

Long-Term Trash Reduction Plan and Progress Assessment Strategy

February 1, 2014

Submitted by:

City of Oakland



Public Works Agency

Watershed & Stormwater Management Program

250 Frank H. Ogawa Plaza

Oakland, CA 94612

In compliance with Provision C.10.c of Municipal Regional Stormwater NPDES Permit
(Order R2-2009-0074)

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**City of Oakland
LONG-TERM TRASH REDUCTION PLAN AND
ASSESSMENT STRATEGY**

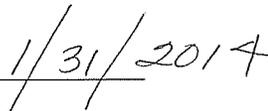
CERTIFICATION STATEMENT

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Signature by Duly Authorized Representative:



Lesley Estes



Date

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ABBREVIATIONS

ACCWP	Alameda County Wide Clean Water Program
ARS	Auto Retractable Screens
BASMAA	Bay Area Stormwater Management Agencies Association
BID	Business Improvement District
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
CDS	Continuous Deflection Separator
CEQA	California Environmental Quality Act
CPS	Connector Pipe Screens
CY	Cubic Yards
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
ESPS	Ettie Street Pump Station
GIS	Geographic Information System
LMI	Lake Merritt Institute
KOCB	Keep Oakland Clean and Beautiful
MRP	Municipal Regional Stormwater NPDES Permit
MS4	Municipal Separate Storm Sewer System
NGO	Non-Governmental Organization
NPDES	National Pollutant Discharge Elimination System
Q	Flow
SWRCB	State Water Resource Control Board
TMA	Trash Management Area
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
Water Board	San Francisco Bay Regional Water Quality Control Board
WDR	Waste Discharge Requirements

PREFACE

This Long-Term Trash Load Reduction Plan and Assessment Strategy (Long-Term Plan) is submitted in compliance with Provision C.10.c of the Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay (Order R2-2009-0074). The Long-Term Plan was developed using a regionally consistent outline and guidance developed by the Bay Area Stormwater Management Agencies Association (BASMAA) and reviewed by San Francisco Bay Regional Water Quality Control Board (Water Board) staff. The Long-Term Plan is consistent with the Long-Term Trash Load Reduction Framework developed in collaboration with Water Board staff. Its content is based on the City of Oakland's current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with Municipal Separate Storm Sewer System (MS4) discharges. This Long-Term Plan is intended to be iterative and may be modified in the future, based on information gained through the implementation of trash control measures. The City of Oakland therefore reserves the right to revise or amend this Long-Term Plan at its discretion. If significant revisions or amendments are made, a revised Long-Term Plan will be submitted to the Water Board through the annual reporting process.

PREAMBLE

It is the City's intention, that the implementation of this Long-Term Trash Plan will improve water quality by preventing pollutants from entering Oakland's creeks, lakes and the San Francisco Bay. The City also intends that this Long-Term Plan will help enhance the attractiveness and livability of Oakland's neighborhoods by providing a healthier, cleaner, and more attractive experience for its residents and visitors.

Oakland's Lake Merritt was the first waterway in the State to be listed as an impaired waterbody for trash. Since that listing in 2003, Oakland has focused its attention and resources on reducing the volume of trash and litter entering our waterways. Below is a discussion of the efforts Oakland had made to date to control trash:

- **Over 900 Acres of City is in Full Trash Capture:** Since 2003, the City has installed a variety of full trash capture devices (including connector pipe screens, hydrodynamic separators, and gross linear solids removal devices). The City is continuing to examine other opportunities for installation of more trash capture devices.
- **Launched a Variety of Pilot Projects:** Oakland continues to explore innovative opportunities to reduce trash. City staff has initiated participation in pilot projects including: 1) Participation in a multi-City effort to promote source reduction of single use items in food service establishments (started 2011); and 2) Assessment of the effectiveness of auto-retractable inlet screens to prevent litter from entering the storm drain system (started 2013).
- **Achieved Over 20,000 Volunteer Hours Per Year in Community Cleanups:** An important element of Oakland's litter reduction program is the support from local citizens and community groups. The City has grown its volunteer stewardship department and has achieved enormous success in getting citizens to help clean City streets and waterways.

- **Reduced Trash Entering Lake Merritt by an Estimated 50%:** There is more data on litter and trash in the Lake Merritt receiving water than any other creek or waterbody location in Oakland. Starting in 1998, The Lake Merritt Institute (LMI) has been measuring the amount of trash its volunteers have removed from the Lake Merritt trash booms and surrounding shoreline. LMI and its volunteers clean the lake 4 to 5 times per week and have documented the pounds of trash removed per month and average rainfall per month. These reductions correlate with the installation of trash capture units in the watershed. Further reductions are noted between 2009 and the present which are attributed to increased street sweeping and Business Improvement District (BID) cleanup efforts in downtown Oakland. Even accounting for differences in rain fall, the data show that trash entering Lake Merritt has steadily decreased and the trash collected in years 2011 and 2012 is roughly half the trash collected in 2003 and 2004.

While acknowledging the accomplishments in trash reduction to date, the City recognizes that litter is still an enormous problem for Oakland. The City recognizes that litter in the streets is correlated with many other undesirable community conditions including graffiti, blight, crime, drug use, gang violence, homelessness, poor health and nutrition, and dilapidated neighborhood environments. The City intends for this Long-Term Trash Plan to be part of the web of City services and community efforts being employed to improve the health of these communities and support the resources already working to enhance the water quality of life. The City will continue to work innovatively with our internal City departments (including creation of a Trash Reduction Committee) and to collaborate with local organizations and state agencies to achieve our common goal of environmental quality, social equity, and economic health of our City.

1.0 INTRODUCTION

1.1 Purpose of Long-Term Trash Reduction Plan

The Municipal Regional Stormwater National Pollutant Discharge Elimination System (NPDES) Permit for Phase I communities in the San Francisco Bay (Order R2-2009-0074), also known as the Municipal Regional Permit (MRP), became effective on December 1, 2009. The MRP applies to 76 large, medium and small municipalities (cities, towns and counties) and flood control agencies in the San Francisco Bay Region, collectively referred to as Permittees. Provision C.10.c of the MRP requires Permittees to submit a Long-Term Trash Load Reduction Plan¹ (Long-Term Plan) by February 1, 2014. Long-Term Plans must describe control measures that are currently being implemented, including the level of implementation, and additional control measures that will be implemented and/or increased to attain a 70% trash load reduction by July 1, 2017, and 100% (i.e., “No Visual Impact”) by July 1, 2022.

This Long-Term Plan is submitted by the City of Oakland in compliance with MRP Provision C.10.c. Consistent with Provision C.10 requirements, the goal of the Long-Term Plan is to solve trash problems in receiving waters by reducing the impacts associated with trash in discharges from the Oakland’s municipal separate storm sewer system (MS4) that are regulated by NPDES Permit requirements. The Long-Term Plan includes:

1. A map that characterizes the City into “Very High,” “High,” “Moderate,” and “Low” trash generation areas;
2. Descriptions of the current level of implementation of trash control measures, and the type and extent to which new or enhanced control measures will be implemented to achieve a target of 100% (i.e. full) trash reduction from MS4s by July 1, 2022, with an interim milestone of 70% reduction by July 1, 2017;
3. A description of the *Trash Assessment Strategy* that will be used assess progress towards trash reduction targets achieved as a result of control measure implementation; and,
4. Time schedules for implementing control measures and the assessment strategy.

The Long-Term Plan was developed using a regionally consistent outline and guidance developed by the Bay Area Stormwater Management Agencies Association (BASMAA) and reviewed by the San Francisco Bay Regional Water Quality Control Board (Water Board) staff. The Long-Term Plan is consistent with the Long-Term Trash Load Reduction Framework (see Section 1.2.1) developed in collaboration with Water Board staff.

¹ This Long-Term Plan replaces the Short-Term Trash Load Reduction Plan submitted by the City of Oakland on February 1, 2012.

1.2 Background

1.2.1 Long-Term Trash Load Reduction Plan Framework

A workgroup of MRP Permittees, the permittees' consultant, EOA, and Water Board staff met between October 2012 and March 2013 to better define the process for developing and implementing Long-Term Plans including: methods for assessing progress toward reduction goals, and tracking and reporting requirements associated with Provision C.10. Through these discussions, an eight-step framework for developing and implementing Long-Term Plans was created by the workgroup (Figure 1).

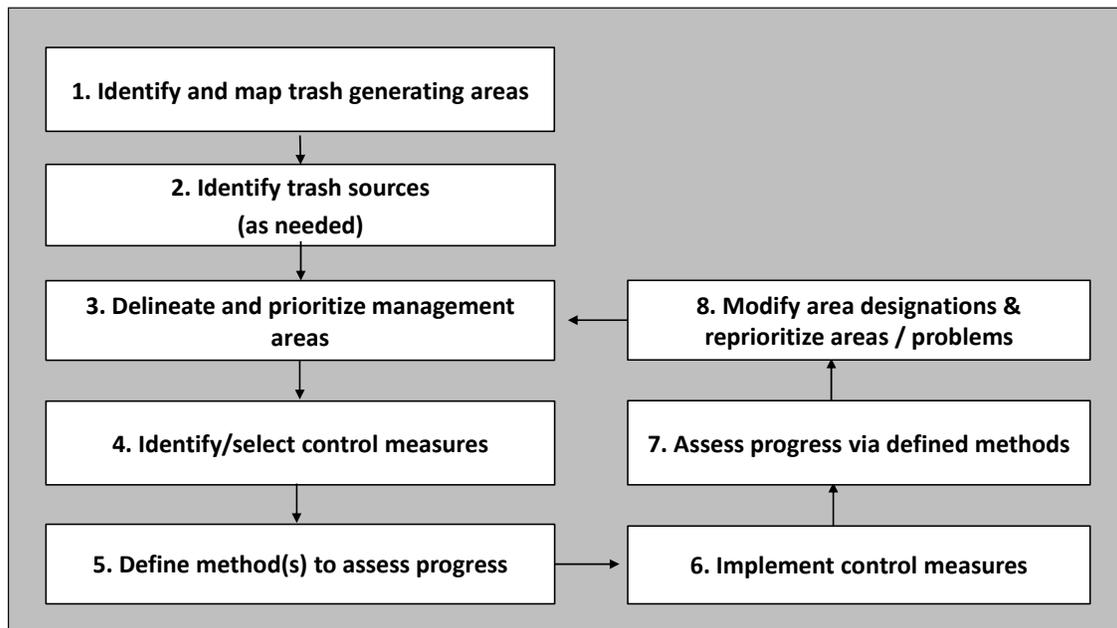


Figure 1. Eight-step framework for developing, implementing and refining Long-Term Trash Reduction Plans

The workgroup agreed that as the first step in the framework, Permittees would identify “Very High”, “High”, “Moderate”, and “Low” trash generating areas in their jurisdictional areas. Trash generation rates developed through the *BASMAA Baseline Trash Generation Rates Project* (as discussed below) were used as a starting point for differentiating and delineating land areas with varying levels of trash generation. Permittees would then use local knowledge and field and/or desktop assessments to confirm or refine the level of trash generation for specific areas within their jurisdiction. Each Permittee would then develop a map depicting trash generation categories within their jurisdiction.

As a next step, Permittees would then delineate and prioritize Trash Management Areas (TMAs) where specific control measures exist or are planned for implementation. TMAs delineated by Permittees are intended to serve as reporting units in the future. Reporting at the management area level provides the level of detail necessary to demonstrate implementation and progress towards trash reduction targets.

Once control measures are selected and implemented, Permittees will evaluate progress toward trash reduction targets using outcome-based assessment methods. As the results of the progress assessments are available, Permittees may choose to reprioritize trash management areas and associated control measures designed to improve trash reduction within their jurisdictions.

1.2.2 BASMAA Generation Rates Project

Through approval of a BASMAA regional project in 2010, Permittees agreed to work collaboratively to develop a regionally consistent method to establish trash generation rates within their jurisdictions. The project, also known as the *BASMAA Trash Generation Rates Project* (Generation Rates Project) assisted Permittees in establishing the rates of trash generation and identifying very high, high, moderate and low trash generating areas.

The term “trash generation” refers to the rate at which trash is produced or generated onto the surface of the watershed and is potentially available for transport via MS4s to receiving waters. Generation rates do not explicitly take into account existing control measures that intercept trash prior to transport. Generation rates are expressed as trash volume/acre/year and were established via the Generation Rates Project.

In contrast to trash generation, the term “trash loading” refers to the rate at which trash from MS4s enters receiving waters. Trash loading rates are also expressed as trash volume/acre/year and are equal to or less than trash generation rates because they account for the effects of control measures that intercept trash generated in an area before it is discharged to a receiving water. Trash loading rates are specific to particular areas because they are dependent upon the effectiveness of control measures implemented within an area. Figure 1.2 illustrates the difference between trash generation and loading.

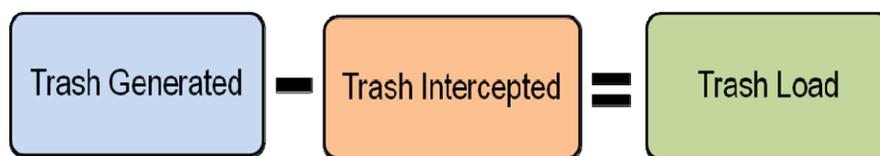


Figure 1-2. Conceptual Model of Trash Generation, Interception and Load

Trash generation rates were estimated based on factors that significantly affect trash generation (i.e., land use and income). The method used to establish trash generation rates for each Permittee builds off “lessons learned” from previous trash loading studies conducted in urban areas (Allison and Chiew 1995; Allison et al. 1998; Armitage et al. 1998; Armitage and Rooseboom 2000; Lippner et al. 2001; Armitage 2003; Kim et al. 2004; County of Los Angeles 2002, 2004a, 2004b; Armitage 2007). The method is based on a conceptual model developed as an outgrowth of these studies (BASMAA 2011b).

Trash generation rates were developed through the quantification and characterization of trash captured in Water Board-recognized full-capture treatment devices installed in the San Francisco Bay Area. Trash generation rates estimated from this study are listed for each land use type in Table 1. Methods used to develop trash generation rates are more fully described in BASMAA (2011b, 2011c, and 2012).

Land Use	Low ^b	Best ^b	High ^b
Commercial & Services	0.7	6.2	17.3
Industrial	2.8	8.4	17.8
Residential ^a	0.3 - 30.2	0.5 - 87.1	1.0 - 257.0
Retail ^a	0.7 - 109.7	1.8 - 150.0	4.6 - 389.1
K-12 Schools	3	6.2	11.5
Urban Parks	0.5	5.0	11.4

Table 1. San Francisco Bay Area Trash Generation Rates by Land Use (gallons/acre/year)

^aFor residential and retail land uses, trash generation rates are provided as a range that takes into account the correlation between rates and household median income.

^b For residential and retail land uses: Low = 5% confidence interval; Best = best fit regression line between generation rates and household median income; and, High = 95% confidence interval. For all other land use categories: High = 90th percentile; Best = mean generation rate; and, Low = 10th percentile.

1.3 Organization of Long-Term Plan

This Long-Term Plan is organized into the following Sections:

- 1.0 Introduction;
- 2.0 Scope of the Trash Problem;
- 3.0 Trash Management Areas and Control Measures;
- 4.0 Progress Assessment Strategies; and
- 5.0 References

Section 2.0 is intended to provide a description of the extent and magnitude of the trash problem in the City of Oakland. Control measures that will be implemented by Oakland as a result of this Long-Term Plan are described in Section 3.0. Section 4.0 describes the methods that will be used to assess progress toward trash reduction targets.

2.0 SCOPE OF THE TRASH PROBLEM

2.1 Permittee Characteristics

Incorporated in 1852, the City of Oakland covers 36,749 acres in Alameda County, and has a jurisdictional² area of 29,265.6 acres. According to the 2010 Census, Oakland has a population of 390,724, with a population density of 7,003.8 people per square mile, and average household size of 2.49. Of the 390,724 people who call the City of Oakland home, 21.3% are under the age of 18, 9.3% are between the ages of 18 and 24, 33.1% are between the ages of 25 and 44, 25.2% are between the ages of 45 and 65, and 11.1% are 65 years of age or older.

Top employers in the City of Oakland include Alameda County, Kaiser Permanente, Oakland Unified School District, City of Oakland, United States Postal Service, and the Internal Revenue Service. The median household income was \$49,721, with 18.7% of Oakland's population living in poverty.

The City of Oakland is primarily comprised of three land use types. All of the land uses within Oakland depicted in ABAG (2005) are provided below.

Land Use Category	Jurisdictional Area (Acres)	% of Jurisdictional Area
Commercial and Services	1,545.3	5.4%
Industrial	2,239.0	7.9%
Residential	16,767.3	59.0%
Retail	1,317.6	4.6%
K-12 Schools	809.7	2.8%
Urban Parks	601.7	2.1%
Other	5,142.8	18.1%

Table 2. Percentages of the City of Oakland's Jurisdictional Area within Land Use Classes Identified by ABAG (2005)

² A Permittee's jurisdictional area is defined as the urban land area within a Permittee's boundary that is not subject to stormwater NPDES Permit requirements for traditional and non-traditional small MS4s (i.e. Phase II MS4s) or the California Department of Transportation, or owned and maintained by the State of California, the U.S. federal government or other municipal agency or special district (e.g., flood control district).

2.2 Trash Generating Areas

2.2.1 Generation Categories and Designation of Areas

The process and methods used to identify the level of trash generation within the City of Oakland are described in this section and illustrated in Figure 2.

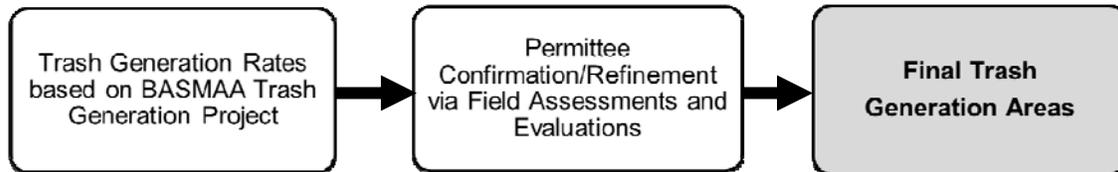


Figure 2. Trash Sources Categories and Transport Pathways to Urban Creeks

As a first step, trash generation rates developed through *the BASMAA Trash Generation Rates Project* were applied to parcels within the City of Oakland based on current land uses, density and 2010 household median incomes. A Draft Trash Generation Map was created as a result of this application. The draft map served as a starting point for Oakland to identify trash generating levels. Levels of trash generation are depicted on the map using four trash generation rate (gallons/acre/year) categories that are symbolized by four different colors illustrated in Table 2-2.

