cleanwater
PROGRAM

Protecting Alameda County Creeks, Wetlands & the Bay

February 1, 2014

Mr. Bruce Wolfe
Executive Officer
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland CA 94612

399 Elmhurst St.
Hayward, CA
94544
p. 510-670-5543

Dear Bruce:

SUBJECT: **SUBMITTAL OF THE ALAMEDA COUNTYWIDE CLEAN WATER PROGRAM PILOT [TRASH] ASSESSMENT STRATEGY**

As you know, various submission and reporting provisions of the Municipal Regional Stormwater Permit (MRP) authorize Permittee implementation and compliance through coordination of the countywide stormwater programs. The member agency Permittees of the Alameda Countywide Clean Water Program (ACCWP) through their Management Committee, and in conformance with the Memorandum of Agreement signed by their governing bodies, have authorized and directed me to prepare and submit certain reports as part of their compliance with submission of MRP required reports.

Therefore, with this letter, I am submitting this ACCWP Pilot Assessment Strategy on behalf of and for the benefit of the ACCWP member agency Permittees. By signing this letter on behalf of ACCWP, I certify under penalty of law that these documents and all attachments are 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 managed 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 fine imprisonment of knowing violations. [40 CFR 122.22(d)].

Sincerely,

James Scanlin
Program Manager

Attachment: ACCWP Pilot Assessment Strategy

MEMBER AGENCIES:
Alameda
Albany
Berkeley
Dublin
Emeryville
Fremont
Hayward
Livermore
Newark
Oakland
Piedmont
Pleasanton
San Leandro
Union City
County of Alameda
Alameda County Flood Control and Water Conservation District
Zone 7 Water Agency

ALAMEDA COUNTYWIDE CLEAN WATER PROGRAM PILOT ASSESSMENT STRATEGY

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1.0 Introduction

Provision C.10.a.ii of the Municipal Regional Permit (MRP) requires population-based Permittees to develop and implement a trash load reduction tracking method that will be used to account for trash load reduction actions and to demonstrate progress toward the trash load reduction targets. The fifteen population-based Permittees within Alameda County (14 cities and the unincorporated area) included a summary of their approach to assessing trash reductions within their jurisdictions in their Long-Term Trash Load Reduction Plans (Long-Term Plans). Section 4 of those Long-Term Plans describe each Permittee's approach to assessment, and include a reference to this ACCWP Pilot Assessment Strategy (Strategy). This Strategy is submitted on behalf of the population-based Permittees (Permittees), and is part of their overall approach to assessing the effectiveness of their trash reduction efforts. The Strategy describes the efforts to be conducted by the Alameda Countywide Clean Water Program (Program or ACCWP) to assist the Program's member agencies in evaluating the effectiveness of their Long-Term Plans.

Management Questions

The implementation of this Strategy in conjunction with the assessment efforts of individual Permittees is intended to answer the following management questions:

Are specific control measures effective?
Is the amount of trash in and along local waterways declining?
Are control measures being implemented appropriately?

Indicators of Progress and Success

To track progress, both outcome and output indicators will be assessed. Outcome-based indicators are those that measure the result of litter reduction efforts. This type of indicator could include measurements of litter in and around the storm drain system or local water bodies. Output-based indicators are those that assess the implementation of control measures. Indicators that ACCWP Permittees will use to answer the management questions include:

Outcome-Based Indicators:
Amount of single-use plastic bags, expanded polystyrene food ware, and other litter in storm drains
Amount of litter removed from cleanup events
Amount of litter at schools participating in the Anti-Litter Outreach to K-12 Schools project
Amount of litter at multi-family dwellings participating in the pilot project
Self-reported litter related attitude and behavior of residents

Output-Based Indicators:
Full capture device operation and maintenance
Compliance with the Single-Use Bag Ban
Implementation of an effective street sweeping program
Commercial/Residential Trash Management

2.0 Outcome-Based Indicators

Storm Drain Trash Characterization Project

The most direct way to measure the effectiveness of the Permittees' trash reduction efforts is to measure changes in the amount of trash entering the storm drain system and local receiving waters over time, and, preferably, to measure at the same locations repeatedly. The Permittees will measure the amount of trash entering their storm drain systems through the implementation of the Storm Drain Trash Characterization Project (Characterization Project). The Characterization Project is useful for measuring the effectiveness of source control activities such as product bans, on-land cleanups, and public outreach. The overall effectiveness of the Permittees activities, including the use of full trash capture devices, will be assessed through the creek/shoreline cleanup assessments and the trash flux monitoring study described in the relevant sections below.

ACCWP participated in the development of the Bay Area Stormwater Management Agencies Association (BASMAA) Preliminary Baseline Trash Generation Rates for San Francisco Bay Area MS4s (BASMAA Baseline Study). A total of 47 drop inlet full trash capture devices located throughout Alameda County as well as over 100 other drop inlet full trash capture devices from throughout the Bay Area were included in the study. The draft Sampling and Analysis Plan (SAP) for the Characterization Project (included in Appendix A) proposes to re-sample 43 of those inlets as well as 57 other inlets throughout the County. (Table 2 in the SAP lists the proposed sites.) The BASMAA Baseline Study included an assessment of the volume and number of single-use plastic bags, disposable expanded polystyrene food ware, other plastics, and all other trash. The ACCWP Characterization Project will expand the study to also include an assessment of the volume and number of disposable rigid plastic food ware items, and cigarette butts. The first round of sampling is planned for February through May of this year (2014) with the report to be completed by July 2014 for inclusion in the ACCWP 2013/14 Annual Report. A second round of sampling is planned for 2017. The objectives of the this first round of sampling are to assess the effectiveness of the Countywide Single-Use Bag Ban, assess the effectiveness of the expanded polystyrene food ware bans that have been adopted by jurisdictions within the County, and to develop a more robust characterization of the current level of trash entering storm drains in Alameda County.

Single-Use Bag Ban: After the conclusion of the BASMAA Baseline Study, the Alameda County Waste Management Authority adopted the Single-Use Bag Ban. As of January 1, 2013, all grocery stores, supermarkets, mini-marts, convenience stores, liquor stores, pharmacies, drug stores or other entities that sell milk, bread, soda and snack foods (all four items) and/or alcohol (Type 20 or21 license) in Alameda County must comply with the Single-Use Bag Ban Ordinance. Affected stores may no longer provide customers with single-use bags at check-out.

Bag Sales Requirements:

- Affected stores that distribute recycled paper or reusable bags must charge a minimum of 10 cents per bag. These bags must meet the specifications in the Ordinance.
- All proceeds from the sale of recycled paper bags and reusable bags are retained by the retailer without any restrictions on their use

A copy of the Ordinance is available on the Alameda County Waste Management Authority's website: http://reusablebagsac.org/ordinancetext.html

The Characterization Project will include re-sampling approximately 43 of the devices sampled during the previous study to compare the number of single-use bags found before versus after the implementation of the bag ban. Approximately 57 additional full trash capture inlet devices from high and medium trash generating areas throughout the County will also be sampled. The number of single-use plastic bags in the approximately 100 inlets from throughout the County will be compared to the number of bags found in inlets throughout the Bay Area during the baseline trash generation rate study. As the baseline trash generation rate study occurred prior to the date when the Single-Use Bag Ban Ordinance took effect, ACCWP expects to see a significant decrease in the amount of single-use plastic bags entering the storm drain system.

Expanded Polystyrene Food Ware Bans: The following ten cities within the County have adopted expanded polystyrene (EPS) food ware bans: Alameda, Albany, Berkeley, Emeryville, Fremont, Hayward, Livermore, Oakland, Pleasanton, and San Leandro. The San Leandro and Pleasanton bans have gone into effect since the completion of the BASMAA baseline study. Through the Characterization Project ACCWP will assess the effectiveness of the EPS food ware bans at reducing the amount of EPS entering the storm drain system. As the San Leandro and Pleasanton bans went into effect after the completion of the baseline study, the follow-up study will compare the volume and number of EPS food ware items in the full trash capture devices in those two cities before and after the implementation of the bans. Twenty-seven of the 47 Alameda County sites included in the BASMAA Baseline Study were located in San Leandro and Pleasanton. Re-sampling of those 27 sites, should provide a good indication of the effectiveness of the bans. The Characterization Project will also include an assessment of the number and volume of disposable EPS food ware items from all of the approximately 100 full trash capture inlet devices included in the study to compare the number and volume of EPS food ware items in cities that have adopted EPS bans versus cities that have not.

