Peninsula CIMP Appendix I
Peninsula Outfall Screening Report

Peninsula Outfall Screening Report

May 2015

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1. INTRODUCTION

The Monitoring and Reporting Program (MRP) section of the Los Angeles Region Municipal Separate Storm Sewer System Permit (Order No. R4-2012-0175, "MS4 Permit") outlines a significant suite of requirements. The overarching purpose of the MRP is to assess chemical, physical, and biological impacts from the MS4 on receiving waters; assess compliance with Receiving Water Limitations (RWLs) and Water Quality Based Effluent Limits (WQBELs); characterize pollutant loads; identify sources of pollutants in MS4 discharges; and measure and improve the effectiveness of controls. In response to these requirements, the Palos Verdes Peninsula Watershed Management Group (Peninsula WMG) completed and submitted a watershed specific Coordinated Integrated Monitoring Program Plan (CIMP) to the Los Angeles Regional Water Quality Control Board on June 28, 2014.

Part of this program was to conduct the Non-stormwater (NSW) Outfall Screening Program, which is a multi-step process to identify and address significant non-stormwater discharges to the receiving water. These studies were conducted during dry weather and in the months of September through December of 2014.

2. REQUIREMENTS

The outfall screening process is intended to develop criteria or other means to ensure that all outfalls with significant nonstormwater discharges are identified and assessed during the term of the MS4 Permit. Following this screening process the Peninsula WMG will meet the following objectives (Part IX.A of the MRP):

1. For outfalls determined to have significant non-stormwater flow, determine whether flows are the result of Illicit Connection/Illicit Discharges (IC/IDs), authorized or conditionally exempt non-stormwater flows, natural flows, or from unknown sources.
2. Refer information related to identify IC/IDs to the IC/ID Elimination Program (Part VI.D.10 of the MS4 Permit) for appropriate action.
3. Based on existing screening or monitoring data or other institutional knowledge, assess the impact of non-stormwater discharges (other than identified IC/IDs) on the receiving water.
4. Prioritize monitoring of outfalls considering the potential threat to the receiving water and applicable TMDL compliance schedules.
5. Conduct monitoring or assess existing monitoring data to determine the impact of nonstormwater discharges on the receiving water.
6. Conduct monitoring or other investigations to identify the source of pollutants in nonstormwater discharges.
7. Use results of the screening process to evaluate the conditionally exempt nonstormwater discharges identified in Parts III.A.2 and III.A.3 of the MS4 Permit and take appropriate actions pursuant to Part III.A.4.d of the MS4 Permit for those discharges that have been found to be a source of pollutants. Any future reclassification shall occur per the conditions in Parts III.A.2 or III.A.6 of the MS4 Permit.
8. Maximize the use of resources by integrating the screening and monitoring process into existing or planned CIMP efforts.

3. GEOGRAPHICAL AREA

The participating agencies for this study were the cities of Rancho Palos Verdes, Rolling Hills Estates, and Palos Verdes Estates, the County of Los Angeles, and the Los Angeles County Flood Control District. The City of Rolling Hills, who is a party to the Peninsula CIMP, required a separate outfall screening within the Rolling Hills city boundary consistent with the City of Rolling Hills Non-Storm Water Screening and Monitoring Program, September 2014. Figure 1 below shows the outfall screening locations.

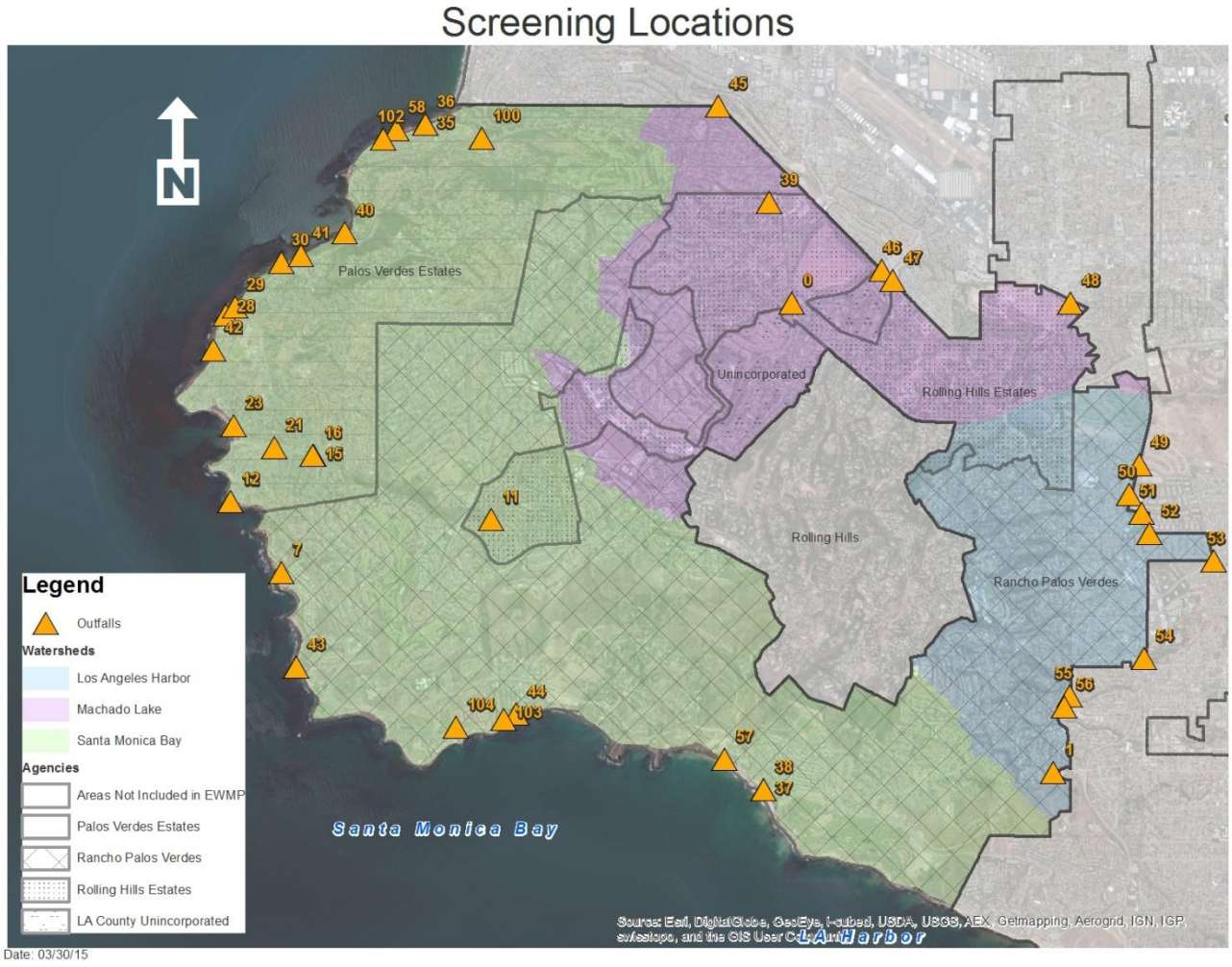

Figure 1: Palos Verdes Peninsula Outfall Screening Locations.

