23 10:00	03/21/23 09:30
SFO-S	23C3292-02	Water	03/20/23 10:05	03/21/23 09:30
Burlingame - D	23C3292-03	Water	03/20/23 08:05	03/21/23 09:30
Burlingame - M	23C3292-04	Water	03/20/23 08:10	03/21/23 09:30
Burlingame - S	23C3292-05	Water	03/20/23 08:15	03/21/23 09:30



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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
04/13/23 12:01

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
<b>SFO-D (23C3292-01)</b>										
	<b>Sample Type: Water</b>				<b>Sampled: 03/20/23 10:00</b>					
<b>Metals by EPA 200 Series Methods</b>										
Boron	ND	mg/L	0.20	1	AC36068	03/31/23 15:55	04/03/23 18:59	1551	EPA 200.7	P-02
Calcium	140	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 18:59	1551	EPA 200.7	
Magnesium	140	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 18:59	1551	EPA 200.7	
Potassium	13	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 18:59	1551	EPA 200.7	
Sodium	810	mg/L	1.0	1	AC36068	03/31/23 15:55	04/04/23 15:15	1551	EPA 200.7	
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>										
Bicarbonate	340	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
pH	7.54	pH Units	1.68	1	AC35421	03/21/23 16:00	03/21/23 17:00	1551	SM4500-H+ B	T-14
Specific Conductance (EC)	5000	umhos/cm	20	1	AC35421	03/21/23 16:00	03/21/23 17:00	1551	SM2510B	
Total Dissolved Solids	3000	mg/L	10	1	AC35425	03/23/23 15:00	04/05/23 22:45	1551	SM2540C	
Bicarbonate Alkalinity as CaCO3	280	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Total Alkalinity as CaCO3	280	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
<b>Anions by EPA Method 300.0</b>										
Chloride	1200	mg/L	50	100	AC35063	03/22/23 10:09	03/22/23 10:09	1551	EPA 300.0	
Nitrate as N	ND	mg/L	1.0	5	AC35063	03/21/23 18:48	03/21/23 18:48	1551	EPA 300.0	R-01
Orthophosphate as P	ND	mg/L	0.50	5	AC35063	03/21/23 18:48	03/21/23 18:48	1551	EPA 300.0	R-01
Sulfate as SO4	110	mg/L	2.5	5	AC35063	03/21/23 18:48	03/21/23 18:48	1551	EPA 300.0	
<b>Anions by EPA Method 300.1</b>										
Bromide	4.4	mg/L	1.0	1	AD33128	04/04/23 19:14	04/04/23 19:14	1551	EPA 300.1	
Surrogate: Dichloroacetate	98.1 %		90-115		AD33128	04/04/23 19:14	04/04/23 19:14	1551	EPA 300.1	
<b>SFO-S (23C3292-02)</b>										
	<b>Sample Type: Water</b>				<b>Sampled: 03/20/23 10:05</b>					
<b>Metals by EPA 200 Series Methods</b>										
Boron	0.84	mg/L	0.20	1	AC36068	03/31/23 15:55	04/03/23 19:08	1551	EPA 200.7	P-02
Calcium	560	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:08	1551	EPA 200.7	
Magnesium	640	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:08	1551	EPA 200.7	
Potassium	71	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:08	1551	EPA 200.7	
Sodium	5300	mg/L	10	10	AC36068	03/31/23 15:55	04/04/23 22:53	1551	EPA 200.7	

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Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
04/13/23 12:01

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note	
<b>SFO-S (23C3292-02)</b>		<b>Sample Type: Water</b>			<b>Sampled: 03/20/23 10:05</b>						
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>											
Bicarbonate	810	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B		
pH	7.27	pH Units	1.68	1	AC35421	03/21/23 16:00	03/21/23 17:00	1551	SM4500-H+ B	T-14	
Specific Conductance (EC)	26000	umhos/cm	20	1	AC35421	03/21/23 16:00	03/21/23 17:00	1551	SM2510B		
Total Dissolved Solids	15000	mg/L	10	1	AC35425	03/23/23 15:00	04/05/23 22:45	1551	SM2540C		
Bicarbonate Alkalinity as CaCO3	660	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B		
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B		
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B		
Total Alkalinity as CaCO3	660	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B		
<b>Anions by EPA Method 300.0</b>											
Chloride	11000	mg/L	500	1000	AC35063	03/22/23 10:26	03/22/23 10:26	1551	EPA 300.0		
Nitrate as N	ND	mg/L	20	100	AC35063	03/21/23 19:38	03/21/23 19:38	1551	EPA 300.0	R-01	
Orthophosphate as P	ND	mg/L	10	100	AC35063	03/21/23 19:38	03/21/23 19:38	1551	EPA 300.0	R-01	
Sulfate as SO4	760	mg/L	50	100	AC35063	03/21/23 19:38	03/21/23 19:38	1551	EPA 300.0		
<b>Anions by EPA Method 300.1</b>											
Bromide	38	mg/L	5.0	1	AD33128	04/03/23 21:34	04/03/23 21:34	1551	EPA 300.1		
Surrogate: Dichloroacetate	100 %		90-115		AD33128	04/03/23 21:34	04/03/23 21:34	1551	EPA 300.1		
<b>Burlingame - D (23C3292-03)</b>		<b>Sample Type: Water</b>			<b>Sampled: 03/20/23 08:05</b>						
<b>Metals by EPA 200 Series Methods</b>											
Boron	ND	mg/L	0.20	1	AC36068	03/31/23 15:55	04/03/23 19:17	1551	EPA 200.7	P-02	
Calcium	40	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:17	1551	EPA 200.7		
Magnesium	18	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:17	1551	EPA 200.7		
Potassium	1.9	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:17	1551	EPA 200.7		
Sodium	51	mg/L	1.0	1	AC36068	03/31/23 15:55	04/04/23 15:28	1551	EPA 200.7		

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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
04/13/23 12:01

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
<b>Burlingame - M (23C3292-04)</b>										
	<b>Sample Type: Water</b>				<b>Sampled: 03/20/23 08:10</b>					
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>										
Bicarbonate	160	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
pH	7.19	pH Units	1.68	1	AC35421	03/21/23 16:00	03/21/23 17:00	1551	SM4500-H+ B	T-14
Specific Conductance (EC)	570	umhos/cm	20	1	AC35421	03/21/23 16:00	03/21/23 17:00	1551	SM2510B	
Total Dissolved Solids	340	mg/L	10	1	AC35425	03/23/23 15:00	04/05/23 22:45	1551	SM2540C	
Bicarbonate Alkalinity as CaCO3	140	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Total Alkalinity as CaCO3	140	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
<b>Anions by EPA Method 300.0</b>										
Chloride	30	mg/L	5.0	10	AC35063	03/21/23 20:43	03/21/23 20:43	1551	EPA 300.0	
Nitrate as N	0.52	mg/L	0.20	1	AC35063	03/21/23 20:27	03/21/23 20:27	1551	EPA 300.0	
Orthophosphate as P	ND	mg/L	0.10	1	AC35063	03/21/23 20:27	03/21/23 20:27	1551	EPA 300.0	
Sulfate as SO4	6.4	mg/L	0.50	1	AC35063	03/21/23 20:27	03/21/23 20:27	1551	EPA 300.0	
<b>Anions by EPA Method 300.1</b>										
Bromide	0.12	mg/L	0.050	1	AD33128	04/03/23 18:20	04/03/23 18:20	1551	EPA 300.1	
Surrogate: Dichloroacetate	114 %		90-115		AD33128	04/03/23 18:20	04/03/23 18:20	1551	EPA 300.1	
<b>Burlingame - S (23C3292-05)</b>										
	<b>Sample Type: Water</b>				<b>Sampled: 03/20/23 08:15</b>					
<b>Metals by EPA 200 Series Methods</b>										
Boron	ND	mg/L	0.20	1	AC36068	03/31/23 15:55	04/03/23 19:34	1551	EPA 200.7	P-02
Calcium	100	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:34	1551	EPA 200.7	
Magnesium	92	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:34	1551	EPA 200.7	
Potassium	8.7	mg/L	1.0	1	AC36068	03/31/23 15:55	04/03/23 19:34	1551	EPA 200.7	
Sodium	720	mg/L	1.0	1	AC36068	03/31/23 15:55	04/04/23 15:36	1551	EPA 200.7	

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San Bruno, City of - DW  
 225 Huntington Avenue  
 San Bruno, CA 94066

Project Manager: Steve Salazar  
 Project: SF Intrusion Project  
 Project Number: [none]

Reported:  
 04/13/23 12:01

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
<b>Burlingame - S (23C3292-05)</b>			<b>Sample Type: Water</b>			<b>Sampled: 03/20/23 08:15</b>				
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>										
Bicarbonate	540	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
pH	7.37	pH Units	1.68	1	AC35421	03/21/23 16:00	03/21/23 17:00	1551	SM4500-H+ B	T-14
Specific Conductance (EC)	3900	umhos/cm	20	1	AC35421	03/21/23 16:00	03/21/23 17:00	1551	SM2510B	
Total Dissolved Solids	2400	mg/L	10	1	AC35425	03/23/23 15:00	04/05/23 22:45	1551	SM2540C	
Bicarbonate Alkalinity as CaCO3	440	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
Total Alkalinity as CaCO3	440	mg/L	5.0	1	AC36102	03/31/23 12:30	03/31/23 15:15	1551	SM2320B	
<b>Anions by EPA Method 300.0</b>										
Chloride	1200	mg/L	50	100	AC35063	03/22/23 10:42	03/22/23 10:42	1551	EPA 300.0	
Nitrate as N	ND	mg/L	1.0	5	AC35063	03/21/23 21:00	03/21/23 21:00	1551	EPA 300.0	R-01
Orthophosphate as P	ND	mg/L	0.50	5	AC35063	03/21/23 21:00	03/21/23 21:00	1551	EPA 300.0	R-01
Sulfate as SO4	37	mg/L	2.5	5	AC35063	03/21/23 21:00	03/21/23 21:00	1551	EPA 300.0	
<b>Anions by EPA Method 300.1</b>										
Bromide	4.8	mg/L	1.0	1	AD33128	04/04/23 20:51	04/04/23 20:51	1551	EPA 300.1	
Surrogate: Dichloroacetate	99.7 %		90-115		AD33128	04/04/23 20:51	04/04/23 20:51	1551	EPA 300.1	



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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
04/13/23 12:01

#### Notes and Definitions

- P-02 Sample acidified to pH <2 and allowed to sit 24 hours before further processing.
- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- T-14 Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

\* ELAP does not offer accreditation in this matrix for the requested analyte/method combination.