Category	Very High	High	Moderate	Low
Generation Rate (gallons/acre/year)	> 50	11-50	5-10	< 5

Table 2-1. Trash Generation Categories and Associated Generation Rates (gallons/acre/year)

The City of Oakland then reviewed and refined the draft trash generation map to ensure that trash generation categories were correctly assigned to parcels or groups of parcels. City staff refined maps using the following process:

1. Oakland convened a work group of City staff to review the preliminary trash baseline load map. The trash categories provided to the workgroup used the categories in Table 2.2 below. Workgroup members were comprised of key municipal staff that has extensive field knowledge of the City. Staff included: a stormwater inspector, a Right-of-Way inspector, storm drainage management staff, a street sweeping supervisor, an illegal dumping supervisor, and a volunteer coordinator for Adopt-A-Spot activities. This multi-disciplinary approach allowed for a comprehensive review of the trash generation rates, as each individual had unique knowledge of the neighborhoods, socioeconomics, infrastructure and trash management

practices. The workgroup reviewed the map and was instructed to identify areas where their professional knowledge of the City differed from the land use categories on the draft map. This workgroup identified areas where: 1) best professional judgment differed from baseline map and/or; 2) workgroup members could not agree on a designation. These areas are listed in ATTACHMENT A.

2. Trash generation category designations initially assigned to areas identified in Step #1 were then assessed, confirmed, and refined by the City using the methods listed below.

a. On-Land Visual Assessments

To assist Permittees with developing their trash generation maps, BASMAA developed a *Draft On-land Visual Trash Assessment Protocol (Draft Protocol)*. The Draft Protocol entails walking a street segment and visually observing the level of trash present on the roadway, curb and gutter, sidewalk, and other areas adjacent to the street that could potentially contribute trash to the MS4. Based on the level of trash observed, each segment (i.e., assessment area) was placed into one of four on-land assessment condition categories that are summarized in Table 2-2. Staff conducted field verifications of each of the locations to determine the correct trash generation rate. The field verification forms are found in ATTACHMENT B. Field verification site visits occurred on July 7th, 9th, 10th, 11th, 16th, 17th, 18th, 19th and 31st, 2013. Photographs representative of areas visited are provided in ATTACHMENT C. Documentation of field verification (including photos and score sheet results) is available on request.

On-land Assessment Condition Category	Summary Definition
A (Low)	Effectively no trash is observed in the assessment area.
B (Moderate)	Predominantly free of trash except for a few pieces that are easily observed.
C (High)	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets.
D (Very High)	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area.

Table 2.2. Definitions of On-Land Visual Trash Assessment Condition Categories

b. Smoothing the “Patchwork Quilt” Areas

The initial land use maps had some isolated and disconnected “patchwork” areas of varying generation rates, in some cases, parcel by parcel or block by block. City staff grouped some of these patchwork areas into one category of generation rates when appropriate. For example, roadways and

arterials were typically given one generation rate rather than having a patchwork of rates varying with small commercial areas or intersections. Areas were typically given the higher generation rate of the patchwork.

c. Reviewing Municipal Operations Data

Staff also confirmed mapping categories using Cityworks³ information. Cityworks documents and maps complaint calls requesting clean-up of illegal dump sites. Areas with a “hot spot” showing illegal dumping concentrations were then cross-verified with the trash generation map.

Based on the assessments described above, the City developed a “final” trash generation map that depicts the most current understanding of **trash generation** within the City of Oakland⁴. This is shown in Figure 3.

2.2.2 Summary of Trash Generating Area and Sources

Summary statistics for land use and trash generation categories generated through the mapping and assessment process are presented in Table 2.3 and Table 2.4.

Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	3,465.0	13.8%	25.7%	27.4%	26.4%	2.9%	1.8%	2.1%
High	4,860.0	5.8%	6.7%	77.6%	4.4%	2.1%	2.6%	0.7%
Moderate	5,663.2	11.0%	18.0%	54.0%	3.0%	7.6%	3.7%	1.0%
Low	14,433.2	1.1%	0.0%	62.3%	0.2%	1.2%	1.4%	34.6%

Table 2.3. TRASH GENERATION (Pre-Control Measures) BY LAND USE TYPE

Percentage of land use type within the Oakland assigned to each trash generation category.

Trash Generation Levels	Jurisdictional Acres	Percentage of Area
Very High	3,465	12%
High	4,860	17%
Moderate	5,663	20%
Low	14,433	51%
TOTAL	28,235	100%

Table 2.4 TRASH GENERATION (Pre-Control Measures) BY PERCENTAGE

Percentage of jurisdictional area within Oakland assigned to each trash generation category.

³ Cityworks is a database application that tracks activities, outputs and staff resources.

⁴ Please note that Figure 3.0 represents the trash generation rate – without any control measures in place. Examples of trash control measures already in place include in-ground hydrodynamic separators, high frequency street sweeping and jurisdiction-wide ban on single use such as polystyrene foam and plastic bags.

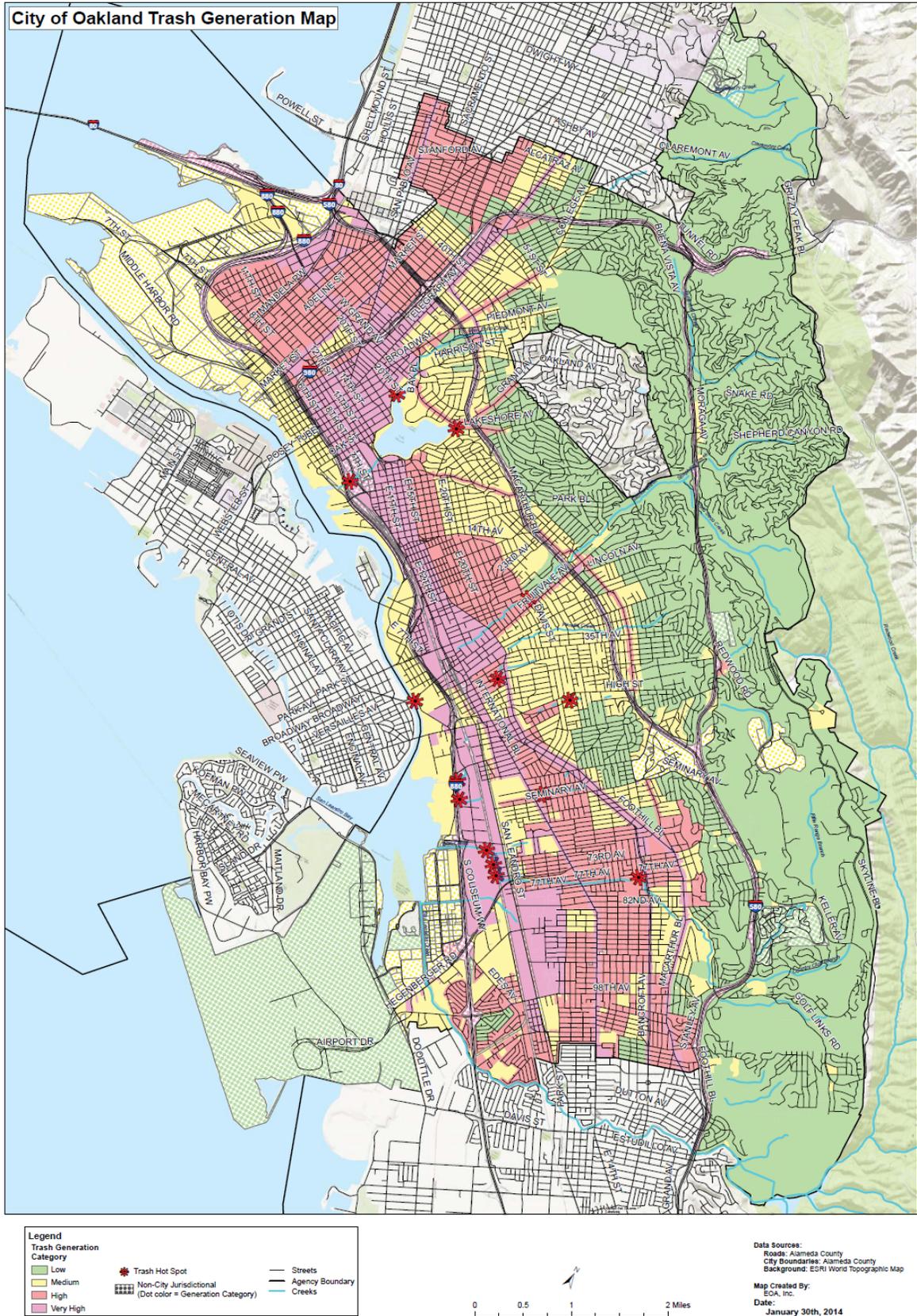


Figure 3. Trash Generation Map

3.0 TRASH MANAGEMENT AREAS AND CONTROL MEASURES

This section describes the trash control measures that the City of Oakland is currently implementing and those that Oakland plans to implement to solve trash problems and achieve a target of 100% (i.e. full) trash reduction from its MS4 by July 1, 2022. The selection of control measures described in this section is based on Oakland's current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with MS4 discharges.

Information on the effectiveness of some trash control measures is currently lacking. In some cases, Oakland has proposed "pilot projects" to better understand how effective that control measure is. The City also based its selection of control measures on existing effectiveness information, our experience in implementing trash controls and knowledge of trash problems, and costs of implementation.

The control measures identified in this plan are the key first steps to long term success in the City's trash reduction efforts. Oakland will continue to explore new partnerships and opportunities to reduce trash and to refine its trash control strategy to account for the knowledge gained from implementation of its control measures and pilot project efforts. By July 1, 2017, the City will present a plan for meeting its 100% reduction (no visual impact) by July 1, 2022. If significant revisions or amendments are made in the interim, changes will be submitted to the Water Board through the City of Oakland's annual reporting process.

3.1 Management Area Delineation and Prioritization

Trash Management Areas (TMAs) are intended to form the management units by which trash control measure implementation can be tracked and assessed for progress towards trash reduction targets. Consistent with the long-term plan framework, the City of Oakland delineated 16 trash management areas (TMAs). These TMAs were delineated based on a combination of factors including: watershed boundaries, geographical distribution, land use type, source of trash, and proposed control measures & implementation strategies. The 16 TMAs are generally organized by contiguous geographic areas. In some instances the TMAs are classified by type of land use (i.e. arterials and commercial centers); which results in non-contiguous areas.

Staff defined management areas in a way that would respect existing management practices, as well as allow for enhanced or new actions. For example, the Downtown management area (TMA #7) was specifically bounded to acknowledge the enhanced street sweeping that occurs there (three times per week).

A map depicting Oakland's TMAs is included as Figure 3.1. All jurisdictional areas within the City are included within a TMA. The amount of jurisdictional land area and associated trash condition categories for each TMA are included below in Table 3. More detailed maps of the City showing the City in north, central and south sections with both TMAs and trash generation rates are found in ATTACHMENT D.

TMA	NAME	Jurisdictional Area (Acres)	Trash Generation Category			
			Very High	High	Moderate	Low
1	Arterials	2701.1	47%	29% 29% 20%	4%20%	4%
2	Commercial Centers	657.6	50%	13%	26%	1%
3	North Oakland	978.1	2.8%	56.2%	35.6%	5.3%
4	Former Army Base	140.7	0.0%	0.0%	100.0%	0.0%
5	West Oakland	946.1	10.0%	81.1%	8.9%	0.0%
6	Shoreline	808.8	2.8%	0.1%	97.1%	0.0%
7	Lake Merritt Watershed	1,329.9	22.3%	6.6%	66.9%	4.1%
8	Downtown Oakland	306.1	87.7%	12.3%	0.0%	0.0%
9	San Antonio	777.0	29.7%	41.7%	25.7%	2.8%
10	Sausal Creek	475.0	12.3%	21.2%	36.0%	30.5%
11	East Oakland (1)	1,416.0	3.8%	12.7%	80.7%	2.8%
12	East Oakland (2)	2,672.5	3.8%	65.9%	26.9%	3.3%
13	Industrial Oakland - West	373.6	3.1%	38.5%	57.5%	1.0%
14	Industrial Oakland - East	576.5	100.0%	0.0%	0.0%	0.0%
15	Port/Airport	Non-jurisdictional	-	-	-	-
16	Hills	14,179.2	0.0%	0.1%	1.7%	98.2%

Table 3. Jurisdictional Area and Percentage of each Trash Management Area (TMA) Comprised of Trash Generation Categories

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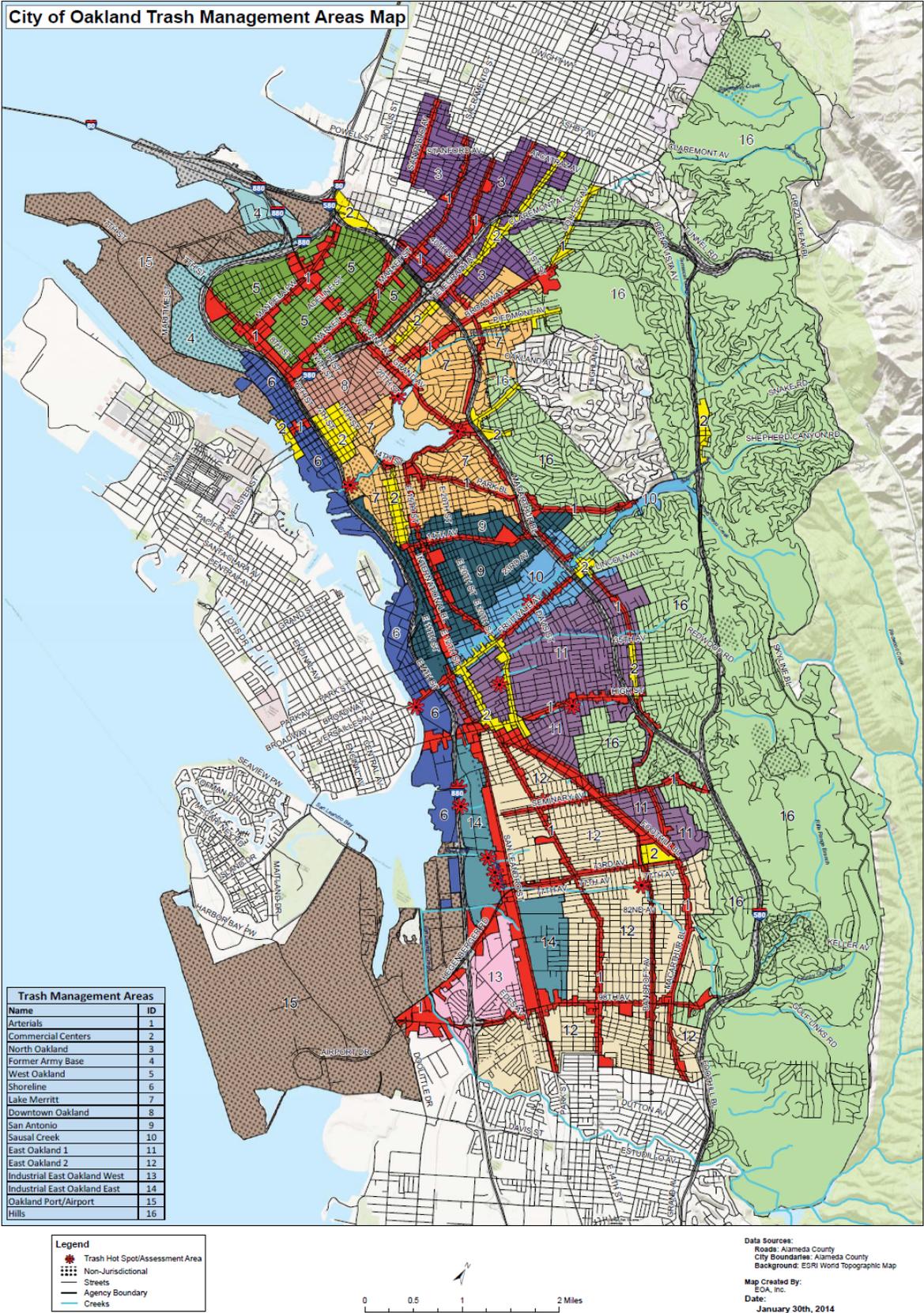


Figure 3.1 – Trash Management Areas

3.2. Current and Planned Trash Control Measures

Trash generation reduction control measures prevent or greatly reduce the likelihood of trash from being deposited onto the urban landscape and into our waterways.

Oakland's trash reduction strategy is multi-pronged and includes:

- Creation of innovative partnerships within City Departments and throughout the community to leverage more trash reduction;
- Evaluation of existing, internal City resources to identify opportunities to provide more efficient trash reduction,
- Implementation of pilot projects to identify the potential for new trash reduction strategies.
- Ongoing adaptive management through creation of a staff Trash Reduction Committee to help guide program activities to reduce trash.

These trash control measures, including prevention measures (such as product ban ordinances), interception (such as full and partial trash capture devices) and clean-up efforts (including creek/shoreline and on-land clean-ups) are discussed below:

Full Capture Treatment Devices

Pre-MRP

- Oakland installed four underground Continuous Deflection Separator (CDS) units in the Lake Merritt Watershed; which provided a total of 206 acres of full trash capture.

2009 – 2014

- Oakland has completed installation of 19 additional full trash capture devices for a current total of 928 acres being intercepted by full trash capture. The complete list of full trash capture devices is provided in ATTACHMENT D. Figure 3.2 is a map showing Full Trash Capture Devices in Oakland.
- Oakland provides maintenance of its full trash capture CDS units and Connector Pipe Screens (CPS) and Gross Solids Linear Removal Devices (GSRD) a minimum of once a year. These clean outs are recorded and documented on the City's data tracking system (Cityworks) and in the City's annual report to the Water Board. Maintenance includes both a visual inspection and, if units are over half-full, a clean-out. A review of the Cityworks maintenance records indicates that a number of CDS units and CPS baskets are cleaned more frequently as staff have acquired field knowledge of the facilities and adjusted their maintenance schedule accordingly.

2014 – 2017

- Potential locations for additional full capture will be assessed and implemented – as funding is available. Emphasis will be on identifying opportunities in very high/high trash areas.

