Malibu Civic Center Wastewater Treatment Facility

First Quarter 2016 Baseline Groundwater + Surface Water Monitoring Report

Rincon Consultants Inc.
April 2016

Submitted to:

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April 28, 2016
Project 15-01587

Craig George
Acting Environmental Sustainability Director
Deputy Building Official
City of Malibu
23825 Stuart Ranch Road
Malibu, CA 90401

Subject: **First Quarter 2016 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 2016 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 and 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 2016 Baseline Groundwater and Surface Water Monitoring Report.

Sincerely,
RINCON CONSULTANTS, INC.

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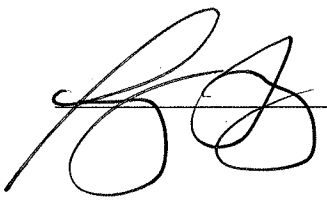
"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry 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 26 day of 2016 at MALIBU, CA



Signature

ACTING EXD DIRECTOR
Title

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1.0 INTRODUCTION

This report presents the results of the First Quarter 2016 Baseline Groundwater and Surface Water Monitoring event for the Malibu Civic Center Water 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, groundwater and surface water sampling methodologies, water quality data results, and our conclusions.

2.0 BACKGROUND

On-site waste water 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 will be constructing a new waste water treatment facility.

To establish baseline groundwater and surface water quality conditions prior to operation and discharge of treated waste water, the LARWQCB requires basin–wide, baseline groundwater and surface water monitoring. The water quality monitoring program is driven by one of 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 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 of all 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) that the City has with the LARWQCB concerning groundwater monitoring corresponds with the baseline and long term groundwater and surface water monitoring program 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. 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). The Malibu Lagoon is located at the terminus of the Malibu Creek watershed. The 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 THE FIRST QUARTER OF 2016

The following activities were completed during the First Quarter of 2016:

- Rincon measured depth to water in the groundwater monitoring wells on January 14, 2016, February 16, 2016, and March 14, 2016.
- Rincon collected and analyzed groundwater samples for SNMP compliance (Task III) and MOU compliance (Task IV).
- Rincon collected and analyzed surface water samples for WDR/MRP compliance (Task I).

5.0 GROUNDWATER ELEVATIONS AND GRADIENTS

Rincon measured the depth to water in 46 groundwater monitoring wells using an electronic water level indicator on January 14, 2016, February 16, 2016, and March 14, 2016 (Table 1). Due to access limitations, Rincon was unable to measure the depth to water in three of the groundwater monitoring wells during the January, February, and March water monitoring events. In addition, Rincon was unable to measure one well during the January, February, and March water monitoring events because the well was dry. 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.

5.1 SHALLOW ZONE

The groundwater elevations ranged from 3.20 feet above mean sea level (amsl) in groundwater monitoring well MCWP-MW10 to 19.93 feet amsl in groundwater monitoring well EC1-RC-MW01 (Table 1 and Figure 3). Groundwater elevations fluctuated during the First Quarter of 2016 when comparing monthly groundwater elevations between January and March 2016. Groundwater elevation decreased a maximum of 1.95 feet amsl in groundwater monitoring well SMBRP-10C and increased a maximum 3.96 feet amsl in groundwater monitoring well SMBRP-2. Groundwater elevations decreased a minimum of 0.02 feet amsl in groundwater monitoring well CCW-4 and increased a minimum of 0.04 feet amsl groundwater monitoring wells SMBRP-2, P-9, and P-4. 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.

The shallow groundwater gradient was 0.0029 feet/foot, 0.0026 feet/foot, and 0.0025 feet/foot (calculated using groundwater monitoring wells SMBRP-9, SMBRP-12, and SMBRP-2) during the January, February, and March monitoring events, respectively.

5.2 DEEP ZONE

The groundwater elevations ranged from 4.89 feet amsl in groundwater monitoring well MCWP-MW07D to 10.26 feet amsl in groundwater monitoring well MCWP-MW09 (Table 1). Groundwater elevation decreased a maximum of 1.03 feet amsl in groundwater monitoring well MCWP-MW05 and increased a maximum 1.73 feet amsl in groundwater monitoring well MCWP-MW07D when comparing monthly groundwater elevations between January and March 2016.

5.3 WINTER CANYON

The groundwater elevations ranged from 10.05 feet amsl in groundwater monitoring well SMBRP-11 to 50.86 feet amsl in groundwater monitoring well LAMW-5S (Table 1). Groundwater elevation decreased a maximum of 0.41 feet amsl in groundwater monitoring well SMBRP-11 and increased a maximum 0.48 feet amsl in groundwater monitoring well LAMW-5S when comparing monthly groundwater elevations between January and March 2016.

6.0 WATER QUALITY SAMPLING AND ANALYSIS

6.1 SURFACE WATER SAMPLING METHODOLOGY

On March 18, 2016 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 Groundwater and Surface Water Analysis Matrix (Table 2).

6.2 GROUNDWATER SAMPLING METHODOLOGY

From March 15, 2016 to March 17, 2016, a total of 16 groundwater samples were collected. Prior to sampling, a minimum of three casing volumes were purged from each well by 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 the well was purged, groundwater samples were collected and the samples were transferred into preserved and non-preserved containers supplied by FGL. The containers were capped, labeled, placed in Ziploc bags, and stored on ice in a cooler 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

The surface water samples collected during the First Quarter 2016 sampling event were analyzed by FGL. The laboratory analytical results for the First Quarter monitoring event

included the constituents listed in Table 3. Laboratory reports are included as Appendix B of this report.

6.3.1 Total Coliform

During the First Quarter 2016 monitoring event, total coliform concentrations in the near shore surface water ranged from less than 1.8 Most Probable Number per 100 milliliters (MPN/100 mL) at N-001 and N-002 to 13 MPN/100 mL at N-003 with an average concentration of 4.2 MPN/100 mL. Total coliform concentrations in the surface water of Malibu Lagoon and Creek ranged from 240 MPN/100 mL at L-003 to 920 MPN/100 mL at L-005 with an average concentration of 447 MPN/100 mL.

6.3.2 Fecal Coliform

During the First Quarter 2016 monitoring event fecal coliform concentrations in the near shore surface water were not detected above the reporting limit of 1.8 mg/L. Fecal coliform concentrations in the Malibu Lagoon and Creek surface water ranged from 23 MPN/100 mL at L-001 and L-003 and 350 MPN/100 mL at L-005 with an average concentration of 124 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 were 0.1 milligrams per liter (mg/L). Malibu Lagoon and Creek nitrate as nitrogen concentration ranged from 0.3 mg/L at L-001 to 1.6 mg/L at L-005.

6.3.3.2 Other Forms of Nitrogen

All nitrite as nitrogen concentrations in surface water samples collected at the near shore and the Malibu Lagoon and Creek sampling locations were not detected above the reporting limit of 0.1 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 Lagoon and Creek sampling locations during the First Quarter 2016 monitoring event 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 2016 monitoring event ranged from less than 0.5 mg/L at N-002 and N-004 to 0.937 mg/L at N-001. TKN detected in surface water samples collected at the Malibu Lagoon and Creek sampling locations during the First Quarter 2016 sampling event ranged from 0.798 mg/L at sampling location L-004 to 1.99 mg/L at sampling location L-001.

Organic nitrogen concentrations in surface water samples collected at the near shore sampling locations during the First Quarter 2016 monitoring event ranged from less than 0.5 mg/L at N-002 and N-004 to 0.937 mg/L at N-001. Organic nitrogen detected in surface water samples collected at the Malibu Lagoon and Creek sampling locations during the First Quarter 2016 sampling event ranged from 0.798 mg/L at sampling location L-004 to 1.99 mg/L at sampling location L-001.

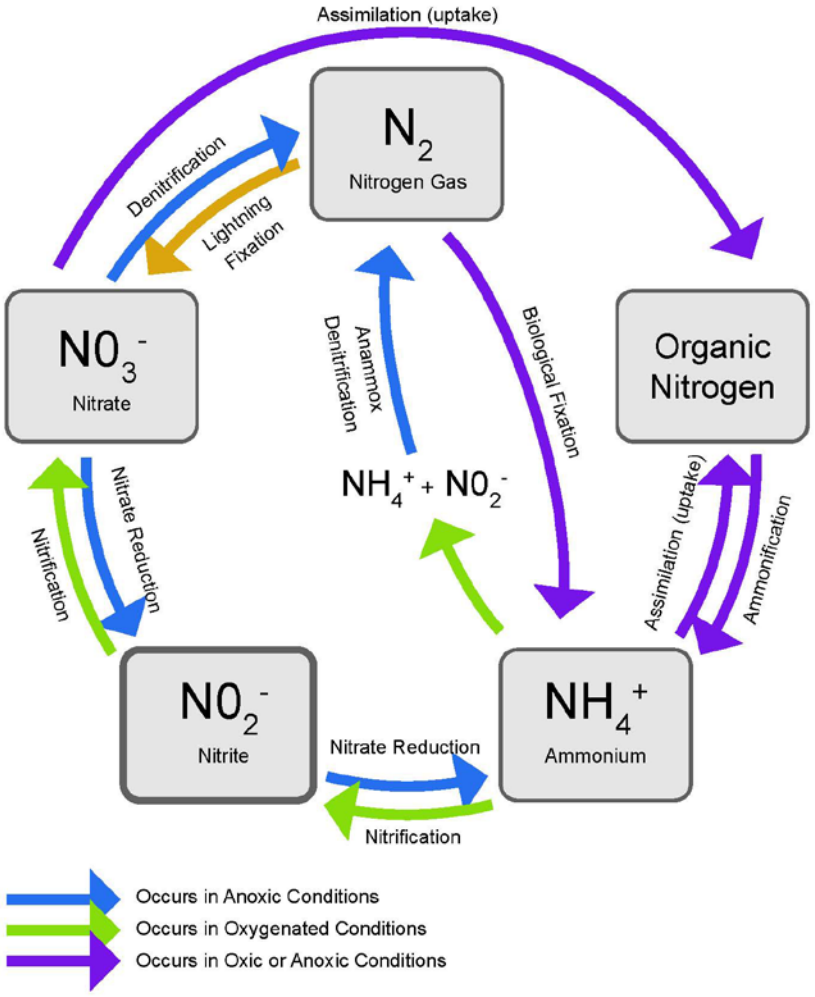

Figure 6. The Nitrogen Cycle

6.3.4 Total Phosphorous

Total phosphorus concentrations detected in surface water samples collected at the near shore sampling locations during the First Quarter 2016 sampling event ranged from less than 0.1 mg/L at sampling location N-003 to 1.42 mg/L at sampling location N-002 with an average concentration of 0.823 mg/L. Total phosphorus concentrations detected in surface water samples collected at Malibu Lagoon and Creek during the First Quarter 2016 sampling event ranged from 0.35 mg/L at L-004 to 0.661 mg/L at L-005 with an average concentration of 0.465 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 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

The groundwater samples collected during the First Quarter 2016 sampling event were analyzed by FGL. The laboratory analytical results for the First Quarter monitoring event included the constituents listed in Table 4. Laboratory reports are included as Appendix B of this report.

6.4.1 Total Coliform

During the First Quarter 2016 monitoring event, total coliform concentrations in groundwater wells monitored ranged from less than 1.8 MPN/100 mL at multiple locations to greater than 1,600 MPN/100 mL at LAMW-5S with an average concentration of 32.07 MPN/100 mL.

6.4.2 Fecal Coliform

Fecal coliform concentrations in groundwater samples collected during the First Quarter 2016 monitoring event ranged from less than 1.8 MPN/100 mL at multiple locations to 350 MPN/100 mL at LAMW-5S with an average concentration of 27 MPN/100 mL.

6.4.3 Nitrogen

6.4.3.1 Nitrate as Nitrogen

During the First Quarter 2016 monitoring event, nitrate as nitrogen detected concentrations ranged from less than 0.1 mg/L at multiple locations to 15.1 mg/L at SMBRP-9, which exceeded the Maximum Contaminant Level (MCL) of 10 mg/L for drinking water standard set by the Environmental Protection Agency (EPA-Updated July 22, 2015).

6.4.3.2 Other forms of Nitrogen

Nitrite as nitrogen concentrations in groundwater samples collected during the First Quarter 2016 monitoring event were not detected above the reporting limit of 0.1 mg/L, except at MCWP-MW07S (0.24 mg/L). Ammonia concentrations ranged from less than 0.2 mg/L at multiple locations to 5.67 mg/L at SMBRP-12 with an average concentration of 0.74 mg/L.

Organic nitrogen concentrations in groundwater samples collected during the First Quarter 2016 monitoring event ranged from less than 0.5 mg/L at multiple groundwater monitoring wells to 2.90 mg/L at SMBRP-12 with an average concentration of 1.02 mg/L. TKN concentrations ranged from less than 0.5 mg/L at multiple locations to 8.57 mg/L at SMBRP-12 with an average concentration of 1.68 mg/L.

6.4.4 Total Phosphorous

During the First Quarter 2016 monitoring event total phosphorus concentrations in groundwater samples analyzed ranged from less than 0.1 mg/L at multiple locations to 9.43 mg/L at LAMW-5S with an average concentration of 1.39 mg/L.

6.4.5 Total Dissolved Solids

TDS concentrations in groundwater samples analyzed during the First Quarter 2016 monitoring event ranged from 713 mg/L at LAMW-5S to 27,500 mg/L at SMBRP-13 with an average concentration of 3,921 mg/L.

6.4.6 Boron, Sulfate, Chloride

During the First Quarter 2016 groundwater monitoring event boron, sulfate, and chloride analyses were not conducted for groundwater wells. Boron, sulfate, and chloride analyses are only conducted annually for WDR/MRP (Task I) monitoring.

6.4.7 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 THE SECOND QUARTER OF 2016

The following activities will be completed during the Second Quarter of 2016:

- Prepare and submit the First Quarter 2016 Groundwater and Surface Water Monitoring Report to the LARWQCB.
- Rincon will measure depth to water in the groundwater monitoring wells in April, May, and June.
- Rincon will collect and analyze surface water samples for MRP compliance (Task I).

8.0 SUMMARY OF MONITORING ACTIVITIES

Groundwater elevations fluctuated several feet between January, February, and March groundwater monitoring events. Shallow groundwater generally flows southeast to south, towards the coastline.

During the First Quarter 2016 monitoring event, total coliform concentrations in the near shore surface water ranged from 2 MPN/100 mL at N-004 to 13 MPN/100 mL at N-003 with an average concentration of 7.5 MPN/100 mL. Total coliform concentrations in the surface water of Malibu Lagoon and Creek ranged from 240 MPN/100 mL at L-003 to 920 MPN/100 mL at L-005 with an average concentration of 447 MPN/100 mL.

Fecal coliform concentrations in the near shore surface water were not detected above laboratory method detection limits. Fecal coliform concentrations in the Malibu Lagoon and Creek surface water ranged from 23 MPN/100 mL at L-001 and L-003 to 350 MPN/100 mL at L-004 with an average concentration of 124 MPN/100 mL.

Nitrate as nitrogen concentrations in surface water samples collected at the near shore were 0.1 mg/L at all locations. Malibu Lagoon and Creek nitrate as nitrogen concentration ranged from 0.3 mg/L at L-001 to 1.6 mg/L at L-005.

During the First Quarter 2016 monitoring event, total coliform concentrations in groundwater wells monitored ranged from 2 MPN/100 mL at MCWP-MW10 to >1,600 MPN/100 mL at LAMW-5S with an average concentration of 68.43 MPN/100 mL.

Fecal coliform concentrations in groundwater samples collected during the First Quarter 2016 monitoring event ranged between 4.5 MPN/100 mL at CCPE and 350 MPN/100 mL at LAMW-5S with an average concentration of 122 MPN/100 mL.

Nitrate as nitrogen detected concentrations in groundwater samples ranged between 0.1 mg/L at MCWP-MW06 to 15.1 mg/L at SMBRP-9, which exceeded the Maximum Contaminant Level (MCL) of 10 mg/L for drinking water standard set by the Environmental Protection Agency (EPA-Updated July 22, 2015). Total phosphorus concentrations in groundwater samples analyzed ranged from 0.239 mg/L at MCWP-MW07S and MCWP-MW07D to 9.43 mg/L at LAMW-5S.

TDS concentrations in groundwater samples analyzed during the First Quarter ranged from 713 mg/L at LAMW-5S to 27,500 mg/L at SMBRP-13 with an average concentration of 3,921 mg/L.

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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RMC Water. 2015b. Draft Groundwater Management Plan Malibu Valley Groundwater Basin.