Expanded Baseline Characterization: The purpose of BASMAA Baseline Study was to develop an estimate of the baseline loading of trash from the storm drain system. However, determining an accurate baseline is difficult. There is both spatial and temporal variation in the amount of trash entering the storm drain system. As an example of how the amount of trash entering the storm drain system is changing over time, San Jose's single-use bag ban and several of the Alameda County cities' EPS bans went into effect during the course of the BASMAA Baseline Study. One purpose of the Characterization Project is to establish a more robust baseline of approximately 100 full trash capture drop inlet devices throughout the County that can be sampled again in the future. Expanding the assessment to include rigid disposable food ware items and cigarette butts will allow Permittees to assess reductions in these items if future efforts specifically target those sources of litter. The Characterization Project will also allow Permittees to assess the overall reduction in the amount of trash entering the storm drain system over time.

Trash Hot Spots and Other Creek/Shoreline Cleanup Events

ACCWP member agencies collect trash annually from a total of 47 Hot Spots as well as numerous additional creek and shoreline locations. Each member agency will gather data from these cleanup events that will allow for long term tracking of trends. The data to be collected include the volume and/or weight of trash removed, the number of people and/or the total number of person hours for each event, the length of creek or shoreline cleaned, and the dominant types of trash at each location. ACCWP will compile the data from these events and track the long term trends in trash along these water bodies throughout the County. Member agencies will also track trends at their specific cleanup locations.

Amount of Litter at Schools Participating in the Litter Outreach Program

ACCWP has developed a request for proposal for a four-year litter reduction education/outreach grant directed at K-12 schools throughout Alameda County. ACCWP intends to award a total of up to $125,000 per year to the successful applicant(s). The goals of the project include reducing the amount of litter at the participating schools and incorporating institutional changes at the schools so that litter will continue to be reduced in the future. Implementation is scheduled to begin in the 2014/15 school year. The request for proposal will includes a requirement to evaluate the level of litter reduction achieved. A copy of the request for proposals is included in Appendix B. A description of the assessment mechanism(s) of the successful proposal(s) will be included in the ACCWP Fiscal Year 2013/14 Annual Report.

Multi-Family Dwelling Litter Outreach

Multi-family dwellings (i.e., apartment buildings and condominium complexes) are often areas of high trash generation. ACCWP is working with the City of Livermore to develop a litter reduction pilot targeting multi-family complexes known to be sites with significant litter issues. Two pilot sites and one control site have been chosen. The pilot study will include: (1) pre-campaign and post-campaign litter measurements at all three sites; (2) Interviews with the property managers; and, (3) Development and implementation of an outreach strategy. Depending on the success of the pilot, it may be replicated at other multi-family complexes throughout the County. A more detailed description of the project is included in Appendix C.

Self-Reported Litter Related Attitude and Behavior of Residents

Through its Public Information and Participation program ACCWP encourages residents to adopt less polluting behaviors. One targeted behavior is littering. ACCWP uses a variety of mechanisms to influence residents including public service announcements, online and movie theater advertising, outreach to K-12 schools, and participating in outreach events. ACCWP conducts telephone surveys of residents every several years to gauge Alameda County residents' awareness and attitude regarding stormwater related issues. These surveys include questions regarding respondents' reported behavior and attitudes regarding litter and littering. Future surveys will continue to track the long term trends in residents' awareness and attitudes regarding litter and littering.

3.0 Output-Based Indicators

Output-based indicators are useful in addressing the third management question regarding whether control measures are being implemented appropriately. To reach the trash reduction targets, Permittees will be implementing new control measures and increasing the level of implementation of existing control measures. For many of these control measures, appropriate assessment methods are not well defined. The Program will work with the Permittees as well as other BASMAA member agencies to develop appropriate and feasible assessment methods. The control measures for which assessment methods will be developed are listed below.

Full capture device operation and maintenance

Consistent with the MRP, adequate inspection and maintenance of trash full capture devices is required to maintain full capture designation by the Water Board. ACCWP will work with the Permittees to develop an operation and maintenance verification program (Trash O&M Verification Program) to ensure that devices are inspected and maintained at a level that maintains this designation. The ACCWP Trash O&M Verification Program will be modeled on the current O&M verification program for stormwater treatment controls implemented consistent with the Permit new and redevelopment requirements.

Compliance with the Single-Use Bag Ban

The Alameda County Waste Management Authority is taking the lead on inspection and enforcement of the Single-Use Bag Ban. ACCWP will coordinate with the Waste Management Authority and report on the results of their inspection and enforcement program.

Implementation of an effective street sweeping program

Street sweeping can be very effective in reducing the amount of trash entering the storm drain system. However, its effectiveness is dependent upon the frequency of sweeping and the ability of the sweeper to sweep along the edge of the curb. Parked cars can significantly reduce the effectiveness of a street sweeping program. ACCWP will work with Permittees to develop an approach to assessing the effectiveness of street sweeping programs.

Commercial and Residential Trash Container Management

Improper trash container management at commercial facilities and fugitive trash from residential trash collection can be significant sources of trash to the storm drain system. ACCWP will work with Permittees to develop an approach to assessing commercial and residential trash management.

4.0 Testing Additional Trash Monitoring Methods

ACCWP recognizes that additional outcome-based trash assessment methods are needed to assess progress toward trash reduction targets. In an effort to address these information gaps associated with trash assessment methods, BASMAA, in collaboration with ACCWP, the 5 Gyres Institute, San Francisco Estuary Partnership, the City of Los Angeles, and other stormwater programs in the Bay Area, developed the *Tracking California's Trash* Project. The Project is funded through a Proposition 84 grant awarded to BASMAA by the State Water Resources Control Board (SWRCB) who recognized the need for standardized trash assessment methods that are robust and cost-effective. Two types of assessment methods will be evaluated through the grant project.

Trash Flux Monitoring

Trash flux monitoring is intended quantify the amount of trash flowing in receiving waters under varying hydrological conditions. Flux monitoring will be tested in up to four receiving water bodies in San Francisco Bay and/or the Los Angeles areas. Methods selected for evaluation and monitoring will be based on a literature review conducted during this task and through input from technical advisors and stakeholders. Monitoring is scheduled to begin in 2014 and will be completed in 2016.

On-land Visual Assessments

As part of the project, BASMAA will also conduct an evaluation of on-land visual assessment methods. The methods are designed to determine the level of trash on streets and public right-of-ways that may be transported to receiving waters via MS4s. BASMAA plans to conduct field work associated with the evaluation of on-land visual assessment at a number of sites throughout the region. To the extent practical, sites where the on-land methods evaluations take place will be coordinated with trash flux monitoring in receiving waters. On-land assessments will occur in areas that drain to trash full capture devices, and all sites will be assessed during wet and dry weather seasons in order to evaluate on-land methods during varying hydrologic conditions. Monitoring is scheduled to begin in 2014 and will be completed in 2016.

5.0 Long-Term Assessment Strategy

The Permittees are committed to implementing standardized assessment methods after the tasks in the Pilot Strategy have been completed. Assessment activities described in the previous sections will evaluate the utility of different assessment methods to demonstrate progress towards trash reduction targets and provide recommended approaches for long-term implementation. Lessons learned will be submitted to the Water Board with the FY 2015-2016 Annual Report and a revised Strategy will be developed and submitted, if necessary. The revised Strategy will include assessment methods that will be used to demonstrate progress during the remaining term of trash reduction requirements.

The implementation schedule for the ACCWP Pilot Implementation Strategy, and the Long-Term Assessment Strategy are included in Table 1. Load reduction reporting milestones are also denoted in the table. The schedule is consistent with the need for near-term pilot assessment results to demonstrate progress toward short-term targets, while acknowledging the need for testing and evaluation of assessment methods and protocols prior to long-term implementation.