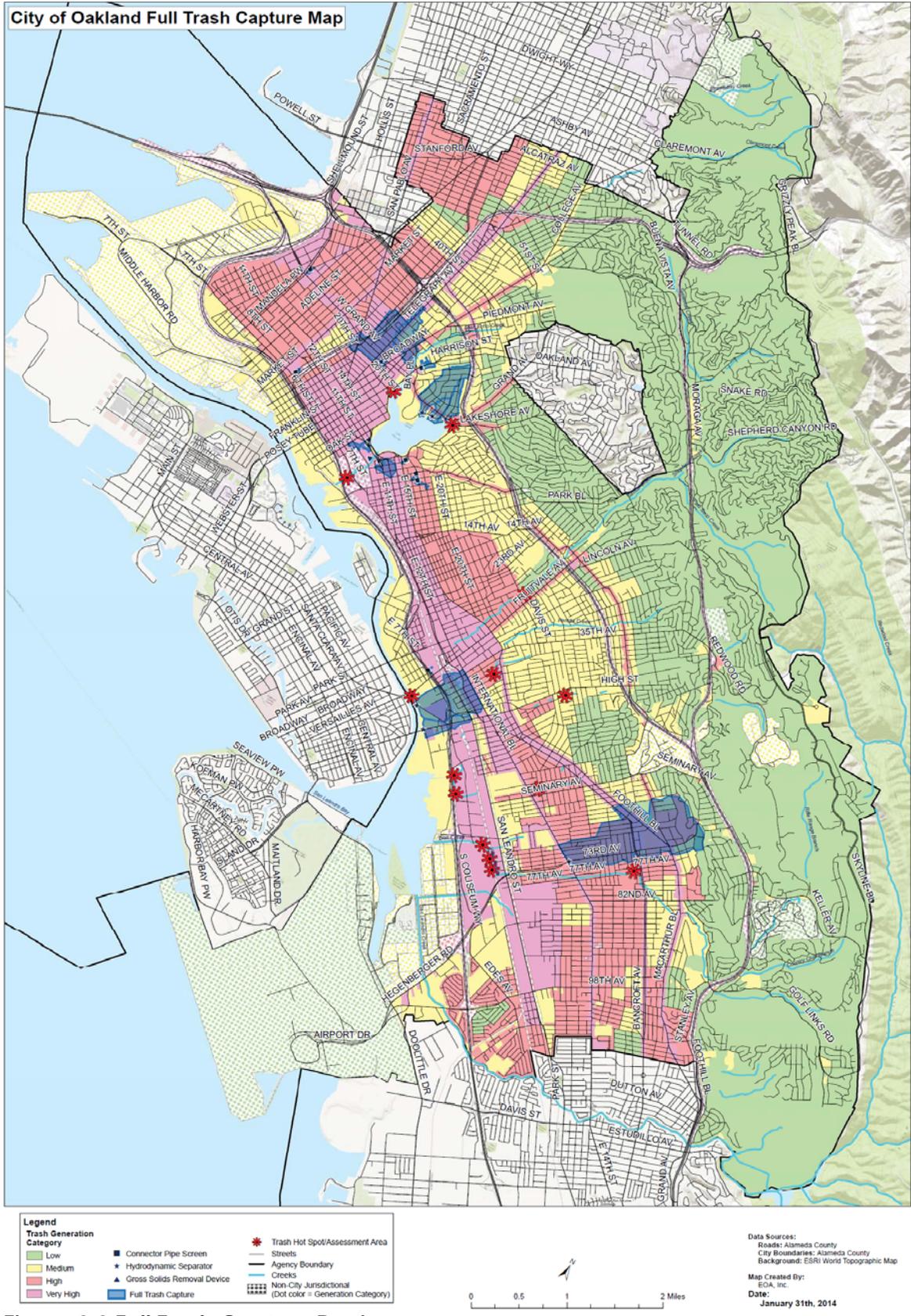


Figure 3.2 Full Trash Capture Devices

- Combination Auto-Retractable Screens (ARS) /CPS Pilot: The City will launch a pilot which will look at combining ARS in combination with CPS full capture inlet baskets. The goal of the pilot will be to investigate how well the ARS screens reduce trash from entering the storm drain inlet and if the reduction is sufficient to offset the frequency of clean out and maintenance activities which is typically associated with CPS. If trash in the ARS inlets is sufficiently less than the non-ARS control inlets, staff will identify high priority areas for installation of ARS and pipe screen baskets.

Post-2017

- Potential locations for additional full capture will be assessed and implemented – as funding is available.
- Evaluation of Combination ARS/CPS Pilot Project and potential implementation in targeted areas.
- Continuation of programs and services listed above, or similar programs and services.

Partial-Capture Treatment Devices

Pre-MRP

- Lake Merritt Trash Booms: There are seven booms at key outfalls in Lake Merritt that were installed in 2002. These booms are floating trash barriers intended to contain trash in an isolated area and allow for clean-up. The trash captured in the partial trash capture devices (booms) at Lake Merritt is contracted out to Lake Merritt Institute (LMI) for its removal. Each of these booms is cleaned a minimum of once per week.
- Pump Station Trash Racks: There is a pump station trash rack in the Ettie Street Watershed and a pump station trash rack in the Lake Merritt Channel at 7th Street. Both pump stations are operated by Alameda County. The Ettie Street Pump Station (ESPS) trash rack is “self-cleaning” in that it has a mechanical arm that combs debris off the front and onto a belt that transports the material up to the street level where it drops in an enclosure for removal. It is set to operate any time one or more main pumps are active. The pumps are triggered by increasing water level in the fore bay, so there is perhaps a short lag as first flush runoff brings the level up maybe roughly a half to one foot. It is estimated that a rain event typically generates ~ 5-6 CY of trash for hauling⁵. The crews also keep track of the volume removed as part of their work tracking. The Lake Merritt Channel pump station trash rack is cleaned by hand (using underwater divers) and occurs on a semi-annual basis.

⁵ Personal Communication, Gene Mazza, Alameda County ESPS Pump Station Supervisor.

2009 – 2014

- Annual Removal of 17,000 gallons/year: In analyzing the truck loads from 2011 - 2013, the City estimates a low and high trash removal of between 17,000 and 25,000 gallons/year. Basing our plan on the conservative, lower, volume of trash removed, the City plans to continue to remove 17,000 gallons/year with these booms at Lake Merritt.
- Increase Trash Removal Efficiency: In late 2012, the City replaced four booms on Lake Merritt to enhance trash removal. These new booms were attached more closely to the shoreline wall to help prevent trash from escaping the booms. See ATTACHMENT F showing the locations of newly installed trash booms.
- Auto-retractable Screens (ARS) Pilot Project: In 2013, the City initiated a pilot project to evaluate the effectiveness of ARS on inlets with curb cuts only (no street grate). The goal is to evaluate the effectiveness of ARS is in preventing trash from entering a storm drain inlet. In high trash areas, screens were installed on one side of the street and trash removed was compared with storm inlets on the opposite side of the street. The description of the pilot project is found in ATTACHMENT G.
- Trash Net Assessment: In 2010 – 2012, the City investigated the feasibility of installing a trash net at the Glen Echo outfall. The City conducted flow and velocity measurements in the channel and reviewed conceptual designs prepared by a trash net vendor. The results of the study indicated that there is not sufficient capacity in the channel to allow installation of a trash net.

2014 – 2017

- Ettie Street Dry-flow Diversion Project: As part of its effort to reduce the pollutants Polychlorinated Biphenyl's (PCBs) & Mercury loading to San Francisco Bay, Alameda County will be evaluating the feasibility of diverting dry weather flows from the County of Alameda pump station to the East Bay Municipal Utility District (EBMUD) wastewater treatment plant. The County and EBMUD are planning a pipe size of 1000 gallons/minute (approximately 1.4 million gallons per day) which is estimated as the dry weather base flow. If this diversion takes place, all trash from dry weather flow would be fully captured. A complete feasibility analysis is expected in 2014.
- Evaluation of ARS Pilot Project and potential implementation in targeted areas

Post-2017

- Continuation of programs and services listed above, or similar programs and services.

Community Engagement – Cigarette Litter

Pre-MRP

- No control measures implemented prior to the MRP.

2009 – 2014

- Cigarette Butt Receptacle Pilot: City of Oakland is supporting a local school initiative to measure cigarette butt litter along a busy commercial district and arterial. St. Paul's Episcopal school children counted the number of cigarette butts along a seven block stretch of Grand Avenue and a portion of the Lake Merritt Park. The school identified the key locations where the most cigarette butts had accumulated: at a fountain, an AC Transit bus stops and outside restaurants. Using this baseline data, the City will provide cigarette butt receptacles at the key areas noted along Grand Avenue and measure the difference in cigarette butt litter. While cigarette butts make up a lesser volume of the trash in our waterways, the City has chosen to focus one of its pilot projects on this pollutant type for the following reasons: 1) cigarette butts are the number one item retrieved in each of the last 20 years of coastal clean-ups; 2) cigarette butts are ubiquitous in all areas with an estimated load of 3 billion butts annually in the Bay Area⁶ and; 3) cigarette butts leach chemicals such as heavy metals, arsenic, nicotine and ethyl phenol that affect water quality and aquatic wildlife. Studies have shown cigarette butts pose high levels of toxicity.⁷

2014 - 2017

- A similar pilot project effort will be replicated in downtown Oakland in coordination with the Downtown Business Improvement District (BID). The Downtown BID has identified 12 sites where cigarette butt receptacles are recommended for installation. The City will supply the Downtown BID with cigarette butt receptacles (to be installed at high priority areas like bus stops, restaurant entrances and other identified "smoke spots") and the Downtown BID will monitor the butt litter before and after installation.

Post 2017

- Evaluation of Cigarette Butt Receptacle Pilot and potential implementation in targeted areas

Community Engagement: "Re-Think Disposable"

Pre-MRP

- No control measures implemented prior to the MRP

2009 – 2014

- Oakland is participating in a pilot effort with four other Bay Area municipalities to promote reduction of single use products in food service establishments. The 3-year effort, initiated by the Clean Water Action in 2011 with a grant from the US EPA, will: conduct business audits to identify opportunities for three business types to reduce their single use products; create models and identify financial incentives to discourage disposable packaging, and implement the key

⁶ Save The Bay Association, Tobacco Policy Options

⁷ Personal Communication, Dr. Tom Novotny, Bay Area Trash Summit, November 15, 2013

reduction practices in 50 – 100 businesses throughout the study area. Detailed description of the pilot is available at:

<http://www.cleanwater.org/ca/rethinkdisposable/reducingdisposablesinfoodservice>

2014 – 2017

- Evaluation of Re-think Disposable Pilot and potential implementation in targeted areas

Post 2017

- City staff will explore the feasibility of continuing this program in some form.

Activities to Reduce Trash from Uncovered Loads

Pre-MRP

- City has a municipal ordinance that prohibits uncovered loads.

2009 – 2014

- Continuation of above program.
- On a quarterly basis, State police have been patrolling Bay Area freeways to enforce uncovered loads.

2014 – 2017

- The Zero Waste System Design adopted by City of Oakland Council (Resolution No. 83689 CMS) includes provisions for regulating independent recyclers and construction and demolition debris haulers through a permit or non-exclusive franchise system. This new regulatory regime may provide new opportunities for identifying illicit or “fly-by-night” haulers who are often implicated in illegal dumping investigations, and assist with the oversight of trucks with uncovered loads.
- Explore opportunities for expanding partnership with Caltrans and Highway Patrol to target illicit haulers.

Post-2017

- Continuation of programs and services listed above, or similar programs and services.

Anti-Littering and Illegal Dumping Enforcement & Clean Up Activities

Pre-MRP

- Illegal dumping has been identified as a high source of trash generation in Oakland. Historically, the City of Oakland has not emphasized legal authority as a control measure. Prosecution was also difficult unless there was an eye-witness and solid proof exists linking the offender to the litter.

- Keep Oakland Clean and Beautiful (KOCB) staff responded to citizen calls of trash and illegal dumping. The program operated two mattress trucks, one tire truck, five pickup trucks, one overhead loader and three garbage trucks on a full-time basis. Materials were picked up and taken to the Davis Street Landfill.

2009– 2014

- Starting in 2009, every call and clean-up activity for illegal dumping began to be tracked through the City's data tracking system, Cityworks. In Fiscal Year 2012/2013, the City responded to and removed illegal dumping materials from 17,467 sites; totaling over 40,000 cubic yards removed.
- In 2009, the City established a performance standard that 85% of its illegal dumping requests will be completed within three working days
- The City established and maintains a list of "Hot Spots for Illegal Dumping" which City crews visit when time permits (regardless of a request or not) to ensure that the hot spot is free of waste materials.
- Increased Resources: An additional overhead loader and five new Full-Time Equivalent (FTE) staff will be added to the illegal dumping department in 2014. In addition, the City's new franchise agreement for trash removal being negotiated includes provisions for the franchised waste hauler to repair and maintain street litter cans. This may allow four existing FTE's currently assigned to litter can maintenance to be redirected to illegal dumping removal activities.
- Video Surveillance Pilot Project: In 2010, the City launched a pilot video surveillance effort using grant funds to install live cameras (monitored in real time by Bay Alarm Company) at 16 high priority illegal dumping sites to deter illegal dumping activities and to collect evidence to aid in the identification, capture, and prosecution of illegal dumping offenders. This effort included installation of "dummy cameras" at an additional 30 priority sites in an effort to deter illegal dumping. Out of a total 83 identified "high priority" illegal dumping sites in Oakland, the City placed deterrence devices at 46 of those locations. Lessons learned from this pilot were: 1) City's legal tools to prosecute and follow-up on persons/vehicles identified through this program were restricted; 2) Calls from Bay Alarm identifying an in-progress illegal dumping were routed to the police department as non-emergency and were given a low priority for response when compared with other violent crimes or theft of personal property.
- Illegal Dumping Enforcement Action Initiative: In August 2013, The City Attorney, Public Works and the City Administrator's office launched an *Illegal Dumping Enforcement Action Initiative* against individuals performing illegal dumping. The City Attorney brought an ordinance to Council in September 2013 to (1) increase penalties for illegal dumping; (2) Make illegal dumping a misdemeanor under city law (it is currently an infraction under the Oakland Municipal code but a

crime under state law) and; (3) allow some violators to perform community service by cleaning up illegal dumping instead of paying fines. See the attached City news release in ATTACHMENT H.

2014– 2017

- Illegal Dumping “Sting”: City staff will coordinate with the Oakland Police Department to stake out five, known illegal dump sites (one per police sector).
- Encourage Community Participation in Collecting Evidence: City will conduct outreach to promote the use of online reporting of incidents, including photographic and video evidence submitted by the public. This will allow the City to identify and pursue enforcement actions against individuals and companies responsible for illegal dumping.
- Illegal Dumping Enforcement – Using Camera data: City will continue to seek funding opportunities and staff resources to assist with installation of active cameras at designated illegal dumping hotspots and staff in City Attorney’s office to provide follow-up to filmed information.
- Additional Resources from Garbage and Organics Collection Services Contract: The new franchise agreement being negotiated includes adding the following provisions, which may help reduce and abate illegal dumping: 1) On-call bulky item collection service for multi-family residences as a standard service, which is estimated to increase by approximately 60,000 the number of residential units with access to bulky collection services; 2) Pay-as-you-go bulky item collection service available to all single-family and multi-family residences to give all residents direct access to bulky item collection services; 3) Illegal dumping collection services at four locations six days per week picked up by the franchise contractor; 4) Documentation and reporting by the franchise contractor of addresses with debris accumulation or apparent illegal dumping.

Post-2017

- Continuation of programs and services listed above, or similar programs and services.

Trash Bin/Container Management (Private & Municipal)

Pre-MRP

- Oakland Municipal Code Section (OMC) 8.28.100 includes a requirement for adequate garbage service for all property types. This code is enforced through the requirements provided in OMC Section 8.28.280. Per this City ordinance, the City has the authority to require adequate service level and prohibits overfilled and overflowing rubbish containers. City ordinance also requires that when service level(s) are deemed inadequate, the contract hauler is required to adjust the level of service appropriately and provide the City with a report of this action.

- Residential subscription to garbage service is enforced by a property lien system described in OMC Sections 8.28.170-8.28.270. Enforcement for commercial customers is on a complaint-driven basis.
- Bulky waste pick-up appointments were available annually for every resident in a single family home and occupants of 2 – 4 unit buildings and an optional second appointment is available for the first 500 callers.

2009 – 2014

- The optional second appointment is no longer available but otherwise City will continue the above program.

2014 – 2017

- Trash Containment Education and Inspection to Businesses with over 4 cubic yards of waste: The Alameda County Waste Management Authority known as StopWaste Partnership offers technical assistance (site visits and outreach materials) for implementing the mandatory recycling ordinance to businesses in Oakland that generate four cubic yards or more of waste each week. Issues of trash containment or adequate service will be addressed as part of the program through waste reduction and recycling. As part of that visit, an assessment is conducted to determine how best to address inadequate trash service (i.e. insufficient trash collection or use of bins that are too small) and improper containment (open dumpsters with potential for wind deposition of trash), and indicate whether the business needs assistance with proper trash management. City staff is exploring the possibility of a one-year effort that will expand this technical assistance to all commercial waste generators in Oakland, targeting businesses in “High”/“Very High” trash areas. Inadequate trash containment sites will be noted and, as appropriate, identified facilities will be referred for more frequent service or code enforcement.
- Pilot Community Engagement Effort to Identify Need for Bin Container Management: Working with the City’s solid waste program, an area will be targeted for a focused campaign to identify inadequate bin containment and enforce removal of trash and implement a proper trash bin and containment program to control trash. In this pilot, the Downtown Oakland Business Improvement District (BID) will work closely with the local community businesses and in coordination with the solid waste program to provide outreach on proper trash management. The Downtown BID will notify City staff of businesses needing additional services. City staff will follow up with businesses that have been identified as having inadequate bin container management.
- Street Litter Cans and Park Litter Can Assessment: City will conduct assessment of its litter containment on its streets, and in park and recreational areas to identify areas needing more trash capacity. As funding allows, City will install trash bins with larger capacity and that are less vulnerable to trash dispersal from wind and scavenging.

Post-2017

- Continuation of programs and services listed above, or similar programs and services.
- City will consider expanding the pilot effort to identify needed bin container management to other commercial district BIDs.

Creek/Shoreline and On-land Trash Clean-ups

Pre-MRP

- The City managed ongoing year-round volunteer⁸ and anti-litter programs. The most notable efforts include annual Earth Day and Creek-to-Bay Day litter removal events.
- Starting in the late 1990s, KOCB staff began management of a youth summer employment program, Team Oakland, which provided litter clean-up in high trash generating areas.

2009 – 2014

- City has continued to grow and promote its Earth Day and Creek-to-Bay Day events and annual cleaning of designated City trash hot-spots. Starting in 2009, the City tracked the amount of trash removed for each of its sites on Earth Day. In reviewing the last five years of collection data from these events, the City estimates a low and high annual trash removal of 4,000 – 9,000 lbs/Creek to Bay Day events and 12 -17 tons per Earth Day Clean Up Events.
- In 2013, the City launched a website for its Adopt-A-Drain program (<http://adoptadrainoakland.com>) which identifies the storm drains in the City and allows volunteers to select a drain to adopt for regular cleaning.
- Increased Volunteer Participation: The City of Oakland plans to increase volunteer participation for on-land /creekside trash cleanups **over the 2009 baseline**. These **additional** on-land cleanups will be conducted or coordinated each year and the number of volunteer hours spent on these efforts and the on-land trash collected will be used to demonstrate the enhanced trash loads reduced.
- Improved Tracking: Currently, the City documents the number of volunteer hours spent on volunteer efforts. City staff intends to improve records of the volume of trash collected at these volunteer clean-up events. Going forward, the City will

⁸ Please note that the volunteers only remove trash that can safely be hand carried. Volunteers are instructed to contact City personnel for removal of any large items. As a result, large items (e.g., appliances, shopping carts, furniture, mattresses, televisions, tires, lumber, etc.) are not collected during trash cleanups and are not part of the volume determination. Organic materials are also excluded from this volume determination.

track the volume and location of litter removed through Cityworks, by recording the “community bags” called in for pick-up.

- Business Improvement Districts: Starting in 2009, several business districts were established which received funding from voter approval of an assessment district. The Downtown Oakland BID uses two full-time staff five days a week to remove litter in their district. The litter removal efforts include cleaning litter, dumped materials, and overflowing trash cans in the public Right-of-Way. The BID has also expanded the trash capacity by installing 10 big-belly solar trash receptacles in 2010 and an additional 11 units in January 2014. Through the BID clean-up efforts, approximately 50 tons of trash is collected per year from downtown Oakland⁹. This has resulted in noticeably cleaner streets. Other BIDs (including Montclair, Rockridge, Fruitvale, Koreatown, Dimond, Grand Lake, and Temescal) also provide litter removal clean-ups on a regular basis.