4. PROCEDURE

The outfall screening was conducted consistent with the procedure described in Section 4.2 of the Peninsula CIMP. All screenings were conducted only in dry weather with a minimum of 72 hours after any rain event of 0.1 inches or greater. Three rounds of outfall screenings were conducted within the months of September through December of 2014[1] with the first initial round of 40 outfalls greater than 36 inches in diameter. All measurements and observations were based on the following (See Appendix C for the Field Datasheet Forms):

a) Date, Time, Weather
b) Photos of outfall and receiving water
c) GPS coordinates of outfall
d) Physical descriptions of outfall, site condition, and accessibility
e) Discharge characteristics, such as odor and color
f) Presence of flow greater than trickle or no flow
g) Receiving water characteristics

Access to the Los Angeles County Flood Control District's right of way and storm drains were done with a Flood Control District Permit. A Company Health and Safety Plan was also prepared, signed, and carried to all outfall screening locations.

Outfall measurements were taken with a tape measure (see Figure 2). When certain access points were too deep or hazardous, a pre-measured pole with visible markings was used in lieu of a tape measure and photos were taken to determine the diameter without risking injury. For accessible outfalls, the outfall specifics were written on a dry-erase board and photographed.

Figure 2: Outfall measurement process.

Certain locations were too hazardous or difficult to access and could not be physically measured. For example, the outfalls located on the cliffs in the Santa Monica Bay Watershed (e.g. Outfall ID_7) and manhole covers located in the middle of traffic lanes.

[1] Outfall screening was performed with an expedited schedule to ensure that the source investigation could be conducted on schedule (25% by December 2015 and 100% by December 2017). Rescreening will occur during different seasons, as feasible.

5. Observations and Results

Outfalls with non-significant stormwater discharges (NSWD) were labeled as either "no flow" or "trickle flow," whereas the outfalls with more significant flow were indicated as either "moderate flow" or "substantial flow." See figures below for representative pictures for each condition.

Figure 3: Outfall ID 44 with no flow.

Figure 4: Outfall ID 41 with trickle flow.

Figure 5: Outfall ID 57 with moderate flow.

Figure 6: Outfall ID 100 with Substantial Flow.

Latitude and longitude coordinates from all locations were recorded and entered into a GIS database to be geographically linked to maps. All other data (i.e. addresses, time of day, photographs, etc.) were placed in an outfall database (See Appendix A).

Table 1 below shows the results of the first outfall screening round. Pictures can be found in Appendix B.

Table 1: Outfall screening first round results (September 12, 2014 - December 10, 2014).

Flow Measurement	Santa Monica Bay	LA Harbor	Machado Lake	Total
Substantial flow	1	0	0	1
Moderate Flow	3	2	1	6
Trickle flow	10	1	0	11
No flow	11	5	5	21
Unknown	0	1	0	1
Total Outfalls	**25**	**9**	**6**	**40**

The outfalls identified as having more than a trickle flow were screened on two additional dry weather occasions. These are considered "Significant Outfall" locations. Additionally, the outfall at Rolling Hills Estates City Hall is (RHE City Hall) is known to have substantial flow as observed during more than three years of monitoring as reported by the Peninsula Cities in the 2011-12, 2012-13, and 2013-14 Yearly Stormwater Monitoring Reports for the Machado Lake Nutrient TMDL. Therefore, this location is considered a Significant Outfall, but was excluded from the screening process. No observed flows reached the wave wash during any of the three screening events. Table 2 shows the screening results for each of the Significant Outfalls. Figure 7 identifies the locations of the Significant Outfalls.

Table 2: Significant Nonstormwater Outfall Screening Results.[2]

Outfall ID	Latitude	Longitude	Nearest Major Intersection/Closest Accessible Street Address	City	Receiving Water	Flow Results
100	33.8016	-118.3908	Palos Verdes Drive W and Via Corta (300 Via Corta)	PVE	Santa Monica Bay	09/12/14 – Substantial 11/25/14 – Substantial 12/10/14 – Substantial
43	33.7464	-118.4131	PV Drive W and Via Vicente (end of Pacifica del Mar)	RPV	Santa Monica Bay	09/17/14 – Moderate 11/25/14 – No Flow 12/10/14 – Moderate
57	33.7372	-118.3609	Palos Verdes Dr S and Yacht Harbor Dr (44 Seawall Rd)	RPV	Santa Monica Bay	09/17/14 – Moderate 11/25/14 – Moderate 12/10/14 – Moderate
53	33.7577	-118.3010	Between W Capitol Dr and Bloomwood Dr	RPV	LA Harbor	10/02/14 – Moderate 11/25/14 – Moderate 12/10/14 – Moderate
50	33.7645	-118.3114	Western Ave and Delasonde Dr (28020 Pontevedra Dr)	RPV	LA Harbor	10/02/14 – Moderate 11/25/14 – Moderate 12/10/14 – Moderate
48	33.7841	-118.3186	Palos Verdes Dr E and Bridlewood Circle (along Bridlewood Trail)	RHE	Machado Lake	09/17/14 – Moderate 11/25/14 – No Flow 12/10/14 – Moderate