Table 1. Planned ACCWP Pilot Assessment Strategy Implementation Schedule

Trash Assessment Programs and Methods	Prior to FY 2013-14	Fiscal Year								
		2013-14[a]	2014-15	2015-16	2016-17[b]	2017-18	2018-19	2019-20	2020-21	2021-22[c]
Outcome-Based Indicators										
Storm Drain Trash Characterization Project	X	X				X				
Trash Hot Spot Cleanup Assessment	X	X	X	X	X					
K-12 School Litter Reduction Outreach Program			X	X	X	X				
Multi-Family Dwelling Litter Outreach Program	X	X								
Residents' Self-Reported Litter-Related Behavior	X					X				
Output-Based Indicators										
Full Capture Operation and Maintenance Verification			X	X	X					
Single-Use Bag Ban Compliance		X	X	X	X					
Street Sweeping Effectiveness Evaluation			X	X	X					
Commercial/Residential Trash Management Assessment			X	X	X					
Testing Additional Trash Monitoring Methods										
Trash Flux Monitoring Protocol Testing			X	X	X					
On-land Visual Assessment Evaluations			X	X	X					
Long-Term Trash Assessment Strategy (ACCWP)					X	X	X	X	X	X

[a] July 1, 2014 - 40% trash reduction target
[b] July 1, 2017 - 70% trash reduction target
[c] July 1, 2022 - 100% trash reduction target

Appendix A

Storm Drain Trash Characterization Project

Alameda Countywide Storm Drain Trash Characterization Project

Sampling and Analysis Plan

FINAL DRAFT

Prepared for:

Alameda Countywide Clean Water Program

Stopwaste (Alameda County)

Prepared by:

EOA, Inc.
1410 Jackson St.
Oakland, CA 94612

January 29, 2014

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TERMINOLOGY

Control Measure: Any activity, technology, process, operational method or measure, or engineered system, which when implemented prevents, controls, removes, or reduces pollution. A control measure is also referred to as a best management practice (BMP).

Full Capture Device: A single device or series of devices that can trap all particles retained by a 5 mm mesh screen, and has a treatment capacity that exceeds the peak flow rate resulting from a one-year, one-hour storm in the subdrainage area treated by the BMP.

Litter: As defined by California Code Section 68055.1(g), litter means all improperly discarded waste material, including, but not limited to, convenience food, beverage, and other product packages or containers constructed of steel, aluminum, glass, paper, plastic, and other natural and synthetic materials, thrown or deposited on the lands and water.

Municipal Separate Storm Sewer System (MS4): "a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains): (i) Owned or operated by a state, city, town, borough, county, parish, district, association, or other public body (created to or pursuant to state law) including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the Clean Water Act that discharges into waters of the United States. (ii) Designed or used for collecting or conveying stormwater; (iii) Which is not a combined sewer; and (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2." (40 CFR 122.26(b)(8))

Receiving Waters: Natural water bodies receiving discharges from municipal stormwater drainage systems.

Stormwater: Runoff from roofs, roads and other surfaces that is generated during rainfall and snow events and flows into a stormwater drainage system.

Storm Drain Inlet: Part of the stormwater drainage system where surface runoff enters the underground conveyance system. Includes side inlets located adjacent to curbs and grate inlets located on the surface of a street or parking lot.

Storm Drain Insert: A device (e.g., screen or basket) designed to capture trash capture within a storm drain inlet.

Stormwater Conveyance System: Any pipe, ditch or gully, or system of pipes, ditches, or gullies, that is owned or operated by a governmental entity and used for collecting and conveying stormwater.

Trash: Man-made litter (as defined by California Code Section 68055.1g) that cannot pass through a 5 mm mesh screen. Excludes sediments, sand, vegetation, oil and grease, and exotic species.

Urban Runoff: All flows in a stormwater drainage system and consists stormwater (wet weather flows) and non-storm water illicit discharges (dry weather flows).

1. PROJECT PURPOSE AND BACKGROUND

Trash (i.e., litter, floatables, gross pollutants, or solid waste) is a serious problem for watersheds where it presents an aesthetic nuisance, and a serious threat to aquatic life in creeks, San Francisco Bay, and the Pacific Ocean. Data suggest that plastic trash in particular persists for hundreds of years in the environment and can pose a threat to wildlife through ingestion, entrapment, as well as harboring chemicals potentially harmful to the aquatic environment. Types of trash commonly observed in watersheds and water bodies include food and beverage containers (e.g., plastic bags and bottles) and packaging, cigarette butts, food waste, construction and landscaping materials, furniture, electronics, tires, and hazardous materials (e.g., paint and batteries).

In response to concerns about urban trash impacts on receiving water bodies in the San Francisco Bay area, the San Francisco Bay Regional Water Quality Control Board (Water Board) included trash reduction requirements in the Municipal Regional Stormwater NPDES Permit for Phase I communities in the Bay area (Order R2-2009-0074), also known as the Municipal Regional Permit (MRP). These provisions require applicable Bay Area municipalities (Permittees) to reduce trash from their Municipal Separate Storm Sewer Systems (MS4s) by 40 percent before July 1, 2014, 70 percent by 2017, and to a point of “no adverse impacts” to water bodies by 2022. To establish a baseline, each Permittee was also required to develop an estimate of the amount of trash discharged from its stormwater conveyance system circa 2011, and develop and implement a trash load reduction tracking method that will be used to account for trash load reduction actions and to demonstrate progress and attainment of trash load reduction targets.

The assessment strategy that will be used by Permittees in Alameda County is described in Permittee Long-Term Trash Reduction Plans and the ACCWP Pilot Assessment Strategy. This sampling and analysis plan (SAP) describes the assessment methods outlined in these plans that will be used to evaluate progress towards overall trash reduction goals, and assist Permittees and the Alameda County Waste Management Authority (StopWaste) in assessing the effects of specific trash control measures designed to reduce the generation and impacts of persistent and problematic types of trash.

1.1. Background

1.1.1. Alameda Countywide Stormwater Trash Management

Permittees in Alameda County collaborate through the Alameda Countywide Clean Water Program(ACCWP) to protect creeks, wetlands and San Francisco Bay. With regard to trash reduction, each Permittee is required by the MRP to submit a Long-Term Trash Management Plan by February 1, 2014. The Long-Term Plan outlines how each will achieve MRP trash reduction goals. Trash control measures and implementation schedules are described in each plan. Section 4.0 of the plans includes an assessment strategy that describes a number of indicators that Permittees will use to assess progress towards trash reduction goals. This SAP further describes a portion of the indicators and the methods that will be used to measure the success of specific trash source control measures implemented by Permittees.

Leading up to Long-Term Plan submittal, Permittees participated in a regional trash characterization and generation rate study that developed initial stormwater trash generation rates for the Bay area. As part of this study, trash was trapped and removed during 4 different time periods from a total of154 storm drain inlets equipped with full trash capture devices. Trash and debris removed was then sorted and characterized. Of the 154 inlets, 45 were located in Alameda County. The generation rate study resulted in trash generation rates for each inlet monitored in the Bay area. These rates along with additional field observations were then used to develop maps illustrating trash generation. Additionally, data generated from the study included the number and volume of single use plastic bags and EPS food service ware, as well as the total volume of trash generated from the land area draining to each inlet. This information was collected prior to the implementation of many trash control measures, including product-related ordinances.

1.1.2. Product-based Ordinances

In an effort to reduce the environmental impacts of single use carryout bags, Alameda County StopWaste adopted Ordinance 2012-2 (Ordinance) to reduce the use of single use carryout bags and promote the use of reusable bags at the point of sale in Alameda County. The Ordinance went into effect on January 1, 2013 in unincorporated Alameda County and its fourteen incorporated cities. On or before January 1, 2013, stores within Alameda County are required to make available for sale to a customer a recycled paper bag or a reusable bag for a minimum price of ten cents ($0.10). The price of a recycled paper bag or a reusable bag is scheduled to increase to a minimum price of twenty-five cents ($0.25) on or after January 1, 2015. If the Authority finds, after January 1, 2014, that the Ordinance has achieved its goal of substantially reducing the environmental impacts of single use carryout bags, the minimum price of ten cents ($0.10) will apply.