2014 – 2017

- Targeted volunteer efforts: By identifying areas of “need” on its website, City staff will direct interested volunteers to high priority trash areas. This will include directing volunteers to areas of highest trash generation areas without full trash capture devices.
- Targeted Team Oakland: Team Oakland efforts will target high trash commercial areas and arterials that are not in full-trash capture zones.
- Storm Response Team: Staff will develop a Storm Response Team which is currently employed by Heal the Bay in Southern California. This program will identify Adopt-A-Drain volunteers who will be called to clean up storm drains, prior to a rain storm. “High” and “Very High” Trash generating areas will be targeted.

Post-2017

- Continuation of programs and services listed above, or similar programs and services.

Homeless Encampment Management

Pre-MRP

- City staff removed homeless encampments as resources allowed.

2009 – 2014

- Starting in 2011, the City initiated a multi-agency homeless encampment task force that meets monthly to target the areas vulnerable to homeless

⁹ Approximately 5% of the total trash collected is organic debris, Personal Communication, Andrew Jones, Downtown BID.

occupation, recommends installation of new fences and/or repair of damaged fences. This task force identifies the priority homeless encampments for removal and coordinates agency resources (illegal dumping crew, homeless social services and fire department personnel) for the monthly removal efforts. This task force also coordinates with adjacent landowners (such as Caltrans) on encampment prevention and removal. This task force also identifies physical barriers to establishment of encampments such as fencing an area or placement of boulders on potential tent site locations.

- City's increased clean-up efforts of homeless encampments have resulted in removal of 529 encampments since March 2009 through December 2013 (or roughly 9 homeless encampments per month).

Post 2014

- Staff will assign a priority to removal of homeless encampments in creekside areas.
- Continuation of programs and services listed above, or similar programs and services.

Street Sweeping Evaluation and Re-Targeting

Pre-MRP

The predominant maintenance operation to remove trash is through the City's aggressive street sweeping program. The City's street sweeping schedule (shown in ATTACHMENT I) has been in effect for many years prior to the MRP adoption and continues to be implemented as our main, year-round trash removal effort.

- City street sweeping program has an inventory of 13 mechanical broom sweepers. Areas to be swept are posted and enforced for no parking¹⁰.

2009-2014

- City of Oakland targeted its street sweeping efforts to "Very High" trash producing areas including downtown Oakland and major arterials. This targeted street sweeping program provides three or more street sweeping events per week in those designated high trash areas. In 2010, all sweeper units were equipped with a GPS device that logs the route and speed of each vehicle. In 2012, the City added a regenerative air sweeper which is used in tandem with a mechanical broom sweeper in high trash areas to ensure full trash removal. In 2013/2014, the City added three more regenerative air sweepers and eight new mechanical broom sweepers. For a total of four new regenerative air sweepers and eight new mechanical broom sweepers added post MRP-adoption.
- City completed its GIS mapping of its street sweeping routes and programs.

¹⁰ Uncontrolled areas such as medians and underpasses are not posted.

2014– 2017

- Street Sweeping Evaluation and Retargeting: The City of Oakland is planning an extensive evaluation and re-targeting of its street sweeping program. Issues to be examined as part of this re-targeting effort include:
 - *One-time assessment of each type of street sweeper equipment used to evaluate its efficacy in picking up street litter.*
 - *Examine parking restrictions and effects on efficacy in the ability to remove trash.*
 - *Examine sweeping frequency in “Very High”, “High”, “Moderate” and “Low” trash areas and full trash capture areas to adjust street sweeping program as appropriate to remove trash.*
 - *As appropriate, modify standard operating procedures to improve trash removal performance.*
 - *Provide operator training on importance of street sweeping effort in meeting Clean Water Act requirements.*
 - *As appropriate, install auto-retractable screens in curb inlets in high trash areas.*
 - *Coordinate City-wide pavement management program with street sweeping effectiveness opportunities.*

Post 2017

- After results of evaluation are completed and tabulated, City will prepare recommendations for the implementation of desired street sweeping program.

Caltrans Mitigation Activities

The City will be working through the Alameda Countywide Clean Water Program to identify specific measures that Caltrans can implement to reduce trash impacts from state-owned freeways and roadways. Possible measures include assessment of Caltrans Interchanges and installation of trash removal devices and increase in trash removal activities. Using observations from inlet and on-land cleaning events, City will identify key areas needed for Caltrans implementation activities. Details of proposed mitigation activities will be provided in future Annual Reports.

JURISDICTION-WIDE ACTIVITIES

In addition to the above-mentioned specific control measures, the City of Oakland plans to conduct jurisdiction-wide control measures for trash that are uniform for all TMA areas. The City will rely heavily on its trash generation map to focus its control measures for trash. However, as indicated in more detail in Section 4 below, the City's assessments of its trash generation areas, and its assessment of its implemented control measures will dictate revising its trash generation map as well as which control measures will be continually implemented. Each TMA is unique in its sources of trash, its geography, drainage, and population. These variables will always be taken in consideration when conducting jurisdiction-wide control measures.

Storm Drain Inlets

Pre-MRP

- The City has as an annual goal that all storm drain inlets are to be cleaned at a baseline level of one time per year. Maintenance includes an inspection and a clean out of the inlet so that the concrete bottom is visible.

Post 2009:

- Continuation of programs and services listed above, or similar programs and services.

Polystyrene Foam Ban

Pre-MRP

- In 2008, the City adopted an Ordinance to Prohibit the Use of Polystyrene Foam Disposable Food Service Ware and Require the Use of Biodegradable or Compostable disposable Food Service Ware by Food Vendors and City Facilities (Oakland Municipal Code Chapter 8.07 Polystyrene Foam Food Service Ware, Ordinance No. 12747). The ordinance prohibits food vendors from serving food or beverages in polystyrene containers. Additionally, vendors doing business with the City, City facilities and City staff are prohibited from purchasing and using polystyrene to serve food. Implementation of the Polystyrene Foam Ban was accompanied by significant outreach to consumers as well as businesses as described in ATTACHMENT J.
- Compliance with the ordinance was designed to be verified on a complaint driven basis. Violations are complaint-driven and reported to the City through the Recycling Hotline. Violators reported to the City receive a letter notifying them that they are in violation and providing alternatives.

2009 – 2014

- In 2012, Oakland conducted compliance inspections at food service establishments in high trash areas to determine compliance with the Polystyrene Foam Food Service Ware ban. Targeting 392 of its stormwater inspections to restaurants in high-generating trash areas. See ATTACHMENT K showing inspection checklist asking for confirmation of appropriate take out materials. Of those 392 facilities inspected, 81 facilities were identified as using polystyrene foam for takeout and thus, are out of compliance –approximately an 80% compliance rate. During the inspections, facilities were provided with information on the polystyrene foam ordinance and ban. The City issued notification letters to each of the restaurants that were out of compliance.

2014 – 2017

- Improved Polystyrene Outreach & Inspection: The City is analyzing opportunities to further reduce polystyrene foam food service ware litter from food service vendors. In coordination with StopWaste and Clean Water Fund, Oakland is exploring implementation of a one-year outreach and technical assistance effort to businesses using the compliance with Alameda County's requirement for mandatory recycling in FY 2014-2015 as a primary vehicle. The City plans to

provide education and outreach assistance on the polystyrene ban, proper trash containment, and litter reduction education as part of this technical assistance effort. Compliance with the polystyrene ban (and effective trash bin management) will be noted and follow-up enforcement will be targeted to non-compliant businesses in “High” and “Very High” trash areas. The City will explore the possibility of using its business licensing procedures to ensure that all new restaurant applicants are made aware of the polystyrene foam ban.

- Improved Enforcement (fine authority)/ Modifications: City staff has analyzed the existing polystyrene foam ban ordinance and continues to make improvements to this program.

Post 2017:

- Continuation of programs and services listed above, or similar programs and services.

Single Use Bag Ban Ordinance

Pre-MRP

- Single-Use plastic bags were a significant component of the litter found in storm drains and waterbodies throughout Alameda County. In July 2007, Oakland passed a plastic bag ban ordinance. The City was later sued over the ordinance and the City was court-ordered to rescind the ordinance in 2008.

2009– 2014

- Single-Use Bag Ban: On January 1, 2013, Alameda County enacted an ordinance to ban all plastic bags and require a 10 cents charge for paper bags to 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 or 21 license) in Alameda County. Alameda County Waste Management Authority known as StopWaste is overseeing a countywide outreach and education campaign in parallel with the ordinance. StopWaste is conducting the compliance program for the bag ban and maintains a complaint hotline for individuals to report on stores that are out of compliance. Since the inception of the program, StopWaste has visited 25% of Oakland stores affected by the ban and found 10% in compliance. When observing a violation, StopWaste offers technical assistance on the spot and anticipates the violation will be corrected in 99% of the cases. The City also has an ongoing public education and outreach campaign promoting the use of reusable bags.

Post 2014

- Continuation of programs and services listed above, or similar programs and services.

Trash Reduction Policies

Pre-MRP

- City developed Standard Conditions of Approval that apply to properties requesting permits.

2009 – 2014

- Implementation of C-3 requirements for applicable projects.

2014-2017

- City will revise and institute new Standard Conditions of Approval requiring new projects to be “trash neutral”. Sample conditions and/or planning guidelines may include:
 - Requiring site retrofit to provide increased and secure trash containment,
 - Requiring, as part of their use permit, that high trash generation facilities (such as fast food restaurants) install and maintain trash receptacles and pick up trash generated from the sale of their items (i.e., wrappers, straws, cups, napkins, etc.) around the perimeter and along the immediate streets bordering their establishment;
 - Policies encouraging trash-generating development into areas with trash capture devices;
 - Requirement for all projects in “Very High” and “High” trash generating areas to provide full or partial trash capture devices; and
 - Development of trash capture device design specifications for City construction projects.

2014 – 2017

- Review and update to conditions as appropriate.

Post-2017

- Continuation of programs and services listed above, or similar programs and services.

Public Outreach & Education

Pre-MRP

- Educational service programs to schools: hired educational services providers to deliver school education programs countywide to educate students about watersheds and stormwater pollution prevention (including impacts of litter on creeks, waterways, and the San Francisco Bay).
- Community Stewardship Grants: grants to individuals, non-profits, organizations, and community groups to implement programs and projects to reduce and educate about stormwater pollution (including impacts of litter on creeks, waterways, and the Bay).
- Advertising campaigns: targeted advertising outreach on stormwater pollution prevention (including impacts of litter on creeks, waterways, and the Bay).

- Educational materials: brochures, school activity books, and a website to educate youth and the public about stormwater pollution prevention.
- Public Outreach Events: Earth Day, Creek to Bay Day, Earth Expo, tabling at community events to involve the public in stormwater pollution prevention activities and educate them about stormwater pollution prevention (including impacts of litter on creeks, waterways, and the Bay).
- Citizen Involvement: Adopt-a-Creek/Spot programs to involve the public in habitat protection and stormwater pollution prevention activities and educate them about stormwater pollution prevention (including impacts of litter on creeks, waterways, and the Bay).
- Watershed Collaboration: provide support (in the form of materials and supplies, event coordination, debris removal, etc.) to non-profits and community organizations in their efforts to protect the watersheds. Often work of these organizations included debris removal/litter pickup.

2009 – 2014

- The City continues to participate in multi-media countywide outreach and education campaign programs through the Alameda Countywide Clean Water Program (ACCWP). In addition to the countywide effort, Oakland provides outreach at public events targeted to the general public and youth education classes to local schools. The list of specific outreach events, City and school education programs provided is described in the City's Annual Stormwater Report, Provision C.7, Public Information and Outreach Section.
- County Pilot on Multi-Family Dwelling Litter Outreach: Multi-family dwellings (i.e., apartment buildings and condominium complexes) are often areas of high trash generation. This pilot will target multi-family dwellings and evaluate how effective the outreach is in reducing litter.

2014 – 2017

- The Public Information and Participation Subcommittee of ACCWP 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.

Post-2017

- Continuation of programs and services listed above, or similar programs and services.

Special Events Trash Reduction

Events with gatherings of 50 people or more are required to obtain a City permit. The City currently has an event recycling program compliant with requirements of the state PRC 42648 (AB 2176, Montanez, Chapter 879, Statutes of 2004) for events of 2000 people or more per day. Staff regularly communicates this requirement to event producers, obtains and reviews event recycling plans for each large event held in the city. A City work group is developing a revised permitting process and permitting language that will include addressing trash management at City-permitted events.

Possible issues to be considered in the revised permitting process may include:

- Prohibition of plastic water bottles: Similar to the restriction at San Francisco's World Cup Event, City event-holders will not be allowed to sell or distribute single-use bottled water.
- Litter Deposit: Event-holders may be required to pay a "litter deposit." This deposit will pay for City staff to attend the event at the end of the function and verify 1) appropriate recycling practices implemented; 2) the area is free of litter and; 3) any trash from the event is adequately contained.

3.2.1 Trash Management Area #1 – Arterials

Arterials and major road thoroughfares have been identified as a "Very High" and "High" source of trash. These major thoroughfares are listed in ATTACHMENT L. Trash is generated by passengers littering from their cars and associated retail industries. Often, these arterials overlap with a portion or most of Commercial Centers (TMA #2).

Street Sweeping – 3 or more times per week

To address trash in arterials, the City will sweep arterials on average three or more times per week. Parking restrictions will be in place during all sweeping events and strictly enforced. Dependent on the street sweeping program evaluation, other street sweeping recommendations may be implemented in this TMA to improve trash reduction.

Litter Cleanup (Volunteer and Team Oakland)

City will target its volunteer and Team Oakland cleanup events to this TMA, as appropriate.

Trash Reduction Policies

City will develop trash reduction policies that will encourage installation of ARS screens, pipe screen baskets and other trash-capture devices for these arterials.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.2 Trash Management Area #2 – Commercial Areas

Commercial centers include geographic areas that have concentrated retail and commercial land uses. Commercial centers attract high volumes of car and pedestrian traffic and often have transit stations and hubs. Some of these centers have formal BIDs while others have more informal networks of business and community efforts. Commercial centers included in this TMA are identified in Table 3.2

Chinatown
Dimond
Downtown Oakland Commercial Center – See Downtown Oakland TMA
East Bay Bridge Mall
East Lake
Eastmont Mall
Fruitvale
Grand Avenue – Lakeshore Avenue
Jack London
Koreatown
Laurel
Montclair
Piedmont
Rockridge
Temescal

Table 3.2 Commercial Center TMAs

Street Sweeping Evaluation and Re-Targeting

Much of this TMA is swept once or twice per month. Based on the street sweeping evaluation and recommendations, this area may be recommended for increased efficiency and/or frequency of sweeping and possible installation of ARS screens in key locations.

Litter Clean-up (Volunteer and Team Oakland)

City will target its volunteer and Team Oakland cleanup events to this TMA, as appropriate.

Trash Reduction Policies

City will develop trash reduction policies that will encourage installation of ARS screens, pipe screen baskets and other trash-capture devices for these arterials.

Business Engagement Pilot Projects

Staff will work with BIDs in commercial centers to identify businesses needing assistance with trash management.

Priority for Pilot Project Implementation

This TMA will be evaluated for implementation of pilot activities including: trash containment, cigarette butt receptacles, installation of ARS screens, and full trash capture installation.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.3 Management Area #3 – North Oakland

Litter in the North Oakland TMA is predominantly generated by commercial centers and high density residential land uses.

Street Sweeping Recommendations

Much of this TMA is swept once or twice per month. Based on the street sweeping evaluation and recommendations, this area may be recommended for increased efficiency and/or frequency of sweeping and possible installation of ARS screens in key locations.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.4 Management Area #4 – Former Army Base

This area served as a US Army facility until it was closed in 1999. It is being redeveloped by a public-private partnership. This redevelopment effort will provide all new infrastructure for the site.

Stormwater Treatment and Control Measures

The former “Army Base” is planned for re-development. In the next four years, new infrastructure, buildings and facilities will be constructed on 160 acres of the former base. City will require compliance with MRP Provision C-3 requirements (providing green infrastructure that filters/slows the runoff) to manage all of the stormwater from the site ¹¹. Therefore, the site will be equipped with stormwater infrastructure that prevents trash from entering the storm drain.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events street reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.5 Management Area #5 – West Oakland

The West Oakland TMA is comprised of industrial/warehouse, transportation and residential land uses. Trash in the area is generated by the regional freeway system and transportation activity. In addition, this TMA is an area with significant illegal dumping.

¹¹ The remaining 160 acres is under Port of Oakland jurisdiction and there are no current plans for development.

Illegal Dumping Enforcement

This TMA will be targeted for illegal dumping prevention, removal and enforcement. City resources will be directed to this area to encourage quick removal of dump materials and priority for follow-up on enforcement.

Ettie Street Dry-flow Diversion Project:

This TMA is anticipated to have its low-flow diversion of stormwater directed to East Bay Municipal Utility District – effectively capturing litter in storm drains during non-rain events.

Cleanup (Volunteer and Team Oakland)

City will target its volunteer and Team Oakland cleanup events to this TMA, as appropriate.

Trash Reduction Policies

City will develop trash reduction policies that will encourage installation of ARS screens, pipe screen baskets and other trash-capture devices for this TMA.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.6 Management Area #6 – Shoreline

The shoreline TMA includes areas along the waterfront of the Oakland Estuary with the predominant sources of trash being the regional freeway system and litter associated with recreational use of parks and trails in the area. Many of the waterfront properties are owned by the Port of Oakland and leased to private tenants. The City will work closely with the Port of Oakland to ensure implementation of trash capture devices and proper trash container management on its shoreline properties.

Litter Containment

City will evaluate whether litter containment in the shoreline recreational and public trail areas is sufficient. Staff will work with the Port of Oakland and East Bay Regional Park District to consider feasibility and effectiveness of installing trash containers with more capacity.

Storm Response Teams

This TMA (along with known hotspots) will also be the area targeted by the storm response teams – volunteers that provide drain cleanups in anticipation of storm events.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.7 Management Area #7– Lake Merritt

The Lake Merritt TMA consists of high density housing, arterials and commercial districts.

Clean-ups – Volunteer and Team Oakland

City will target its volunteer effort and its contractor, LMI, to this TMA, as appropriate.

Priority for Pilot Implementation

This TMA will be evaluated for implementation of pilot activities including: trash containment, cigarette butt receptacles, installation of ARS screens, and full trash capture installation.

Street Sweeping Program Evaluation & Recommendations

Much of this TMA is swept once or twice per month. Based on the street sweeping evaluation and recommendations, this area may be recommended for increased efficiency and/or frequency of sweeping and possible installation of ARS screens in key locations.

Additional Full-Trash Capture Opportunities

City will continue to evaluate of this TMA for installation of full trash capture units.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.8 Management Area #8 – Downtown Oakland

This TMA is a high litter area due to a combination of transit hubs, high pedestrian traffic and high density land uses.

Priority for Pilot Implementation

This TMA will be evaluated for implementation of pilot activities including: trash containment, cigarette butt receptacles, installation of ARS screens, and full capture installation and targeted homeless encampment removal efforts.

Street Sweeping Program Evaluation & Recommendations

Much of this area is swept three times per week. Based on the street sweeping evaluation and recommendations, this area may be recommended for operation modifications that provide increased efficiency and/or possible installation of ARS screens in key locations.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.9 Management Area #9 – San Antonio District

This TMA has a retail and high density housing.

