



Prepared for:

The City of Rolling Hills
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Rolling Hills, CA 90274

City of Rolling Hills

Non-Storm Water Screening and Monitoring Program

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1. INTRODUCTION

The 2012 Municipal Separate Storm Sewer System (MS4) Permit¹ (Permit) requires the City of Rolling Hills (City) to develop a Monitoring and Reporting Program (MRP) to accomplish the following primary objectives:

1. Assess the chemical, physical, and biological impacts of discharges from the MS4 on receiving waters.
2. Assess compliance with receiving water limitations (RWLs) and water quality-based effluent limitations (WQBELs) established to implement Total Maximum Daily Load (TMDL) wet-weather and dry-weather waste load allocations (WLAs).
3. Characterize pollutant loads in MS4 discharges.
4. Identify sources of pollutants in MS4 discharges.
5. Measure and improve the effectiveness of pollutant controls implemented under the Permit.

To achieve these objectives in a cost efficient and effective manner, the Permit allows Permittees to coordinate monitoring efforts on a watershed or subwatershed basis by developing a Coordinated Integrated Monitoring Program (CIMP). Although the City has decided not to participate in the development of an enhanced watershed management program (EWMP), the City submitted a letter of intent to the Los Angeles Regional Water Quality Control Board (Regional Board) on June 27, 2013 stating the City's intent to collaborate with the Palos Verdes Peninsula agencies² to develop a CIMP in accordance with the requirements of the Permit.

¹ Order No. R4-2012-0175 NPDES Permit No. CAS004001 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach MS4.

² The Palos Verdes Peninsula agencies include the City of Rolling Hills, City of Rancho Palos Verdes, City of Palos Verdes Estates, City of Rolling Hills Estates, County of Los Angeles, and the Los Angeles County Flood Control District.



Because the City has chosen not to participate in an EWMP, they are required to develop an integrated monitoring plan addressing any monitoring requirements that will not be addressed by the Palos Verdes Peninsula CIMP (i.e., those monitoring requirements which they intend to implement individually), per Attachment E, Part IV.C.2 of the Permit.

This report has been drafted to serve as the individual integrated monitoring plan for the City. As discussed in the August 22, 2013 meeting between the City and Regional Board, this integrated monitoring plan includes the following:

1. Non-storm water screening and monitoring plan, including the information identified in Part VII.A and IX of Attachment E of the Permit; and
2. A description and documentation of all ongoing TMDL compliance monitoring conducted by the City individually or in coordination with other agencies and confirmation that the TMDL compliance monitoring will continue uninterrupted during the development and approval of the CIMP.

All other MS4 Permit monitoring requirements will be addressed by the City's participation in the Palos Verdes Peninsula CIMP, which is due no later than June 28, 2014. A December 5, 2013 letter from the Regional Board to the City confirms the Regional Board's agreement with this approach.

2. NON-STORM WATER SCREENING AND MONITORING

2.1 Background

The City of Rolling Hills is a uniquely developed community, being composed entirely of low-density, single family residential homes on large lots and lacking a continuous improved storm drain system throughout the City. The City is by design a low density, low impact, rural residential community with primary drainage conveyed via natural canyons. Roadways are narrow with soft shoulders (no curb-and-gutter). Dry weather flows and small rainfall events are infiltrated within the natural soft-bottom canyons which serve as the primary drainage system. Storm water from private property drains into these largely undisturbed, heavily vegetated, soft-bottom canyons.

This lack of a developed storm drain system within the City, coupled with the particular attention given to the monitoring of "major outfalls" in the Permit, means that the City's Non-Storm Water Outfall Monitoring Program must be adapted to this unique situation. The City will therefore focus non-storm water monitoring efforts on the natural canyons that serve as the primary drainage network in the City. The term "outfall," as used by



the Permit and applied to the City, will refer to the selected monitoring locations within the City’s canyons that are described in this plan.

The City’s Non-Storm Water Outfall Monitoring Program has been prepared to meet the specific objectives outlined in Part IX.A of Attachment E of the Permit:

1. To identify non-exempt or conditionally non-exempt non-storm water discharges³ from the City’s canyons, so that such discharges may be eliminated or effectively controlled in accordance with City’s illicit connection/illicit discharge (IC/ID) program; and
2. To assess whether such non-storm water discharges are causing or contributing to exceedances of applicable receiving water limits.

2.2 Canyon Screening and Identifying Canyons with Significant Non-Storm Water Discharges

The MS4 Permit requires Permittees to “identify MS4 outfalls with significant non-storm water discharges” within their jurisdiction. To accomplish this, the City will conduct a field screening of pre-determined “major canyons” to visually observe whether non-storm water discharges are present in significant amounts. “Major canyons” are defined as canyons within the City which drain at least 50 acres⁴ of land within the City’s jurisdiction. Canyons which are known to contain natural flows on a regular basis (e.g., canyons fed by a perennial spring), as determined by historic observations and review of the USGS National Hydrograph Dataset, will not be screened as part of the non-storm water monitoring program. These canyons include Sepulveda Canyon, George F. Canyon, Bent Springs Canyon, and Klondike Canyon.

Five major canyons have been identified within the City: Aqua Magna Canyon (including Johns Canyon), Blackwater Canyon, Purple Canyon, Paintbrush Canyon, and an unnamed canyon near the southeast corner of the City (hereinafter called “Unnamed Canyon 1”). Aqua Magna Canyon and Blackwater Canyon are within the Machado Lake Watershed; Purple Canyon is within the Greater LA Harbor Watershed; and

³ These discharges are defined in Section III.A of the Permit and have been codified in Chapter 8.32 of the City’s Municipal Code.

⁴ Attachment A of the Permit similarly uses a drainage area of 50 acres as the threshold to define a major outfall.



Paintbrush Canyon and Unnamed Canyon 1 is within the Santa Monica Bay Watershed. These major canyons are shown on Figure 1.