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
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
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
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
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
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

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	-
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	-
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	-
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	-
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	-
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	-

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	-
MBCMW-5	8/24/2015	29.03	N/A	-
	9/21/2015		N/A	-
	10/20/2015		N/A	-
	11/16/2015		N/A	-
	12/14/2015		N/A	-
	1/14/2016		N/A	-
	2/16/2016		N/A	-
	3/14/2016		N/A	-
MBCMW-6	8/24/2015	29.02	N/A	-
	9/21/2015		N/A	-
	10/20/2015		N/A	-
	11/16/2015		N/A	-
	12/14/2015		N/A	-
	1/14/2016		N/A	-
	2/16/2016		N/A	-
	3/14/2016		N/A	-
MBCMW-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
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
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

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
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
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
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
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
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

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
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
SMBRP-3C	8/24/2015	36.53	N/A	-
	9/21/2015		N/A	-
	10/20/2015		N/A	-
	11/16/2015		N/A	-
	12/14/2015		N/A	-
	1/14/2016		N/A	-
	2/16/2016		N/A	-
	3/14/2016		N/A	-
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
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
EC1-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

Table 1
Groundwater Elevations

Shallow Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
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
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
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
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
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	-
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

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	17.90	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
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
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
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
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

Table 1
Groundwater Elevations

Deep Groundwater Monitoring Wells				
Well ID	Date	TOC Elevation (ft amsl)	Depth to Water (ft bTOC)	Groundwater Elevation
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
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
MCWP-MW09	8/24/2015	16.30	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

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
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

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*	*SNMP*	*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*
Laboratory Analysis	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**									
Laboratory Analysis	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
		N-002	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	1.42
		N-003	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
		N-004	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
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
		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
		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
		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
		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
		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

Notes:

mg/L: milligrams per liter

MPN/100mL: Most Probable Number per 100 milliliters

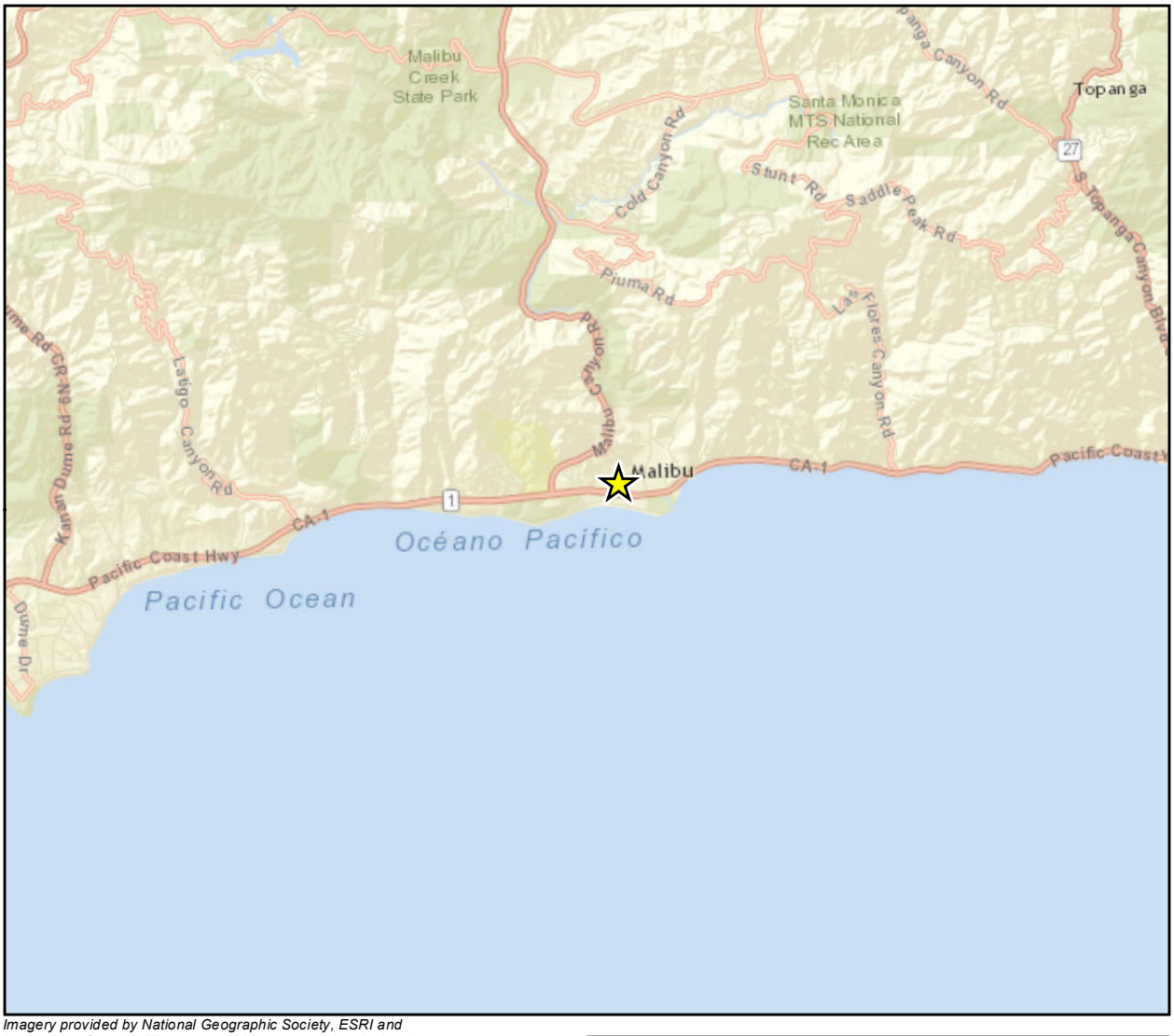
BSW: below surface water

<: 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	-
SMBRP-7B	25 feet	12/15/2015	11	<1.8	-	<0.1	-	<0.1	<0.5	<0.2	0.552	-	0.478	-	-	3,090	-
		3/15/2016	110	11	-	<0.1	-	<0.1	1.37	<0.2	1.37	-	0.916	-	-	1,400	-
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	2,100	309
		3/15/2016	<1.8	<1.8	-	<0.1	-	15.1	<0.5	<0.2	<0.5	-	0.462	-	-	2,100	-
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	2,140	478
		3/15/2016	<1.8	<1.8	-	<0.1	-	<0.1	2.9	5.67	8.57	-	1.43	-	-	2,290	-
SMBRP-13	19 feet	12/15/2015	4.5	<1.8	-	<0.1	-	<0.1	<0.5	0.2	<0.5	-	0.316	-	-	1,810	-
		3/15/2016	<1.8	<1.8	-	<0.1	-	<0.1	0.556	0.884	1.44	-	0.461	-	-	27,500	-
MBCMW-9	9 feet	9/23/2015	*well was dry at time of sampling*														
		3/16/2016	7.8	<1.8	-	<0.1	-	<0.1	1.82	<0.2	1.82	-	2.26	-	-	6,080	-
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	6,510	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	-	-	6,320	-
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	1,630	216
		3/17/2016	<1.8	<1.8	-	<0.1	-	1.7	<0.5	<0.2	<0.5	-	<0.1	-	-	1,600	-
MCWP-MW05	154 feet	9/23/2015	-	-	-	-	-	2.3	-	-	-	-	-	-	-	1,400	-
		3/17/2016	-	-	-	-	-	2.1	-	-	-	-	-	-	-	1,400	-
MCWP-MW06	138 feet	9/23/2015	-	-	-	-	-	0.2	-	-	-	-	-	-	-	1,590	-
		3/16/2016	-	-	-	-	-	0.1	-	-	-	-	-	-	-	1,520	-
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	1,230	227
		3/16/2016	49	<1.8	-	0.24	-	4.8	<0.5	<0.2	<0.5	-	2.39	-	-	1,180	-
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	2,300	348
		3/16/2016	<1.8	<1.8	-	<0.1	-	<0.1	1.15	<0.2	1.15	-	0.239	-	-	2,470	-
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	2,570	723
		3/15/2016	<1.8	<1.8	-	<0.1	-	<0.1	0.84	2.36	3.2	-	0.355	-	-	2,410	-
MCWP-MW10	22 feet	9/29/2015	2	<1.8	-	-	-	0.4	<1	<0.2	<1	-	<0.1	-	-	1,550	-
		3/15/2016	2	<1.8	-	<0.1	-	0.6	1.28	<0.2	1.28	-	<0.1	-	-	1,800	-
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	2,170	410
		3/16/2016	<1.8	<1.8	-	<0.1	-	<0.1	1.03	0.433	1.46	-	0.758	-	-	2,160	-
CCPE	52 feet	9/23/2015	>1,600	49	-	-	-	1.4	<1	<0.2	<1	-	<0.1	-	-	1,630	-
		3/15/2016	240	4.5	-	<0.1	-	0.9	0.664	<0.2	0.664	-	<0.1	-	-	1,800	-

Notes:
mg/L: milligams 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

N

0 1 2

Miles

Vicinity Map

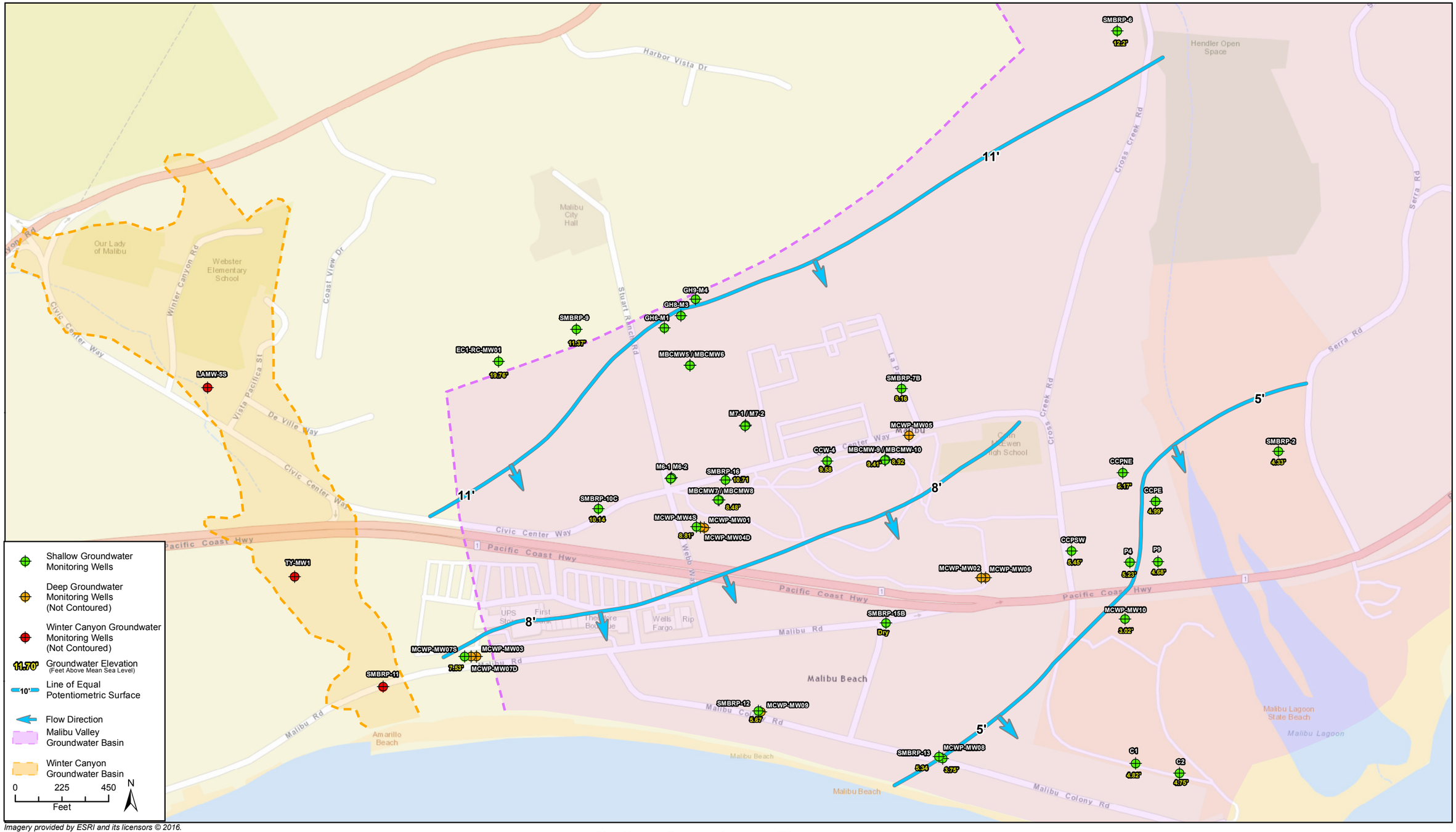
Figure 1

Imagery provided by ESRI and its licensors © 2015.

Site Map

Figure 2

Rincon Consultants Inc.



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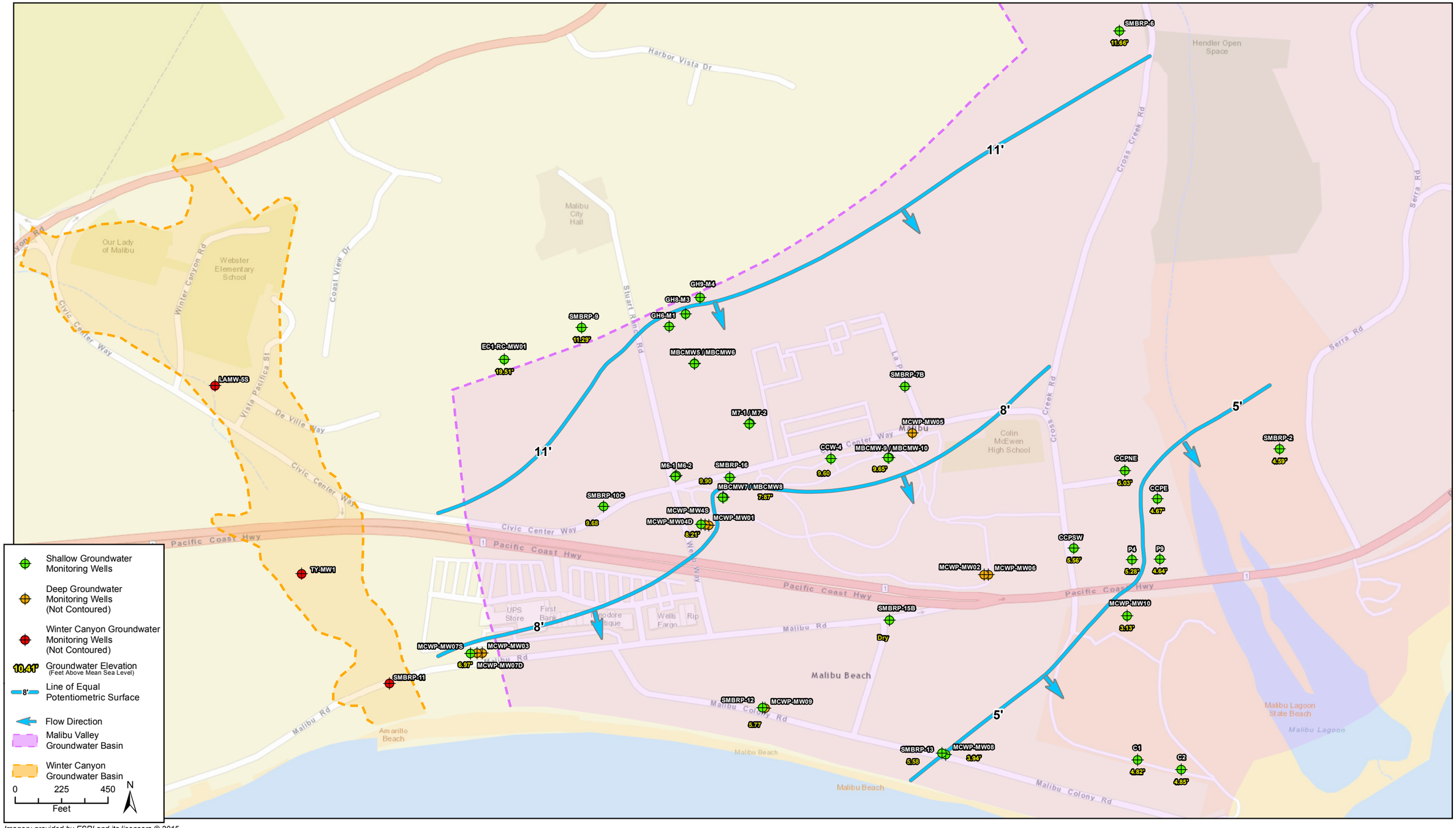
Shallow Groundwater Elevations
January 2016

Figure 3

Rincon Consultants Inc.