Priority for Pilot Implementation

This TMA will be evaluated for implementation of pilot activities including: trash containment, cigarette butt receptacles, installation of ARS screens, and full capture installation.

Street Sweeping Program Evaluation & Recommendations

Based on the street sweeping evaluation and recommendations, this area may be recommended for increased efficiency and targeted sweeping and possible installation of ARS screens in key locations.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.10 Management Area #10 – Sausal Creek

This TMA is a combination of high density housing and commercial/retail land uses.

Street Sweeping Program Evaluation & Recommendations

Based on the street sweeping evaluation and recommendations, this area may be recommended for increased efficiency and/or targeted sweeping and possible installation of ARS screens in key locations.

Clean-ups – Volunteer and Team Oakland

City will target its volunteer efforts to this TMA, as appropriate.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.11/12 Management Area #11/#12 – East Oakland 1 & East Oakland 2

These TMAs are similar with some commercial areas and predominant high-density residential housing. Trash sources include pedestrian litter, poor trash container management and illegal dumping.

Street Sweeping Program Evaluation & Recommendations

Much of the residential areas in this TMA are swept once or twice per month. Based on the street sweeping evaluation and recommendations, this area may be

recommended for increased efficiency and/or frequency of sweeping and possible installation of ARS screens in key locations.

Priority for Pilot Project Implementation

This TMA will be evaluated for implementation of pilot project activities including: trash containment, cigarette butt receptacles, installation of ARS screens, trash capture devices, and priority homeless encampment removal efforts.

Clean-ups - Volunteer and Team Oakland Targeting

City will target its volunteer and Team Oakland cleanup events to this TMA, as appropriate.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.13 Management Area #13 – Industrial East Oakland (1)

This TMA has predominantly industrial land uses. This area has high litter from BART and railway lines and the adjacent freeway. This TMA has a high incidence of illegal dumping.

Illegal Dumping Enforcement

This TMA will be targeted for illegal dumping prevention, removal and enforcement. City resources will be directed to this area to encourage quick removal of dump materials and priority for follow-up on enforcement. This area will be a candidate for actively encouraging citizen reporting of illegal dumping. In addition, this area will be high priority for waste removal by the City's franchise hauler.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.14 Management Area #14– Industrial East Oakland (2)

This TMA is composed primarily of light industrial and warehouse facilities. Primary source of trash is poor container management and wind-blown from freeways.

Trash Container Management

City will implement the business engagement pilot to assist with improved trash management in these facilities.

Jurisdiction Wide Controls

Jurisdiction-wide control measures including: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation will be implemented in this TMA.

3.2.15 Management Area #15–Oakland Port/Airport

This area is managed by the Port of Oakland and has highly restricted access to Port and Airport facilities. Source of trash is primarily traffic-related and windblown. Airport personnel clean up property on regular basis. No additional control measures are planned at this time.

3.2.16 Management Area #16 – Oakland Hills

This TMA is comprised primarily of low-density residential housing. TMA #16 is a low trash generating area and no additional control measures are planned at this time.

Jurisdiction Wide Controls

This TMA is a low trash generating area and only jurisdiction-wide control measures will be implemented in this TMA. These jurisdiction-wide measures include: polystyrene foam ban, single use bag ban, trash neutral policies, special events waste reduction and street sweeping evaluation and recommendation.

3.3 Creek and Shoreline Trash Hot Spot Cleanups

The City of Oakland identified 14 creek hot spot areas (plus one alternate) as required per MRP Provision C.10.b.iii. These site selections were based on areas with high trash volume and those locations that demonstrate a large accumulation of trash from the entire watershed. These hot spot sites have been indicated on the maps in this Long-Term Plan and are discussed below in Table 3.3.

Since the MRP adoption, the City has instituted an annual cleanup of its required trash hot spots along creeks pursuant to the MRP Provision C.10.b.i. These hot spot sites have been cleaned annually (either on Earth Day or Creek-to-Bay Day) by volunteers. The date of cleanup and amount of trash collected are recorded in the City's Annual Stormwater Report(s).

Starting in 2014, the City intends to increase the creek and shoreline cleanup in each designated hot spot to a minimum of two times per year. Starting in 2014, the City will standardize its hot spot data collection sheet gathering consistent location, date, type of trash and volume. Previously, data sheets varied according to the clean-up sponsor. This will provide information on the progress demonstrating reduced trash in the environment. In addition, the City plans to initiate a "Storm Response Team" outreach effort which will notify Adopt-A-Drain volunteers of upcoming storm events and encourage them to conduct clean-up activities in advance of an oncoming storm. This will be based on the model used by Heal the Bay in Southern California.

<http://www.healthebay.org/event/storm-response-team-emergency-cleanup>

	Trash Hot Spot	Dominant Type(s) of Trash	Trash Sources
1	Arroyo Viejo Creek - (Recreation Center)	Litter & illegal dumping including items such as: mattresses, appliances, tires, shopping carts. Small items such as plastic bags, aluminum cans, bottles, plastic wrappers, and clothing, etc.	Litter, homeless encampments, illegal dumping
2	Courtland Creek- (Brookdale to Fairfax)	Large illegally dumped items such as mattresses, appliances tires, shopping carts.	Litter, homeless encampments, illegal dumping
3	Arroyo Viejo/Lion Creek – Damon Slough (Site 1) (Line K)	Large illegally dumped items such as mattresses, appliances tires, shopping carts. Small items such as plastic bags, aluminum cans, bottles, plastic wrappers, and clothing, etc.	Litter, homeless outfall, windblown from freeway, illegal dumping
4	Arroyo Viejo/ Lion – Damon Slough (Site 2)	See Damon Slough Section 1 (above)	Litter, homeless outfall, windblown from freeway, illegal dumping
5	Arroyo Viejo/Lion – Damon Slough (Site 3)	See Damon Slough Section 1 (above)	Litter, homeless outfall, windblown from freeway, illegal dumping
6	Seminary Creek – East Creek Slough (Section 1) (Line I)	Dominant trash types include small items such as plastic bags, clothing, and food wrappers.	Litter, homeless, windblown from freeway, illegal dumping
7	Seminary Creek – East Creek Slough (Site 2) (Line I)	See East Creek/Slough Section I, above.	Litter, homeless, windblown from freeway, illegal dumping
8	Lake Merritt Channel - (7th Street to Hwy 880)	Trash common to parks, high density residential and commercial areas, homeless encampments and plastic bags.	Litter, homeless encampments, illegal dumping
9	Lake Merritt – Trestle Glen at Trash Boom	Trash common to parks, high density residential and commercial areas such as food wrappers, plastic bags, aluminum cans, bottles, and clothing, etc.	Litter, outfall, windblown, illegal dumping
10	Lake Merritt – Glen Echo Arm at Trash Boom	See Lake Merritt-Trestle Glen section, above.	Litter, outfall, windblown, illegal dumping
11	Peralta Creek – Cesar Chavez Park	Illegally dumped items such as construction materials, mattresses, appliances, tires and shopping carts. Small items such as plastic bags, aluminum cans, bottles, plastic wrappers and clothing, etc.	Litter, windblown, illegal dumping
12	Sausal Creek – Fruitvale Bridge	Illegally dumped items such as construction materials, mattresses, appliances, tires and shopping carts. Small items such as plastic bags, aluminum cans, bottles, plastic wrappers and clothing, etc.	Litter, illegal dumping
13	Sausal Creek- Barry Place	Illegally dumped items such as construction materials, mattresses, appliances, tires and shopping carts. Small items such as plastic bags, aluminum cans, bottles, plastic wrappers and clothing, etc.	Litter, illegal dumping
14	Seminary Creek	Illegally dumped items such as construction materials, mattresses, appliances, tires and shopping carts. Small items such as plastic bags, aluminum cans, bottles, plastic wrappers and clothing, etc.	Litter, illegal dumping

Table 3-3. Oakland Trash Hot Spot Information

3.4 Control Measure Implementation Schedule

As discussed in Section 3.0, the City has identified key activities and implementation dates for achieving trash reduction. The implementation schedule, Table 3.4 below, shows when activities will be implemented.

Table 3.4 City of Oakland Trash Control Measure Implementation Schedule

Note: Any future Changes in Implementation Schedule will be indicated in City's Annual Stormwater Report

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Mid-Term	Long-Term
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	July 1, 2014 – June 30, 2017	July 1, 2017 – July 1, 2022
PILOT PROJECTS - Underway								
ARS – Screen only					X	X	X	TBD
Cigarette Litter – Community Engagement						X	X	TBD
ReThink Disposable – Community Engagement				X	X	X	X	TBD
PILOT PROJECTS - Planned								
Trash Containment – Community Engagement							X	TBD
Full Trash Capture – Reduced Maintenance (ARS & Connector Pipe Screen)							X	TBD
Cigarette Litter - BID							X	TBD
Illegal Dumping “Sting”							X	
ADAPTIVE MANAGEMENT						X	X	X
Guidance from City Trash Reduction Committee						X	X	X
Maintenance of Trash Capture Devices	X	X	X	X	X	X	X	X
JURISDICTION-WIDE CONTROL MEASURES								
Identify feasible opportunities for full trash capture units		X	X	X	X	X	X	X
Street Sweeping Program Evaluation & Retargeting Recommendations						X	X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Mid-Term	Long-Term
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	July 1, 2014 – June 30, 2017	July 1, 2017 – July 1, 2022
Regulate Uncovered Loads	X	X	X	X	X	X	X	X
Provisions for Regulating Debris Haulers							X	X
POLYSTYRENE BAN								
Polystyrene Ban	X	X	X	X	X	X	X	X
Polystyrene Ban: Compliance					X	X	X	X
Polystyrene Ban – Technical Outreach & Inspections						X	X	
Polystyrene Ban Modifications							As needed	As needed
SINGLE USE BAG BAN								
City Ordinance	X				X	X	X	X
Compliance Inspections					X	X	X	X
TRASH CONTAINMENT								
Trash Containment – Technical Outreach & Inspections						X	X	TBD
Litter Container Assessment							X	X
ILLEGAL DUMPING								
Hot Spot Identification		X	X	X	X	X	X	X
Improved Tracking		X	X	X	X	X	X	X
Illegal Dumping Clean-up: Enhanced						X	X	X
Illegal Dumping: Community Assistance							X	X
Illegal Dumping Enforcement Initiative						X	X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Mid-Term	Long-Term
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	July 1, 2014 – June 30, 2017	July 1, 2017 – July 1, 2022
Illegal Dumping: Increased Resources						X	X	X
Illegal Dumping: Video Surveillance		X	X				X	X
CLEANUPS								
Volunteer: Earth Day, Creek to Bay Day	X	X	X	X	X	X	X	X
Volunteer: Increase over 2009 Baseline			X	X	X	X	X	X
Volunteer: Adopt-A-Drain	X	X	X	X	X	X	X	X
Volunteer: Improve Tracking						X	X	X
Volunteer: Storm Response Team						X	X	X
Volunteer: Targeted to High Trash Areas							X	X
Team Oakland	X	X	X	X	X	X	X	X
Business Improvement Districts		X	X	X	X	X	X	X
SPECIAL EVENTS REQUIREMENTS							X	X
TRASH REDUCTION POLICIES							X	X
HOMELESS ENCAMPMENT MANAGEMENT								
Increased Coordination								
Prioritize Creekside Encampment Removal								
PLANNED MEASURES (Longer-Term)								
Caltrans Mitigation Opportunities							X	X
Evaluation of Ettie Street Diversion							X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Mid-Term	Long-Term
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	July 1, 2014 – June 30, 2017	July 1, 2017 – July 1, 2022
Re-development of Oakland Army Base							X	X
Public Outreach & Education	X	X	X	X	X	X	X	X
K-12 School Outreach								
Be the Street campaign					x	X		
Multi-Family Dwelling Outreach						X		
Community Stewardship Grants (litter)	X	X	X	X	X	X		
Litter related outreach to residents						X		
TMA #1 : Commercial Centers								
Street Sweeping Recommendations						X	X	X
Clean ups – Volunteer, BID & Team Oakland	X	X	X	X	X	X	X	X
Trash Reduction Policies							X	X
Container Management - Business Engagement						X	X	X
Priority for Pilot Implementation						X	X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA #2: Arterials								
Street Sweeping Recommendations							X	X
Clean ups – Volunteer, BID & Team Oakland	X	X	X	X	X	X	X	X
Trash Reduction Policies							X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA #3 : North Oakland								

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Mid-Term	Long-Term
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	July 1, 2014 – June 30, 2017	July 1, 2017 – July 1, 2022
Street Sweeping Recommendations							X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA #4: Former Army Base					X	X		
Stormwater Control Measures (MRP C-3)							X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA#5: Ettie Street								
Partial Capture	X	X	X	X	X	X	X	X
Illegal Dumping - Targeted	X	X	X	X	X	X	X	X
Illegal Dumping – Increased Resources						X	X	X
Illegal Dumping - Enforcement						X	X	X
Dry-Flow Diversion						X	TBD	TBD
Targeted Clean-ups						X	X	X
Trash Reduction Policies								
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA#6: Shoreline								
Litter Container Assessment							X	X
Storm Response Teams							X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA#7: Lake Merritt Watershed								
Partial Capture	X	X	X	X	X	X	X	X
Partial Capture (Increased Efficiency)					X	X	x	x
ARS Pilot					X	X	TBD	TBD
Cigarette Receptacle Pilot				X	X	X	X	TBD
Clean-ups: Targeted	X	X	X	X	X	X	X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Mid-Term	Long-Term
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	July 1, 2014 – June 30, 2017	July 1, 2017 – July 1, 2022
Priority for Pilot Implementation						X	x	x
Street Sweeping Recommendations							x	x
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA # 8: Downtown Oakland					X			
Cigarette Receptacle Pilot - BID						X	X	TBD
Priority for Pilot Implementation							X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA#9: San Antonio					X	X		
Priority for Pilot Implementation							X	X
Street Sweeping Recommendations							X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA #10: Sausal Creek Watershed								
Street Sweeping Recommendations							X	X
Targeted Clean-ups	X	X	X	X	X	X	X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA#11, #12: East Oakland (1) and (2)								
Street Sweeping Recommendations							X	X
Targeted Clean-ups: Volunteer & BID							X	X
Priority for Pilot Implementation							X	X
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA#13: Industrial East Oakland (1)								
Street Sweeping Recommendations							X	X
Illegal Dumping - Targeted	X	X	X	X	X	X	X	X
Illegal Dumping – Increased Resources					X	X	X	X

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Mid-Term	Long-Term
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 ^a	July 1, 2014 – June 30, 2017	July 1, 2017 – July 1, 2022
Illegal Dumping - Enforcement					X	X	X	
Jurisdiction-wide Controls						X	X	X
TMA#14: Industrial East Oakland (2)								
Trash Containment						X	x	x
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA #15: Oakland Airport								
Jurisdiction-wide Controls		X	X	X	X	X	X	X
TMA #16: Oakland Hills								
Jurisdiction-wide Controls		X	X	X	X	X	X	X
Creek and Shoreline Hot Spot Cleanups								
Annual Clean-Up		X	X	X	X	X		
2 x Year Clean-up							X	x
Improved Tracking							X	X
Storm Response Team							X	X
Assessment		X	X	X	X	X	X	X

^aJuly 1, 2014 - 40% trash reduction targets

^bJuly 1, 2017 - 70% trash reduction targets

^cJuly 1, 2022 - 100% trash reduction targets

4.0 PROGRESS ASSESSMENT STRATEGY

Provision C.10.a.ii of the MRP requires 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 and attainment of trash load reduction targets. Early into the MRP, Permittees decided to work collaboratively to develop a trash load reduction tracking method through the Bay Area Stormwater Management Agencies Association (BASMAA). Permittees, Water Board staff and other stakeholders assisted in developing Version 1.0 of the tracking method. On behalf of all MRP Permittees, BASMAA submitted Version 1.0 to the Water Board on February 1, 2012.

The Trash Assessment Strategy (Strategy) described in this Section is specific to Permittees participating in the Alameda Countywide Clean Water Program (ACCWP), including the City of Oakland. Oakland intends to implement the Strategy in phases and at multiple geographical scales (i.e., jurisdiction-wide and trash management area) in collaboration with ACCWP. Pilot implementation is scheduled for the near-term. An adaptive management approach will be utilized to ensure that the City can modify and correct its strategies for trash reduction as staff gains more experience and collect additional data. Preliminary plans have been developed for most TMAs and will require further refinement using an iterative approach.

The Strategy selected by the City is described in the following sections.

4.1 ACCWP Pilot Assessment Strategy

The following ACCWP Pilot Trash Assessment Strategy (ACCWP Pilot Strategy) was developed by ACCWP on behalf of the City of Oakland and other co-Permittees in Alameda County. The ACCWP Pilot Strategy will be implemented at a pilot scale on a countywide basis and includes measurements and observations in the City of Oakland.

4.1.1 Management Questions

The ACCWP Pilot Strategy is intended to answer the following management questions over time as trash control measures outlined in Section 3.0 are implemented and refined:

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

The ACCWP Pilot Strategy, including indicators and methods, is summarized in this section. These indicators are intended to detect progress towards trash load reduction targets and solving trash problems.

4.1.2 Indicators of Progress and Success - County

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. This type of indicator could include assessing the maintenance of trash capture devices or compliance with product bans. Indicators that Oakland will use to answer the management questions include:

Outcome-Based Indicators:

- 1-A Amount of single-use plastic bags entering storm drains
- 1-B Amount of polystyrene food ware entering storm drains
- 1-C Amount of litter removed from Trash Hot Spots and other creek/shoreline cleanup events
- 1-D Amount of litter at schools participating in the litter outreach program
- 1-E Amount of litter at multi-family dwellings participating in the targeted outreach program
- 1-F Self-reported litter related attitude and behavior of residents

Output-Based Indicators:

- 2-A Full capture device operation and maintenance
- 2-B Compliance with Single Use Bag bans
- 2-C Implementation of an effective street sweeping program
- 2-D Trash Container Management

In selecting the indicators above, Oakland, in collaboration with ACCWP and other ACCWP Permittees recognize that no one environmental indicator will provide the information necessary to effectively determine progress made in reducing trash discharged from MS4s and improvements in the level of trash in receiving waters. Multiple indicators were therefore selected.

4.1.3 Pilot Assessment Methods - County

This section briefly summarizes the preliminary assessment methods that Oakland will implement through the ACCWP Pilot Strategy. Additional information on each method can be found in the ACCWP Pilot Trash Assessment Strategy submitted to the Water Board by ACCWP on behalf of Oakland.

4.1.4 Outcome Based Indicators - County

1-A Amount of Single-Use Plastic Bags Entering Storm Drains

ACCWP participated in the development of the BASMAA baseline trash generation rate study. A total of 47 drop inlet full trash capture devices located throughout Alameda County were included in the study. The study included an assessment of the volume and number of single-use plastic bags found in these 47 inlets as well as over 100 other inlets from throughout the Bay Area. Since the conclusion of the study, the Alameda County Waste Management Authority has adopted a 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 or 21 license) in Alameda County must comply with the Single-Use Bag Ban Ordinance.