*alpha*

Alpha Analytical Laboratories, Inc.

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Corporate: 208 Mason Street | Ukiah, CA 95482 | T: 707-468-0401 | F: 707-468-5267 | ELAP# 1551

30 August 2023

San Bruno, City of - DW

Attn: Steve Salazar

225 Huntington Avenue

San Bruno, CA 94066

RE: SF Intrusion Project

Work Order: 23H2291

Enclosed are the results of analyses for samples received by the laboratory on 08/14/23 21:30. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Robbie C. Phillips

Project Manager



Alpha Analytical Laboratories, Inc. email: [clientservices@alpha-labs.com](mailto:clientservices@alpha-labs.com)  
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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
08/30/23 07:40

Bay Area: 262 Rickenbacker Circle | Livermore, CA 94551 | 925-828-6226 | ELAP# 2728  
Central Valley: 9090 Union Park Way Suite 113 | Elk Grove, CA 95624 | 916-686-5190 | ELAP# 2922  
North Bay: 737 Southpoint Blvd Unit D | Petaluma, CA 94954 | 707-769-3128 | ELAP# 2303  
San Diego: 2722 Loker Avenue West Suite A | Carlsbad, CA 92010 | 760-930-2555 | ELAP# 3055  
Los Angeles: 1230 E. 223rd Street Suite 205 | Carson, CA 90745 | 424-267-5032 | ELAP# 3091

#### ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SFO-D	23H2291-01	Water	08/14/23 09:15	08/14/23 21:30
SFO-S	23H2291-02	Water	08/14/23 09:25	08/14/23 21:30
Burlingame - D	23H2291-03	Water	08/14/23 08:30	08/14/23 21:30
Burlingame - M	23H2291-04	Water	08/14/23 08:20	08/14/23 21:30
Burlingame - S	23H2291-05	Water	08/14/23 08:10	08/14/23 21:30



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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
08/30/23 07:40

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
<b>SFO-D (23H2291-01)</b>										
	<b>Sample Type: Water</b>					<b>Sampled: 08/14/23 09:15</b>				
<b>Metals by EPA 200 Series Methods</b>										
Boron	ND	mg/L	0.20	1	AH34160	08/16/23 11:31	08/17/23 15:02	1551	EPA 200.7	
Calcium	130	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:02	1551	EPA 200.7	
Magnesium	110	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:02	1551	EPA 200.7	
Potassium	12	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:02	1551	EPA 200.7	
Sodium	650	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:02	1551	EPA 200.7	
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>										
Bicarbonate	300	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
pH	7.45	pH Units	1.68	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM4500-H+ B	T-14
Specific Conductance (EC)	4500	umhos/cm	20	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM2510B	
Total Dissolved Solids	2400	mg/L	10	1	AH34431	08/17/23 07:30	08/24/23 09:07	1551	SM2540C	
Bicarbonate Alkalinity as CaCO3	240	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Total Alkalinity as CaCO3	240	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
<b>Anions by EPA Method 300.0</b>										
Chloride	1300	mg/L	50	100	AH34106	08/16/23 19:53	08/16/23 19:53	1551	EPA 300.0	
Nitrate as N	ND	mg/L	1.0	5	AH34106	08/15/23 18:03	08/15/23 18:03	1551	EPA 300.0	R-01
Orthophosphate as P	ND	mg/L	0.50	5	AH34106	08/15/23 18:03	08/15/23 18:03	1551	EPA 300.0	R-01
Sulfate as SO4	120	mg/L	2.5	5	AH34106	08/15/23 18:03	08/15/23 18:03	1551	EPA 300.0	
<b>Anions by EPA Method 300.1</b>										
Bromide	5.7	mg/L	2.5	50	AH34667	08/25/23 06:29	08/25/23 06:29	1551	EPA 300.1	
Surrogate: Dichloroacetate	104 %		90-115		AH34667	08/25/23 06:29	08/25/23 06:29	1551	EPA 300.1	
<b>SFO-S (23H2291-02)</b>										
	<b>Sample Type: Water</b>					<b>Sampled: 08/14/23 09:25</b>				
<b>Metals by EPA 200 Series Methods</b>										
Boron	0.85	mg/L	0.20	1	AH34160	08/16/23 11:31	08/17/23 15:13	1551	EPA 200.7	
Calcium	550	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:13	1551	EPA 200.7	
Magnesium	650	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:13	1551	EPA 200.7	
Potassium	66	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:13	1551	EPA 200.7	
Sodium	5200	mg/L	10	10	AH34160	08/16/23 11:31	08/18/23 11:56	1551	EPA 200.7	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
08/30/23 07:40

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
<b>SFO-S (23H2291-02)</b>										
<b>Sample Type: Water</b>										
<b>Sampled: 08/14/23 09:25</b>										
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>										
Bicarbonate	860	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
pH	7.11	pH Units	1.68	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM4500-H+ B	T-14
Specific Conductance (EC)	27000	umhos/cm	20	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM2510B	
Total Dissolved Solids	17000	mg/L	10	1	AH34431	08/17/23 07:30	08/24/23 09:07	1551	SM2540C	
Bicarbonate Alkalinity as CaCO3	700	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Total Alkalinity as CaCO3	700	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
<b>Anions by EPA Method 300.0</b>										
Chloride	10000	mg/L	1000	2000	AH34106	08/16/23 20:25	08/16/23 20:25	1551	EPA 300.0	
Nitrate as N	ND	mg/L	4.0	20	AH34106	08/15/23 18:36	08/15/23 18:36	1551	EPA 300.0	R-01
Orthophosphate as P	ND	mg/L	2.0	20	AH34106	08/15/23 18:36	08/15/23 18:36	1551	EPA 300.0	R-01
Sulfate as SO4	730	mg/L	10	20	AH34106	08/15/23 18:36	08/15/23 18:36	1551	EPA 300.0	
<b>Anions by EPA Method 300.1</b>										
Bromide	38	mg/L	5.0	100	AH34667	08/25/23 07:17	08/25/23 07:17	1551	EPA 300.1	
Surrogate: Dichloroacetate	105 %		90-115		AH34667	08/25/23 07:17	08/25/23 07:17	1551	EPA 300.1	
<b>Burlingame - D (23H2291-03)</b>										
<b>Sample Type: Water</b>										
<b>Sampled: 08/14/23 08:30</b>										
<b>Metals by EPA 200 Series Methods</b>										
Boron	ND	mg/L	0.20	1	AH34160	08/16/23 11:31	08/17/23 15:23	1551	EPA 200.7	
Calcium	36	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:23	1551	EPA 200.7	
Magnesium	15	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:23	1551	EPA 200.7	
Potassium	2.0	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:23	1551	EPA 200.7	
Sodium	46	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:23	1551	EPA 200.7	





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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
08/30/23 07:40

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note	
<b>Burlingame - D (23H2291-03)</b>		<b>Sample Type: Water</b>				<b>Sampled: 08/14/23 08:30</b>					
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>											
Bicarbonate	200	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B		
pH	7.50	pH Units	1.68	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM4500-H+ B	T-14	
Specific Conductance (EC)	560	umhos/cm	20	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM2510B		
Total Dissolved Solids	240	mg/L	10	1	AH34431	08/17/23 07:30	08/24/23 09:07	1551	SM2540C		
Bicarbonate Alkalinity as CaCO3	160	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B		
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B		
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B		
Total Alkalinity as CaCO3	160	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B		
<b>Anions by EPA Method 300.0</b>											
Chloride	46	mg/L	5.0	10	AH34106	08/15/23 19:26	08/15/23 19:26	1551	EPA 300.0		
Nitrate as N	ND	mg/L	0.20	1	AH34106	08/15/23 19:09	08/15/23 19:09	1551	EPA 300.0		
Orthophosphate as P	ND	mg/L	0.10	1	AH34106	08/15/23 19:09	08/15/23 19:09	1551	EPA 300.0		
Sulfate as SO4	19	mg/L	0.50	1	AH34106	08/15/23 19:09	08/15/23 19:09	1551	EPA 300.0		
<b>Anions by EPA Method 300.1</b>											
Bromide	0.13	mg/L	0.050	1	AH34667	08/25/23 08:05	08/25/23 08:05	1551	EPA 300.1		
Surrogate: Dichloroacetate	89.9 %		90-115		AH34667	08/25/23 08:05	08/25/23 08:05	1551	EPA 300.1	S-02	
<b>Burlingame - M (23H2291-04)</b>		<b>Sample Type: Water</b>				<b>Sampled: 08/14/23 08:20</b>					
<b>Metals by EPA 200 Series Methods</b>											
Boron	ND	mg/L	0.20	1	AH34160	08/16/23 11:31	08/17/23 14:44	1551	EPA 200.7		
Calcium	16	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 14:44	1551	EPA 200.7		
Magnesium	5.4	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 14:44	1551	EPA 200.7		
Potassium	2.1	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 14:44	1551	EPA 200.7		
Sodium	19	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 14:44	1551	EPA 200.7		

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San Bruno, City of - DW 225 Huntington Avenue San Bruno, CA 94066	Project Manager: Steve Salazar Project: SF Intrusion Project Project Number: [none]	Reported: 08/30/23 07:40
---	---	-----------------------------