These five canyons will be screened twice during summer dry weather prior to September 30, 2014. Screening will be conducted at specific locations near the downstream end of each major canyon. Screening locations for each canyon have been selected based on a desktop evaluation and general familiarity with the City's terrain. Factors considered in selection included accessibility/safety, proximity to City boundary, and ability to adequately observe the presence/absence of flows. These screening locations are shown on Figure 1; photos and brief descriptions of these locations are provided in Attachment A. It is important to note that these locations may be altered if it is determined by field personnel that adequate observations cannot be made safely. In such cases, field personnel will note the reason for the alteration as well as the new location selected. If necessary, new locations will be considered outside of the City's boundary farther towards the bottom of canyons, with reasonable attempts being made to get as near to the City boundary as possible.

For each screened major canyon, field personnel will determine if significant non-storm water discharges are present. Attachment E of the Permit provides examples of various characteristics that may be used to determine if discharges are considered significant. Due to the uniqueness of the City's storm water infrastructure, observed measurable⁵ flows that are not known to be naturally occurring will be defined as significant non-storm water discharges for the sake of this screening.

If, after two dry weather screenings, no significant non-storm water discharges are present at a particular monitoring location, no further action is necessary under this Plan.

A field data sheet (Attachment B) will be completed by field personnel at each screening location to assist in the development of an inventory of the screened canyons.

2.3 Inventory of Monitored Canyons

An inventory of the screened canyons will be developed following the screening, identifying those canyons with observed significant non-storm water discharges and those requiring no further assessment (Part IX.D of Attachment E of the Permit). For

⁵ Measurable flows are defined as active flows that continue beyond the City boundary or line of sight (if upstream of the City boundary). Pondered water, wetted soil, or flows that dry up within the City's boundary are not considered significant discharges since they do not leave the City.



canyons requiring no further assessment, the inventory will include the justification of this determination (e.g., the canyon does not have observed measurable flow).

To gather necessary information of each major canyon to be used in the City's inventory, a field data sheet will be filled out for each major canyon. A blank field data sheet has been provided in Attachment B, which includes the minimum attributes listed in Part IX.D.2 of Attachment E.

Collected data will be incorporated into an electronic inventory which the City will maintain. Updates to the inventory will occur at least once a year, as necessary.

2.4 Prioritization of Monitored Canyons

Part IX.E.1 of Attachment E of the Permit requires that identified outfalls with significant non-storm water discharges be prioritized according to the following:

- a. Outfalls discharging directly to receiving waters with WQBELs or receiving water limitations in the TMDL provisions for which final compliance deadlines have passed.
- b. All major outfalls and other outfalls that discharge to a receiving water subject to a TMDL shall be prioritized according to TMDL compliance schedules.
- c. Outfalls for which monitoring data exist and indicate recurring exceedances of one or more of the Action Levels identified in Attachment G of the MS4 Permit.
- d. All other major outfalls identified to have significant non-storm water discharges.

Due to the limited number of major canyons within the City, such a prioritization is not necessary at this time. Additionally, based on current information, all major canyons in the City would qualify as "Priority b" if significant non-storm water discharges are observed.

Following the screening of the major canyons, a source identification schedule will be developed to ensure that source investigations are completed on no less than 25% of the major canyons with significant non-storm water discharges by December 28, 2015, and 100% by December 28, 2017.



2.5 Source Identification

A source investigation is required for major canyons identified to have significant non-storm water discharges to ascertain the source(s) and point(s) of origin of the non-storm water discharge(s).

Due to the unique nature of the City and the lack of man-made storm water infrastructure, conducting source investigations within the major canyons of the City presents numerous challenges. As a result, the process the City will follow to conduct these source investigations will be a fluid one, changing as necessary based on the specifics of the observed discharge. In most cases, the procedure will be to walk the canyon under investigation, beginning at the downstream end and walking upstream to attempt to locate the source of flow. In some locations, canyon access is impossible due to characteristics such as steep grades or the presence of poison oak. In these instances, the City will attempt to gain safe access from other locations in the canyon, or at the very least observe the canyon from additional viewing points, in an attempt to identify the source of discharge. In cases where private access is required, the City will obtain appropriate access permission before proceeding.

Significant non-storm water flows will be classified into one of these three categories:

- A. Illicit discharges: If the source is determined to be an illicit connection or illicit discharge, the City will follow procedures outlined in its IC/ID Program and appropriate documentation will be made regarding the source.
- B. Authorized or conditionally exempt non-storm water discharges: If the source is determined to be authorized per Chapter 8.32 of the City's Municipal Code, the source will be documented in the inventory and photographs of the source will be archived. Such findings will be reported each year in the City's annual report.
- C. Unknown sources: If the source is unknown, the City will conduct monitoring consistent with Part IX.G of Attachment E of the Permit. The City will document the efforts undertaken to identify the source.

For cases where multiple sources are discovered within the same canyon, the City will attempt to quantify the relative contribution of each individual source, to the extent practicable.



2.6 Monitoring

If monitoring is required following the identification of significant non-storm water discharges, procedures outlined in the Permit and the Palos Verdes Peninsula CIMP will be followed.

3. SUMMARY OF ONGOING TMDL COMPLIANCE MONITORING

On June 27, 2013 the City submitted a Letter of Intent to the Regional Board to participate in the development of a Coordinated Integrated Monitoring Program (CIMP) in collaboration with the Palos Verdes Peninsula watershed agencies. These agencies are part of Jurisdictional Group 7 with respect to the coordinated shoreline monitoring that currently exists under the Santa Monica Bay Beaches Bacteria TMDL. On December 5th 2013, the City received a letter from the Executive Officer confirming the City's participation in the Palos Verdes Peninsula CIMP which is due on June 28, 2014 to meet the City's obligations for receiving water monitoring and storm water outfall monitoring. The following discussion summarizes ongoing TMDL compliance monitoring either conducted by the City individually or in coordination with other agencies which will continue until the CIMP is approved. Upon approval of the CIMP, these programs may be incorporated into the CIMP.

3.1 Machado Lake Nutrient TMDL Monitoring for Palos Verdes Peninsula

The incorporated cities of the Palos Verdes Peninsula are conducting joint monitoring to meet the requirements of the *Machado Lake Eutrophic, Algae, Ammonia, and Odors (Nutrient) Total Maximum Daily Load (TMDL)* established by the Regional Board on May 1, 2008 (Resolution No. R08-006). This monitoring is being conducted in accordance with the *Palos Verdes Peninsula Coordinated Monitoring Plan (CMP)* approved by Regional Board staff. Monitoring under the CMP began in August 2011. The first annual monitoring report with full analysis of the data was submitted by December 14, 2012, and the second report was submitted with the City's MS4 Permit Annual report by December 15, 2013.