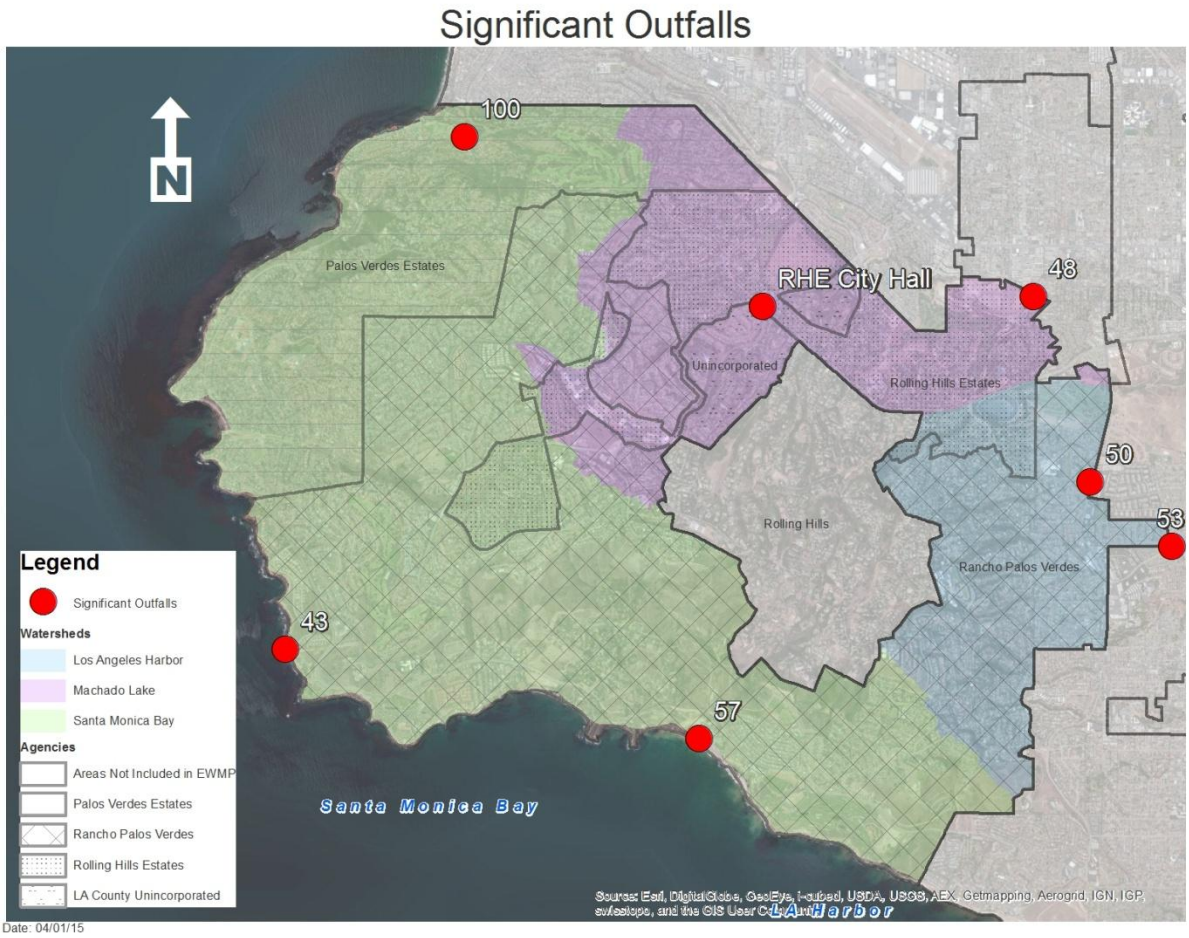

Figure 7: Significant Nonstormwater Outfall Locations.

Out of the remaining outfalls that required follow-up screenings, the NSW discharges comprised of either unknown or conditionally exempt non-essential discharges or potential illicit discharges. Potential sources considered exempt non-essential discharges include natural groundwater. According to local residents, business owners, and city officials, this area is known to have high groundwater which commonly seeps into streams, channels, and canyons. One particular outfall, ID 100, was found to have heavy flow, thick vegetation, no odor and no signs of trash. This outfall is suspected to have natural groundwater. Other unknown sources, such as an outfall, ID 57, showed significant indicators such as odor and visual stains that will trigger further investigation.

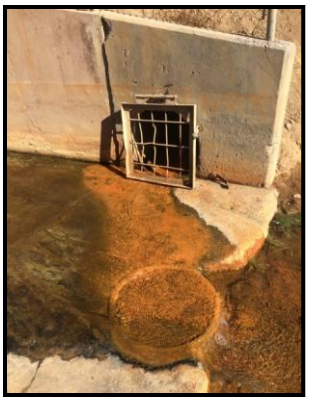

Figure 8: Outfall ID 57 with moderate flow requiring additional investigation.

6. Alternate Outfall Locations

There were 5 outfall locations which were too hazardous to screen or take accurate measurements. Hazards and obstacles that deterred the outfall screening included conditions such as steep cliffs, tidal changes, bio-hazardous conditions, and slippery surfaces. Alternate upstream monitoring locations were selected for four of the five outfalls that were too hazardous to screen (see Figure 9 and Figure 10 below).

Figure 9: Outfall location.

Figure 10: Alternate monitoring location.

Table 3 below provides a list of each outfall location identified as being too hazardous to sample. The only location without an alternate was ID 49 which was inaccessible due to construction activities.

Table 3: Alternate outfall locations.

Outfall ID	Outfall Location	Hazard/Restriction	Alternate Location
ID 1	Residential area	Steep canyon	998 Friendship Park Dr.
ID 7	Rocky shore	Steep cliffs	Upstream SD manhole
ID 49	Construction Zone	No access	No access due to construction
ID 58	Rocky shore	High tide/Steep cliffs	Upstream SD manhole
ID 100	Malaga Creek	Heavy vegetation	Upstream SD manhole

7. NEXT STEPS

From the total of 40 outfalls that were screened, six (6) were considered to be more than a trickle flow. In addition, the outfall at RHE City Hall is known to have substantial flow. These seven (7) outfalls will require follow-up source investigations. The significant NSW outfalls are summarized in Table 2. The summary of results is based on the measurements of outfalls from the cities of Rancho Palos Verdes, Rolling Hills Estates, and Palos Verdes Estates, and the County of Los Angeles.

Since there are unknown sources of NSW in the Palos Verdes Peninsula, there will be a complete source investigation for 25%, approximately two (2), of the seven (7) outfalls by December 28, 2015, and 100% by the end of 2017. As required by the MRP Section IX.E.2 of the MS4 Permit, If it is determined that a source of significant non-stormwater discharges is comprised of unknown or conditionally exempt or illicit discharges, then monitoring will begin within 90 days of completing the source investigation or after the CIMP has been approved by the EO, whichever is later. Source control and monitoring procedures will follow those outlined in the Peninsula CIMP.

