



Malibu Civic Center Wastewater Treatment Facility

First Quarter 2017 Groundwater + Surface Water Monitoring Report



Rincon Consultants Inc.
April 2017

Submitted to:

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April 24, 2017
Project 15-01587

Craig George
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Building Official
City of Malibu
23825 Stuart Ranch Road
Malibu, CA 90401

Subject: First Quarter 2017 Baseline Groundwater and Surface Water Monitoring Report, Malibu Civic Center Wastewater Treatment Facility – City of Malibu, California

Dear Mr. George:

Rincon Consultants, Inc. has prepared the First Quarter 2017 Baseline Groundwater and Surface Water Monitoring Report for the Malibu Civic Center Wastewater Treatment Facility located in Malibu, California. The objective of the study is to develop baseline groundwater and surface water quality conditions prior to the operation of the Wastewater Treatment Facility. Once the Wastewater Treatment Facility is operating, the baseline water quality conditions will be used to identify any potential impacts as a result of land disposal of treated wastewater via injection and landscape irrigation or percolation on the receiving water aquifers, Santa Monica Bay, Malibu Creek, and Malibu Lagoon.

Please contact us with any questions you may have regarding the results of the First Quarter 2017 Baseline Groundwater and Surface Water Monitoring Report.

Sincerely,
RINCON CONSULTANTS, INC.

A handwritten signature in black ink, appearing to read "Peter Shellenbarger".

Peter Shellenbarger, MESM
Environmental Scientist

A handwritten signature in blue ink, appearing to read "Walt Hamann".

Walt Hamann, PG, CHG, CEG, QSD/P
Vice Presidentt



Torin Snyder, PG, CHG, TOPE, QSD/P
Senior Hydrogeologist

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment."

Executed on the 1st day of May at 2017


_____ Signature

Environmental Sustainability Dir. Title



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1.0 INTRODUCTION

This report presents the results of the First Quarter 2017 Baseline Groundwater and Surface Water Monitoring events for the Malibu Civic Center Wastewater Treatment Facility located in the City of Malibu, California (Figure 1). The objective of the work program is to implement and manage a basin-wide groundwater and surface water monitoring and reporting program. The monitoring program has been designed to identify potential impacts as a result of land disposal of treated wastewater via injection and landscape irrigation or percolation on the receiving water quality of the local groundwater aquifers, Santa Monica Bay, Malibu Creek, and Malibu Lagoon.

This report was prepared by Rincon Consultants, Inc. (Rincon) and presents the geologic and hydrogeologic setting, groundwater elevations and gradient, surface water sampling methodologies, groundwater sampling methodologies, water quality data results, and our conclusions.

2.0 BACKGROUND

On-site wastewater disposal systems (OWDS) have allegedly contributed to the non-point source pollution of Malibu Creek and Lagoon located in the Civic Center Area of the City of Malibu. As a result of regulatory actions taken by the Los Angeles Regional Water Quality Control Board (LARWQCB) and the State Water Resources Control Board (SWRCB) to prohibit discharges from OWDS in the Civic Center area, the City of Malibu has designed and begun constructing a new centralized wastewater treatment facility.

To establish baseline groundwater and surface water quality conditions prior to operation and discharge of treated wastewater, the LARWQCB requires basin-wide, baseline groundwater and surface water monitoring. The water quality monitoring program is driven by several factors:

- Timelines established through regulatory action
- Proposed programs to fulfill anticipated future regulatory requirements associated with the development of the Civic Center Wastewater Treatment Facility (CCWTF)
- The distribution of Title 22 Recycled Water in the Prohibition area
- Protection of the Malibu Valley Groundwater Basin, Malibu Creek, Malibu Lagoon, and the near shore environment of Santa Monica Bay.

At this time, the basin-wide monitoring program consists of five water quality monitoring tasks that occur in the Civic Center area of the City of Malibu. All five monitoring tasks have been designed to build upon one another to provide a comprehensive basin-wide groundwater and surface water monitoring program. Below is a general description of each task and a discussion of its key objective.

– *Task I – Baseline Groundwater and Surface Water Quality Monitoring of the Civic Center Area*
The baseline groundwater and surface water quality monitoring task involves monitoring groundwater in nine shallow and deep groundwater wells, and monitoring surface water quality at ten locations. The objective of the monitoring in this task is to develop baseline, ambient shallow and deep groundwater and surface water conditions prior to the



implementation of the CCWTF, as required by the Monitoring and Reporting Program (MRP) No. CI 10042 issued by the LARWQCB (LARWQCB 2015).

– *Task II – Long-Term Monitoring of Groundwater and Surface Water Quality Monitoring of the Civic Center Area*

The long-term groundwater and surface water quality monitoring task involves monitoring groundwater in nine shallow and deep groundwater wells and monitoring surface water quality at ten locations. The objective of the long-term monitoring is to identify the impact that land disposal of recycled water, via injection and landscape irrigation or percolation, will have on the water quality of the receiving groundwater aquifers, Santa Monica Bay, Malibu Creek, and Malibu Lagoon. The nine groundwater monitoring wells and ten surface water sampling locations identified in Task II will be sampled on a quarterly basis once CCWTF operations commence. This sampling is required by the MRP No. CI 10042 issued by the LARWQCB (LARWQCB 2015).

– *Task III – Salt and Nutrient Management Plan Monitoring Program*

The Salt and Nutrient Management Plan (SNMP) monitoring program branches off from the baseline and long-term groundwater and surface water monitoring programs described above (Tasks I and II). Task III involves performing semi-annual groundwater monitoring at 16 groundwater monitoring wells (mix of shallow and deep) located in the Civic Center area of the City and in a small area in the unincorporated portion of Los Angeles County. The objective of the SNMP is to monitor the potential impacts that recycled water, introduced through irrigation and injection, will have on the Malibu Groundwater Basin. The SNMP will also provide data to assess the various phases of the CCWTF implementation during the time that the collection system and treatment plant connections increase, and as OWDS-related discharges cease (RMC Water 2015a).

– *Task IV – Memorandum of Understanding Compliance Monitoring*

Compliance with the Memorandum of Understanding (MOU) the City has entered into with the LARWQCB corresponds with baseline and long term groundwater and surface water monitoring programs described in Tasks I through III above. Task IV involves performing semi-annual monitoring at 14 groundwater wells located in the City's Civic Center area. The objective of the MOU is to monitor for potential impacts to the Shallow Alluvium as a result of CCTWF implementation (LARWQCB 2014).

– *Task V – Civic Center Groundwater Elevation Monitoring Program*

The groundwater elevation monitoring program has been designed to appraise the groundwater elevations in the Malibu Groundwater Basin and in Winter Canyon Groundwater Basin. The objective of this task is to provide a better understanding of the groundwater elevation conditions of the Civic Center Area, including elevation trends related to precipitation, tidal, and lagoon influences (LARWQCB 2015).

3.0 GEOLOGIC AND HYDROGEOLOGIC SETTING

3.1 HYDROLOGY

The project lies in the Los Angeles hydrologic region, as defined by the LARWQCB. The Los Angeles hydrologic region encompasses all coastal drainages flowing to the Pacific Ocean between Rincon Point and the eastern Los Angeles County line. The study area covers two watersheds: the Malibu Creek and Winter Canyon Creek watersheds. The majority of the study area addressed in this report is located within the 109-square-mile Malibu Creek watershed, which is the second largest watershed draining to the Santa Monica Bay. The Malibu Creek watershed contains mostly undeveloped mountain areas, large-acreage residential properties, and many natural stream reaches (Los Angeles RWQCB 2011). Malibu Lagoon is located at the terminus of the Malibu Creek watershed. Malibu Lagoon is a brackish estuary of approximately 13 acres but is one of the only two remaining coastal marshes in Los Angeles County.

3.2 GEOLOGY

The study area is located within the Santa Monica Mountains in the northwestern corner of the Los Angeles basin. The study area lies at the juncture of the Peninsular Ranges geomorphic province, consisting of a northwest-oriented structural grain, and the Transverse Ranges geomorphic province, which features a predominantly east-west-oriented structural grain.

The 45-mile-long Santa Monica Mountains range is part of the southernmost portion of the western Transverse Ranges province. It forms an east-west range of low mountains along the southern California Coast from the Oxnard Plain to Los Angeles. The Santa Monica Mountain range is characterized by long, south draining canyons on its south flank and short, north draining canyons on its north flank. The Malibu Canyon and Winter Canyon are two significant canyons within the study area that drain to the south.

3.3 HYDROGEOLOGY

The Malibu Valley Groundwater Basin (DWR groundwater basin no. 4-22) is a small alluvial basin, approximately 613 acres in size. The groundwater basin is bounded by the Pacific Ocean on the south, and by the Santa Monica Mountains, composed of non-water-bearing Tertiary age rocks to the north, east, and west.

Water bearing geologic formations in the Malibu Valley Groundwater Basin are comprised of Holocene alluvium, consisting of clays, silts, sands, and gravels, overlying impermeable bedrock. The unconsolidated alluvium in the Civic Center area by Malibu Creek and other small drainages is estimated to range in thickness from a thin layer near the valley walls to around 175 feet in the central part of the main body of the alluvium. The alluvium can be subdivided into three categories or zones: 1) a shallow zone of permeable alluvial sediments, 2) underlain by a sequence of fine-grained estuarine deposits, and 3) and underlying coarse-grained stratum commonly referred to as the "Civic Center Gravels" (GeoSoils 1989, Leighton 1994, ECI 200, Ambrose and Orme 2000, Fugro West, Inc. 2005, Geosyntec Consultants 2007). Depth to groundwater in the alluvium is typically 5 to 13 feet below grade and is deeper in the upland canyon areas.



4.0 ACTIVITIES COMPLETED DURING FIRST QUARTER 2017

The following activities were completed during the first quarter of 2017:

- Prepared and submitted the Fourth Quarter 2016 and 2016 Annual Groundwater and Surface Water Monitoring Reports to the LARWQCB.
- Rincon collected and analyzed surface water samples for MRP compliance (Task I).
- Rincon collected and analyzed groundwater samples for SNMP compliance (Task III).
- Rincon collected and analyzed groundwater samples for MOU compliance (Task IV).
- Rincon measured depth to water in the groundwater monitoring wells (Task V) January 2017, February 2017, and March 2017.

5.0 GROUNDWATER ELEVATIONS AND GRADIENTS

Rincon measured the depth to water monthly in 46 groundwater monitoring wells using an electronic water level indicator January 17, 2017, February 24, 2017, and March 27, 2017 (Table 1 and Appendix A). Of the 46 groundwater monitoring wells, seven of the wells do not have elevation data for the top of well casing. Therefore, groundwater elevations could not be calculated in these seven groundwater wells. Groundwater monitoring wells MCWP-MW07S, MCWP-MS07D, MCWP-MW05, and MCWP-MW03 were inaccessible during First Quarter 2017 due to construction of Malibu Civic Center Wastewater Treatment Facility infrastructure.

5.1 SHALLOW ZONE

Groundwater elevations ranged from 2.41 feet above mean sea level (amsl) in groundwater monitoring well MCWP-MW10 to 23.48 feet amsl in groundwater monitoring well EC-RC-MW01 (Table 1). An increasing trend in groundwater elevations was observed throughout the Civic Center area during the first quarter of 2017 when compared to fourth quarter 2016 monitoring data. Groundwater elevation decreased a maximum of 2.10 feet amsl in groundwater monitoring well SMBRP-16 and increased a maximum 5.23 feet amsl in groundwater monitoring well SMBRP-10C. Groundwater elevations increased the most during January and February; shallow groundwater elevation increases are believed to be attributed to above average rainfall totals observed during January and February 2017.

Groundwater gradient for January 2017, February 2017, and March 2017 are 0.0022 feet per foot, 0.0035 feet per foot, 0.0056 feet per foot, respectively. Groundwater gradients were calculated using monthly groundwater measurements derived from groundwater monitoring wells SMBRP-9, SMBRP-12, and SMBRP-2. The predominant direction of groundwater flow ranged from southeast to south, towards the coastline. Elevation data and flow direction are depicted in Figures 3 through 5.

5.2 DEEP ZONE

Groundwater elevations ranged from 4.64 feet amsl in groundwater monitoring well MCWP-MW06 to 10.51 feet amsl in groundwater monitoring well MCWP-MW09 (Table 1). Groundwater elevation decreased a maximum of 1.36 feet amsl in groundwater monitoring well



MCWP-MW06 and increased a maximum 0.52 feet amsl in groundwater monitoring well MCWP-MW09 when comparing monthly groundwater elevations during the first quarter of 2017. All deep zone groundwater well elevations increased between December 2016 and January 2017.

5.3 WINTER CANYON

Groundwater elevations ranged from 10.38 feet amsl in groundwater monitoring well SMBRP-11 to 55.84 feet amsl in groundwater monitoring well LAMW-5S (Table 1). Groundwater elevation decreased a maximum of 0.75 feet amsl in groundwater monitoring well SMBRP-11 and increased a maximum 1.83 feet amsl in groundwater monitoring well LAMW-5S when comparing monthly groundwater elevations during the first quarter of 2017. No clear trend was observed in groundwater elevations during the first quarter of 2017.

6.0 WATER QUALITY SAMPLING AND ANALYSIS

6.1 SURFACE WATER SAMPLING METHODOLOGY

During the first quarter of 2017 a total of ten surface water samples were collected. Six surface water samples were collected from the Malibu Lagoon and Creek and four ocean water samples were collected from the near shore area along Malibu Road. Surface water samples from nearshore were collected from each location at a depth of approximately 3-6 inches (ankle deep). Surface water samples from Malibu Lagoon and Creek were collected from each location at a depth of approximately twelve inches below the surface of the water. All surface water samples were collected up-current of the sampling person's body to minimize the potential for contaminating the surface water sample with bacteria that may originate from field personnel. Surface water samples were collected in a field sampling container and then transferred into preserved and non-preserved containers supplied by Fruit Growers Laboratory, Inc. (FGL) located in Santa Paula, California. The containers were capped, labeled, placed in Ziploc bags, and stored on ice in a cooler pending delivery to FGL. The surface water samples were analyzed for total and fecal coliform, total dissolved solids (TDS), phosphorous, nitrate (as nitrogen), nitrite (as nitrogen), ammonia, organic nitrogen, and total Kjeldahl nitrogen (TKN). All surface water monitoring locations and corresponding laboratory analysis are shown in the Surface Water Analysis Matrix (Table 2).

6.2 GROUNDWATER SAMPLING METHODOLOGY

A total of fourteen groundwater samples were collected during the first quarter of 2017. Monitoring wells MCWP-MW07D and MCWP-MW07S were inaccessible during March 2017 due to Malibu Civic Center Wastewater Treatment Facility infrastructure installation along Malibu Road. Prior to sampling, a minimum of three casing volumes were purged from each well using a submersible pump. Purging stopped when consecutive water quality measurements (temperature, electrical conductivity, and pH) varied by less than 10 percent or until the well purged dry, which ever occurred first. Field equipment was decontaminated between each well. Purged groundwater and decontamination water was stored in 55 gallon drums approved by Department of Transportation (DOT). Field data are included in Appendix A.



Once each well was purged, groundwater samples were collected using preserved and non-preserved containers supplied by FGL. The containers were capped, labeled, placed in Ziploc bags, and stored on ice in coolers pending delivery to FGL. All groundwater monitoring locations and corresponding laboratory analysis are shown in the Groundwater and Surface Water Analysis Matrix (Table 2).

6.3 SURFACE WATER ANALYTICAL LABORATORY ANALYSIS

Surface water samples collected during the first quarter of 2017 were analyzed by FGL. The laboratory analytical results included constituents listed in Table 3. Laboratory reports are included as Appendix B of this report.

6.3.1 Total Coliform

During the first quarter 2017 monitoring event, total coliform concentrations in the near shore ranged from 6.8 Most Probable Number per 100 milliliters (MPN/100 mL) at N-004 to 350 MPN/100 mL at N-003 with an average concentration of 44.9 MPN/100 mL. Total coliform concentrations in the surface water of Malibu Creek and Lagoon ranged from 70 MPN/100 mL at L-003 to 540 MPN/100 mL at L-001, L-004, and L-006 with an average concentration of 332 MPN/100 mL.

6.3.2 Fecal Coliform

During the first quarter 2017 monitoring event, fecal coliform concentrations in the near shore ranged from less than 1.8 MPN/100 mL at N-002 to 33 MPN/100 mL at N-003 with an average concentration of 13.9 MPN/100 mL. Fecal coliform concentrations in the Malibu Creek and Lagoon surface water ranged from <1.8 MPN/100 mL at L-001 to 170 MPN/100 mL at L-004 with an average concentration of 52 MPN/100 mL.

6.3.3 Nitrogen

6.3.3.1 Nitrate as Nitrogen

Nitrate as nitrogen concentrations in all surface water samples collected at the near shore sampling locations were less than or equal to 0.1 milligrams per liter (mg/L), the analytical practical quantification limit (reporting limit), except N-001 which reported 0.2 mg/L. Nitrate as nitrogen concentrations in surface water samples collected at Malibu Creek and Lagoon sampling locations ranged from less than 0.1 mg/L at L-006 to 1.5 mg/L at L-001 and L-002 with an average concentration of 0.96 mg/L.

6.3.3.2 Other Forms of Nitrogen

All nitrite as nitrogen concentrations in surface water samples collected at the near shore and Malibu Creek and Lagoon sampling locations were not detected above the reporting limit of 0.1 mg/L, except N-004 which reported 0.153 mg/L.

Ammonia (NH_3^+) is the primary form of nitrogen in OWDS effluent, and it is converted to nitrate during the leaching process through the vadose zone (Figure 6). All ammonia concentrations in surface water samples collected at the near shore and the Malibu Creek and



Lagoon sampling locations during the first quarter of 2017 were not detected above the reporting limit of 0.2 mg/L.

TKN concentrations in surface water samples collected at the near shore sampling locations during the first quarter of 2017 were only detected above the reporting limit of 0.5 mg/L at sampling location N-003 with concentrations of 10.8 mg/L. TKN concentrations detected in surface water samples collected at Malibu Creek and Lagoon sampling locations during the first quarter of 2017 ranged from less than 0.5 mg/L at L-005 to 13.6 mg/L at sampling location L-006 with an average concentration of 3.6 mg/L.

Organic nitrogen concentrations in surface water samples collected at the near shore sampling locations during the first quarter of 2017 were only detected above the reporting limit of 0.5 mg/L on at sampling location N-003 with concentrations of 10.8 mg/L. Organic nitrogen concentrations detected in surface water samples collected at the Malibu Creek and Lagoon sampling locations during the first quarter of 2017 ranged from less than 0.1 mg/L at sampling location L-006 to 1.5 mg/L at sampling locations L-006 and L-002 with an average concentration of 0.96 mg/L.

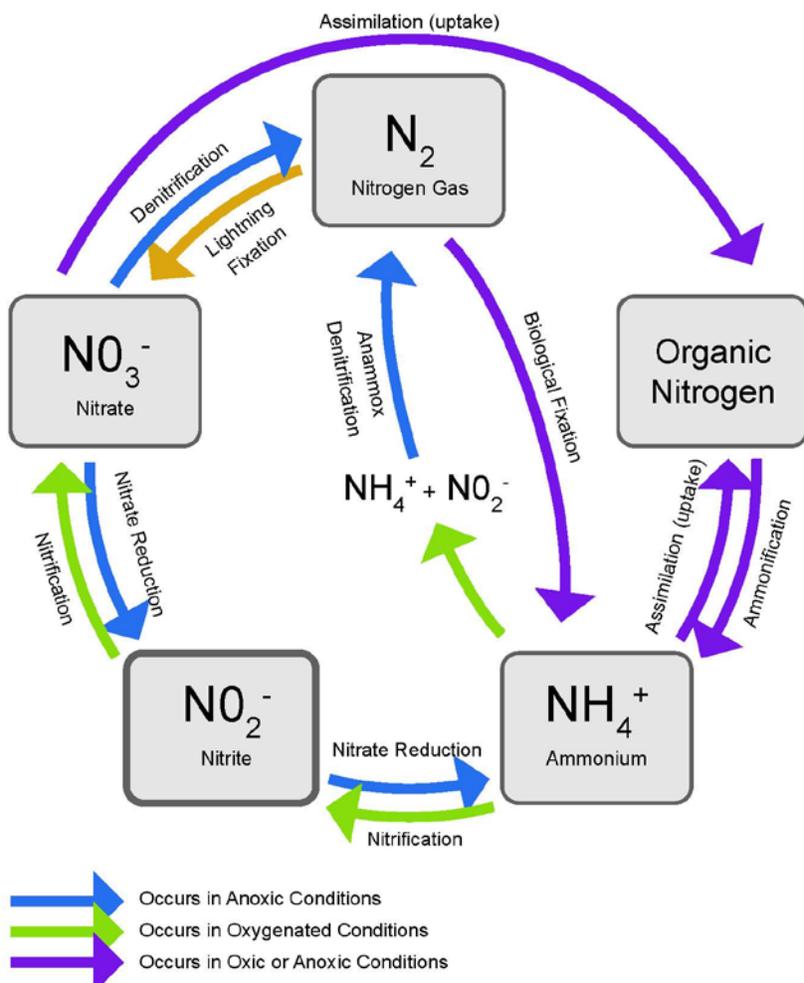


Figure 6. The Nitrogen Cycle

6.3.4 Total Phosphorous

Total phosphorus concentrations detected in surface water samples collected at the near shore sampling locations during the first quarter of 2017 ranged from 0.127 mg/L at sampling location N-002 to 1.87 mg/L at sampling location N-004 with an average concentration of 1.039 mg/L. Total phosphorus concentrations detected in surface water samples collected at Malibu Creek and Lagoon during the first quarter of 2017 ranged from 0.104 mg/L at L-005 to 3.500 mg/L at L-006 with an average concentration of 0.914 mg/L.

6.3.5 Analytical Laboratory QA/QC

FGL performed QA/QC measures including the recovery of surrogates. FGL followed all QA procedures per method requirements. Any exceedances are indicated in the Case Narrative of the analytical laboratory report. The Data Qualifier Flag (DQF) column of the analytical reports also has the QC flags; definitions for the QC flags are below the analytical tables.

6.4 GROUNDWATER ANALYTICAL LABORATORY ANALYSIS

Groundwater samples collected during the first quarter of 2017 were analyzed by FGL. The laboratory analytical results from the monitoring event include constituents listed in Table 4. Laboratory reports are included as Appendix B of this report.

6.4.1 Total Coliform

During the first quarter 2017 monitoring event, total coliform concentrations in groundwater wells ranged from less than 1.8 MPN/100 mL to greater than 1,600 MPN/100 mL with an average concentration of 186.11 MPN/100 mL. Total coliform was detected above practical quantification limits in all but two monitoring wells sampled during the first quarter of 2017 (MCWP-MW10 and SMBRP-13).

6.4.2 Fecal Coliform

Fecal coliform concentrations in groundwater wells were detected above 1.8 MPN/100 mL (practical quantification limit) in MBCMW-9, MCWP-MW09, and CCPE with detection concentrations of 4.5 MPN/100mL, 7.8 MPN/100mL, and 350 MPN/100mL, respectively.

6.4.3 Nitrogen

6.4.3.1 Nitrate as Nitrogen

During the first quarter 2017 monitoring event, nitrate as nitrogen ranged from less than 0.1 mg/L at SMBRP-12 and MBCMW-9 to 22.2 mg/L at SMBRP-9 with an average concentration of 4.21 mg/L. Groundwater wells LAMW-5S and SMBRP-9 had the highest detected nitrate as nitrogen concentrations of 13.6 mg/L and 22.2 mg/L, respectively.

6.4.3.2 Other forms of Nitrogen

During the first quarter 2017 monitoring event, nitrite as nitrogen was not detected above the laboratory detection limit of 0.1 mg/L. Ammonia concentrations detected ranged from less than 0.2 mg/L to 7.6 mg/L with an average concentration of 3.01 mg/L.



Organic nitrogen concentrations ranged from less than 0.5 mg/L at multiple groundwater wells to 3.6 mg/L at CCPE with an average concentration of 2.04 mg/L. TKN concentrations ranged from less than 0.5 mg/L at multiple groundwater monitoring wells to 7.85 mg/L at SMBRP-12 with an average concentration of 3.27 mg/L.

6.4.4 Total Phosphorous

During the first quarter 2017 monitoring event total phosphorus concentrations in groundwater samples analyzed ranged from less than 0.1 mg/L at MCWP-MW10 to 6.08 mg/L at TY-MW-1 with an average concentration of 1.64 mg/L.

6.4.5 Total Dissolved Solids

Total Dissolved Solids (TDS) concentrations in groundwater samples analyzed during the first quarter of 2017 ranged from 171 mg/L at MCWP-MW05 to 6,360 mg/L at MCWP-MW04S with an average concentration of 2,195 mg/L. In general, TDS concentration decreased in monitoring wells deeper than 50 feet.

6.4.6 Analytical Laboratory QA/QC

FGL performed QA/QC measures including the recovery of surrogates. FGL followed all QA procedures per method requirements. Any exceedances are indicated in the Case Narrative of the analytical laboratory report. The DQF column of the analytical reports also has the QC flags; definitions for the QC flags are below the analytical tables.

7.0 SCHEDULED ACTIVITIES FOR SECOND QUARTER 2017

The following activities will be completed during 2017:

- Rincon will collect and analyze surface water samples for MRP compliance (Task I).
- Rincon will measure depth to water in the groundwater monitoring wells in April 2017, May 2017, and June 2017 (Task V).
- Rincon will prepare and submit the First Quarter 2017 Groundwater and Surface Water Monitoring Reports to the LARWQCB.

8.0 SUMMARY OF MONITORING ACTIVITIES

An increasing trend in shallow groundwater elevations was observed throughout the Civic Center area during January and February 2017. Shallow groundwater elevation increases are believed to be attributed to above average rainfall totals observed over the last rainy season. Shallow groundwater generally flowed southeast to south.

During the first quarter 2017 monitoring event, total coliform concentrations in the near shore ranged from 6.8 Most Probable Number per 100 milliliters (MPN/100 mL) at N-004 to 350 MPN/100 mL at N-003 with an average concentration of 44.9 MPN/100 mL. Total coliform concentrations in the surface water of Malibu Creek and Lagoon ranged from 70 MPN/100 mL at L-003 to 540 MPN/100 mL at L-001, L-004, and L-006 with an average concentration of 332 MPN/100 mL.



During the first quarter 2017 monitoring event, fecal coliform concentrations in the near shore ranged from less than 1.8 MPN/100 mL at N-002 to 33 MPN/100 mL at N-003 with an average concentration of 13.9 MPN/100 mL. Fecal coliform concentrations in the Malibu Creek and Lagoon surface water ranged from <1.8 MPN/100 mL at L-001 to 170 MPN/100 mL at L-004 with an average concentration of 52 MPN/100 mL.

Based upon limited monitoring data from the 2016 calendar year and first quarter of 2017, it appears that total and fecal coliform bacteria concentrations are highest in the winter months (November 1 - March 31) in Malibu Creek and Lagoon. No total or fecal coliform bacteria concentration trends were observed during the first quarter of 2017.