ACCWP will conduct a follow-up study to assess the number and volume of single-use plastic bags in storm drain inlets throughout the County following the implementation of the bag ban. The study will consist of re-sampling most or all devices sampled during the previous study and comparing the number of single-use bags found before versus after the implementation of the bag ban. ACCWP will also sample up to 50 additional full trash capture inlet devices from high and medium trash generating areas throughout the County and compare the number of single-use bags found in all of the sampled inlets in Alameda County after the adoption of the bag ban versus the number of bags found in inlets throughout the Bay Area during the baseline trash generation rate study. ACCWP is planning to assess the level of single-use and other trash in all of the approximately 100 inlets again after several years to assess the overall decline in trash over time. A detailed study design is included in the ACCWP Pilot Assessment Strategy to be submitted separately.

1-B Amount of Polystyrene Food Ware Entering the Storm Drain System

As noted above, ACCWP participated in the development of the BASMAA baseline trash generation rate study. A total of 47 drop inlet full trash capture devices located throughout Alameda County were included in the study. The study included an assessment of the volume and number of expanded polystyrene (EPS) food ware items found in these 47 inlets as well as over 100 other inlets from throughout the Bay Area. Nine of the fourteen cities within Alameda County have adopted expanded polystyrene food ware bans. San Leandro and Pleasanton adopted their expanded polystyrene bans after the completion of the BASMAA baseline trash generation rate study.

ACCWP will conduct a follow-up study to assess the effectiveness of the EPS food ware bans at reducing the amount of EPS entering the storm drain system. As San Leandro and Pleasanton have adopted their ban since 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. ACCWP will also sample a total of up to 100 full trash capture inlet devices from

throughout the County and compare the number and volume of EPS food ware items in areas with versus without EPS bans. A detailed study design is included in the ACCWP Pilot Assessment Strategy to be submitted separately.

1-C Amount of Litter Removed from Trash Hot Spots and Other Creek/Shoreline Cleanup Events

ACCWP member agencies collect trash annual from a total of 47 Hot Spots as well as numerous additional creek and shoreline cleanup events. Each member agency will gather data from these 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 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.

1-D 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 are to clearly reduce the amount of litter at the participating schools and incorporate 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 include a requirement to evaluate the level of litter reduction achieved. A copy of the request for proposals is included in the ACCWP Pilot Assessment Strategy. A description of the assessment mechanism(s) of the successful proposal(s) will be included in the ACCWP Fiscal Year 2013/14 Annual Report.

1-E Amount of Litter at Multi-Family Dwellings Participating in the Targeted Outreach Program

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 will take baseline measurements of all three sites. Methods of measurement will include documentation of on-site litter, as well as collecting, characterizing and counting the litter using the Ocean Conservancy’s Volunteer Trash Data Form. (Adopt-A-Spot volunteers use this Data Form to characterize and count the trash collected from the Trash Hot Spot located behind the condominium complexes on Coastal Clean-up Day.)

Areas to be measured include landscaped and other common areas, the sidewalk, gutter and streets located in front of the sites. All three property managers/volunteers will collect one week's worth of on-site litter. City staff will collect off-site litter located on the sidewalk, pedestrian trail and creek bank closest to the building and complex, and in the gutter.

- November – December 2013: Research – All three property managers will be interviewed by City staff using twenty-five questions developed by the ACCWP. The interview results will help define the target audience(s) (i.e., age groups, income level, ethnic groups, etc.) and determine outreach tactics (i.e., face-to-face, signage, printed materials, etc.) This information will also assist the City and ACCWP in developing appropriate messaging.
- November 2013 – January 2014: Plan – One of the three sites will be chosen as the “Control” site. In addition, outreach strategies and tactics will be selected for the “Active” sites.
- 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.

1-F 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.

2-A 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. The City of Oakland is currently developing an operation and maintenance verification program (Trash O&M Verification Program), via ACCWP, 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 MRP new and redevelopment requirements.

2-B 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.

2-C 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 a variety of issues including the frequency of sweeping, type of sweeper, operation of sweeper and the ability of the sweeper to sweep along the edge of the curb. While Oakland will be conducting an evaluation specific to Oakland's street sweeping program, staff will continue to coordinate with the ACCWP on its Countywide assessment of street sweeping programs.

2-D Trash Container Management

Improper trash container management at commercial facilities can be a significant source of trash to the storm drain system. Oakland will coordinate with ACCWP to help develop outreach materials and develop and implement an assessment of its commercial trash container management program.

4.2 BASMAA "*Tracking California's Trash*" Project

The ACCWP Pilot Assessment Strategy described in the previous section recognizes that outcome-based trash assessment methods needed to assess progress toward trash reduction targets are not well established by the scientific community. 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 (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.

The Project is intended to assist BASMAA member agencies in testing trash assessment and monitoring methods needed to evaluate trash levels in receiving waters, establish control measures that have an equivalent performance to trash full capture devices, and assess progress in trash reduction over time. The following sections provide brief descriptions of tasks that BASMAA will conduct via the three-year Project. Full

descriptions of project scopes, deliverables, and outcomes will be developed as part of the task-specific Sampling and Analysis Plans required by the SWRCB during the beginning of the Project. The Project is currently underway and will continue through 2016.

4.2.1 Testing of Trash Monitoring Methods

BASMAA and the 5 Gyres Institute will evaluate the following two types of assessment methods as part of the 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 that are included in the ACCWP Pilot Assessment Strategy. 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.

4.2.2 Full Capture Equivalent Studies

Through the implementation of BASMAA's *Tracking California's Trash* grant-funded project, a small set of "Full Capture Equivalent" projects will also be conducted in an attempt to demonstrate that specific combinations of control measures will reduce trash to a level equivalent to full capture devices. Initial BMP combinations include high-frequency street sweeping, and enhanced street sweeping with auto-retractable curb inlet screens. Other combinations will also be considered. Studies are scheduled to begin in 2014 and will be completed in 2016.

4.3 Additional Progress Assessments - City

In addition to the ACCWP and BASMAA trash assessment efforts, the City of Oakland will also conduct assessments of trash control measures implemented within our jurisdictional area. Assessment methods will be selected based on trash sources and the

type of control measure being implemented. Control measure effectiveness evaluations are more fully described in the ACCWP Pilot Trash Assessment Strategy. The following are example assessment methods that may be used to demonstrate successful control measure implementation and progress towards trash reduction targets:

- Product-related Ordinances – Annually tracking and reporting the % of businesses in compliance with the ordinance and the percentage requiring a response.
- Street Sweeping – Reporting the frequency of sweeping and ability to sweep to the curb in specific areas where enhanced sweeping is implemented; and/or documenting the level of trash on streets directly after street sweeping during wet and dry weather seasons.
- Public/Private Trash Container Management – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and documenting conditions around public trash containers before and after implementing enhanced control measures.
- Targeted Outreach and Enforcement – Reporting the magnitude and extent of enhanced actions; tracking and reporting the % increase in enforcement actions; and/or visually assessing and documenting the conditions in targeted areas before and after implementing control measures.
- Public Outreach Campaigns – Reporting the magnitude and extent of enhanced actions, and/or conducting pre and post campaign surveys.
- On-land Cleanups and Enforcement – Reporting the magnitude and extent of enhanced actions; visually assessing and documenting the conditions in targeted areas before and after control measure implementation; and/or tracking the volumes of trash removed.
- Illegal Dumping Prevention – Reporting the magnitude and extent of enhanced actions; and/or tracking and reporting improvements in the number of incidents.
- Business Improvement Districts – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and documenting the conditions in BID areas before and after implementing control measures.
- Prevention of Uncovered Loads - Reporting the magnitude and extent of enhanced actions; tracking and reporting the decreases in the number of incidents; and/or visually assessing and documenting the conditions in targeted areas before and after implementing control measures.
- Partial Capture Devices – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and the amount of trash in storm drains or downstream of partial capture devices.

Oakland will develop specific metrics to measure the effectiveness of its pilot projects. Possible measurement of pilot studies may include:

- Cigarette litter before and after Cigarette –butt receptacles installed in Lake Merritt Watershed
- Volume of inlet litter before and after Pilot Auto Retractable Screens (ARS)
- Street litter count before and after Street Sweeping

4.4 Long-Term Assessment Strategy

The ultimate goal of stormwater trash management in the Bay Area is to significantly reduce the amount of trash found in receiving waters. In the last decade, Permittees and volunteers have collected data on the amounts of trash removed during cleanup events. More recently, Permittees have conducted trash assessments in creek and shoreline hotspots using standardized assessment methods. In an effort to answer the core management question *Have trash problems in receiving waters been resolved?*, the City of Oakland plans to continue conducting receiving water condition assessments at trash hot spots a minimum of one time per year. Assessment will be conducted consistent with Permit hot spot cleanup and assessment requirements.

In addition, the City of Oakland intends to implement standardized assessment methods post-2016 based on the lessons learned from pilot assessments and studies that will occur between 2014 and 2016. 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 agreed upon assessment methods that will be used to demonstrate progress during the remaining term of trash reduction requirements.

The City of Oakland is also evaluating using the following long-term assessment methods:

1. *Hot Spot Monitoring & Trends Analysis.* Start right away, held twice per year.
2. *Monthly Trash Volumes Removed from Lake Merritt.* Ongoing since 1998 and will continue. Based on volumes of trash collected in Lake Merritt, see Table 4 below, trash volume in the Lake has declined over 50% since CDS installation(s) and 40% since MRP adoption.

YEAR	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Total Pounds of Trash Removed	59,100	45,940	46,060	37,720	27,160	32,965	33,200	21,100	26,860	19,500

Source: Lake Merritt Institute

Table 4. Annual Volume of Trash Removed from Lake Merritt

3. *Team Oakland Litter Surveys:* Team Oakland has cleaned the same sites since late 1990s and amount of litter collected at each site has been recorded. City will compare the volume of litter collected at these sites over time.
4. *Street Litter Surveys at Designated Locations.* Street litter surveys were done during the map verification phase. City intends to designate specific street sites that will serve as long-term indicators of litter reduction. These Litter Surveys at Designated Locations (LSDLs) will be conducted twice a year on randomized, unannounced dates. There will be one LSDL per TMA (at a minimum). City will identify its LSDLs in the 2013/2014 Annual Stormwater Report.

4.5 Assessment Implementation Schedule

The implementation schedule for the ACCWP Pilot Implementation Strategy, BASMAA's Tracking California's Trash project, and the Long-Term Assessment Strategy are included in Table 4.1. 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.

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
Pilot Trash Assessment Strategy (ACCWP)										
On-land Visual Assessments										
Initial (Baseline) Assessments	X									
Pilot Progress Assessments		X	X	X	X					
Full Capture Operation and Maintenance Verification			X	X	X					
Control Measure Effectiveness Evaluations	X	X	X	X	X					
Receiving Water Condition Assessments	X	X	X	X	X					
Tracking California's Trash Project (BASMAA)										
Testing of Trash Monitoring Methods										
Trash Flux Monitoring Protocol Testing			X	X	X					
On-land Visual Assessment Evaluations			X	X	X					
Full Capture Equivalent Studies			X	X	X					
Additional Assessments (City of Oakland)										
Hot Spot Assessment	X	X	X	X	X	X	X	X	X	X
Pilot Project Evaluations		X	X	X	X	X	X	X	X	X
Lake Merritt Trash Volume	X	X	X	X	X	X	X	X	X	X
Team Oakland Removal Amounts	X	X	X	X	X	X	X	X	X	X
Street Litter Count		X		X		X		X		X
Long-Term Trash Assessment Strategy (ACCWP)						X	X	X	X	X

Table 4.1 City of Oakland Trash Progress Assessment Implementation Schedule

^aJuly 1, 2014 - 40% trash reduction targets

^bJuly 1, 2017 - 70% trash reduction targets

^cJuly 1, 2022 - 100% trash reduction targets

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ATTACHMENT A: Modification to Land-Use Trash Generation Rate City of Oakland

Land Area	Trash Generation		Comments
ID	Trash Rate on Land Use on Map	Updated Trash Rate	
NORTH OAKLAND (TMA 3)			
52nd Street to 40th Street / MLK Jr. Way to City Boundary (Area ID-7)	B/C	B	
Broadway to Telegraph Ave. / 51st Steet to Highway 24 (Area ID-8)	B/C	B	Telegraph Ave. Remain D Designation
Rockridge (Area ID -10a)	B/C	A	College Ave. Remain B designation
Market Street to Shattuck Ave. / 52 nd Street to Border (Area ID-8b)	B/C	B	
MLK Jr. Way to Telegraph Ave. / 22nd Street to 33rd Street (Area ID-FV2)	B/C	D	
WEST OAKLAND (TMA 5)			
Railroad to Mandela Parkway / Grand Ave. to I-80 (Area ID-2)	A/B	D	
West Grand Ave. to I-880 / Adeline Street to MLK Jr. Way (Area ID 3)	C	D	
I-580 to W. Grand Ave. / Peralta Street to MLK Jr. Way (Area ID-4)	B/C	C	
Port Area to I-880 South / Fruitvale Ave. to I-880 & I-80 intersections (Area ID-14)	A/B/C	B	
LAKE MERRITT WATERSHED (TMA 6)			
MacArthur Blvd. to Grand Ave., Harrison Street to Broadway (Area ID-6a)	B/C	B	
Harrison Street to Oakland Ave. / I-580 to Lake Merritt (Area ID-FV1)	B	A	
I-580 to San Pablo Ave. / 25th Street to 22nd Street (Area ID-10)	B/D	D	
I-580 to John Street / Broadway to Oakland Ave. (Area ID-12)	B/C	B	
San Antonio (TMA 8)			
MacArthur Blvd. to E. 20th Street / Lakeshore Ave. to 14th Ave. (Area ID-16)	B/C	B	
14th Ave. to Harrington Ave. / Foothill Blvd. to I-880 (Area ID-17)	B/C/D	D	
14th Ave. to Harrington Ave. / E. 20th Street to I-580 (Area ID-17)	A/B/C	B	
Rawson Street to 55th Ave. / Trask Street to Wyman Street	B	A	

**ATTACHMENT A: Modification to Land-Use Trash Generation Rate
City of Oakland**

Land Area	Trash Generation		Comments
	Trash Rate on Land Use on Map	Updated Trash Rate	
ID			
SAUSAL CREEK WATERSHED (TMA 10)			
I-580 to Hwy-13 / Lyman Road to Beaumont Ave.(Area ID-15)	C	B	
INDUSTRIAL EAST OAKLAND (TMA 8)			
Russett Street to Edes Ave. / 105th Ave. to San Leandro Border (Area ID-A)	A/B/C	C	
E. 12th Street to International Blvd. / High Street to 54th Ave. (Area ID-I)	B/C/D	D	
98th Ave. to 105th Ave. / San Leandro to Railroad (Area ID-L)	B	D	
EAST OAKLAND (TMA 11 -14)			
25 th Street to Fruitvale Ave. (Area ID-17a)	A/B/C	A	Fruitvale Ave. Remain C designation
Above MacArthur Blvd.; Cosgrave Ave. and 83rd Ave. to 94th Ave. (Area ID-D)	B/C	B	
High Street to 82nd Ave. / San Leandro Ave to I-880 (Area ID-FV2)	C	D	
55 th Ave. North to Rawson Street East to Wyman Street (Area ID-FV3)	B	A	
78th - 73rd/Holly to Locust (Area ID-FV4)	C	C	Confirmed 12/16/2013
Fruitvale Ave. to 35th Ave. / I-580 to Foothill (Area ID-17b)	B/C	C	
G Street to E Street / 85th Ave. to 92nd Ave. (Area ID -B)	B/C	C	
Foothill Blvd. to Redding Street / Harrington Ave. to Monticello Ave. (Area ID -G)	B/C	B	
San Leandro St. to International Blvd / 58 th Ave. to 66 th Ave. (Area ID -J)	C	B	
Area North of San Leandro Street and South of B Street from 77th Ave. to 88th Ave.	C	D	Changed to higher trash due to illegal dumping
HILLS (TMA 16)			
Redding Street to Wisconsin Street, High Street to Midvale Ave. above I-580 (Area ID- H)	B/C	A/B	MacArthur Ave. Remain C designation
Above Cosgrave Ave. / 82nd Ave. to 78th Ave. (Area ID-E)	B	A	

Field Verification Form

On-land Visual Assessment Data Collection Form – Version 1.0

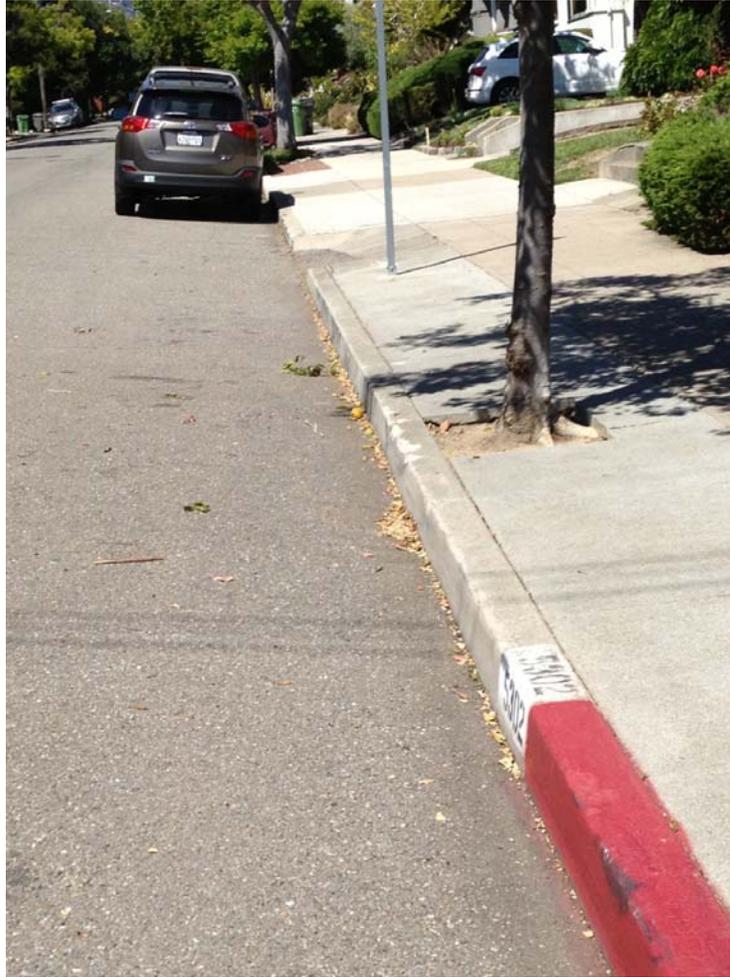
Agency: _____ Date: _____

Team Members: _____ Contact E-mail: _____

Note: Fill out a separate Data Collection Form for each assessment area

I. Assessment Area	
MAP ID	<p>Assessment Area: Delineate the assessment area on the associated map, create a map ID, and mark the ID on the map and place in the box provided to the left. Below, describe the location and boundaries of the assessment area. Include the street segment name, length of the street based on cross streets, and land area description (if applicable).</p> <hr style="border: 0.5px solid black;"/> <hr style="border: 0.5px solid black;"/>
II. Condition Category Assignment	
<p>Trash Condition Category</p> <p>Conduct the assessment in accordance with the Visual On-land Assessment Protocol for Stormwater (Refer to Definitions on Back). Check one of the below categories based on the assessment.</p> <p style="text-align: center;"> <input type="checkbox"/> Low (A) <input type="checkbox"/> Medium (B) <input type="checkbox"/> High (C) <input type="checkbox"/> Very High (D) <input type="checkbox"/> Low/Medium (A/B) <input type="checkbox"/> Medium/High (B/C) <input type="checkbox"/> High/Very High (C/D) </p>	
<p>Photograph Documentation</p> <p>Check the box below to indicate that photographs were taken and are maintained by your agency.</p> <p>Photographs: <input type="checkbox"/> Number of photographs taken: _____</p>	
Trash Condition Category	Definition
A	Effectively no trash is observed in the assessment area. There may be some small pieces in the area, but they are not obvious at first glance and one individual could easily clean up all trash observed in a very short timeframe.
B	Predominantly free of trash except for a few pieces that are easily observed in the assessment area. The trash could be collected by one or two individuals in a short period of time.
C	Trash is widely/evenly distributed and/or small accumulations are visible on the street, sidewalks, or inlets. It would take a more organized effort to remove all trash from the area.
D	Trash is continuously seen throughout the assessment area, with large piles and a strong impression of lack of concern for litter in the area. There is often significant litter along gutters. It would take a large number of people during an organized effort to remove all trash from the area.