Appendix A
Outfall Database

Outfall Screening Event Number 1

Outfall ID	Size	Latitude	Longitude	Nearest Major Intersection/Closest Accessible Street Address	Agency	Receiving Water	Photo ID	Flow category	Date of Screening	Further Source ID	Notes
0	18"	33.784054	-118.352886	Crenshaw Blvd/PV Drive N - Chandler Park	RHE	Machado Lake	ID_0_10-1-14	No flow	10/1/2015	N	No flow from MH. Size "18." Pipe runs vertical. Inspectors CS,HG.
1	NA	33.735958	-118.320597	Chandeleur Dr and Rue le Charlene - Averil Canyon Creek	RPV	LA Harbor	ID_1_10-2-14	No flow	10/2/2015	N	No access. Located behind homes in canyon. No flow downstream. Inspectors CS,HG.
7	N/A	33.756221	-118.415305	PV Drive W and Calle Entradero (End of Marguerite Dr.)	RPV	Santa Monica Bay	ID_7_9-17-14	Trickle Flow	9/17/2015	N	Trickle flow Hard to access. No measurements. Gate locked. Inspectors JR, HG.
11	NA	33.76169	-118.389611	Hawthorne and Crest Rd (End of Santa Cruz)	RHE	Santa Monica Bay	ID_11_11-25-14	No flow	11/25/2015	N	No flow near club house. Open channel, difficult to get measurements. Inspectors JR, MG
12	48"	33.762844	-118.418894	Paseo del Mar and Via Segovia (2809 Via Segovia)	PVE	Santa Monica Bay	ID_12_9-17-14	No flow	9/17/2014	N	No Flow. Inhabited by Cattail. Algae present after box. Pounding present. Inspectors JR, HG.
15	36"	33.768195	-118.411425	Paseo Lunado and Via Rivera (2630 Via Rivera)	PVE	Santa Monica Bay	ID_15_9-12-14	Trickle Flow	9/12/2014	N	Inside grate gate. 36 inch. Diameter. Wet ground no significant flow. Graffiti. Inspectors JR, CS.
16	66"	33.768213	-118.411505	Paseo Lunado and Via Rivera (2630 Via Rivera)	PVE	Santa Monica Bay	ID_16_9-12-14	Trickle Flow	9/12/2014	N	Inside grate gate. 67 inch. Diameter. Wet ground no significant flow. Graffiti. Inspectors JR, CS.
21	NA	33.769014	-118.416261	Paseo del Mar and Via Anacapa (2821 Via Anacapa)	PVE	Santa Monica Bay	ID_21_9-12-14	No flow	9/12/2014	N	Locked gate Could not get measurements. Inspectors JR, CS.
23	36"	33.771235	-118.421206	Paseo del Mar and Via Bandini (2499 Paseo del Mar)	PVE	Santa Monica Bay	ID_23_9-12-14	No flow	9/12/2014	N	Could not access from outlet because the area is filled with water. Took measurements from catch basin pipe which was 36 inches and no flow was observed. Inspectors JR,CS.
28	86" x 77"	33.782599	-118.422198	Paseo del Mar and Cloyden Rd (end of Cloyden Rd - Drainage Pipe Trail)	PVE	Santa Monica Bay	ID_28_9-12-14	Trickle Flow	9/12/2014	N	Trickle flow. End of Drain Pipe Trail. Some trash, graffiti, algae, and a small pond of water. Grate gate could not take measurement of pipe but the rectangle box height was 86" and length 77". Inspectors JR, CS.
29	44"	33.784943	-118.419984	Paseo del Mar and Cloyden Rd (end of Cloyden Path) (1733 Paseo del Mar)	PVE	Santa Monica Bay	ID_29_9-12-14	Trickle Flow	9/12/2014	N	Trickle flow Inside grate gate. 44 inch Diameter. Inspectors JR, CS.
30	42"	33.787964	-118.415445	Paseo del Mar and Chelsea Road	PVE	Santa Monica Bay	ID_30_9-17-14	No flow	9/17/2014	N	No flow, graffiti present, 42 inches. Inspectors JR, HG.
35	48	33.80225	-118.397889	Paseo del Mar and Via Arroyo (just south of the Beach and Athletic Club)	PVE	Santa Monica Bay	ID_35_36_9-12-14	Trickle Flow	9/12/2014	N	Only one outlet notes have two listed Trickle flow, ponding water maybe from hide tide. Site has a gate. Some algae present. Inspectors JR, CS .