Nitrate as nitrogen concentrations in all surface water samples collected at the near shore sampling locations were less than or equal to 0.1 mg/L, the analytical practical quantification limit (reporting limit), except N-001 which reported 0.2 mg/L. Nitrate as nitrogen concentrations in surface water samples collected at Malibu Creek and Lagoon sampling locations ranged from less than 0.1 mg/L at L-006 to 1.5 mg/L at L-001 and L-002 with an average concentration of 0.96 mg/L.

Total coliform concentrations in groundwater wells ranged from less than 1.8 MPN/100 mL to greater than 1,600 MPN/100 mL with an average concentration of 186.11 MPN/100 mL. Total coliform was detected above practical quantification limits in all but two monitoring wells sampled during the first quarter of 2017 (MCWP-MW10 and SMBRP-13).

Fecal coliform concentrations in groundwater wells were only detected above 1.8 MPN/100 mL (practical quantification limit) in monitoring wells MBCMW-9, MCWP-MW09, and CCPE during the first quarter of 2017.

Nitrate as nitrogen ranged from less than 0.1 mg/L at SMBRP-12 and MBCMW-9 to 22.2 mg/L at SMBRP-9 with an average concentration of 4.21 mg/L. Groundwater wells LAMW-5S and SMBRP-9 had the highest detected nitrate as nitrogen concentrations of 13.6 mg/L and 22.2 mg/L, respectively.

TDS concentrations in groundwater samples analyzed during the first quarter of 2017 ranged from 171 mg/L at MCWP-MW05 to 6,360 mg/L at MCWP-MW04S with an average concentration of 2,195 mg/L. In general, TDS concentration decreased in monitoring wells deeper than 50 feet.

9.0 LIMITATIONS

This report has been prepared for and is intended for the exclusive use of the City of Malibu. The contents of this report should not be relied upon by any other party without the written consent of Rincon Consultants, Inc.

Our conclusions regarding the site are based on observations of existing site conditions, our interpretation of site usage information, and the results of a limited subsurface sampling and chemical testing program. The concentrations of contaminants measured at any given location may not be representative of conditions at other locations intermediate to the locations sampled. Furthermore, conditions may change at any particular location as a function of time in response to natural conditions, chemical reactions, and other events. Conclusions regarding the condition of the site do not represent a warranty that all areas within the site are similar to those sampled.



10.0 REFERENCES

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Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
C-1	8/24/2015	11.47	N/A	-
	9/21/2015		N/A	-
	10/20/2015		N/A	-
	11/16/2015		5.07	6.40
	12/14/2015		4.12	7.35
	1/14/2016		6.65	4.82
	2/16/2016		6.65	4.82
	3/14/2016		6.80	4.67
	4/25/2016		5.72	5.75
	5/16/2016		4.59	6.88
	6/17/2016		4.72	6.75
	7/20/2016		5.32	6.15
	8/20/2016		5.42	6.05
	9/19/2016		5.47	6.00
	10/21/2016		5.64	5.83
	11/18/2016		4.71	6.76
	12/19/2016		6.75	4.72
	1/17/2017		6.89	4.58
	2/24/2017		7.28	4.19
	3/27/2017		6.66	4.81
C-2	8/24/2015	11.19	5.11	6.08
	9/21/2015		4.92	6.27
	10/20/2015		5.18	6.01
	11/16/2015		4.96	6.23
	12/14/2015		3.93	7.26
	1/14/2016		6.44	4.75
	2/16/2016		6.34	4.85
	3/14/2016		6.50	4.69
	4/25/2016		5.54	5.65
	5/16/2016		4.49	6.70
	6/17/2016		4.62	6.57
	7/20/2016		5.16	6.03
	8/20/2016		5.25	5.94
	9/19/2016		5.21	5.98
	10/21/2016		5.46	5.73
	11/18/2016		4.48	6.71
	12/19/2016		6.74	4.45
	1/17/2017		6.51	4.68
	2/24/2017		6.84	4.35
	3/27/2017		6.55	4.64

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
CCPE	8/24/2015	12.935	5.76	7.18
	9/21/2015		5.61	7.33
	10/20/2015		5.87	7.07
	11/16/2015		5.79	7.15
	12/14/2015		4.52	8.42
	1/14/2016		7.95	4.99
	2/16/2016		8.27	4.67
	3/14/2016		8.35	4.59
	4/25/2016		7.13	5.81
	5/16/2016		5.72	7.22
	6/17/2016		6.54	6.40
	7/20/2016		6.09	6.85
	8/20/2016		6.43	6.51
	9/19/2016		6.80	6.14
	10/21/2016		6.67	6.27
	11/18/2016		5.61	7.33
	12/19/2016		11.63	1.31
	1/17/2017		8.38	4.56
	2/24/2017		8.67	4.27
	3/27/2017		8.21	4.73
CCPNE	8/24/2015	13.675	6.44	7.24
	9/21/2015		6.27	7.41
	10/20/2015		6.54	7.14
	11/16/2015		6.74	6.94
	12/14/2015		5.28	8.40
	1/14/2016		8.51	5.17
	2/16/2016		8.65	5.03
	3/14/2016		8.65	5.03
	4/25/2016		7.79	5.89
	5/16/2016		6.39	7.29
	6/17/2016		5.83	7.85
	7/20/2016		6.79	6.89
	8/20/2016		7.16	6.52
	9/19/2016		7.52	6.16
	10/21/2016		7.4	6.28
	11/18/2016		6.32	7.36
	12/19/2016		8.82	4.86
	1/17/2017		8.66	5.02
	2/24/2017		8.8	4.88
	3/27/2017		9.37	4.31

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
CCPSW	8/24/2015	13.67	6.29	7.38
	9/21/2015		6.09	7.58
	10/20/2015		6.35	7.32
	11/16/2015		6.24	7.43
	12/14/2015		5.27	8.40
	1/14/2016		8.22	5.45
	2/16/2016		8.11	5.56
	3/14/2016		8.05	5.62
	4/25/2016		7.50	6.17
	5/16/2016		6.18	7.49
	6/17/2016		6.26	7.41
	7/20/2016		6.60	7.07
	8/20/2016		6.92	6.75
	9/19/2016		7.28	6.39
	10/21/2016		7.17	6.50
	11/18/2016		6.22	7.45
	12/19/2016		8.34	5.33
	1/17/2017		8.03	5.64
	2/24/2017		8.27	5.40
	3/27/2017		9.32	4.35
CCW-4	8/24/2015	15.765	6.50	9.27
	9/21/2015		6.71	9.06
	10/20/2015		6.90	8.87
	11/16/2015		7.02	8.75
	12/14/2015		7.05	8.72
	1/14/2016		6.19	9.58
	2/16/2016		6.17	9.60
	3/14/2016		5.72	10.05
	4/25/2016		5.28	10.49
	5/16/2016		6.45	9.32
	6/17/2016		6.70	9.07
	7/20/2016		7.07	8.70
	8/20/2016		7.33	8.44
	9/19/2016		7.56	8.21
	10/21/2016		7.68	8.09
	11/18/2016		7.84	7.93
	12/19/2016		7.09	8.68
	1/17/2017		4.97	10.80
	2/24/2017		2.04	13.73
	3/27/2017		2.92	12.85

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
GH6-M1	8/24/2015	-	28.92	-
	9/21/2015		29.11	-
	10/20/2015		29.24	-
	11/16/2015		29.32	-
	12/14/2015		29.43	-
	1/14/2016		29.43	-
	2/16/2016		29.56	-
	3/14/2016		29.44	-
	4/25/2016		29.46	-
	5/16/2016		29.35	-
	6/17/2016		29.20	-
	7/20/2016		29.49	-
	8/20/2016		29.58	-
	9/19/2016		29.69	-
	10/21/2016		29.85	-
	11/18/2016		29.95	-
	12/19/2016		30.05	-
	1/17/2017		29.9	-
	2/24/2017		28.74	-
	3/27/2017		27.63	-
GH8-M3	8/24/2015	-	28.37	-
	9/21/2015		28.54	-
	10/20/2015		28.69	-
	11/16/2015		28.75	-
	12/14/2015		28.78	-
	1/14/2016		28.92	-
	2/16/2016		28.96	-
	3/14/2016		28.79	-
	4/25/2016		28.78	-
	5/16/2016		28.63	-
	6/17/2016		28.67	-
	7/20/2016		28.90	-
	8/20/2016		29.08	-
	9/19/2016		29.19	-
	10/21/2016		29.36	-
	11/18/2016		29.36	-
	12/19/2016		29.44	-
	1/17/2017		29.27	-
	2/24/2017		27.8	-
	3/27/2017		26.22	-

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
GH9-M4	8/24/2015	-	30.31	-
	9/21/2015		30.54	-
	10/20/2015		30.66	-
	11/16/2015		30.75	-
	12/14/2015		30.86	-
	1/14/2016		34.54	-
	2/16/2016		31.12	-
	3/14/2016		31.07	-
	4/25/2016		34.32	-
	5/16/2016		32.80	-
	6/17/2016		30.56	-
	7/20/2016		30.90	-
	8/20/2016		31.09	-
	9/19/2016		31.18	-
	10/21/2016		31.29	-
	11/18/2016		30.87	-
	12/19/2016		31.11	-
	1/17/2017		30.79	-
	2/24/2017		30.53	-
	3/27/2017		24.94	-
M6-1	8/24/2015	-	6.61	-
	9/21/2015		6.43	-
	10/20/2015		6.72	-
	11/16/2015		6.68	-
	12/14/2015		6.35	-
	1/14/2016		6.63	-
	2/16/2016		7.03	-
	3/14/2016		6.45	-
	4/25/2016		7.15	-
	5/16/2016		6.85	-
	6/17/2016		7.04	-
	7/20/2016		7.34	-
	8/20/2016		7.61	-
	9/19/2016		7.87	-
	10/21/2016		7.83	-
	11/18/2016		7.19	-
	12/19/2016		7.26	-
	1/17/2017		5.81	-
	2/24/2017		4.96	-
	3/27/2017		7.17	-

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
M6-2	8/24/2015	-	5.76	-
	9/21/2015		5.75	-
	10/20/2015		6.08	-
	11/16/2015		6.17	-
	12/14/2015		6.12	-
	1/14/2016		4.69	-
	2/16/2016		5.46	-
	3/14/2016		4.27	-
	4/25/2016		5.51	-
	5/16/2016		5.74	-
	6/17/2016		5.94	-
	7/20/2016		6.21	-
	8/20/2016		6.42	-
	9/19/2016		6.61	-
	10/21/2016		6.82	-
	11/18/2016		6.96	-
	12/19/2016		5.93	-
	1/17/2017		3.05	-
	2/24/2017		1.75	-
	3/27/2017		3.87	-
M7-1	8/24/2015	-	8.09	-
	9/21/2015		8.12	-
	10/20/2015		8.40	-
	11/16/2015		8.48	-
	12/14/2015		8.30	-
	1/14/2016		8.04	-
	2/16/2016		8.36	-
	3/14/2016		7.83	-
	4/25/2016		8.46	-
	5/16/2016		8.17	-
	6/17/2016		8.22	-
	7/20/2016		8.54	-
	8/20/2016		8.74	-
	9/19/2016		8.88	-
	10/21/2016		9.01	-
	11/18/2016		8.98	-
	12/19/2016		8.68	-
	1/17/2017		6.94	-
	2/24/2017		5.13	-
	3/27/2017		6.71	-

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
M7-2	8/24/2015	-	7.78	-
	9/21/2015		7.91	-
	10/20/2015		8.15	-
	11/16/2015		8.27	-
	12/14/2015		8.28	-
	1/14/2016		7.34	-
	2/16/2016		7.74	-
	3/14/2016		7.03	-
	4/25/2016		7.84	-
	5/16/2016		7.70	-
	6/17/2016		7.77	-
	7/20/2016		8.05	-
	8/20/2016		8.26	-
	9/19/2016		8.42	-
	10/21/2016		8.64	-
	11/18/2016		8.88	-
	12/19/2016		8.21	-
	1/17/2017		5.91	-
	2/24/2017		3.56	-
	3/27/2017		5.29	-
MBCM7-7	8/24/2015	16.635	11.26	5.38
	9/21/2015		10.94	5.70
	10/20/2015		11.09	5.55
	11/16/2015		11.11	5.53
	12/14/2015		10.27	6.37
	1/14/2016		11.39	5.25
	2/16/2016		11.75	4.89
	3/14/2016		11.55	5.09
	4/25/2016		11.44	5.20
	5/16/2016		11.22	5.42
	6/17/2016		11.71	4.93
	7/20/2016		12.12	4.52
	8/20/2016		12.27	4.37
	9/19/2016		12.65	3.99
	10/21/2016		12.32	4.32
	11/18/2016		10.31	6.33
	12/19/2016		11.65	4.99
	1/17/2017		11.29	5.35
	2/24/2017		10.96	5.68
	3/27/2017		12.84	3.80

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
MBCMW-8	8/24/2015	16.53	9.11	7.42
	9/21/2015		9.13	7.40
	10/20/2015		9.44	7.09
	11/16/2015		9.58	6.95
	12/14/2015		9.59	6.94
	1/14/2016		8.05	8.48
	2/16/2016		8.66	7.87
	3/14/2016		7.36	9.17
	4/25/2016		8.54	7.99
	5/16/2016		8.89	7.64
	6/17/2016		9.16	7.37
	7/20/2016		9.46	7.07
	8/20/2016		9.73	6.80
	9/19/2016		9.99	6.54
	10/21/2016		10.02	6.51
	11/18/2016		10.11	6.42
	12/19/2016		9.61	6.92
	1/17/2017		7.03	9.50
	2/24/2017		4.41	12.12
	3/27/2017		6.13	10.40
MBCMW-9	8/24/2015	17.71	8.70	9.01
	9/21/2015		8.83	8.88
	10/20/2015		9.00	8.71
	11/16/2015		9.09	8.62
	12/14/2015		9.09	8.62
	1/14/2016		8.30	9.41
	2/16/2016		8.06	9.65
	3/14/2016		7.83	9.88
	4/25/2016		8.21	9.50
	5/16/2016		8.40	9.31
	6/17/2016		8.64	9.07
	7/20/2016		8.78	8.93
	8/20/2016		8.80	8.91
	9/19/2016		8.80	8.91
	10/21/2016		9.29	8.42
	11/18/2016		9.15	8.56
	12/19/2016		8.75	8.96
	1/17/2017		8.06	9.65
	2/24/2017		5.11	12.60
	3/27/2017		5.44	12.27

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
MBCMW-10	8/24/2015	17.74	8.63	9.11
	9/21/2015		8.20	9.54
	10/20/2015		8.40	9.34
	11/16/2015		8.35	9.39
	12/14/2015		7.34	10.40
	1/14/2016		8.82	8.92
	2/16/2016		9.34	8.40
	3/14/2016		8.97	8.77
	4/25/2016		9.22	8.52
	5/16/2016		8.75	8.99
	6/17/2016		8.58	9.16
	7/20/2016		9.29	8.45
	8/20/2016		9.52	8.22
	9/19/2016		9.85	7.89
	10/21/2016		9.67	8.07
	11/18/2016		8.31	9.43
	12/19/2016		8.97	8.77
	1/17/2017		8.67	9.07
	2/24/2017		8.55	9.19
	3/27/2017		10.12	7.62
MCWP-MW04S	8/24/2015	15.29	7.55	7.74
	9/21/2015		7.67	7.62
	10/20/2015		7.85	7.44
	11/16/2015		7.99	7.30
	12/14/2015		8.06	7.23
	1/14/2016		6.48	8.81
	2/16/2016		7.08	8.21
	3/14/2016		5.92	9.37
	4/25/2016		7.10	8.19
	5/16/2016		7.36	7.93
	6/17/2016		7.64	7.65
	7/20/2016		7.95	7.34
	8/20/2016		8.18	7.11
	9/19/2016		8.35	6.94
	10/21/2016		8.88	6.41
	11/18/2016		8.4	6.89
	12/19/2016		8.67	6.62
	1/17/2017		6.62	8.67
	2/24/2017		3.34	11.95
	3/27/2017		5.2	10.09

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
MCWP-MW07S	8/24/2015	13.72	6.76	6.96
	9/21/2015		7.13	6.59
	10/20/2015		6.44	7.28
	11/16/2015		6.74	6.98
	12/14/2015		6.56	7.16
	1/14/2016		6.19	7.53
	2/16/2016		6.75	6.97
	3/14/2016		5.85	7.87
	4/25/2016		6.49	7.23
	5/16/2016		6.73	6.99
	6/17/2016		N/A	-
	7/20/2016		6.18	7.54
	8/20/2016		6.25	7.47
	9/19/2016		6.48	7.24
	10/21/2016		6.61	7.11
	11/18/2016		6.7	7.02
	12/19/2016		6.67	7.05
	1/17/2017		6.11	7.61
	2/24/2017		N/A	-
	3/27/2017		N/A	-
MCWP-MW08	8/24/2015	12.21	7.64	4.57
	9/21/2015		7.42	4.79
	10/20/2015		7.61	4.60
	11/16/2015		7.40	4.81
	12/14/2015		6.62	5.59
	1/14/2016		8.46	3.75
	2/16/2016		8.27	3.94
	3/14/2016		7.96	4.25
	4/25/2016		7.83	4.38
	5/16/2016		6.87	5.34
	6/17/2016		6.97	5.24
	7/20/2016		7.76	4.45
	8/20/2016		7.77	4.44
	9/19/2016		7.74	4.47
	10/21/2016		8	4.21
	11/18/2016		7.27	4.94
	12/19/2016		8.57	3.64
	1/17/2017		8	4.21
	2/24/2017		8.77	3.44
	3/27/2017		8.81	3.40

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
MCWP-MW10	8/24/2015	11.11	5.70	5.41
	9/21/2015		5.55	5.56
	10/20/2015		5.81	5.30
	11/16/2015		5.74	5.37
	12/14/2015		4.59	6.52
	1/14/2016		8.09	3.02
	2/16/2016		7.98	3.13
	3/14/2016		8.04	3.07
	4/25/2016		7.07	4.04
	5/16/2016		5.63	5.48
	6/17/2016		5.73	5.38
	7/20/2016		6.02	5.09
	8/20/2016		6.34	4.77
	9/19/2016		6.70	4.41
	10/21/2016		6.61	4.50
	11/18/2016		5.57	5.54
	12/19/2016		N/A	-
	1/17/2017		8.11	3.00
	2/24/2017		8.45	2.66
	3/27/2017		8.7	2.41
P-4	8/24/2015	12.155	4.58	7.58
	9/21/2015		4.47	7.69
	10/20/2015		4.71	7.45
	11/16/2015		4.65	7.51
	12/14/2015		3.52	8.64
	1/14/2016		6.93	5.23
	2/16/2016		6.88	5.28
	3/14/2016		6.92	5.24
	4/25/2016		6.00	6.16
	5/16/2016		4.57	7.59
	6/17/2016		4.68	7.48
	7/20/2016		4.95	7.21
	8/20/2016		5.27	6.89
	9/19/2016		5.63	6.53
	10/21/2016		5.55	6.61
	11/18/2016		4.51	7.65
	12/19/2016		7.17	4.99
	1/17/2017		6.98	5.18
	2/24/2017		7.12	5.04
	3/27/2017		7.71	4.45

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
P-9	8/24/2015	12.165	5.07	7.10
	9/21/2015		4.90	7.27
	10/20/2015		5.18	6.99
	11/16/2015		5.08	7.09
	12/14/2015		3.92	8.25
	1/14/2016		7.49	4.68
	2/16/2016		7.53	4.64
	3/14/2016		7.66	4.51
	4/25/2016		6.49	5.68
	5/16/2016		5.02	7.15
	6/17/2016		5.09	7.08
	7/20/2016		5.34	6.83
	8/20/2016		5.70	6.47
	9/19/2016		6.06	6.11
	10/21/2016		6.01	6.16
	11/18/2016		4.91	7.26
	12/19/2016		7.81	4.36
	1/17/2017		7.68	4.49
	2/24/2017		7.82	4.35
	3/27/2017		8	4.17
SMBRP-2	8/24/2015	13.131	6.04	7.09
	9/21/2015		5.91	7.22
	10/20/2015		6.16	6.97
	11/16/2015		6.09	7.04
	12/14/2015		4.84	8.29
	1/14/2016		8.80	4.33
	2/16/2016		8.54	4.59
	3/14/2016		8.58	4.55
	4/25/2016		7.59	5.54
	5/16/2016		6.07	7.06
	6/17/2016		6.14	6.99
	7/20/2016		6.36	6.77
	8/20/2016		6.73	6.40
	9/19/2016		7.11	6.02
	10/21/2016		6.98	6.15
	11/18/2016		5.94	7.19
	12/19/2016		8.87	4.26
	1/17/2017		8.64	4.49
	2/24/2017		8.94	4.19
	3/27/2017		9.25	3.88

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
SMBRP-6	8/24/2015	26.875	16.49	10.39
	9/21/2015		15.95	10.93
	10/20/2015		16.66	10.22
	11/16/2015		16.47	10.41
	12/14/2015		14.78	12.10
	1/14/2016		14.68	12.20
	2/16/2016		15.22	11.66
	3/14/2016		14.43	12.45
	4/25/2016		16.60	10.28
	5/16/2016		16.81	10.07
	6/17/2016		17.87	9.01
	7/20/2016		18.52	8.36
	8/20/2016		19.01	7.87
	9/19/2016		19.61	7.27
	10/21/2016		18.13	8.75
	11/18/2016		16.12	10.76
	12/19/2016		14.46	12.42
	1/17/2017		14.14	12.74
	2/24/2017		13.14	13.74
	3/27/2017		15.01	11.87
SMBRP-7B	8/24/2015	18.985	10.69	8.30
	9/21/2015		10.62	8.37
	10/20/2015		10.77	8.22
	11/16/2015		10.78	8.21
	12/14/2015		10.60	8.39
	1/14/2016		10.83	8.16
	2/16/2016		11.08	7.91
	3/14/2016		10.84	8.15
	4/25/2016		11.23	7.76
	5/16/2016		11.04	7.95
	6/17/2016		11.08	7.91
	7/20/2016		11.31	7.68
	8/20/2016		11.54	7.45
	9/19/2016		11.68	7.31
	10/21/2016		11.81	7.18
	11/18/2016		11.49	7.50
	12/19/2016		11.33	7.66
	1/17/2017		10.18	8.81
	2/24/2017		8.13	10.86
	3/27/2017		9.68	9.31

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
EC-RC-MW01	8/24/2015	48.69	28.74	19.95
	9/21/2015		29.02	19.67
	10/20/2015		28.76	19.93
	11/16/2015		29.38	19.31
	12/14/2015		29.32	19.37
	1/14/2016		28.93	19.76
	2/16/2016		29.18	19.51
	3/14/2016		28.76	19.93
	4/25/2016		29.40	19.29
	5/16/2016		29.18	19.51
	6/17/2016		29.38	19.31
	7/20/2016		29.73	18.96
	8/20/2016		30.02	18.67
	9/19/2016		30.64	18.05
	10/21/2016		31.02	17.67
	11/18/2016		31.16	17.53
	12/19/2016		30.83	17.86
	1/17/2017		29.49	19.20
	2/24/2017		26.78	21.91
	3/27/2017		25.21	23.48
SMBRP-9	8/24/2015	50.32	38.24	12.08
	9/21/2015		38.46	11.86
	10/20/2015		38.62	11.70
	11/16/2015		N/A	-
	12/14/2015		38.86	11.46
	1/14/2016		38.95	11.37
	2/16/2016		39.03	11.29
	3/14/2016		38.97	11.35
	4/25/2016		38.82	11.50
	5/16/2016		38.82	11.50
	6/17/2016		38.86	11.46
	7/20/2016		39.06	11.26
	8/20/2016		39.17	11.15
	9/19/2016		39.33	10.99
	10/21/2016		39.55	10.77
	11/18/2016		39.67	10.65
	12/19/2016		39.79	10.53
	1/17/2017		39.82	10.50
	2/24/2017		38.75	11.57
	3/27/2017		37.59	12.73

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
SMBRP-10C	8/24/2015	16.25	7.37	8.88
	9/21/2015		7.64	8.61
	10/20/2015		7.96	8.29
	11/16/2015		8.16	8.09
	12/14/2015		8.06	8.19
	1/14/2016		6.11	10.14
	2/16/2016		6.57	9.68
	3/14/2016		4.80	11.45
	4/25/2016		6.59	9.66
	5/16/2016		6.86	9.39
	6/17/2016		6.90	9.35
	7/20/2016		7.72	8.53
	8/20/2016		8.12	8.13
	9/19/2016		8.54	7.71
	10/21/2016		8.78	7.47
	11/18/2016		8.89	7.36
	12/19/2016		7.95	8.30
	1/17/2017		2.72	13.53
	2/24/2017		0.99	15.26
	3/27/2017		2.06	14.19
SMBRP-12	8/24/2015	12.615	7.52	5.10
	9/21/2015		6.91	5.71
	10/20/2015		6.72	5.90
	11/16/2015		6.75	5.87
	12/14/2015		6.42	6.20
	1/14/2016		6.95	5.67
	2/16/2016		6.85	5.77
	3/14/2016		6.09	6.53
	4/25/2016		6.76	5.86
	5/16/2016		6.40	6.22
	6/17/2016		5.39	7.23
	7/20/2016		6.05	6.57
	8/20/2016		6.85	5.77
	9/19/2016		6.44	6.18
	10/21/2016		8.09	4.53
	11/18/2016		6.52	6.10
	12/19/2016		7.16	5.46
	1/17/2017		6.48	6.14
	2/24/2017		7.61	5.01
	3/27/2017		6.96	5.66

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
SMBRP-13	8/24/2015	13.58	8.32	5.26
	9/21/2015		7.98	5.60
	10/20/2015		8.20	5.38
	11/16/2015		7.87	5.71
	12/14/2015		6.85	6.73
	1/14/2016		8.24	5.34
	2/16/2016		8.00	5.58
	3/14/2016		7.61	5.97
	4/25/2016		7.66	5.92
	5/16/2016		6.92	6.66
	6/17/2016		7.52	6.06
	7/20/2016		8.30	5.28
	8/20/2016		8.03	5.55
	9/19/2016		7.45	6.13
	10/21/2016		8.33	5.25
	11/18/2016		7.14	6.44
	12/19/2016		8.34	5.24
	1/17/2017		7.48	6.10
	2/24/2017		9.32	4.26
	3/27/2017		7.83	5.75
SMBRP-15B	8/24/2015	16.765	dry	-
	9/21/2015		dry	-
	10/20/2015		dry	-
	11/16/2015		dry	-
	12/14/2015		dry	-
	1/14/2016		dry	-
	2/16/2016		dry	-
	3/14/2016		dry	-
	4/25/2016		dry	-
	5/16/2016		dry	-
	6/17/2016		dry	-
	7/20/2016		dry	-
	8/20/2016		dry	-
	9/19/2016		dry	-
	10/21/2016		dry	-
	11/18/2016		dry	-
	12/19/2016		dry	-
	1/17/2017		dry	-
	2/24/2017		dry	-
	3/27/2017		dry	-