In addition to single use carryout bags, nine Permittees in Alameda have also prohibited the distribution of expanded polystyrene (EPS) food service ware at restaurants. Ordinances were developed based on the potential impacts of EPS to aquatic life and wildlife and the persistence of this material in the environment. Limited information on the levels of EPS food service ware in the environment, however, is currently available for Alameda County. Therefore, the Authority is also interested in characterizing the magnitude and extent of expanded polystyrene (EPS) food service ware and assessing whether these items continue to be present in the environment.

1.2. Management Questions

Alameda County Permittees subject to trash reduction requirements described in provision C.10 of the MRP have implemented a variety of enhanced or new trash control measures since the regional trash generation study was conducted in 2011. Therefore, conceptually trash reductions should be observable on streets, public right-of-ways, and in stormwater conveyances as control measures are implemented. At a minimum, the effects of municipal ordinances that prohibit the distribution of trash items frequently observed in stormwater conveyances should be detectable.

With increased levels of control measures being implemented, Permittees are now poised to begin assessing progress toward trash reduction goals and assessing the effectiveness of specific control measures that are designed to reduce the generation of trash. This Sampling and Analysis Plan (SAP) describes the methods that will be used by ACCWP and StopWaste to assist Permittees in answering the following management questions:

1. Has the Alameda Countywide single use carryout bag ordinance achieved its intended goal of substantially reducing the level of bags observed in the environment and associated adverse environmental impacts?

2. What levels of EPS food service ware items are observed in the environment and have municipal ordinances achieved their intended goal of substantially reducing the level of EPS found in the environment?

3. Are trash control measures implemented by Permittees effectively reducing trash in municipal stormwater conveyances in Alameda County?

2. MONITORING DESIGN

The following section describes the monitoring design that will be used to answer the management questions presented in section 1. The monitoring design consists of re-sampling all or most of the storm drain inlets in Alameda County monitored during the regional trash generation study, in addition to a number of other inlets that have not been previously monitored. Data on single-use bags and EPS food service ware, which was collected during the regional generation rates study and prior to the implementation of many product-related ordinances in Alameda County, will be compared to data

collected via this stormwater trash characterization project. Additionally, data generated through monitoring of new sites located in high and medium trash generating areas throughout the County will be compared to data from similar site previously sampled in other Bay Area locations during the regional trash generation study.

2.1. Monitoring Sites

2.1.1. Trash Full Capture Devices

Storm drain insert devices (e.g., connector pipe screens and baskets) provide optimal sampling locations to establish trash generation/loading rates and have been used extensively in previous trash loading studies. Storm drain inserts will be the primary device utilized in this assessment study because they generally drain a relatively small drainage area with a homogenous land use (e.g., retail) and are easy to clean/maintain. Alameda County Permittees have installed nearly 1,400 inserts in storm drain inlets to-date, creating an adequate pool for the selection of 100 sites that will be monitored during the project in attempts to adequately represent the levels of trash in Alameda County stormwater conveyance systems.

2.1.2. Considerations of Land Use

In an effort to assess the level of specific trash items that will be characterized during the project and inform the selection of new monitoring sites, data generated via the regional trash generation project was compiled and evaluated. During the regional study, 154 sites located throughout the Bay area (45 in Alameda County) were monitored up to four times each and the material removed was characterized into eight trash and debris categories: 1) debris (vegetation and sediment); 2) recyclable beverage containers; 3) single-use plastic bags; 4) EPS Food and Beverage Ware; 5) Other Plastic; 6) Paper; 7) Metal; and 8) Miscellaneous (rubber, items of mixed material, etc).For each category, both volume and weight were measured. For single-use plastic bags and EPS food service ware, individual items were also counted. An average of 1.09 single-use plastic bags was observed per year during the regional study. Although the number of bags observed at any one site varied heavily, no particular land use type was identified as contributing significantly more bags than others (Figure 1 and Table 1).

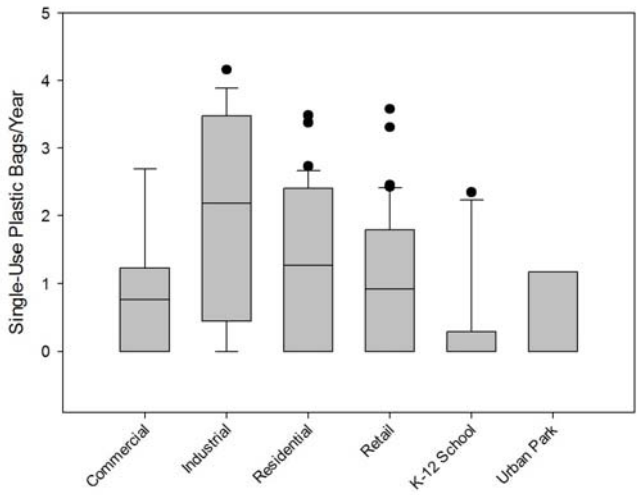

Figure 1. Number of single-use plastic bags observed in 154 San Francisco Bay area storm drains in 2011-12.

Table 1. Descriptive statistics for the number of single-use plastic bags observed in 154 San Francisco Bay area storm drains in 2011-12.

	Commercial	Industrial	Residential	Retail	School	Urban Park
Max	2.7	4.2	3.5	3.6	2.3	1.2
75%	1.0	3.5	2.3	1.8	0	0.6
Mean	**0.8**	**2.0**	**1.3**	**0.9**	**0.4**	**0.4**
Median	**0.8**	**2.2**	**1.3**	**0.9**	**0**	**0**
25%	0	0.9	0	0	0	0
Min	0	0	0	0	0	0
N	18	13	49	61	10	3

2.1.3. Site Selection Criteria

Based on the analysis of single-use plastic bag data with regard to land uses, the current and planned locations of many control measures, and experience in conducting trash characterization studies, monitoring sites that will be include in this stormwater trash characterization project were selected based on the following selection criteria, which were applied in the following order:

1. All sites (inlets) selected must be equipped with a properly functioning and meet the full capture devices or systems definition (i.e., a full capture system or device has the ability to trap all particles retained by a 5 mm mesh screen and has a design treatment capacity of at least the peak flow rate resulting from a one-year, one-hour, storm in the sub-drainage area);
2. Monitoring sites cannot be equipped by curb inlet screens that block trash from entering the storm drain inlet;
3. To the extent possible, all properly functioning sites that were sampled during the trash generation study will be re-sampled;
4. Most new sites will drain predominately retail land use areas associated with moderate, high or very high trash generation rates;
5. A minimum of three sites will be selected within each Permittee's jurisdictional area. The maximum number of sites possible will be sampled for those Permittees with less than three sites that meet the criteria above.

2.1.4. Proposed Monitoring Sites

Trash and debris from a total of 100 monitoring sites will be removed and characterized during the project. Although locations of proposed monitoring sites are presented in this section, field verification is required to ensure that each full capture device is operational and meets the criteria described above.

A total of 41 of the 45 previously monitored sites are proposed for re-sampling during the project. Of the four sites not recommended for re-sampling, two in the City of Oakland have recently had Automatic Retractable Screens (ARS) installed, and two sites in the City of Dublin are located in a parking lot that is not an ideal monitoring location due to the very limited volume of trash observed during previous monitoring events. All proposed monitoring sites are listed in Table 2.

Table 2. Trash monitoring and characterization sites in Alameda County that were sampled during the Bay area regional trash generation study in 2011-2012.