Outfall Screening Event Number 1

Outfall ID	Size	Latitude	Longitude	Nearest Major Intersection/Closest Accessible Street Address	Agency	Receiving Water	Photo ID	Flow category	Date of Screening	Further Source ID	Notes
36	48	33.80225	-118.397889	Paseo del Mar and Via Arroyo (just south of the Beach and Athletic Club)	PVE	Santa Monica Bay	ID_35_36_9-12-15	Trickle Flow	9/12/2014	N	Only one outlet notes have two listed Trickle flow, ponding water maybe from hide tide. Site has a gate. Some algae present. Inspectors JR, CS.
37	52"	33.73446	-118.354928	Palos Verdes Dr. S and Yacht Harbor Dr (3 Yacht Harbor Dr)	RPV	Santa Monica Bay	ID_37_38_9-17-14	No flow	9/17/2014	N	No Flow 52 inches, Fenced area near security post. Only one outlet. Inspectors JR, HG.
39	82" x 96"	33.794416	-118.354575	Hawthorne Blvd and PV Drive N (end of Sugarhill Dr)	RHE	Machado Lake	ID_39_10-1-14	No flow	10/1/2014	N	No flow from pipe outlet. Channel had algae present. Located in private property (Rancho Del Canyon). Inspectors CS, HG.
40	36"	33.790918	-118.408247	Palos Verdes Dr W (Bluff Cove Shoreline)	PVE	Santa Monica Bay	ID_40_9-17-14	No flow	9/17/2014	N	No Flow, 36 inches. Feces present. Long hike to access point. Inspectors JR, HG
41	60"	33.788707	-118.413004	Paseo del Mar and Chiswick Rd.	PVE	Santa Monica Bay	ID_41_9-17-14	Trickle Flow	9/17/2014	N	Trickle flow, 60 inches. Tide reaches outlet. Inspectors JR, HG.
42	>36"	33.778371	-118.424206	Paseo del Mar and Epping Rd	PVE	Santa Monica Bay	ID_42_9-12-14	Trickle Flow	9/12/2014	N	Site has a gate. Accurate measurements could not be obtained but definitely bigger than 36". Some trash, graffiti, and algae. Drainage pipe out of cliff. No access. Inspectors JR, CS.
43	N/A	33.746404	-118.413135	PV Drive W and Via Vicente (end of Pacifica del Mar)	RPV	Santa Monica Bay	ID_43_9-17-14	Moderate	9/17/2014	Y	Outlet difficult to access. Moderate flow present. Soap suds present. MH was access on Pacific Del Mar. Inspectors JR, HG.
44	53"	33.742301	-118.387024	PV Drive S and Seacoast Dr (21 Barkentine Rd)	RPV	Santa Monica Bay	ID_44_9-17-14	No flow	9/17/2015	N	No flow 53 inches. Inspectors JR, HG
45	18" x 11"	33.804201	-118.361916	Paseo de las Tortugas and Via el Sereno (4401 Paseo de las Tortugas) (along Boundary Trail)	PVE	Machado Lake	ID_45_10-1-14	No flow	10/1/2014	N	No flow, 18" x 11". Alternative outfall located near curb inlet, 17". Inspectors CS, HG
46	29"	33.787394	-118.341851	Crenshaw Blvd and Rolling Hills Rd	County UNK	Machado Lake	ID_46_10-1-14	No flow	10/1/2014	N	No flow, Catch Basin. Inspectors CS, HG.
47	NA	33.786369	-118.340475	Crenshaw Blvd and Rolling Hills Rd (26198 Rolling Hills Rd)	County UNK	Machado Lake	ID_47_12-10-14	No flow	12/10/2014	N	No flow, MH in the middle of traffic lane. Sampling tube tied to steps. Inspectors JR, CS.
48	25"	33.784153	-118.318644	Palos Verdes Dr E and Bridlewood Circle (along Bridlewood Trail)	RHE	Machado Lake	ID_48_10-1-14	Moderate	10/1/2014	Y	Moderate flow inside private property. Fertilizer odor. Inspectors CS, HG.
49	N/A	33.767523	-118.310145	Western Ave and Redondela Dr	RPV	LA Harbor	ID_49_10-2-14	NA	10/2/2014	Y	Inside fence area no access. Inspectors CS, HG.
50	60"	33.764504	-118.311436	Western Ave and Delasonde Dr (28020 Pontevedra Dr)	RPV	LA Harbor	ID_50_10-2-14	Moderate	10/2/2014	Y	Moderate flow MH, 60 inches. Inspectors CS, HG.

Outfall Screening Event Number 1

Outfall ID	Size	Latitude	Longitude	Nearest Major Intersection/Closest Accessible Street Address	Agency	Receiving Water	Photo ID	Flow category	Date of Screening	Further Source ID	Notes
51	18"	33.762613	-118.309869	Western Ave and Westmont Dr (N side of Eastview Park)	RPV	LA Harbor	ID_51_10-1-14	No flow	10/1/2014	N	No flow, leave litter. Inspectors CS, HG.
52	12"	33.760522	-118.308924	Western Ave and Westmont Dr (SW side of Eastview Park)	RPV	LA Harbor	ID_52_10-1-14	No flow	10/1/2014	N	No flow, 12 inches. Located between housing and apartment complex. Inspectors CS, HG.
53	6' by 12'	33.757753	-118.301026	Between W Capitol Dr and Bloomwood Dr	RPV	LA Harbor	ID_53_10-2-14	Moderate	10/2/2014	Y	Moderate flow, Garbage odor, trash sediment, No access locked gate. MH on street has access to outfall. 6' H x 12' W. Inspectors CS, HG.
54	18"	33.747632	-118.309669	Western Ave and Summerland (SE side of Peck Park)	RPV	LA Harbor	ID_54_10-2-14	Trickle Flow	10/2/2014	N	Trickle flow, 18 inches. Inspectors CS, HG.
55	48"	33.743791	-118.318581	S Miraleste Dr and W 1st St (30100 Miraleste Dr)	RPV	LA Harbor	ID_55_10-2-14	No flow	10/2/2014	N	No flow, graffiti present, 48 inches. Inspectors CS, HG.
56	24"	33.742659	-118.319299	S Miraleste Dr and W 1st St (4375 S Miraleste Dr)	RPV	LA Harbor	ID_56_10-2-14	No flow	10/2/2014	N	No flow, 24 inches, faint feces smell, some sediment. Inspectors CS,HG.
58	36"	33.801659	-118.401444	Paseo del Mar and Via Aromitas (just south of Neighborhood Church)	PVE	Santa Monica Bay	ID_58_11-25-14	No flow	9/12/2014	N	High tide difficult to get to. Phone got wet near this location. 36 inches will need picture from next schedule screening. Inspectors JR, CS.
100	N/A	33.801624	-118.390813	Palos Verdes Drive W and Via Corta (300 Via Corta)	PVE	Santa Monica Bay	ID_100_9-12-14	Substantial	9/12/2014	Y	Substantial flow to Malaga Canyon, heavy vegetation and would need to cross stream to get measurements. The outfall across was dry. Inspectors JR, CS.
102	48"	33.800741	-118.40306	Paseo del Mar and Via Chino	PVE	Santa Monica Bay	ID_102_9-12-14	Trickle Flow	9/12/2014	N	Trickle flow, outlet was 48 inches. Big trapezoidal box with some litter and graffiti. Inspectors JR,CS.
103	65"	33.740532	-118.387692	32079 Sea Gate Dr.	RPV	Santa Monica Bay	ID_103_9-17-14	No flow	9/17/2014	N	No flow 65", Graffiti inside outlet. Inspectors JR, HG.
104	60"	33.740065	-118.39395	32636 Nantasket Dr	RPV	Santa Monica Bay	ID_104_9-17-14	No flow	9/17/2014	N	No flow 60". Inside golf course. Algae bloom. Pounding water. Inspectors JR, HG.
57 A	48"	33.737229	-118.360913	Palos Verdes Dr S and Yacht Harbor Dr (44 Seawall Rd)	RPV	Santa Monica Bay	ID_57_9-17-14	Moderate	9/17/2014	Y	Moderate flow from two outlets 32" and 48". Foul odor. Water colorless but heavy brown stain present. Spoke with Kristen Lenders, (Yacht resident). Inspectors JR, HG.
57 B	32"	33.737229	-118.360913	Palos Verdes Dr S and Yacht Harbor Dr (44 Seawall Rd)	RPV	Santa Monica Bay	ID_57_9-17-15	Moderate	9/18/2014	Y	Moderate flow from two outlets 32" and 48". Foul odor. Water colorless but heavy brown stain present. Spoke with Kristen Lenders, (Yacht resident). Inspectors JR, HG.