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
SMBRP-16	8/24/2015	14.5	4.95	9.55
	9/21/2015		4.96	9.54
	10/20/2015		5.34	9.16
	11/16/2015		5.55	8.95
	12/14/2015		5.59	8.91
	1/14/2016		3.79	10.71
	2/16/2016		4.60	9.90
	3/14/2016		5.27	9.23
	4/25/2016		4.65	9.85
	5/16/2016		4.92	9.58
	6/17/2016		5.15	9.35
	7/20/2016		5.49	9.01
	8/20/2016		5.72	8.78
	9/19/2016		5.92	8.58
	10/21/2016		6.18	8.32
	11/18/2016		6.02	8.48
	12/19/2016		5.23	9.27
	1/17/2017		2.54	11.96
	2/24/2017		0.51	13.99
	3/27/2017		2.61	11.89

Notes:

N/A: well not accessible

'-': no data available

TOC: top of well casing

ft bTOC: feet below top of well casing

ft amsl: feet above mean sea level

Table 1
Groundwater Elevations

Deep Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
MCWP-MW01	8/24/2015	17.9	10.22	7.68
	9/21/2015		9.71	8.19
	10/20/2015		10.00	7.90
	11/16/2015		9.91	7.99
	12/14/2015		9.23	8.67
	1/14/2016		10.45	7.45
	2/16/2016		11.02	6.88
	3/14/2016		10.53	7.37
	4/25/2016		10.89	7.01
	5/16/2016		10.70	7.20
	6/17/2016		10.75	7.15
	7/20/2016		11.09	6.81
	8/20/2016		11.30	6.6
	9/19/2016		11.13	6.77
	10/21/2016		11.19	6.71
	11/18/2016		9.94	7.96
	12/19/2016		10.56	7.34
	1/17/2017		10.17	7.73
	2/24/2017		10.68	7.22
	3/27/2017		11.47	6.43
MCWP-MW02	8/24/2015	18.06	10.39	7.67
	9/21/2015		9.92	8.14
	10/20/2015		10.25	7.81
	11/16/2015		10.16	7.90
	12/14/2015		9.14	8.92
	1/14/2016		10.68	7.38
	2/16/2016		11.13	6.93
	3/14/2016		10.72	7.34
	4/25/2016		11.08	6.98
	5/16/2016		10.55	7.51
	6/17/2016		10.82	7.24
	7/20/2016		11.10	6.96
	8/20/2016		11.35	6.71
	9/19/2016		11.59	6.47
	10/21/2016		11.41	6.65
	11/18/2016		10.16	7.9
	12/19/2016		10.82	7.24
	1/17/2017		10.44	7.62
	2/24/2017		10.68	7.38
	3/27/2017		11.96	6.1

Table 1
Groundwater Elevations

Deep Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
MCWP-MW03	8/24/2015	15.31	7.65	7.66
	9/21/2015		7.52	7.79
	10/20/2015		7.78	7.53
	11/16/2015		7.34	7.97
	12/14/2015		6.75	8.56
	1/14/2016		8.38	6.93
	2/16/2016		8.43	6.88
	3/14/2016		8.05	7.26
	4/25/2016		8.63	6.68
	5/16/2016		8.35	6.96
	6/17/2016		8.50	6.81
	7/20/2016		8.30	7.01
	8/20/2016		8.87	6.44
	9/19/2016		8.23	7.08
	10/21/2016		8.94	6.37
	11/18/2016		7.64	7.67
	12/19/2016		8.09	7.22
	1/17/2017		7.63	7.68
	2/24/2017		N/A	-
	3/27/2017		N/A	-
MCWP-MW04D	8/24/2015	15.43	9.35	6.08
	9/21/2015		8.84	6.59
	10/20/2015		9.16	6.27
	11/16/2015		9.13	6.30
	12/14/2015		8.39	7.04
	1/14/2016		9.59	5.84
	2/16/2016		10.24	5.19
	3/14/2016		9.69	5.74
	4/25/2016		10.07	5.36
	5/16/2016		9.83	5.60
	6/17/2016		9.97	5.46
	7/20/2016		10.22	5.21
	8/20/2016		10.33	5.1
	9/19/2016		10.32	5.11
	10/21/2016		10.4	5.03
	11/18/2016		9.12	6.31
	12/19/2016		9.68	5.75
	1/17/2017		9.34	6.09
	2/24/2017		9.83	5.6
	3/27/2017		10.61	4.82

Table 1
Groundwater Elevations

Deep Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
MCWP-MW05	8/24/2015	13.92	7.62	6.30
	9/21/2015		7.30	6.62
	10/20/2015		7.47	6.45
	11/16/2015		7.42	6.50
	12/14/2015		6.39	7.53
	1/14/2016		7.82	6.10
	2/16/2016		8.37	5.55
	3/14/2016		7.96	5.96
	4/25/2016		8.27	5.65
	5/16/2016		7.78	6.14
	6/17/2016		8.05	5.87
	7/20/2016		8.41	5.51
	8/20/2016		8.69	5.23
	9/19/2016		8.98	4.94
	10/21/2016		N/A	-
	11/18/2016		N/A	-
	12/19/2016		N/A	-
	1/17/2017		N/A	-
	2/24/2017		N/A	-
	3/27/2017		8.39	5.53
MCWP-MW06	8/24/2015	16.05	9.87	6.18
	9/21/2015		9.40	6.65
	10/20/2015		9.71	6.34
	11/16/2015		9.61	6.44
	12/14/2015		8.64	7.41
	1/14/2016		10.12	5.93
	2/16/2016		10.58	5.47
	3/14/2016		10.14	5.91
	4/25/2016		10.49	5.56
	5/16/2016		10.06	5.99
	6/17/2016		10.27	5.78
	7/20/2016		10.60	5.45
	8/20/2016		10.86	5.19
	9/19/2016		11.07	4.98
	10/21/2016		10.9	5.15
	11/18/2016		9.62	6.43
	12/19/2016		10.2	5.85
	1/17/2017		9.87	6.18
	2/24/2017		10.05	6
	3/27/2017		11.41	4.64

Table 1
Groundwater Elevations

Deep Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
MCWP-MW07D	8/24/2015	13.21	7.51	5.70
	9/21/2015		7.44	5.77
	10/20/2015		7.67	5.54
	11/16/2015		7.27	5.94
	12/14/2015		6.59	6.62
	1/14/2016		8.32	4.89
	2/16/2016		8.32	4.89
	3/14/2016		7.92	5.29
	4/25/2016		8.47	4.74
	5/16/2016		8.26	4.95
	6/17/2016		8.45	4.76
	7/20/2016		8.18	5.03
	8/20/2016		8.77	4.44
	9/19/2016		8.12	5.09
	10/21/2016		8.81	4.4
	11/18/2016		7.54	5.67
	12/19/2016		7.99	5.22
	1/17/2017		7.52	5.69
	2/24/2017		N/A	-
	3/27/2017		N/A	-
MCWP-MW09	8/24/2015	16.3	5.69	10.61
	9/21/2015		5.42	10.88
	10/20/2015		5.68	10.62
	11/16/2015		5.50	10.80
	12/14/2015		4.75	11.55
	1/14/2016		6.37	9.93
	2/16/2016		6.42	9.88
	3/14/2016		6.04	10.26
	4/25/2016		6.38	9.92
	5/16/2016		5.85	10.45
	6/17/2016		5.96	10.34
	7/20/2016		6.44	9.86
	8/20/2016		6.54	9.76
	9/19/2016		6.26	10.04
	10/21/2016		6.71	9.59
	11/18/2016		5.68	10.62
	12/19/2016		6.31	9.99
	1/17/2017		5.79	10.51
	2/24/2017		6.78	9.52
	3/27/2017		7.12	9.18

Notes:

N/A: well not accessible

'-': no data available

TOC: top of well casing

ft bTOC: feet below top of well casing

ft amsl: feet above mean sea level

Table 1
Groundwater Elevations

Winter Canyon Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
LAMW-5S	8/24/2015	104.55	53.71	50.84
	9/21/2015		53.30	51.25
	10/20/2015		53.74	50.81
	11/16/2015		53.90	50.65
	12/14/2015		53.54	51.01
	1/14/2016		54.02	50.53
	2/16/2016		53.69	50.86
	3/14/2016		53.92	50.63
	4/25/2016		53.88	50.67
	5/16/2016		53.98	50.57
	6/17/2016		53.97	50.58
	7/20/2016		54.23	50.32
	8/20/2016		54.42	50.13
	9/19/2016		54.77	49.78
	10/21/2016		55	49.55
	11/18/2016		54.91	49.64
	12/19/2016		53.83	50.72
	1/17/2017		53.81	50.74
	2/24/2017		50.54	54.01
	3/27/2017		48.71	55.84
SMBRP-11	8/24/2015	18.35	8.88	9.47
	9/21/2015		8.70	9.65
	10/20/2015		8.36	9.99
	11/16/2015		8.64	9.71
	12/14/2015		8.35	10.00
	1/14/2016		8.00	10.35
	2/16/2016		8.30	10.05
	3/14/2016		7.89	10.46
	4/25/2016		8.63	9.72
	5/16/2016		8.62	9.73
	6/17/2016		8.39	9.96
	7/20/2016		8.00	10.35
	8/20/2016		8.44	9.91
	9/19/2016		8.56	9.79
	10/21/2016		8.71	9.64
	11/18/2016		8.47	9.88
	12/19/2016		8.71	9.64
	1/17/2017		7.81	10.54
	2/24/2017		7.22	11.13
	3/27/2017		7.97	10.38

Notes:

N/A: well not accessible

'-': no data available

TOC: top of well casing

ft bTOC: feet below top of well casing

ft amsl: feet above mean sea level

Table 2
Baseline Groundwater and Surface Water Analysis Matrix

Groundwater	Baseline GW/SW Monitoring SNMP MOU	SNMP MOU	SNMP MOU	Baseline GW/SW Monitoring SNMP MOU	Baseline GW/SW Monitoring SNMP MOU	SNMP MOU	SNMP MOU	Baseline GW/SW Monitoring SNMP MOU	Baseline GW/SW Monitoring SNMP MOU	SNMP MOU	SNMP MOU	Baseline GW/SW Monitoring SNMP MOU	Baseline GW/SW Monitoring SNMP MOU	Baseline GW/SW Monitoring SNMP MOU	SNMP MOU	Baseline GW/SW Monitoring SNMP MOU
<i>Laboratory Analysis</i>	LAMW-5S	CCPE	SMBRP-7B	SMBRP-9	SMBRP-12	SMBRP-13	MBCMW-9	MCWP-MW04S	MCWP-MW04D	MCWP-MW05	MCWP-MW06	MCWP-MW07S	MCWP-MW07D	MCWP-MW09	MCWP-MW10	TY-MW-1
Total and Fecal Coliform	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
Total Suspended Solids	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
Nitrate as Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nitrite as Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammonia Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
Kjeldahl Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
Organic Nitrogen (calculation)	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
Total Phosphorous	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓
Total Dissolved Solids	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Surface Water	Location									
<i>Laboratory Analysis</i>	N-001	N-002	N-003	N-004	L-001	L-002	L-003	L-004	L-005	L-006
Total and Fecal Coliform	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nitrate as Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nitrite as Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ammonia Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Organic Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kjeldahl Nitrogen	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Total Phosphorous	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Notes:
 ✓: Laboratory analysis completed
 -: Sampling & analysis not required

Table 3
Surface Water Quality Analytical Results

Location	Monitoring Depth	Well ID	Sample Date	Coliform Bacteria Analysis (MPN/100mL)		Inorganic Analysis (mg/L)					
				Total	Fecal	Nitrate Nitrogen	Nitrite Nitrogen	Nitrogen, Organic	Ammonia Nitrogen	Kjeldahl Nitrogen	Phosphorous, Total
Near Shore	Ankle Depth	N-001	9/25/2015	70	46	<0.1	<0.1	<0.5	<0.2	<0.5	1.760
			12/1/2015	<1.8	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	0.775
			3/18/2016	<1.8	<1.8	0.1	<0.1	0.937	<0.2	0.937	0.400
			6/16/2016	<1.8	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	0.658
			9/23/2016	<1.8	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	1.970
			12/20/2016	49	49	0.1	<0.1	<0.5	<0.2	<0.5	1.010
		3/31/2017	14	6.8	0.2	<0.1	<0.5	<0.2	<0.5	1.690	
		9/25/2015	13	13	<0.1	<0.1	<0.5	<0.2	<0.5	1.480	
		12/1/2015	<1.8	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	1.380	
		3/18/2016	<1.8	<1.8	0.1	<0.1	<0.5	<0.2	<0.5	1.420	
		6/16/2016	<1.8	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	1.030	
		9/23/2016	240	6.8	<0.1	<0.1	<0.5	<0.2	<0.5	1.300	
		12/20/2016	<1.8	<1.8	0.1	<0.1	<0.5	<0.2	<0.5	1.350	
		3/31/2017	13	<1.8	0.1	<0.1	<0.5	<0.2	<0.5	0.127	
		9/25/2015	11	4	<0.1	<0.1	<0.5	<0.2	<0.5	0.347	
		12/1/2015	14	14	<0.1	<0.1	<0.5	<0.2	<0.5	1.460	
		3/18/2016	13	<1.8	0.1	<0.1	0.865	<0.2	0.865	<0.1	
		6/16/2016	<1.8	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	<0.1	
		9/23/2016	2	2	<0.1	<0.1	<0.5	<0.2	<0.5	1.460	
		12/20/2016	79	79	0.1	<0.1	<0.5	<0.2	<0.5	1.310	
		3/31/2017	350	33	0.1	<0.1	10.8	<0.2	10.8	0.467	
		9/25/2015	14	9.3	<0.1	<0.1	<0.5	<0.2	<0.5	0.288	
		12/1/2015	2	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	1.010	
		3/18/2016	2	<1.8	0.1	<0.1	<0.5	<0.2	<0.5	0.648	
		6/16/2016	6.8	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	1.250	
		9/23/2016	4.5	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	1.290	
		12/20/2016	7.8	<1.8	<0.1	<0.1	<0.5	<0.2	<0.5	1.290	
		3/31/2017	6.8	2	<0.1	0.153	<0.5	<0.2	<0.5	1.870	

Table 3
Surface Water Quality Analytical Results

Location	Monitoring Depth	Well ID	Sample Date	Coliform Bacteria Analysis (MPN/100mL)		Inorganic Analysis (mg/L)					
				Total	Fecal	Nitrate Nitrogen	Nitrite Nitrogen	Nitrogen, Organic	Ammonia Nitrogen	Kjeldahl Nitrogen	Phosphorous, Total
Malibu Lagoon and Creek	1 foot BSW	L-001	9/25/2015	920	49	<0.1	<0.1	2.26	<0.2	2.26	0.558
			12/1/2015	350	33	<0.1	<0.1	0.837	<0.2	0.837	0.218
			3/18/2016	350	23	0.3	<0.1	1.99	<0.2	1.99	0.635
			6/16/2016	350	4.5	<0.1	<0.1	0.696	<0.2	0.696	0.178
			9/23/2016	540	79	<0.1	<0.1	1.04	<0.2	1.04	0.153
			12/20/2016	>1600	49	3.2	<0.1	<0.5	<0.2	<0.5	0.934
			3/31/2017	540	<1.8	1.5	<0.1	1.84	<0.2	1.84	0.577
		L-002	9/25/2015	920	49	<0.1	<0.1	1.83	<0.2	1.83	0.404
			12/1/2015	540	33	<0.1	<0.1	0.591	<0.2	0.591	0.226
			3/18/2016	280	49	0.6	<0.1	0.852	<0.2	0.852	0.379
			6/16/2016	33	2	<0.1	<0.1	0.964	<0.2	0.964	<0.1
			9/23/2016	14	4.5	0.1	<0.1	0.77	<0.2	0.77	<0.1
			12/20/2016	>1600	240	1.6	<0.1	<0.5	<0.2	<0.5	0.621
			3/31/2017	130	33	1.5	<0.1	0.457	<0.2	0.457	0.464
		L-003	9/25/2015	540	70	<0.1	<0.1	2.35	<0.2	2.35	0.379
			12/1/2015	240	17	<0.1	<0.1	<0.5	<0.2	<0.5	0.213
			3/18/2016	240	23	0.6	<0.1	1.03	<0.2	1.03	0.397
			6/16/2016	79	4	<0.1	<0.1	<0.5	<0.2	<0.5	0.139
			9/23/2016	23	4.5	<0.1	<0.1	1.21	<0.2	1.21	<0.1
			12/20/2016	220	31	2.7	<0.1	<0.5	<0.2	<0.5	0.984
			3/31/2017	70	23	1.2	<0.1	0.511	<0.2	0.511	0.446
		L-004	9/25/2015	170	23	<0.1	<0.1	2.67	<0.2	2.67	0.266
			12/1/2015	170	130	<0.1	<0.1	0.583	<0.2	0.583	0.200
			3/18/2016	350	170	0.5	<0.1	0.798	<0.2	0.798	0.350
			6/16/2016	49	2	<0.1	<0.1	0.667	<0.2	0.667	0.114
			9/23/2016	17	4.5	<0.1	<0.1	0.627	<0.2	0.627	<0.1
			12/20/2016	540	79	2.4	<0.1	<0.5	<0.2	<0.5	0.833
			3/31/2017	540	170	0.4	<0.1	1.67	<0.2	1.67	0.394
		L-005	9/25/2015	350	49	<0.1	<0.1	3.8	<0.2	3.8	0.372
			12/1/2015	350	49	<0.1	<0.1	<0.5	<0.2	<0.5	0.123
			3/18/2016	540	350	1.6	<0.1	1.37	<0.2	1.37	0.661
			6/16/2016	26	6.8	<0.1	<0.1	1.16	<0.2	1.16	0.133
			9/23/2016	7.8	7.8	<0.1	<0.1	<0.5	<0.2	0.53	<0.1
			12/20/2016	350	49	2.5	<0.1	<0.5	<0.2	<0.5	0.865
			3/31/2017	170	22	0.2	<0.1	<0.5	<0.2	<0.5	0.104
		L-006	9/25/2015	170	170	<0.1	<0.1	3.59	<0.2	3.67	0.320
			12/1/2015	350	49	<0.1	<0.1	<0.5	<0.2	<0.5	0.168
			3/18/2016	920	130	0.4	<0.1	1.46	<0.2	1.46	0.366
			6/16/2016	17	7.8	<0.1	<0.1	1.18	<0.2	1.18	0.172
			9/23/2016	7.8	7.8	<0.1	<0.1	1.24	<0.2	1.24	<0.1
			12/20/2016	130	14	0.3	<0.1	<0.5	<0.2	<0.5	0.287
			3/31/2017	540	11	<0.1	<0.1	13.6	<0.2	13.6	3.500

Notes:

mg/L: milligrams per liter

MPN/100mL: Most Probable Number per 100 milliliters

BSW: below surface water

<: not detected above the Practical Quantitation Limit (PQL)

Table 4
Groundwater Analytical Results

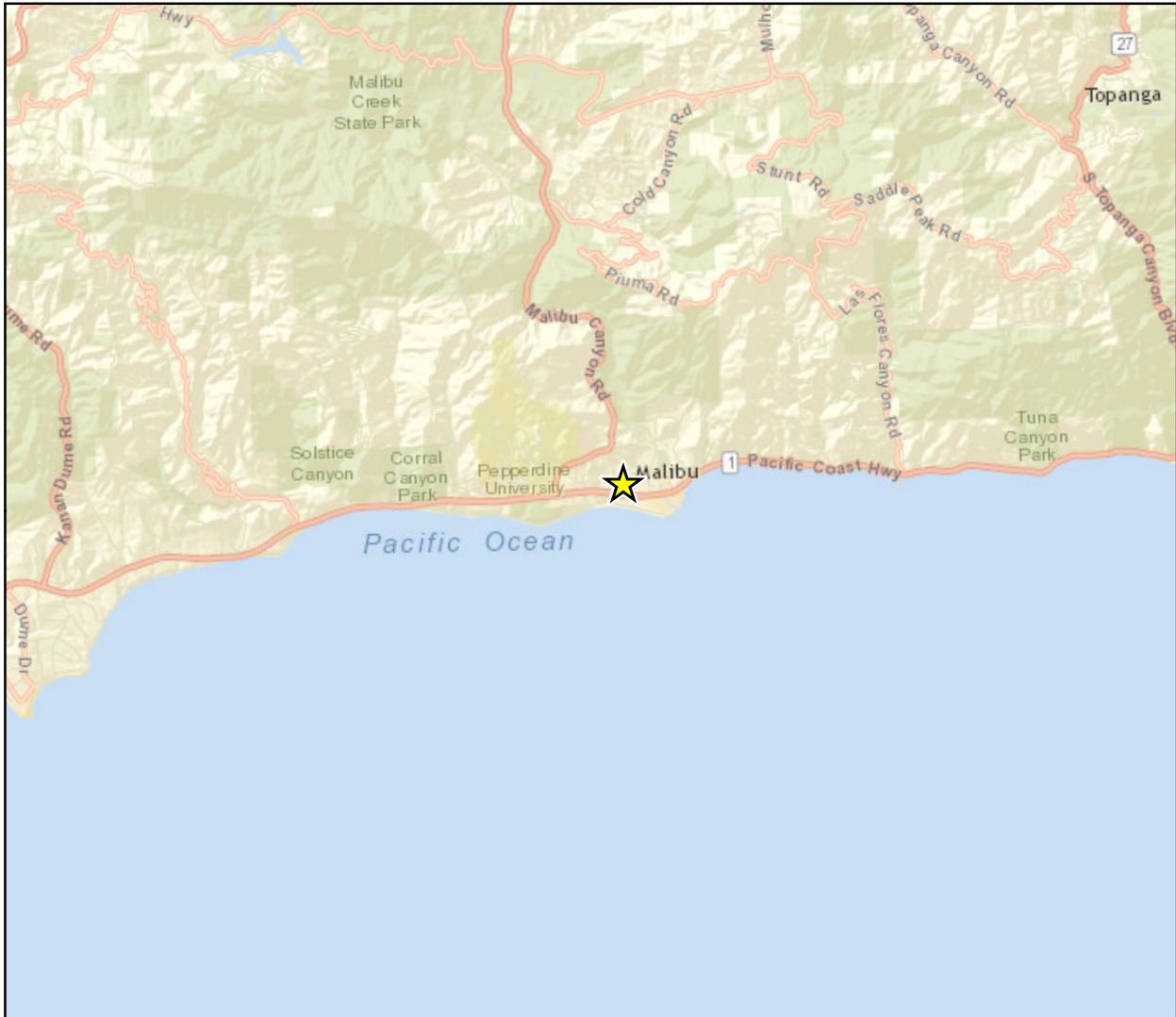
			Coliform Bacteria Analysis (MPN/100mL)		Inorganic Analysis (mg/L)												
Well ID	Well Depth (BGS)	Sample Date	Total	Fecal	Nitrate as NO ₃	Nitrite Nitrogen	Nitrate + Nitrite as N	Nitrate Nitrogen	Nitrogen, Organic	Ammonia Nitrogen	Kjeldahl Nitrogen	Nitrogen, Total as Nitrogen	Phosphorous, Total	Boron	Sulfate	Total Dissolved Solids (TDS)	Chloride
LAMW-5S	73 feet	9/29/2015	350	4.5	32.8	<0.1	7.68	7.4	0.986	<0.2	1.07	8.75	14.7	0.314	156	769	103
		3/15/2016	>1,600	350	-	<0.1	-	8.2	<0.5	<0.2	<0.5	-	9.43	-	-	713	-
		9/20/2016	<1.8	<1.8	55.1	<0.1	12.4	12.4	<0.5	<0.2	<0.5	12.4	7.04	0.248	200	863	125
		3/28/2017	49	<1.8	-	<0.1	-	13.6	<0.5	<0.2	<0.5	-	5.24	-	-	696	-
SMBRP-7B	25 feet	12/15/2015	11	<1.8	-	<0.1	-	<0.1	<0.5	<0.2	0.552	-	0.478	-	-	3090	-
		3/15/2016	110	11	-	<0.1	-	<0.1	1.37	<0.2	1.37	-	0.916	-	-	1400	-
		9/20/2016	<1.8	<1.8	-	<0.1	-	<0.1	<0.5	0.215	0.618	-	0.445	-	-	3920	-
		3/28/2017	4.5	<1.8	-	<0.1	-	2.3	<0.5	<0.2	<0.5	-	0.287	-	-	3430	-
SMBRP-9	45 feet	12/15/2015	<1.8	<1.8	78.8	<0.1	17.8	17.8	<0.5	0.331	<0.5	17.8	0.41	0.56	538	2100	309
		3/15/2016	<1.8	<1.8	-	<0.1	-	15.1	<0.5	<0.2	<0.5	-	0.462	-	-	2100	-
		9/20/2016	33	<1.8	84.5	<0.1	19.1	19.1	<0.5	<0.2	<0.5	19.1	0.272	0.649	342	1940	213
		3/28/2017	9.3	<1.8	-	<0.1	-	22.2	<0.5	<0.2	<0.5	-	0.101	-	-	2080	-
SMBRP-12	25 feet	12/16/2015	<1.8	<1.8	<0.4	<0.1	<0.1	<0.1	<0.5	6.41	5.81	5.81	1.36	0.923	426	2140	478
		3/15/2016	<1.8	<1.8	-	<0.1	-	<0.1	2.9	5.67	8.57	-	1.43	-	-	2290	-
		9/21/2016	<1.8	<1.8	0.6	<0.1	0.128	0.1	<0.5	8.85	8.28	8.28	0.753	1.25	871	7930	3140
		3/29/2017	6.8	<1.8	-	<0.1	-	<0.1	<0.5	7.60	7.85	-	1.88	-	-	1610	-
SMBRP-13	19 feet	12/15/2015	4.5	<1.8	-	<0.1	-	<0.1	<0.5	0.2	<0.5	-	0.316	-	-	1810	-
		3/15/2016	<1.8	<1.8	-	<0.1	-	<0.1	0.556	0.884	1.44	-	0.461	-	-	27500	-
		9/21/2016	<1.8	<1.8	-	<0.1	-	0.1	<0.5	<0.2	<0.5	-	<0.1	-	-	3320	-
		3/29/2017	<1.8	<1.8	-	<0.1	-	0.5	<0.5	<0.2	<0.5	-	1.61	-	-	4620	-
MBCMW-9	9 feet	9/23/2015	<i>well dry at time of sampling</i>														
		3/16/2016	7.8	<1.8	-	<0.1	-	<0.1	1.82	<0.2	1.82	-	2.26	-	-	6,080	-
		9/21/2016	<i>well dry at time of sampling</i>														
		3/28/2017	11	4.5	-	<0.1	-	<0.1	1.22	<0.2	1.22	-	0.307	-	-	4980	-
MCWP-MW04S	20 feet	9/28/2015	17	<1.8	<0.4	<0.1	<0.1	<0.1	1.00	<0.2	1.00	1.26	0.516	2.09	3440	6510	480
		12/15/2015	<1.8	<1.8	-	-	-	-	-	-	-	-	-	-	-	-	-
		3/16/2016	1.8	<1.8	-	<0.1	-	0.2	1.60	<0.2	1.60	-	0.548	-	-	6320	-
		9/21/2016	<1.8	<1.8	1.18	<0.1	0.3	0.3	0.60	<0.2	0.60	0.9	0.583	2.25	2980	6750	744
		3/28/2017	33	<1.8	-	<0.1	-	2.0	1.44	<0.2	1.44	-	0.417	-	-	6360	-
MCWP-MW04D	148 feet	9/28/2015	17	<1.8	6.44	<0.1	1.5	1.5	<0.5	0.117	<0.5	1.5	0.154	0.772	527	1630	216
		3/17/2016	<1.8	<1.8	-	<0.1	-	1.7	<0.5	<0.2	<0.5	-	<0.1	-	-	1600	-
		9/22/2016	<1.8	<1.8	8.63	<0.1	1.9	1.9	<0.5	<0.2	<0.5	1.9	<0.1	0.774	531	1550	232
		3/30/2017	130	<1.8	-	<0.1	-	0.8	<0.5	<0.2	<0.5	-	0.795	-	-	232	-