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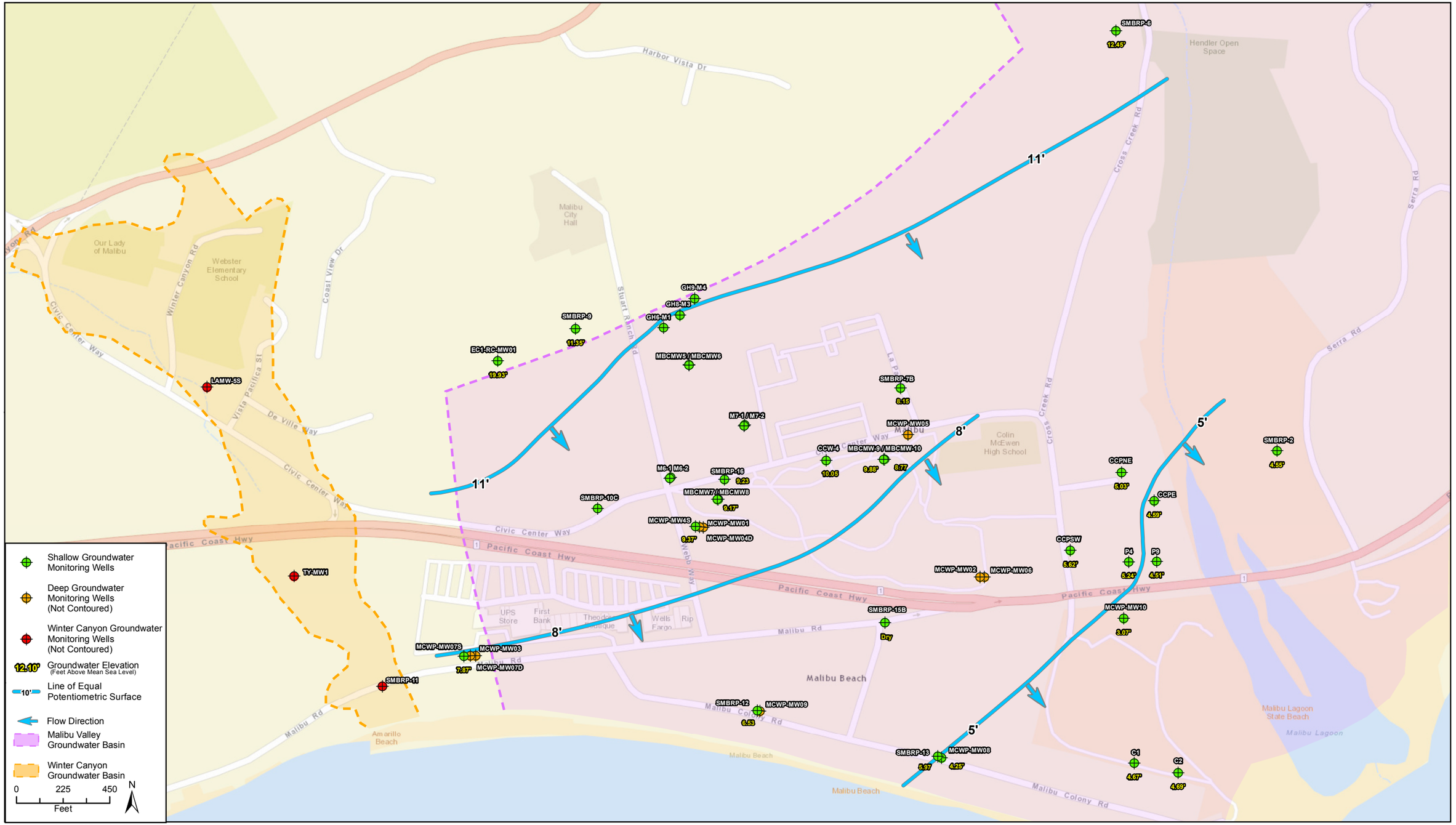
Shallow Groundwater Elevations
February 2016

Figure 4



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Shallow Groundwater Elevations
March 2016

Figure 5

Appendix A

Groundwater Sampling/Purging Data Sheets

1-14-16
Peter Shellenbarger
Malibu DTW

Arrive @ Malibu 1045
DTW meter # 1
left Malibu @ ~~09~~ 1540

Table 1

Groundwater Monitoring Well Construction

	Well ID	Total Well Depth (ft bTOC)	Well Diameter (in)	TOC Elevation (ft amsl)	Depth to Water 12/14/2015	Time	Depth to Water 8/24/2015 (ft bTOC)
1	C-1	14.5	n/a	11.47	10.65	1212	n/a
2	C-2	14.5	2	11.19	6.44	1208	5.11
3	CCPE	20	2	12.935	7.95	1245	5.76
4	CCPNE		2	13.675	8.51	1234	6.44
5	CCPSW		2	13.67	8.22	1253	6.29
6	CCW-4		1	15.765	6.19	1119	6.5
7	GH6-M1	35	2		29.49	1438	28.92
8	GH8-M3	40	2		28.92	1433	28.37
9	GH9-M4	45	2		34.54	1429	30.31
10	Lagoon		n/a		N/A		n/a
11	LAMW-5S	20	4	104.55	54.02	1405	53.71
12	~~MW-1~~ MT-1	45	2		8.04	1422	6.61
13	~~MW-2~~ MT-2	20	2		7.34	1418	5.76
14	~~MT-1~~ MW-1	40	2		10.63	1442	8.09
15	~~MT-2~~ MW-2	25	2		9.69	1431	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	~~10.83~~ 11.39	1112	11.26
19	MBCMW-8	10	2	16.53	8.05	1108	9.11
20	MBCMW-9	10	2	17.71	8.30	1127	8.7
21	MBCMW-10	53	2	17.74	8.82	1131	8.63
22	MCWP-MW01	148	6		10.45	1348	10.22
23	MCWP-MW02	145	6	18.06	10.68	1330	10.39
24	MCWP-MW03	134	6		8.38	1458	7.65
25	MCWP-MW04D	148	4		9.59	1345	9.35
26	MCWP-MW04S	20	4		8.48	~~1341~~	7.55
27	MCWP-MW05	158	4		7.82	1124	7.62

Not city of Malibu Well

28	MCWP-MW06	153	2		10.12	1327	9.87
29	MCWP-MW07D	134	2		8.32	1501	7.51
30	MCWP-MW07S	20	2		6.19	1503	6.76
31	MCWP-MW08	77	2		8.46	1525	7.64
32	MCWP-MW09	95	2	16.3	6.37	1531	7.52
33	MCWP-MW10	60	2		8.09	1202	5.7
34	P-4	12.5	4	12.155	6.93	1248	4.58
35	P-9	14.3	4	12.165	7.49	1250	5.07
36	SMBRP-2	25	2	13.131	8.80	1154	6.04
37	SMBRP-6	25	2	26.875	14.68	1141	16.49
38	SMBRP-7b	45	2	18.985	10.83	1135	10.69
39	SMBRP-8 (EG-RC	60	4		28.93	1100	28.74
40	SMBRP-9	45	2	50.32	38.95	1352	38.24
41	SMBRP-10C	25	2	16.25	6.11	1415	7.37
42	SMBRP-11	20	2	18.35	8.00	1513	8.88
43	SMBRP-12	25	2	12.615	6.95	1530	5.69
44	SMBRP-13	20	2	13.58	8.24	1521	8.32
45	SMBRP-15b	25	1	16.765	DRY	Dry	dry, recorded depth 8.77
46	SMBRP-16	25	2	14.5	379	1105	4.95

- Lagoon has breached → water level low

- Approach by Efrain Fernandez of Los Angeles County Public Working regarding LAMW-5S. He was not aware of City of Malibu sampling "their" well. I directed him to contact Craig George @ City of Malibu.

County of Los Angeles
Department of Public Works
www.dpw.lacounty.gov

EFRAIN FERNANDEZ
Waste Water Treatment Plant Operator
Waterworks & Sewer Maintenance Division

recycled paper

3620 Vista Pacifica Street
Malibu, CA 90265

Office: (310) 456-3436
Cell: (626) 862-3389


Legend
Monthly Transducer Well
Monthly
Other Well
SMBRP-6
SMBRP-5
GH8-M3
GH9-M4
GH6-M1
ECI-RC-MW01
LAMW-5S
SMBRP-7B
M7-2
M7-1
MCWP-MW05
CCW-4
M6-1
SMBRP-16
MBCMW-9
SMBRP-2
CCPNE
SMBRP-10C
MBCMW-8
MBCMW-10
M6-2
CCPE
MBCMW-7
CCPSW
MCWP-MW01
P-6
P-4
MCWP-MW02
Lagoon-before
MCWP-MW04S
MCWP-MW04D
MCWP-MW06
MCWP-MW10
SMBRP-15b
MCWP-MW07S
MCWP-MW07D
SMBRP-11
SMBRP-12
MCWP-MW09
SMBRP-13
MCWP-MW08
C-1
C-2
0
500
Feet
earthforensics, inc.
MONTHLY
GROUNDWATER WELLS
Civic Center Area
Malibu CA
2012 ISC
1

2-16-16 Malibu DTW
Arrive onsite @ 1100

Table 1

Groundwater Monitoring Well Construction

	Well ID	Total Well Depth (ft bTOC)	Well Diameter (in)	TOC Elevation (ft amsl)	Depth to Water 2/16/2016	Time	Depth to Water 8/24/2015 (ft bTOC)
1	C-1	14.5	n/a	11.47	6.65	1259	n/a
2	C-2	14.5	2	11.19	6.34	1257	5.11
3	CCPE	20	2	12.935	8.27	1321	5.76
4	CCPNE		2	13.675	8.65	1317	6.44
5	CCPSW		2	13.67	8.11	1331	6.29
6	CCW-4		1	15.765	6.17	1158	6.5
7	GH6-M1	35	2		29.56	1425	28.92
8	GH8-M3	40	2		28.96	1422	28.37
9	GH9-M4	45	2		31.12	1418	30.31
10	Lagoon		n/a				n/a
11	LAMW-5S	20	4	104.55	53.69	1100	53.71
12	M6-1	45	2		7.03	1431	6.61
13	M6-2	20	2		5.46	1429	5.76
14	M7-1	40	2		8.36	1410	8.09
15	M7-2	25	2		7.74	1412	7.78
16	MBCMW-5	19.4	n/a	29.03			n/a
17	MBCMW-6	64.26	n/a	29.02			n/a
18	MBCMW-7	52.5	2	16.635	11.75	1142	11.26
19	MBCMW-8	10	2	16.53	8.66	1138	9.11
20	MBCMW-9	10	2	17.71	8.06	1210	8.7
21	MBCMW-10	53	2	17.74	9.34	1208	8.63
22	MCWP-MW01	148	6		11.02	1351	10.22
23	MCWP-MW02	145	6	18.06	11.13	1338	10.39
24	MCWP-MW03	134	6		8.43	1512	7.65
25	MCWP-MW04D	148	4		10.24	1347	9.35
26	MCWP-MW04S	20	4		7.08	1345	7.55
27	MCWP-MW05	158	4		8.37	1202	7.62

28	MCWP-MW06	153	2		10.58	1336	9.87
29	MCWP-MW07D	134	2		8.32	1515	7.51
30	MCWP-MW07S	20	2		6.75	1521	6.76
31	MCWP-MW08	77	2		8.27	1531	7.64
32	MCWP-MW09	95	2	16.3	6.42	1538	7.52
33	MCWP-MW10	60	2		7.98	12:48	5.7
34	P-4	12.5	4	12.155	6.88	1329	4.58
35	P-9	14.3	4	12.165	7.53	1326	5.07
36	SMBRP-2	25	2	13.131	8.54	1240	6.04
37	SMBRP-6	25	2	26.875	15.22	1230	16.49
38	SMBRP-7b	45	2	18.985	11.08	1206	10.69
39	SMBRP-8 (EG-RC	60	4		29.18	1123	28.74
40	SMBRP-9	45	2	50.32	39.03	1401	38.24
41	SMBRP-10C	25	2	16.25	6.57	1133	7.37
42	SMBRP-11	20	2	18.35	8.30	1525	8.88
43	SMBRP-12	25	2	12.615	6.85	1540	5.69
44	SMBRP-13	20	2	13.58	8.00	1534	8.32
45	SMBRP-15b	25	1	16.765	Dry	1545	dry, recorded depth 8.77
46	SMBRP-16	25	2	14.5	4.60	1137	4.95

Car Parked @ 1110
Lawnmower @ 1400

- lagoon level very low → much lower than January OTW measurement


Legend
Monthly Transducer Well
Monthly
Other Well
SMBRP-6
SMBRP-9
GH8-M3
GH9-M4
GH8-M1
ECI-RC-MW01
LAMW-5S
SMBRP-7B
M7-2
M7-1
MCWP-MW05
CCW-4
M6-1
SMBRP-16
MBCMW-9
SMBRP-2
CCPNE
SMBRP-10L
MBCMW-8
MBCMW-10
M6-2
MBCMW-7
CCPE
CCPSW
MCWP-MW01
P-4
P-3
MCWP-MW04S
MCWP-MW04D
MCWP-MW02
MCWP-MW06
SMBRP-15b
MCWP-MW10
MCWP-MW07S
MCWP-MW03
MCWP-MW07D
SMBRP-11
SMBRP-12
MCWP-MW09
SMBRP-13
MCWP-MW08
C-1
C-2
0
500
Feet
earthforensics, inc.
MONTHLY
GROUNDWATER WELLS
Civic Center Area
Malibu, CA
2012.190
1

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-14-16
Project/Location	Malibu Civic Center	Well Number:	LAMW-55
Observation Period Start:	1545 Stop: 1710	Survey Reference Point:	TOC
Sampled By:	P. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	redi-Flow 2	Pump Inlet Depth (ft)	60
Well Diameter (in)	4 1/2 inch	Depth of Well (ft)	73.43
Initial/Static Depth to Water (ft)	53.92	Length of Water Column (ft)	19.51
Product Thickness (ft)	———	Volume Multiplier (gal/ft)	0.65
One Casing Volume (gal)	12.68	Three Casing Volumes (gal)	38.04
Purge Time, Start	1620	Purge Time, Stop	1655
Total Purge Time (minutes)	35 min	Purge Rate (gpm)	
Purge Volume (gal)	22 gal	Depth to Water (ft) at Sampling	53.96

CASING OR BOREHOLE VOLUME

5 gallon 1/2 →

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	1/2	1	2	3			At Sampling
TDS (ppm) kg/L	0.0001	0.0005	.0005	.0006				0.0008
Turbidity (measured or visual) cloudy, clear, muddy	Cloudy milky Br	→	Drk Brn milky Cloudy	Drk Brn →				clear
Temperature (C)	22.54	22.89	22.80	23.05				21.56
Conductivity (mS/cm micromhos)	200	665	713	821				1094
pH	6.64	6.49	6.77	6.82				7.08
Dissolved Oxygen (mg/L & %)	10.7% 0.91 mg/L	13.9% 1.22 mg/L	15.1 %	16.7 %				44.8
Comments:			1.26 mg/L	1.43 mg/L				3.90
Depth to Water at End of Purge (ft)				71.82				71.82
Drawdown (ft)				17.9				

DM 0 gallons 22 Depth to Water

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	70°F, light wind

Comments:

Sampled at: 0930 3-15-16

Well Recovery Calculation

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

53.92 + 0.2 * 17.9 = 57.5

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16
Project/Location	Malibu Civic Center	Well Number:	SMBRP-9
Observation Period Start:	0815 Stop: 0915	Survey Reference Point:	TOC
Sampled By:	D. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	Redi-Flow 2	Pump Inlet Depth (ft)	40
Well Diameter (in)	2 inch	Depth of Well (ft)	45
Initial/Static Depth to Water (ft)	38.97	Length of Water Column (ft)	6.03
Product Thickness (ft)	———	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	0.9648	Three Casing Volumes (gal)	2.89
Purge Time, Start	0823	Purge Time, Stop	0831
Total Purge Time (minutes)	8	Purge Rate (gpm)	0.375
Purge Volume (gal)	3 gal	Depth to Water (ft) at Sampling	39.35

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	2	3				At Sampling
TDS (ppm)	~~0.0020~~ 0.0021	0.0021	.0021	0.0020				0.0021
Turbidity (measured or visual) cloudy, clear, muddy	milky	milky	milky wht	Milky cwht				milky cloudy
Temperature (C)	20.49	21.62	20.81	22.39	* Slow recharge for waiting for recovery			20.84
Conductivity (~~micromhos~~ uS/cm)	2901	3016	2962	3021				2983
pH	7.14	7.40	7.48	7.41				7.41
Dissolved Oxygen (mg/L & %) %	42.1	29.8	32.0	94.6				67.2
Comments: mg/L	3.70	2.60	2.85	8.22				5.35
Depth to Water at End of Purge (ft)				41.17				
Drawdown (ft)				2.2				

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	clear, 60°F, No wind

Comments: Sampled at: 0855

Well Recovery Calculation

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

38.97 + 0.2 * 2.2 = 39.41

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GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16
Project/Location	Malibu Civic Center	Well Number:	CCPE
Observation Period	Start: 950 Stop: 1045	Survey Reference Point:	TOC
Sampled By:	P. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	vedi-Flow 2/Grundfos	Pump Inlet Depth (ft)	12
Well Diameter (in)	2inch	Depth of Well (ft)	52.7
Initial/Static Depth to Water (ft)	8.35	Length of Water Column (ft)	44.35
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	7.1	Three Casing Volumes (gal)	21.3
Purge Time, Start	1000	Purge Time, Stop	1025
Total Purge Time (minutes)	25	Purge Rate (gpm)	0.88
Purge Volume (gal)	22	Depth to Water (ft) at Sampling	8.36

CASING OR BOREHOLE VOLUME

5 gallon count

1111

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	2	3				At Sampling
TDS ~~(ppm)~~ mg/L	0.0008	0.0011	0.0012	0.0017	→	→	→	→
Turbidity (measured or visual) cloudy, clear, muddy	clear Blk specs	→	→	→	→	→	→	→
Temperature (C)	20.12	20.31	20.79	20.36	→	→	→	→
Conductivity ~~(micromhos)~~ uS/cm	1185	1545	1689	2345	→	→	→	→
pH	7.32	7.12	7.16	7.13	→	→	→	→
Dissolved Oxygen (mg/L & ~~%~~) mg/L %	35.5↓	11.2	15.0↓	9.6	→	→	→	→
Comments: mg/L	2.9↓	1.00	1.30↓	0.86	→	→	→	→
Depth to Water at End of Purge (ft)				8.41				
Drawdown (ft)				0.06				