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
<b>Burlingame - M (23H2291-04)</b>			<b>Sample Type: Water</b>			<b>Sampled: 08/14/23 08:20</b>				
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>										
Bicarbonate	60	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
pH	6.75	pH Units	1.68	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM4500-H+ B	T-14
Specific Conductance (EC)	240	umhos/cm	20	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM2510B	
Total Dissolved Solids	120	mg/L	10	1	AH34431	08/17/23 07:30	08/24/23 09:07	1551	SM2540C	
Bicarbonate Alkalinity as CaCO3	49	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Total Alkalinity as CaCO3	49	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
<b>Anions by EPA Method 300.0</b>										
Chloride	34	mg/L	5.0	10	AH34106	08/15/23 19:58	08/15/23 19:58	1551	EPA 300.0	
Nitrate as N	0.50	mg/L	0.20	1	AH34106	08/15/23 19:42	08/15/23 19:42	1551	EPA 300.0	
Orthophosphate as P	ND	mg/L	0.10	1	AH34106	08/15/23 19:42	08/15/23 19:42	1551	EPA 300.0	
Sulfate as SO4	6.0	mg/L	0.50	1	AH34106	08/15/23 19:42	08/15/23 19:42	1551	EPA 300.0	
<b>Anions by EPA Method 300.1</b>										
Bromide	0.31	mg/L	0.050	1	AH34667	08/25/23 08:54	08/25/23 08:54	1551	EPA 300.1	
Surrogate: Dichloroacetate	85.3 %		90-115		AH34667	08/25/23 08:54	08/25/23 08:54	1551	EPA 300.1	S-02
<b>Burlingame - S (23H2291-05)</b>			<b>Sample Type: Water</b>			<b>Sampled: 08/14/23 08:10</b>				
<b>Metals by EPA 200 Series Methods</b>										
Boron	ND	mg/L	0.20	1	AH34160	08/16/23 11:31	08/17/23 15:27	1551	EPA 200.7	
Calcium	100	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:27	1551	EPA 200.7	
Magnesium	92	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:27	1551	EPA 200.7	
Potassium	8.0	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:27	1551	EPA 200.7	
Sodium	650	mg/L	1.0	1	AH34160	08/16/23 11:31	08/17/23 15:27	1551	EPA 200.7	

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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
08/30/23 07:40

	Result	Units	Reporting Limit	Dilution	Batch	Prepared	Analyzed	ELAP#	Method	Note
<b>Burlingame - S (23H2291-05)</b>										
<b>Sample Type: Water</b>										
<b>Sampled: 08/14/23 08:10</b>										
<b>Conventional Chemistry Parameters by APHA/EPA Methods</b>										
Bicarbonate	500	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
pH	7.23	pH Units	1.68	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM4500-H+ B	T-14
Specific Conductance (EC)	4100	umhos/cm	20	1	AH34273	08/15/23 16:00	08/15/23 17:00	1551	SM2510B	
Total Dissolved Solids	4200	mg/L	10	1	AH34431	08/17/23 07:30	08/24/23 09:07	1551	SM2540C	
Bicarbonate Alkalinity as CaCO3	410	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Carbonate Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Hydroxide Alkalinity as CaCO3	ND	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
Total Alkalinity as CaCO3	410	mg/L	5.0	1	AH34450	08/22/23 07:00	08/22/23 10:00	1551	SM2320B	
<b>Anions by EPA Method 300.0</b>										
Chloride	1100	mg/L	50	100	AH34106	08/16/23 20:09	08/16/23 20:09	1551	EPA 300.0	
Nitrate as N	ND	mg/L	1.0	5	AH34106	08/15/23 20:48	08/15/23 20:48	1551	EPA 300.0	R-01
Orthophosphate as P	ND	mg/L	0.50	5	AH34106	08/15/23 20:48	08/15/23 20:48	1551	EPA 300.0	R-01
Sulfate as SO4	33	mg/L	2.5	5	AH34106	08/15/23 20:48	08/15/23 20:48	1551	EPA 300.0	
<b>Anions by EPA Method 300.1</b>										
Bromide	5.0	mg/L	1.0	20	AH34667	08/25/23 18:36	08/25/23 18:36	1551	EPA 300.1	
Surrogate: Dichloroacetate	101	%	90-115		AH34667	08/25/23 18:36	08/25/23 18:36	1551	EPA 300.1	



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San Bruno, City of - DW  
225 Huntington Avenue  
San Bruno, CA 94066

Project Manager: Steve Salazar  
Project: SF Intrusion Project  
Project Number: [none]

Reported:  
08/30/23 07:40

#### Notes and Definitions

- QM-4X The spike recovery was outside of QC acceptance limits for the MS and/or MSD due to analyte concentration at 4 times or greater the spike concentration. The QC batch was accepted based on LCS and/or LCSD recoveries within the acceptance limits.
- R-01 The Reporting Limit for this analyte has been raised to account for matrix interference.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- T-14 Residual chlorine, dissolved oxygen, sulfite, and pH must be analyzed in the field to meet the EPA specified 15 minute hold time.
- ND Analyte NOT DETECTED at or above the reporting limit
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

\* ELAP does not offer accreditation in this matrix for the requested analyte/method combination.

# Chain of Custody Record

Lab No. 2312291 Page      of     

Name: City of San Bruno - Drinking Water		Project No: <b>SF Intrusion Project</b>		Signature below authorizes work under terms stated on reverse side.																																																							
Mailing Address: 225 Huntington Avenue San Bruno, CA 94066		Project ID:		<b>Analysis Request</b>										<b>Sample Notes</b>		<b>TAT</b>																																											
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**Appendix C**  
**Westside Basin Groundwater Monitoring Manual of Procedures**

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# **Westside Basin Groundwater Monitoring Manual of Procedures**

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**Final**

March 2014

## Foreword

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The San Francisco Public Utilities Commission (SFPUC) has authorized two new groundwater projects to help meet the SFPUC's regular and dry year water supply needs. The San Francisco Groundwater Supply Project (SFGW) will provide a total of up to 4 mgd from 6 wells in San Francisco as a regular water supply to supplement the existing surface water supply in San Francisco. The Regional Groundwater Storage and Recovery (GSR) Project will pump up to 7.2 mgd from 16 wells in northern San Mateo County as a regional dry year water supply.

Over the past 15 years, the SFPUC has worked with the Dal City, San Bruno and Cal Water to develop a network of monitoring and test wells and a sampling program to characterize groundwater quality and water levels in the Westside Basin. This program allows basin users to monitor the long-term condition of the basin; helps establish baseline conditions prior to implementation of the SFPUC's projects; and will inform future basin operations.

This document outlines the technical procedures for the SFPUC groundwater sampling programs in the Westside Basin. The Water Quality Division (WQD) will complete sampling and coordination with the Water Resources Division (WRD) according to standards and programmatic details described in this manual. WRD will continue to provide groundwater project management, data analysis, and reporting.

This formal program description applies to routine monitoring and sampling. Additional monitoring Standard Operating Procedures (SOPs) for environmental assessments and remediation, environmental discharges for future drinking wells, and other special studies will require alternative sampling procedures. The SFPUC Water Quality Division would like to acknowledge and thank the following individuals who have contributed to this project:

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**Appendix A:** Well Descriptions and Locations

**Appendix B:** Groundwater Sampling Procedure Flow Chart and Summary

**Appendix C:** General Supply and Equipment Checklist

**Appendix D:** Title 22 Constituents with Additional Parameters of Concern for  
Groundwater Sampling

**Appendix E:** Field Forms

**Appendix F:** Individual Well Site Maps and Photos

**Appendix G:** Operations Manual, Calibration, and Maintenance Procedures

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## **1.1. Overview**

The San Francisco Public Utilities Commission (SFPUC) has developed a groundwater monitoring program for the Westside Basin in support of its groundwater management goals and various planned groundwater projects. Monitoring of groundwater elevations and water quality is conducted to evaluate the potential for seawater intrusion, determine water quality and groundwater conditions in areas of potential groundwater development, define lake-aquifer interaction, assess general conditions in the Westside Basin resulting from historical and ongoing pumping, and establish baseline groundwater conditions prior to and during implementation of various groundwater projects.

This manual provides formal procedures and program descriptions of Westside Groundwater Basin monitoring for SFPUC staff involved with the sampling and field analytical measurement, as well as for the data analysis and reporting for the various groundwater programs. The manual does not, however, include any environmental assessment protocols that may affect groundwater quality. This information can be referenced from the latest Drinking Water Source Assessment Program documents for the proposed San Francisco Groundwater (SFGW) Project as well as the proposed Regional Groundwater Storage and Recovery (GSR) Project.

## **1.2. Background**

The Westside Basin is composed of a series of aquifers with its north boundary located in Golden Gate Park in San Francisco stretching to its southern boundary in the City of Burlingame in San Mateo County. The City of Daly City, California Water Service Company (Cal Water), and the City of San Bruno currently operate a series of wells that distribute groundwater from the Westside Basin to their respective systems. These entities also receive water from the SFPUC's Regional Water System.

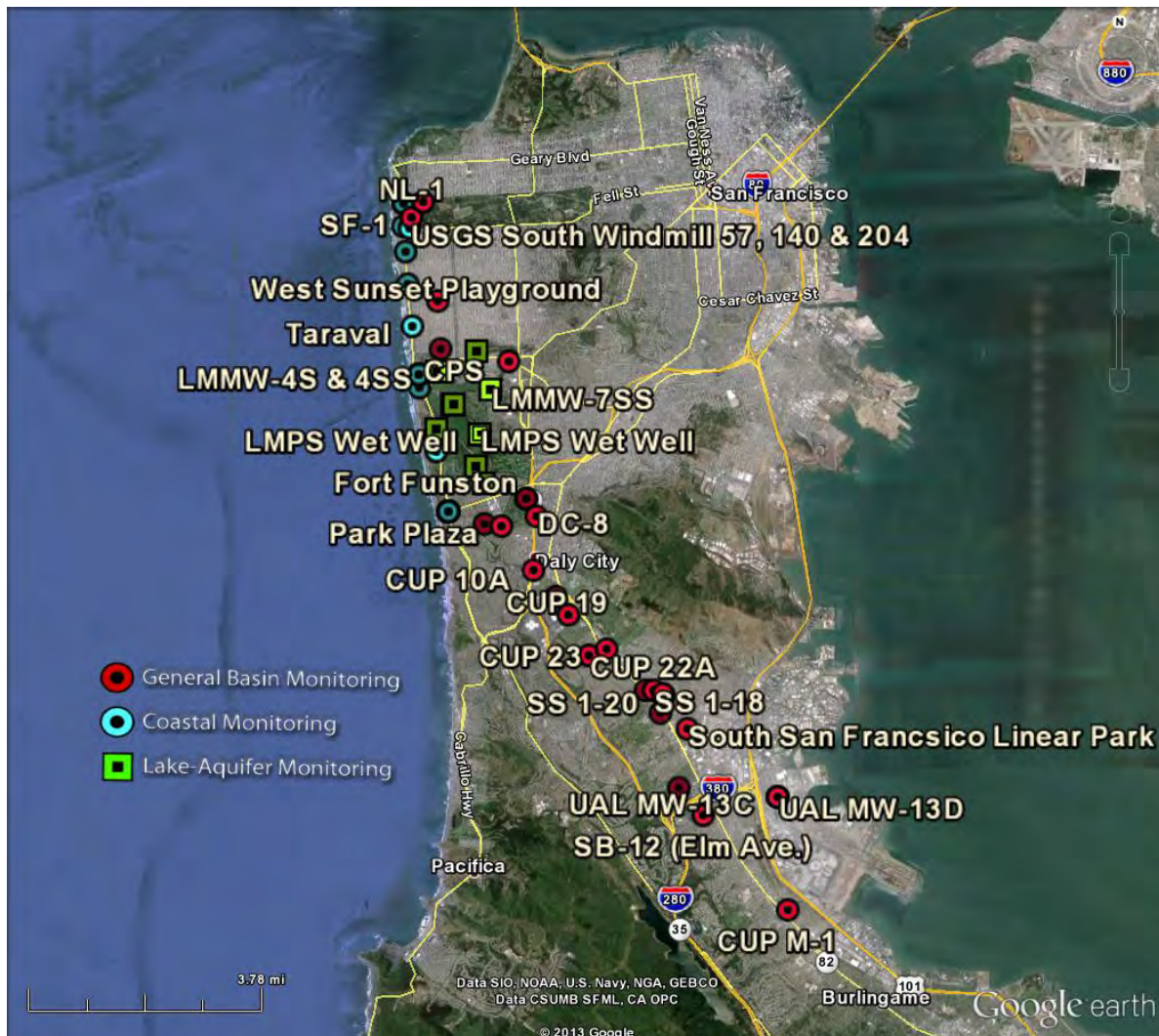
As with the agencies noted above, the SFPUC plans to supplement existing surface water supplies with groundwater. The SFGW project was developed to supply up to four million gallons per day (MGD) from the North Westside Basin from six production wells. These wells will be operated continuously in order to increase the long term availability of water in San Francisco. The GSR project was designed to supply up to 7.2 MGD of groundwater from the South Westside Basin during drought conditions.