Table 4
Groundwater Analytical Results

Well ID	Well Depth (BGS)	Sample Date	Coliform Bacteria Analysis (MPN/100mL)		Inorganic Analysis (mg/L)													
			Total	Fecal	Nitrate as NO ₃	Nitrite Nitrogen	Nitrate + Nitrite as N	Nitrate Nitrogen	Nitrogen, Organic	Ammonia Nitrogen	Kjeldahl Nitrogen	Nitrogen, Total as Nitrogen	Phosphorous, Total	Boron	Sulfate	Total Dissolved Solids (TDS)	Chloride	
MCWP-MW05	154 feet	9/23/2015	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-	1400	-
		3/17/2016	-	-	-	-	-	-	2.1	-	-	-	-	-	-	-	1400	-
		9/22/2016	-	-	-	-	-	-	2.2	-	-	-	-	-	-	-	1450	-
		3/29/2017	-	-	-	-	-	-	2.4	-	-	-	-	-	-	-	171	-
MCWP-MW06	138 feet	9/23/2015	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	1590	-
		3/16/2016	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	1520	-
		9/21/2016	-	-	-	-	-	-	<0.1	-	-	-	-	-	-	-	1550	-
		3/28/2017	-	-	-	-	-	-	3.6	-	-	-	-	-	-	-	383	-
MCWP- MW07S	20 feet	9/22/2015	4.5	<1.8	28.8	<0.1	6.5	6.5	<0.5	<0.2	<0.5	6.71	0.451	0.41	294	1230	227	
		3/16/2016	49	<1.8	-	0.24	-	4.8	<0.5	<0.2	<0.5	-	2.39	-	-	1180	-	
		9/20/2016	<1.8	<1.8	22.8	<0.1	5.2	5.2	<0.5	<0.2	<0.5	5.2	0.545	0.39	234	1160	217	
		3/30/2017	Well not accessible at time of sampling															
MCWP-MW07D	130 feet	9/22/2015	<1.8	<1.8	<0.4	<0.1	<0.1	<0.1	<0.5	0.23	<0.5	0.524	0.318	0.476	1010	2300	348	
		3/16/2016	<1.8	<1.8	-	<0.1	-	<0.1	1.15	<0.2	1.15	-	0.239	-	-	2470	-	
		9/22/2016	<1.8	<1.8	<0.4	<0.1	<0.1	<0.1	<0.5	0.283	<0.5	<0.5	0.125	0.412	474	1680	229	
		3/30/2017	Well not accessible at time of sampling															
MCWP-MW09	95 feet	12/16/2015	<1.8	<1.8	<0.4	<0.1	<0.1	<0.1	<0.5	<0.2	1.41	1.41	0.218	0.74	590	2570	723	
		3/15/2016	<1.8	<1.8	-	<0.1	-	<0.1	0.84	2.36	3.2	-	0.355	-	-	2410	-	
		9/21/2016	<1.8	<1.8	<0.4	<2	<0.1	<0.1	<0.5	4.18	3.88	3.88	<0.1	0.972	807	4920	1740	
		3/29/2017	13	7.8	-	<0.1	-	1.4	0.583	<0.2	0.731	-	0.336	-	-	1070	-	
MCWP-MW10	22 feet	9/29/2015	2	<1.8	-	-	-	0.4	<1	<0.2	<1	-	<0.1	-	-	1550	-	
		3/15/2016	2	<1.8	-	<0.1	-	0.6	1.28	<0.2	1.28	-	<0.1	-	-	1800	-	
		9/20/2016	<1.8	<1.8	-	<0.1	-	0.7	<0.5	<0.2	<0.5	-	<0.1	-	-	1730	-	
		3/29/2017	<1.8	<1.8	-	<0.1	-	1.0	<0.5	<0.2	<0.5	-	<0.1	-	-	1990	-	
TY-MW-1	41 feet	12/15/2015	<1.8	<1.8	<0.4	<0.1	<0.1	<0.1	<0.5	1.09	0.613	0.703	0.416	0.272	658	2170	410	
		3/16/2016	<1.8	<1.8	-	<0.1	-	<0.1	1.03	0.433	1.46	-	0.758	-	-	2160	-	
		9/21/2016	<1.8	<1.8	0.218	<0.1	<0.1	<0.1	<0.5	0.432	<0.5	0.516	1.64	0.286	610	2290	396	
		3/29/2017	4.5	<1.8	-	<0.1	-	0.1	3.38	0.310	3.69	-	6.08	-	-	2140	-	
CCPE	52 feet	9/23/2015	>1,600	49	-	-	-	1.4	<1	<0.2	<1	-	<0.1	-	-	1630	-	
		3/15/2016	240	4.5	-	<0.1	-	0.9	0.664	<0.2	0.664	-	<0.1	-	-	1800	-	
		9/20/2016	540	<1.8	-	<0.1	-	0.9	<0.5	<0.2	<0.5	-	<0.1	-	-	2880	-	
		3/28/2017	>1,600	350	-	<0.1	-	0.6	3.6	1.11	4.71	-	0.932	-	-	968	-	

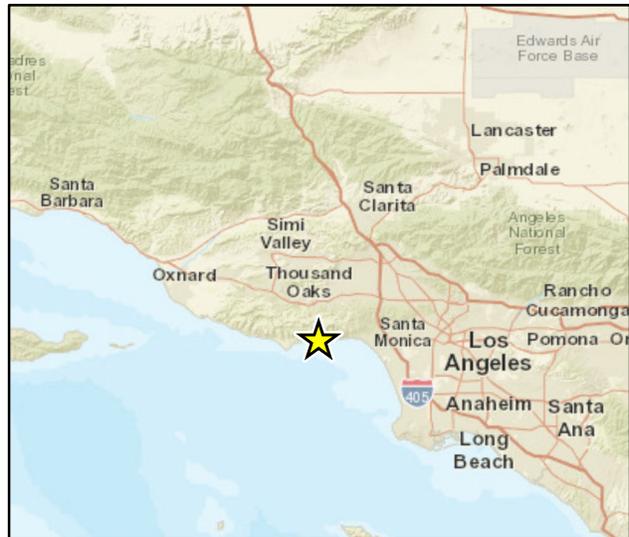
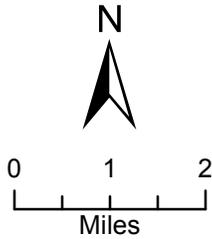
Notes:

- mg/L: milligrams per liter
- MPN/100mL: Most Probable Number per 100 milliliter
- BGS: below ground surface
- <: below the Practical Quantitation Limit (PQL)
- : not reported



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★ Project Location



Vicinity Map

Figure 1

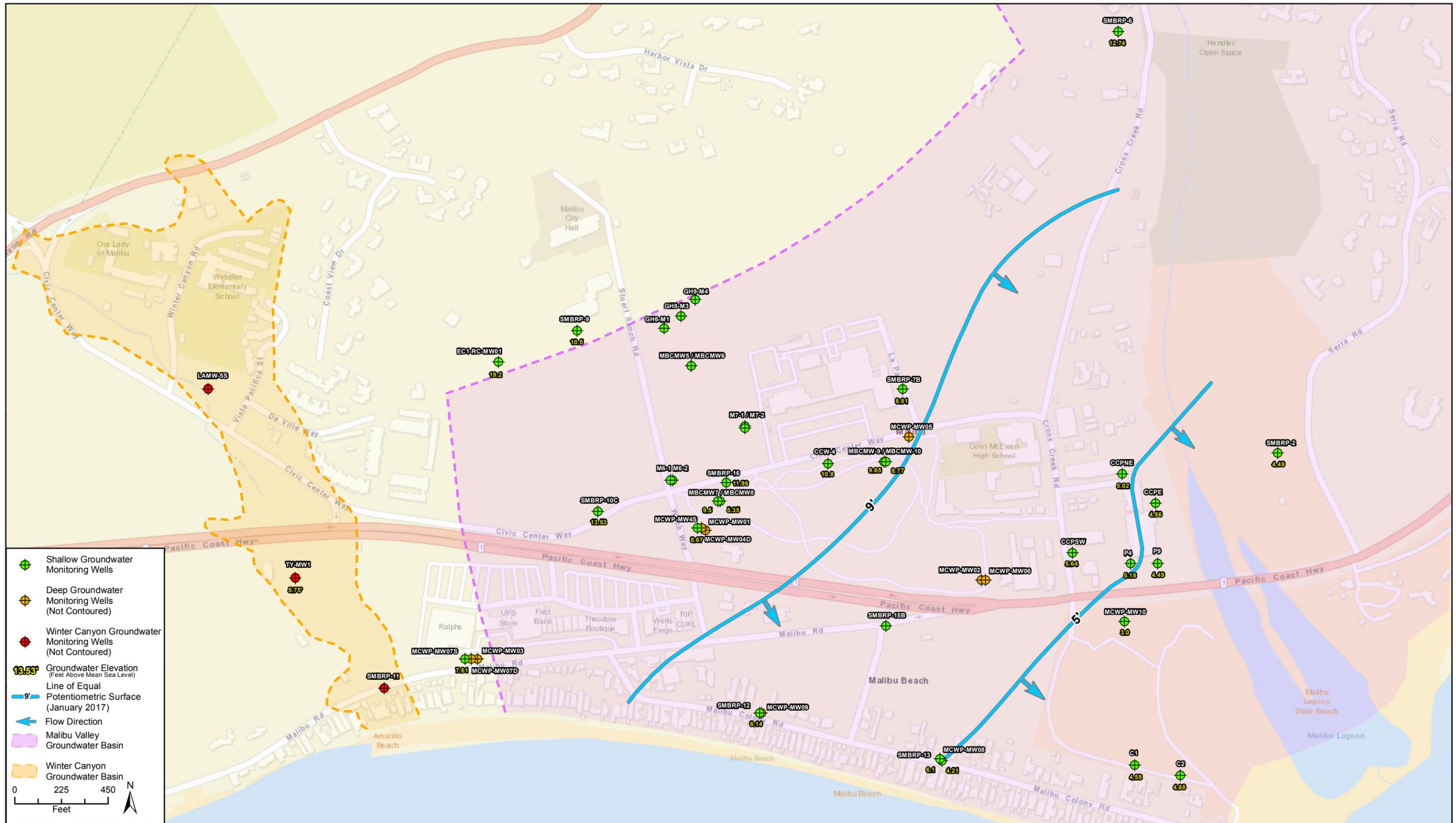




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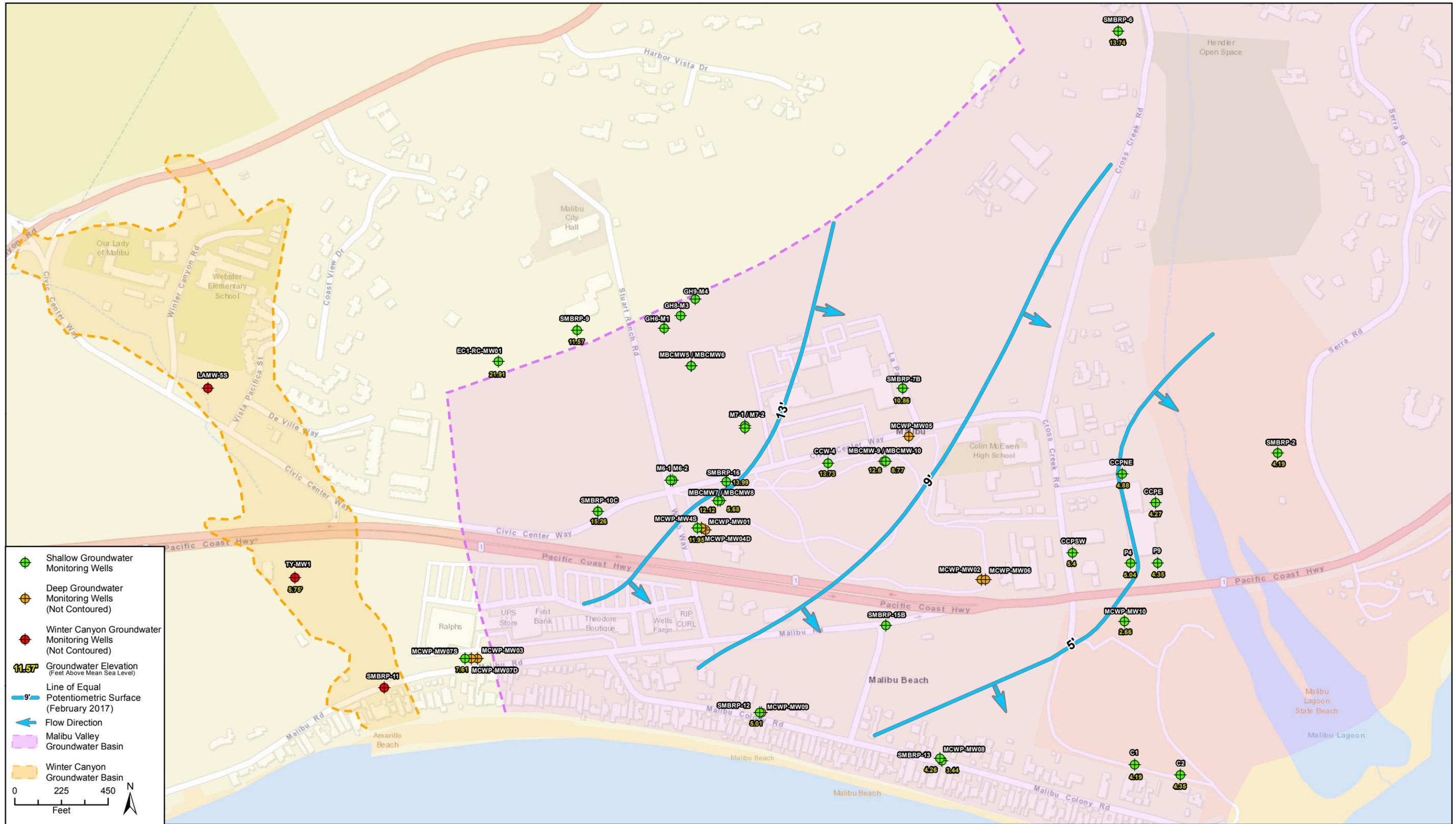
Site Map

Figure 2
 Rincon Consultants Inc.



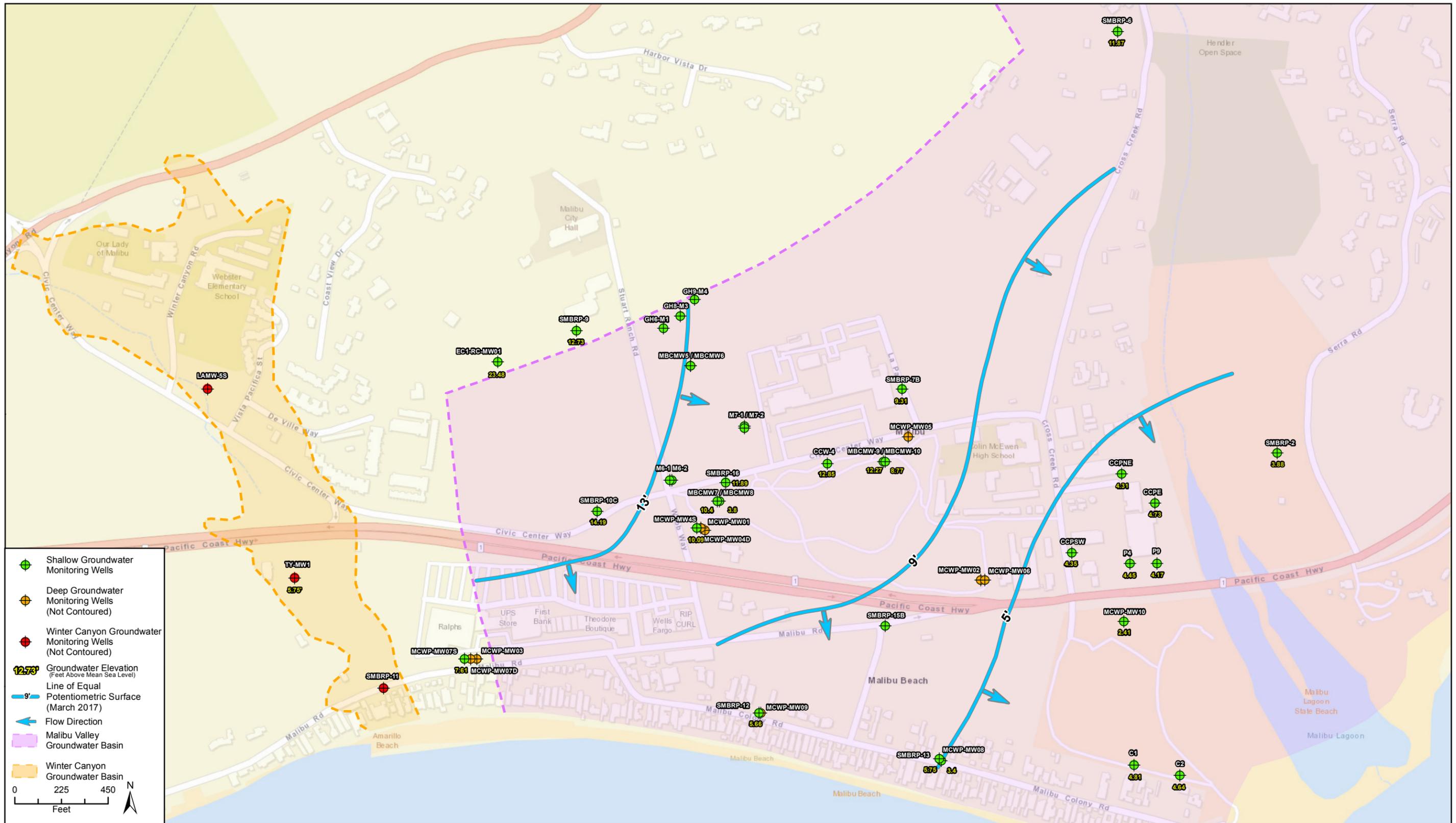
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Shallow Groundwater Elevation
 January 2017



Imagery provided by ESRI and its licensors © 2017.

Shallow Groundwater Elevations
 February 2017



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Shallow Groundwater Elevations
 March 2017

Appendix A

Groundwater and Surface Water Field Sheets

Arrive: 0830
 Leave: 1245

Rincon Consultants
 Inc.
 Peter Shellenbarger

1-17-17
 Malibu Civic Center
 DTW Task 5

Table 1
 Groundwater Monitoring Well Construction

Well ID	Total Well Depth (ft bTOC)	Well Diameter (in)	TOC Elevation (ft amsl)	Depth to Water 12/19/2016	Time	Depth to Water 8/24/2015 (ft bTOC)
1 C-1	14.5	n/a	11.47	6.89	1000	n/a
2 C-2	14.5	2	11.19	6.51	0958	5.11
3 CCPE	20	2	12.935	8.38	1032	5.76
4 CCPNE		2	13.675	8.66	1036	6.44
5 CCPSW		2	13.67	8.03	1040	6.29
6 CCW-4		1	15.765	4.97	0907	6.5
7 GH6-M1	35	2		29.90	1151	28.92
8 GH8-M3	40	2		29.27	1149	28.37
9 GH9-M4	45	2		30.79	1146	30.31
10 Lagoon		n/a		N/A	N/A	n/a
11 LAMW-5S	20	4	104.55	53.81	0830	53.71
12 M6-1	45	2		5.81	1156	6.61
13 M6-2	20	2		3.05	1159	5.76
14 M7-1	40	2		6.94	1139	8.09
15 M7-2	25	2		5.91	1137	7.78
16 MBCMW-5	19.4	n/a	29.03	N/A	N/A	n/a
17 MBCMW-6	64.26	n/a	29.02	N/A	N/A	n/a
18 MBCMW-7	52.5	2	16.635	11.29	0902	11.26
19 MBCMW-8	10	2	16.53	7.03	0904	9.11
20 MBCMW-9	10	2	17.71	8.06	0918	8.7
21 MBCMW-10	53	2	17.74	8.67	0916	8.63
22 MCWP-MW01	148	6		10.17	1100	10.22
23 MCWP-MW02	145	6	18.06	10.44	1053	10.39
24 MCWP-MW03	134	6		7.63	1121	7.65
25 MCWP-MW04D	148	4		9.34	1102	9.35
26 MCWP-MW04S	20	4		6.62	1105	7.55
27 MCWP-MW05	158	4		No Access - WWTP Pump Station		7.62

Malibu Creek → high water level @ SMBPP-6 bridge crossing
 Malibu Lagoon → berm high, breached near adamsom House → Lagoon drained

28	MCWP-MW06	153	2		9.87	1050	9.87
29	MCWP-MW07D	134	2		7.52	1118	7.51
30	MCWP-MW07S	20	2		6.11	1116	6.76
31	MCWP-MW08	77	2		8.00	1226	7.64
32	MCWP-MW09	95	2	16.3	5.79	1232	7.52
33	MCWP-MW10	60	2		8.11	0950	5.7
34	P-4	12.5	4	12.155	6.99	1022	4.58
35	P-9	14.3	4	12.165	7.68	1025	5.07
36	SMBRP-2	25	2	13.131	8.64	0942	6.04
37	SMBRP-6	25	2	26.875	14.14	0929	16.49
38	SMBRP-7b	45	2	18.985	10.18	0913	10.69
39	SMBRP-8 (EG-RC)	60	4		29.49	0841	28.74
40	SMBRP-9	45	2	50.32	39.82	0837	38.24
41	SMBRP-10C	25	2	16.25	2.72	0856	7.37
42	SMBRP-11	20	2	18.35	7.81	1124	8.88
43	SMBRP-12	25	2	12.615	6.48	1235	5.69
44	SMBRP-13	20	2	13.58	7.48	1229	8.32
45	SMBRP-15b	25	1	16.765	Dry	Dry	dry, recorded depth 8.77
46	SMBRP-16	25	2	14.5	2.54	0900	4.95

Arrive : 9:30 AM
 Depart : 1345

2-24-17

Malibu DTW Monthly
 Peter Shellenbayer

Table 1
 Groundwater Monitoring Well Construction

Well ID	Total Well Depth (ft bTOC)	Well Diameter (in)	TOC Elevation (ft amsl)	Depth to Water 12/19/2016	Time	Depth to Water 8/24/2015 (ft bTOC)
1 C-1	14.5	n/a	11.47	7.28	1121	n/a
2 C-2	14.5	2	11.19	6.84	1117	5.11
3 CCPE	20	2	12.935	8.67	1138	5.76
4 CCPNE		2	13.675	8.80	1141	6.44
5 CCPSW		2	13.67	8.27	1215	6.29
6 CCW-4		1	15.765	2.04	1019	6.5
7 GH6-M1	35	2		28.74	1255	28.92
8 GH8-M3	40	2		27.80	1252	28.37
9 GH9-M4	45	2		30.57	1250	30.31
10 Lagoon		n/a		N/A	---	n/a
11 LAMW-5S	20	4	104.55	50.54	1000	53.71
12 M6-1	45	2		4.96	1300	6.61
13 M6-2	20	2		1.75	1302	5.76
14 M7-1	40	2		5.13	1245	8.09
15 M7-2	25	2		3.56	1243	7.78
16 MBCMW-5	19.4	n/a	29.03	N/A	---	n/a
17 MBCMW-6	64.26	n/a	29.02	N/A	---	n/a
18 MBCMW-7	52.5	2	16.635	10.96	1012	11.26
19 MBCMW-8	10	2	16.53	4.41	1015	9.11
20 MBCMW-9	10	2	17.71	5.11	1028	8.7
21 MBCMW-10	53	2	17.74	8.55	1027	8.63
22 MCWP-MW01	148	6		10.68	1225	10.22
23 MCWP-MW02	145	6	18.06	10.68	1220	10.39
24 MCWP-MW03	134	6		N/A	construction w/wrp	7.65
25 MCWP-MW04D	148	4		9.83	1227	9.35
26 MCWP-MW04S	20	4		3.34	1229	7.55
27 MCWP-MW05	158	4		Not accessible	construction	7.62

Lagoon Stage Low → recent rain opened mouth, drained lagoon
 Malibu Creek Stage high & Flowing → recent rain damaged railing
 of bridge crossing @ Serra Retreat

28	MCWP-MW06	153	2		10.05	1219	9.87
29	MCWP-MW07D	134	2		N/A	N/A	7.51
30	MCWP-MW07S	20	2		N/A	N/A	6.76
31	MCWP-MW08	77	2		8.77	1326	7.64
32	MCWP-MW09	95	2	16.3	6.78	1334	7.52
33	MCWP-MW10	60	2		9.45	1109	5.7
34	P-4	12.5	4	12.155	7.12	1130	4.58
35	P-9	14.3	4	12.165	7.82	1134	5.07
36	SMBRP-2	25	2	13.131	8.94	1102	6.04
37	SMBRP-6	25	2	26.875	13.14	1051	16.49
38	SMBRP-7b	45	2	18.985	8.13	1023	10.69
39	SMBRP-8 (EG-RC)	60	4		26.76	1042	28.74
40	SMBRP-9	45	2	50.32	38.75	1037	38.24
41	SMBRP-10C	25	2	16.25	0.99 *	1005	7.37
42	SMBRP-11	20	2	18.35	7.22	1318	8.88
43	SMBRP-12	25	2	12.615	7.61	1331	5.69
44	SMBRP-13	20	2	13.58	9.32	1328	8.32
45	SMBRP-15b	25	1	16.765	Dry		dry, recorded depth 8.77
46	SMBRP-16	25	2	14.5	0.51	1009	4.95

WWT
injection
well
construction

* Groundwater extremely high, day lighting

Legend

- Monthly Transducer Well
- Monthly
- Other Well



0 500 Feet

earthforensics, inc.