These annual reports provide a summary of the monitoring program progress, storm water analytical data, flow data, and data quality assurance/quality control analysis. Monthly averages for total nitrogen (TN), and total phosphorus (TP) in storm water were calculated and compared to interim Waste Load Allocations (WLAs) to determine attainment status. Monthly average values calculated for both TN and TP collected during the first fifteen months of monitoring as discussed in the first annual monitoring report were below the current interim concentration-based WLAs. Monthly average



values calculated for both TN and TP collected during the twelve month period covered by the 2nd annual report have continued to remain below the current interim concentration-based WLAs. Furthermore, flow was not present at the Lariat monitoring station during any of the sampling events in the most recent data set—the Lariat station is representative of runoff from the City of Rolling Hills since 94% of the drainage area to Lariat lies within the City of Rolling Hills—Agua Magna, Sepulveda, and Blackwater Canyon are all tributary to the Lariat Monitoring site.

3.2 Santa Monica Bay Beaches Bacteria TMDL Monitoring

Monitoring under the Coordinated Shoreline Monitoring Plan in accordance with the Santa Monica Bay Beaches Bacteria TMDL is conducted on a weekly basis by the Sanitation Districts of Los Angeles County at nine shoreline monitoring locations along the Palos Verdes Peninsula (Jurisdictional Group 7). The data is reported directly to the Los Angeles Regional Water Quality Control Board such that annual monitoring reports are not currently being prepared by Jurisdictional Group 7. Following is a brief summary of ongoing shoreline monitoring single-sample data results for the shoreline monitoring location to which the City is tributary.

Drainage from that portion of the City of Rolling Hills that drains toward the Santa Monica Bay is conveyed via natural soft bottom canyons (Klondike Canyon, Paint Brush Canyon, and several smaller unnamed canyons) across significant areas of open space for a distance of ½ mile to a mile before reaching improved storm drains operated by other agencies that outlet into Portuguese Bend. The shoreline monitoring location in Portuguese Bend, also known as SMB 7-5, is an open beach shoreline monitoring location on the Palos Verdes Peninsula that is considered to be an anti-degradation monitoring location, i.e., it has historically and continues to exhibit a lower rate of exceedances than the reference monitoring location at Leo Carillo Beach (reference beach). For a weekly sampling schedule, SMB 7-5 is allocated zero (0) single sample exceedances per year during summer dry weather (April 1 through October 31), one (1) exceedance per year during winter dry weather (November 1 through March 30), and one (1) exceedance per year during year-round wet weather (November 1 through October 31) of the indicator bacterial targets under the Santa Monica Bay Beaches Bacteria TMDL.

3.2.1 Single-Sample Results

Table 1 shows the history of summer dry and winter dry weather exceedances at SMB 7-5 in comparison with the reference beach which are both monitored once per week. Review of this data clearly shows that the shoreline monitoring location at SMB 7-5 in Portuguese Bend has maintained its historically high water quality and there has been



no degradation over the past eight years during either summer dry weather or winter dry weather periods and that the site continues to exhibit significantly fewer exceedances than the reference beach. From the summer of 2005 through June of 2013 there have been only three exceedances of the bacterial indicator targets at SMB 7-5 while there have been twenty-five (25) exceedances at the reference beach. Likewise from the winter of 2005-06 through the winter of 2012-13 there has been only one (1) exceedance of the winter dry weather bacterial indicator targets at SMB 7-5 in Portuguese Bend while there have been eight (8) such exceedances at the reference site at Leo Carillo beach.

Thus monitoring at SMB 7-5 over the past eight years substantiates that in most years the dry weather water quality in Portuguese Bend is superior to the reference beach with no evidence of degradation. The rare dry weather exceedances of the bacterial objectives at SMB 7-5, are most likely attributed to natural background causes, such as presence of ocean debris, birds, dead birds or marine mammals, heavy surf, increased wave height and wind speed.⁶ Given (1) that the City's conveyances are through natural canyons, which allow for infiltration; (2) the City is a low-density, community which incorporates LID by design; (3) there is a long distance through an undeveloped nature preserve between the City and the monitoring site; (4) years that exceed the TMDL allowable exceedance days are rare; and (5) the natural reference beach exhibits far more exceedances than site 7-5, there is no evidence to suggest that discharges from the City caused or contributed to these rare exceedances.

⁶ February 2008 Los Angeles County Department of Public Works. Santa Monica Bay Beaches Bacterial Indicator TMDL Compliance Study-Final Report, prepared by Weston Solutions.



Table 1: Single Sample (SS) Limit Exceedance Days* at SMB 7-5 (Portuguese Bend Sampling Station) Compared with Reference Site for Dry Weather

SUMMER DRY WEATHER (Apr 1-Oct 31)			WINTER DRY WEATHER (Nov 1- Apr 30)		
Summer	SS Exceedance Days SMB 7-5	SS Exceedance Days Reference Beach	Winter	SS Exceedance Days SMB 7-5	SS Exceedance Days Reference Beach
2005	0	7	2005-06	0	1
2006	0	11	2006-07	0	1
2007	0	0	2007-08	0	2
2008	0	2	2008-09	1	0
2009	1	0	2009-10	0	0
2010	0	0	2010-11	0	1
2011	2	5	2011-12	0	3
2012	0	0	2012-13	0	0
2013 ⁷	0	0			
Total	3	25		1	8

*Based on weekly sampling

Table 2 shows the history of year-round wet weather exceedances at SMB 7-5 in comparison with the reference beach (SMB 1-1). From the storm year 2004-05 through June 30th of storm year 2012-13, there were nine (9) wet weather exceedances at SMB 7-5. By comparison the reference beach (SMB 1-1) exhibited eighteen (18) wet weather exceedances during the same period. In its staff report for the reconsideration of the Santa Monica Bay Bacteria TMDL, the Regional Board staff analyzed the history of wet weather exceedances from November 2004 through October 2010 at SMB 7-5 and found that the wet weather exceedance rate was only 4% in comparison with the reference beach exceedance rate of 22%. Likewise dry weather exceedance rates over this same period at SMB 7-5 were 1% while the dry weather exceedance rates at the reference beach were 10%.