In 2000, the San Mateo County Environmental Health Services Agency initiated the effort in sampling and testing groundwater conditions throughout the Westside Basin. In 2004, the program coordination was shifted to the SFPUC in cooperation with Daly City, San Bruno, and Cal Water (Partner Agencies). The SFPUC continues to lead the monitoring and sampling programs in the Westside Basin based on groundwater management goals and any supporting data needed for the SFGW and GSR projects.

Water quality and level sampling is currently handled by the Natural Resources Division (NRD) and an outside consulting firm with oversight and coordination by the Water Resources Division (WRD). The Water Quality Division will assume the role of sampling during fall of 2013. Water quality samples are processed through Millbrae Laboratories and select samples are sent to subcontracted laboratories for analysis.

All well locations are sampled from a network of existing monitoring and production wells located throughout the Westside Basin. A complete list of individual well sites and map locations can be found in Appendix F.

This document is not intended to cover monitoring procedures for any future potable water well facilities.



**Figure 1: Westside Basin Groundwater Well Location Overview**

### **1.3. Governing Regulations**

Groundwater regulations and guidance materials for the procedures listed in this manual were researched from available literature, web search of regulatory sites and through contact with the local California Department of Public Health. Existing practices already in use by Water Resources & Natural Resources Divisions and various consultants were also considered.

No specific regulations were identified governing monitoring well sample techniques, operations and maintenance. Most of the available guidelines were found from U.S. EPA, Region 9 (Western Region) and Region 4 Science, Ecosystem Support Division (SESD, Southeast Region based in Atlanta). The latter SESD document was dated 2013 and referenced several other research and guidance recommendations found online.

Summaries of key regulations and guidelines governing monitoring well sampling, operations and maintenance, sorted by agency, are as follows:

United States Environmental Protection Agency (U.S. EPA), Region 9 and Region 4. No regulations were found, however several guidance documents were published on sampling and operating procedure, well and depth measurement, decontamination and field equipment cleaning.

California Department of Water Resources (CA DWR). Published regulations for monitoring well construction, disinfection and destruction/abandonment in DWR Bulletin 74 and Bulletin 91. No specific regulations or guidance were found for operations, sampling or monitoring of wells. DWR permits monitoring wells, and construction data must be submitted to DWR and assigned a state well number.

California Regional Water Quality Control Board. Governs discharges to state water bodies and reinjection of water into the aquifer. No specific regulations or guidance were found for operations, sampling or monitoring of wells.

California Department of Public Health. Oversees drinking water regulations and statutes in California Code of Regulations Title 22. Regulations cite aquifer protection and prevention of groundwater contamination. No specific regulations or guidance found for operations, or sampling or monitoring of wells.

San Francisco Department of Public Health. Provides local jurisdiction of wells and enforces City and County of San Francisco regulations. Regulations in Article 12B of the San Francisco Health Code include language regarding prohibiting contamination of groundwater and well/boring construction and destruction requirements. No specific regulations or guidance were found for operations, sampling or monitoring of wells.

## Project Objective

The objective of this project is to create a Manual of Procedures (MOP) for the various groundwater sampling and monitoring programs for the Westside Basin. It includes details and descriptions for each monitoring program, locations for each well site, coordinates and direction data for each well, and standard operating procedures (SOPs) for water quality, water level sampling, and the various types of equipment used for groundwater sampling.

The basin monitoring programs are divided into five categories. The description for each category is as follows:

**Table 2.1-1: Well Monitoring Categories and Objectives**

<b>Category</b>	<b>Objective</b>
<b>General Basin Monitoring</b>	Hydrogeologic dynamics of groundwater conditions (levels)
<b>Coastal Monitoring</b>	Detection of seawater intrusion at coastal and bayside locations
<b>Lake-Aquifer Monitoring</b>	Characterization of lake-aquifer interactions around Lake Merced
<b>Groundwater Supply</b>	Assessment of groundwater conditions at proposed local and regional drinking water well locations
<b>Miscellaneous Projects</b>	Sampling support for all other groundwater-related projects (e.g. Contaminants of Emerging Concern (CEC) Study)

## Well Locations and Descriptions

Wells used for the various sampling protocols for the Westside Basin are located locally throughout Golden Gate Park, Sunset District, and Lake Merced, as well as in Daly City, Colma, South San Francisco, Millbrae, Burlingame, and San Bruno. These wells include various monitoring wells and existing wells developed by SFPUC and Partner Agencies along the Peninsula. Appendix A lists each well sampling location along with its associated physical parameters that may aid in the sampling process. These parameters include:

- Well type
- Sample method
- Geospatial coordinates
- Location
- Water level from previous sampling event
- Case diameter
- Total depth of casing, below top of casing (BTOC)
- Measured total depth of casing, BTOC
- Screen interval
- Year Installed
- Additional comments (well condition, special access or location information)

Table 3.1-1 below tabulates typical sampling and analyses for well sites in the Westside Basin. Additional constituents are added on an as-needed basis.

**Table 3.1-1: Analyses and Associated Well Sites**

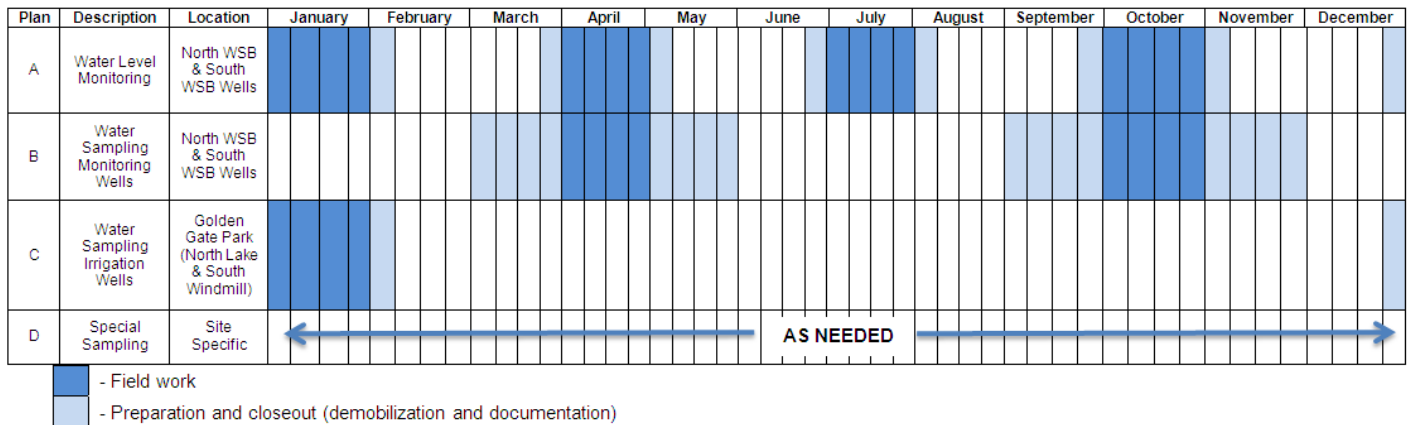
Analyses	Well Names
Chloride, TDS, Specific Conductance	USGS South Windmill MW57, 140 Kirkham MW130, 255, 385, 435 Ortega MW125, 265, 400, 475 Taraval MW145, 240, 400, 530 Zoo MW275, 450, 565
Total Alkalinity, pH, Specific Conductance, TDS, Hardness, Calcium, Magnesium, Sodium, Potassium, Bicarbonate as CaCO <sub>3</sub> , Chloride, Sulfate, and Nitrate	NL-1 SF-1 NWM-3 SWM-3 West Sunset Playground LMMW-1S, 1D, 2S, 2D, 3S, 3D, 6D