MONTHLY GROUNDWATER WELLS
Civic Center Area
Malibu, CA

Date 8/1/2016	Title Number 2012.196	Sheet 1
DRAWN BY: MCVW		

Source: Earth Forensics, Inc. (SMBRP, GH8, GH9, GH6, M6, M7, MZ, CCW, MBCMW, CCPSW, CCPE, P-4, P-3, Lagoon-before, MCWP-MW045, MCWP-MW01, MCWP-MW02, MCWP-MW06, MCWP-MW10, SMBRP-15b, MCWP-MW075, MCWP-MW03, SMBRP-11, MCWP-MW07D, SMBRP-12, MCWP-MW08, SMBRP-13, MCWP-MW09, C-1, C-2)

Malibu Lagoon open
 Full - 7.5 mbl level
 Malibu Creek Flowing -> medium Full

Peter Shellenbarger

March 27, 2017

Arrive 0800

Depart 1215

Malibu Civic Center DTW

Table 1
 Groundwater Monitoring Well Construction

Well ID	Total Well Depth (ft bTOC)	Well Diameter (in)	TOC Elevation (ft amsl)	Depth to Water 3-27-17 12/19/2016	Time	Depth to Water 8/24/2015 (ft bTOC)
1 C-1	14.5	n/a	11.47	6.66	0949	n/a
2 C-2	14.5	2	11.19	6.55	0947	5.11
3 CCPE	20	2	12.935	8.21	1010	5.76
4 CCPNE		2	13.675	9.37	1012	6.44
5 CCPSW		2	13.67	9.32	1015	6.29
6 CCW-4		1	15.765	2.92	0859	6.5
7 GH6-M1	35	2		27.63	1121	28.92
8 GH8-M3	40	2		26.22	1112	28.37
9 GH9-M4	45	2		24.94	1117	30.31
10 Lagoon		n/a		N/A	—	n/a
11 LAMW-5S	20	4	104.55	48.71	0802	53.71
12 M6-1	45	2		7.17	1132	6.61
13 M6-2	20	2		3.87	1130	5.76
14 M7-1	40	2		6.71	1104	8.09
15 M7-2	25	2		5.29	1102	7.78
16 MBCMW-5	19.4	n/a	29.03	N/A	N/A	n/a
17 MBCMW-6	64.26	n/a	29.02	N/A	N/A	n/a
18 MBCMW-7	52.5	2	16.635	12.84	0853	11.26
19 MBCMW-8	10	2	16.53	6.13	0850	9.11
20 MBCMW-9	10	2	17.71	5.44	0852 1912	8.7
21 MBCMW-10	53	2	17.74	10.12	0910	8.63
22 MCWP-MW01	148	6		11.47	1039	10.22
23 MCWP-MW02	145	6	18.06	11.96	1023	10.39
24 MCWP-MW03	134	6		NA WWTP Pump status		7.65
25 MCWP-MW04D	148	4		10.61	1042	9.35
26 MCWP-MW04S	20	4		5.20	1044	7.55
27 MCWP-MW05	158	4		No ACCESS 3-27-17	—	7.62

Legend

- Monthly Transducer Well
- Monthly
- Other Well



et earthforensics, inc.

**MONTHLY
GROUNDWATER WELLS**
Civic Center Area
Malibu, CA

Date	Project Number	Page
5/1/2018	2012-150	1
Project Name		
MCWP		

Source: Esri, DigitalGlobe, GeoEye, IGN, GeoEye, Intermap, Inc., Swire, GEBCO, CNES/Airbus DS, USDA, AeroGRID, IGN, and the GIS User Community

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: ^{Purge} 3-27-17 ^{Sample} 3-28-17
Project/Location: Malibu, CA Civic Center Area	Well Number: LAMW-55
Observation Period: Start: 1245 Stop: 1410	Survey Reference Point: TOC
Sampled By: Peter Shellenbarger	Witnessed By: PS

PURGING DATA

Type of Pump: <u>Grundfos / Peristaltic</u>	Pump Inlet Depth (ft): <u>60</u>
Well Diameter (in): <u>4 in</u>	Depth of Well (ft): 48.71 <u>73.43</u>
Initial/Static Depth to Water (ft): <u>48.71</u>	Length of Water Column (ft): <u>24.72</u>
Product Thickness (ft): <u> </u>	Volume Multiplier (gal/ft): <u>0.65</u>
One Casing Volume (gal): <u>16.10</u>	Three Casing Volumes (gal): <u>48.30</u>
Purge Time, Start: <u>1323</u>	Purge Time, Stop: <u>1348</u>
Total Purge Time (minutes): <u>25</u>	Purge Rate (gpm): <u>1.16 gpm</u>
Purge Volume (gal): <u>29</u>	Depth to Water (ft) at Sampling: <u>48.63</u>

CASING OR BOREHOLE VOLUME

<u>5 gallon</u> <u>HH</u> 0.5-inch Diameter = 0.010 gal/ft 0.75-inch Diameter = 0.023 gal/ft 1-inch Diameter = 0.041 gal/ft 1.5-inch Diameter = 0.092 gal/ft 2-inch Diameter = 0.16 gal/ft	4-inch Diameter = 0.65 gal/ft 6-inch Diameter = 1.46 gal/ft 9-inch Diameter = 3.30 gal/ft 12-inch Diameter = 5.87 gal/ft 15-inch Diameter = 9.18 gal/ft <u>Speed = 105V</u>
--	--

INDICATOR DATA

Volume Pumped (gal)	Before Purge	16	32	48	~	29	At Sampling
TDS (ppm) <u>g/L</u>	0.834	0.715				0.699	0.817
Turbidity (measured or visual) cloudy, clear, muddy <u>NTU</u>	28.1	12.1				Max	9.7
Temperature (C)	21.69	21.72				24.13	21.14
Conductivity (micromhos) <u>uS/cm</u>	1.39	1.22				1.09	1.29
pH	7.11	7.02				7.09	7.27
Dissolved Oxygen (mg/L & %) <u>/</u>	2.58↓	2.22↓				1.35↓	5.18↓
Comments:							
	Depth to Water at End of Purge (ft)			<u>73.43</u>			
	Drawdown (ft)			<u>24.72</u>			

MISCELLANEOUS DATA

Condition of Traffic Box: <u>Good</u>
Drum Identification Labeling: <u>Non-Hazardous Waste</u>
Water Level Indicator: <u>Solinst Model 101</u>
Weather Conditions: <u>70°F, slight wind NW 5-10 mph</u>
Comments: Well Recovery Calculation Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery <u>48.71</u> + 0.2 * <u>24.72</u> = <u>53.65</u>
Sampled at: <u>1020</u> on <u>3-28-17</u>

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: ^{Purge} 3-27-17 ^{Sample} 3-28-17
Project/Location: Malibu, CA Civic Center Area	Well Number: SMBRP-9
Observation Period: Start: 1420 Stop: 1500	Survey Reference Point: TOC
Sampled By: Peter Shellenbarger	Witnessed By: PS

PURGING DATA			
Type of Pump	Gravelos / verti flow	Pump Inlet Depth (ft)	40
Well Diameter (in)	2 inch	Depth of Well (ft)	45
Initial/Static Depth to Water (ft)	37.59	Length of Water Column (ft)	7.41
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	1.18	Three Casing Volumes (gal)	3.55
Purge Time, Start	1433	Purge Time, Stop	1440
Total Purge Time (minutes)	7	Purge Rate (gpm)	0.57
Purge Volume (gal)	4	Depth to Water (ft) at Sampling	37.55

CASING OR BOREHOLE VOLUME	
0.5-inch Diameter = 0.010 gal/ft 0.75-inch Diameter = 0.023 gal/ft 1-inch Diameter = 0.041 gal/ft 1.5-inch Diameter = 0.092 gal/ft 2-inch Diameter = 0.16 gal/ft	4-inch Diameter = 0.65 gal/ft 6-inch Diameter = 1.46 gal/ft 9-inch Diameter = 3.30 gal/ft 12-inch Diameter = 5.87 gal/ft 15-inch Diameter = 9.18 gal/ft

INDICATOR DATA							
Volume Pumped (gal)	Before Purge	1.18	2.37	3.55			At Sampling
TDS (ppm) ^{g/L}	2.08	2.08	2.10	2.11			2.04
Turbidity (measured or visual) <small>cloudy, clear, muddy</small> NTU	Max	133	65.1	121			755
Temperature (C)	24.86	23.75	23.47	23.09			22.68
Conductivity (microsiemens) ^{ns/cm}	3.25	3.26	3.28	3.29			3.18
pH	7.43	7.38	7.39	7.39			7.38
Dissolved Oxygen (mg/L & %)	9.25	10.23	9.54	1.99			2.41
Comments:				47.25			
				47.25			
				Depth to Water at End of Purge (ft)			
				Drawdown (ft)			

MISCELLANEOUS DATA	
Condition of Traffic Box:	Good
Drum Identification labeling:	Non-Hazardous Waste
Water Level Indicator:	Solinst Model 101
Weather Conditions:	70°F, slight wind 5-10 mph, lightly cloudy
Comments:	Sampled at: 1050 ON
Well Recovery Calculation Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery $\underline{37.59} + 0.2 * \underline{2.75} = \underline{38.14}$	
	3-28-17

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587		Date: <u>Purge</u> 3-27-17 <u>Sample</u> 3-28-17						
Project/Location Malibu, CA Civic Center Area		Well Number: <u>MCWP-MW045</u>						
Observation Period Start: <u>1530</u> Stop: <u>1800</u>		Survey Reference Point: TOC						
Sampled By: Peter Shellenbarger		Witnessed By: <u>PS</u>						
PURGING DATA <u>2 hr delay @ Purge</u>								
Type of Pump: <u>submersible</u>	Pump Inlet Depth (ft): <u>10</u>							
Well Diameter (in): <u>4 inch</u>	Depth of Well (ft): <u>20.45</u>							
Initial/Static Depth to Water (ft): <u>5.20</u>	Length of Water Column (ft): <u>15.25</u>							
Product Thickness (ft): <u>---</u>	Volume Multiplier (gal/ft): <u>0.65</u>							
One Casing Volume (gal): <u>9.91</u>	Three Casing Volumes (gal): <u>29.73</u>							
Purge Time, Start: <u>1740</u>	Purge Time, Stop: <u>1754</u>							
Total Purge Time (minutes): <u>14</u>	Purge Rate (gpm): <u>1.21</u>							
Purge Volume (gal): <u>17</u>	Depth to Water (ft) at Sampling: <u>5.91</u>							
CASING OR BOREHOLE VOLUME								
<u>5 gallon</u> 0.5-inch Diameter = 0.010 gal/ft 0.75-inch Diameter = 0.023 gal/ft 1-inch Diameter = 0.041 gal/ft 1.5-inch Diameter = 0.092 gal/ft 2-inch Diameter = 0.16 gal/ft		4-inch Diameter = 0.65 gal/ft 6-inch Diameter = 1.46 gal/ft 9-inch Diameter = 3.30 gal/ft 12-inch Diameter = 5.87 gal/ft 15-inch Diameter = 9.18 gal/ft						
INDICATOR DATA								
Volume Pumped (gal)	Before Purge	<u>9.91</u>	<u>19.83</u>	<u>29.73</u>				At Sampling
TDS (ppm) <u>g/L</u>	<u>4.62</u>	<u>2.71</u>						<u>4.43</u>
Turbidity (measured or visual) <u>cloudy clear muddy NTU</u>	<u>500</u>	<u>87.4</u>						<u>1.5</u>
Temperature (C)	<u>22.59</u>	<u>21.45</u>						<u>22.24</u>
Conductivity (micromhos) <u>uS/cm</u>	<u>7.33</u>	<u>4.23</u>						<u>7.04</u>
pH	<u>7.36</u>	<u>7.26</u>						<u>7.47</u>
Dissolved Oxygen (mg/L & %) <u>1</u>	<u>9.71 ↓</u>	<u>8.62 ↓</u>						<u>5.85</u>
Comments:								
Depth to Water at End of Purge (ft)								
Drawdown (ft)								
MISCELLANEOUS DATA								
Condition of Traffic Box: <u>Good</u>								
Drum Identification labeling: <u>Non-Hazardous Waste</u>								
Water Level Indicator: <u>Solinst Model 101</u>								
Weather Conditions: <u>70°F, wind 10-15 mph NW, Partly Cloudy</u>								
Comments: <u>1115 on</u> Sampled at: <u>1115 on</u> <u>3-28-17</u>								
Well Recovery Calculation Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery <u>5.20</u> + 0.2 * <u>15.25</u> = <u>8.25</u>								

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: 3-28-17
Project/Location Malibu, CA Civic Center Area	Well Number: CCPE
Observation Period Start: 0740 Stop: 0915	Survey Reference Point: TOC
Sampled By: Peter Shellenbarger	Witnessed By: PS

PURGING DATA

Type of Pump	Submersible	Pump Inlet Depth (ft)	12
Well Diameter (in)	2 inch	Depth of Well (ft)	52.7
Initial/Static Depth to Water (ft)	9.19	Length of Water Column (ft)	43.51
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	6.96	Three Casing Volumes (gal)	20.88
Purge Time, Start	0758	Purge Time, Stop	0849
Total Purge Time (minutes)	51	Purge Rate (gpm)	0.42
Purge Volume (gal)	21	Depth to Water (ft) at Sampling	9.19

CASING OR BOREHOLE VOLUME

5 gallon 	0.5-inch Diameter = 0.010 gal/ft	4-inch Diameter = 0.65 gal/ft
	0.75-inch Diameter = 0.023 gal/ft	6-inch Diameter = 1.46 gal/ft
	1-inch Diameter = 0.041 gal/ft	9-inch Diameter = 3.30 gal/ft
	1.5-inch Diameter = 0.092 gal/ft	12-inch Diameter = 5.87 gal/ft
	2-inch Diameter = 0.16 gal/ft	15-inch Diameter = 9.18 gal/ft

INDICATOR DATA 20.88

Volume Pumped (gal)	Before Purge	6.96	10.44	13.92		At Sampling
TDS (ppm)	4/L 0.849	1.46	1.88	2.57	→	
Turbidity (measured or visual) cloudy, clear, muddy	36.3	1.5	2.8	0.0	→	
Temperature (C)	16.34	17.67	18.19	19.09	→	
Conductivity (micromhos)	1.33	2.32	2.94	4.01		
pH	7.10	7.16	7.29	7.26	→	
Dissolved Oxygen (mg/L & %)	1.13	2.77↓	3.01↓	2.14↓	→	
Comments:						
Depth to Water at End of Purge (ft)				9.19		
Drawdown (ft)				0		

MISCELLANEOUS DATA

Condition of Traffic Box: Fair. Bolts Stripped. Well cap damaged

Drum Identification Labeling: Non-Hazardous Waste

Water Level Indicator: Solinst Model 101

Weather Conditions: 60°F, 10-25 mph wind E-NE, clear

Comments: Well Recovery Calculation
 Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery
 9.19 + 0.2 * 0 = 9.19

Sampled at: 0900

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587		Date: 3-28-17						
Project/Location Malibu, CA Civic Center Area		Well Number: SMBRP-7B						
Observation Period Start: 0930 Stop: 1005		Survey Reference Point: TOC						
Sampled By: Peter Shellenbarger		Witnessed By: PS						
PURGING DATA								
Type of Pump	Submersible	Pump Inlet Depth (ft)	17					
Well Diameter (in)	2 inch	Depth of Well (ft)	25.13					
Initial/Static Depth to Water (ft)	9.71	Length of Water Column (ft)	15.42					
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16					
One Casing Volume (gal)	2.46	Three Casing Volumes (gal)	7.40					
Purge Time, Start	938	Purge Time, Stop	0958 0949					
Total Purge Time (minutes)	11	Purge Rate (gpm)	0.68					
Purge Volume (gal)	7.5	Depth to Water (ft) at Sampling	11.45					
CASING OR BOREHOLE VOLUME								
0.5-inch Diameter = 0.010 gal/ft 0.75-inch Diameter = 0.023 gal/ft 1-inch Diameter = 0.041 gal/ft 1.5-inch Diameter = 0.092 gal/ft 2-inch Diameter = 0.16 gal/ft		4-inch Diameter = 0.65 gal/ft 6-inch Diameter = 1.46 gal/ft 9-inch Diameter = 3.30 gal/ft 12-inch Diameter = 5.87 gal/ft 15-inch Diameter = 9.18 gal/ft						
INDICATOR DATA								
Volume Pumped (gal)	Before Purge	2.46	4.93	7.40				At Sampling
TDS (ppm) <i>g/L</i>	1.12	1.05	1.54	2.28				2.66
Turbidity (measured or visual) cloudy, clear, muddy <i>NTU</i>	428	347	200	86.4				140
Temperature (C)	19.55	19.76	19.96	20.22				21.74
Conductivity (micromhos) <i>uS/cm</i>	1.76	1.59	2.41	3.56				4.15
pH	7.06	7.02	6.98	7.03				7.10
Dissolved Oxygen (mg/L & %) <i>%</i>	4.65	2.12	9.91	5.51				3.25
Comments:								
Depth to Water at End of Purge (ft)				18.51				
Drawdown (ft)				8.8				
MISCELLANEOUS DATA								
Condition of Traffic Box: Good, well has crack in pipe								
Drum Identification labeling: Non-Hazardous Waste								
Water Level Indicator: Solinst Model 101								
Weather Conditions: 65°F, 5-15 mph NE, clear								
Comments: Well Recovery Calculation Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery <u>9.71</u> + 0.2 * <u>8.8</u> = <u>11.47</u> Sampled at: <u>1205</u> on <u>3-28-17</u>								

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: 3-28-17
Project/Location Malibu, CA Civic Center Area	Well Number: MCWP-MW06
Observation Period Start: 1220 Stop: 1400	Survey Reference Point: TOC
Sampled By: Peter Shellenbarger	Witnessed By: PS

PURGING DATA

Type of Pump	Submersible	Pump Inlet Depth (ft)	50
Well Diameter (in)	2 inch	Depth of Well (ft)	138.15
Initial/Static Depth to Water (ft)	10.91	Length of Water Column (ft)	127.24
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	20.35	Three Casing Volumes (gal)	61.1
Purge Time, Start	1230	Purge Time, Stop	1344
Total Purge Time (minutes)	64	Purge Rate (gpm)	~ 1 gpm
Purge Volume (gal)	65	Depth to Water (ft) at Sampling	10.91

CASING OR BOREHOLE VOLUME

0.5-inch Diameter = 0.010 gal/ft	4-inch Diameter = 0.65 gal/ft
0.75-inch Diameter = 0.023 gal/ft	6-inch Diameter = 1.46 gal/ft
1-inch Diameter = 0.041 gal/ft	9-inch Diameter = 3.30 gal/ft
1.5-inch Diameter = 0.092 gal/ft	12-inch Diameter = 5.87 gal/ft
2-inch Diameter = 0.16 gal/ft	15-inch Diameter = 9.18 gal/ft

INDICATOR DATA

Volume Pumped (gal)	Before Purge	20.35	40.72	61.1				At Sampling
TDS (ppm) <i>g/L</i>	0.528	1.27	1.33					
Turbidity (measured or visual) cloudy, clear, muddy	46.3	0.0	0.0					
Temperature (C)	21.81	21.15	20.22					
Conductivity (micromhos) <i>uS/cm</i>	0.821	1.99	2.08					
pH	7.41	7.40	7.43					
Dissolved Oxygen (mg/L & %) <i>%</i>	2.04 ↓	1.06 ↓	0.90 ↓					
Comments:								
Depth to Water at End of Purge (ft)								10.91
Drawdown (ft)								0

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	Non-Hazardous Waste
Water Level Indicator:	Solinst Model 101
Weather Conditions:	75°F, Clear, 15-25 mph N-NE wind
Comments:	Well Recovery Calculation Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery <u>10.91</u> + 0.2 * <u>0</u> = <u>10.91</u> Sampled at: <u>1350</u>

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: 3-29-17
Project/Location Malibu, CA Civic Center Area	Well Number: TY-MW-1
Observation Period Start: 7:45 Stop: 0900	Survey Reference Point: TOC
Sampled By: Peter Shellenbarger	Witnessed By: PS

PURGING DATA

Type of Pump	Submersible	Pump Inlet Depth (ft)	75
Well Diameter (in)	2 inch	Depth of Well (ft)	80.45
Initial/Static Depth to Water (ft)	65.65	Length of Water Column (ft)	14.8
Product Thickness (ft)		Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	2.37	Three Casing Volumes (gal)	7.1
Purge Time, Start	0818	Purge Time, Stop	0831
Total Purge Time (minutes)	13	Purge Rate (gpm)	0.54
Purge Volume (gal)	7.10	Depth to Water (ft) at Sampling	65.65

CASING OR BOREHOLE VOLUME

0.5-inch Diameter = 0.010 gal/ft	4-inch Diameter = 0.65 gal/ft
0.75-inch Diameter = 0.023 gal/ft	6-inch Diameter = 1.46 gal/ft
1-inch Diameter = 0.041 gal/ft	9-inch Diameter = 3.30 gal/ft
1.5-inch Diameter = 0.092 gal/ft	12-inch Diameter = 5.87 gal/ft
2-inch Diameter = 0.16 gal/ft	15-inch Diameter = 9.18 gal/ft

INDICATOR DATA

Volume Pumped (gal)	Before Purge	2.37	4.74	7.10				At Sampling
TDS (ppm) g/L	2.04	2.03	2.01	1.99	—	—	—	→
Turbidity (measured or visual) cloudy, clear, muddy NTU	532	139	94.7	30.6	—	—	—	→
Temperature (C)	18.53	19.78	20.36	20.73	—	—	—	→
Conductivity (micromhos)	3.18	3.18	3.15	3.11	—	—	—	→
pH	6.74	6.77	6.76	6.75	—	—	—	→
Dissolved Oxygen (mg/L & %)	2.96	2.25	1.99	0.84	—	—	—	→
Comments:					—	—	—	→
Depth to Water at End of Purge (ft)		65.65						
Drawdown (ft)		0						

MISCELLANEOUS DATA

Condition of Traffic Box: Good -> located 17 ft from white pole

Drum Identification labeling: Non-Hazardous Waste

Water Level Indicator: Solinst Model 101

Weather Conditions: 65° clear .0 wind

Comments: Well Recovery Calculation
 Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery

65.65 + 0.2 * 0 = 65.65

Sampled at: 0840

Same as 3rd purge

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: 3-29-17
Project/Location Malibu, CA Civic Center Area	Well Number: SMBRP-13
Observation Period Start: 0905 Stop: 0935	Survey Reference Point: TOC
Sampled By: Peter Shellenbarger	Witnessed By: PS

PURGING DATA

Type of Pump	Submersible	Pump Inlet Depth (ft)	13
Well Diameter (in)	2 inch	Depth of Well (ft)	1943
Initial/Static Depth to Water (ft)	8.19	Length of Water Column (ft)	11.24
Product Thickness (ft)		Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	1.80	Three Casing Volumes (gal)	5.4
Purge Time, Start	09:12	Purge Time, Stop	09:15
Total Purge Time (minutes)	3	Purge Rate (gpm)	2.33
Purge Volume (gal)	7	Depth to Water (ft) at Sampling	8.19

CASING OR BOREHOLE VOLUME

0.5-inch Diameter = 0.010 gal/ft	4-inch Diameter = 0.65 gal/ft
0.75-inch Diameter = 0.023 gal/ft	6-inch Diameter = 1.46 gal/ft
1-inch Diameter = 0.041 gal/ft	9-inch Diameter = 3.30 gal/ft
1.5-inch Diameter = 0.092 gal/ft	12-inch Diameter = 5.87 gal/ft
2-inch Diameter = 0.16 gal/ft	15-inch Diameter = 9.18 gal/ft

INDICATOR DATA

Volume Pumped (gal)	Before Purge	1.8	3.6	5.4				At Sampling
TDS (ppm) g/L	14.7	17.3	17.1	17.2				
Turbidity (measured or visual) cloudy, clear, muddy NTU	10.9	0.0	0.0	0.0	→			
Temperature (C)	19.9	19.18	19.24	19.25				
Conductivity (micromhos) us/cm	23.8	28.0	27.7	28.1	→			
pH	7.21	6.90	6.90	6.90				
Dissolved Oxygen (mg/L & %)	4.47	1.75	1.73	1.65				
Comments:					→			
Depth to Water at End of Purge (ft)					8.19			
Drawdown (ft)					0			

MISCELLANEOUS DATA

Condition of Traffic Box: Good

Drum Identification Labeling: Non-Hazardous Waste

Water Level Indicator: Solinst Model 101

Weather Conditions: 70°F, NO wind, clear

Comments: changed length of purge hose; Faster Purge rate
 Well Recovery Calculation
 Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery
 8.19 + 0.2 * 0 = 8.19

Sampled at: 0925

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: 3-29-17
Project/Location Malibu, CA Civic Center Area	Well Number: SMBRP-12
Observation Period Start: 0940 Stop: 1010	Survey Reference Point: TOC
Sampled By: Peter Shellenbarger	Witnessed By: PS

PURGING DATA

Type of Pump	Submersible	Pump Inlet Depth (ft)	10.00
Well Diameter (in)	2.125	Depth of Well (ft)	24.88
Initial/Static Depth to Water (ft)	7.07	Length of Water Column (ft)	17.81
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	2.85	Three Casing Volumes (gal)	8.55
Purge Time, Start	0948	Purge Time, Stop	0952
Total Purge Time (minutes)	0952 4	Purge Rate (gpm)	2.25
Purge Volume (gal)	9	Depth to Water (ft) at Sampling	7.07

CASING OR BOREHOLE VOLUME

0.5-inch Diameter = 0.010 gal/ft	4-inch Diameter = 0.65 gal/ft
0.75-inch Diameter = 0.023 gal/ft	6-inch Diameter = 1.46 gal/ft
1-inch Diameter = 0.041 gal/ft	9-inch Diameter = 3.30 gal/ft
1.5-inch Diameter = 0.092 gal/ft	12-inch Diameter = 5.87 gal/ft
2-inch Diameter = 0.16 gal/ft	15-inch Diameter = 9.18 gal/ft

INDICATOR DATA

Volume Pumped (gal)	Before Purge	2.85	5.7	8.55				At Sampling
TDS (ppm)	2.02	2.03	2.13	2.14	→			
Turbidity (measured or visual) cloudy, clear, muddy	98.9	8.4	0.0	0.0	→			
Temperature (C)	20.25	20.15	20.14	20.14				
Conductivity (micromhos)	2.99	3.18	3.32	3.40	→			
pH	7.58	7.39	7.33	7.34				
Dissolved Oxygen (mg/L & %)	3.52 ↓	1.84	1.01 ↓	1.00 ↓	→			
Comments:								
Depth to Water at End of Purge (ft)				7.07	→			
Drawdown (ft)				0				

MISCELLANEOUS DATA

Condition of Traffic Box: Good

Drum Identification Labeling: Non-Hazardous Waste

Water Level Indicator: Solinst Model 101

Weather Conditions: 70°F, 0-5 mph NW wind, clear

Comments: Sampled at: 1000

Well Recovery Calculation
 Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery
7.07 + 0.2 * 0 = 7.07