Permittee	Site ID	Latitude	Longitude	Land Use	Trash Rate (gal/year)	# of Bags Observed	Accumulation Period (days)	Bag Rate (bags/yr)	Proposed for Re-sampling	Proposed New Site	Notes
Berkeley	BK01	37.85756	-122.26772	Retail	8.03	0	407	0	X		
Berkeley	BK02	37.86734	-122.27033	K-12 School	14	3	407	2.7	X		
Berkeley	BK03	37.87002	-122.28412	Retail	5.22	0	404	0	X		
Berkeley	BK04	37.85653	-122.29489	Industrial	4.72	2	407	1.8	X		
Dublin	DN01	37.70386	-121.91531	Urban Park	0.19	0	477	0			Located in a parking lot and does not accumulate trash. Not recommended for sampling
Dublin	DN02	37.70361	-121.91425	Urban Park	1.07	0	477	0			Located in a parking lot and does not accumulate trash. Not recommended for sampling
Dublin	DN03	37.71684	-121.92666	Residential	2.64	1	477	0.8	X		
Dublin	DN04	37.71482	-121.9272	Residential	1.03	1	477	0.8	X		
Fremont	FR01	37.57133	-122.03228	Commercial	1.12	1	407	0.9	X		
Fremont	FR02	37.56358	-122.01732	K-12 School	2.65	1	407	0.9	X		
Fremont	FR03	37.53444	-121.96658	Retail	5.41	3	407	2.7	X		
Fremont	FR04	37.53173	-121.95881	Retail	8.28	1	407	0.9	X		
Livermore	LV01	37.7015	-121.8146	Commercial	1.14	0	408	0	X		
Livermore	LV02	37.69917	-121.77336	Retail	2.43	0	408	0	X		
Oakland	OK01	37.77387	-122.22911	Retail	11.73	3	315	3.5			Has an Auto-Retractable Screen (ARS). Not recommended for sampling
Oakland	OK02	37.76932	-122.2291	Industrial	30.25	3	315	3.5			Has an Auto-Retractable Screen (ARS). Not recommended for sampling
Oakland	OK03	37.81783	-122.2888	Industrial	5.69	1	126	2.9	X		
Oakland	OK04	37.80312	-122.28091	Retail	8.65	3	315	3.5	X		
Pleasanton	PL01	37.70028	-121.87022	Retail	2.63	0	315	0	X		
Pleasanton	PL02	37.69915	-121.89833	Commercial	1.28	0	408	0	X		
San Leandro	SL01	37.72223	-122.15454	Retail	5.5	1	408	0.9	X		
San Leandro	SL02	37.72279	-122.15628	Retail	6.95	2	408	1.8	X		
San Leandro	SL03	37.70067	-122.14023	Retail	4.96	2	408	1.8	X		
San Leandro	SL04	37.69638	-122.13912	Retail	7.28	2	408	1.8	X		
San Leandro	SL05	37.72064	-122.1549	Residential	5.2	1	300	1.2	X		
San Leandro	SL06	37.72235	-122.15378	Retail	6.96	2	300	2.4	X		
San Leandro	SL07	37.72223	-122.15362	Retail	3.66	2	300	2.4	X		
San Leandro	SL08	37.72215	-122.15188	Residential	1.27	0	302	0	X		
San Leandro	SL09	37.72271	-122.15264	Retail	8.13	1	294	1.2	X		
San Leandro	SL10	37.72288	-122.15287	Retail	2.45	0	274	0	X		
San Leandro	SL11	37.72361	-122.1538	Retail	5.5	2	297	2.4	X		
San Leandro	SL12	37.72303	-122.1549	Retail	3.72	1	302	1.2	X		

Permittee	Site ID	Latitude	Longitude	Land Use	Trash Rate (gal/year)	# of Bags Observed	Accumulation Period (days)	Bag Rate (bags/yr)	Proposed for Re-sampling	Proposed New Site	Notes
San Leandro	SL13	37.72433	-122.15505	Retail	5.82	0	274	0	X		
San Leandro	SL14	37.72449	-122.1574	Retail	5.01	1	301	1.2	X		
San Leandro	SL15	37.72501	-122.15565	Retail	7.89	1	274	1.3	X		
San Leandro	SL16	37.72543	-122.15455	Commercial	3.45	1	295	1.2	X		
San Leandro	SL17	37.72615	-122.15452	Commercial	2.07	0	274	0	X		
San Leandro	SL18	37.72692	-122.15609	Retail	11.37	1	294	1.2	X		
San Leandro	SL19	37.71749	-122.14295	K-12 School	4.38	0	311	0	X		
San Leandro	SL20	37.71524	-122.1398	K-12 School	5.8	2	308	2.4	X		
San Leandro	SL21	37.7134	-122.13727	Residential	1.71	0	310	0	X		
San Leandro	SL22	37.71282	-122.13644	K-12 School	4.79	0	296	0	X		
San Leandro	SL23	37.71211	-122.16221	Retail	10.01	0	307	0	X		
San Leandro	SL24	37.68676	-122.13875	Retail	6.51	1	314	1.2	X		
San Leandro	SL25	37.68673	-122.13703	Retail	14.9	2	301	2.4	X		
Alameda	AL01	37.77715	-122.27654	Retail	-	-	-	-		X	
Alameda	AL02	37.77813	-122.27651	Retail	-	-	-	-		X	
Alameda	AL03	37.76888	-122.24142	Residential	-	-	-	-		X	
Albany	AB01	37.89021	-122.2987	Retail	-	-	-	-		X	
Albany	AB02	37.88445	-122.30812	Retail	-	-	-	-		X	
Albany	AB03	37.89051	-122.29609	Retail	-	-	-	-		X	
Albany	AB04	37.88508	-122.3081	Retail	-	-	-	-		X	
Berkeley	BK05	37.89147	-122.27915	Retail	-	-	-	-		X	
Berkeley	BK06	37.88001	-122.29785	Retail	-	-	-	-		X	
Berkeley	BK07	37.88049	-122.26917	Retail	-	-	-	-		X	
Berkeley	BK08	37.87019	-122.2695	Retail	-	-	-	-		X	
Dublin	DN05	37.70555	-121.92029	Retail	-	-	-	-		X	
Dublin	DN06	37.70528	-121.92303	Retail	-	-	-	-		X	
Dublin	DN07	37.70448	-121.92804	Retail	-	-	-	-		X	
Dublin	DN08	37.70469	-121.92814	Retail	-	-	-	-		X	
Dublin	DN09	37.70418	-121.92978	Retail	-	-	-	-		X	
Emeryville	EM01	37.837222	-122.30268	Retail	-	-	-	-		X	
Emeryville	EM02	37.837227	-122.30228	Retail	-	-	-	-		X	
Emeryville	EM03	37.837222	-122.30203	Retail	-	-	-	-		X	
Fremont	FR05	37.50292	-121.96778	Retail	-	-	-	-		X	
Fremont	FR06	37.50239	-121.96744	Retail	-	-	-	-		X	
Fremont	FR07	37.54469	-121.98343	Retail	-	-	-	-		X	
Fremont	FR08	37.50307	-121.97232	Retail	-	-	-	-		X	
Fremont	FR09	37.51998	-121.98864	Retail	-	-	-	-		X	
Hayward	HW01	37.68006	-122.085	Retail	-	-	-	-		X	
Hayward	HW02	37.66655	-122.07886	Retail	-	-	-	-		X	
Hayward	HW03	37.67257	-122.08579	Retail	-	-	-	-		X	
Hayward	HW04	37.67196	-122.08395	Retail	-	-	-	-		X	
Hayward	HW05	37.67167	-122.08452	Retail	-	-	-	-		X	
Hayward	HW06	37.66363	-122.07641	Retail	-	-	-	-		X	