Analyses	Well Names
<p>Total Alkalinity, pH, Specific Conductance, TDS, Hardness, Calcium, Magnesium, Sodium, Potassium, Bicarbonate as CaCO<sub>3</sub>, Chloride, Sulfate, Nitrate, Total and Dissolved Iron and Manganese</p>	<p>CUP 3A MW180, 240, 450, 580                      CUP 10A MW160, 250, 500                      CUP 18A MW230, 425, 490                      CUP 19 MW475, 600, 690                      CUP 22A MW290, 440, 545                      CUP 23 MW230, 440, 515, 600                      CUP 31A MW145, 280, 480, 595                      CUP 36-1 MW160, 270, 455, 585                      CUP 44-1 MW190, 300, 460, 580                      CUP MW-M1                      Park Plaza MW195, 460, 620                      SSFLP MW120, 220, 440, 520</p>
<p>Water Level</p>	<p>CPS MW190, 270                      CUP 3A MW180, 240, 450, 580                      CUP 10A MW160, 250, 500, 710                      CUP 18A MW230, 425, 490, 595                      CUP 19 MW180, 475, 600, 690                      CUP 22A MW140, 290, 440, 545                      CUP 23 MW230, 440, 515, 600                      CUP 31A MW145, 280, 480, 595                      CUP 36-1 MW160, 270, 455, 585                      CUP 44-1 MW190, 300, 460, 580                      CUP MW-M1                      DC-1 (Westlake)                      DC-8                      Fort Funston S, M, D                      LMMW 1S, 1D, 2S, 2D, 2SS, 3S, 3SS, 3D, 4S, 4SS, 5S, 5SS, 6D 7SS, 8SS, 9SS                      LMPS MW155, 270, 440, 575                      LMPS Wet Well                      NL-1                      NWM-3                      Ortega MW125, 265, 400, 475                      Park Plaza MW135, 190, 460, 620                      Kirkham MW130, 255, 385, 435                      SB-12                      SF-1                      SS 1-02, SS 1-18, SS 1-20                      SSFLP MW120, 220, 440, 520                      SWM-3                      Taraval MW145, 240, 400, 530                      Thornton Beach MW225, 360, 670                      UAL MW13C, 13D                      USGS South Windmill 57, 140                      West Sunset Playground                      Zoo MW275, 450, 565</p>



## Monitoring Schedule

A monitoring schedule has been implemented to accommodate the various sampling events throughout the calendar year. The program list includes Semi-Annual (water quality, level), Quarterly, Annual Production (Title 22 for various test/monitoring wells), Specific Sampling (repeat sampling for detected contaminants of concern), and Special Projects. Figure 2 shows the overall Basin monitoring schedule.



- Plan A - Quarterly Water Level Monitoring:** Water level measurements and downloading transducers (levelloggers and barologgers)
- Plan B - Semi-Annual Water Sampling and Water Level Monitoring:** Plan A activities and groundwater sampling for well specific constituents
- Plan C - Annual Water Sampling:** Groundwater sampling for full Title 22 constituents (test wells and regulatory wells)
- Plan D - Special Groundwater Sampling:** usually conducted with regular scheduled well sampling

**Figure 2: Groundwater Sampling and Monitoring Schedule**

## Staffing

WQD will maintain field sampling equipment, conduct field sampling, compile field sampling records, coordinate pick-up and drop-off of sample containers, and coordinate with WRD according to the standards and programmatic details described in this manual. WRD will provide project management, data analysis, and reporting.

A minimum of one engineer/scientist and one senior technician from WQD will be needed to conduct the field work for each sampling event. The engineer/ scientist will review & analyze data, reporting and program development. The scientist will manage equipment, scheduling, and preparation for sampling, and perform field work and analysis with assistance from the team.

**Note:** The field work component of the prior water sampling events required two full-time scientists from the Natural Resource Division (NRD) for two weeks for shallow well sampling and two full-time staff members from Baseline Environmental Consulting for two weeks for deep

well sampling. Coordination and program management by one scientist from WRD remains unchanged for the new program.

## Major Equipment

Westside Groundwater Basin monitoring and sampling requires mechanical and electrical equipment to measure water level and well depths, and extract water from the well. These equipment are sized to fit within the 2" diameter well casing, and needs to be securely fastened so that the equipment can be retrieved after measurement and sampling.

A multi-parameter field analyzer is needed to monitor the water quality during the purging process, where specific parameters are measured for stability and consistency.

Equipment is bulky and heavy and requires a large vehicle for transport. Operations, maintenance and safety protocols are provided in Appendix G. Key equipment are listed and briefly discussed below:

### Level Tape and Reel

Tape measures to 0.01 feet and is attached to a probe with an electrode sensor to detect water depth, with either a manual hand crank or automated reel. Westside Basin monitoring requires tape lengths of 500' to 750'. Tape should be decontaminated and cleaned between uses.

### Well Pump

Groundwater can be extracted from wells by hand bailers or pump-tubing systems. Pumps allow the sampler to purge standing well water and obtain fresh groundwater from the source aquifer. For the Westside Basin monitoring, two pump systems are used.

**Submersible Pump** – (e.g. Grundfos RediFlo2 electrical submersible pump, Portable Purge and Sampling Pump System, 100ml/min to 9gpm, 5.5lbs. 5HP. 220V 5.5amps; 1.8 in diameter). This multistage centrifugal pump provides a higher flow to purge shallow wells (280' or less), and provide continuous flow for sampling. Pump placement should be within the top 3 to 5' of the water surface so that the casing can be purged of at least 3 well casing volumes of water. The pump and tubing/ hose reel assembly is operated with a VFD flow controller. A stainless steel wireline cable is attached to the pump to ensure retrieval from well.

**Bladder Pump** – (e.g. Geotech bladder pump). This pump, equipped with small diameter tubing (1/4 in and 3/8 in OD) is used to sample deeper wells (up to 1000' depth), and provides continuous low flow (at 100 – 500 ml/min) for sampling. The pump operates with pressurized CO<sub>2</sub> gas to expand and compress the bladder to suction lift the sample to the surface. Gas does not come into contact with the sample. The pump fits within 2" diameter monitoring wells. Pump placement should be at mid-screen depth so that formation water is extracted directly from the target aquifer. Purging of water inside the sample tubing is required (to at least 3 tubing volumes). Other equipment used in conjunction with the bladder pump include: flow controller,

CO<sub>2</sub> cylinder with pressure regulator and stainless steel cable to ensure retrieval from the well.

**Other Pumps** – Other types of pumps include bailers, peristaltic pumps, and hydra-sleeves. A peristaltic pump may be used to purge and sample shallow wells (to about 25 feet). Also, it is used when decontaminating the tubing and pump.

### **Tubing**

**Silicon Silicone Tubing** (1/2" ID, 5/8" OD, 300'). Stain, corrosion and ozone/UV resistant tubing used to purge and sample wells. Tubing is odorless and inert, but susceptible to high temperatures and should be replaced if gummy. NSF61 certified. For use with submersible pump.

**Polyethylene tubing** (1/4" ID, 3/8" OD, 1000')

**Teflon Tubing** (Teflon® and Silastic® or Tygon®, PTFE Type 1, Grade E5, 150 psi, 1/4" OD x 0.040 wall and 3/8"OD x 0.062 wall/SS nuts and fittings or equivalent)

### **Generator**

A gas generator is used to power the submersible pump. A Honda 2000i EU Inverter is available for use. This unit provides 2000 watts, 120V, 9.6 hours run time for 1 gal of gas. Weight: 47 lbs.

### **Multi-parameter Water Quality instrument**

Field parameters such as pH, conductivity, DO, ORP, temperature and turbidity are measured and monitored when purging wells. Multi-parameter water quality meter used include: YSI 556, YSI Professional Plus, Horiba U-10, Hach MP-6, Hach 40-D, and Hach 2100P Turbidimeter. The multi-parameter meters are recommended for use with a flow-through cell unit.

### **Leveloader**

Some of the wells are equipped with transducers/data loggers that continuously monitor water level and temperature. In particular, Solinst Leveloggers and Barologgers may be found suspended on a wire line cable or coaxial "direct read cables" inside the well. The table in Appendix A indicates the wells that currently have transducers and/or barologgers installed in them. Connecting the cable end of the data loggers to a Leveloader allows viewing of the data, downloading and/or programming in the field.

## **5.1 Groundwater Sampling Protocol**

This section describes general and specific procedures, methods and considerations to be used and observed in the collection and documentation of groundwater well data and groundwater samples for field screening and laboratory analysis, during its quarterly, semi-annual and annual schedules.

## **5.2 Monitoring and Sampling Overview**

The following list highlights key procedures when planning any groundwater monitoring and sampling activities:

Determine monitoring/sampling schedule as calendared

Determine and coordinate activity requirements (inter-agency services, e.g. access, sample bottles from the laboratory, and equipment)

Understand field safety procedures, undergo training as necessary, and make available field safety equipment and PPE

Know proper safety protocols when handling and operating field equipment and appurtenances

Review well construction data and sampling history including purge stabilization data such as pump rates/ flow control adjustments, and water level data.

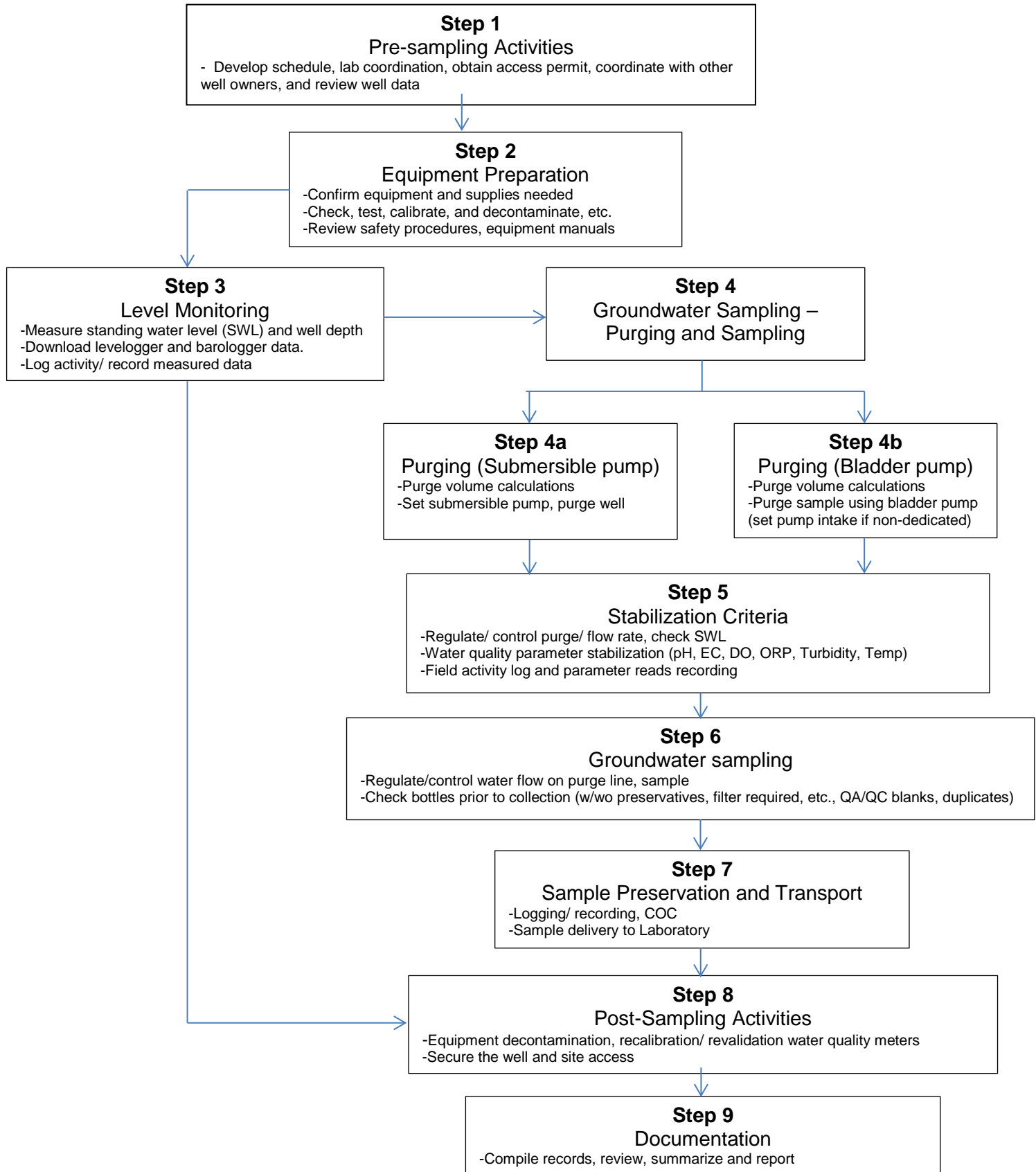
Coordinate sampling event with Millbrae Laboratory. Providing type of sampling (e.g. regulatory Title 22, basin study), well and analyte lists, QA/QC samples (field, equipment and trip blanks, and duplicates needed), as well as transportation and receiving procedures and deadlines.