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: 3-29-17
Project/Location Malibu, CA Civic Center Area	Well Number: MCWP-MW09
Observation Period Start: 1010 Stop: 1055	Survey Reference Point: TOC
Sampled By: Peter Shellenbarger	Witnessed By: PS

PURGING DATA

Type of Pump	Submersible	Pump Inlet Depth (ft)	55
Well Diameter (in)	2	Depth of Well (ft)	89.60
Initial/Static Depth to Water (ft)	6.62	Length of Water Column (ft)	82.98
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	13.27	Three Casing Volumes (gal)	39.83
Purge Time, Start	1017	Purge Time, Stop	1035
Total Purge Time (minutes)	18	Purge Rate (gpm)	2.22
Purge Volume (gal)	40	Depth to Water (ft) at Sampling	6.62

CASING OR BOREHOLE VOLUME

0.5-inch Diameter = 0.010 gal/ft	4-inch Diameter = 0.65 gal/ft
0.75-inch Diameter = 0.023 gal/ft	6-inch Diameter = 1.46 gal/ft
1-inch Diameter = 0.041 gal/ft	9-inch Diameter = 3.30 gal/ft
1.5-inch Diameter = 0.092 gal/ft	12-inch Diameter = 5.87 gal/ft
2-inch Diameter = 0.16 gal/ft	15-inch Diameter = 9.18 gal/ft

INDICATOR DATA

Volume Pumped (gal)	Before Purge	6	12	18				At Sampling	
TDS (ppm) g/L	2.03	2.61	2.82	2.91	→				
Turbidity (measured or visual) cloudy, clear, muddy NTU	24.4	5.6	0.0	0.0	→				
Temperature (C)	21.06	20.31	20.30	20.47	→				
Conductivity (micromhos)	3.21	4.06	4.42	4.54	→				
pH	7.6	7.57	7.54	7.49	→				
Dissolved Oxygen (mg/L & %)	3.56	1.89	1.53	0.80	→				
Comments:					→				
Depth to Water at End of Purge (ft)								6.62	
Drawdown (ft)								0	

MISCELLANEOUS DATA

Condition of Traffic Box: Good

Drum Identification labeling: Non-Hazardous Waste

Water Level Indicator: Solinst Model 101

Weather Conditions: 70°F, calm, 0-5 mph NW wind

Comments: Well Recovery Calculation
 Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery
 6.62 + 0.2 * 0 = 6.62

Sampled at: 1050

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587		Date: 3-29-17						
Project/Location Malibu, CA Civic Center Area		Well Number: MCWP MW10						
Observation Period Start: 1100 Stop: 1145		Survey Reference Point: TOC						
Sampled By: Peter Shellenbarger		Witnessed By: PS						
PURGING DATA								
Type of Pump	Submersible	Pump Inlet Depth (ft)	10 ft					
Well Diameter (in)	2 inch	Depth of Well (ft)	22.23					
Initial/Static Depth to Water (ft)	8.51	Length of Water Column (ft)	13.72					
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16					
One Casing Volume (gal)	2.20	Three Casing Volumes (gal)	6.60					
Purge Time, Start	1115	Purge Time, Stop	1119					
Total Purge Time (minutes)	4	Purge Rate (gpm)						
Purge Volume (gal)	7	Depth to Water (ft) at Sampling	8.51					
CASING OR BOREHOLE VOLUME								
0.5-inch Diameter = 0.010 gal/ft 0.75-inch Diameter = 0.023 gal/ft 1-inch Diameter = 0.041 gal/ft 1.5-inch Diameter = 0.092 gal/ft 2-inch Diameter = 0.16 gal/ft		4-inch Diameter = 0.65 gal/ft 6-inch Diameter = 1.46 gal/ft 9-inch Diameter = 3.30 gal/ft 12-inch Diameter = 5.87 gal/ft 15-inch Diameter = 9.18 gal/ft						
INDICATOR DATA								
Volume Pumped (gal)	Before Purge	2.2	4.4	6.6				At Sampling
TDS (ppm)	1.97	1.94	1.21	1.95				
Turbidity (measured or visual) cloudy, clear, muddy	5.9	0.0	0.0	0.0				
Temperature (C)	22.00	21.22	20.96	21.05				
Conductivity (micromhos)	3.08	3.03	3.06	3.04				
pH	7.39	7.37	7.33	7.34				
Dissolved Oxygen (mg/L & %)	3.06	2.64	2.09	2.00				
Comments:								
Depth to Water at End of Purge (ft)		8.51						
Drawdown (ft)		0						
MISCELLANEOUS DATA								
Condition of Traffic Box:		Good						
Drum Identification labeling:		Non-Hazardous Waste						
Water Level Indicator:		Solinst Model 101						
Weather Conditions:		75°F, NW 5-10 mph, clear, hot						
Comments:		Sampled at: 1130						
Well Recovery Calculation Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery <u>8.51</u> + 0.2 * <u>0</u> = <u>8.51</u>								

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587		Date: 3-29-17						
Project/Location Malibu, CA Civic Center Area		Well Number: MCWP-MW05						
Observation Period Start: 1235 Stop: 1535		Survey Reference Point: TOC						
Sampled By: Peter Shellenbarger		Witnessed By: PS						
PURGING DATA								
Type of Pump	Submersible	Pump Inlet Depth (ft)	45 ft					
Well Diameter (in)	4 inch	Depth of Well (ft)	154.4					
Initial/Static Depth to Water (ft)	8.39	Length of Water Column (ft)	146.01					
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.65					
One Casing Volume (gal)	94.90	Three Casing Volumes (gal)	284.71					
Purge Time, Start	① 1245 to 1335 = 140 min	Purge Time, Stop	107					
Total Purge Time (minutes)	② 1428 to 1525 = 145 min	Purge Rate (gpm)	2.66					
Purge Volume (gal)	285	Depth to Water (ft) at Sampling	8.39					
CASING OR BOREHOLE VOLUME								
0.5-inch Diameter = 0.010 gal/ft 0.75-inch Diameter = 0.023 gal/ft 1-inch Diameter = 0.041 gal/ft 1.5-inch Diameter = 0.092 gal/ft 2-inch Diameter = 0.16 gal/ft		4-inch Diameter = 0.65 gal/ft 6-inch Diameter = 1.46 gal/ft 9-inch Diameter = 3.30 gal/ft 12-inch Diameter = 5.87 gal/ft 15-inch Diameter = 9.18 gal/ft						
INDICATOR DATA								
Volume Pumped (gal)	Before Purge	95	190	285				At Sampling
TDS (ppm)	g/L 0.197	1.23	1.30	1.31				
Turbidity (measured or visual) cloudy, clear, muddy	NTU 4.0 3.0	0.0	0.0	0.0				
Temperature (C)	22.45	20.45	20.94	20.58				
Conductivity (microhm/cm)	0.320	1.92	2.03	2.05				
pH	7.86	7.14	7.45	7.36				
Dissolved Oxygen (mg/L & %)	5.80 ↓	2.39 ↓	1.30	1.42 ↓				
Comments:			157 ↓					
Depth to Water at End of Purge (ft)		8.39						
Drawdown (ft)		0						
MISCELLANEOUS DATA								
Condition of Traffic Box:	Good → uncovered for sampling → in construction zone							
Drum Identification labeling:	Non-Hazardous Waste							
Water Level Indicator:	Solinst Model 101							
Weather Conditions:	75°F, light NW wind 5-10 mph, clear, hot							
Comments:	Sampled at: 1535							
Well Recovery Calculation Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery <u>8.39</u> + 0.2 * <u>0</u> = <u>8.39</u>								

Completed EW Monitoring event @ 1200 3/30/17
 16 Drums Filled = 880 gallons

Rincon Consultants, Inc.
GROUND WATER SAMPLING/PURGING DATA SHEET

Job No: 15-01587	Date: 3-30-17							
Project/Location Malibu, CA Civic Center Area	Well Number: MCWP-MW04D							
Observation Period Start: 0750 Stop: 1050	Survey Reference Point: TOC							
Sampled By: Peter Shellenbarger	Witnessed By: PS							
PURGING DATA								
Type of Pump: Submersible	Pump Inlet Depth (ft): 15							
Well Diameter (in): 4 inch	Depth of Well (ft): 149.2							
Initial/Static Depth to Water (ft): 10.56	Length of Water Column (ft): 138.64							
Product Thickness (ft): 	Volume Multiplier (gal/ft): 0.65							
One Casing Volume (gal): 90.11	Three Casing Volumes (gal): 270.35							
Purge Time, Start: ① 0800 ② 0945	Purge Time, Stop: ① 0845 ② 1035							
Total Purge Time (minutes): ① 45 ② 50	Purge Rate (gpm): 2.95							
Purge Volume (gal): ① 140 ② 140	Depth to Water (ft) at Sampling: 10.56							
CASING OR BOREHOLE VOLUME								
0.5-inch Diameter = 0.010 gal/ft 0.75-inch Diameter = 0.023 gal/ft 1-inch Diameter = 0.041 gal/ft 1.5-inch Diameter = 0.092 gal/ft 2-inch Diameter = 0.16 gal/ft	4-inch Diameter = 0.65 gal/ft 6-inch Diameter = 1.46 gal/ft 9-inch Diameter = 3.30 gal/ft 12-inch Diameter = 5.87 gal/ft 15-inch Diameter = 9.18 gal/ft							
INDICATOR DATA								
Volume Pumped (gal)	Before Purge	90	180	270				At Sampling
TDS (ppm) g/L	0.210	1.44	1.50	1.51				→
Turbidity (measured or visual) cloudy, clear, muddy NTU	93.1	0.0	0.0	0.0				→
Temperature (C)	19.50	18.0	19.09	18.56				→
Conductivity (µS/cm)	0.322	2.25	2.34	2.35				→
pH	6.90	7.27	7.37	7.26				→
Dissolved Oxygen (mg/L & %)	4.09	2.08↓	1.55↓	1.91↓				→
Comments:								
Depth to Water at End of Purge (ft)				10.56				→
Drawdown (ft)				0				
MISCELLANEOUS DATA								
Condition of Traffic Box:	Good							
Drum Identification labeling:	Non-Hazardous Waste							
Water Level Indicator:	Solinst Model 101							
Weather Conditions:	60°F, Clear, 0-5 mph N-NE							
Comments:								Sampled at: 1040
Well Recovery Calculation Static Depth to Water in feet + (0.2) (maximum Drawdown in feet) = Depth to Water at 80% Recovery 10.56 + 0.2 * 0 = 10.56								

Project #
Malibu Civic Center WWTP
Task 1 - Surface H₂O Sampling
Arrive in Malibu: 0925
Depart Malibu: 1400
Arrive/Drop off
Samples @ Lab (FGL): 1533

March 31, 2017
Rincon Consultants
Peter Shellenbarger
(PS)

L-001 @ 1200	N-001 @ 0955
L-002 @ 1340	N-002 @ 1015
L-003 @ 1230	N-003 @ 1300
L-004 @ 1025	N-004 @ 0935
L-005 @ 1310	
L-006 @ 1040	

+ Weather - Clear, 65°F, 0-10 mph wind
NW

Lagoon Stage - open, tidal influenced

Malibu Creek - Flow present, low creek level
Compared to winter months

				4259:03/06/2017				TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information																
Client: Rincon Consultants, Inc. Address: Attn: Torin Snyder 180 N. Ashwood Ave. Ventura, CA 93003 Phone: (760)918-9444ext209 Fax: Contact Person: Torin Snyder Project Name: Malibu WWTP-GW-SNMP/MOU Purchase Order Number: Quote Number: SP 20150526-01				Method of Sampling: Composite(C) Grab(G) Type of Sample: **SEE REVERSE SIDE** Potable(P) Non-Potable(NP) Ag Water(AgW) Bacti Type: Other(O) System(SYS) Source(SR) Waste(W) Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)				Coliform-LTB-Series 15 Tube ***8 Hour Hold Time*** 120ml(PBa)-Na2S2O3 Wet Chemistry-NO3-N, NO2-N, N-Organic, Total P, NH3-N, TDS ***NO2-N, NO3-N-48 Hour Hold Time*** 16oz(P), 16oz(P)-H2SO4 Wet Chemistry-NO3-N, TDS ***NO3-N-48 Hour Hold Time*** 16oz(P)																
Sampler(s) <i>Rincon Consultants Malibu Shellback</i>				Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___/___				Lab Number: SP 2-25173																
Samp Num	Location Description	Date Sampled	Time Sampled	Method	Type	Potable	Bacti Type	Bacti Reason	Other	Special	Coliform	Wet Chem	Wet Chem											
11	MCWP-MW10			G	MW						1	1,1												
12	CCPE	<i>3-28-17</i>	<i>1400</i>	G	MW						1	1,1												
13	MBCMW-9	<i>3-28-17</i>	<i>140</i>	G	MW						1	1,1												
14	SMBRP-7B	<i>3-28-17</i>	<i>1205</i>	G	MW						1	1,1												
15	MCWP-MW05			G	MW								1											
16	MCWP-MW06	<i>3-28-17</i>	<i>1350</i>	G	MW								1											
Remarks: Multiple Chains				Relinquished <i>[Signature]</i>				Date: _____ Time: _____				Relinquished Date: _____ Time: _____				Relinquished Date: _____ Time: _____								
Received By: _____				Date: _____ Time: _____				Received By: _____				Date: _____ Time: _____				Received By: _____				Date: _____ Time: _____				

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Fax: (559) 734-8435

				4259-03/06/2017				TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information														
Client: Rincon Consultants, Inc. Address: Attn: Torin Snyder 180 N. Ashwood Ave. Ventura, CA 93003 Phone: (760)918-9444ext209 Fax: Contact Person: Torin Snyder Project Name: Malibu WWTP-GW-SNMP/MOU Purchase Order Number: Quote Number: SP 20150526-01				Method of Sampling: Composite(C) Grab(G) Type of Sample: **SEE REVERSE SIDE** Potable(P) Non-Potable(NP) Ag Water(AgW) Bacti Type: Other(O) System(SYS) Source(SR) Waste(W) Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)				Coliform-LTB-Series 15 Tube ***8 Hour Hold Time*** 120ml(PBa)-Na2S2O3 Wet Chemistry-NO3-N,NO2-N,N-Organic,Total P,NH3-N,TDS ***NO2-N, NO3-N-48 Hour Hold Time*** 16oz(P), 16oz(P)-H2SO4 Wet Chemistry-NO3-N,TDS ***NO3-N-48 Hour Hold Time*** 16oz(P)														
Sampler(s): <i>Rincon Consultants</i> <i>Attn: Torin Snyder</i> Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___/___				Lab Number: SP 2-25173																		
Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling	Type of Sample	Potable(P)	Non-Potable(NP)	Ag Water(AgW)	Bacti Type	Bacti Reason	Other(O)	Special(SPL)	Coliform-LTB-Series 15 Tube	***8 Hour Hold Time***	120ml(PBa)-Na2S2O3	Wet Chemistry-NO3-N,NO2-N,N-Organic,Total P,NH3-N,TDS	***NO2-N, NO3-N-48 Hour Hold Time***	16oz(P), 16oz(P)-H2SO4	Wet Chemistry-NO3-N,TDS	***NO3-N-48 Hour Hold Time***	16oz(P)	
1	SMBRP-9	<i>3-28-17</i>	<i>1050</i>	G	MW								1		1,1							
2	MCWP-MW04S	<i>3-28-17</i>	<i>1115</i>	G	MW								1		1,1							
3	MCWP-MW07S			G	MW								1		1,1							
4	SMBRP-12			G	MW								1		1,1							
5	MCWP-04D			G	MW								1		1,1							
6	MCWP-07D			G	MW								1		1,1							
7	MCWP-MW09			G	MW								1		1,1							
8	TY-MW-1			G	MW								1		1,1							
9	LAMW-5S	<i>3-28-17</i>	<i>1020</i>	G	MW								1		1,1							
10	SMBRP-13			G	MW								1		1,1							
Remarks: Multiple Chains				Relinquished Date: _____ Time: _____				Relinquished Date: _____ Time: _____				Relinquished Date: _____ Time: _____										
				Received By: _____ Date: _____ Time: _____				Received By: _____ Date: _____ Time: _____				Received By: _____ Date: _____ Time: _____										

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				4259:03/06/2017				TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information											
Client: Rincon Consultants, Inc. Address: Attn: Torin Snyder 180 N. Ashwood Ave. Ventura, CA 93003 Phone: (760)918-9444ext209 Fax: Contact Person: Torin Snyder Project Name: Malibu WWTP-GW-SNMP/MOU Purchase Order Number: Quote Number: SP 20150526-01				Method of Sampling: Composite(C) Grab(G) Type of Sample: **SEE REVERSE SIDE** Potable(P) Non-Potable(NP) Ag Water(AgW) Bacti Type: Other(O) System(SYS) Source(SR) Waste(W) Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)				Coliform-LTB-Series 15 Tube ***8 Hour Hold Time*** 120ml(PBa)-Na2S2O3 Wet Chemistry-NO3-N, NO2-N, N-Organic, Total P, NH3-N, TDS ***NO2-N, NO3-N-48 Hour Hold Time*** 16oz(P), 16oz(P)-H2SO4 Wet Chemistry-NO3-N, TDS ***NO3-N-48 Hour Hold Time*** 16oz(P)											
Sampler(s): <i>Rincon Consultants Peter Shellmeyer</i>				Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___				Lab Number: SP 2-25173											
Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling	Type of Sample	Potable(P)	Bacti Type	Bacti Reason	Other(O)	Coliform-LTB-Series 15 Tube	***8 Hour Hold Time***	120ml(PBa)-Na2S2O3	Wet Chemistry-NO3-N, NO2-N, N-Organic, Total P, NH3-N, TDS	***NO2-N, NO3-N-48 Hour Hold Time***	16oz(P), 16oz(P)-H2SO4	Wet Chemistry-NO3-N, TDS	***NO3-N-48 Hour Hold Time***	16oz(P)	
1	SMBRP-9			G	MW					1			1,1						
2	MCWP-MW04S			G	MW					1			1,1						
3	MCWP-MW07S			G	MW					1			1,1						
4	SMBRP-12	<i>3/21/17</i>	<i>000</i>	G	MW					1			1,1						
5	MCWP-04D			G	MW					1			1,1						
6	MCWP-07D			G	MW					1			1,1						
7	MCWP-MW09	<i>3/29/17</i>	<i>1150</i>	G	MW					1			1,1						
8	TY-MW-1	<i>3/21/17</i>	<i>0840</i>	G	MW					1			1,1						
9	LAMW-5S			G	MW					1			1,1						
10	SMBRP-13	<i>3/21/17</i>	<i>0915</i>	G	MW					1			1,1						
Remarks: Multiple Chains				Relinquished Date: _____ Time: _____ <i>3/21/17 1330</i>				Relinquished Date: _____ Time: _____				Relinquished Date: _____ Time: _____							
				Received By: _____ Date: _____ Time: _____ <i>[Signature]</i>				Received By: _____ Date: _____ Time: _____				Received By: _____ Date: _____ Time: _____							

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				4259:03/06/2017				TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information												
Client: Rincon Consultants, Inc. Address: Attn: Torin Snyder 180 N. Ashwood Ave. Ventura, CA 93003 Phone: (760)918-9444ext209 Fax: Contact Person: Torin Snyder Project Name: Malibu WWTP-GW-SNMP/MOU Purchase Order Number: Quote Number: SP 20150526-01				Method of Sampling: Composite(C) Grab(G) Type of Sample: **SEE REVERSE SIDE** Potable(P) Non-Potable(NP) Ag Water(AgW) Bacti Type: Other(O) System(SYS) Source(SR) Waste(W) Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)				Coliform-LTB-Series 15 Tube ***8 Hour Hold Time*** 120ml(PBa)-Na2S2O3 Wet Chemistry-NO3-N,NO2-N,N-Organic, Total P,NH3-N, TDS ***NO2-N, NO3-N-48 Hour Hold Time*** 16oz(P), 16oz(P)-H2SO4 Wet Chemistry-NO3-N, TDS ***NO3-N-48 Hour Hold Time*** 16oz(P)												
Sampler(s): <i>Peter Shella Bayer</i> <i>Rincon Consultants, Inc.</i> Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___				Lab Number: SP 2-25173																
Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling	Type of Sample	Potable(P)	Bacti Type	Bacti Reason	Other(O)	Special(SPL)	Coliform-LTB-Series 15 Tube	***8 Hour Hold Time***	120ml(PBa)-Na2S2O3	Wet Chemistry-NO3-N,NO2-N,N-Organic, Total P,NH3-N, TDS	***NO2-N, NO3-N-48 Hour Hold Time***	16oz(P), 16oz(P)-H2SO4	Wet Chemistry-NO3-N, TDS	***NO3-N-48 Hour Hold Time***	16oz(P)	
11	MCWP-MW10			G	MW						1			1,1						
12	CCPE			G	MW						1			1,1						
13	MBCMw-9			G	MW						1			1,1						
14	SMBRP-7B			G	MW						1			1,1						
15	MCWP-MW05	3/29/17	11:53	G	MW												1			
16	MCWP-MW06			G	MW												1			
Remarks: Multiple Chains				Relinquished Date: _____ Time: _____ <i>Peter Shella Bayer 3/30/17 12:00</i>				Relinquished Date: _____ Time: _____				Relinquished Date: _____ Time: _____								
Received By: _____ Date: _____ Time: _____				Received By: _____ Date: _____ Time: _____				Received By: _____ Date: _____ Time: _____				Received By: _____ Date: _____ Time: _____								

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4053:03/06/2017		TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information																		
Client: Rincon Consultants, Inc. Address: Attn: Torin Snyder 180 N. Ashwood Ave. Ventura, CA 93003 Phone: (760)918-9444ext209 Fax: Contact Person: Torin Snyder Project Name: Malibu WWTP - SW Monitoring Purchase Order Number: Quote Number: SP 20150526-01		Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacit Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacit Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Coliform-LTB-Series 15 Tube ***8 Hour Hold Time*** 120ml(PBa)-Na2S2O3	Wet Chemistry-NO3-N,NO2-N,N-Organic,Total P,NH3-N ***NO2-N, NO3-N-48 Hour Hold Time*** 16oz(P), 16oz(F)-H2SO4												
Sampler(s): Rincon Consultants Sampling Fee: _____ Pickup Fee: _____ Compositor Setup Date: ___/___/___ Time: ___/___																				
Lab Number: SP 2-25173																				
Samp Num	Location Description	Date Sampled	Time Sampled																	
1	N-001	3/7/17	0955	G	SW					1	1,1									
2	N-002		1015	G	SW					1	1,1									
3	N-003		1300	G	SW					1	1,1									
4	N-004		0935	G	SW					1	1,1									
5	L-001		1200	G	SW					1	1,1									
6	L-002	1300	1340	G	SW					1	1,1									
7	L-003		1238	G	SW					1	1,1									
8	L-004		1251	G	SW					1	1,1									
9	L-005		1510	G	SW					1	1,1									
10	L-006		0940	G	SW					1	1,1									
Remarks:				Relinquished		Date:	Time:	Relinquished		Date:	Time:	Relinquished		Date:	Time:					
				Received By:		Date:	Time:	Received By:		Date:	Time:	Received By:		Date:	Time:					

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Appendix B

Analytical Laboratory Reports

April 11, 2017

Rincon Consultants, Inc.
 Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Lab ID : SP 1703867
 Customer : 2-25173

Laboratory Report

Introduction: This report package contains total of 6 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(2 pages)	: Results for each sample submitted.
Quality Control	(2 pages)	: Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
MCWP-04D	03/30/2017	03/30/2017	SP 1703867-005	MW
MCWP-MW05	03/30/2017	03/30/2017	SP 1703867-015	MW

Sampling and Receipt Information: All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples arrived on ice. All samples were prepared and analyzed within the method specified hold time. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Wet Chemistry QC

2540CE	03/31/2017:203762	All preparation quality controls are within established criteria
351.2	03/31/2017:203728	All preparation quality controls are within established criteria
4500NH3G	03/31/2017:204649	All analysis quality controls are within established criteria
	03/31/2017:203732	All preparation quality controls are within established criteria
4500NO2F	03/30/2017:203712	All preparation quality controls are within established criteria
4500NO3F	03/30/2017:204629	All analysis quality controls are within established criteria
	03/30/2017:204632	All analysis quality controls are within established criteria
	03/30/2017:203711	All preparation quality controls are within established criteria

April 11, 2017
Rincon Consultants, Inc.

Lab ID : SP 1703867
Customer : 2-25173

Inorganic - Wet Chemistry QC

4500-P B	04/05/2017:203951 All preparation quality controls are within established criteria
4500PE	04/05/2017:204925 All analysis quality controls are within established criteria
EPA351.2	04/03/2017:204699 All analysis quality controls are within established criteria

Certification:: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**



Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2017-04-11

April 11, 2017

Lab ID : SP 1703867-005
 Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 30, 2017-10:40
 Sampled By : Peter Shellenberger
 Received On : March 30, 2017-13:50
 Matrix : Monitoring Well

Description : MCWP-04D
 Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.800	0.1	0.032	mg/L	1		4500NO3F	203711	03/30/17 14:15	4500NO3F	204632-FI207	03/30/17-14:34JDD
Nitrite Nitrogen	0.0280	0.1	0.011	mg/L	1	J	4500NO2F	203712	03/30/17 15:40	4500NO3F	204629-FI207	03/30/17-14:32JDD
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	U	4500NH3G	203732	03/31/17 03:00	4500NH3G	204649-FI207	03/31/17-06:07AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203732	03/31/17 03:00	4500NH3G	204649-FI207	03/31/17-06:07AMB
Kjeldahl Nitrogen	ND	0.5	0.32	mg/L	1	U	351.2	203728	03/31/17 06:28	EPA351.2	204699-FI206	04/03/17-05:38AMB
Phosphorus, Total	0.795	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:44SJM
Total Dissolved Solids (TFR)	232	20	5.8	mg/L	1	b	2540CE	203762	03/31/17 14:12	2540C	204714-WT219	04/03/17-10:35JMG

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.



April 11, 2017

Rincon Consultants, Inc.

Attn: Torin Snyder
180 N. Ashwood Ave.
Ventura, CA 93003

Description : MCWP-MW05
Project : Malibu WWTP-GW-SNMP/MOU

Lab ID : SP 1703867-015

Customer ID : 2-25173

Sampled On : March 30, 2017-15:35

Sampled By : Peter Shellenberger

Received On : March 30, 2017-13:50

Matrix : Monitoring Well

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	2.40	0.1	0.032	mg/L	1		4500NO3F	203711	03/30/17 14:15	4500NO3F	204632-FI207	03/30/17-14:36JDD
Total Dissolved Solids (TFR)	171	20	5.8	mg/L	1	b	2540CE	203762	03/31/17 14:12	2540C	204714-WT219	04/03/17-10:34JMG
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017
Rincon Consultants, Inc.