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	65, clear, light wind

Comments: Sampled at: 1028

Well Recovery Calculation

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

8.35 + 0.2 * 0.012 = 8.367 → No real drawdown

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GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16
Project/Location	Malibu	Well Number:	SMBRP-13
Observation Period Start:	1110 Stop: 1140	Survey Reference Point:	TOC
Sampled By:	P. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	Redi-Flow 2 / Grundfos	Pump Inlet Depth (ft)	13
Well Diameter (in)	2 inch	Depth of Well (ft)	19.48
Initial/Static Depth to Water (ft)	~~7.55~~ 7.55	Length of Water Column (ft)	11.93
Product Thickness (ft)		Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	1.91	Three Casing Volumes (gal)	5.73
Purge Time, Start	1122	Purge Time, Stop	1128
Total Purge Time (minutes)	6	Purge Rate (gpm)	1 gpm
Purge Volume (gal)	6 gallons	Depth to Water (ft) at Sampling	7.57

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	2	3				At Sampling
TDS ~~(ppm)~~ ~~mg~~ kg/L	0.0205	0.0206	0.0205	0.1773	→	→	→	
Turbidity (measured or visual) cloudy, clear, muddy	clear	clear	clear	clear				
Temperature (C)	21.29	21.48	21.45	21.57	→	→		
Conductivity ~~(micromhos)~~ uS/cm	29350	29622	29621	25757				
pH	6.60	6.62	6.63	6.64				
Dissolved Oxygen (mg/L & %) %	23.5	21.5	22.1	20.7	→	→	→	
Comments: mg/L	1.79	1.70	1.71	0.37				
Depth to Water at End of Purge (ft)				7.57				
Drawdown (ft)				0.02	> NO	Drawdown		

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	70°F, clear, NO wind

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

7.55 + 0.2 * 0.02 = 7.554 → None

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GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16
Project/Location	Civic Center Malibu	Well Number:	SMBRP-12
Observation Period Start:	1145 Stop: 1215	Survey Reference Point:	TOC
Sampled By:	D. Shellenberger	Witnessed By:	PS

PURGING DATA

Type of Pump	Grundfos / Redi Flow 2	Pump Inlet Depth (ft)	10
Well Diameter (in)	2 inch	Depth of Well (ft)	24.88
Initial/Static Depth to Water (ft)	6.05	Length of Water Column (ft)	18.83
Product Thickness (ft)		Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	3.0128	Three Casing Volumes (gal)	9.03
Purge Time, Start	1158	Purge Time, Stop	1208
Total Purge Time (minutes)	10	Purge Rate (gpm)	
Purge Volume (gal)	9	Depth to Water (ft) at Sampling	6.05

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	2	3				At Sampling
TDS (ppm)	0.0001	0.0075	0.1134	0.1233				
Turbidity (measured or visual) cloudy, clear, muddy	clear	clear	clear	clear				
Temperature (C)	22.27	22.61	22.51	22.58				
Conductivity (mS/cm micromhos)	1228	11060	180160	178110				
pH	7.42	7.37	7.30	7.25				
Dissolved Oxygen (mg/L & %) %	65.5	29.0	15.1	10.5				
mg/L Comments:	4.47	2.39	0.60	0.37				
Depth to Water at End of Purge (ft)				6.05				
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, clear, light wind

Comments: Sampled at: 1210

Well Recovery Calculation

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

____ + 0.2 * ____ = ____

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GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16
Project/Location	Malibu Civic Center	Well Number:	MCWP-mw09
Observation Period	Start: 1230 Stop: 1315	Survey Reference Point:	TOC
Sampled By:	D. Shellenbarger	Witnessed By:	PS.

PURGING DATA

Type of Pump	Grundfos	Pump Inlet Depth (ft)	55
Well Diameter (in)	2 inch	Depth of Well (ft)	89.60
Initial/Static Depth to Water (ft)	6.37	Length of Water Column (ft)	83.23
Product Thickness (ft)	———	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	13.31	Three Casing Volumes (gal)	39.95
Purge Time, Start	1238	Purge Time, Stop	1305
Total Purge Time (minutes)	27	Purge Rate (gpm)	1.48
Purge Volume (gal)	40	Depth to Water (ft) at Sampling	6.37

CASING OR BOREHOLE VOLUME

5 gallon Bucket

IIII III

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	2	3				At Sampling
TDS (ppm)	0.2588	0.2605	0.2577	0.2590				
Turbidity (measured or visual) cloudy, clear, muddy	milky clear	→	clear	clear				
Temperature (C)	21.51	21.20	21.62	21.47				
Conductivity (~~micromhos~~ µS/cm)	371372	371760	371745	371703				
pH	7.92	7.63	7.65	7.54				
Dissolved Oxygen (mg/L & %) %	40.4↓	14.5	10.9	19.9↓				
mg/L Comments:	0.18	0.06	0.05	0.09↓				
Stop purge → return to 6.37 30 seconds.			Depth to Water at End of Purge (ft)	6.39				
			Drawdown (ft)	.02				

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	75°, clear, light wind

Comments: Sampled at: 1307

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

_____ + 0.2 * _____ = _____

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16
Project/Location	Malibu Civic Center	Well Number:	~~MW-3~~ MCWP-MW10
Observation Period Start:	1325 Stop: 1355	Survey Reference Point:	TOC
Sampled By:	D. Shellenbarger	Witnessed By:	DS

PURGING DATA

Type of Pump	Redi-Flow/ Grundfos	Pump Inlet Depth (ft)	9
Well Diameter (in)	2 inch	Depth of Well (ft)	22.23
Initial/Static Depth to Water (ft)	8.12	Length of Water Column (ft)	14.11
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	2.25	Three Casing Volumes (gal)	6.75
Purge Time, Start	1333	Purge Time, Stop	~~1340~~ 1340
Total Purge Time (minutes)	7	Purge Rate (gpm)	1 gpm
Purge Volume (gal)	7 gallon	Depth to Water (ft) at Sampling	8.12

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	2	3				At Sampling
TDS (ppm)	0.2576	0.2571	0.2586	0.2561				
Turbidity (measured or visual) cloudy, clear, muddy	clear	clear	clear	clear				
Temperature (C)	21.69	21.89	21.55	22.01				
Conductivity (micromhos)	371725	371725	371725	371751				
pH	7.44	7.30	7.28	7.28				
Dissolved Oxygen (mg/L & %) %	43.7	18.7	17.5	17.8				
mg/L Comments:	0.20	0.09	0.08	0.09				
recharge ~1	Depth to Water at End of Purge (ft)			8.12				
30 sec.	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, clear, light wind

Comments: Sampled at: 1344

Well Recovery Calculation

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

_____ + 0.2 * _____ = _____

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16
Project/Location	Malibu Civic Center	Well Number:	SMBRP-7B
Observation Period Start:	1400	Stop: 1530	Survey Reference Point: TOC
Sampled By:	D. Shellenbarger	Witnessed By:	DS

PURGING DATA

Type of Pump	Redi-Flow2 / Grundfos	Pump Inlet Depth (ft)	17
Well Diameter (in)	2inch	Depth of Well (ft)	25.13
Initial/Static Depth to Water (ft)	10.62	Length of Water Column (ft)	14.51
Product Thickness (ft)	~~0.00~~	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	2.32	Three Casing Volumes (gal)	6.96
Purge Time, Start	1407	Purge Time, Stop	1416
Total Purge Time (minutes)	~~8~~ 9	Purge Rate (gpm)	0.77 gpm
Purge Volume (gal)	7	Depth to Water (ft) at Sampling	~~14.80~~ 14.65*

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

* lab waiting on 8-hour hold time

INDICATOR DATA

Volume Pumped (gal)	Before Purge	1	2	3				At Sampling
TDS (ppm)	0.1769	0.2367	0.2273	0.0686	——	——	▷	0.0010
Turbidity (measured or visual) cloudy, clear, muddy	Brwn Drk Cloudy	light Brn milky	—▷	—▷	——	——	▷	~~0.0010~~ light Brn
Temperature (C)	24.05	22.04	22.22	22.60				21.77
Conductivity (micromhos)	141387	347908	371375	109089				1443
pH	7.43	7.34	7.31	7.31	——	——	▷	7.33
Dissolved Oxygen (mg/L & %) %	30.6 ▷	23.4	17.8	15.2 ▷		excessive recharge		55.7
mg/L Comments:	1.28 ▷	0.15	0.12	0.65	——	lab waiting on Bacteria		4.86
Depth to Water at End of Purge (ft)				16.80				
Drawdown (ft)				6.18				

MISCELLANEOUS DATA

Condition of Traffic Box:	Good-▷ TOC has Notch
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	75°F, light wind, clear

Comments:

Sampled at: 1455

Well Recovery Calculation

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

10.62 + 0.2 * 6.18 = 11.85

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16 & 3-16-16
Project/Location	Malibu Civic Center	Well Number:	MCWP-MW07S
Observation Period Start:	1730 Stop: 1810	Survey Reference Point:	TOC
Sampled By:	P. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	redi-Flow2-/Grundfos	Pump Inlet Depth (ft)	8
Well Diameter (in)	2inch	Depth of Well (ft)	17.22
Initial/Static Depth to Water (ft)	5.60	Length of Water Column (ft)	11.62
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	1.86	Three Casing Volumes (gal)	5.58
Purge Time, Start	1738	Purge Time, Stop	1546
Total Purge Time (minutes)	8 mins	Purge Rate (gpm)	0.625
Purge Volume (gal)	5 gallons	Depth to Water (ft) at Sampling 3-16-16	5.67

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	2	3				At Sampling
TDS (ppm) kg/L	0.0014	0.0014	0.0014		after			0.0677
Turbidity (measured or visual) cloudy, clear, muddy	clear milky	light Brn milky	—		5 gallons			Brn. milky
Temperature (C)	20.71	20.84	21.15	DRY				21.13
Conductivity (micromhos) mS/cm	2030	1942	1954	5				10813
pH	7.80	7.82	7.78					7.47
Dissolved Oxygen (mg/L & %) %	24.8↓	16.0↓	19.1↓					29.4
mg/L Comments:	2.11↓	1.37↓	1.62↓					2.51
Depth to Water at End of Purge (ft)				17.22				
Drawdown (ft)				11.62				

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	65, clear, light wind

Comments:

Sampled at: 0910 3-16-16

Well Recovery Calculation

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

5.60 + 0.2 * 11.62 = 7.92

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-16-16
Project/Location	Malibu Civic Center	Well Number:	MCWP-MW07D
Observation Period Start:	0920 Stop: 1015	Survey Reference Point:	TOC
Sampled By:	D. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	redi-flow2/GRUNDFOS	Pump Inlet Depth (ft)	50
Well Diameter (in)	2 inch	Depth of Well (ft)	129.6
Initial/Static Depth to Water (ft)	8.54	Length of Water Column (ft)	121.06
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	19.36	Three Casing Volumes (gal)	58.10
Purge Time, Start	0927	Purge Time, Stop	1000
Total Purge Time (minutes)	33	Purge Rate (gpm)	1.81 gpm
Purge Volume (gal)	60	Depth to Water (ft) at Sampling	8.54 J

CASING OR BOREHOLE VOLUME

5 gallon HHH HH

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	2	3				At Sampling
TDS (ppm)	0.0019	0.0024	0.0022	0.0022				
Turbidity (measured or visual) cloudy, clear, muddy	clear	clear	clear	clear				
Temperature (C)	21.37	21.20	21.10	21.17				
Conductivity (micromhos) mS/cm	2774	3385	3091	3103				
pH	7.59	7.35	7.61	7.99				
Dissolved Oxygen (mg/L & %) %	11.8	11.5	11.5	8.4				
Lab mg/L Comments:	1.03	1.00	1.01	0.74				
Depth to Water at End of Purge (ft)				8.54				
recharge to 8.54 in 5 secs. Drawdown (ft)				0				

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	65, clear, no wind

Comments: Sampled at: 1002

Well Recovery Calculation

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

8.54 + 0.2 * 0 = 8.54

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-16-16
Project/Location	Malibu Civic Center	Well Number:	TR-MW-1
Observation Period Start:	1020 Stop: 1145	Survey Reference Point:	TOC
Sampled By:	P. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	rediFlow2/GrundFos	Pump Inlet Depth (ft)	75
Well Diameter (in)	2 inch	Depth of Well (ft)	80.45
Initial/Static Depth to Water (ft)	68.37	Length of Water Column (ft)	12.08
Product Thickness (ft)	~~1.93~~ —	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	1.93	Three Casing Volumes (gal)	5.79
Purge Time, Start	1115	Purge Time, Stop	1122
Total Purge Time (minutes)	7	Purge Rate (gpm)	0.857 gpm
Purge Volume (gal)	6	Depth to Water (ft) at Sampling	68.37

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	2	3				At Sampling
TDS ~~(ppm)~~ kg/L	0.0033	0.0045	0.0031		→			
Turbidity (measured or visual) cloudy, clear, muddy	Brn Drk muddy	light Brn	milky			less turb →		
Temperature (C)	22.40	22.75	23.17					
Conductivity ~~(micromhos)~~ uS/cm	4906	7008	5331				→	
pH	7.05	7.00	6.64					→
Dissolved Oxygen (mg/L & %) %	44.4	16.1	9.2					
Comments: Lo mg/L	3.52	1.35	0.78					

well buried ~17' from Black Gate (white Post) ~~23'6"~~ 23'6" from white ~~Pole~~ Strobe in Bank

Depth to Water at End of Purge (ft): 68.37 → recharge 10 secs after purge

Drawdown (ft): 0

MISCELLANEOUS DATA

Condition of Traffic Box:	Good → Buried See Notes above
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	75°F, clear, light wind

Comments:

Sampled at: 1124

Well Recovery Calculation

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

68.37 + 0.2 * 0 = 68.37

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-16-16
Project/Location	Malibu Civic Center	Well Number:	MCWP-MW06
Observation Period	Start: 1233 Stop: 1330	Survey Reference Point:	TOC
Sampled By:	P. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	Redi Flow II / Grundfos	Pump Inlet Depth (ft)	50
Well Diameter (in)	2 inch	Depth of Well (ft)	138.15
Initial/Static Depth to Water (ft)	10.43	Length of Water Column (ft)	127.72
Product Thickness (ft)	———	Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	20.44	Three Casing Volumes (gal)	~~350~~ 61.31
Purge Time, Start	1242	Purge Time, Stop	1313
Total Purge Time (minutes)	31	Purge Rate (gpm)	2 gpm
Purge Volume (gal)	62	Depth to Water (ft) at Sampling	10.43

CASING OR BOREHOLE VOLUME

5 gallon Buckets

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	2	3				At Sampling
TDS (ppm)	0.0013	0.0015	0.0015	0.0015				
Turbidity (measured or visual) cloudy, clear, muddy	clear	clear	clear	clear				
Temperature (C)	21.52	20.97	20.59	20.40				
Conductivity (~~micromhos~~) mS/cm	1863	2101	2070	2046				
pH	8.04	7.70	8.50	7.63				
Dissolved Oxygen (mg/L & %) %	22.4	13.9	19.4	12.3				
Comments: mg/L	1.95	1.22	1.69	1.10				
Depth to Water at End of Purge (ft)				10.44	recharged immediately after	Purge		
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, clear, no wind

Comments: Sampled at: 1315

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

10.43 + 0.2 * 0 = 10.43

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16 & 3-16-16
Project/Location	Malibu Civic Center	Well Number:	MBCMW-9
Observation Period	Start: ~~0911~~ 1520 Stop: 1525	Survey Reference Point:	TOC
Sampled By:	3-15-16 1640 1645	Witnessed By:	PS
	3-16-16 1340 1350		

PURGING DATA

Type of Pump	Hand Bailer	Pump Inlet Depth (ft)	
Well Diameter (in)	2 inch	Depth of Well (ft)	9.20
Initial/Static Depth to Water (ft)	7.85	Length of Water Column (ft)	1.35
Product Thickness (ft)		Volume Multiplier (gal/ft)	0.16
One Casing Volume (gal)	.216	Three Casing Volumes (gal)	0.648
Purge Time, Start	1640	Purge Time, Stop	1645
Total Purge Time (minutes)	5 mins	Purge Rate (gpm)	
Purge Volume (gal)	0.5 gallon	Depth to Water (ft) at Sampling	7.97 3-16-16

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							At Sampling
TDS (ppm)		returned	3-16-16					
Turbidity (measured or visual) cloudy, clear, muddy		DTW=	7.97					
Temperature (C)								
Conductivity (micromhos)								
pH								
Dissolved Oxygen (mg/L & %)		Hand Bailed						
Comments:		Well		went	Dry	@	0.5	gal
Depth to Water at End of Purge (ft)								
Drawdown (ft)								

MISCELLANEOUS DATA

Condition of Traffic Box:	Good-> no cloths
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	75, clear, light wind

Comments:

Sampled at: 3-16-16 @ 1345

Well Recovery Calculation

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

_____ + 0.2 * _____ = _____

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-15-16 & 3-16-16
Project/Location	Malibu Civic Center	Well Number:	MCWP-MW045
Observation Period Start:	1651 Stop: 1725	Survey Reference Point:	TOC
Sampled By:	P. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	~~2~~ Redi Flow / Grundfos	Pump Inlet Depth (ft)	10
Well Diameter (in)	4 inch	Depth of Well (ft)	20.45
Initial/Static Depth to Water (ft)	5.66	Length of Water Column (ft)	~~0.85~~ 14.79
Product Thickness (ft)	———	Volume Multiplier (gal/ft)	0.65
One Casing Volume (gal)	9.61	Three Casing Volumes (gal)	28.85
Purge Time, Start	~~0~~ 1700	Purge Time, Stop	1714
Total Purge Time (minutes)	14	Purge Rate (gpm)	1.07 gpm
Purge Volume (gal)	15	Depth to Water (ft) at Sampling 3-16-16	8.11

CASING OR BOREHOLE VOLUME

5 gallon Buckets

111

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	2	3				At Sampling
TDS (ppm) kg/L	0.0089	0.0053						0.0051
Turbidity (measured or visual) cloudy, clear, muddy	clear	clear	DM	after				clear
Temperature (C)	22.08	22.85	Purge	of				23.16
Conductivity (~~micromhos~~) µS/cm	14741	7870	15	gallons				7496
pH	7.85	7.77						7.80
Dissolved Oxygen (mg/L & %) %	64.7↓	19.1						~~8~~ 7.1↓
mg/L Comments:	5.23↓	1.61						7.20↓
Depth to Water at End of Purge (ft)				20.45				
Drawdown (ft)				14.79				

MISCELLANEOUS DATA

Condition of Traffic Box:	Good
Drum Identification labeling:	**Non-Hazardous Waste**
Water Level Indicator:	**Solinst Model 101**
Weather Conditions:	75, clear, light wind

Comments:

Sampled at: 1410 3-16-16

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

5.66 + 0.2 * 14.79 = 8.618

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-17-16
Project/Location	Malibu Civic Center	Well Number:	MCWP-MW05
Observation Period Start:	0910 Stop: 1235	Survey Reference Point:	TOC
Sampled By:	D. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	RediFlow II/ Grundfos	Pump Inlet Depth (ft)	45
Well Diameter (in)	4 inch	Depth of Well (ft)	154.4
Initial/Static Depth to Water (ft)	7.96	Length of Water Column (ft)	~~0.65~~ 146.44
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.65
One Casing Volume (gal)	95.19	Three Casing Volumes (gal)	285.56
Purge Time, Start	0953	Purge Time, Stop	1208
Total Purge Time (minutes)	135	Purge Rate (gpm)	2.11 gpm
Purge Volume (gal)	~285	Depth to Water (ft) at Sampling	7.96

CASING OR BOREHOLE VOLUME

95 10"-> 1040
190 18"-> 1125
285 24"->

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	2	3				At Sampling
TDS ~~(ppm)~~ kg/L	0.0017	0.0013	0.0013	0.0013				
Turbidity (measured or visual) cloudy, clear, muddy	clear	clear	clear	clear	→	→	→	
Temperature (C)	18.94	19.31	19.04	19.30			→	
Conductivity ~~(micromhos)~~ µS/cm	2217	1801	1780	1794	→	→	→	
pH 7.70	~~7.70~~	7.42	7.36	7.28				
Dissolved Oxygen (mg/L & %) %	34.0↓	33.6↓	35↓	35.7↓				
mg/L Comments:	3.01↓	2.89↓	3.03↓	3.18↓	→	→	→	→
Pump @ 160 V	Depth to Water at End of Purge (ft)			7.96				
↳ keep there	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, clear, no wind

Comments: Sampled at: 1210

Well Recovery Calculation

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

7.96 + 0.2 * 0 = 7.96

Rincon Consultants, Inc.

GROUND WATER SAMPLING/PURGING DATA SHEET

Job No:	15-01587	Date:	3-17-16
Project/Location	Malibu Civic Center	Well Number:	MCWP-MW04D
Observation Period Start:	1320 Stop: 1550	Survey Reference Point:	TOC
Sampled By:	P. Shellenbarger	Witnessed By:	PS

PURGING DATA

Type of Pump	Rediflow II / Grundfos	Pump Inlet Depth (ft)	15
Well Diameter (in)	4 inch	Depth of Well (ft)	~~149.2~~ 149.2
Initial/Static Depth to Water (ft)	10.22	Length of Water Column (ft)	138.98
Product Thickness (ft)	—	Volume Multiplier (gal/ft)	0.65
One Casing Volume (gal)	90.33	Three Casing Volumes (gal)	271.01
Purge Time, Start	1345	Purge Time, Stop	1515
Total Purge Time (minutes)	90 mins	Purge Rate (gpm)	3 gpm
Purge Volume (gal)	~270	Depth to Water (ft) at Sampling	10.22

CASING OR BOREHOLE VOLUME

Pump @ set 165

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	2	3				At Sampling
TDS (~~ppm~~) kg/L	0.0013	0.0014	0.0015	0.0015				
Turbidity (measured or visual) cloudy, clear, muddy	clear	clear	clear	clear				
Temperature (C)	23.23	20.46	20.23	20.24				
Conductivity (micromhos) mS/cm	2.000	2013	2030	2032				
pH	7.41	7.34	7.22	7.27				
Dissolved Oxygen (mg/L & %) %	21.0	31.4↓	21.4↓	68.2↓				
mg/L Comments:	1.78	2.70↓	1.90↓	4.94↓				
Depth to Water at End of Purge (ft)				10.22				
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, Light wind, clear

Comments: Sampled at: 1520

Well Recovery Calculation

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

10.22 + 0.2 * 0 = 10.22

Sampler Peter Shellenbarger
Meter = Solinst #1

Arrive onsite @ 1100
departed site @ 1510

3/14/16

Table 1

Groundwater Monitoring Well Construction

	Well ID	Total Well Depth (ft bTOC)	Well Diameter (in)	TOC Elevation (ft amsl)	Depth to Water 3/14/2016	Time	Depth to Water 8/24/2015 (ft bTOC)
1	C-1	14.5	n/a	11.47	6.80	1300	n/a
2	C-2	14.5	2	11.19	6.50	1255	5.11
3	CCPE	20	2	12.935	8.35	1320	5.76
4	CCPNE		2	13.675	8.65	1315	6.44
5	CCPSW		2	13.67	8.05	1330	6.29
6	CCW-4		1	15.765	5.72	1144	6.5
7	GH6-M1	35	2		29.44	1415	28.92
8	GH8-M3	40	2		28.79	1411	28.37
9	GH9-M4	45	2		31.07	1407	30.31
10	Lagoon		n/a		N/A	—	n/a
11	LAMW-5S	20	4	104.55	53.92	1105	53.71
12	M6-1	45	2		6.45	1422	6.61
13	M6-2	20	2		4.27	1420	5.76
14	M7-1	40	2		7.83	1402	8.09
15	M7-2	25	2		7.03	1400	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	11.55	1136	11.26
19	MBCMW-8	10	2	16.53	7.36	1138	9.11
20	MBCMW-9	10	2	17.71	7.83	1152	8.7
21	MBCMW-10	53	2	17.74	8.97	1154	8.63
22	MCWP-MW01	148	6		10.53	1343	10.22
23	MCWP-MW02	145	6	18.06	10.72	1336	10.39
24	MCWP-MW03	134	6		8.05	1433	7.65
25	MCWP-MW04D	148	4		9.69	1346	9.35
26	MCWP-MW04S	20	4		5.92	1342	7.55
27	MCWP-MW05	158	4		7.96	1148	7.62

28	MCWP-MW06	153	2		10.14	1334	9.87
29	MCWP-MW07D	134	2		7.92	1435	7.51
30	MCWP-MW07S	20	2		5.85	1439	6.76
31	MCWP-MW08	77	2		7.96	1455	7.64
32	MCWP-MW09	95	2	16.3	6.04	1501	7.52
33	MCWP-MW10	60	2		8.04	1252	5.7
34	P-4	12.5	4	12.155	6.92	1324	4.58
35	P-9	14.3	4	12.165	7.66	1327	5.07
36	SMBRP-2	25	2	13.131	8.58	1243	6.04
37	SMBRP-6	25	2	26.875	14.43	1234	16.49
38	SMBRP-7b	45	2	18.985	10.84	1159	10.69
39	SMBRP-8 (EG-RC	60	4		28.76	1124	28.74
40	SMBRP-9	45	2	50.32	38.97	1121	38.24
41	SMBRP-10C	25	2	16.25	4.80	1112	7.37
42	SMBRP-11	20	2	18.35	7.89	1442	8.88
43	SMBRP-12	25	2	12.615	6.09	1459	5.69
44	SMBRP-13	20	2	13.58	7.61	1451	8.32
45	SMBRP-15b	25	1	16.765	Dry	→ 1445	dry, recorded depth 8.77
46	SMBRP-16	25	2	14.5	5.27	1133	4.95


Legend
Monthly Transducer Well
Monthly
Other Well
SMBRP-6
SMBRP-5
GH8-M3
GH9-M2
GH6-M1
FCI-RC-MW01
LAMW-5S
MBCMW-5
M7-2
M7-1
SMBRP-7B
MCWP-MW05
CCW-4
M6-1
SMBRP-16
MBCMW-5
CCPNE
SMBRP-2
SMBRP-10C
MBCMW-8
MBCMW-10
M6-2
MBCMW-7
CCPE
CCPSW
MCWP-MW01
MCWP-MW02
P-4
P-5
MCWP-MW04S
MCWP-MW04D
MCWP-MW06
flagpole.before
SMBRP-15b
MCWP-MW10
MCWP-MW07S
MCWP-MW03
SMBRP-11
MCWP-MW07D
SMBRP-12
MCWP-MW09
SMBRP-13
MCWP-MW08
C-1
C-2
0
500
Feet
earthforensics, inc.
MONTHLY
GROUNDWATER WELLS
Civic Center Area
Malibu, CA
2012.150
1

City of Malibu
P# 15-01587

Surface Water Sampling
Task 1B

3-18-16

- Arrive onsite in Malibu Civic Center @ 0830
- Surface water sampling

L-001 -0900
L-002 -~~0920~~ 1000
L-003 -0940
L-004 -1020
L-005 1115
L-006 -1050

N-001 805
N-002 1315
N-003 1125
N-004 1200

- lagoon level extremely low -> large Beach Berm present
- LA County out on beach Grad w/ Earth mover

- Completed Last sampling pt. @ 1315
- Arrived at truck & left site @ 1341

Peter Shellenbarger

Appendix B

Analytical Laboratory Reports

March 24, 2016

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

SP 1602922:1, 4, 7, 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 1602922-001	SMBRP-9	Source-Other	Peter Shellenbarger	Rincon Consultants,	03/15/2016 08:55	03/15/2016 16:34 RV	03/19/2016 RV
2	SP 1602922-004	SMBRP-12	Source-Other	Peter Shellenbarger	Rincon Consultants,	03/15/2016 12:10	03/15/2016 16:36 RV	03/17/2016 RV
3	SP 1602922-007	MCWP-MW09	Source-Other	Peter Shellenbarger	Rincon Consultants,	03/15/2016 13:07	03/15/2016 16:38 RV	03/17/2016 RV
4	SP 1602922-009	LAMW-5S	Source-Other	Peter Shellenbarger	Rincon Consultants,	03/15/2016 09:30	03/15/2016 16:40 RV	03/17/2016 RV
5	SP 1602922-010	SMBRP-13	Source-Other	Peter Shellenbarger	Rincon Consultants,	03/15/2016 11:30	03/15/2016 16:42 RV	03/17/2016 RV
6	SP 1602922-011	MCWP-MW10	Source-Other	Peter Shellenbarger	Rincon Consultants,	03/15/2016 13:44	03/15/2016 16:44 RV	03/19/2016 RV
7	SP 1602922-012	CCPE	Source-Other	Peter Shellenbarger	Rincon Consultants,	03/15/2016 10:28	03/15/2016 16:46 RV	03/17/2016 RV
8	SP 1602922-014	SMBRP-7B	Source-Other	Peter Shellenbarger	Rincon Consultants,	03/15/2016 14:55	03/15/2016 16:48 RV	03/18/2016 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	<1.8	<1.8	---	N/R			
2	SMBRP-12	---	---	SM 9221B	MPN/100ml	<1.8	<1.8	---	N/R			
3	MCWP-MW09	---	---	SM 9221B	MPN/100ml	<1.8	<1.8	---	N/R			
4	LAMW-5S	---	---	SM 9221B	MPN/100ml	>1600	350	---	N/R			
5	SMBRP-13	---	---	SM 9221B	MPN/100ml	<1.8	<1.8	---	N/R			
6	MCWP-MW10	---	---	SM 9221B	MPN/100ml	2	<1.8	---	N/R			
7	CCPE	---	---	SM 9221B	MPN/100ml	240	4.5	---	N/R			
8	SMBRP-7B	---	---	SM 9221B	MPN/100ml	110	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.

RRH:SMH

Reviewed and Approved By **Raquel R. Harvey**
Digitally signed by Raquel R. Harvey
Title: Tech Director Microbiology
Date: 2016-03-24

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April 8, 2016

Rincon Consultants, Inc.
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Ventura, CA 93003

Lab ID : SP 1602922
Customer : 2-25173

Laboratory Report

Introduction: This report package contains total of 13 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(8 pages)	: Results for each sample submitted.
Quality Control	(3 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	03/15/2016	03/15/2016	SP 1602922-001	MW
SMBRP-12	03/15/2016	03/15/2016	SP 1602922-004	MW
MCWP-MW09	03/15/2016	03/15/2016	SP 1602922-007	MW
LAMW-5S	03/15/2016	03/15/2016	SP 1602922-009	MW
SMBRP-13	03/15/2016	03/15/2016	SP 1602922-010	MW
MCWP-MW10	03/15/2016	03/15/2016	SP 1602922-011	MW
CCPE	03/15/2016	03/15/2016	SP 1602922-012	MW
SMBRP-7B	03/15/2016	03/15/2016	SP 1602922-014	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	03/16/2016:203028 All preparation quality controls are within established criteria
351.2	03/17/2016:203061 All preparation quality controls are within established criteria
4500NH3G	03/21/2016:203887 All analysis quality controls are within established criteria
	03/23/2016:204044 All analysis quality controls are within established criteria
	03/21/2016:203179 All preparation quality controls are within established criteria

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April 8, 2016 Lab ID : SP 1602922
Rincon Consultants, Inc. Customer : 2-25173

Inorganic - Wet Chemistry QC

4500NH3G	03/23/2016:203299 All preparation quality controls are within established criteria
4500NO2F	03/16/2016:203047 All preparation quality controls are within established criteria
4500NO3F	03/16/2016:203729 All analysis quality controls are within established criteria
	03/16/2016:203736 All analysis quality controls are within established criteria
	03/16/2016:203029 All preparation quality controls are within established criteria
4500-P B	03/16/2016:203041 All preparation quality controls are within established criteria
	03/30/2016:203628 All preparation quality controls are within established criteria
4500PE	03/17/2016:203706 All analysis quality controls are within established criteria
	03/31/2016:204414 All analysis quality controls are within established criteria
EPA351.2	03/22/2016:203952 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: 2016-04-08

April 8, 2016

Lab ID : SP 1602922-001
Customer ID : 2-25173

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

Sampled On : March 15, 2016-08:55
Sampled By : Peter Shellenbarger
Received On : March 15, 2016-16:20
Matrix : Monitoring Well

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

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	15.1	0.1	0.032	mg/L	1		4500NO3F	203029	03/16/16 15:10	4500NO3F	203736-FI207	03/16/16-21:26NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203047	03/16/16 15:10	4500NO3F	203729-FI207	03/16/16-21:23NMRP
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	Ub	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-05:01AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-05:01AMB
Kjeldahl Nitrogen	ND	0.5	0.32	mg/L	1	Ub	351.2	203061	03/17/16 08:11	EPA351.2	203952-FI206	03/22/16-04:17AMB
Phosphorus, Total	0.462	0.2	0.031	mg/L	2	b	4500-P B	203041	03/16/16 15:40	4500PE	203706-UV205	03/17/16-19:35SJN
Total Dissolved Solids (TFR)	2100	20	5.8	mg/L	1		2540CE	203028	03/16/16 11:56	2540C	203751-WT219	03/17/16-10:05JMG

DQF Flags Definition:

b The Blank was positive for constituent but less than the PQL

U Constituent results were non-detect.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602922-004
Customer ID : 2-25173

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

Sampled On : March 15, 2016-12:10
Sampled By : Peter Shellenbarger
Received On : March 15, 2016-16:20
Matrix : Monitoring Well

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

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.0600	0.1	0.032	mg/L	1	J	4500NO3F	203029	03/16/16 15:10	4500NO3F	203736-FI207	03/16/16-21:28NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203047	03/16/16 15:10	4500NO3F	203729-FI207	03/16/16-21:26NMRP
Nitrogen, Organic	2.90	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-07:00AMB
Ammonia Nitrogen	5.67	0.2	0.072	mg/L	1		4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-07:00AMB
Kjeldahl Nitrogen	8.57	0.5	0.32	mg/L	1	b	351.2	203061	03/17/16 08:11	EPA351.2	203952-FI206	03/22/16-04:18AMB
Phosphorus, Total	1.43	0.1	0.031	mg/L	1	b	4500-P B	203041	03/16/16 15:40	4500PE	203706-UV205	03/17/16-19:36SJN
Total Dissolved Solids (TFR)	2290	20	5.8	mg/L	1		2540CE	203028	03/16/16 11:56	2540C	203751-WT219	03/17/16-10:17JMG