⁷Summer 2013 data shown through June 2013



Table 2: Single Sample (SS) Limit Exceedance Days* at SMB 7-5 (Portuguese Bend Sampling Station) Compared with Reference Site for Wet Weather

WET WEATHER		
Summer	SS Exceedance Days SMB 7-5	SS Exceedance Days Reference Beach
2004-05⁸	4	4
2005-06	1	1
2006-07	0	0
2007-08	0	1
2008-09	1	2
2009-10	1	3
2010-11	2	4
2011-12	0	3
2012-13⁹	0	0
Total	9	18

*Based on weekly sampling

3.3 Machado Lake Trash TMDL Monitoring

The City of Rolling Hills has now completed a fourth year of monitoring in accordance with the Trash Monitoring and Reporting Plan, having submitted an annual monitoring report along with its MS4 Permit Annual Report by December 15, 2013. Because the City of Rolling Hills does not have a storm drain system that is amenable to the installation of full capture devices, it has implemented a Trash Monitoring and Reporting Plan (TMRP) which includes a Minimum Frequency of Assessment and Collection Program (MFAC) in conjunction with Best Management Practices (BMPs) in order to achieve compliance with the Machado Lake Trash TMDL. The results obtained through implementation of the City’s approved TMRP indicate an effective implementation of existing institutional and source controls such as weekly collection

⁸ The 2004-05 storm year was a 97th percentile year with respect to the number of days of rain (54 days of rain) and annual precipitation (26.7 inches), while it was a 77th percentile year with respect to wet days (65 wet days). By comparison the critical storm year which was used to establish the number of allowable wet weather exceedance days was 1992-93 which was a 75th percentile year with respect to the number of days of rain (41 days of rain) and a 93rd percentile rain year with respect to annual precipitation (22.9 inches) and a 92nd percentile rain year with 75 wet days. Thus it is not surprising that in 2004-05 many sites including the reference beach site exceeded the number of allowable wet weather exceedance days.

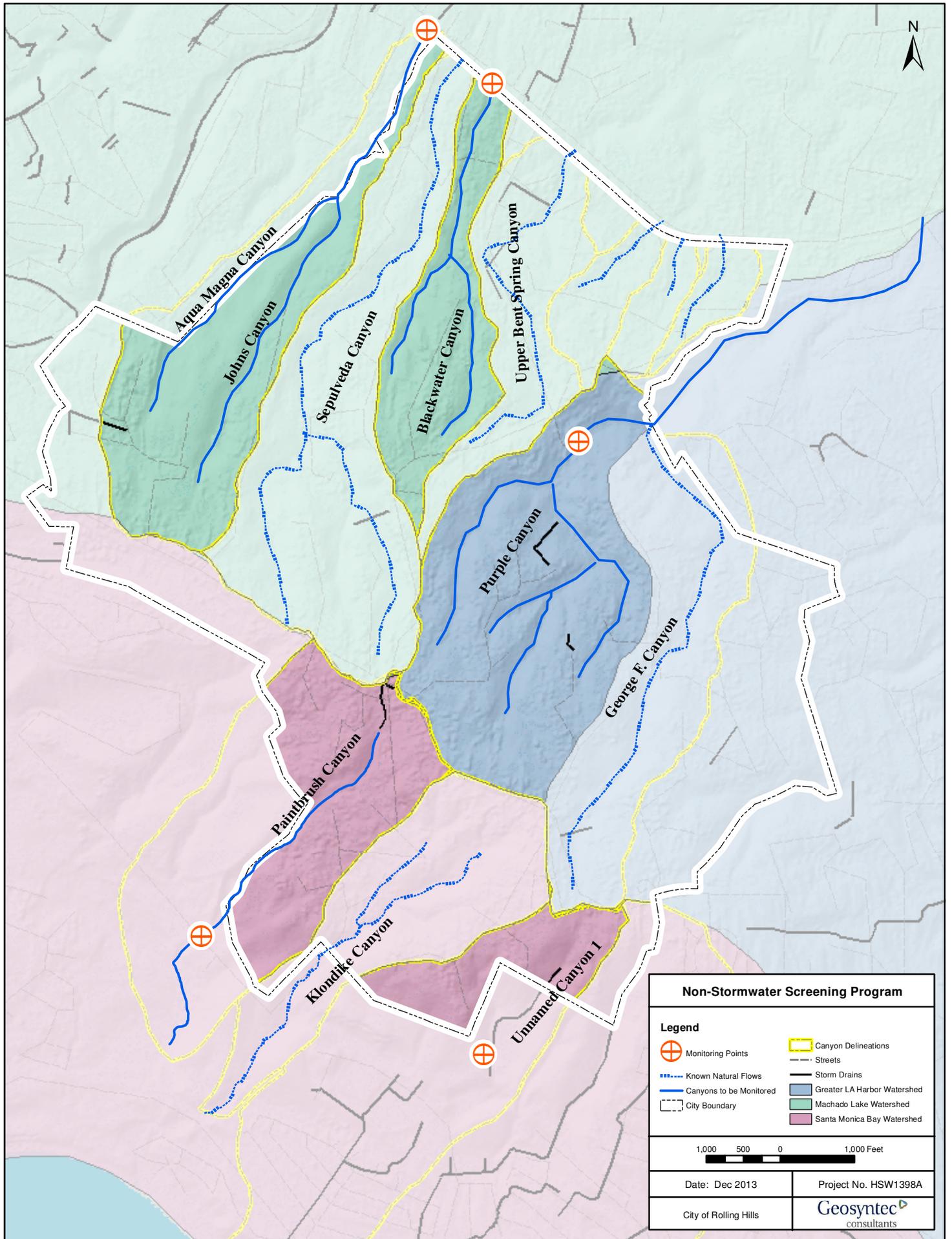
⁹ 2012-2013 Wet Weather data shown through June 2013.



of trash (with additional pickup as needed) along roads and equestrian trails by the RHCA maintenance crew, strict enforcement of litter laws, enforcement of ordinances requiring solid waste enclosures, and close oversight of the solid waste hauler. In addition, due to dense vegetation within the natural canyons, trace amounts of wind-blown trash that may be deposited in the canyons are captured and collected before leaving the City.