Lab ID : SP 1703867
 Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note	
Wet Chem									
Total Dissolved Solids (TFR)	2540CE	03/31/17:203762CTL (SP 1703867-015)	Blank	mg/L	998.7	7.8	20		
			LCS	mg/L		101 %	90-110		
			Dup	mg/L		1.3%	5		
Nitrogen, Total Kjeldahl	351.2	03/31/17:203728jmg (CC 1780869-001)	Blank	mg/L	12.00	ND	<1		
			LCS	mg/L		92.2 %	73-124		
			MS	mg/L		90.0 %	54-136		
			MSD	mg/L		87.0 %	54-136		
			MSRPD	mg/L		2.8%	≤27		
Ammonia Nitrogen	4500NH3G	(STK1733466-002)	MS	mg/L	2.000	116 %	70-130		
			MSD	mg/L		112 %	70-130		
			MSRPD	mg/L		2.000	≤20		
	4500NH3G	03/31/17:204649AMB	CCB	mg/L	2.000	-0.174	0.2		
			CCV	mg/L		108 %	90-110		
Nitrite as Nitrogen	4500NO2F	(STK1733469-001)	CCB	mg/L	2.000	0.000	0.2		
			CCV	mg/L		110 %	90-110		
			MS	mg/L		1.218	103 %		50-150
			MSD	mg/L		1.218	99.3 %		50-150
Nitrate + Nitrite as N	4500NO3F	(STK1733469-001)	MSRPD	mg/L	11.22	3.7%	≤30		
			MS	mg/L		11.22	95.4 %		5-285
			MSD	mg/L		11.22	96.3 %		5-285
	4500NO3F	03/30/17:204632JDD	CCB	mg/L	11.22	0.9%	≤30.4		
			CCV	mg/L		11.22	0.055		0.1
Nitrite as Nitrogen	4500NO3F	03/30/17:204629JDD	CCB	mg/L	1.218	96.0 %	90-110		
			CCV	mg/L		11.22	0.083		0.1
			CCB	mg/L		11.22	97.3 %		90-110
			CCV	mg/L		11.22	0.01100		0.012
Phosphorus	4500-P B	04/05/17:203951sjn (STK1733496-005)	CCV	mg/L	0.5000	98.8 %	90-110		
			CCB	mg/L		1.218	0.01200		0.012
			CCB	mg/L		1.218	97.9 %		90-110
			CCV	mg/L		1.218	0.025		0.1
Total Phosphorus	4500PE	04/05/17:204925SJN	CCB	mg/L	0.5000	104 %	90-110		
			CCV	mg/L		0.5000	103 %		90-110
			CCB	mg/L		0.025	0.1		
			CCV	mg/L		0.5000	103 %		90-110
Nitrogen, Total Kjeldahl	EPA351.2	04/03/17:204699AMB	CCB	mg/L	5.000	0.000	0.5		
			CCV	mg/L		5.000	93.3 %		90-110
			CCB	mg/L		5.000	0.000		0.5
			CCV	mg/L		5.000	91.3 %		90-110

Definition	
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

April 11, 2017
Rincon Consultants, Inc.

Lab ID : SP 1703867
Customer : 2-25173

Quality Control - Inorganic

Definition	
ND	: Non-detect - Result was below the DQO listed for the analyte.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

April 7, 2017

Rincon Consultants, Inc.
 Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

SP 1703867:5 COLIFORM BACTERIA ANALYSIS
 Customer ID : 2-25173

System Number :
 Project Name : Malibu WWTP-GW-SNMP/MOU

Sample Handling Information

ID	Sample Number	Sample Description	Sample Type/Reason	Sampled By	Employed By	Sampled	Started	Finished
1	SP 1703867-005	MCWP-04D	Source-Other	Peter Shellenberger	Rincon Consultants,	03/30/2017 10:40	03/30/2017 13:57 lmm	04/02/2017 lmm

Analytical Results

ID	Sample Description	Chlorine Total/Free	Temp °C	Method	Units	Total	Fecal	E. Coli	Person Notified ‡	Date ‡ Notified	Time ‡ Notified	Foot Note
1	MCWP-04D	---	---	SM 9221B	MPN/100ml	130 PRESENT	< 1.8 ABSENT	---	N/R			

N/R Not Required. MPN Most Probable Number A/P Absence/Presence

‡ Client Notification details.

Analyses were performed using Standard Methods 21st edition. If you have any questions regarding your results, please call.

RRH:SMH

Reviewed and
 Approved By

Raquel R. Harvey



Digitally signed by Raquel R. Harvey
 Title: Tech Director Microbiology
 Date: 2017-04-07

April 6, 2017

Rincon Consultants, Inc.
 Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Lab ID : SP 1703769
 Customer : 2-25173

Laboratory Report

Introduction: This report package contains total of 11 pages divided into 3 sections:

Case Narrative (2 pages) : An overview of the work performed at FGL.
 Sample Results (7 pages) : Results for each sample submitted.
 Quality Control (2 pages) : Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
SMBRP-9	03/28/2017	03/28/2017	SP 1703769-001	MW
MCWP-MW04S	03/28/2017	03/28/2017	SP 1703769-002	MW
LAMW-5S	03/28/2017	03/28/2017	SP 1703769-009	MW
CCPE	03/28/2017	03/28/2017	SP 1703769-012	MW
MBCMW-9	03/28/2017	03/28/2017	SP 1703769-013	MW
SMBRP-7B	03/28/2017	03/28/2017	SP 1703769-014	MW
MCWP-MW06	03/28/2017	03/28/2017	SP 1703769-016	MW

Sampling and Receipt Information: All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples arrived on ice. All samples were prepared and analyzed within the method specified hold time. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Wet Chemistry QC

2540CE	03/29/2017:203656 All preparation quality controls are within established criteria.
351.2	03/29/2017:203616 All preparation quality controls are within established criteria.
4500NH3G	03/29/2017:204495 All analysis quality controls are within established criteria.
	03/29/2017:203612 All preparation quality controls are within established criteria, except: The following note applies to Ammonia Nitrogen: 435 Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

April 6, 2017
Rincon Consultants, Inc.

Lab ID : SP 1703769
Customer : 2-25173

Inorganic - Wet Chemistry QC

4500NO2F	03/29/2017:203667 All preparation quality controls are within established criteria.
4500NO3F	03/29/2017:204558 All analysis quality controls are within established criteria.
	03/29/2017:204560 All analysis quality controls are within established criteria.
	03/29/2017:203666 All preparation quality controls are within established criteria.
4500-P B	03/31/2017:203770 All preparation quality controls are within established criteria.
	04/04/2017:203898 All preparation quality controls are within established criteria.
4500PE	04/01/2017:204688 All analysis quality controls are within established criteria.
	04/04/2017:204842 All analysis quality controls are within established criteria.
EPA351.2	03/30/2017:204571 All analysis quality controls are within established criteria.

Certification:: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**



Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2017-04-06

April 6, 2017

Lab ID : SP 1703769-001
 Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 28, 2017-10:50
 Sampled By : Peter Shellenberger
 Received On : March 28, 2017-15:25
 Matrix : Monitoring Well

Description : SMBRP-9
 Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	22.2	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-15:33JDD
Nitrite Nitrogen	0.0480	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-15:30JDD
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	Ub	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:39AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:39AMB
Kjeldahl Nitrogen	ND	0.5	0.19	mg/L	1	Ub	351.2	203616	03/29/17 08:20	EPA351.2	204571-FI206	03/30/17-07:22AMB
Phosphorus, Total	0.101	0.1	0.020	mg/L	1	b	4500-P B	203898	04/04/17 15:20	4500PE	204842-UV205	04/04/17-17:50SJN
Total Dissolved Solids (TFR)	2080	20	5.8	mg/L	1		2540CE	203656	03/29/17 13:05	2540C	204578-WT219	03/30/17-10:35CTL

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 6, 2017

Lab ID : SP 1703769-002

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 28, 2017-11:15

Sampled By : Peter Shellenberger

Received On : March 28, 2017-15:25

Matrix : Monitoring Well

Description : MCWP-MW04S

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	2.00	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-15:35JDD
Nitrite Nitrogen	0.0210	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-15:32JDD
Nitrogen, Organic	1.44	0.5	0.072	mg/L	1	b	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:22AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:22AMB
Kjeldahl Nitrogen	1.44	0.5	0.19	mg/L	1	b	351.2	203616	03/29/17 08:20	EPA351.2	204571-FI206	03/30/17-07:23AMB
Phosphorus, Total	0.417	0.1	0.020	mg/L	1	b	4500-P B	203770	03/31/17 15:43	4500PE	204688-UV205	04/01/17-12:34SJM
Total Dissolved Solids (TFR)	6360	34	5.8	mg/L	1.7		2540CE	203656	03/29/17 13:05	2540C	204578-WT219	03/30/17-10:41CTL

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 6, 2017

Lab ID : SP 1703769-009

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 28, 2017-10:20

Sampled By : Peter Shellenberger

Received On : March 28, 2017-15:25

Matrix : Monitoring Well

Description : LAMW-5S

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	13.6	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-15:37JDD
Nitrite Nitrogen	0.0160	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-15:35JDD
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	Ub	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:37AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:37AMB
Kjeldahl Nitrogen	ND	0.5	0.19	mg/L	1	Ub	351.2	203616	03/29/17 08:20	EPA351.2	204571-FI206	03/30/17-07:24AMB
Phosphorus, Total	5.24	0.5	0.020	mg/L	5	b	4500-P B	203770	03/31/17 15:43	4500PE	204688-UV205	04/01/17-12:35SJM
Total Dissolved Solids (TFR)	696	20	5.8	mg/L	1		2540CE	203656	03/29/17 13:05	2540C	204578-WT219	03/30/17-10:24CTL

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 6, 2017

Lab ID : SP 1703769-012

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 28, 2017-09:00

Sampled By : Peter Shellenberger

Received On : March 28, 2017-15:25

Matrix : Monitoring Well

Description : CCPE

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.600	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-15:39JDD
Nitrite Nitrogen	0.0960	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-15:37JDD
Nitrogen, Organic	3.60	0.5	0.072	mg/L	1	b	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:14AMB
Ammonia Nitrogen	1.11	0.2	0.072	mg/L	1		4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:14AMB
Kjeldahl Nitrogen	4.71	0.5	0.19	mg/L	1	b	351.2	203616	03/29/17 08:20	EPA351.2	204571-FI206	03/30/17-07:25AMB
Phosphorus, Total	0.932	0.1	0.020	mg/L	1	b	4500-P B	203770	03/31/17 15:43	4500PE	204688-UV205	04/01/17-12:36SJM
Total Dissolved Solids (TFR)	968	20	5.8	mg/L	1		2540CE	203656	03/29/17 13:05	2540C	204578-WT219	03/30/17-10:25CTL

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 6, 2017

Lab ID : SP 1703769-013

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 28, 2017-11:40

Sampled By : Peter Shellenberger

Received On : March 28, 2017-15:25

Matrix : Monitoring Well

Description : MBCMW-9

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.0900	0.1	0.032	mg/L	1	J	4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-15:41JDD
Nitrite Nitrogen	0.0120	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-15:39JDD
Nitrogen, Organic	1.22	0.5	0.072	mg/L	1	b	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:42AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:42AMB
Kjeldahl Nitrogen	1.22	0.5	0.19	mg/L	1	b	351.2	203616	03/29/17 08:20	EPA351.2	204571-FI206	03/30/17-07:26AMB
Phosphorus, Total	0.307	0.1	0.020	mg/L	1	b	4500-P B	203898	04/04/17 15:20	4500PE	204842-UV205	04/04/17-17:51SJM
Total Dissolved Solids (TFR)	4980	34	5.8	mg/L	1.7		2540CE	203656	03/29/17 13:05	2540C	204578-WT219	03/30/17-10:28CTL

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 6, 2017

Lab ID : SP 1703769-014

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 28, 2017-12:05

Sampled By : Peter Shellenberger

Received On : March 28, 2017-15:25

Matrix : Monitoring Well

Description : SMBRP-7B

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	2.30	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-15:55JDD
Nitrite Nitrogen	0.0540	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-15:52JDD
Nitrogen, Organic	0.332	0.5	0.072	mg/L	1	UJb	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:35AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203612	03/29/17 03:00	4500NH3G	204495-FI207	03/29/17-05:35AMB
Kjeldahl Nitrogen	0.332	0.5	0.19	mg/L	1	Jb	351.2	203616	03/29/17 08:20	EPA351.2	204571-FI206	03/30/17-07:27AMB
Phosphorus, Total	0.287	0.1	0.020	mg/L	1	b	4500-P B	203898	04/04/17 15:20	4500PE	204842-UV205	04/04/17-17:52SJN
Total Dissolved Solids (TFR)	3430	20	5.8	mg/L	1		2540CE	203656	03/29/17 13:05	2540C	204578-WT219	03/30/17-10:33CTL

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.



April 6, 2017

Lab ID : SP 1703769-016

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
180 N. Ashwood Ave.
Ventura, CA 93003

Sampled On : March 28, 2017-13:50

Sampled By : Peter Shellenberger

Received On : March 28, 2017-15:25

Matrix : Monitoring Well

Description : MCWP-MW06

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	3.60	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-15:56JDD
Total Dissolved Solids (TFR)	383	20	5.8	mg/L	1		2540CE	203656	03/29/17 13:05	2540C	204578-WT219	03/30/17-10:37CTL

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 6, 2017
Rincon Consultants, Inc.

Lab ID : SP 1703769
Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Total Dissolved Solids (TFR)	2540CE	03/29/17:203656CTL (SP 1703686-001)	Blank LCS Dup	mg/L mg/L mg/L	998.7	ND 101 % 2.7%	<20 90-110 5	
Nitrogen, Total Kjeldahl	351.2	03/29/17:203616JMG (SP 1703730-001) (SP 1703730-001)	Blank LCS LCS MS MSD MSRPD Dup	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 12.00	ND 108 % 106 % 97.4 % 92.3 % 5.0% 0.18	<0.5 80-120 80-120 54-136 54-136 ≤25 0.5	
Ammonia Nitrogen	4500NH3G	(SP 1703058-001)	MS MSD MSRPD	mg/L mg/L mg/L	2.000 2.000 2.000	340 % 756 % 23.6%	<¼ ¼ ≤20	435
	4500NH3G	03/29/17:204495AMB	ICB ICV CCB CCV CCB CCV	mg/L mg/L mg/L mg/L mg/L mg/L	2.000 2.000 2.000 2.000	-0.090 106 % -0.144 110 % -0.171 109 %	0.2 90-110 0.2 90-110 0.2 90-110	
Nitrite as Nitrogen	4500NO2F	(VI 1741069-001)	MS MSD MSRPD	mg/L mg/L mg/L	1.218 1.218 1.218	93.8 % 95.3 % 1.5%	50-150 50-150 ≤30	
Nitrate + Nitrite as N	4500NO3F	(VI 1741069-001)	MS MSD MSRPD	mg/L mg/L mg/L	11.22 11.22 11.22	92.6 % 93.4 % 0.5%	5-285 5-285 ≤30.4	
	4500NO3F	03/29/17:204560JDD	CCB CCV CCB CCB CCV CCB CCV	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	11.22 11.22 11.22 11.22	0.032 93.9 % 0.041 0.030 94.7 % 0.037 95.9 %	0.1 90-110 0.1 0.1 90-110 0.1 90-110	
Nitrite as Nitrogen	4500NO3F	03/29/17:204558JDD	CCB	mg/L	1.218	0.0100	0.012	
			CCV	mg/L	1.218	95.5 %	90-110	
			CCB	mg/L	1.218	0.0100	0.012	
			CCB	mg/L	1.218	0.000	0.012	
			CCV	mg/L	1.218	96.6 %	90-110	
			CCB	mg/L	1.218	0.01100	0.012	
Phosphorus	4500-P B	03/31/17:203770sjn (CH 1771958-001)	Blank	mg/L	0.5000	ND	<0.1	
			LCS	mg/L	0.5000	109 %	90-116	
			MS	mg/L	0.2800	119 %	25-292	
	4500-P B	04/04/17:203898sjn (CC 1780838-001)	MSD	mg/L	0.2800	171 %	25-292	
			MSRPD	mg/L	0.2800	2.4%	≤13.2	
			Blank	mg/L	0.2800	ND	<0.1	
4500-P B	04/04/17:203898sjn (CC 1780838-001)	LCS	mg/L	0.5000	108 %	90-116		
		MS	mg/L	0.2800	322 %	<¼		
		MSD	mg/L	0.2800	301 %	<¼		
Total Phosphorus	4500PE	04/01/17:204688SJM	MSRPD	mg/L	0.2800	0.3%	≤13.2	
			CCB	mg/L	0.5000	0.028	0.1	
Total Phosphorus	4500PE	04/04/17:204842SJM	CCV	mg/L	0.5000	106 %	90-110	
			CCB	mg/L	0.5000	0.031	0.1	
			CCV	mg/L	0.5000	106 %	90-110	
			CCB	mg/L	0.5000	0.022	0.1	
Total Phosphorus	4500PE	04/04/17:204842SJM	CCV	mg/L	0.5000	109 %	90-110	
			CCV	mg/L	0.5000	109 %	90-110	

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Total Phosphorus	4500PE	04/04/17:204842SJN	CCB CCV	mg/L mg/L	0.5000	0.025 104 %	0.1 90-110	
Nitrogen, Total Kjeldahl	EPA351.2	03/30/17:204571AMB	CCB CCV CCB CCV	mg/L mg/L mg/L mg/L	5.000 5.000	0.000 103 % 0.000 105 %	0.5 90-110 0.5 90-110	
Definition								
ICV : Initial Calibration Verification - Analyzed to verify the instrument calibration is within criteria.								
ICB : Initial Calibration Blank - Analyzed to verify the instrument baseline is within criteria.								
CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.								
CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.								
Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.								
LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.								
MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.								
MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.								
Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.								
MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.								
ND : Non-detect - Result was below the DQO listed for the analyte.								
<1/4 : High Sample Background - Spike concentration was less than one fourth of the sample concentration.								
DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.								
Explanation								
435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.								

April 5, 2017

Rincon Consultants, Inc.
 Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

SP 1703769:1-2, 9, 12-14 COLIFORM BACTERIA ANALYSIS
 Customer ID : 2-25173

System Number :
 Project Name : Malibu WWTP-GW-SNMP/MOU

Sample Handling Information

ID	Sample Number	Sample Description	Sample Type/Reason	Sampled By	Employed By	Sampled	Started	Finished
1	SP 1703769-001	SMBRP-9	Source-Other	Peter Shellenberger	Rincon Consultants,	03/28/2017 10:50	03/28/2017 15:39 lmm	04/01/2017 lmm
2	SP 1703769-002	MCWP-MW04S	Source-Other	Peter Shellenberger	Rincon Consultants,	03/28/2017 11:15	03/28/2017 15:41 rv	03/31/2017 rv
3	SP 1703769-009	LAMW-5S	Source-Other	Peter Shellenberger	Rincon Consultants,	03/28/2017 10:20	03/28/2017 15:43 rv	03/31/2017 rv
4	SP 1703769-012	CCPE	Source-Other	Peter Shellenberger	Rincon Consultants,	03/28/2017 09:00	03/28/2017 15:45 rv	03/30/2017 rv
5	SP 1703769-013	MBCMW-9	Source-Other	Peter Shellenberger	Rincon Consultants,	03/28/2017 11:40	03/28/2017 15:57 rv	04/01/2017 rv
6	SP 1703769-014	SMBRP-7B	Source-Other	Peter Shellenberger	Rincon Consultants,	03/28/2017 12:05	03/28/2017 15:59 rv	03/31/2017 rv

Analytical Results

ID	Sample Description	Chlorine Total/Free	Temp °C	Method	Units	Total	Fecal	E. Coli	Person Notified ‡	Date ‡ Notified	Time ‡ Notified	Foot Note
1	SMBRP-9	---	---	SM 9221B	MPN/100ml	9.3 PRESENT	< 1.8 ABSENT	---	N/R			
2	MCWP-MW04S	---	---	SM 9221B	MPN/100ml	33 PRESENT	< 1.8 ABSENT	---	N/R			
3	LAMW-5S	---	---	SM 9221B	MPN/100ml	49 PRESENT	< 1.8 ABSENT	---	N/R			
4	CCPE	---	---	SM 9221B	MPN/100ml	> 1600 PRESENT	350 PRESENT	---	N/R			
5	MBCMW-9	---	---	SM 9221B	MPN/100ml	11 PRESENT	4.5 PRESENT	---	N/R			
6	SMBRP-7B	---	---	SM 9221B	MPN/100ml	4.5 PRESENT	< 1.8 ABSENT	---	N/R			

N/R Not Required. MPN Most Probable Number A/P Absence/Presence

‡ Client Notification details.

Analyses were performed using Standard Methods 21st edition. If you have any questions regarding your results, please call.

RRH:SMH

Reviewed and
 Approved By

Raquel R. Harvey



Digitally signed by Raquel R. Harvey
 Title: Tech Director Microbiology
 Date: 2017-04-05

April 5, 2017

Rincon Consultants, Inc.
 Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

SP 1703813:4, 7-8, 10-11 COLIFORM BACTERIA ANALYSIS
 Customer ID : 2-25173

System Number :
 Project Name : Malibu WWTP-GW-SNMP/MOU

Sample Handling Information

ID	Sample Number	Sample Description	Sample Type/Reason	Sampled By	Employed By	Sampled	Started	Finished
1	SP 1703813-004	SMBRP-12	Source-Other	Peter Shellenberger	Rincon Consultants,	03/29/2017 10:00	03/29/2017 15:01 lmm	04/01/2017 lmm
2	SP 1703813-007	MCWP-MW09	Source-Other	Peter Shellenberger	Rincon Consultants,	03/29/2017 10:50	03/29/2017 15:03 lmm	04/01/2017 lmm
3	SP 1703813-008	TY-MW-1	Source-Other	Peter Shellenberger	Rincon Consultants,	03/29/2017 08:40	03/29/2017 15:05 lmm	04/02/2017 lmm
4	SP 1703813-010	SMBRP-13	Source-Other	Peter Shellenberger	Rincon Consultants,	03/29/2017 09:25	03/29/2017 15:07 lmm	04/01/2017 lmm
5	SP 1703813-011	MCWP-MW10	Source-Other	Peter Shellenberger	Rincon Consultants,	03/29/2017 11:30	03/29/2017 15:09 lmm	03/31/2017 lmm

Analytical Results

ID	Sample Description	Chlorine Total/Free	Temp °C	Method	Units	Total	Fecal	E. Coli	Person Notified ‡	Date ‡ Notified	Time ‡ Notified	Foot Note
1	SMBRP-12	---	---	SM 9221B	MPN/100ml	6.8 PRESENT	<1.8 ABSENT	---	N/R			
2	MCWP-MW09	---	---	SM 9221B	MPN/100ml	13 PRESENT	7.8 PRESENT	---	N/R			
3	TY-MW-1	---	---	SM 9221B	MPN/100ml	4.5 PRESENT	<1.8 ABSENT	---	N/R			
4	SMBRP-13	---	---	SM 9221B	MPN/100ml	<1.8 ABSENT	<1.8 ABSENT	---	N/R			
5	MCWP-MW10	---	---	SM 9221B	MPN/100ml	<1.8 ABSENT	<1.8 ABSENT	---	N/R			

N/R Not Required. MPN Most Probable Number A/P Absence/Presence

‡ Client Notification details.

Analyses were performed using Standard Methods 21st edition. If you have any questions regarding your results, please call.

RRH:SMH

Reviewed and
 Approved By

Raquel R. Harvey



Digitally signed by Raquel R. Harvey
 Title: Tech Director Microbiology
 Date: 2017-04-05

April 13, 2017

Rincon Consultants, Inc.
 Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Lab ID : SP 1703813
 Customer : 2-25173

Laboratory Report

Introduction: This report package contains total of 9 pages divided into 3 sections:

Case Narrative (2 pages) : An overview of the work performed at FGL.
 Sample Results (5 pages) : Results for each sample submitted.
 Quality Control (2 pages) : Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
SMBRP-12	03/29/2017	03/29/2017	SP 1703813-004	MW
MCWP-MW09	03/29/2017	03/29/2017	SP 1703813-007	MW
TY-MW-1	03/29/2017	03/29/2017	SP 1703813-008	MW
SMBRP-13	03/29/2017	03/29/2017	SP 1703813-010	MW
MCWP-MW10	03/29/2017	03/29/2017	SP 1703813-011	MW

Sampling and Receipt Information: All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples arrived on ice. All samples were prepared and analyzed within the method specified hold time. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Wet Chemistry QC

2540CE	03/30/2017:203695	All preparation quality controls are within established criteria
351.2	03/31/2017:203728	All preparation quality controls are within established criteria
4500NH3G	03/31/2017:204649	All analysis quality controls are within established criteria
	04/04/2017:204868	All analysis quality controls are within established criteria
	03/31/2017:203732	All preparation quality controls are within established criteria
	04/04/2017:203867	All preparation quality controls are within established criteria

April 13, 2017
Rincon Consultants, Inc.

Lab ID : SP 1703813
Customer : 2-25173

Inorganic - Wet Chemistry QC

4500NO2F	03/29/2017:203667 All preparation quality controls are within established criteria
4500NO3F	03/29/2017:204558 All analysis quality controls are within established criteria
	03/29/2017:204560 All analysis quality controls are within established criteria
	03/29/2017:203666 All preparation quality controls are within established criteria
4500-P B	04/07/2017:204063 All preparation quality controls are within established criteria
	04/10/2017:204147 All preparation quality controls are within established criteria
4500PE	04/07/2017:205067 All analysis quality controls are within established criteria
	04/11/2017:205164 All analysis quality controls are within established criteria
EPA351.2	04/03/2017:204699 All analysis quality controls are within established criteria

Certification:: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**



Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2017-04-13



April 13, 2017

Lab ID : SP 1703813-004
Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
180 N. Ashwood Ave.
Ventura, CA 93003

Sampled On : March 29, 2017-10:00
Sampled By : Peter Shellenberger
Received On : March 29, 2017-14:45
Matrix : Monitoring Well

Description : SMBRP-12
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.0800	0.1	0.032	mg/L	1	J	4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-16:13JDD
Nitrite Nitrogen	0.0120	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-16:11JDD
Nitrogen, Organic	0.250	0.5	0.072	mg/L	1		4500NH3G	203732	03/31/17 03:00	4500NH3G	204649-FI207	03/31/17-06:44AMB
Ammonia Nitrogen	7.60	0.2	0.072	mg/L	1		4500NH3G	203732	03/31/17 03:00	4500NH3G	204649-FI207	03/31/17-06:44AMB
Kjeldahl Nitrogen	7.85	0.5	0.32	mg/L	1		351.2	203728	03/31/17 06:28	EPA351.2	204699-FI206	04/03/17-05:27AMB
Phosphorus, Total	1.88	0.1	0.020	mg/L	1	b	4500-P B	204063	04/07/17 14:49	4500PE	205067-UV205	04/07/17-19:31SJN
Total Dissolved Solids (TFR)	1610	20	5.8	mg/L	1	b	2540CE	203695	03/30/17 15:38	2540C	204656-WT219	03/31/17-10:12JMG
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 13, 2017

Lab ID : SP 1703813-007

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 29, 2017-10:50

Sampled By : Peter Shellenberger

Received On : March 29, 2017-14:45

Matrix : Monitoring Well

Description : MCWP-MW09

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	1.40	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-16:27JDD
Nitrite Nitrogen	0.0130	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-16:24JDD
Nitrogen, Organic	0.583	0.5	0.072	mg/L	1	J	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-07:35AMB
Ammonia Nitrogen	0.148	0.2	0.072	mg/L	1	J	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-07:35AMB
Kjeldahl Nitrogen	0.731	0.5	0.32	mg/L	1	J	351.2	203728	03/31/17 06:28	EPA351.2	204699-FI206	04/03/17-05:28AMB
Phosphorus, Total	0.336	0.1	0.020	mg/L	1	b	4500-P B	204063	04/07/17 14:49	4500PE	205067-UV205	04/07/17-19:32SJN
Total Dissolved Solids (TFR)	1070	20	5.8	mg/L	1	b	2540CE	203695	03/30/17 15:38	2540C	204656-WT219	03/31/17-10:11JMG

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.