Complete, check, calibrate, test and decontaminate monitoring and sampling equipment

Understand and manage applicable purge method and water sampling practices

Apply proper sampling protocol and field analytical techniques

Know proper field activity logging, recording, chain-of-custody procedures, and reporting



**Figure 3: Groundwater Monitoring and Sampling Flow Chart**

**Table 5.2-1: Groundwater Monitoring and Sampling Plan Summary**

<u>Step(s)</u>	<u>Procedure</u>	<u>Materials/Equipment</u>
<b>Step 1 &amp; 2: Pre-sampling Activity/ Mobilization</b>	<p>Determine monitoring/ sampling schedule. Review last well data (level, purging and sampling data), and safety protocols. Schedule field activities and lab requirements, coordinate well access/ permits Confirm schedule, goals, and analytes with groundwater project managers List and procure monitoring/sampling and safety equipment/ supplies (sample bottles, preservatives, filters, cooler, ice, etc.) Complete, clean, calibrate, test, check batteries, and decontaminate sampling equipment Site inspection</p>	<p>SOP manual, well sampling data from last monitoring event Equipment and supply list</p>
<b>Step 3: Level Monitoring</b>	<p>Open well cover and cap, note integrity. Clean and de-water if necessary Measure and record water level and well depth (reference point as marked/or north side of top of casing) Download data, if data loggers are present. Decontaminate submerged meter and probe Secure well if only doing level monitoring.</p>	<p>Set of keys, tools Water Level meter Levellogger Barologger Leveloader Field record sheets</p>
<b>Step 4 &amp; 5: Well Purging and Recording</b>	<p>Install submersible pump or bladder pump to intake depth. Pump water to a minimum of 3x standing water volume. *If using bladder pump, purge a minimum of 3x line/tubing volumes as calculated. Regulate flow and monitor water quality parameters until stable: pH, EC, DO, ORP, Temperature, Turbidity. Refer to stabilization criteria Record water quality data and pump data</p>	<p>Submersible pump (lift range to 300 ft.) Generator Bladder pump (used with deeper wells and/or if dedicated tube is present) Water level meter Laptop</p>
<b>Step 6: Sample Collection and Recording</b>	<p>Regulate water flow, use sample purge line for sampling. Use filter only if required. Check sample bottles to use with type of analysis (w/ or w/o preservative), field blanks, standards. Water level meter re-validation/ calibration (last sampling site) Equipment decontamination (pump, hose and tubing in contact with groundwater). Complete COC</p>	<p>Field blanks (Travel &amp; Equipment blank, if necessary) Sample labels Duplicate samples and bottles Field forms, COC</p>
<b>Step 7: Sample Preservation, Storage and Transport</b>	<p>Place samples in cooler and keep chilled during transport to the laboratory. Preservation includes cooling the sample to 4°C (40°F) during transport, shipping and storage. It is best to deliver the samples to the laboratory on the same day as sampling.</p>	<p>Cooler Ice packs and chemical preservatives (if necessary)</p>
<b>Step 8: Post Sampling Activity</b>	<p>WQ meter/ probe calibration/revalidation). Clean and pack equipment and supplies Brush/ clean inside casing protector (if necessary) and secure the well.</p>	
<b>Step 9: Documentation</b>	<p>Compile data and review results Summarize results for sampling/monitoring event and report</p>	

## **Measurements of Groundwater Indicator Parameters**

Indicator parameters are measured in the field to evaluate well flow stabilization during purging, provide information on general ground water quality, and to help evaluate well construction, or indicate when well maintenance is needed. Indicator parameters measured during well purging and sampling activities include specific conductance, pH, dissolved oxygen, oxidation-reduction potential, turbidity and temperature. These are reliably measured using multi-parameter water quality meters, or a combination of available meters and probes. Calibration procedures vary with each meter. Hence, it is important to follow the operating instructions supplied for each piece of equipment.

Calibration of instruments should be conducted prior to each day of monitoring/ sampling activity. Although calibration is preferred to be done in the field as close to the time of use, it may be conducted in a controlled environment that is in the laboratory or field office. It is always a good practice to re-calibrate and validate all instruments used after the last sampling location to compare with the initial calibration results while noting any significant deviations.

### pH

Measurement of pH is conducted to determine the acid balance of the water on a scale of 1 (being strongly acid) to 14 (being strongly alkaline). It is ideally measured on site at the time of sampling.

### Conductivity

Conductivity is a measure of the ability of water to conduct electricity. This is directly related to the concentration of dissolved ions; thus, it is a reasonable indication of the concentration of dissolved solids in the water. Like pH, conductivity is ideally measured in the field.

### Temperature

Temperature is not necessarily an indicator of ground water chemical stabilization, and is generally not very sensitive in distinguishing between stagnant casing water and formation water. Nevertheless, temperature is important for data interpretation. Groundwater temperature is subject to rapid changes when collected for parameter measurement. Its usefulness is subject to question for the purpose of determining parameter stability. However, it is still advisable to record the sample temperature, along with the other groundwater chemistry parameters during well purging, as it may be needed to interpret other chemical parameter results in some situations.



### Dissolved Oxygen (DO)

Dissolved oxygen (DO) has been noted to be a reliable indicator of the chemical stabilization of purge water under most ground water purging and sampling circumstances. DO is a good indicator when sampling for volatile organic compounds (VOCs), because erratic or elevated DO readings may reflect procedures that are causing excessive agitation and aeration of the ground water being drawn from the well and subsequent loss of VOCs. Artificially aerated ground water may also adversely affect dissolved metals analyses.

### Turbidity

Turbidity is not an indicator of ground water chemical stabilization and does not distinguish between stagnant casing water and formation water. However, turbidity can be useful to measure during purging. Relatively high or erratic measurements may indicate improper sampling procedures, such as purging at an excessive rate that exceeds the well yield. Purging and sampling in a manner that produces low-turbidity water is particularly important when analyzing for total metals. When sampling for contaminants or parameters that may be biased by turbidity, stabilizing the turbidity readings at or below 10 Nephelometric Turbidity Units (NTUs) is recommended.

### Oxidation Reduction Potential Meter

Oxidation-reduction potential (ORP), also referred to as redox potential or Eh, is a numerical index of the intensity of the oxidizing or reducing conditions within an aqueous solution such as groundwater. Oxidizing conditions are indicated by positive potentials and reducing conditions are indicated by negative potentials. ORP measurements are generally expressed in millivolts (mV).

## **Purge Stabilization Criteria**

An adequate purge is achieved when the pH and specific conductance of the ground water have stabilized, and the turbidity has either stabilized or is below 10 NTUs. Although 10 NTUs is normally considered the minimum goal for most ground water sampling objectives, lower turbidity has been shown to be easily achievable in most situations and reasonable attempts should be made to achieve these lower levels.

Stabilization occurs when, for at least three consecutive measurements, the pH remains constant within 0.1 Standard Unit (SU) and specific conductance varies no more than approximately 5 percent. Other parameters, such as dissolved oxygen (DO), may also be used as a purge adequacy parameter. Normal goals for DO are 0.2 mg/L or 10% saturation, whichever is greater. DO measurements must be conducted using either a flow-through cell or an over-topping cell to minimize or reduce any oxygenation of the sample during measurement. Oxidation Reduction Potential (ORP) should not be used as a purge stabilization parameter but

may be measured during purging to obtain the measurement of record for ORP for the sampling event (see Table 3 – Stabilization Criteria).

If the chemical parameters have not stabilized according to the above criteria after three well volumes have been removed, purging should continue up to five well volumes. If the parameters have not stabilized within five volumes, it is at the discretion of the project leader whether or not to collect a sample or to continue purging. If, after five well volumes, pH and conductivity have stabilized and the turbidity is still decreasing and approaching an acceptable level, additional purging should be considered to obtain the best sample possible, with respect to turbidity. The conditions of sampling should be noted in the field log.

**Table 5.4-1: Stabilization Criteria (Note: ORP is for reference only and not recommended for use to determine stabilization)**

Parameter	Stabilization Criteria
pH	± 0.1 standard units
Specific Conductance	± 5%
Oxidation-Reduction Potential (ORP)	± 10 millivolts
Turbidity	± 10% (when > 10 NTUs); maintained at <10 NTUs, consider stabilized
Dissolved Oxygen (DO)	± 0.2 milligrams per liter or 10% saturation; If 3 DO values < 0.5 mg/L, consider stabilized

**Note:** Stabilization criteria based on U.S. EPA Groundwater Sampling Operating Procedure (Science and Ecosystem Support Division (SESD), SESDPROC-301-R3 section 3.2.1.1.2, effective March 6, 2013).