Permittee	Site ID	Latitude	Longitude	Land Use	Trash Rate (gal/year)	# of Bags Observed	Accumulation Period (days)	Bag Rate (bags/yr)	Proposed for Re-sampling	Proposed New Site	Notes
Hayward	HW07	37.67303	-122.08478	Retail	-	-	-	-		X	
Livermore	LV03	37.6978	-121.77317	Retail	-	-	-	-		X	
Livermore	LV04	37.69791	-121.77333	Retail	-	-	-	-		X	
Livermore	LV05	37.69523	-121.74558	Retail	-	-	-	-		X	
Livermore	LV06	37.69562	-121.74495	Retail	-	-	-	-		X	
Livermore	LV07	37.70047	-121.74101	Retail	-	-	-	-		X	
Livermore	LV08	37.69961	-121.74223	Retail	-	-	-	-		X	
Newark	NW01	37.54976	-122.05006	Retail	-	-	-	-		X	
Newark	NW02	37.55075	-122.05032	Retail	-	-	-	-		X	
Newark	NW03	37.54937	-122.04688	Retail	-	-	-	-		X	
Newark	NW04	37.5518	-122.04837	Retail	-	-	-	-		X	
Newark	NW05	37.53044	-122.03661	Retail	-	-	-	-		X	
Newark	NW06	37.52989	-122.03828	Retail	-	-	-	-		X	
Oakland	OK05	37.81346	-122.26078	Retail	-	-	-	-		X	
Oakland	OK06	37.8	-122.25389	Urban Park	-	-	-	-		X	
Oakland	OK07	37.80003	-122.254	Retail	-	-	-	-		X	
Oakland	OK08	37.799	-122.25096	Retail	-	-	-	-		X	
Oakland	OK09	37.79834	-122.25001	Retail	-	-	-	-		X	
Oakland	OK10	37.79827	-122.25011	Retail	-	-	-	-		X	
Piedmont	PD01	37.81899	-122.24441	Retail	-	-	-	-		X	
Piedmont	PD02	37.82478	-122.23086	Commercial	-	-	-	-		X	
Piedmont	PD03	37.82457	-122.23058	Urban Park	-	-	-	-		X	
Union City	UC01	37.5995	-122.06638	Retail	-	-	-	-		X	
Union City	UC02	37.60308	-122.06933	Retail	-	-	-	-		X	
Union City	UC03	37.60395	-122.06906	Retail	-	-	-	-		X	
Union City	UC04	37.59837	-122.06534	Retail	-	-	-	-		X	
Union City	UC05	37.59059	-122.07091	Retail	-	-	-	-		X	
Union City	UC06	37.58921	-122.0703	Retail	-	-	-	-		X	
Union City	UC07	37.58704	-122.02127	Retail	-	-	-	-		X	

The remaining 59 (new) sites were selected from the nearly 1,400 additional full trash capture inlet screens currently installed in municipalities in Alameda County. A total of 335 of the 1,400 sites have a majority of retail land use within a 200 foot radius surrounding each site. Sites depicting retail land uses were emphasized because they are the focused area of implementation for the single-use plastic bag ban and these areas generally have a higher potential for trash generation. The 59 new sites were selected randomly and consistent with the monitoring site selection criteria. Proposed new sites are listed in Table 2.

Table 3 presents a summary of the sites in each Permittee's jurisdictional area that are proposed for monitoring. Figure 2 illustrates the location of each proposed site. The following provides additional information on the sites selection process:

- Of the original 45 sites monitoring during the regional generation study, 25 were located in the City of San Leandro. Each of these 25 sites is planned for re-sampling. To best distribute the new monitoring sites within other cities, no new sites are proposed in San Leandro.
- Each city was assigned an allotment of new monitoring locations to best distribute the total sites equally among all jurisdictions.
- Alameda and Piedmont both have three or fewer retail sites and therefore did not receive more than three monitoring locations.
- Albany, Dublin and Oakland have a limited number of retail locations and so all or nearly all retail sites are proposed.
- New sites in Berkeley, Fremont, Hayward, Livermore, Newark, and Union City were chosen randomly from all available retail locations.

Each site planned for re- or new sampling will be field verified and backup locations will be chosen within the same city if the originally selected site does not meet the monitoring site criteria.

Table 3. New proposed trash monitoring and characterization sites in Alameda County.

Permittee	# Storm Drain Insert Full Capture Devices[1]	# Device/Sites Previously Sampled	# Previously Sampled Sites Proposed for Re-sampling	# Proposed New Sites	Total Sampling Locations
Alameda	16			3	**3**
Albany	17			4	**4**
Berkeley	104	4	4	4	**8**
Dublin	76	4	2	5	**7**
Emeryville	3			3	**3**
Fremont	346	4	4	5	**9**
Hayward	79			7	**7**
Livermore	174	2	2	6	**8**
Newark	127			6	**6**
Oakland	11	4	2	6	**8**
Piedmont	14			3	**3**
Pleasanton	2	2	2		**2**
San Leandro	273	25	25		**25**
Union City	147			7	**7**
County	0				**0**
Total	1,389	45	41	59	**100**

[1] Numbers only include those devices owned and operated by Permittees. Many Permittees have additional devices within their jurisdictional boundaries that are owned and operated by Private entities.

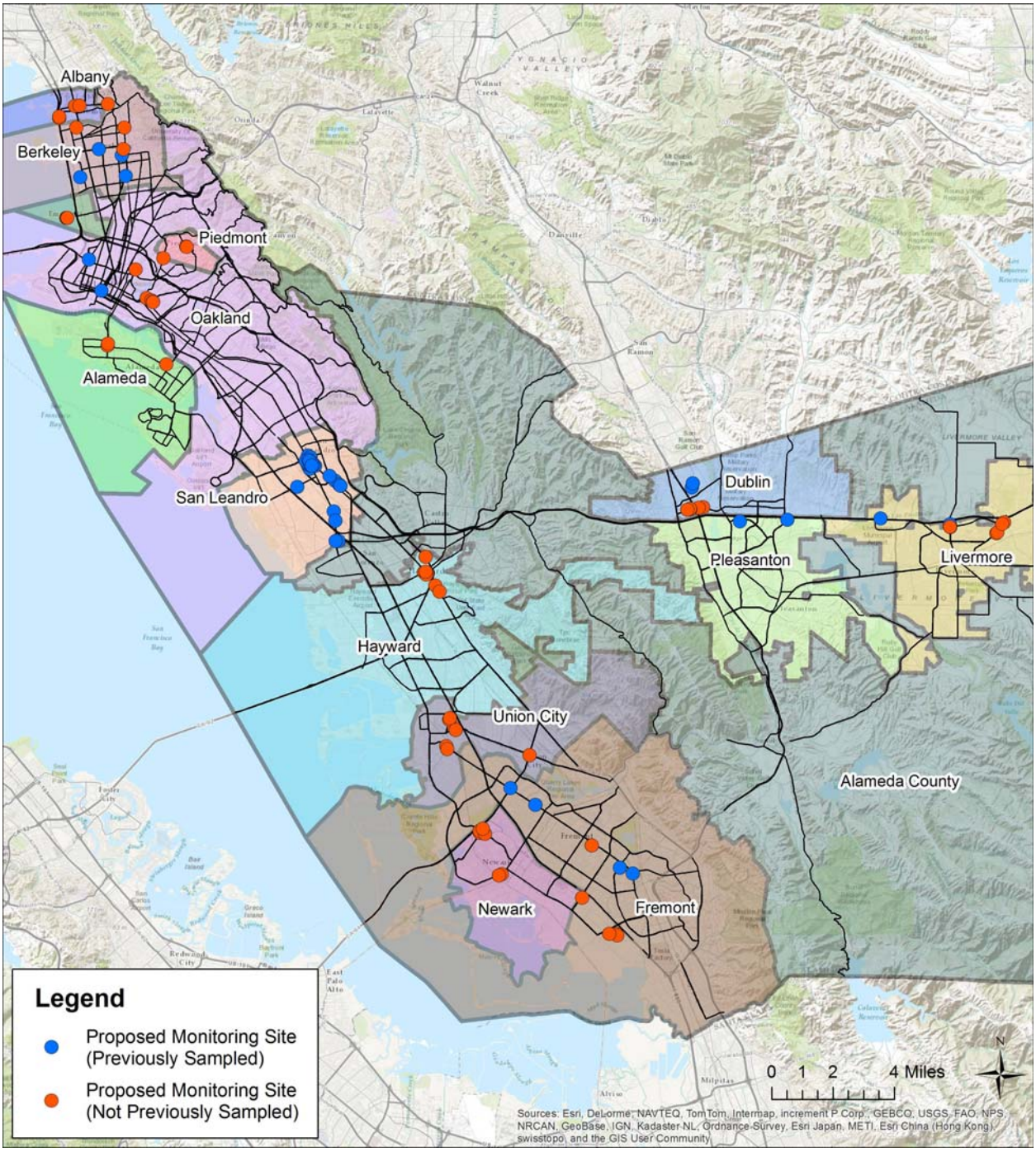

Figure 2. Location of 100 monitoring sites in Alameda County proposed for trash and debris monitoring and characterization.