ATTACHMENT C: Representative Photographs of Trash Levels



LOW - "A" Designation on 5300 block of Locksley Avenue

ATTACHMENT C: Representative Photographs of Trash Levels



MEDIUM - "B" Designation: 29th Street & Fairmount Avenue

ATTACHMENT C: Representative Photographs of Trash Levels



HIGH - "C" Designation below MacArthur Boulevard at Redding Street / Loma Vista Avenue

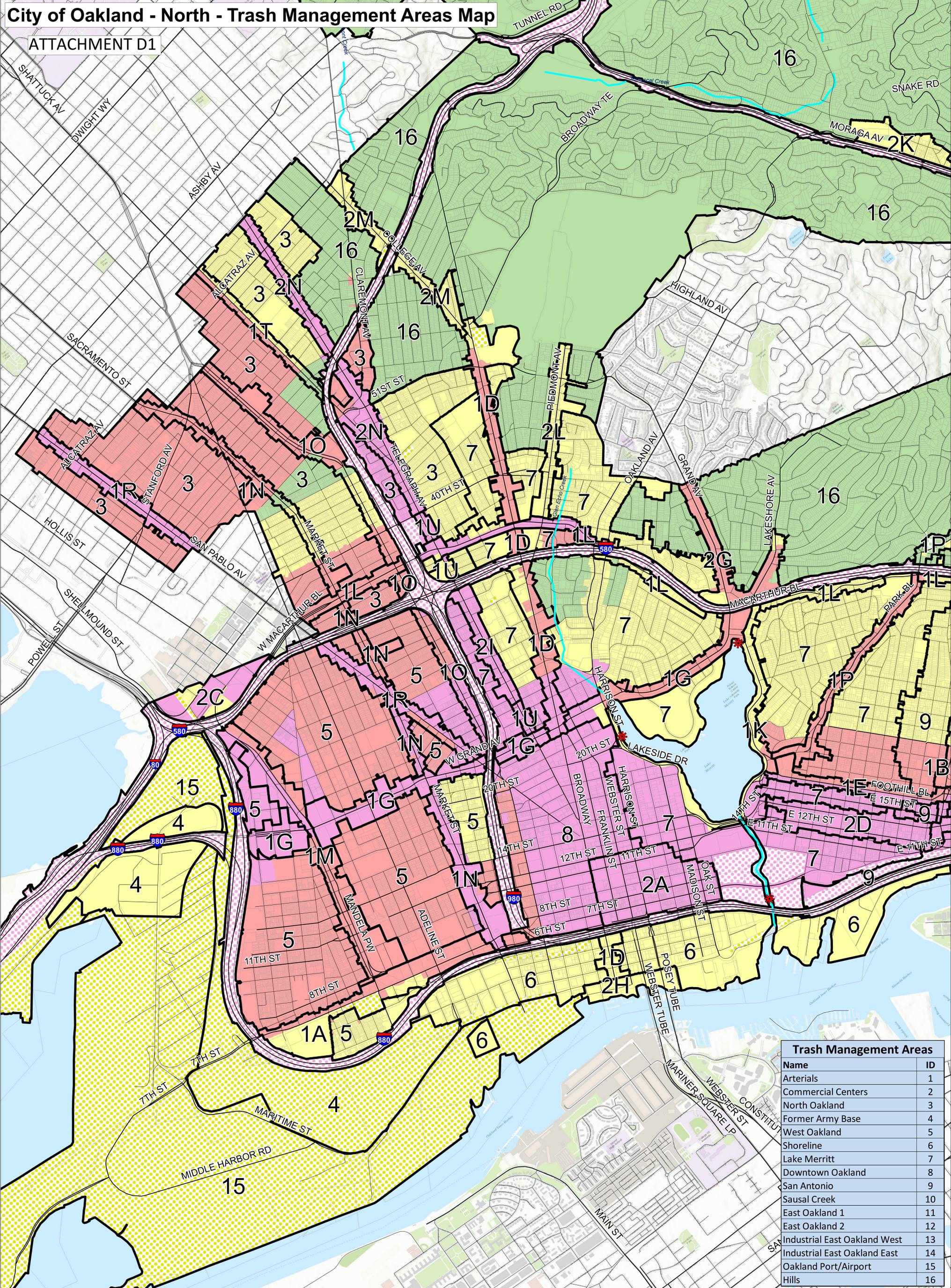
ATTACHMENT C: Representative Photographs of Trash Levels



VERY HIGH - "D" Designation Trask Street at Seminary Avenue

City of Oakland - North - Trash Management Areas Map

ATTACHMENT D1



Trash Management Areas	
Name	ID
Arterials	1
Commercial Centers	2
North Oakland	3
Former Army Base	4
West Oakland	5
Shoreline	6
Lake Merritt	7
Downtown Oakland	8
San Antonio	9
Sausal Creek	10
East Oakland 1	11
East Oakland 2	12
Industrial East Oakland West	13
Industrial East Oakland East	14
Oakland Port/Airport	15
Hills	16

Legend

Trash Generation Category

- Low (Green)
- Medium (Yellow)
- High (Red)
- Very High (Pink)

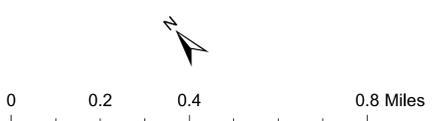
Other Symbols:

- Trash Hot Spot/Assessment Area (Red star)
- Trash Management Area (Black outline)
- Non-Jurisdictional (Dot color = Generation Category)
- Streets (Grey line)
- Agency Boundary (Black line)
- Creeks (Blue line)
- Parcel Boundary (Thin grey line)

Data Sources:
 Roads: Alameda County
 City Boundaries: Alameda County
 Background: ESRI World Topographic Map

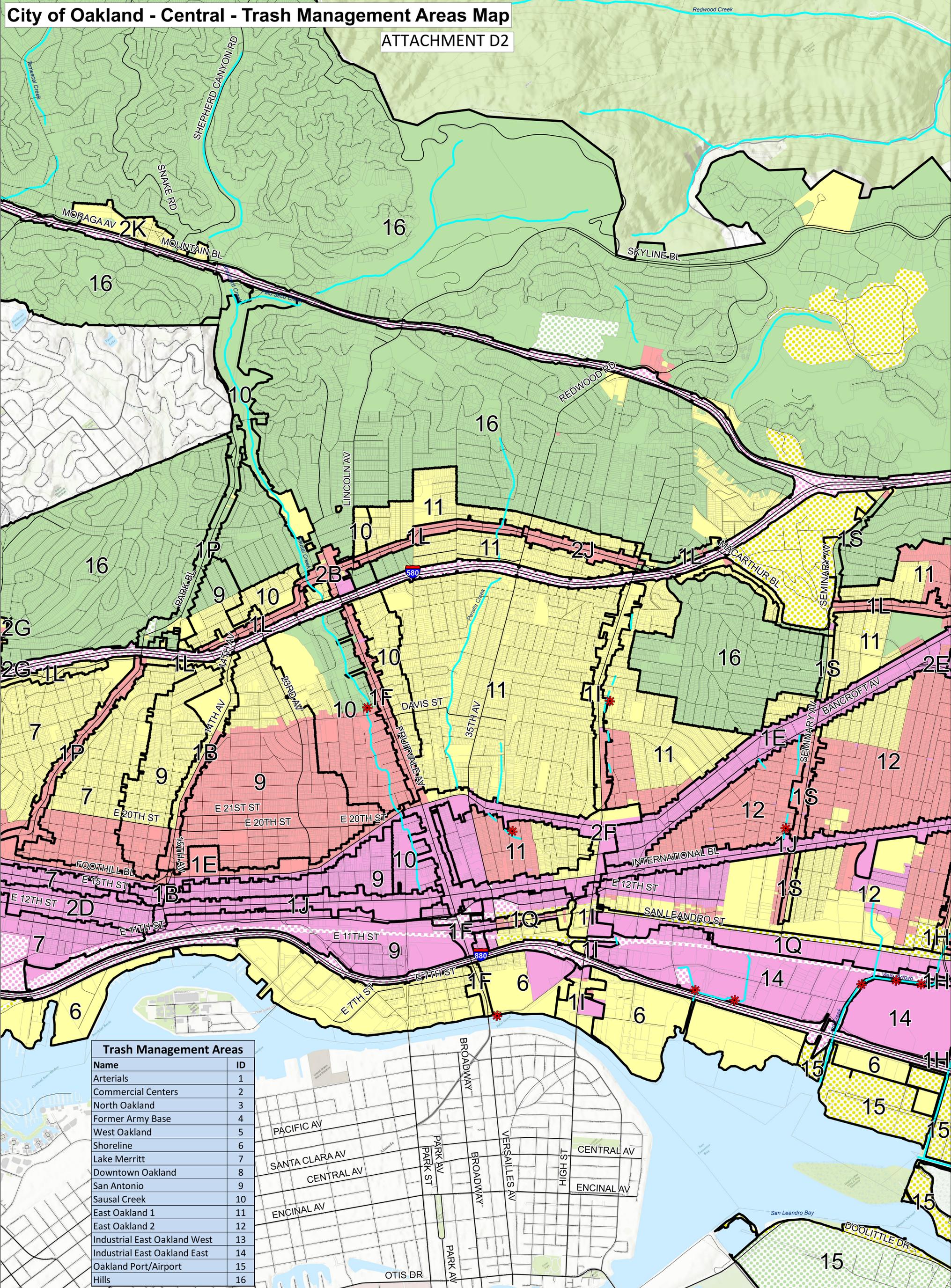
Map Created By:
 EOA, Inc.

Date:
 January 30th, 2014



City of Oakland - Central - Trash Management Areas Map

ATTACHMENT D2



Trash Management Areas	
Name	ID
Arterials	1
Commercial Centers	2
North Oakland	3
Former Army Base	4
West Oakland	5
Shoreline	6
Lake Merritt	7
Downtown Oakland	8
San Antonio	9
Sausal Creek	10
East Oakland 1	11
East Oakland 2	12
Industrial East Oakland West	13
Industrial East Oakland East	14
Oakland Port/Airport	15
Hills	16

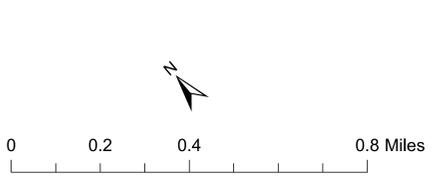
Legend

Trash Generation Category

- Low
- Medium
- High
- Very High

Other Symbols:

- * Trash Hot Spot/Assessment Area
- Trash Management Area
- Non-Jurisdictional (Dot color = Generation Category)
- Streets
- Agency Boundary
- Creeks
- Parcel Boundary



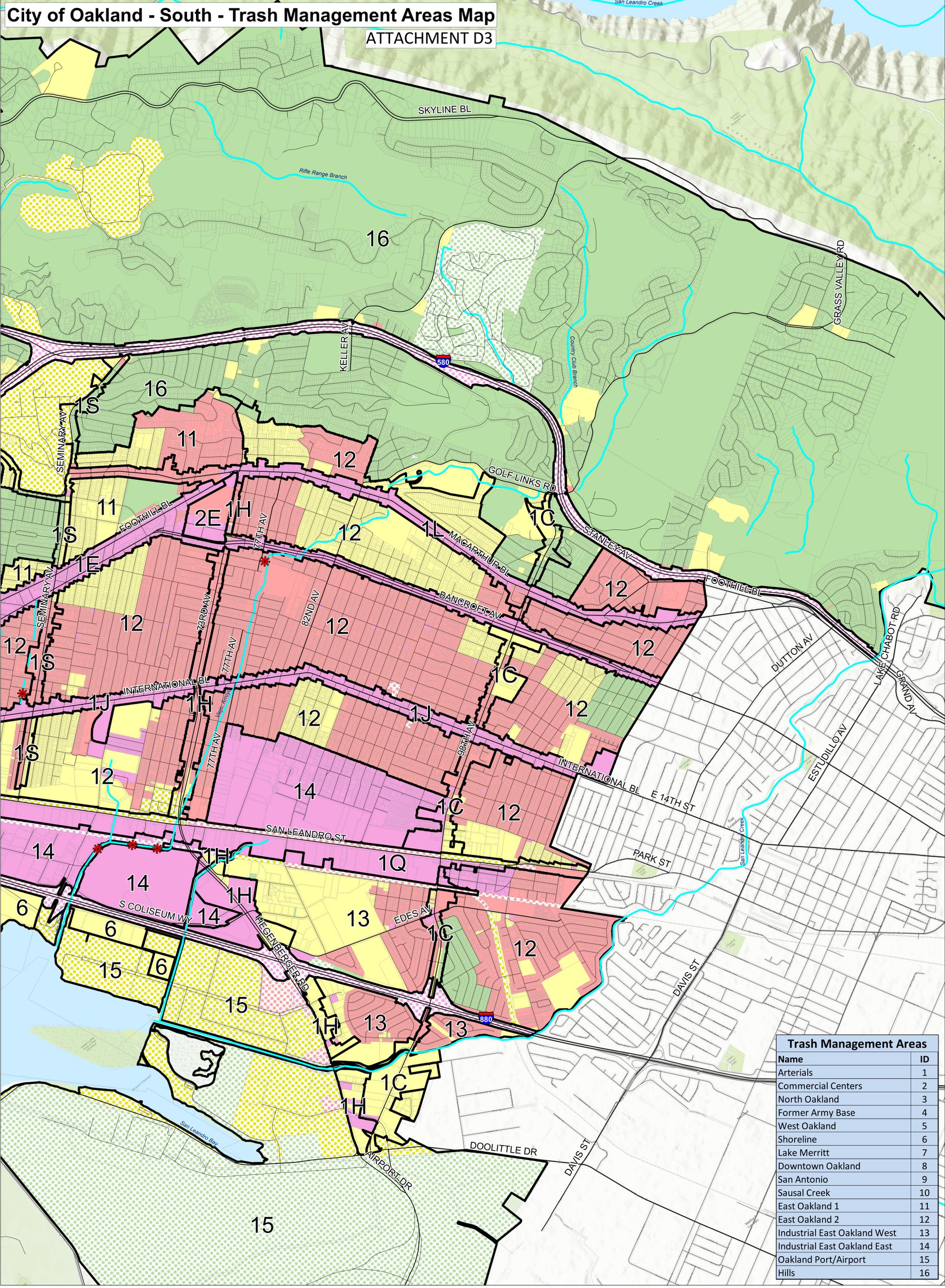
Data Sources:
 Roads: Alameda County
 City Boundaries: Alameda County
 Background: ESRI World Topographic Map

Map Created By:
 EOA, Inc.

Date:
 January 30th, 2014

City of Oakland - South - Trash Management Areas Map

ATTACHMENT D3



Trash Management Areas	
Name	ID
Arterials	1
Commercial Centers	2
North Oakland	3
Former Army Base	4
West Oakland	5
Shoreline	6
Lake Merritt	7
Downtown Oakland	8
San Antonio	9
Sausal Creek	10
East Oakland 1	11
East Oakland 2	12
Industrial East Oakland West	13
Industrial East Oakland East	14
Oakland Port/Airport	15
Hills	16

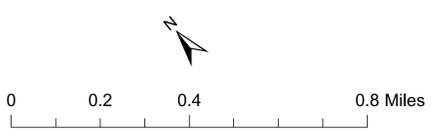
Legend

Trash Generation Category

- Low
- Medium
- High
- Very High

Other Symbols:

- * Trash Hot Spot/Assessment Area
- Trash Management Area
- Non-Jurisdictional (Dot color = Generation Category)
- Streets
- Agency Boundary
- Creeks
- Parcel Boundary



Data Sources:
 Roads: Alameda County
 City Boundaries: Alameda County
 Background: ESRI World Topographic Map

Map Created By:
 EOA, Inc.

Date:
 January 30th, 2014

ATTACHMENT E: City of Oakland Full Trash Capture Devices

Device #	Location/Name	Device Type	Planned or Installed	Maintenance Frequency	Total Number Installed	Total Area Treated (acres)
5-A	Euclid Ave. @ Grand Ave.	Hydrodynamic Separator	Installed (2002)	2 x year	1	25.8
5-B	Staten Ave. & Bellvue Ave.	Hydrodynamic Separator	Installed (2004)	2 x year	1	19.6
5-C	27 Street & Valdez Ave.	Hydrodynamic Separator	Installed (2006)	3x year	1	58.9
5-D	22nd Street & Valley Street	Hydrodynamic Separator	Installed (2006)	3 x year	1	102.3
5-E	2436 Harrison Street & Bay Place	Connector Pipe Screen	Installed (2009)	2 x year	1	3.3
5-F	2629 Harrison Street @ Westlake Middle School	Connector Pipe Screen	Installed (2009)	1 x year	1	2.2
5-G	Perkins Street & Bellevue Ave. (Nature Center)	Hydrodynamic Separator	Installed (2010)	3 x year	1	75.3
5-H	Lake Merritt (SD Outfall 11)	Hydrodynamic Separator	Installed (2011)	2 x year	1	5.4
5-I	Lake Merritt (SD Outfall 26)	Hydrodynamic Separator	Installed (2011)	2 x year	1	
5-J	Lake Merritt (SD Outfall 47)	Gross Solids Removal Device	Installed (2012)	1 x year	1	14.4
5-K	2nd Ave. & 18th Street, east side	Connector Pipe Screen	Installed (2012)	2 x year	1	0.9
5-L	2nd Ave. & 18th Street, west side	Connector Pipe Screen	Installed (2012)	2 x year	1	0.5
5-M	18th Street & Park Street, south side	Connector Pipe Screen	Installed (2012)	3 x year	1	1.5
5-N	18th Street & 5th Ave., east side	Connector Pipe Screen	Installed (2012)	3 x year	1	2.2
5-O	18th Street & 5th Ave., south side	Connector Pipe Screen	Installed (2012)	3 x year	1	0.8
5-P	Lake Merritt (SD Outfall 63)	Gross Solids Removal Device	Installed (2013)	TBD	1	4.5
9-A	73rd Ave. & International Blvd.	Hydrodynamic Separator	Installed (Dec. 2012)	TBD	1	421.4
8-A	Alameda Ave. near Fruitvale Ave.	Hydrodynamic Separater	Installed (2012)	2 x year	1	149.2
8-B	Alameda Ave. & Fruitvale Ave.	Connector Pipe Screen	Installed (2012)	2 x year	1	0.5
8-C	High Street @ Alameda Bridge	Hydrodynamic Separator	Installed (Dec. 2012)	TBD	1	36.9
3-A	Peralta Street near Mandela Parkway	Connector Pipe Screen	Installed (2012)	1 x year	1	1.6
3-B	Brush Street @ 7th Street	Connector Pipe Screen	Installed (2012)	2 x year	1	0.7
6-A	E. 9th Street & Del Monte	Connector Pipe Screen	Installed (2012)	2 x year	1	0.5
Totals*					20	928.3

Removed Bay Place @ Vernon Street CPS Unit - Could not be found

* Acreage includes jurisdictional and non-jurisdictional areas.