## Procedural Precautions

The following precautions should be considered when collecting groundwater samples:

Avoid contaminating samples, start sampling from least suspected contaminated site.

Always wear new clean sterile gloves per sample site, or as necessary.

Always wash/spray wash the water level/depth level measuring probe and/or line, and pumping equipment with a phosphate free detergent (ex. Alconox), rinse with distilled or de-ionized water, and wipe clean each time it is used in a well. This minimizes the opportunity for cross-contamination to occur during sampling.

Sample as soon as possible after purging

Always document field events (e.g. well access, monitoring, purging and sampling procedural deviations) in a field logbook or appropriate field form.

Chain-of-custody documents shall be filled out and remain with the samples until custody is relinquished.

## Special Sampling Considerations

### Volatile Organic Compounds (VOC) Analysis

Groundwater samples for VOC analysis are typically collected in 40 ml glass vials that are preserved with concentrated hydrochloric acid. Absolutely no bubbles or headspace should be present in the vial after it is capped.

After the cap is securely tightened, the vial should be inverted to see if any undetected bubbles are present. If a bubble or bubbles are present, the vial should be topped off with care so as not to flush any preservative out of the vial. If bubbles are still present after capping, a new vial should be obtained and the sample re-collected.

Groundwater producing large amount of fine bubbles will render the sample unacceptable. In this case, unpreserved vials should be used and arrangements must be made with the laboratory to meet the sample holding times.

**Note:** VOC analysis based on U.S. EPA Groundwater Sampling Operating Procedure (SESDPROC-301-R3 section 2.1, effective March 6, 2013).

### Sample Handling and Preservation Requirements

All sample vessels that do not contain preservatives should be rinsed twice with sample water. Groundwater samples will typically be collected from the discharge line of a pump. Reduce the flow from either the pump discharge line during sample collection to minimize sample agitation.

During sample collection, make sure that the pump discharge line does not come in contact with the sample container.

Samples may be collected from either designated tubing or reused tubing after purging decontamination.

Place the sample into appropriate, labeled containers. Samples collected for VOC, acidity and alkalinity analysis must **not** have any headspace. All other sample containers can be filled with headspace.

## **Quality Control**

To assure adequate QA/QC in the field, the sampling plan should be followed consistently. The laboratory typically provides the tools to verify if procedures are contaminating water samples, hence, a variety of samples and blanks need to be collected and analyzed. The following are typical checks:

Field Duplicate - Field duplicates are prepared by the laboratory to be collected at a frequency of one per sampling event (or one a day) or one (1) per 10 sampling locations. Field forms should note the wells from which field duplicates were collected.

Trip Blanks - Trip blanks are generally prepared by the laboratory and are included in each cooler containing VOC samples. At a minimum, at least one trip blank should accompany each sampling event. Trip blanks are never opened in the field.

Equipment Blanks - Whenever non-dedicated sampling equipment is used, equipment/field blanks should be collected. An equipment/field blank is obtained by passing analyte-free, distilled or deionized water through a cleaned sampling apparatus (pump, bailer, filtration gear, etc.) and collecting it in a clean container. This blank is used to assess the effectiveness of the decontamination procedures implemented between sampling locations.

Immediately after sampling, well data measurements shall be recorded in a field logbook or field monitoring/sampling form, and Chain-of-Custody documentation shall be completed.

## **Field Procedures**

### Accessing the Well

Monitoring wells are usually secured with a locking cover or bolted metal housing, either at ground level in well box or inside a 2- to 3- foot tall metal pipe housing. Inside the housing, the actual monitoring well (usually a 2- or 4-inch PVC pipe) is sealed with an expandable rubber plug that can be locked tight. The plug is sometimes sealed with a keyed padlock. Specific entities will need to be notified in order to access certain wells/properties and to schedule site work.

After completion of monitoring and sampling activities, all locking covers, locks, housing covers, and access gates should be secured safely to ensure protection of the well. Any maintenance or improvement needs should be recorded and reported to the supervisor and WRD.

### Level readings

Groundwater level and well depth measurements are needed to determine the volume of water or drawdown in the well casing for proper purging. These measurements also provide indication of the well condition.

All groundwater level and well depth measurements are made relative to an established reference point on the well casing documented in the field records. This reference point is usually identified by a permanent marker for PVC wells, or by a notch at the top of casing. By convention, this marking is usually placed on the north side of the top of casing. If no mark is apparent, the person performing the measurements should take both water level and depth measurements from the north side of the top of casing and note this procedure in the field logbook

Water levels should be allowed to equilibrate prior to measurement after removing sealing caps. When the sounding probe comes in contact with the water, the circuit is closed and a meter light and/or audible buzzer attached to the spool will signal contact. At least two readings are made. Measurements should be made and recorded to the nearest 0.01 foot.

The well sounder, a weighted tape or electronic water level indicators can be used to determine water level and the total well depth. Measuring well depth is accomplished by lowering the tape or cable until the weighted end is felt resting on the bottom of the well. The operator may find it easier to allow the weight to touch bottom and then detect the 'tug' on the tape while lifting the weight off the well bottom. Well depths do not need to be measured when we are only checking water levels (i.e., not sampling).

As a cautionary note, when measuring well depths with the electronic water level indicators, the person performing the measurement should initially check if the water level probe has its circuit closing electrode referenced to the tape distance markings and specific for water level

sounding. In some instances, one must measure and add the length of the probe beneath the circuit closing electrodes to the depth measured to obtain the true depth

**Note:** Level reading procedures based on U.S. EPA Groundwater Level and Well Depth Measurement Operating Procedure (SESDPROC-105-R2, effective January 29, 2013).

### Data Loggers

Solinst Leveloggers and Barologgers may be found suspended on a wire line cable or coaxial “direct read cables” inside the well. The table in Appendix A indicates the wells that currently have transducers and/or barologgers installed in them. Additionally, prior to each water level measurement event, WRD will provide a list of water level measurements from the previous event; the list will also include a notation of which wells have transducers and/or barologgers installed in them. Connecting the cable end of the data loggers to a Leveloader allows viewing of the data, downloading and/or programming in the field. It is important to record the lapsed time real-time data logging was disturbed for later data interpretation.

After removing the data logging unit from the well, the water level is allowed to equilibrate/stabilize and is then measured using a water level sounder. After water level and depth measurements, purging and groundwater sampling are conducted the Levelogger and Barologger are placed back in the well as previously set.

### Decontamination

Equipment and tools shall be kept cleaned and decontaminated throughout the groundwater sampling activities. Equipment in direct contact with groundwater such as water level meter tapes, probes, tubings, pumps, and protective sheaths will be new or decontaminated using at least the following process: Phosphate free soap (Alconox, Liquinox or equivalent) and water wash, and DI water rinse. Soap and DI water bath and sprays may be used for the process. Decontamination wastes such as rinsates, liquid spray, soil, nitrile gloves and other debris should be fully contained and collected for proper waste management and disposal.

**Note:** Decontamination procedures based on U.S. EPA Field Equipment Cleaning and Decontamination (SESD, SESDPROC-205-R2, effective December 20, 2011).

## **Purging Requirements**

Prior to sampling a monitoring well, the well must be purged to remove standing water from the well. Purging also serves to rinse and condition the sampling equipment with well water.

### Purge Volume Determination and Purge Adequacy

Prior to initiating the purge, the amount of water standing in the well should be determined. To do this, the diameter of the well/ casing must be determined and the water level and total depth of the well should be measured and recorded. Measuring the depth of a well indicates the amount of siltation that has occurred. Natural siltation can block water from entering, which could lead to erroneous water level measurements and bias analytical results by increasing sample turbidity. Checking depth also provides a check on casing integrity.

Once this information is obtained, calculate the approximate volume of water in the well using the following equation:

$$V = 0.041 \times d^2 \times h$$

Where:

h = length of water column\* (ft)

d = diameter of well (in)

V = volume of water (gal)

\*The length of the water column (h) is the total depth of the well minus the depth to water. Multiply the calculated volume (V) by the desired number of well volumes to determine the purge volume, in gallons.

With respect to volume, an adequate purge is normally achieved when three to five well volumes have been removed. The field notes should reflect the single well volume calculation, and a reference to the appropriate multiplication of that volume, i.e., a minimum three well volumes, identified as a purge volume goal.

### Equipment Considerations for Purging

Monitoring well purging is accomplished by using in-place plumbing and dedicated pumps or by using portable pumps/equipment when dedicated systems are not present. The equipment utilized consists of a variable speed submersible pump and dedicated/ in-place bladder pumps. Standard operating procedures for these 2 methods are discussed in the following sections. In addition, the manufacturer's manual on operation, calibration and maintenance manuals for all groundwater monitoring and sampling equipment used by our crew are included in Appendix G.

Well Purging and Sampling Standard Operating Procedure

**Method 1 – Submersible Pump**

When a submersible pump, e.g. Grundfos RediFlo2, is used for well purging/ sampling, the pump itself is lowered into the water column. The pump/hose assembly used in purging should be lowered into the top of the standing water column, but not deep into the column. This is done so that the purging will "pull" water from the formation into the screened area of the well and up through the casing so that the entire static volume can be removed. If the pump is placed deep into the water column, the water above the pump may not be removed, and the subsequent samples may not be representative of the aquifer conditions. The pump should be lowered no more than three to five feet into the water column. If the recovery rate of the well is faster than the pump rate and no observable drawdown occurs, the pump should be raised until the intake is within one foot of the top of the water column for the duration of purging. If the pump rate exceeds the recovery rate of the well, the pump will have to be lowered, as needed, to accommodate the drawdown.

Before purging begins, prepare the necessary field forms. Review past well data, including pump depth placement and Variable Flow Drive (VFD) settings. Complete the field form including the type of equipment being used. Lay plastic sheeting around the well to prevent contaminating the equipment.