2.2. Device Cleanouts

Removal of trash and debris will follow procedures described in the Standard Operating Procedures (SOP) summarized below and included in Appendix A. Prior to the start of the project, each monitoring site will be cleaned out to provide an accurate start date for the first accumulation period. The date of clean out will be recorded and reported. Site cleanouts will follow the procedures in the *Standard Operating Procedure for Storm Drain Insert Trash Removal* (see Appendix A). If unexpected cleanouts occur during the project other than at times identified as project sampling event (either due to flooding issues or other unforeseen events) a record of the cleanout will need to be taken, including the date of cleanout and the estimated amount of material removed.

2.2.1. Sample Identification

In order to standardize the cleanout reporting, field staff will identify the cleanout and site/device using the following code MMDDYY-XX-NN-#, where MMDDYY is the month, date and year; XX is the city, NN is the device number, and # is the cleanout number. For example, if device number OK07 is cleaned out for the first time on February 15, 2011, its code would be 021511-OK-07-1. The consultant responsible for cleanouts will maintain a list of device numbers and corresponding locations.

2.2.2. Documentation

Field forms illustrated in **Error! Reference source not found.**A will be completed at the time of the cleanout. Specifically, the date, location and personnel responsible will be noted. If possible, field staff will photograph the full capture device prior to and after cleaning. Photographs will be stored for future use.

2.3. Trash and Debris Characterization

All trash characterization will be conducted consistent with the *Standard Operating Procedure* for *Trash and Debris Evaluation* included as Appendix . The *Trash and Debris Evaluation Data Collection Form* included in Appendix C will be used to record the item counts and volumes. Recorded information will then be entered into a simple data management system to allow data analysis to occur efficiently.

In summary, there are three evaluation steps that field crews will conduct as part of the characterization portion of the project. They include:

1) Sorting trash from debris,
2) Counting the number of specific trash items (as applicable); and,
3) Measuring the volume of sorted trash and debris.

Categories of trash that will be counted and/or measured are presented in Table 4. The *Trash and Debris Evaluation Data Collection Form* included in Appendix C will be used to record the item counts and volumes. Recorded information will then be entered into a simple data management system to allow data analysis to occur efficiently.

Table 4. Trash sort and characterization categories that will be used during the project.

	Trash Category/Type	Item Count	Volume
1	Recyclable Beverage Containers (CRV labeled)	Yes	Yes
2	Single-use Plastic Carryout Grocery Bags	Yes	Yes
3	Expanded Polystyrene (Foam) Disposable Food and Beverage Ware	Yes	Yes
4	Rigid Plastic Disposable Food and Beverage Ware (includes Non-EPS plastic, fiber-based, and compostable plastic)	Yes	Yes
5	Cigarette Butts	No	Yes
6	Other Plastic	No	Yes
7	All Other Trash	No	Yes

2.4. Data Analysis

All data collected through the project will be managed, analyzed and reported. All new and existing data and associated information on trash captured via monitored full capture treatment devices will be compiled into a simple Microsoft Excel or Access database. Data analysis and interpretation methods will be defined based on discussions with project managers.

3. PROJECT SCHEDULE

The project is scheduled to begin in early 2014 and continue through the spring 2014. Data analysis is planned in late spring or early summer 2014. A project report is scheduled for completion by late summer 2014. Additional monitoring may be conducted in 2014 and/or subsequent years if deemed necessary by the Authority and/or ACCWP. Based on previous experience and the results of other studies, variability at a given site can be high and may require sampling sites multiple times to best characterize the types and levels of trash in stormwater conveyances. Monitoring priority is typically given to the wet season due to high likelihood that precipitation runoff is the main mode of transport of trash from streets to storm drains.

Appendix B

Request for Proposals

For

Anti-Litter Outreach to K-12 Schools

cleanwater PROGRAM

MEMBER AGENCIES:

Alameda

Albany

Berkeley

Dublin

Emeryville

Fremont

Hayward

Livermore

Newark

Oakland

Piedmont

Pleasanton

San Leandro

Union City

County of Alameda

Alameda County Flood Control and Water Conservation District

Zone 7 Water Agency

REQUEST FOR PROPOSALS

ANTI-LITTER OUTREACH TO K-12 SCHOOLS

January 14, 2014

Protecting Alameda County Creeks, Wetlands & the Bay

BACKGROUND AND INTRODUCTION

The Alameda Countywide Clean Water Program (Program) was established in 1991 to help prevent stormwater runoff from becoming polluted before entering local storm drains, creeks and the San Francisco Bay. The Program's seventeen member agencies (fourteen cities in Alameda County, Alameda County, the Alameda County Flood Control and Water Conservation District, and Zone 7) are subject to National Pollutant Discharge Elimination System (NPDES) permits issued by the California Regional Water Quality Control Board, San Francisco Bay Region. The current NPDES permit requires the member agencies to develop and implement plans to reduce the amount of litter entering local creeks and the Bay by 70% by 2017. K-12 schools have been identified as potentially high litter generating areas. The Program wishes to fund one or more projects that focus on reducing the amount of litter on and around K-12 schools and reduce the littering behavior of students.

The Program has several components that focus on conveying the stormwater pollution prevention message to various organizations and people. The Public Information and Participation (PI/P) component of the Program has several facets including media relations, advertising, outreach to the general public, and efforts that focus specifically on student and/or educator education. For more information on the Program, please visit our website at cleanwaterprogram.org. There is a link to the current NPDES permit (referred to as the Municipal Regional Stormwater Permit) at the bottom of the home page. Provision C.10 of the permit contains the trash/litter reduction requirements.

GOALS

The proposed projects should focus on achieving one or more of the following goals:

1) Clearly reduce the amount of litter on and around K-12 school campuses.
2) Institute institutional changes at K-12 schools that will reduce the amount of litter.
3) Reduce the littering behavior of students (incorporating outreach to students' families is encouraged).
4) Raise students' awareness of how watersheds function and their role in preventing stormwater pollution.

FUNDING

The Program is planning to award up to $125,000 per year for up to four years to the successful applicant(s). If selected for funding, the applicant(s) will receive payments after submittal of detailed invoices. The minimum grant application amount is $10,000 per year.

ELIGIBILITY

- Educational organizations, non-profit or for-profit organizations, and government agencies
- Projects must be implemented within Alameda County.
- Alameda Countywide Clean Water Program's name and logo must be included on all printed materials.
- Proposers should have a proven track record of successfully providing stormwater pollution or watershed education outreach to students and/or educators and/or completing contracts for the Program.
- If applicable, applicants must have legitimate access to the project site; project must have written

support from the property owner.

- Funding is for actual implementation of projects; therefore, any planning type projects are not eligible.

Additionally, the Program strives to achieve **countywide coverage through its educational programs**. Thus, the Program will select the proposal(s) that best address its goals and reach different audiences and locations throughout Alameda County.

SCOPE OF PROJECTS

Educational Projects **MUST**:

1. Educate students about stormwater pollution, with an emphasis on litter reduction.
2. Include a detailed description of the methods to be used to evaluate the success of the project.
3. Submit an annual report that includes high-resolution photos of students engaged in project activities, a description of goals and accomplishments, number of students reached and number of impression hours, and a one to two paragraph project summary suitable for posting to the Program website (may include graphics and/or quotes).

Projects may include, but certainly are not limited to the following types of activities:

- School assemblies
- Classroom presentations
- Hands-on participation
- Field trips
- After school programs

SELECTION CRITERIA

The Program will evaluate all proposals according to these seven selection criteria. Each criterion has a weighting value that is reflected in the number following it. Your proposal should demonstrate the following:

1. Explain how your project will educate students/educators about stormwater pollution prevention. The stormwater pollution prevention message is required to educate students and/or teachers on the topic of litter including causes of litter pollution in stormwater and methods of prevention. (20)
2. Explain how your project will, immediately or over time, result in less litter at and near the school and reduce littering behavior by students and their families. Provide information on how the reduction in litter will be measured (e.g., before and after samples, monitoring, or surveys). (20)
3. Identify your target audience and provide the numbers of students and/or educators your project will reach including: the duration of your proposed assemblies, presentations, or workshops; and, the total student impression hours. Additionally, please include a map showing the area(s) your project will serve. (10)
4. Describe how you will implement the proposed project successfully, including how you will market your project and, if applicable, how you will ensure your programs are fully booked for the year. (15)
5. Demonstrate that the goal of your project is achieved in a cost-effective manner. Include, as applicable, the dollar amount per student impression hour and/or educator trained. (10)
6. Describe how you will use to evaluate the success of your project. Include a sample evaluation form. (15)
7. Describe how your previous experience qualifies you to implement your proposed project. (10)

ROLES AND RESPONSIBILITIES OF PARTIES

The Alameda County Flood Control and Water Conservation District (District) is the administrative, fiscal, and contracting agent for the Program. Any proposal selected will need to meet the District's contracting requirements. The District reserves the right to reject any or all proposals and to negotiate with any proposer to modify his or her proposal to best serve the interests of the Program.