Discharge rates at the canyon outlets during the past year were undetectable, which is consistent with previous years' data. . The collected data demonstrates that the City is reducing its generated trash by 100% through its current BMP program. Based on the outcome of this additional year of study, the City is able to demonstrate achievement of the final waste load allocation, and continued compliance with the Machado Lake Trash TMDL. The results for the fourth year of monitoring continue to demonstrate that the City's current BMPs are effective and no additional BMPs are warranted.

Figures



Non-Stormwater Screening Program

Legend	
	Monitoring Points
	Canyon Delineations
	Known Natural Flows
	Canyons to be Monitored
	City Boundary
	Streets
	Storm Drains
	Greater LA Harbor Watershed
	Machado Lake Watershed
	Santa Monica Bay Watershed



Date: Dec 2013	Project No. HSW1398A
City of Rolling Hills	Geosyntec consultants

Attachments

Attachment A:
Screening Locations



City of Rolling Hills

Non-Storm Water Screening and Monitoring Program

Monitoring Locations

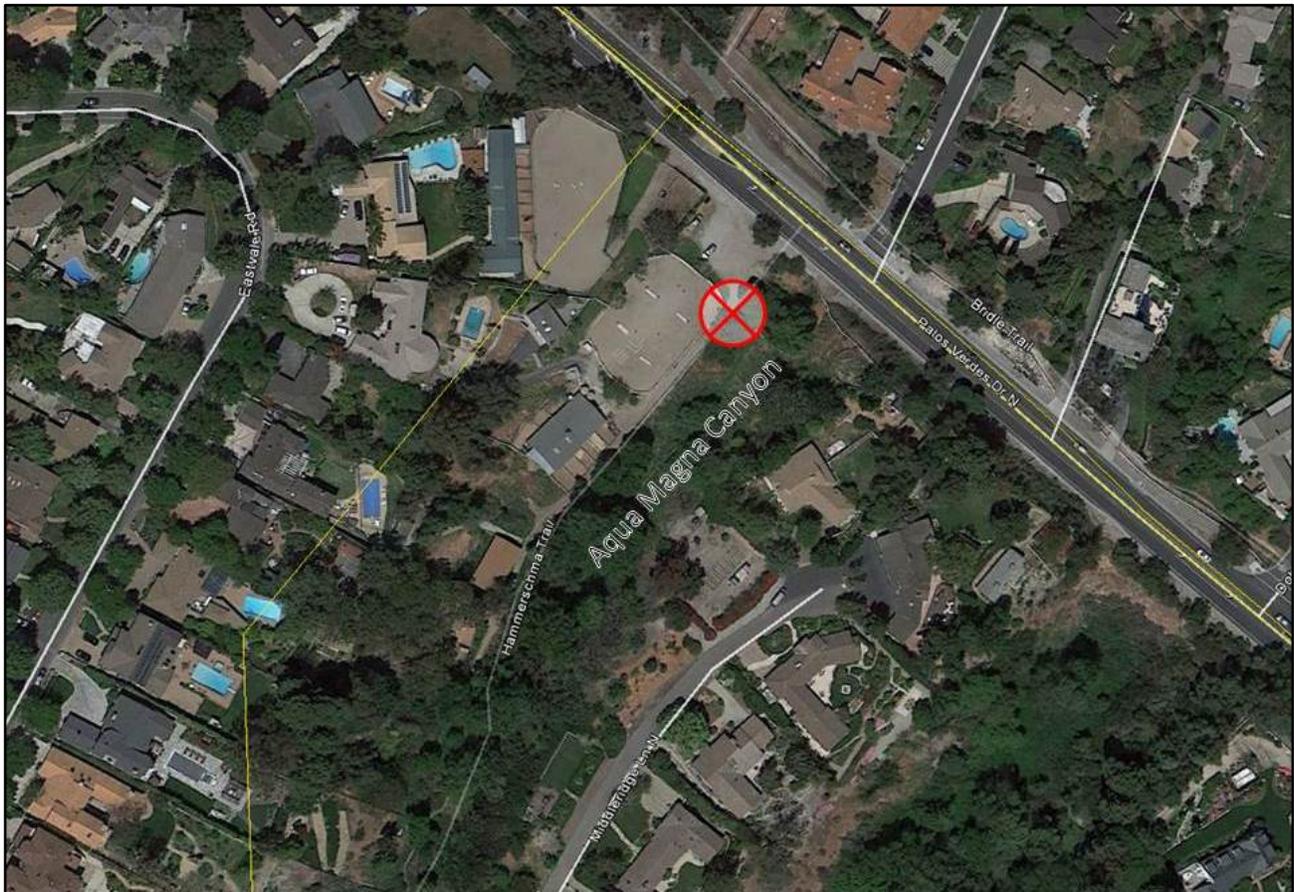
Monitoring Location ID: Agua Magna Canyon #1

Latitude: 33° 46' 45.8 N

Longitude: 118° 20' 54.5 W

Monitoring Location Description: Agua Magna Canyon intersects Palos Verdes Dr North, after which it continues underground until the botanic garden. Hammerschma Trail, which is outside the City boundaries, runs along the canyon until it merges with John's Canyon Trail. Monitoring will initially be conducted near the intersection of the canyon and Palos Verdes Dr North. The beginning of Hammerschma Trail provides a good view point to monitor the canyon. However, due to the possibility of contributions in this vicinity from outside the City boundaries, if flows are observed, Hammerschma Trail will be followed upstream to observe if the flows are in fact from the City.