1. Using a water level meter, measure and record the depth to static/standing water level and the depth of the well inside the casing.
2. Calculate and record the well water volume (multiply by 3 to get purge volume).
3. In the monitoring well, lower the submersible pump followed by a water-level sensor to the desired location of the pump intake. Lower the equipment slowly and smoothly to avoid stirring up particulates. Position the pump intake between 3 ft (~0.9 m) below static water surface and a minimum distance above the top of the open/screened interval. The water-level sensor should be a maximum of 1 ft (~0.3 m) below water surface.
4. Start the generator. Connect the pump terminals to the generator, then run the pump using the VFD keypad controls. Gradually increase and (or) adjust the pumping rate to limit drawdown to between 0.5 and 1.0 ft (~0.15 to ~0.3 m). Measure the water level as purging progresses. The pumping rate for a pump can be determined by collecting the discharge from the pump in a bucket of known volume and timing how long it takes to fill the bucket. The pumping rate is recorded in gallons per minute.
5. If the final intake position is above the screened or open interval, the final pumping rate should be about 500 to 1,000 milliliters per minute. Do not exceed 1 ft of drawdown.
6. If the final intake position is within the screened or open interval, the final pumping rate should be about 200 to 500 milliliters per minute. Do not exceed 0.5 ft of drawdown. After approximately one to two well volumes are removed, a flow-through cell may be hooked-up to the discharge tubing of the pump.
7. If the pump and intake position are fixed, as in a supply well, control the rate of flow for field measurements through flow-splitting valve(s). Do not move the pump during



purging or sample collection after the intake has been set at the final location.

8. Throughout purging, monitor and record field-measurement readings. Check for special instructions regarding field-measurement or field-analysis requirements. Consult criteria for establishing field-measurement stabilization.
9. Record field measurements at regular time intervals, about 3 to 5 minutes apart. For deep wells, the time intervals could be 15 minutes or longer. The time intervals selected will depend on the well characteristics and hydraulic properties of the aquifer, but the intervals must be sufficiently spaced to yield results representative of aquifer properties.
10. Purge a minimum of three well volumes or the purge volume dictated by study.
11. As the third or last well volume is purged, when the final field measurements are recorded, adjust the purge rate to the pumping rate to be used during sampling.
12. If criteria are being met--record at least five sequential measurements and report the median value.
13. If criteria are not being met, consult the study requirements and objectives. Extend the purge time if readings still do not stabilize; report the median value of the last five or more sequential measurements.
14. Contain purge water as required by Federal, State, or local regulations.
15. Complete field forms and report the data. Report the median of the recorded field-measurement readings as the final well volume is purged. Record anomalies, difficulties, and adjustments on the field form. Record the purge volume, rate of pumping, initial and final intake locations, and time and respective reading of sequential field measurements.
16. Prepare the sample bottles and collect groundwater samples using the same purge tubing. Place bottles in coolers and add ice/ ice packs in sealed bags.
17. Turn off pump, shut off generator. Slowly pull out the pump/hose assembly. Wipe dry the portion of the submerged hose and pump, and set up to decontaminate as per SOP (see section 5.8.4). Bag or wrap the pump with clean plastic prior to storage.

**Note:** Purging and sampling procedure based on U.S. EPA Groundwater Sampling Operating Procedure (SESDPROC-301-R3 section 3.3.1, effective March 6, 2013).

***Method 2 - Bladder Pump***

The following describes the purging and sampling procedures for the collection of ground-water samples when using a bladder pump. These procedures describe steps for both dedicated and non-dedicated systems. Some WSB monitoring wells have dedicated bladder pumps installed at set depths. Two surface tubing lines (air supply line and intake line) are required to hook up to the Micro Purge Basics Controller (Model MP-10 Controller).

Before purging begins, lay out plastic sheeting around the well to minimize the likelihood of contamination of sampling/purging equipment from the soil. Place monitoring, purging and sampling equipment on the sheeting.

1. Measure water level depth and well casing depth (to nearest 0.01 feet, and at least twice to confirm) relative to a reference measuring point on the well casing with an electronic water level indicator and record in logbook or ground-water sampling log.
2. Calculate the volume of the water inside the tubing that extends from the top of the monitoring well to the depth of the intake.
3. For a dedicated system – The pump (a QED P1101M bladder pump) has already been installed. Refer to the available monitoring well data from the last purge/ sampling and enter pertinent information into the new blank form (Baseline Environmental Consulting Groundwater Sampling Form). Note purge data, including pump intake depth, purge volume and (MP-10) controller settings
4. For a non-dedicated system - Place the pump and support equipment at the wellhead and slowly lower the pump and tubing down into the monitoring well until the location of the pump intake is set at a pre-determined location within the screen interval. The placement of the pump intake should be positioned with a calibrated sampling pump hose, sounded with a weighted-tape, or using a pre-measured hose. Measure the depth of the pump intake while lowering the pump into location. Record pump location in a field logbook or sampling log.
5. For both non-dedicated system and dedicated systems, the following procedure applies - Measure the water level and record information on the ground-water sampling log, leave water level indicator probe in the monitoring well.
6. For both non-dedicated and dedicated systems - Connect the discharge line from the pump to a flow-through cell. A “T” connection is recommended prior to the flow cell to allow for the collection of water for the turbidity measurements. The discharge line from the flow-through cell must be directed to a container to contain the purge water during the purging and sampling of the monitoring well.

7. Non-dedicated and dedicated system – Connect all tubing/ fittings to air supply and pump to controller. Set air supply pressure (max 125 psi), set cycle and discharge values, set air intake psi and cycle frequency in the MP-10 Controller. Turn on pump and throttle/ adjust refill and discharge flow rates. Start pumping the well at a low flow rate (0.2 to 0.5 liter per minute) and slowly increase the speed. Check water level. Maintain a steady flow rate while maintaining a drawdown of less than 0.33 feet. If drawdown is greater than 0.33 feet lower the flow rate. Measure the discharge rate of the pump with a graduated cylinder and a stop watch. Also, measure the water level and record both flow rate and water level on the groundwater sampling log.
8. Non-dedicated and dedicated system - Continue purging, monitor and record water level and pump rate every three to five minutes during purging. Pumping rates should be kept at minimal flow to ensure minimal drawdown in the monitoring well.
9. Non-dedicated and dedicated system - During the purging, a minimum of one tubing volume (including the volume of water in the pump and flow cell) must be purged prior to recording the water-quality indicator parameters. Then monitor and record the water-quality indicator parameters every three to five minutes.
10. Once the criteria have been successfully met indicating that the water quality indicator parameters have stabilized, then sample collection can take place. If two tubing volumes (including the volume of water in the pump and flow cell) have been removed during purging then sampling can proceed. All information should be noted in the field notebook and groundwater sampling form with an explanation if a different purging and sampling procedure was conducted.
11. Prepare the sample bottles and collect groundwater samples using the same purge tubing. Place bottles in coolers and add ice/ ice packs in sealed bags.
12. After sampling, recording and properly storing the samples, turn off pump and air supply, and disconnect fittings. In a non-dedicated system slowly pull out/ remove the pump and tubing assembly from the monitoring well. Decontaminate the pump and tubing.
13. For a dedicated system, disconnect all surface tubing that extends from the plate at the wellhead (or cap). Rinse, bag and seal for future use in the same well. Also, decontaminate the tubing if to be used in other wells.

**Note:** Purging and sampling procedure based on U.S. EPA Groundwater Sampling Operating Procedure (SESDPROC-301-R3 section 3.3.2, effective March 6, 2013).

## **Sampling for Laboratory Analysis**

For monitoring wells, the same pump should be used for purging and sampling without stopping or removing the pump. Samples should be collected directly from the discharge port of the pump tubing prior to passing through the flow-through cell. Alternatively, disconnect the pump's tubing from the flow-through-cell so that the samples are collected from the pump's discharge tubing.

The sequence of the samples is immaterial unless filtered (dissolved) samples are collected and they must be collected last. However, the preferred order of sampling is metals first, followed by other inorganic analytes, extractable organic compounds and volatile organic compounds. All sample containers should be filled with minimal turbulence by allowing the ground water to flow from the tubing gently down the inside of the container.

Access to production wells can be more difficult. Ideally, sample water should be collected directly from the well. A sample valve or spigot will be located in the water pipeline at a point in the distribution system that comes before the water enters any treatment and as close to the well as possible. In some cases it may be possible to gain access to the well casing through an access pipe. If you are sampling directly from a production well by means of a portable submersible pump, considerable care must be taken to avoid tangling or wedging the sampling/testing equipment between the production line, cables, and other equipment typically suspended in a well casing.

## **Documentation and Field Forms**

As mentioned previously, all field documentation should be accurately recorded. Accurate records are critical for historical purposes, including regulatory and liability issues. Appendix E lists all field forms related to all groundwater sampling activities.

We have two (2) level monitoring and groundwater sampling forms adapted from previous works: (1) the SFPUC Groundwater Level Data Field Form which is used for level monitoring survey only, and (2) the Groundwater Sampling Form, which includes more well data than the SFPUC Well Sampling Form used when purging/ sampling with the Grundfos submersible pump. This second form is adapted from Baseline Environmental Consulting for continuity. Because it is available in an electronic program, it is easier to determine when purge stabilization has been achieved. It is necessary to review and copy previous data for reference and guidance in setting flow controls for purging, sampling, and recording. Additional information or issues such as well/site condition and maintenance requirements should be recorded in the comments section.

A Field Daily Activity Log is kept on site and updated with all activities and events. The form is self-explanatory and is completed by filling in the box items such as changes from plans and procedures, important decisions made pertaining to water level monitoring, purging and

sampling, weather conditions, visitors on site, notes on well site number, sample number/ label collected, QA/QC field duplicates collected, personnel on site, etc.

Chain-of-Custody (COC) forms are provided with the sample bottles by the laboratory and accompany the samples collected at all times. The forms are updated as soon as samples have been collected, checked and stored, prior to moving to the next sampling site or finally transporting and submitting all samples to the laboratory.

## References

*U.S. EPA Groundwater Sampling Operating Procedure*, Science and Ecosystem Studies Division (SESD), SESDPROC-301-R3, effective March 6, 2013.

*U.S. EPA Groundwater Level and Well Depth Measurement Operating Procedure*, SESD, SESDPROC-105-R2, effective January 29, 2013.

*U.S. EPA Field Equipment Cleaning and Decontamination*, SESD, SESDPROC-205-R2, effective December 20, 2011.

*CS-179 Groundwater Monitoring Program*: Agreement between the City and County of San Francisco and Baseline Environmental Consulting – Westside Basin Services to be provided by Contractor.

*Field Procedures – Westside Basin Monitoring Project*, SFPUC Natural Resources Division – Limnology

*Groundwater Quality Monitoring – Sampling and Testing Protocol for Westside Basin*, Luhdorf and Scalmanini Consulting Engineers, November 2006