The Program's PI/P Subcommittee is the managing group for this project. The Educational Services Selection Committee (Selection Committee) and its project manager are the lead entity for this project. The Selection Committee consists of PI/P Subcommittee representatives. All reports and inquiries will be directed to the project manager, who will report back to the Selection Committee and the PI/P Subcommittee.

PROJECT SCHEDULE

The planned project period is for one year with an option to renew up to four years if project successfully meets the evaluation criteria.

EVALUATION CRITERIA

Projects selected for funding will be periodically evaluated based on the following criteria:

1. Timeliness and completion of reporting and invoicing requirements.
2. On-site observation by Program staff.
3. Fulfillment of scope of work and/or action plan.

INSTRUCTIONS FOR SUBMITTING A PROPOSAL

Proposal packages must follow the format requirements listed below. Proposals are required to be on **double-sided** paper. Proposal length (including the title page but excluding resumes and other attachments) is limited and should not exceed 10 printed pages (five double-sided pages). Clarity and conciseness are essential and will be considered in assessing the submitters' capabilities. **Seven (7) hard copies and one (1) electronic copy (PDF or Word format) of the proposal must be delivered to the Alameda County Public Works Agency, 399 Elmhurst Street, Hayward, CA 94544, Attention: James Scanlin.** Facsimile copies will not be accepted.

In order to simplify the review process and to obtain the maximum degree of comparability, the proposal should be organized in the following manner:

Transmittal Letter
Signed by a responsible party authorized to represent the proposing agency, group, company, or organization.

Title Page
Must contain:

- Name of the organization for which the proposal is prepared (Alameda Countywide Clean Water Program)
- Project Title
- Subject of the proposal
- Name of the proposer's organization
- Proposer's address
- Name of the contact person

- Telephone number and email address
- Date and signature of a responsible party authorized to present the proposing agency or organization

Table of Contents
Clearly identify materials by section and page number.

Proposal Content

1. *Overview and Summary*

2. *Project Description:* Clearly and succinctly describe the project that is being proposed. Include the following:
   - Name of the Project
   - An explanation of how your project educates students/teachers about stormwater pollution prevention and litter reduction.
   - Identification of your target audience, including the number of schools, students and/or educators that your project will reach as well as the duration of the proposed assembly, presentation, or workshop as applicable. Additionally, include a map showing the area (s) your project will serve.
   - An explanation of how you will publicize the project.
   - A description of the project evaluation methodology including a sample evaluation form.
   - Detailed Work Plan: Provide a detailed scope of work for the tasks proposed. Task descriptions should be clear and complete.
   - Schedule: Describe the schedule for completing each task.
   - Cost Proposal: Submit detailed cost information for each task with a breakdown by the number of hours and hourly rates for each category of personnel assigned to the project and other direct expenses. Additionally, each proposed project should indicate the dollar amount per student impression hour and/or educator trained.

3. *Summary of Qualifications:* This section shall describe your group's experience relating to the proposed project. The proposal must include:
   - Detailed description of previous projects that significantly relate to your qualifications for this project.
   - List of current and former projects where your organization performed similar services. Include a contact name and telephone number for each.
   - Names and copies of resumes of people who will be working on the proposed project.
   - List three references, which include the name, phone number, and address of the person who knows your work.

ASSISTANCE AND SELECTION PROCESS

- To answer questions, the Selection Committee's Project Manager will hold a **pre-proposal meeting**. Attendance is not mandatory but potential applicants are encouraged to attend. Other questions may be directed to James Scanlin at jims@acpwa.org
- Following the pre-proposal meeting, proposers will have six weeks to submit the proposals.
- Submitted proposals will be reviewed and ranked by the selection panel. Proposals receiving the highest rankings will be invited to a **mandatory oral interview**.

SCHEDULE

January 14, 2014	Request for Proposals released
February 4, 2014	Pre-proposal meeting from 10 to 11:30 a.m. City of Oakland Public Works Agency 250 Frank H Ogawa Plaza 4th Floor, Broadway Conference Room
March 17, 2014	Proposals due by noon
April 21 or 22, 2014	Mandatory oral interviews
May 9, 2014	Selected proposer(s) expected to be notified
July 29, 2014	Contract(s) are expected to be executed

Thank you for your interest!

Appendix C

Summary of Multi-Family Dwelling

Anti-Litter Pilot Project

Multi-Family Dwelling Litter Outreach

Multi-family dwellings (i.e., apartment buildings and condominium complexes) are often areas of high trash generation. ACCWP is working with the City of Livermore to develop a litter reduction pilot targeting multi-family complexes known to be sites with significant litter issues. The pilot includes the following apartment building and condominium complexes: Livermore Garden Apartments (5720 East Avenue), La Castilleja (975 Murrieta Boulevard), and Castilleja Del Arroyo (1001 and 1009 Murrieta Boulevard). The planned assessment mechanisms include:

- December 2013: Pre-campaign Measurement – ACCWP and the City staff took baseline measurements of all three sites on December 12th, December 16th and December 26th. Most of the on-site litter collected, characterized and counted included some of the Coastal Commission's "most likely to find items". These items include: cigarette butts, food (i.e., candy, chip) wrappers, and loose paper pieces (i.e., napkins, receipts, tissues junk mail and newspaper).

- December 2013: Property Manager Interviews – All three property managers were interviewed by City staff using twenty-five questions developed by the ACCWP on December 12th, 13th and 27th. The interview results helped define the ACCWP and City's target audiences. These audiences include: low and medium income, school-aged children and adults, and Hispanic and Caucasian ethnic groups. Also, the interview results helped determine that in-person conversation and written notices posted to residents' front doors were the most effective outreach tactics used by property managers.

- January 2014: Plan – ACCWP and City staff will be testing the merits of a more traditional multi-touch campaign versus a norming-only campaign. Both will be measured against a "control". Control Site and Active Sites with assigned outreach tactics listed below:

  <u>*Active Sites:*</u>

  Castilleja Del Arroyo Condominiums
  1001 & 1009 Murrieta Boulevard
  Multi-touch Campaign:
  - Content in HOA Newsletter (tentatively an ad box &/or resident Q&A)
  - Litter Signage
  - Notice on Bulletin Board &/or on Unit Doors

  La Castilleja Condominiums
  975 Murrieta Boulevard
  Norming Campaign:
  -Volunteer will clean up every day instead of once-twice/week.

  <u>*Control Site:*</u>

  Livermore Garden Apartments
  5720 East Avenue
  No Campaign

- May 17, 2014 – May 31, 2014: Post-campaign Measurement — City staff and ACCWP will duplicate the pre-campaign measurement methodologies at all three sites, including the Control. All three property managers/volunteers will collect one week's worth of on-site litter. On-site and off-site litter will be characterized and counted by City staff using the Ocean Conservancy's Volunteer Trash Data Form. All three property managers will be interviewed by City staff to help determine residents' attitudes/change in behavior, etc.

- June 1, 2014 – June 30, 2014: Reporting – Final Pilot Report will be presented to ACCWP member agencies.

Depending on the success of the pilot, it may be replicated at other multi-family complexes throughout the County. The Public Information and Participation Subcommittee of ACCWP also is in the process of identifying other litter-related areas and activities that affect jurisdictions throughout the County, and will implement pilot projects to address the high priority issues over the next several years. One issue being considered is cigarette butt litter.