Aerial Photo





City of Rolling Hills

Non-Storm Water Screening and Monitoring Program

Monitoring Locations

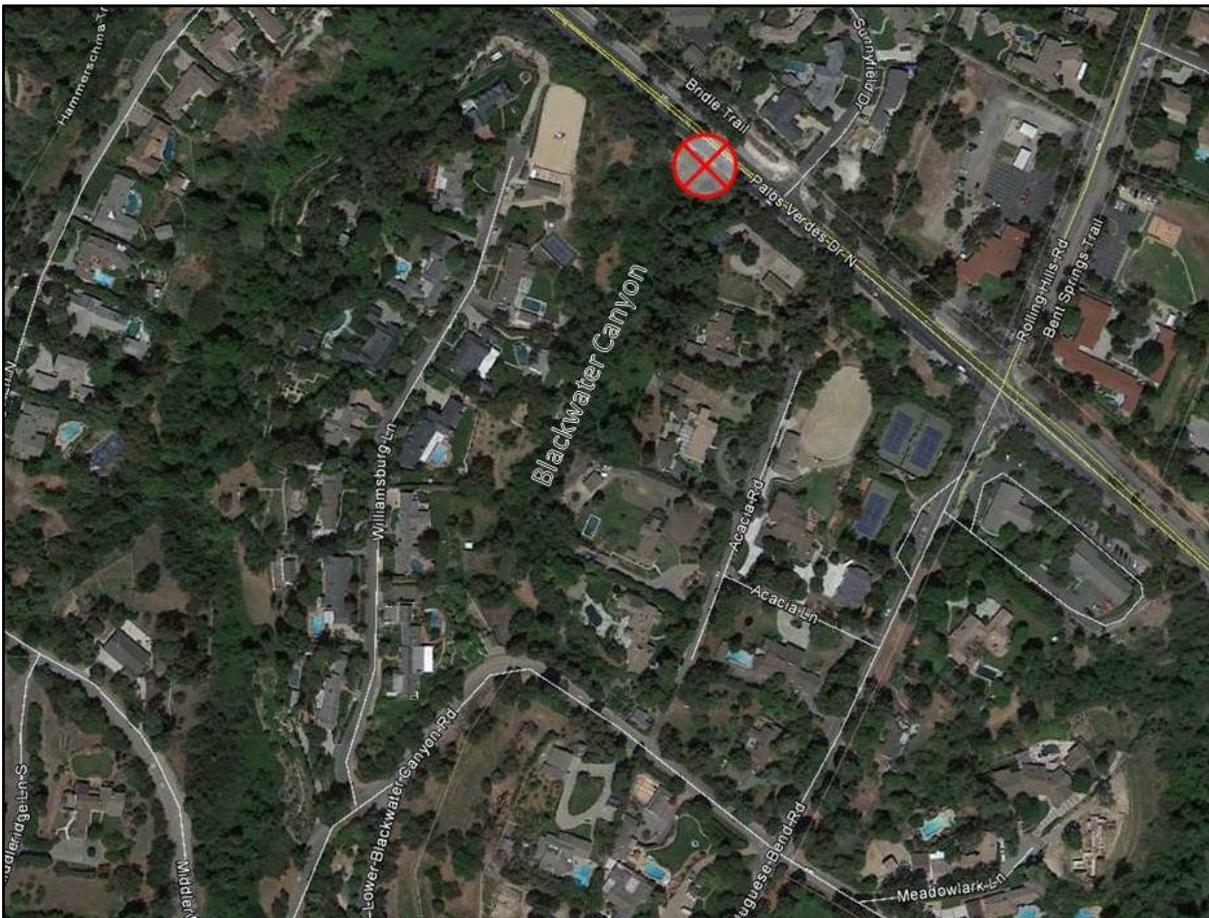
Monitoring Location ID: Blackwater Canyon #1

Latitude: 33° 46' 39.5 N

Longitude: 118° 20' 44.3 W

Monitoring Location Description: Like Agua Magna Canyon, Blackwater Canyon intersects Palos Verdes Dr North. Monitoring will initially be conducted at the intersection of the canyon and Palos Verdes Dr North. If observations cannot be made from Palos Verdes Dr North, Lower Blackwater Canyon Road provides another observation point upstream. From there, if flows are observed and need to be tracked, Blackwater Canyon Trail can be walked since it follows the canyon flow path.