Outfall Screening Event Number 2

Outfall ID	Size	latitude	longitude	Nearest Major Intersection/Closest Accessible Street Address	Agency	Receiving Water	Photo ID	Flow category	Date of Screening	Further Source ID	Notes
43	N/A	33.746404	-118.413135	PV Drive W and Via Vicente (end of Pacifica del Mar)	RPV	Santa Monica Bay	ID_43_11-25-14	No flow	11/24/2014	Y	Outlet difficult to access. No Flow but CB had traces of discharge. MH was access on Pacific Del Mar. Inspectors JR, MG.
48	25"	33.784153	-118.318644	Palos Verdes Dr E and Bridlewood Circle (along Bridlewood Trail)	RHE	Machado Lake	ID_48_11-25-14	No flow	11/24/2014	Y	No flow from MH on Oak st. Inspectors JR, MG.
50	60"	33.764504	-118.311436	Western Ave and Delasonde Dr (28020 Pontevedra Dr)	RPV	LA Harbor	ID_50_11-25-14	Moderate flow	11/24/2014	Y	Moderate flow MH, 60 inches. Inspectors JR, MG.
53	6' by 12'	33.757753	-118.301026	Between W Capitol Dr and Bloomwood Dr	RPV	LA Harbor	ID_53_11-25-14	Moderate flow	11/24/2014	Y	Moderate flow, from open channel. Inspectors JR, MG.
57A	48"	33.737229	-118.360913	Palos Verdes Dr S and Yacht Harbor Dr (44 Seawall Rd)	RPV	Santa Monica Bay	ID_57_11-25-14	Moderate flow	11/24/2014	Y	Moderate flow from two outlets 32" and 48". Foul odor. Water colorless but heavy brown stain present. Inspectors JR, MG.
57B	32"	33.737229	-118.360913	Palos Verdes Dr S and Yacht Harbor Dr (44 Seawall Rd)	RPV	Santa Monica Bay	ID_57_11-25-14	Moderate flow	11/24/2014	Y	Moderate flow from two outlets 32" and 48". Foul odor. Water colorless but heavy brown stain present. Inspectors JR, MG.
100	NA	33.801624	-118.390813	Palos Verdes Drive W and Via Corta (300 Via Corta)	PVE	Santa Monica Bay	ID_100_11-25-14	Substantial flow	11/24/2014	Y	Substantial flow to Malaga Canyon, heavy vegetation The outfall across was dry. Inspectors JR, MG.

Outfall Screening Event Number 3

Outfall ID	Size	latitude	longitude	Nearest Major Intersection/Closest Accessible Street Address	Agency	Receiving Water	Photo ID	Flow category	Date of Screening	Further Source ID	Notes
43	N/A	33.746404	-118.413135	PV Drive W and Via Vicente (end of Pacifica del Mar)	RPV	Santa Monica Bay	ID_43_12-10-14	Moderate flow	12/10/2014	Y	Outlet difficult to access. Moderate flow but CB . MH was access on Pacific Del Mar. Inspectors JR, CS.
48	25"	33.784153	-118.318644	Palos Verdes Dr E and Bridlewood Circle (along Bridlewood Trail)	RHE	Machado Lake	ID_48_12-10-14	Moderate flow	12/10/2014	Y	Moderate flow from MH on Oak st. Inspectors JR, CS.
50	60"	33.764504	-118.311436	Western Ave and Delasonde Dr (28020 Pontevedra Dr)	RPV	LA Harbor	ID_50_12-10-14	Moderate flow	12/10/2014	Y	Moderate flow MH, 60 inches. Inspectors JR, CS.
53	6' by 12'	33.757753	-118.301026	Between W Capitol Dr and Bloomwood Dr	RPV	LA Harbor	ID_53_12-10-14	Moderate flow	12/10/2014	Y	Moderate flow from open channel. Inspectors JR, CS.
57A	48"	33.737229	-118.360913	Palos Verdes Dr S and Yacht Harbor Dr (44 Seawall Rd)	RPV	Santa Monica Bay	ID_57_12-10-14	Moderate flow	12/10/2014	Y	Moderate flow from two outlets 32" and 48". Foul odor. Water colorless but heavy brown stain present. pH 7. Inspectors JR, CS.
57B	32"	33.737229	-118.360913	Palos Verdes Dr S and Yacht Harbor Dr (44 Seawall Rd)	RPV	Santa Monica Bay	ID_57_12-10-14	Moderate flow	12/10/2014	Y	Moderate flow from two outlets 32" and 48". Foul odor. Water colorless but heavy brown stain present. pH 7. Inspectors JR, CS.
100	NA	33.801624	-118.390813	Palos Verdes Drive W and Via Corta (300 Via Corta)	PVE	Santa Monica Bay	ID_100_12-10-14	Substantial flow	12/10/2014	Y	Substantial flow to Malaga Canyon, heavy vegetation The outfall across was dry. Spoke with Antonia Graeber-Director of Town & Country Nursery school (310) 375-2829. She stated that the discharge from the outfall is from natural spring water. Inspectors JR, CS.