April 13, 2017

Rincon Consultants, Inc.

Attn: Torin Snyder
180 N. Ashwood Ave.
Ventura, CA 93003

Description : TY-MW-1
Project : Malibu WWTP-GW-SNMP/MOU

Lab ID : SP 1703813-008

Customer ID : 2-25173

Sampled On : March 29, 2017-08:40

Sampled By : Peter Shellenberger

Received On : March 29, 2017-14:45

Matrix : Monitoring Well

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.100	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-16:28JDD
Nitrite Nitrogen	0.0550	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-16:26JDD
Nitrogen, Organic	3.38	0.5	0.072	mg/L	1		4500NH3G	203732	03/31/17 03:00	4500NH3G	204649-FI207	03/31/17-06:14AMB
Ammonia Nitrogen	0.310	0.2	0.072	mg/L	1		4500NH3G	203732	03/31/17 03:00	4500NH3G	204649-FI207	03/31/17-06:14AMB
Kjeldahl Nitrogen	3.69	0.5	0.32	mg/L	1		351.2	203728	03/31/17 06:28	EPA351.2	204699-FI206	04/03/17-05:29AMB
Phosphorus, Total	6.08	0.5	0.020	mg/L	5	b	4500-P B	204147	04/10/17 15:34	4500PE	205164-UV205	04/11/17-17:17SJNI
Total Dissolved Solids (TFR)	2140	20	5.8	mg/L	1	b	2540CE	203695	03/30/17 15:38	2540C	204656-WT219	03/31/17-10:18JMG

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 13, 2017

Lab ID : SP 1703813-010

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 29, 2017-09:25

Sampled By : Peter Shellenberger

Received On : March 29, 2017-14:45

Matrix : Monitoring Well

Description : SMBRP-13

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.500	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-16:30JDD
Nitrite Nitrogen	0.0140	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-16:28JDD
Nitrogen, Organic	0.416	0.5	0.072	mg/L	1	UJ	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-10:31AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-10:31AMB
Kjeldahl Nitrogen	0.416	0.5	0.32	mg/L	1	J	351.2	203728	03/31/17 06:28	EPA351.2	204699-FI206	04/03/17-05:30AMB
Phosphorus, Total	1.61	0.1	0.020	mg/L	1	b	4500-P B	204063	04/07/17 14:49	4500PE	205067-UV205	04/07/17-19:34SJN
Total Dissolved Solids (TFR)	4620	34	5.8	mg/L	1.7	b	2540CE	203695	03/30/17 15:38	2540C	204656-WT219	03/31/17-10:16JMG

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 13, 2017

Lab ID : SP 1703813-011

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 29, 2017-11:30

Sampled By : Peter Shellenberger

Received On : March 29, 2017-14:45

Matrix : Monitoring Well

Description : MCWP-MW10

Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	1.00	0.1	0.032	mg/L	1		4500NO3F	203666	03/29/17 14:15	4500NO3F	204560-FI207	03/29/17-16:33JDD
Nitrite Nitrogen	0.0320	0.1	0.011	mg/L	1	J	4500NO2F	203667	03/29/17 14:15	4500NO3F	204558-FI207	03/29/17-16:30JDD
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	U	4500NH3G	203732	03/31/17 03:00	4500NH3G	204649-FI207	03/31/17-06:49AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203732	03/31/17 03:00	4500NH3G	204649-FI207	03/31/17-06:49AMB
Kjeldahl Nitrogen	ND	0.5	0.32	mg/L	1	U	351.2	203728	03/31/17 06:28	EPA351.2	204699-FI206	04/03/17-05:34AMB
Phosphorus, Total	0.0426	0.1	0.020	mg/L	1	Jb	4500-P B	204063	04/07/17 14:49	4500PE	205067-UV205	04/07/17-19:35SJM
Total Dissolved Solids (TFR)	1990	20	5.8	mg/L	1	b	2540CE	203695	03/30/17 15:38	2540C	204656-WT219	03/31/17-10:22JMG

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 13, 2017
Rincon Consultants, Inc.

Lab ID : SP 1703813
 Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Total Dissolved Solids (TFR)	2540CE	03/30/17:203695CTL (CC 1780860-001)	Blank LCS Dup	mg/L mg/L mg/L	998.7	7.1 99.5 % 1.9%	20 90-110 5	
Nitrogen, Total Kjeldahl	351.2	03/31/17:203728jmg (CC 1780869-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00	ND 92.2 % 90.0 % 87.0 % 2.8%	<1 73-124 54-136 54-136 ≤27	
Ammonia Nitrogen	4500NH3G	(STK1733466-002)	MS	mg/L	2.000	116 %	70-130	
			MSD	mg/L	2.000	112 %	70-130	
			MSRPD	mg/L	2.000	3.0%	≤20	
	4500NH3G	03/31/17:204649AMB	CCB	mg/L	2.000	-0.174	0.2	
			CCV	mg/L	2.000	108 %	90-110	
			CCB	mg/L	2.000	0.000	0.2	
			CCV	mg/L	2.000	110 %	90-110	
			CCB	mg/L	2.000	0.000	0.2	
			CCV	mg/L	2.000	108 %	90-110	
	4500NH3G	(SP 1703935-006) (STK1733520-015)	MS	mg/L	2.000	96.2 %	70-130	
			MSD	mg/L	2.000	89.6 %	70-130	
			MSRPD	mg/L	2.000	7.4%	≤20	
			MS	mg/L	2.000	110 %	70-130	
			MSD	mg/L	2.000	108 %	70-130	
			MSRPD	mg/L	2.000	1.8%	≤20	
	4500NH3G	04/04/17:204868AMB	CCB	mg/L	2.000	0.005	0.2	
CCV			mg/L	2.000	108 %	90-110		
CCB			mg/L	2.000	-0.047	0.2		
CCV			mg/L	2.000	109 %	90-110		
CCB			mg/L	2.000	0.085	0.2		
CCV			mg/L	2.000	92.6 %	90-110		
CCB			mg/L	2.000	-0.114	0.2		
CCV			mg/L	2.000	109 %	90-110		
Nitrite as Nitrogen	4500NO2F (STK1733483-001)	MS	mg/L	1.218	97.5 %	50-150		
		MSD	mg/L	1.218	98.5 %	50-150		
		MSRPD	mg/L	1.218	1.1%	≤30		
Nitrate + Nitrite as N	4500NO3F (STK1733483-001)	MS	mg/L	11.22	95.2 %	5-285		
		MSD	mg/L	11.22	96.6 %	5-285		
		MSRPD	mg/L	11.22	1.4%	≤30.4		
	4500NO3F	03/29/17:204560JDD	CCB	mg/L	11.22	0.030	0.1	
			CCV	mg/L	11.22	94.7 %	90-110	
			CCB	mg/L	11.22	0.037	0.1	
			CCB	mg/L	11.22	0.043	0.1	
			CCV	mg/L	11.22	95.9 %	90-110	
			CCB	mg/L	11.22	0.096	0.1	
			CCV	mg/L	11.22	95.9 %	90-110	
Nitrite as Nitrogen	4500NO3F (STK1733483-001)	CCB	mg/L	1.218	0.000	0.012		
		CCV	mg/L	1.218	96.6 %	90-110		
		CCB	mg/L	1.218	0.01100	0.012		
		CCB	mg/L	1.218	0.01100	0.012		
		CCV	mg/L	1.218	97.5 %	90-110		
		CCB	mg/L	1.218	0.000	0.012		
		CCV	mg/L	1.218	96.6 %	90-110		
		CCV	mg/L	1.218	96.6 %	90-110		
Phosphorus	4500-P B (SP 1703813-004)	Blank	mg/L	0.5000	ND	<0.1		
		LCS	mg/L	0.2800	108 %	90-116		
		MS	mg/L	0.2800	85.1 %	25-292		
		MSD	mg/L	0.2800	70.5 %	25-292		
		MSD	mg/L	0.2800	70.5 %	25-292		

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem Phosphorus	4500-P B	04/07/17:204063sjn	MSRPD	mg/L	0.2800	1.9%	≤13.2	
	4500-P B	04/10/17:204147sjn (SP 1703813-008)	Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	107 %	90-116	
			MS	mg/L	0.2800	135 %	25-292	
			MSD	mg/L	0.2800	150 %	25-292	
MSRPD	mg/L	0.2800	0.7%	≤13.2				
Total Phosphorus	4500PE	04/07/17:205067SjN	CCB	mg/L		0.028	0.1	
			CCV	mg/L	0.5000	107 %	90-110	
			CCB	mg/L		0.019	0.1	
			CCV	mg/L	0.5000	109 %	90-110	
	4500PE	04/11/17:205164SjN	CCB	mg/L		0.028	0.1	
			CCV	mg/L	0.5000	105 %	90-110	
			CCB	mg/L		0.022	0.1	
			CCV	mg/L	0.5000	102 %	90-110	
Nitrogen, Total Kjeldahl	EPA351.2	04/03/17:204699AMB	CCB	mg/L		0.000	0.5	
			CCV	mg/L	5.000	90.6 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCV	mg/L	5.000	93.3 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCV	mg/L	5.000	91.3 %	90-110	
Definition								
CCV	: Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria.							
CCB	: Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria.							
Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.							
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.							
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.							
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.							
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.							
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.							
ND	: Non-detect - Result was below the DQO listed for the analyte.							
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.							

April 10, 2017

Rincon Consultants, Inc.
 Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

SP 1703935:1-10 COLIFORM BACTERIA ANALYSIS
 Customer ID : 2-25173

System Number :
 Project Name : Malibu WWTP - Surface Water Monitoring

Sample Handling Information

ID	Sample Number	Sample Description	Sample Type/Reason	Sampled By	Employed By	Sampled	Started	Finished
1	SP 1703935-001	N-001	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 09:55	03/31/2017 15:50 lmm	04/04/2017 lmm
2	SP 1703935-002	N-002	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 10:15	03/31/2017 15:52 lmm	04/03/2017 lmm
3	SP 1703935-003	N-003	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 13:00	03/31/2017 15:54 lmm	04/03/2017 lmm
4	SP 1703935-004	N-004	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 09:35	03/31/2017 15:56 lmm	04/04/2017 lmm
5	SP 1703935-005	L-001	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 12:00	03/31/2017 15:58 lmm	04/04/2017 lmm
6	SP 1703935-006	L-002	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 13:40	03/31/2017 16:00 lmm	04/04/2017 lmm
7	SP 1703935-007	L-003	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 12:30	03/31/2017 15:02 lmm	04/04/2017 lmm
8	SP 1703935-008	L-004	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 10:25	03/31/2017 15:04 lmm	04/03/2017 lmm
9	SP 1703935-009	L-005	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 13:10	03/31/2017 15:06 lmm	04/04/2017 lmm
10	SP 1703935-010	L-006	Source-Other	Rincon Consultants	Rincon Consultants,	03/31/2017 10:40	03/31/2017 15:08 lmm	04/03/2017 lmm

Analytical Results

ID	Sample Description	Chlorine Total/Free	Temp °C	Method	Units	Total	Fecal	E. Coli	Person Notified ‡	Date ‡ Notified	Time ‡ Notified	Foot Note
1	N-001	---	---	SM 9221B	MPN/100ml	14	6.8	---	N/R			
2	N-002	---	---	SM 9221B	MPN/100ml	13	< 1.8	---	N/R			
3	N-003	---	---	SM 9221B	MPN/100ml	350	33	---	N/R			
4	N-004	---	---	SM 9221B	MPN/100ml	6.8	2	---	N/R			
5	L-001	---	---	SM 9221B	MPN/100ml	540	< 1.8	---	N/R			
6	L-002	---	---	SM 9221B	MPN/100ml	130	33	---	N/R			
7	L-003	---	---	SM 9221B	MPN/100ml	70	23	---	N/R			
8	L-004	---	---	SM 9221B	MPN/100ml	540	170	---	N/R			
9	L-005	---	---	SM 9221B	MPN/100ml	170	22	---	N/R			
10	L-006	---	---	SM 9221B	MPN/100ml	540	11	---	N/R			

N/R Not Required. MPN Most Probable Number A/P Absence/Presence

‡ Client Notification details.

Analyses were performed using Standard Methods 22nd edition. If you have any questions regarding your results, please call.

Reviewed and
Approved By

Raquel R. Harvey



Digitally signed by Raquel R. Harvey
 Title: Tech Director Microbiology
 Date: 2017-04-10

April 11, 2017

Rincon Consultants, Inc.
 Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Lab ID : SP 1703935
 Customer : 2-25173

Laboratory Report

Introduction: This report package contains total of 14 pages divided into 3 sections:

Case Narrative (2 pages) : An overview of the work performed at FGL.
 Sample Results (10 pages) : Results for each sample submitted.
 Quality Control (2 pages) : Supporting Quality Control (QC) results.

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab ID #	Matrix
N-001	03/31/2017	03/31/2017	SP 1703935-001	SW
N-002	03/31/2017	03/31/2017	SP 1703935-002	SW
N-003	03/31/2017	03/31/2017	SP 1703935-003	SW
N-004	03/31/2017	03/31/2017	SP 1703935-004	SW
L-001	03/31/2017	03/31/2017	SP 1703935-005	SW
L-002	03/31/2017	03/31/2017	SP 1703935-006	SW
L-003	03/31/2017	03/31/2017	SP 1703935-007	SW
L-004	03/31/2017	03/31/2017	SP 1703935-008	SW
L-005	03/31/2017	03/31/2017	SP 1703935-009	SW
L-006	03/31/2017	03/31/2017	SP 1703935-010	SW

Sampling and Receipt Information: All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples arrived on ice. All samples were prepared and analyzed within the method specified hold time. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the attached Chain of Custody and Condition Upon Receipt Form.

Quality Control: All samples were prepared and analyzed according to the following tables:

Inorganic - Wet Chemistry QC

351.2	04/03/2017:203780 All preparation quality controls are within established criteria
	04/03/2017:203781 All preparation quality controls are within established criteria
4500NH3G	04/04/2017:204868 All analysis quality controls are within established criteria
	04/04/2017:203867 All preparation quality controls are within established criteria

April 11, 2017
Rincon Consultants, Inc.

Lab ID : SP 1703935
Customer : 2-25173

Inorganic - Wet Chemistry QC

4500NO2F	03/31/2017:203739 All preparation quality controls are within established criteria
4500NO3F	03/31/2017:204653 All analysis quality controls are within established criteria
	03/31/2017:204693 All analysis quality controls are within established criteria
	03/31/2017:203738 All preparation quality controls are within established criteria
4500-P B	04/05/2017:203951 All preparation quality controls are within established criteria
	04/07/2017:204063 All preparation quality controls are within established criteria
4500PE	04/05/2017:204925 All analysis quality controls are within established criteria
	04/07/2017:205067 All analysis quality controls are within established criteria
EPA351.2	04/04/2017:204818 All analysis quality controls are within established criteria
	04/05/2017:204869 All analysis quality controls are within established criteria

Certification:: I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature.

KD:DMB

Approved By **Kelly A. Dunnahoo, B.S.**



Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2017-04-11

April 11, 2017

Lab ID : SP 1703935-001

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-09:55

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : N-001

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.200	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:25JDD
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:22JDD
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:08AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:08AMB
Kjeldahl Nitrogen	ND	0.5	0.32	mg/L	1	U	351.2	203780	04/03/17 09:21	EPA351.2	204818-FI206	04/04/17-09:04AMB
Phosphorus, Total	1.69	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:48SJJ
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-002

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-10:15

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : N-002

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.100	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:27JDD
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:25JDD
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	Ub	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:01AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:01AMB
Kjeldahl Nitrogen	ND	0.5	0.19	mg/L	1	Ub	351.2	203781	04/03/17 09:48	EPA351.2	204818-FI206	04/04/17-08:48AMB
Phosphorus, Total	0.127	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:51SJN
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-003

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-13:00

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : N-003

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.100	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:30JDD
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:27JDD
Nitrogen, Organic	10.8	0.5	0.072	mg/L	1		4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-07:30AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-07:30AMB
Kjeldahl Nitrogen	10.8	0.5	0.32	mg/L	1		351.2	203780	04/03/17 09:21	EPA351.2	204818-FI206	04/04/17-09:05AMB
Phosphorus, Total	0.467	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:52SJN
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-004

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-09:35

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : N-004

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	ND	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:32JDD
Nitrite Nitrogen	0.153	0.1	0.011	mg/L	1		4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:29JDD
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-07:32AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-07:32AMB
Kjeldahl Nitrogen	ND	0.5	0.32	mg/L	1	U	351.2	203780	04/03/17 09:21	EPA351.2	204818-FI206	04/04/17-09:06AMB
Phosphorus, Total	1.87	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:53SJN
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-005

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-12:00

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : L-001

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	1.50	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:34JDD
Nitrite Nitrogen	0.0110	0.1	0.011	mg/L	1	J	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:30JDD
Nitrogen, Organic	1.84	0.5	0.072	mg/L	1	b	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:33AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:33AMB
Kjeldahl Nitrogen	1.84	0.5	0.19	mg/L	1	b	351.2	203781	04/03/17 09:48	EPA351.2	204818-FI206	04/04/17-08:49AMB
Phosphorus, Total	0.577	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:54SJN
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												
J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-006

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-13:40

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : L-002

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	1.50	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:36JDD
Nitrite Nitrogen	0.0150	0.1	0.011	mg/L	1	J	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:32JDD
Nitrogen, Organic	0.457	0.5	0.072	mg/L	1	UJ	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-07:18AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-07:18AMB
Kjeldahl Nitrogen	0.457	0.5	0.32	mg/L	1	J	351.2	203780	04/03/17 09:21	EPA351.2	204818-FI206	04/04/17-09:08AMB
Phosphorus, Total	0.464	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:55SJM

DQF Flags Definition:

- b The Blank was detected above method MDL for constituent but less than the PQL
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.

ND=Non-Detected, PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-007

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-12:30

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : L-003

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	1.20	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:38JDD
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:34JDD
Nitrogen, Organic	0.511	0.5	0.072	mg/L	1	J	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:59AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:59AMB
Kjeldahl Nitrogen	0.511	0.5	0.32	mg/L	1	J	351.2	203780	04/03/17 09:21	EPA351.2	204818-FI206	04/04/17-09:09AMB
Phosphorus, Total	0.446	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:56SJN
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												
J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.												

ND=Non-Detected, PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-008

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-10:25

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : L-004

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.400	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:51JDD
Nitrite Nitrogen	0.0110	0.1	0.011	mg/L	1	J	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:49JDD
Nitrogen, Organic	1.67	0.5	0.072	mg/L	1		4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:22AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:22AMB
Kjeldahl Nitrogen	1.67	0.5	0.32	mg/L	1		351.2	203780	04/03/17 09:21	EPA351.2	204818-FI206	04/04/17-09:10AMB
Phosphorus, Total	0.394	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:57SJN
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												
J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-009

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-13:10

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : L-005

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.200	0.1	0.032	mg/L	1		4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:53JDD
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:50JDD
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-09:01AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-09:01AMB
Kjeldahl Nitrogen	ND	0.5	0.32	mg/L	1	U	351.2	203780	04/03/17 09:21	EPA351.2	204818-FI206	04/04/17-09:11AMB
Phosphorus, Total	0.104	0.1	0.020	mg/L	1	b	4500-P B	203951	04/05/17 15:58	4500PE	204925-UV205	04/05/17-18:58SJN
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017

Lab ID : SP 1703935-010

Customer ID : 2-25173

Rincon Consultants, Inc.

Attn: Torin Snyder
 180 N. Ashwood Ave.
 Ventura, CA 93003

Sampled On : March 31, 2017-10:40

Sampled By : Rincon Consultants

Received On : March 31, 2017-15:22

Matrix : Surface Water

Description : L-006

Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation			Sample Analysis		
							Method	ID	Time	Method	ID	Time
Wet Chemistry												
Nitrate Nitrogen	0.0900	0.1	0.032	mg/L	1	J	4500NO3F	203738	03/31/17 14:00	4500NO3F	204693-FI207	03/31/17-16:55JDD
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203739	03/31/17 14:00	4500NO3F	204653-FI207	03/31/17-16:52JDD
Nitrogen, Organic	13.6	0.5	0.072	mg/L	1		4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:03AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203867	04/04/17 03:00	4500NH3G	204868-FI207	04/04/17-08:03AMB
Kjeldahl Nitrogen	13.6	0.5	0.32	mg/L	1		351.2	203780	04/03/17 09:21	EPA351.2	204869-FI206	04/05/17-05:00AMB
Phosphorus, Total	3.50	0.2	0.020	mg/L	2	b	4500-P B	204063	04/07/17 14:49	4500PE	205067-UV205	04/07/17-19:40SJN
DQF Flags Definition:												
b The Blank was detected above method MDL for constituent but less than the PQL												
U Constituent results were non-detect.												
J Reported value is estimated; detected at a concentration below the PQL and above the laboratory MDL.												

ND=Non-Detected. PQL=Practical Quantitation Limit.

April 11, 2017
 Rincon Consultants, Inc.

Lab ID : SP 1703935
 Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem Nitrogen, Total Kjeldahl	351.2	04/03/17:203780jmg (CH 1772101-005)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	114 %	73-124	
			MS	mg/L	12.00	110 %	54-136	
			MSD	mg/L	12.00	115 %	54-136	
	351.2	04/03/17:203781jmg (SP 1703853-001) (SP 1703853-001)	MSRPD	mg/L	12.00	4.6%	≤27	
			Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	91.7 %	80-120	
			LCS	mg/L	12.00	99.3 %	80-120	
			MS	mg/L	12.00	69.0 %	54-136	
			MSD	mg/L	12.00	68.7 %	54-136	
Ammonia Nitrogen	4500NH3G	(SP 1703935-006)	MS	mg/L	2.000	96.2 %	70-130	
			MSD	mg/L	2.000	89.6 %	70-130	
			MSRPD	mg/L	2.000	7.4%	≤20	
			MS	mg/L	2.000	106 %	70-130	
	4500NH3G	04/04/17:204868AMB	MSD	mg/L	2.000	109 %	70-130	
			MSRPD	mg/L	2.000	3.0%	≤20	
			CCB	mg/L		0.005	0.2	
			CCV	mg/L	2.000	108 %	90-110	
			CCB	mg/L		-0.047	0.2	
			CCV	mg/L	2.000	109 %	90-110	
Nitrite as Nitrogen	4500NO2F	(VI 1741096-001)	CCB	mg/L		-0.001	0.2	
			CCV	mg/L	2.000	109 %	90-110	
			CCB	mg/L		0.019	0.2	
			CCV	mg/L	2.000	108 %	90-110	
	4500NO2F	(VI 1741096-001)	CCB	mg/L		-0.045	0.2	
			CCV	mg/L	2.000	109 %	90-110	
			MS	mg/L	1.218	91.7 %	50-150	
			MSD	mg/L	1.218	91.5 %	50-150	
			MSRPD	mg/L	1.218	0.3%	≤30	
			MS	mg/L	11.22	99.4 %	5-285	
Nitrate + Nitrite as N	4500NO3F	(VI 1741096-001)	MSD	mg/L	11.22	98.3 %	5-285	
			MSRPD	mg/L	11.22	0.7%	≤30.4	
			MS	mg/L	11.22	99.4 %	5-285	
	4500NO3F	03/31/17:204693JDD	CCB	mg/L		0.096	0.1	
			CCV	mg/L	11.22	96.1 %	90-110	
			CCB	mg/L		0.000	0.1	
			CCB	mg/L		0.097	0.1	
			CCV	mg/L	11.22	96.4 %	90-110	
			CCB	mg/L		0.081	0.1	
			CCV	mg/L	11.22	96.6 %	90-110	
Nitrite as Nitrogen	4500NO3F	03/31/17:204653JDD	CCB	mg/L		-0.0010	0.012	
			CCV	mg/L	1.218	94.7 %	90-110	
			CCB	mg/L		-0.00200	0.012	
			CCB	mg/L		-0.00200	0.012	
	4500NO3F	03/31/17:204653JDD	CCV	mg/L	1.218	94.2 %	90-110	
			CCB	mg/L		-0.0010	0.012	
			CCV	mg/L	1.218	94.3 %	90-110	
			Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	108 %	90-116	
			MS	mg/L	0.2800	36.3 %	25-292	
Phosphorus	4500-P B	04/05/17:203951sjn (STK1733496-005)	MSD	mg/L	0.2800	29.1 %	25-292	
			MSRPD	mg/L	0.2800	0.020	≤0.1	
			Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	108 %	90-116	
	4500-P B	04/07/17:204063sjn	Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	108 %	90-116	

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem Phosphorus	4500-P B	(SP 1703813-004)	MS	mg/L	0.2800	85.1 %	25-292	
			MSD	mg/L	0.2800	70.5 %	25-292	
			MSRPD	mg/L	0.2800	1.9%	≤13.2	
Total Phosphorus	4500PE	04/05/17:204925SJJN	CCB	mg/L		0.025	0.1	
			CCV	mg/L	0.5000	104 %	90-110	
			CCB	mg/L		0.025	0.1	
	4500PE	04/07/17:205067SJJN	CCV	mg/L	0.5000	103 %	90-110	
			CCB	mg/L		0.028	0.1	
			CCV	mg/L	0.5000	107 %	90-110	
Nitrogen, Total Kjeldahl	EPA351.2	04/04/17:204818AMB	CCB	mg/L		0.000	0.5	
			CCV	mg/L	5.000	108 %	90-110	
			CCB	mg/L		0.000	0.5	
	EPA351.2	04/05/17:204869AMB	CCV	mg/L	5.000	107 %	90-110	
			CCB	mg/L		0.000	0.5	
			CCV	mg/L	5.000	104 %	90-110	
Definition	CCV : Continuing Calibration Verification - Analyzed to verify the instrument calibration is within criteria. CCB : Continuing Calibration Blank - Analyzed to verify the instrument baseline is within criteria. Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples. LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery. MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery. MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery. Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis. MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis. ND : Non-detect - Result was below the DQO listed for the analyte. DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.							