Aerial Photo





City of Rolling Hills

Non-Storm Water Screening and Monitoring Program

Monitoring Locations

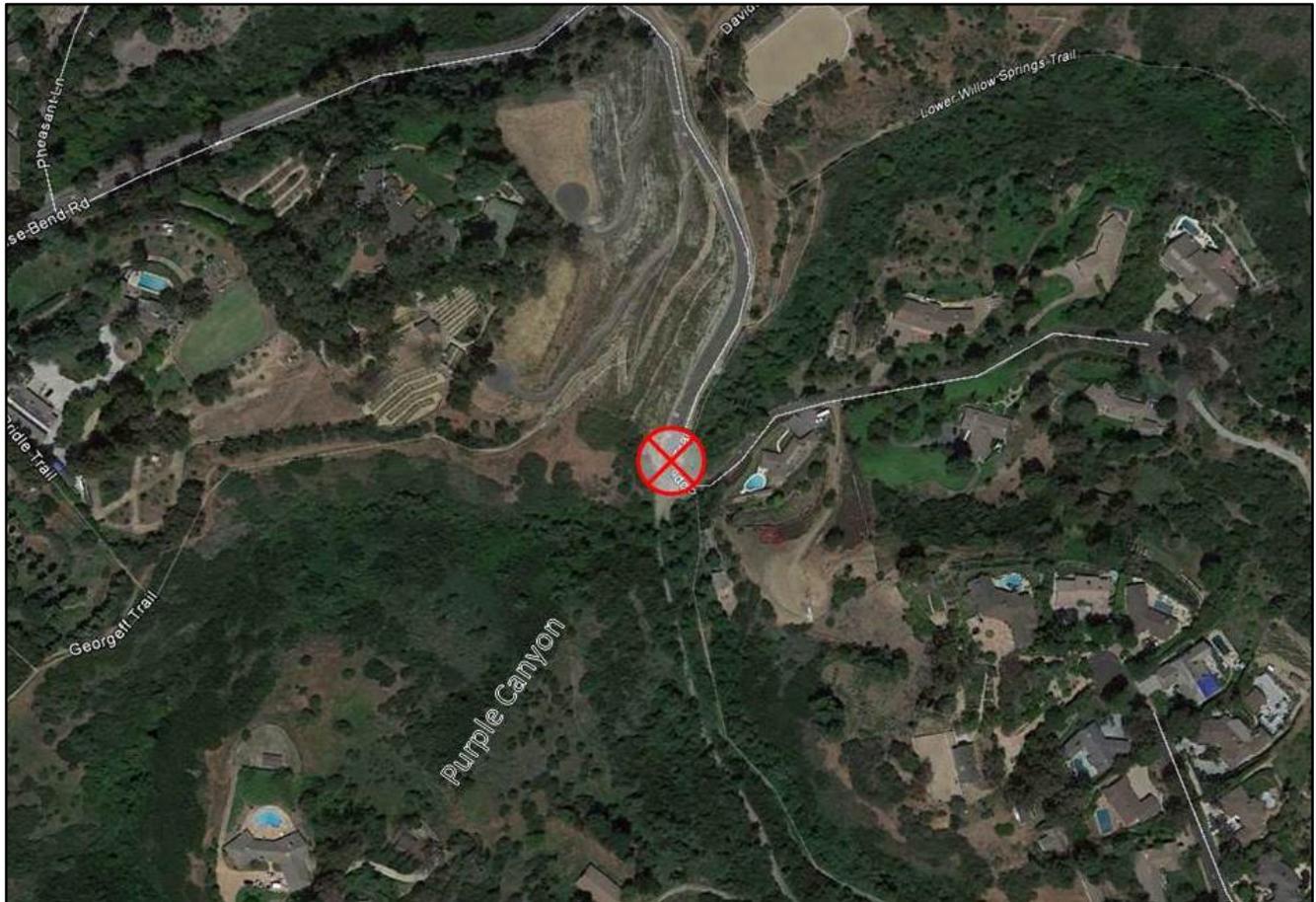
Monitoring Location ID: Purple Canyon #1

Latitude: 33° 45' 46.6 N

Longitude: 118° 20' 34.5 W

Monitoring Location Description: Poppy Trail provides an optimal observation point to view Purple Canyon downstream of the confluence point, where multiple reaches of the canyon come together. If flows are observed, Lower Willow Springs Trail will allow for monitoring at the City border to determine if flows leave the City. Additionally, Sleepy Hollow Trail and Georgeff Trail provide access to track flow sources up Purple Canyon.

Aerial Photo





City of Rolling Hills

Non-Storm Water Screening and Monitoring Program

Monitoring Locations

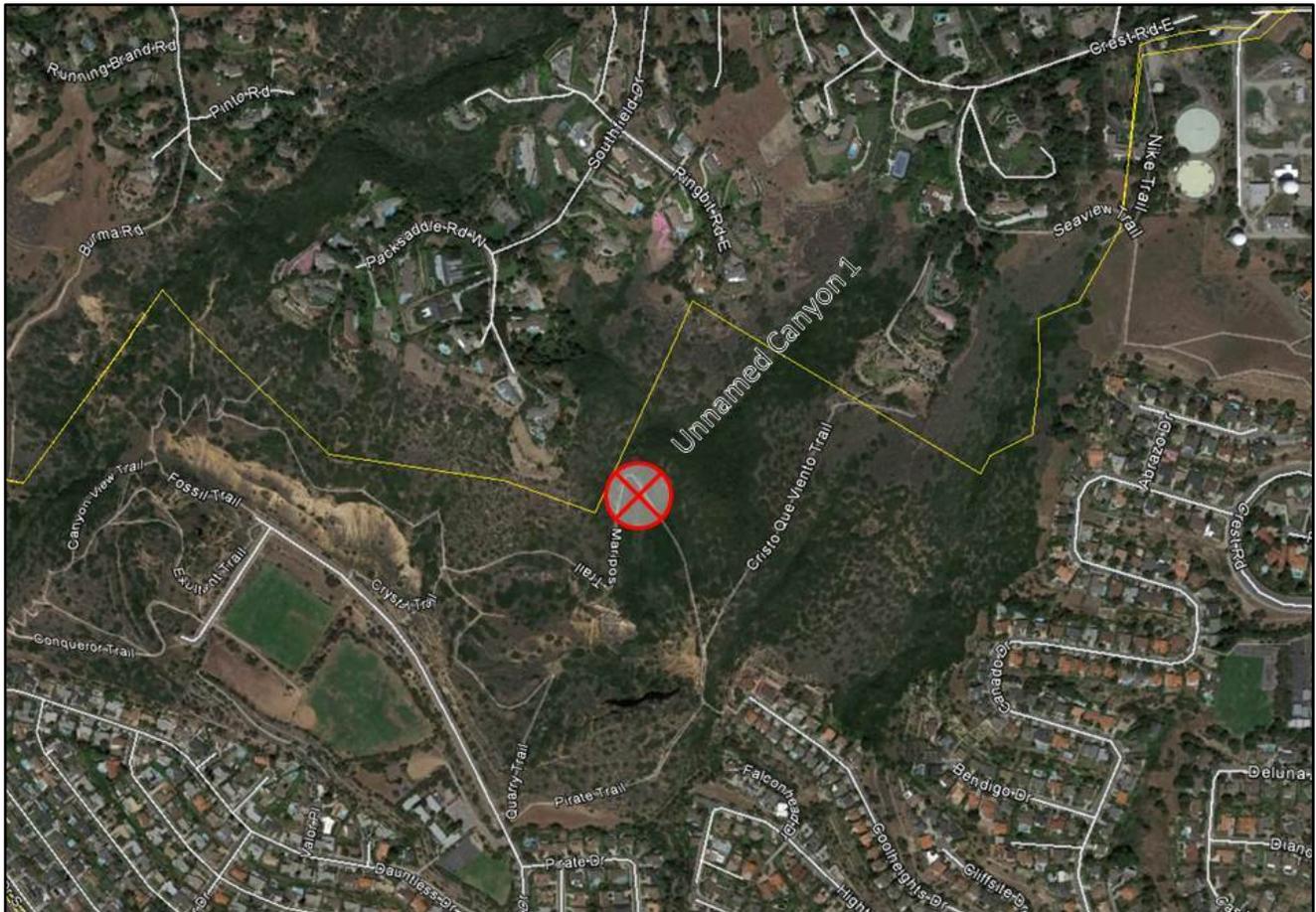
Monitoring Location ID: Unnamed Canyon 1 #1

Latitude: 33° 44' 33.3 N

Longitude: 118° 20' 43.6 W

Monitoring Location Description: Unnamed Canyon 1 is located near the southeast corner of the City boundary. The canyon is difficult to reach from the City, but can be accessed from hiking trails to the south. In particular, Mariposa Trail provides access to a point near the bottom of the canyon. The canyon is likely too steep to hike for source tracking purposes, so if such tracking is required, this will most likely be done on the various residential roads in the vicinity.