Appendix B
Outfall Pictures

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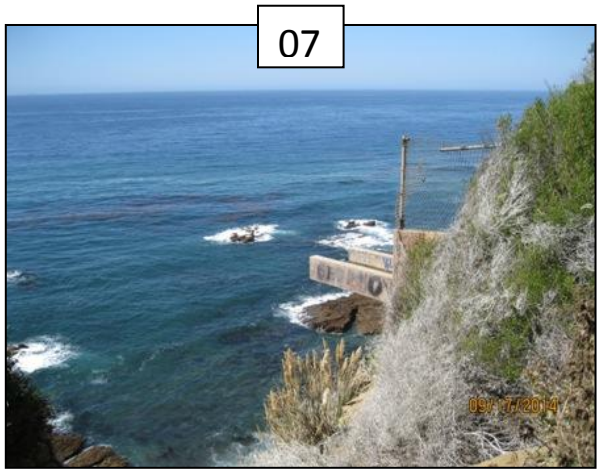

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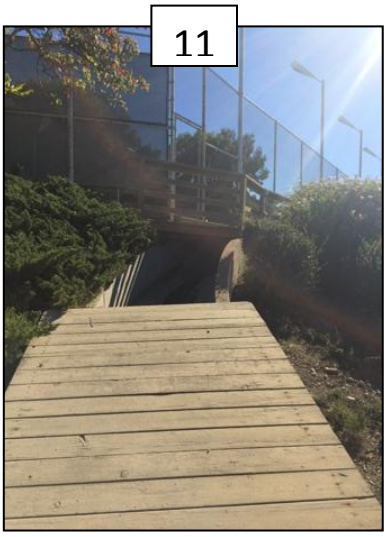

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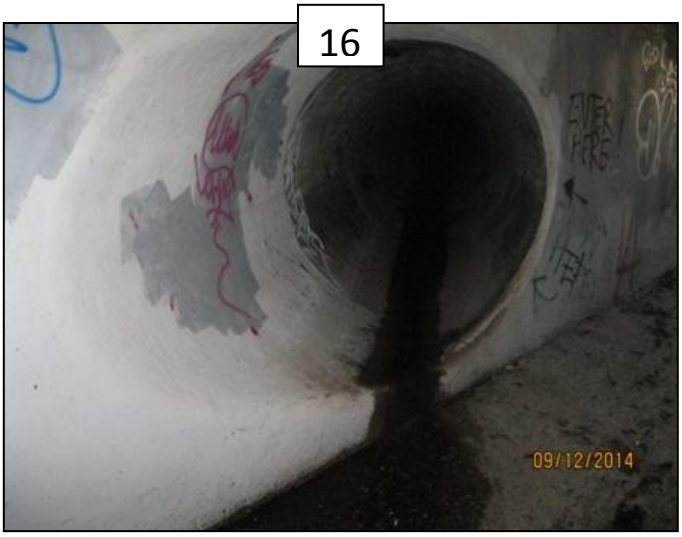

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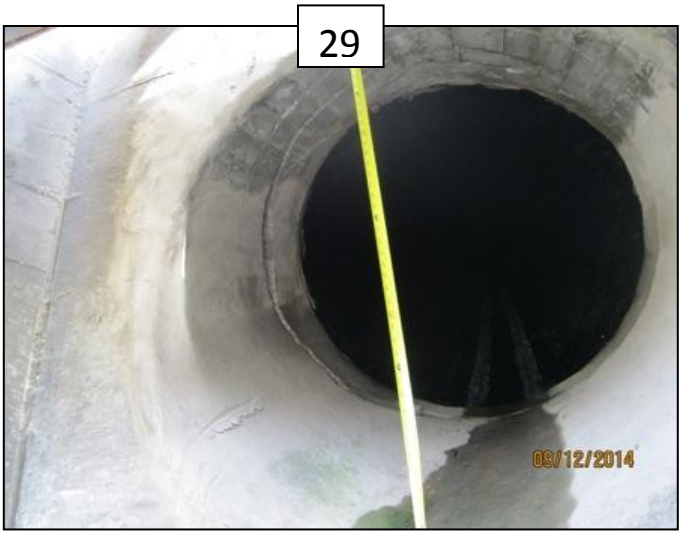

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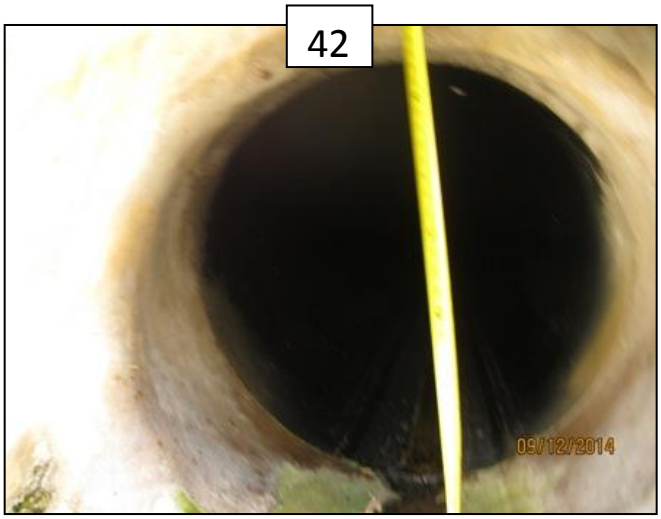

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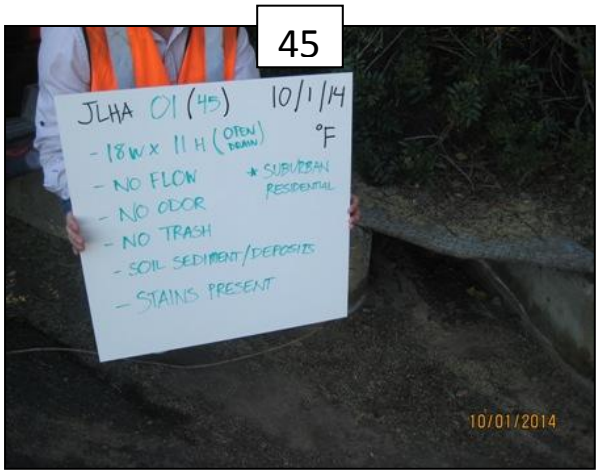

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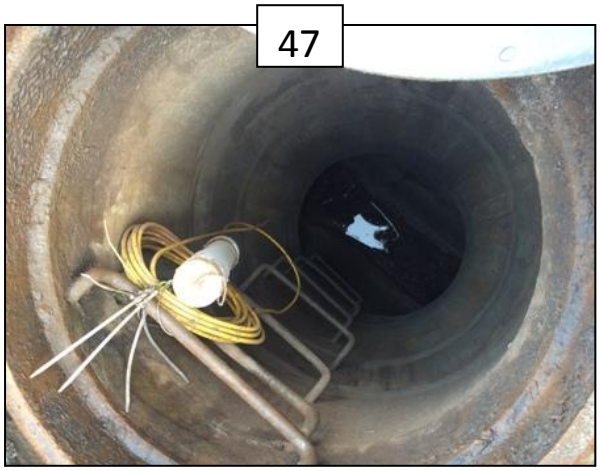