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602922-007
Customer ID : 2-25173

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

Sampled On : March 15, 2016-13:07
Sampled By : Peter Shellenbarger
Received On : March 15, 2016-16:20
Matrix : Monitoring Well

Description : MCWP-MW09
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	ND	0.1	0.032	mg/L	1	U	4500NO3F	203029	03/16/16 15:10	4500NO3F	203736-FI207	03/16/16-21:30NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203047	03/16/16 15:10	4500NO3F	203729-FI207	03/16/16-21:28NMRP
Nitrogen, Organic	0.840	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:03AMB
Ammonia Nitrogen	2.36	0.2	0.072	mg/L	1		4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:03AMB
Kjeldahl Nitrogen	3.20	0.5	0.32	mg/L	1	b	351.2	203061	03/17/16 08:11	EPA351.2	203952-FI206	03/22/16-04:19AMB
Phosphorus, Total	0.355	0.1	0.031	mg/L	1	b	4500-P B	203041	03/16/16 15:40	4500PE	203706-UV205	03/17/16-19:37SJN
Total Dissolved Solids (TFR)	2410	34	5.8	mg/L	1.7		2540CE	203028	03/16/16 11:56	2540C	203751-WT219	03/17/16-10:23JMG

DQF Flags Definition:

b The Blank was positive for constituent but less than the PQL

U Constituent results were non-detect.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

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

Description : LAMW-5S
Project : Malibu WWTP-GW-SNMP/MOU

Lab ID : SP 1602922-009
Customer ID : 2-25173

Sampled On : March 15, 2016-09:30
Sampled By : Peter Shellenbarger
Received On : March 15, 2016-16:20
Matrix : Monitoring Well

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	8.20	0.1	0.032	mg/L	1		4500NO3F	203029	03/16/16 15:10	4500NO3F	203736-FI207	03/16/16-21:32NMRP
Nitrite Nitrogen	0.0130	0.1	0.011	mg/L	1	J	4500NO2F	203047	03/16/16 15:10	4500NO3F	203729-FI207	03/16/16-21:30NMRP
Nitrogen, Organic	0.359	0.5	0.072	mg/L	1	UJb	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-07:35AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-07:35AMB
Kjeldahl Nitrogen	0.359	0.5	0.32	mg/L	1	Jb	351.2	203061	03/17/16 08:11	EPA351.2	203952-FI206	03/22/16-04:20AMB
Phosphorus, Total	9.43	0.5	0.031	mg/L	5	b	4500-P B	203628	03/30/16 16:30	4500PE	204414-UV205	03/31/16-16:52SJN
Total Dissolved Solids (TFR)	713	20	5.8	mg/L	1		2540CE	203028	03/16/16 11:56	2540C	203751-WT219	03/17/16-10:02JMG

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602922-010
Customer ID : 2-25173

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

Sampled On : March 15, 2016-11:30
Sampled By : Peter Shellenbarger
Received On : March 15, 2016-16:20
Matrix : Monitoring Well

Description : SMBRP-13
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	ND	0.1	0.032	mg/L	1	U	4500NO3F	203029	03/16/16 15:12	4500NO3F	203736-FI207	03/16/16-21:49NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203047	03/16/16 15:12	4500NO3F	203729-FI207	03/16/16-21:47NMRP
Nitrogen, Organic	0.556	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:38AMB
Ammonia Nitrogen	0.884	0.2	0.072	mg/L	1		4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:38AMB
Kjeldahl Nitrogen	1.44	0.5	0.32	mg/L	1	b	351.2	203061	03/17/16 08:11	EPA351.2	203952-FI206	03/22/16-04:21AMB
Phosphorus, Total	0.461	0.1	0.031	mg/L	1	b	4500-P B	203041	03/16/16 15:40	4500PE	203706-UV205	03/17/16-19:39SJN
Total Dissolved Solids (TFR)	27500	170	5.8	mg/L	8.5		2540CE	203028	03/16/16 11:56	2540C	203751-WT219	03/17/16-10:11JMG

DQF Flags Definition:

b The Blank was positive for constituent but less than the PQL
U Constituent results were non-detect.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602922-011
Customer ID : 2-25173

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

Sampled On : March 15, 2016-13:44
Sampled By : Peter Shellenbarger
Received On : March 15, 2016-16:20
Matrix : Monitoring Well

Description : MCWP-MW10
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.600	0.1	0.032	mg/L	1		4500NO3F	203029	03/16/16 15:12	4500NO3F	203736-FI207	03/16/16-21:51NMRP
Nitrite Nitrogen	0.0230	0.1	0.011	mg/L	1	J	4500NO2F	203047	03/16/16 15:12	4500NO3F	203729-FI207	03/16/16-21:49NMRP
Nitrogen, Organic	1.28	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-04:56AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-04:56AMB
Kjeldahl Nitrogen	1.28	0.5	0.32	mg/L	1	b	351.2	203061	03/17/16 08:11	EPA351.2	203952-FI206	03/22/16-04:22AMB
Phosphorus, Total	0.0755	0.1	0.031	mg/L	1	Jb	4500-P B	203041	03/16/16 15:40	4500PE	203706-UV205	03/17/16-19:42SJN
Total Dissolved Solids (TFR)	1800	20	5.8	mg/L	1		2540CE	203028	03/16/16 11:56	2540C	203751-WT219	03/17/16-10:06JMG

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602922-012
Customer ID : 2-25173

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

Sampled On : March 15, 2016-10:28
Sampled By : Peter Shellenbarger
Received On : March 15, 2016-16:20
Matrix : Monitoring Well

Description : CCPE
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.900	0.1	0.032	mg/L	1		4500NO3F	203029	03/16/16 15:12	4500NO3F	203736-FI207	03/16/16-21:53NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203047	03/16/16 15:12	4500NO3F	203729-FI207	03/16/16-21:51NMRP
Nitrogen, Organic	0.664	0.5	0.072	mg/L	1	Jb	4500NH3G	203179	03/21/16 03:00	4500NH3G	203887-FI207	03/21/16-09:00AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203179	03/21/16 03:00	4500NH3G	203887-FI207	03/21/16-09:00AMB
Kjeldahl Nitrogen	0.664	0.5	0.32	mg/L	1	Jb	351.2	203061	03/17/16 08:11	EPA351.2	203952-FI206	03/22/16-04:26AMB
Phosphorus, Total	0.0518	0.1	0.031	mg/L	1	Jb	4500-P B	203041	03/16/16 15:40	4500PE	203706-UV205	03/17/16-19:43SJN
Total Dissolved Solids (TFR)	1800	20	5.8	mg/L	1		2540CE	203028	03/16/16 11:56	2540C	203751-WT219	03/17/16-10:04JMG

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602922-014
Customer ID : 2-25173

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

Sampled On : March 15, 2016-14:55
Sampled By : Peter Shellenbarger
Received On : March 15, 2016-16:20
Matrix : Monitoring Well

Description : SMBRP-7B
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	ND	0.1	0.032	mg/L	1	U	4500NO3F	203029	03/16/16 15:12	4500NO3F	203736-FI207	03/16/16-21:56NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203047	03/16/16 15:12	4500NO3F	203729-FI207	03/16/16-21:53NMRP
Nitrogen, Organic	1.37	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-05:03AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-05:03AMB
Kjeldahl Nitrogen	1.37	0.5	0.32	mg/L	1	b	351.2	203061	03/17/16 08:11	EPA351.2	203952-FI206	03/22/16-04:27AMB
Phosphorus, Total	0.916	0.2	0.031	mg/L	2	b	4500-P B	203041	03/16/16 15:40	4500PE	203706-UV205	03/17/16-19:44SJN
Total Dissolved Solids (TFR)	1400	20	5.8	mg/L	1		2540CE	203028	03/16/16 11:56	2540C	203751-WT219	03/17/16-10:23JMG

DQF Flags Definition:

b The Blank was positive for constituent but less than the PQL
U Constituent results were non-detect.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016 Lab ID : SP 1602922
Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Total Dissolved Solids (TFR)	2540CE	03/16/16:203028CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	995.8	99.9 %	90-110	
		(SP 1602922-012)	Dup	mg/L		0.8%	5	
Nitrogen, Total Kjeldahl	351.2	03/17/16:203061JMG	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	107 %	73-124	
			MS	mg/L	12.00	82.2 %	54-136	
		(SP 1602922-004)	MSD	mg/L	12.00	85.6 %	54-136	
			MSRPD	mg/L	12.00	2.2%	≤27	
Ammonia Nitrogen	4500NH3G		MS	mg/L	2.000	103 %	70-130	
		(STK1632701-005)	MSD	mg/L	2.000	101 %	70-130	
			MSRPD	mg/L	2.000	2.4%	≤20	
	4500NH3G	03/21/16:203887AMB	CCB	mg/L		-0.190	0.2	
			CCV	mg/L	2.000	106 %	90-110	
			CCB	mg/L		-0.167	0.2	
			CCV	mg/L	2.000	104 %	90-110	
	4500NH3G		MS	mg/L	2.000	106 %	70-130	
		(SP 1602997-006)	MSD	mg/L	2.000	104 %	70-130	
			MSRPD	mg/L	2.000	1.6%	≤20	
			MS	mg/L	2.000	102 %	70-130	
		(STK1632916-003)	MSD	mg/L	2.000	103 %	70-130	
			MSRPD	mg/L	2.000	0.2%	≤20	
			MS	mg/L	2.000	106 %	70-130	
		(SP 1603136-005)	MSD	mg/L	2.000	101 %	70-130	
			MSRPD	mg/L	2.000	4.2%	≤20	
			MS	mg/L	2.000	102 %	70-130	
		(SP 1603093-004)	MSD	mg/L	2.000	103 %	70-130	
			MSRPD	mg/L	2.000	0.6%	≤20	
	4500NH3G	03/23/16:204044AMB	ICB	mg/L		-0.138	0.2	
			ICV	mg/L	2.000	107 %	90-110	
			CCB	mg/L		-0.136	0.2	
			CCV	mg/L	2.000	104 %	90-110	
			CCB	mg/L		-0.121	0.2	
			CCV	mg/L	2.000	102 %	90-110	
			CCB	mg/L		-0.113	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		-0.124	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		0.000	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		-0.070	0.2	
			CCV	mg/L	2.000	100 %	90-110	
Nitrite as Nitrogen	4500NO2F		MS	mg/L	1.270	90.8 %	50-150	
		(STK1632874-001)	MSD	mg/L	1.270	95.0 %	50-150	
			MSRPD	mg/L	1.270	4.6%	≤30	
			MS	mg/L	1.270	90.9 %	50-150	
		(SP 1602922-010)	MSD	mg/L	1.270	90.7 %	50-150	
			MSRPD	mg/L	1.270	0.3%	≤30	
Nitrate + Nitrite as N	4500NO3F		MS	mg/L	11.27	95.2 %	5-285	
		(STK1632874-001)	MSD	mg/L	11.27	97.5 %	5-285	
			MSRPD	mg/L	11.27	2.0%	≤30.4	
			MS	mg/L	11.27	89.8 %	5-285	
		(SP 1602922-010)	MSD	mg/L	11.27	91.0 %	5-285	
			MSRPD	mg/L	11.27	1.3%	≤30.4	
	4500NO3F	03/16/16:203736NMRP	CCB	mg/L		-0.060	0.1	
			CCV	mg/L	11.27	98.4 %	90-110	

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April 8, 2016 Lab ID : SP 1602922
Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Nitrate + Nitrite as N	4500NO3F	03/16/16:203736NMRP	CCB	mg/L		-0.004	0.1	
			CCB	mg/L		-0.067	0.1	
			CCV	mg/L	11.27	95.0 %	90-110	
			CCB	mg/L		-0.016	0.1	
			CCV	mg/L	11.27	97.9 %	90-110	
Nitrite as Nitrogen	4500NO3F	03/16/16:203729NMRP	CCB	mg/L		0.003	0.2	
			CCV	mg/L	1.270	96.5 %	90-110	
			CCB	mg/L		0.003	0.2	
			CCB	mg/L		0.004	0.2	
			CCV	mg/L	1.270	97.1 %	90-110	
			CCB	mg/L		0.003	0.2	
			CCV	mg/L	1.270	97.3 %	90-110	
Phosphorus	4500-P B	03/16/16:203041sjn	Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	111 %	90-116	
			MS	mg/L	0.2500	-686 %	<¼	
		(CC 1680747-001)	MSD	mg/L	0.2500	-734 %	<¼	
			MSRPD	mg/L	0.2500	3.1%	≤13.2	
	4500-P B	03/30/16:203628SJN	Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	99.0 %	90-116	
			MS	mg/L	0.2500	-918 %	<¼	
		(CC 1680939-001)	MSD	mg/L	0.2500	-1060 %	<¼	
			MSRPD	mg/L	0.2500	7.4%	≤13.2	
Total Phosphorus	4500PE	03/17/16:203706SJN	CCB	mg/L		0.025	0.1	
			CCV	mg/L	0.5000	106 %	90-110	
			CCB	mg/L		0.012	0.1	
			CCV	mg/L	0.5000	102 %	90-110	
			CCB	mg/L		0.062	0.1	
			CCV	mg/L	0.5000	102 %	90-110	
	4500PE	03/31/16:204414SJN	CCB	mg/L		0.023	0.1	
			CCV	mg/L	0.5000	96.9 %	90-110	
			CCB	mg/L		0.028	0.1	
			CCV	mg/L	0.5000	90.6 %	90-110	
Nitrogen, Total Kjeldahl	EPA351.2	03/22/16:203952AMB	CCB	mg/L		-0.092	0.5	
			CCV	mg/L	5.000	94.4 %	90-110	
			CCB	mg/L		-0.040	0.5	
			CCV	mg/L	5.000	108 %	90-110	
			CCB	mg/L		-0.191	0.5	
			CCV	mg/L	5.000	104 %	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 analyted. 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.

April 8, 2016 Lab ID : SP 1602922
Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Definition	
<¼	: High Sample Background - Spike concentration was less than one forth of the sample concentration.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

March 24, 2016

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

SP 1602996:2-3, 6, 8, 13 **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 1602996-002	MCWP-MW04S	Source-Other	Peter Shellenberger	Rincon Consultants,	03/16/2016 14:10	03/16/2016 16:50 RV	03/18/2016 RV
2	SP 1602996-003	MCWP-MW07S	Source-Other	Peter Shellenberger	Rincon Consultants,	03/16/2016 09:10	03/16/2016 16:52 LM	03/19/2016 LM
3	SP 1602996-006	MCWP-07D	Source-Other	Peter Shellenberger	Rincon Consultants,	03/16/2016 10:02	03/16/2016 16:54 LM	03/18/2016 LM
4	SP 1602996-008	TY-MW-1	Source-Other	Peter Shellenberger	Rincon Consultants,	03/16/2016 11:24	03/16/2016 16:56 RV	03/19/2016 RV
5	SP 1602996-013	MBCMW-9	Source-Other	Peter Shellenberger	Rincon Consultants,	03/16/2016 13:45	03/16/2016 16:58 RV	03/19/2016 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	MCWP-MW04S	---	---	SM 9221B	MPN/100ml	1.8	<1.8	---	N/R			
2	MCWP-MW07S	---	---	SM 9221B	MPN/100ml	49	<1.8	---	N/R			
3	MCWP-07D	---	---	SM 9221B	MPN/100ml	<1.8	<1.8	---	N/R			
4	TY-MW-1	---	---	SM 9221B	MPN/100ml	<1.8	<1.8	---	N/R			
5	MBCMW-9	---	---	SM 9221B	MPN/100ml	7.8	<1.8	---	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.