ATTACHMENT F: Lake Merritt Partial Capture Booms – Newly Installed City of Oakland



ATTACHMENT G: Auto Retractable Screens (ARS) Pilot Study

August 2013

BACKGROUND

City of Oakland wanted to test the efficacy of auto retractable screens - litter control devices that can be installed on inlets and used to prevent stormwater runoff from bringing trash into the storm drains.

United Works offered to install six auto-retractable screens (ARS) in the City as a pilot demonstration so as to afford Oakland the opportunity to determine how well the ARS products worked in the Oakland environment.

LOCATION OF PILOT ARS

In designing the pilot study, City staff wanted to try a few locations with both the inlet baskets and the ARS products. The idea behind this combined approach was to ensure full capture and see if it helped to reduce the amount of trash entering the baskets; thereby reducing the frequency of maintenance. Two sites were chosen with inlet baskets.

The remaining four sites are chosen due to their location in high trash areas and that afforded an opportunity to compare with a “control” inlet. Two sites along International Boulevard will be compared with the control inlets (not ARS) in a location with a median. The remaining two sites will be along Broadway Avenue in downtown Oakland.

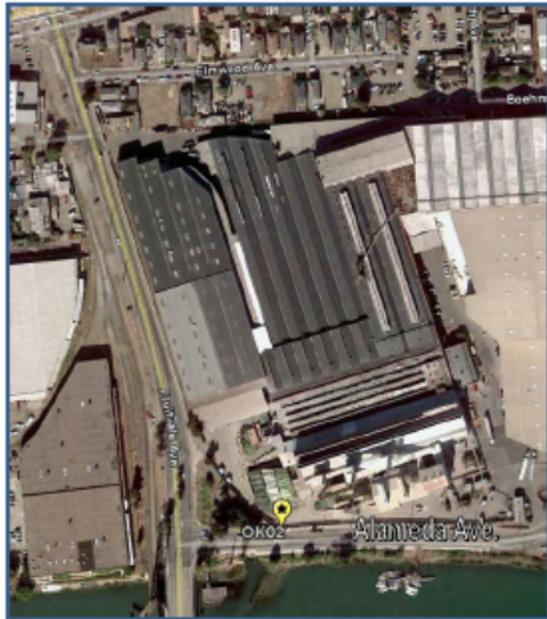
LOCATIONS

ATTACHMENT G: Auto Retractable Screens (ARS) Pilot Study

August 2013

Pilot SITE 1: (ARS Screen + Inlet Basket)

Alameda Avenue/Fruitvale Ave, 200 feet south of Fruitvale, eastside

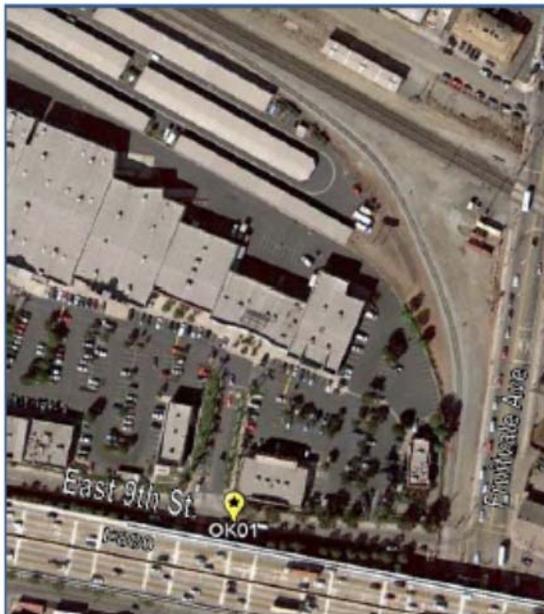


BASMAA ID: OK02		City ID: 1173499	
Location			
Alameda Ave about 200 ft south of Fruitvale Ave, eastside			
Total Bags		Moisture Content Dry Damp Wet	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Comments			
Staff			

CONTROL SITE 1 = NO control

Pilot Site 2: (ARS + Inlet Basket)

E 9th Street/ Del Monte Street, 325 feet northwest of Fruitvale Ave near Lucky's entrance



BASMAA ID: OK01		City ID: 1171614	
Location			
E 9th St, about 325 feet northwest of Fruitvale Ave, near entrance to Lucky's Supermarket			
Total Bags		Moisture Content Dry Damp Wet	
		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Comments			
Staff			

ATTACHMENT G: Auto Retractable Screens (ARS) Pilot Study

August 2013

Control Site 2 = NO Control site

Pilot Site 3 (High Trash Area with median) = Inlet in front of 3322 International Boulevard

Control Site 3 = Inlet in front of 3351 International Boulevard

Pilot Site 4 (High Trash Area with median) = Inlet in front of 3300 International Blvd.

Control Site 4 = Inlet in front of 3347 International Blvd.

Pilot Site 5 (High Trash Area, no median) : Inlet on Broadway Avenue in front of Chase Bank (between 13th and 14th).

Control Site 5 = Inlet at 1333 Broadway Avenue (between 14th and 13th in front of Walgreens)

Pilot Site 6 (High Trash Area, no median): Inlet on Broadway in front of Burger King (between 12th and 13th)

Control Site 6 = Inlet on 1221 Broadway Avenue between 12th and 13th in front of Clorox Building

COMPARING CONTROL TO PILOT INLETS

All inlets (control and pilot), will be cleaned prior to installation of ARS. Inlets will be cleaned regularly and dates recorded. In every case, the pilot inlet will be cleaned the same day as the control inlet. The amount of trash found in each inlet will be measured and recorded; using photo documentation and visual estimation of the volume of litter. Photos and visual estimation will be performed at each cleaning event and after the litter is separated from the organic debris (as feasible).

Results will be tabulated, analyzed and summarized prior to the first rain.



CITY OF OAKLAND
newsrelease
Office of the City Attorney

Tuesday, August 6, 2013
FOR IMMEDIATE RELEASE

Press Contact: Alex Katz (510) 238-3148
<http://www.oaklandcityattorney.org/>

Oakland cracks down on illegal dumping
City Attorney, Public Works Agency and City Administrator launch enforcement effort against individuals responsible for widespread neighborhood blight

OAKLAND, CA – With help from a growing number of concerned citizens, the City of Oakland is going after individuals who are responsible for one of the worst sources of civic blight in Oakland: illegal dumping.

The Illegal Dumping Enforcement Action initiative – a joint effort by Oakland City Attorney Barbara Parker, the Public Works Agency and the City Administrator's Office – uses photos, videos and other evidence from members of the public to track down illegal dumpers and make them pay for disrespecting Oakland's residents, businesses and taxpayers.

Dumping old mattresses, furniture, construction debris, garbage and other items on sidewalks, in parks and under freeways is a major source of blight in neighborhoods across Oakland.

"Oaklanders have had enough of this disrespect of our beautiful city; we will not be a dumping ground," City Attorney Barbara Parker said. "Illegal dumping is more than just unsightly. It also has a chilling effect on the quality of life in our neighborhoods, and creates an environment of blight and lawlessness that can encourage more serious crime and violence. Making Oakland a cleaner city will make our city safer."

Parker also thanked members of the public for making enforcement actions possible by submitting evidence of violations, especially photos showing the license plate numbers of vehicles involved in dumping. The City Attorney's Office is using license plate numbers to track down the owners of those vehicles. Many of the individuals cited by the City live outside of Oakland, meaning they drive to Oakland to dump their garbage here.

An increasing number of Oakland citizens, many using camera phones, are taking photos and videos of illegal dumping incidents and reporting violators to the Public Works Agency using the Agency's [on line service request page](#) or the [SeeClickFix mobile application](#) for Oakland. SeeClickFix is an online and mobile tool that allows residents to report and track non-emergency problems such as graffiti, illegal dumping and potholes.

The Neighborhood Law Corps – the community law unit in the City Attorney's Office – is reviewing evidence and developing cases. So far about a dozen people have been cited by the City Administrator's Office, and more reports come in every day.

“These enforcement actions and fines will be far reaching as the word hits the street,” said Acting Director of Public Works Brooke A. Levin. “Our residents and businesses are fed up with dumping. Oakland Public Works is pleased to be in partnership with the City Attorney’s Office to address the critical need to take legal action against illegal dumping.”

The City is charging illegal dumpers up to \$1,000 a day for every day the blight continues, plus other fees and costs. The average citation is in the range of \$3,000 to \$4,000. In a recent case, an individual was cited for \$6,000 for two incidents of illegal dumping in East Oakland. A resident submitted photos of the incidents from a home security camera, and took a close up photo of the license plate, which was used to track down the owner.

The City Attorney will bring an ordinance to the City Council in September to (1) increase penalties for illegal dumping, (2) make illegal dumping a misdemeanor crime under City law (it is currently an infraction under the Oakland Municipal Code, but a crime under state law) and (3) allow some violators to perform community service by cleaning up illegal dumping instead of paying fines.

In recent years the City has focused on cleaning up illegal dumping, but has lacked resources to cite illegal dumpers. With the increase in online reporting of incidents, including photographic and video evidence submitted by the public, the City is now able to identify and pursue enforcement actions against individuals and companies responsible for illegal dumping in Oakland.

How to report illegal dumping in Oakland:

(510) 615-5566

Public Works Agency Call Center:

pwacallcenter@oaklandnet.com

Email Public Works:

<http://www.seeclickfix.com/oakland/>

Sign up for SeeClickFix:

Dumping in progress:

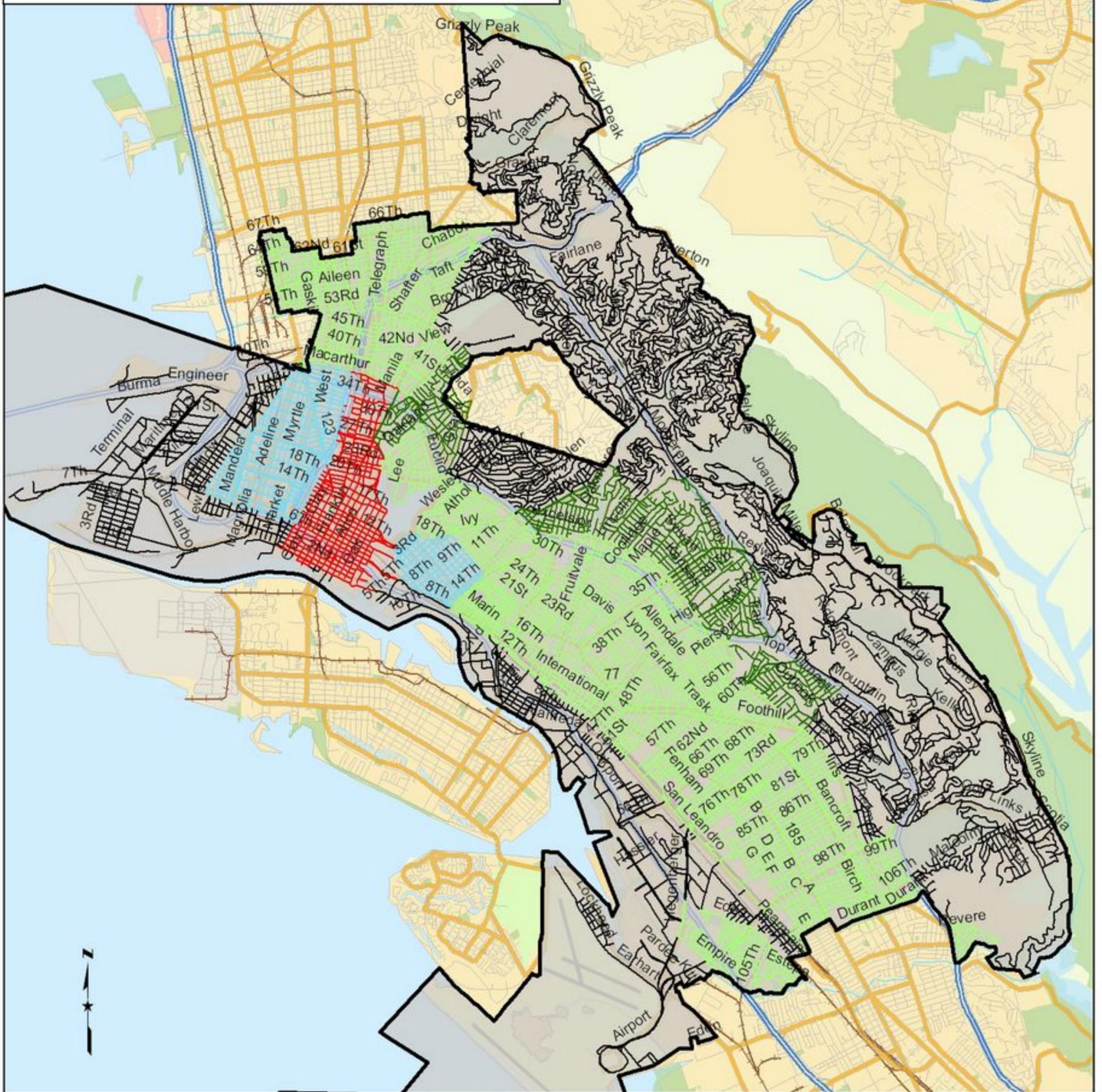
(510) 777-3333

Oakland Police non-emergency line:

Tips for submitting evidence:

- Photos of vehicle license plates are ideal. If a photo is not available, write down the license plate number.
- Include time, date and location.
- Include your contact info – the City must contact you to verify evidence.
- More information is always better – photos of company names or logos on vehicles involved in dumping may be helpful.

City of Oakland Current Street Sweeping Frequency



Current Street Sweeping Frequency

- Not Swept
- 3x/Week
- 1x/Week
- 2x/Month
- 1x/Month
- ▭ Permittee Boundary



Data Sources:

Streets: Tele Atlas, 2003. Retrieved from <http://www.arcgis.com/>

City Boundary: County of Alameda

Background: ESRI StreetMap USA

Map Created By: EOA, Inc.

Date: January 3, 2012

ATTACHMENT J: Polystyrene Foam Ban – Implementation Efforts

Oakland's Outreach and Education Campaigns on Polystyrene Food Service Ban

- Launched a dedicated web site www.oaklandgreenware.com – January 2007
- Established Ordinance information and non-compliance/complaint tracking service through the 238-SAVE Recycling Hotline – January 2007
- Hand delivered informational flyers to approximately 100 downtown businesses – January through March 2007
- Hand delivered flyers to approximately 70 restaurants as part Small Business Recycling recruitment – March through June 2007
- Made presentations to various business associations – January through June 2007
- Provided additional information for compliance to 35 businesses after violations were reported through Recycling Hotline – January through June 2007
- Launched a dedicated web site www.oaklandgreenware.com – January 2007
- Established Ordinance information and non-compliance/complaint tracking service through the (510) 238-SAVE Recycling Hotline – January 2007
- Hand delivered informational flyers to approximately 100 downtown businesses – January through March 2007
- Hand delivered flyers to approximately 70 restaurants as part Small Business Recycling recruitment – March through June 2007
- Made presentations to various business associations – January through June 2007
- Provided additional information for compliance to 35 businesses after violations were reported through Recycling Hotline – January through June 2007
- Sent formal warning letters to 17 businesses for reported violations – June 2007 through July 2008
- Direct mailed informational brochure to affected businesses – July 2007
- Outreach at Art & Soul and Earth EXPO festivals – 2007 and 2008
- Outreach to Oakland residents, informing them of the polystyrene foam ban and how to report violations was provided through garbage bill inserts to 95,000 residential customers – July 2007 and October 2008.

ATTACHMENT K: RESTAURANT STORMWATER INSPECTION FORM

GENERAL INFORMATION				
NAME OF FACILITY:	SITE ADDRESS:	DATE:	TIME:	
REPRESENTATIVE NAME:	TITLE:	PHONE:	EMAIL:	
Inspection Checklist				
BMP /Activity	Yes	No	Other	Comment(s)
1. Visual Inspection of Property		REFER TO WATERSHED: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Drain spouts drain to storm drain				
Visible sign of wet spots, drainage from building & staining is absent				
2. Trash Containment		FOLLOW-UP WITH HAULER <input type="checkbox"/> Yes <input type="checkbox"/> No		
Container has operable lid				
Area free of spillage & overflow				
Container is in a secure enclosure				
No Container runoff drains to storm drain				
3. Polystyrene Use		REFER TO ESD: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Using non-polystyrene products for take out (food and beverages)				
4. Wash Water		REFER TO WATERSHED: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Appropriate disposal of rinse water from hoods & floor mats				
5. Fats Oil & Grease (FOG)		REFER TO EBMUD: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Uses FOG disposal method				
Grease Trap				
Bucket				
Other (describe)				
Documentation (records) of adequate oil and grease disposal				
6. Training		REFER TO WATERSHED: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Employees receive stormwater training				
7. Recycling		REFER TO ESD: <input type="checkbox"/> Yes <input type="checkbox"/> No		
Distributed information on restaurant recycling.				
INSPECTED BY (Print):	Signature:		Title:	
Certification Statement:				
"I certify under penalty of law that 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."				
Print Name		Signature		Date
Official Use Only				
List BMP Brochures Provided:				
Recommended as Priority for follow-up: YES <input type="checkbox"/> NO <input type="checkbox"/>				

ATTACHMENT L: Arterials in TMA #1

TMA Name	Primary	Secondary	Combined
Arterial - 7th St	1	A	1A
Arterial - 14th Ave	1	B	1B
Arterial - 98th Ave	1	C	1C
Arterial - Broadway	1	D	1D
Arterial - Foothill Bancroft	1	E	1E
Arterial - Fruitvale	1	F	1F
Arterial - Grand	1	G	1G
Arterial - Hegenberger 73rd	1	H	1H
Arterial - High	1	I	1I
Arterial - International	1	J	1J
Arterial - Lakeshore	1	K	1K
Arterial - MacArthur	1	L	1L
Arterial - Mandela	1	M	1M
Arterial - Market	1	N	1N
Arterial - Martin Luther King Jr.	1	O	1O
Arterial - Park	1	P	1P
Arterial - San Leandro	1	Q	1Q
Arterial - San Pablo	1	R	1R
Arterial - Seminary	1	S	1S
Arterial - Shattuck	1	T	1T
Arterial - Telegraph	1	U	1U