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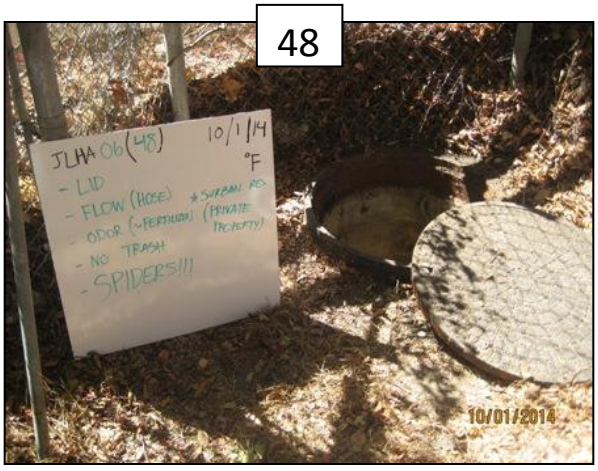

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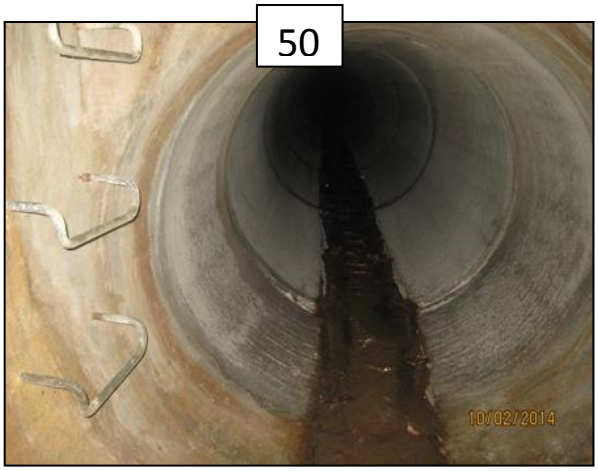

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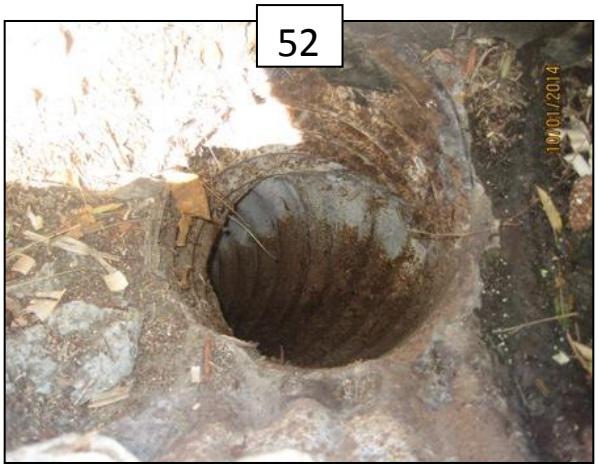

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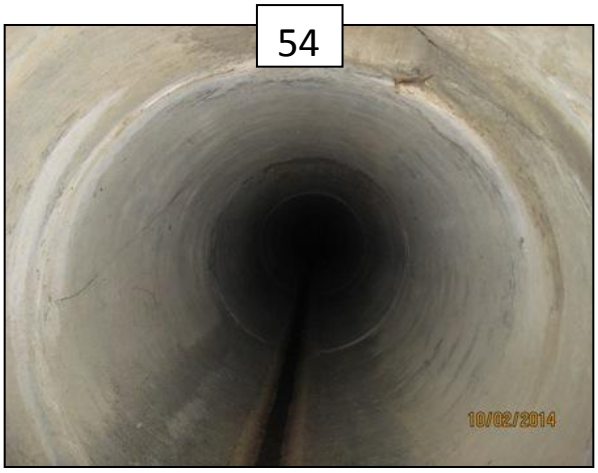

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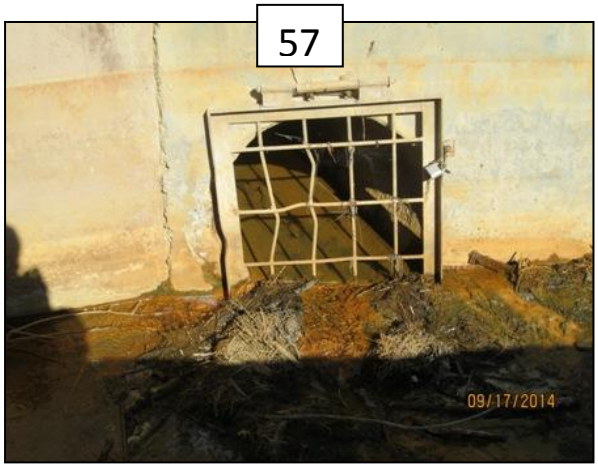

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Appendix C
Outfall Screening Field Datasheet Forms

OUTFALL RECONNAISSANCE INVENTORY/ SAMPLE COLLECTION FIELD SHEET

Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.): Last 24 hours: Last 48 hours:		
Latitutde:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	

Land Use in Drainage Area (Check all that apply):

☐ Industrial ☐ Open Space

☐ Ultra-Urban Residential ☐ Institutional

☐ Suburban Residential Other: _____

☐ Commercial Known Industries: _____

Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ **Closed Pipe**	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Eliptical ☐ Box ☐ Other: _____	☐ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: _____	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ **Open drainage**	☐ Concrete ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
☐ **In-Stream**	**(applicable when collecting samples)**				
Flow Present?	☐ Yes ☐ No	***If No, Skip to Section 5***			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial				

Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER		**RESULT**	**UNIT**	**EQUIPMENT**
☐Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
☐Flow #2	Flow depth		In	Tape measure
	Flow width	_____' _____"	Ft, In	Tape measure
	Measured length	_____' _____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature			°F	Thermometer
pH			pH Units	Test strip/Probe
Ammonia			mg/L	Test strip

Outfall Reconnaissance Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in sample bottle	☐ 2 – Clearly visible in sample bottle	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Overall Outfall Characterization

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Data Collection

1.	Sample for the lab?	☐ Yes	☐ No	
2.	If yes, collected from:	☐ Flow	☐ Pool	
3.	Intermittent flow trap set?	☐ Yes	☐ No	If Yes, type: ☐ OBM ☐ Caulk dam

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?