RRH:SMH

Reviewed and Approved By **Raquel R. Harvey**
Digitally signed by Raquel R. Harvey
Title: Tech Director Microbiology
Date: 2016-03-24

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April 8, 2016

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

Lab ID : SP 1602996
Customer : 2-25173

Laboratory Report

Introduction: This report package contains total of 10 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(6 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-MW04S	03/16/2016	03/16/2016	SP 1602996-002	MW
MCWP-MW07S	03/16/2016	03/16/2016	SP 1602996-003	MW
MCWP-07D	03/16/2016	03/16/2016	SP 1602996-006	MW
TY-MW-1	03/16/2016	03/16/2016	SP 1602996-008	MW
MBCMW-9	03/16/2016	03/16/2016	SP 1602996-013	MW
MCWP-MW06	03/16/2016	03/16/2016	SP 1602996-016	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	03/18/2016:203156 All preparation quality controls are within established criteria
351.2	03/18/2016:203121 All preparation quality controls are within established criteria
4500NH3G	03/21/2016:203887 All analysis quality controls are within established criteria
	03/23/2016:204044 All analysis quality controls are within established criteria
	03/21/2016:203179 All preparation quality controls are within established criteria
	03/23/2016:203299 All preparation quality controls are within established criteria

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April 8, 2016 Lab ID : SP 1602996
Rincon Consultants, Inc. Customer : 2-25173

Inorganic - Wet Chemistry QC

4500NO2F	03/17/2016:203120 All preparation quality controls are within established criteria
4500NO3F	03/17/2016:203799 All analysis quality controls are within established criteria
	03/17/2016:204026 All analysis quality controls are within established criteria
	03/17/2016:202959 All preparation quality controls are within established criteria
4500-P B	03/17/2016:203109 All preparation quality controls are within established criteria
4500PE	03/18/2016:203783 All analysis quality controls are within established criteria
EPA351.2	03/22/2016:203952 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: 2016-04-08

April 8, 2016

Lab ID : SP 1602996-002
Customer ID : 2-25173

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

Sampled On : March 16, 2016-14:10
Sampled By : Peter Shellenberger
Received On : March 16, 2016-16:10
Matrix : Monitoring Well

Description : MCWP-MW04S
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.200	0.1	0.032	mg/L	1		4500NO3F	202959	03/17/16 09:20	4500NO3F	204026-FI207	03/17/16-13:52NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203120	03/17/16 09:20	4500NO3F	203799-FI207	03/17/16-13:50NMRP
Nitrogen, Organic	1.60	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-06:34AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-06:34AMB
Kjeldahl Nitrogen	1.60	0.5	0.32	mg/L	1	b	351.2	203121	03/18/16 08:09	EPA351.2	203952-FI206	03/22/16-04:54AMB
Phosphorus, Total	0.548	0.1	0.031	mg/L	1	b	4500-P B	203109	03/17/16 16:34	4500PE	203783-UV205	03/18/16-19:17SJN
Total Dissolved Solids (TFR)	6320	34	5.8	mg/L	1.7	b	2540CE	203156	03/18/16 15:15	2540C	203879-WT219	03/21/16-09:37JMG

DQF Flags Definition:

b The Blank was positive for constituent but less than the PQL

U Constituent results were non-detect.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602996-003
Customer ID : 2-25173

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

Sampled On : March 16, 2016-09:10
Sampled By : Peter Shellenberger
Received On : March 16, 2016-16:10
Matrix : Monitoring Well

Description : MCWP-MW07S
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	4.80	0.1	0.032	mg/L	1		4500NO3F	202959	03/17/16 09:20	4500NO3F	204026-FI207	03/17/16-13:54NMRP
Nitrite Nitrogen	0.240	0.1	0.011	mg/L	1		4500NO2F	203120	03/17/16 09:20	4500NO3F	203799-FI207	03/17/16-13:52NMRP
Nitrogen, Organic	0.471	0.5	0.072	mg/L	1	UJb	4500NH3G	203179	03/21/16 03:00	4500NH3G	203887-FI207	03/21/16-06:07AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203179	03/21/16 03:00	4500NH3G	203887-FI207	03/21/16-06:07AMB
Kjeldahl Nitrogen	0.471	0.5	0.32	mg/L	1	Jb	351.2	203121	03/18/16 08:09	EPA351.2	203952-FI206	03/22/16-04:55AMB
Phosphorus, Total	2.39	0.2	0.031	mg/L	2	b	4500-P B	203109	03/17/16 16:34	4500PE	203783-UV205	03/18/16-19:18SJN
Total Dissolved Solids (TFR)	1180	20	5.8	mg/L	1	b	2540CE	203156	03/18/16 15:15	2540C	203879-WT219	03/21/16-09:48JMG

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602996-006
Customer ID : 2-25173

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

Sampled On : March 16, 2016-10:02
Sampled By : Peter Shellenberger
Received On : March 16, 2016-16:10
Matrix : Monitoring Well

Description : MCWP-07D
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.0800	0.1	0.032	mg/L	1	J	4500NO3F	202959	03/17/16 09:20	4500NO3F	204026-FI207	03/17/16-13:56NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203120	03/17/16 09:20	4500NO3F	203799-FI207	03/17/16-13:54NMRP
Nitrogen, Organic	1.15	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:47AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:47AMB
Kjeldahl Nitrogen	1.15	0.5	0.32	mg/L	1	b	351.2	203121	03/18/16 08:09	EPA351.2	203952-FI206	03/22/16-04:57AMB
Phosphorus, Total	0.239	0.1	0.031	mg/L	1	b	4500-P B	203109	03/17/16 16:34	4500PE	203783-UV205	03/18/16-19:19SJN
Total Dissolved Solids (TFR)	2470	20	5.8	mg/L	1	b	2540CE	203156	03/18/16 15:15	2540C	203879-WT219	03/21/16-09:58JMG

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602996-008
Customer ID : 2-25173

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

Sampled On : March 16, 2016-11:24
Sampled By : Peter Shellenberger
Received On : March 16, 2016-16:10
Matrix : Monitoring Well

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

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.0400	0.1	0.032	mg/L	1	J	4500NO3F	202959	03/17/16 09:20	4500NO3F	204026-FI207	03/17/16-13:59NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203120	03/17/16 09:20	4500NO3F	203799-FI207	03/17/16-13:56NMRP
Nitrogen, Organic	1.03	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:50AMB
Ammonia Nitrogen	0.433	0.2	0.072	mg/L	1		4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:50AMB
Kjeldahl Nitrogen	1.46	0.5	0.32	mg/L	1	b	351.2	203121	03/18/16 08:09	EPA351.2	203952-FI206	03/22/16-04:58AMB
Phosphorus, Total	0.758	0.2	0.031	mg/L	2	b	4500-P B	203109	03/17/16 16:34	4500PE	203783-UV205	03/18/16-19:20SJN
Total Dissolved Solids (TFR)	2160	20	5.8	mg/L	1	b	2540CE	203156	03/18/16 15:15	2540C	203879-WT219	03/21/16-09:50JMG

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602996-013
Customer ID : 2-25173

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

Sampled On : March 16, 2016-13:45
Sampled By : Peter Shellenberger
Received On : March 16, 2016-16:10
Matrix : Monitoring Well

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

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.0700	0.1	0.032	mg/L	1	J	4500NO3F	202959	03/17/16 09:20	4500NO3F	204026-FI207	03/17/16-14:01NMRP
Nitrite Nitrogen	ND	0.1	0.011	mg/L	1	U	4500NO2F	203120	03/17/16 09:20	4500NO3F	203799-FI207	03/17/16-13:58NMRP
Nitrogen, Organic	1.82	0.5	0.072	mg/L	1	b	4500NH3G	203179	03/21/16 03:00	4500NH3G	203887-FI207	03/21/16-07:15AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203179	03/21/16 03:00	4500NH3G	203887-FI207	03/21/16-07:15AMB
Kjeldahl Nitrogen	1.82	0.5	0.32	mg/L	1	b	351.2	203121	03/18/16 08:09	EPA351.2	203952-FI206	03/22/16-04:59AMB
Phosphorus, Total	2.26	0.2	0.031	mg/L	2	b	4500-P B	203109	03/17/16 16:34	4500PE	203783-UV205	03/18/16-19:21SJN
Total Dissolved Solids (TFR)	6080	34	5.8	mg/L	1.7	b	2540CE	203156	03/18/16 15:15	2540C	203879-WT219	03/21/16-09:32JMG

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1602996-016
Customer ID : 2-25173

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

Sampled On : March 16, 2016-13:15
Sampled By : Peter Shellenberger
Received On : March 16, 2016-16:10
Matrix : Monitoring Well

Description : MCWP-MW06
Project : Malibu WWTP-GW-SNMP/MOU

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.100	0.1	0.032	mg/L	1		4500NO3F	202959	03/17/16 09:20	4500NO3F	204026-FI207	03/17/16-13:50NMRP
Total Dissolved Solids (TFR)	1520	20	5.8	mg/L	1	b	2540CE	203156	03/18/16 15:15	2540C	203879-WT219	03/21/16-09:44JMG

DQF Flags Definition:
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016 Lab ID : SP 1602996
Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Total Dissolved Solids (TFR)	2540CE	03/18/16:203156CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	995.8	97.2 %	90-110	
		(STK1632917-001)	Dup	mg/L		0.7%	5	
Nitrogen, Total Kjeldahl	351.2	03/18/16:203121JMG	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	106 %	73-124	
			MS	mg/L	12.00	90.8 %	54-136	
		(SP 1602996-006)	MSD	mg/L	12.00	97.3 %	54-136	
			MSRPD	mg/L	12.00	6.3%	≤27	
Ammonia Nitrogen	4500NH3G		MS	mg/L	2.000	109 %	70-130	
		(SP 1603027-003)	MSD	mg/L	2.000	109 %	70-130	
			MSRPD	mg/L	2.000	0.05%	≤20	
			MS	mg/L	2.000	109 %	70-130	
		(SP 1602869-002)	MSD	mg/L	2.000	102 %	70-130	
			MSRPD	mg/L	2.000	6.0%	≤20	
	4500NH3G	03/21/16:203887AMB	CCB	mg/L		-0.176	0.2	
			CCV	mg/L	2.000	106 %	90-110	
			CCB	mg/L		-0.115	0.2	
			CCV	mg/L	2.000	107 %	90-110	
			CCB	mg/L		-0.184	0.2	
			CCV	mg/L	2.000	104 %	90-110	
			CCB	mg/L		-0.178	0.2	
			CCV	mg/L	2.000	108 %	90-110	
	4500NH3G		MS	mg/L	2.000	102 %	70-130	
		(STK1632916-003)	MSD	mg/L	2.000	103 %	70-130	
			MSRPD	mg/L	2.000	0.2%	≤20	
			MS	mg/L	2.000	102 %	70-130	
		(SP 1603093-004)	MSD	mg/L	2.000	103 %	70-130	
			MSRPD	mg/L	2.000	0.6%	≤20	
	4500NH3G	03/23/16:204044AMB	CCB	mg/L		-0.042	0.2	
			CCV	mg/L	2.000	108 %	90-110	
			CCB	mg/L		-0.121	0.2	
			CCV	mg/L	2.000	102 %	90-110	
			CCB	mg/L		0.000	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		-0.070	0.2	
			CCV	mg/L	2.000	100 %	90-110	
Nitrite as Nitrogen	4500NO2F		MS	mg/L	1.270	86.1 %	50-150	
		(SP 1602996-016)	MSD	mg/L	1.270	81.0 %	50-150	
			MSRPD	mg/L	1.270	6.1%	≤30	
Nitrate + Nitrite as N	4500NO3F		MS	mg/L	11.27	84.4 %	5-285	
		(SP 1602996-016)	MSD	mg/L	11.27	81.8 %	5-285	
			MSRPD	mg/L	11.27	3.0%	≤30.4	
	4500NO3F	03/17/16:204026NMRP	ICB	mg/L		0.014	0.1	
			ICV	mg/L	11.27	93.9 %	90-110	
			CCB	mg/L		0.060	0.1	
			CCV	mg/L	11.27	95.4 %	90-110	
Nitrite as Nitrogen	4500NO3F	03/17/16:203799NMRP	ICB	mg/L		0.004	0.2	
			ICV	mg/L	1.270	97.1 %	90-110	
			CCB	mg/L		0.005	0.2	
			CCV	mg/L	1.270	96.6 %	90-110	
Phosphorus	4500-P B	03/17/16:203109sjn	Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	102 %	90-116	
			MS	mg/L	0.2500	-749 %	<¼	
		(CC 1680857-001)	MSD	mg/L	0.2500	-718 %	<¼	
			MSRPD	mg/L	0.2500	1.8%	≤13.2	

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April 8, 2016 Lab ID : SP 1602996

Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Total Phosphorus	4500PE	03/18/16:203783SJN	CCB	mg/L		0.033	0.1	
			CCV	mg/L	0.5000	104 %	90-110	
			CCB	mg/L		0.01	0.1	
			CCV	mg/L	0.5000	103 %	90-110	
Nitrogen, Total Kjeldahl	EPA351.2	03/22/16:203952AMB	CCB	mg/L		-0.261	0.5	
			CCV	mg/L	5.000	98.4 %	90-110	
			CCB	mg/L		-0.229	0.5	
			CCV	mg/L	5.000	100 %	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 analyted. 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.
<¼	: High Sample Background - Spike concentration was less than one forth of the sample concentration.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

March 24, 2016

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

SP 1603053:5 **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 1603053-005	MCWP-04D	Source-Other	Peter Shellenbarger	Rincon	03/17/2016 15:15	03/17/2016 17:28 LM	03/19/2016 LM

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	<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: 2016-03-24

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April 8, 2016

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

Lab ID : SP 1603053
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	03/17/2016	03/17/2016	SP 1603053-005	MW
MCWP-MW05	03/17/2016	03/17/2016	SP 1603053-015	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	03/21/2016:203210 All preparation quality controls are within established criteria
351.2	03/19/2016:203171 All preparation quality controls are within established criteria
4500NH3G	03/21/2016:203887 All analysis quality controls are within established criteria
	03/21/2016:203179 All preparation quality controls are within established criteria
4500NO2B	03/18/2016:203854 All analysis quality controls are within established criteria
	03/18/2016:203165 All preparation quality controls are within established criteria
4500NO3F	03/22/2016:204028 All analysis quality controls are within established criteria
	03/22/2016:203247 All preparation quality controls are within established criteria

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April 8, 2016 Lab ID : SP 1603053
Rincon Consultants, Inc. Customer : 2-25173

Inorganic - Wet Chemistry QC

4500-P B	03/24/2016:203415 All preparation quality controls are within established criteria
4500PE	03/25/2016:204162 All analysis quality controls are within established criteria
EPA351.2	03/22/2016:203952 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: 2016-04-08

April 8, 2016

Lab ID : SP 1603053-005
Customer ID : 2-25173

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

Sampled On : March 17, 2016-15:15
Sampled By : Peter Shellenbarger
Received On : March 17, 2016-17:20
Matrix : Monitoring Well

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

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	1.70	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-12:57NMRP
Nitrite Nitrogen	0.00832	0.1	0.0016	mg/L	1	J	4500NO2B	203165	03/18/16 17:17	4500NO2B	203854-UV207	03/18/16-17:55SJN
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	Ub	4500NH3G	203179	03/21/16 03:00	4500NH3G	203887-FI207	03/21/16-07:26AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203179	03/21/16 03:00	4500NH3G	203887-FI207	03/21/16-07:26AMB
Kjeldahl Nitrogen	ND	0.5	0.32	mg/L	1	Ub	351.2	203171	03/19/16 06:36	EPA351.2	203952-FI206	03/22/16-05:32AMB
Phosphorus, Total	0.0465	0.1	0.031	mg/L	1	Jb	4500-P B	203415	03/24/16 15:40	4500PE	204162-UV205	03/25/16-16:43SJN
Total Dissolved Solids (TFR)	1600	20	5.8	mg/L	1	b	2540CE	203210	03/21/16 11:55	2540C	203959-WT219	03/22/16-09:43CTL

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016

Lab ID : SP 1603053-015
Customer ID : 2-25173

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

Sampled On : March 17, 2016-12:10
Sampled By : Peter Shellenbarger
Received On : March 17, 2016-17:20
Matrix : Monitoring Well

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

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	2.10	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-12:59NMRP
Total Dissolved Solids (TFR)	1400	20	5.8	mg/L	1	b	2540CE	203210	03/21/16 11:55	2540C	203959-WT219	03/22/16-10:03CTL

DQF Flags Definition:
b The Blank was positive for constituent but less than the PQL

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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April 8, 2016 Lab ID : SP 1603053
Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Total Dissolved Solids (TFR)	2540CE	03/21/16:203210CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	995.8	98.0 %	90-110	
		(SP 1603042-001)	Dup	mg/L		1.0%	5	
Nitrogen, Total Kjeldahl	351.2	03/19/16:203171jmg	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	100 %	73-124	
			MS	mg/L	12.00	107 %	54-136	
		(SP 1602997-005)	MSD	mg/L	12.00	101 %	54-136	
			MSRPD	mg/L	12.00	5.1%	≤27	
Ammonia Nitrogen	4500NH3G		MS	mg/L	2.000	109 %	70-130	
		(SP 1602869-002)	MSD	mg/L	2.000	102 %	70-130	
			MSRPD	mg/L	2.000	6.0%	≤20	
	4500NH3G	03/21/16:203887AMB	CCB	mg/L		-0.184	0.2	
			CCV	mg/L	2.000	104 %	90-110	
			CCB	mg/L		-0.178	0.2	
			CCV	mg/L	2.000	108 %	90-110	
Nitrite as Nitrogen	4500NO2B		MS	mg/L	0.2284	86.2 %	1-173	
		(SP 1603053-005)	MSD	mg/L	0.2284	87.2 %	1-173	
			MSRPD	mg/L	0.2284	0.0024	≤0.1	
	4500NO2B	03/18/16:203854SJN	CCV	mg/L	0.1522	92.7 %	90-110	
			CCB	mg/L		0.005	0.1	
			CCV	mg/L	0.1522	95.9 %	90-110	
			CCB	mg/L		0.008	0.1	
Nitrate + Nitrite as N	4500NO3F		MS	mg/L	11.27	80.7 %	5-285	
		(VI 1640765-001)	MSD	mg/L	11.27	79.2 %	5-285	
			MSRPD	mg/L	11.27	1.4%	≤30.4	
	4500NO3F	03/22/16:204028NMRP	CCB	mg/L		0.095	0.1	
			CCV	mg/L	11.27	92.7 %	90-110	
			CCB	mg/L		0.108	0.1	
			CCV	mg/L	11.27	93.3 %	90-110	
Phosphorus	4500-P B	03/24/16:203415sjn	Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	105 %	90-116	
			MS	mg/L	0.2500	-412 %	<¼	
		(CC 1680781-001)	MSD	mg/L	0.2500	-364 %	<¼	
			MSRPD	mg/L	0.2500	2.7%	≤13.2	
Total Phosphorus	4500PE	03/25/16:204162SJN	CCB	mg/L		0.046	0.1	
			CCV	mg/L	0.5000	107 %	90-110	
			CCB	mg/L		0.017	0.1	
			CCV	mg/L	0.5000	110 %	90-110	
Nitrogen, Total Kjeldahl	EPA351.2	03/22/16:203952AMB	CCB	mg/L		-0.178	0.5	
			CCV	mg/L	5.000	106 %	90-110	
			CCB	mg/L		-0.023	0.5	
			CCV	mg/L	5.000	109 %	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 analyted. 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.