Aerial Photo





City of Rolling Hills

Non-Storm Water Screening and Monitoring Program

Monitoring Locations

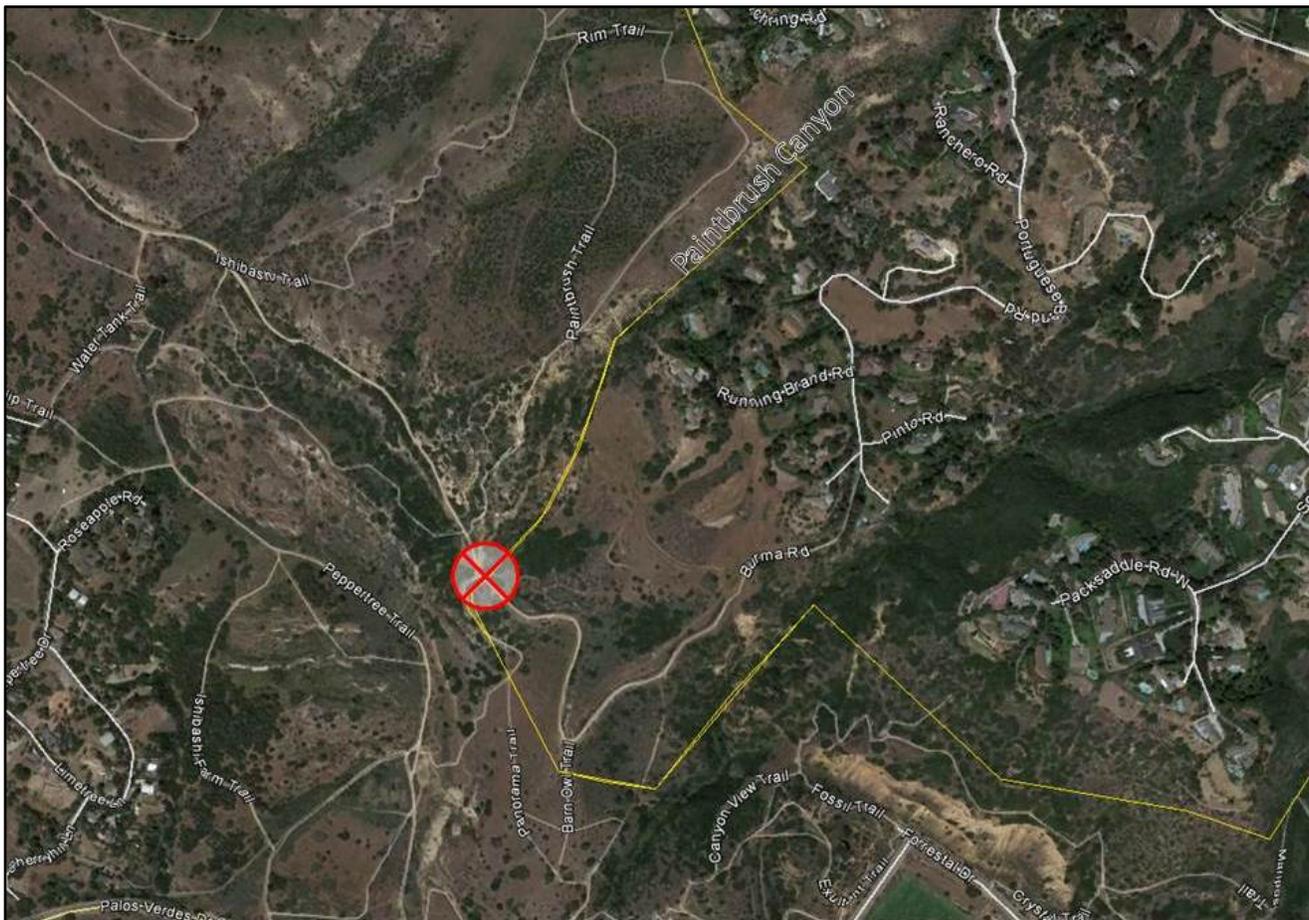
Monitoring Location ID: Paintbrush Canyon #1

Latitude: 33° 44' 44.4 N

Longitude: 118° 21' 30.5 W

Monitoring Location Description: Like Unnamed Canyon 1, Paintbrush Canyon is a challenge to assess from the City. However, a variety of trails near the outlet of the canyon make for easy access from the downstream end. In particular, Burma Road crosses the canyon's mouth immediately downstream of the City boundary. This road can be accessed on foot from a variety of trails (e.g., Panorama Trail). A trailhead is located off of Palos Verdes Dr South.

Aerial Photo



Attachment B:
Field Data Sheet



City of Rolling Hills

Non-Storm Water Screening and Monitoring Program

Field Data Sheet

Page _____ of _____

Inspector: _____

Date: _____

Monitoring Location: _____

Arrival Time: _____

Non-Storm Water Discharge Observed? Yes / No

Approximate Depth of Flow: _____

Approximate Width of Flow: _____

Approximate Flow Rate: _____

Sources of Non-Storm Water Discharge Observable? Yes / No

If Yes, Provide Description: _____

Other Noticeable Characteristics of Flow:

Odor: _____

Color/Clarity: _____

Floatingables: _____

Photo Log

Photo ID: Description:

_____	_____
_____	_____
_____	_____
_____	_____

Additional Notes: _____