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April 8, 2016 Lab ID : SP 1603053
Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Definition	
ND	: Non-detect - Result was below the DQO listed for the analyte.
<¼	: High Sample Background - Spike concentration was less than one forth of the sample concentration.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.

March 30, 2016

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

SP 1603093:1-10 **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 1603093-001	N-001	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 13:05	03/18/2016 15:42 LM	03/20/2016 LM
2	SP 1603093-002	N-002	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 13:15	03/18/2016 15:43 LM	03/20/2016 LM
3	SP 1603093-003	N-003	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 11:25	03/18/2016 15:44 LM	03/22/2016 LM
4	SP 1603093-004	N-004	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 12:00	03/18/2016 15:45 LM	03/21/2016 LM
5	SP 1603093-005	L-001	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 09:00	03/18/2016 15:46 LM	03/21/2016 LM
6	SP 1603093-006	L-002	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 10:00	03/18/2016 15:47 LM	03/22/2016 LM
7	SP 1603093-007	L-003	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 09:40	03/18/2016 15:48 LM	03/20/2016 LM
8	SP 1603093-008	L-004	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 10:20	03/18/2016 15:49 LM	03/20/2016 LM
9	SP 1603093-009	L-005	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 11:15	03/18/2016 15:50 LM	03/21/2016 LM
10	SP 1603093-010	L-006	Source-Other	Peter Shellenbarger	Not Available	03/18/2016 10:50	03/18/2016 15:51 LM	03/20/2016 LM

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	<1.8	<1.8	---	N/R			
2	N-002	---	---	SM 9221B	MPN/100ml	<1.8	<1.8	---	N/R			
3	N-003	---	---	SM 9221B	MPN/100ml	13	<1.8	---	N/R			
4	N-004	---	---	SM 9221B	MPN/100ml	2	<1.8	---	N/R			
5	L-001	---	---	SM 9221B	MPN/100ml	350	23	---	N/R			
6	L-002	---	---	SM 9221B	MPN/100ml	280	49	---	N/R			
7	L-003	---	---	SM 9221B	MPN/100ml	240	23	---	N/R			
8	L-004	---	---	SM 9221B	MPN/100ml	350	170	---	N/R			
9	L-005	---	---	SM 9221B	MPN/100ml	540	350	---	N/R			
10	L-006	---	---	SM 9221B	MPN/100ml	920	130	---	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: 2016-03-30

RRH:GMA

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March 28, 2016

Rincon Consultants, Inc.
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Ventura, CA 93003

Lab ID : SP 1603093
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	03/18/2016	03/18/2016	SP 1603093-001	SW
N-002	03/18/2016	03/18/2016	SP 1603093-002	SW
N-003	03/18/2016	03/18/2016	SP 1603093-003	SW
N-004	03/18/2016	03/18/2016	SP 1603093-004	SW
L-001	03/18/2016	03/18/2016	SP 1603093-005	SW
L-002	03/18/2016	03/18/2016	SP 1603093-006	SW
L-003	03/18/2016	03/18/2016	SP 1603093-007	SW
L-004	03/18/2016	03/18/2016	SP 1603093-008	SW
L-005	03/18/2016	03/18/2016	SP 1603093-009	SW
L-006	03/18/2016	03/18/2016	SP 1603093-010	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	03/21/2016:203180 All preparation quality controls are within established criteria
	03/22/2016:203239 All preparation quality controls are within established criteria
4500NH3G	03/23/2016:204044 All analysis quality controls are within established criteria
	03/23/2016:203299 All preparation quality controls are within established criteria

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March 28, 2016 Lab ID : SP 1603093
Rincon Consultants, Inc. Customer : 2-25173

Inorganic - Wet Chemistry QC

4500NO2B	03/18/2016:203845 All analysis quality controls are within established criteria
	03/18/2016:203159 All preparation quality controls are within established criteria
4500NO3F	03/22/2016:204028 All analysis quality controls are within established criteria
	03/22/2016:203247 All preparation quality controls are within established criteria
4500-P B	03/23/2016:203230 All preparation quality controls are within established criteria
4500PE	03/24/2016:204093 All analysis quality controls are within established criteria
EPA351.2	03/22/2016:203957 All analysis quality controls are within established criteria
	03/24/2016:204108 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: 2016-03-29

March 28, 2016

Lab ID : SP 1603093-001
Customer ID : 2-25173

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

Sampled On : March 18, 2016-13:05
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : N-001
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.100	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-13:56NMRP
Nitrite Nitrogen	0.00832	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-16:57SJN
Nitrogen, Organic	0.937	0.5	0.072	mg/L	1	Jb	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-06:41AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-06:41AMB
Kjeldahl Nitrogen	0.937	0.5	0.32	mg/L	1	Jb	351.2	203180	03/21/16 07:29	EPA351.2	203957-FI206	03/22/16-08:24AMB
Phosphorus, Total	0.400	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-18:52SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-002
Customer ID : 2-25173

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

Sampled On : March 18, 2016-13:15
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : N-002
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.100	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-13:58NMRP
Nitrite Nitrogen	0.00712	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-16:58SJN
Nitrogen, Organic	ND	0.5	0.072	mg/L	1	Ub	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:43AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:43AMB
Kjeldahl Nitrogen	ND	0.5	0.32	mg/L	1	Ub	351.2	203180	03/21/16 07:29	EPA351.2	203957-FI206	03/22/16-08:25AMB
Phosphorus, Total	1.42	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-18:55SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-003
Customer ID : 2-25173

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

Sampled On : March 18, 2016-11:25
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : N-003
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.100	0.1	0.032	mg/L	1	J	4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-14:00NMRP
Nitrite Nitrogen	0.00470	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-16:59SJN
Nitrogen, Organic	0.865	0.5	0.072	mg/L	1	Jb	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:08AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:08AMB
Kjeldahl Nitrogen	0.865	0.5	0.32	mg/L	1	Jb	351.2	203180	03/21/16 07:29	EPA351.2	203957-FI206	03/22/16-08:26AMB
Phosphorus, Total	0.0386	0.1	0.031	mg/L	1	J	4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-18:56SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-004
Customer ID : 2-25173

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

Sampled On : March 18, 2016-12:00
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : N-004
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.100	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-14:03NMRP
Nitrite Nitrogen	0.00470	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-17:00SJN
Nitrogen, Organic	0.234	0.5	0.072	mg/L	1	UJb	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:17AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:17AMB
Kjeldahl Nitrogen	0.234	0.5	0.19	mg/L	1	Jb	351.2	203239	03/22/16 07:34	EPA351.2	204108-FI206	03/24/16-04:22AMB
Phosphorus, Total	0.648	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-18:57SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-005
Customer ID : 2-25173

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

Sampled On : March 18, 2016-09:00
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : L-001
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.300	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-14:05NMRP
Nitrite Nitrogen	0.0156	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-17:01SJN
Nitrogen, Organic	1.99	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:05AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:05AMB
Kjeldahl Nitrogen	1.99	0.5	0.19	mg/L	1	b	351.2	203239	03/22/16 07:34	EPA351.2	204108-FI206	03/24/16-04:25AMB
Phosphorus, Total	0.635	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-18:58SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-006
Customer ID : 2-25173

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

Sampled On : March 18, 2016-10:00
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : L-002
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.600	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-14:07NMRP
Nitrite Nitrogen	0.0132	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-17:02SJN
Nitrogen, Organic	0.852	0.5	0.072	mg/L	1	Jb	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:01AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:01AMB
Kjeldahl Nitrogen	0.852	0.5	0.32	mg/L	1	Jb	351.2	203180	03/21/16 07:29	EPA351.2	203957-FI206	03/22/16-08:29AMB
Phosphorus, Total	0.379	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-18:59SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-007
Customer ID : 2-25173

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

Sampled On : March 18, 2016-09:40
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : L-003
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.600	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-14:09NMRP
Nitrite Nitrogen	0.0180	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-17:05SJN
Nitrogen, Organic	1.03	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-06:39AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-06:39AMB
Kjeldahl Nitrogen	1.03	0.5	0.19	mg/L	1	b	351.2	203239	03/22/16 07:34	EPA351.2	204108-FI206	03/24/16-04:26AMB
Phosphorus, Total	0.397	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-19:00SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-008
Customer ID : 2-25173

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

Sampled On : March 18, 2016-10:20
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : L-004
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.500	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-14:11NMRP
Nitrite Nitrogen	0.0192	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-17:06SJN
Nitrogen, Organic	0.798	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-07:37AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-07:37AMB
Kjeldahl Nitrogen	0.798	0.5	0.19	mg/L	1	b	351.2	203239	03/22/16 07:34	EPA351.2	204108-FI206	03/24/16-04:27AMB
Phosphorus, Total	0.350	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-19:01SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-009
Customer ID : 2-25173

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

Sampled On : March 18, 2016-11:15
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : L-005
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	1.60	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-18:06NMRP
Nitrite Nitrogen	0.0301	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-17:07SJN
Nitrogen, Organic	1.37	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:33AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:33AMB
Kjeldahl Nitrogen	1.37	0.5	0.32	mg/L	1	b	351.2	203180	03/21/16 07:29	EPA351.2	203957-FI206	03/22/16-08:30AMB
Phosphorus, Total	0.661	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-19:02SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016

Lab ID : SP 1603093-010
Customer ID : 2-25173

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

Sampled On : March 18, 2016-10:50
Sampled By : Peter Shellenbarger
Received On : March 18, 2016-15:00
Matrix : Surface Water

Description : L-006
Project : Malibu WWTP - Surface Water Monitoring

Sample Result - Inorganic

Constituent	Result	PQL	MDL	Units	Dilution	DQF	Sample Preparation Method	Sample Preparation ID	Sample Preparation Time	Sample Analysis Method	Sample Analysis ID	Sample Analysis Time
Wet Chemistry P:1												
Nitrate Nitrogen	0.400	0.1	0.032	mg/L	1		4500NO3F	203247	03/22/16 10:30	4500NO3F	204028-FI207	03/22/16-18:07NMRP
Nitrite Nitrogen	0.0264	0.1	0.0016	mg/L	1	J	4500NO2B	203159	03/18/16 16:07	4500NO2B	203845-UV207	03/18/16-17:08SJN
Nitrogen, Organic	1.46	0.5	0.072	mg/L	1	b	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:36AMB
Ammonia Nitrogen	ND	0.2	0.072	mg/L	1	U	4500NH3G	203299	03/23/16 03:00	4500NH3G	204044-FI207	03/23/16-08:36AMB
Kjeldahl Nitrogen	1.46	0.5	0.32	mg/L	1	b	351.2	203180	03/21/16 07:29	EPA351.2	203957-FI206	03/22/16-08:31AMB
Phosphorus, Total	0.366	0.1	0.031	mg/L	1		4500-P B	203230	03/23/16 15:49	4500PE	204093-UV205	03/24/16-19:03SJN

DQF Flags Definition:

b	The Blank was positive for constituent but less than the PQL
U	Constituent results were non-detect.
J	To indicate that result is estimated in cases where result less than PQL; or estimated due to RPD failure.

ND=Non-Detected. PQL=Practical Quantitation Limit. Containers: (P) Plastic Preservatives: H2SO4 pH < 2

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March 28, 2016 Lab ID : SP 1603093
Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Nitrogen, Total Kjeldahl	351.2	03/21/16:203180jmg	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	92.0 %	73-124	
			MS	mg/L	12.00	80.0 %	54-136	
		(CC 1680748-001)	MSD	mg/L	12.00	75.8 %	54-136	
			MSRPD	mg/L	12.00	4.4%	≤27	
	351.2	03/22/16:203239JMG	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	90.7 %	73-124	
			MS	mg/L	12.00	84.1 %	54-136	
		(VI 1640718-003)	MSD	mg/L	12.00	81.0 %	54-136	
			MSRPD	mg/L	12.00	3.7%	≤27	
Ammonia Nitrogen	4500NH3G		MS	mg/L	2.000	102 %	70-130	
		(STK1632916-003)	MSD	mg/L	2.000	103 %	70-130	
			MSRPD	mg/L	2.000	0.2%	≤20	
			MS	mg/L	2.000	106 %	70-130	
		(SP 1603136-005)	MSD	mg/L	2.000	101 %	70-130	
			MSRPD	mg/L	2.000	4.2%	≤20	
			MS	mg/L	2.000	102 %	70-130	
		(SP 1603093-004)	MSD	mg/L	2.000	103 %	70-130	
			MSRPD	mg/L	2.000	0.6%	≤20	
	4500NH3G	03/23/16:204044AMB	CCB	mg/L		-0.042	0.2	
			CCV	mg/L	2.000	108 %	90-110	
			CCB	mg/L		-0.121	0.2	
			CCV	mg/L	2.000	102 %	90-110	
			CCB	mg/L		-0.113	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		-0.124	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		0.000	0.2	
			CCV	mg/L	2.000	103 %	90-110	
			CCB	mg/L		-0.070	0.2	
			CCV	mg/L	2.000	100 %	90-110	
Nitrite as Nitrogen	4500NO2B		MS	mg/L	0.2284	89.4 %	1-173	
		(SP 1603043-002)	MSD	mg/L	0.2284	89.9 %	1-173	
			MSRPD	mg/L	0.2284	0.0012	≤0.1	
	4500NO2B	03/18/16:203845SJN	CCV	mg/L	0.1522	91.9 %	90-110	
			CCB	mg/L		0.003	0.1	
			CCV	mg/L	0.1522	94.3 %	90-110	
			CCB	mg/L		0.006	0.1	
			CCV	mg/L	0.1522	94.3 %	90-110	
			CCB	mg/L		0.005	0.1	
Nitrate + Nitrite as N	4500NO3F		MS	mg/L	11.27	74.2 %	5-285	
		(SP 1603093-001)	MSD	mg/L	11.27	84.1 %	5-285	
			MSRPD	mg/L	11.27	12.4%	≤30.4	
	4500NO3F	03/22/16:204028NMRP	CCB	mg/L		0.093	0.1	
			CCV	mg/L	11.27	92.3 %	90-110	
			CCB	mg/L		0.058	0.1	
			CCV	mg/L	11.27	92.9 %	90-110	
			CCB	mg/L		0.086	0.1	
			CCV	mg/L	11.27	94.2 %	90-110	
			CCB	mg/L		0.392	0.1	
			CCV	mg/L	11.27	95.3 %	90-110	
Phosphorus	4500-P B	03/23/16:203230sjn	Blank	mg/L		ND	<0.1	
			LCS	mg/L	0.5000	109 %	90-116	
			MS	mg/L	0.2500	34.8 %	25-292	
		(SP 1603093-001)	MSD	mg/L	0.2500	33.8 %	25-292	

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March 28, 2016 Lab ID : SP 1603093

Rincon Consultants, Inc. Customer : 2-25173

Quality Control - Inorganic

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Phosphorus	4500-P B	03/23/16:203230sjn	MSRPD	mg/L	0.2500	0.0026	≤0.1	
Total Phosphorus	4500PE	03/24/16:204093SJN	CCB	mg/L		0.060	0.1	
			CCV	mg/L	0.5000	104 %	90-110	
			CCB	mg/L		0.052	0.1	
			CCV	mg/L	0.5000	109 %	90-110	
			CCB	mg/L		0.015	0.1	
			CCV	mg/L	0.5000	109 %	90-110	
Nitrogen, Total Kjeldahl	EPA351.2	03/22/16:203957AMB	CCB	mg/L		0.426	0.5	
			CCV	mg/L	5.000	92.5 %	90-110	
			CCB	mg/L		0.385	0.5	
			CCV	mg/L	5.000	93.5 %	90-110	
			CCB	mg/L		0.488	0.5	
			CCV	mg/L	5.000	93.4 %	90-110	
	EPA351.2	03/24/16:204108AMB	ICB	mg/L		0.080	0.5	
			ICV	mg/L	5.000	92.4 %	90-110	
			CCB	mg/L		0.033	0.5	
			CCV	mg/L	5.000	92.1 %	90-110	
			CCB	mg/L		0.055	0.5	
			CCV	mg/L	5.000	90.5 %	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 analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.
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.