

# Long-Term Trash Load Reduction Plan and Assessment Strategy

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**Submitted by:**



**City of San Bruno  
567 El Camino Real  
San Bruno, CA 94066**

*In compliance with Provisions C.10.c of Order R2-2009-0074*

**January 30, 2014**

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## ABBREVIATIONS

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
CY	Cubic Yards
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
FY	Fiscal Year
GIS	Geographic Information System
MRP	Municipal Regional Stormwater NPDES Permit
MS4	Municipal Separate Storm Sewer System
NGO	Non-Governmental Organization
NPDES	National Pollutant Discharge Elimination System
PIP	Public Information and Participation
PSA	Public Service Announcement
Q	Flow
SFRWQCB	San Francisco Regional Water Quality Control Board
SMCWPPP	San Mateo Countywide Water Pollution Prevention Program
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 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 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 San Bruno'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 (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 San Bruno therefore reserves the right to revise or amend this Long-Term Plan at its discretion. If significant revisions or amendments are made by the City, a revised Long-Term Plan will be submitted to the Water Board through the City's annual reporting process.

## 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 Plan* (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 level of implementation designed to attain a 70% trash load reduction by July 1, 2017, and 100% (i.e., “No Adverse Impact”) by July 1, 2022.

This Long-Term Plan is submitted by the City of San Bruno 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 San Bruno’s municipal separate storm sewer system (MS4) that are regulated by NPDES Permit requirements. The Long-Term Plan includes:

1. Descriptions 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;
2. 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,
3. Time schedules for implementing control measures and the assessment strategy.

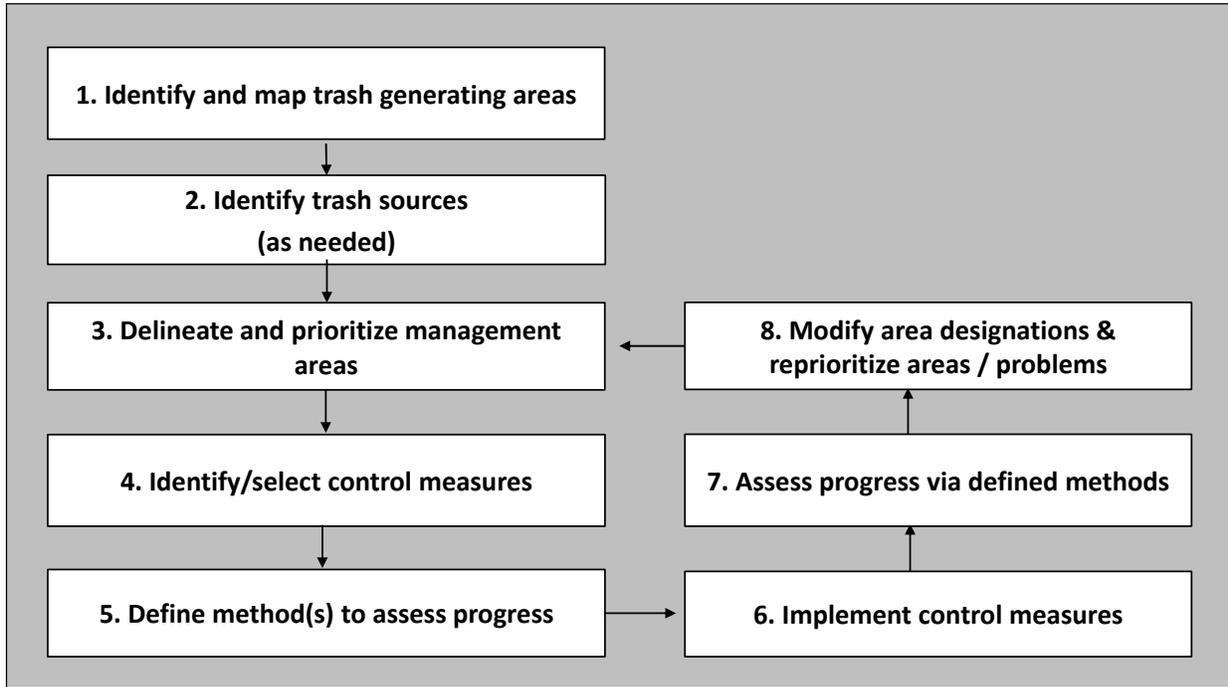
The Long-Term Plan was developed using a regionally consistent outline and guidance developed by the Bay Area Stormwater Management Agencies Association (BASMAA) and reviewed by the San Francisco Bay Regional Water Quality Control Board (Water Board) staff. The Long-Term Plan is consistent with the Long-Term Trash Load Reduction Framework (see section 1.2.1) developed in collaboration with Water Board staff. Its content is based on the San Bruno’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 (MS4) discharges. The Long-Term Plan builds upon trash control measures implemented by the City prior to the adoption of the MRP and during the implementation of the Short-Term Trash Load Reduction Plan submitted to the Water Board on February 1, 2012.

### 1.2 Background

#### 1.2.1 Long-Term Trash Load Reduction Plan Framework

A workgroup of MRP Permittee, Bay Area countywide stormwater program staff and Water Board staff met between October 2012 and March 2013 to better define the process for developing and implementing Long-Term Plans, 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.

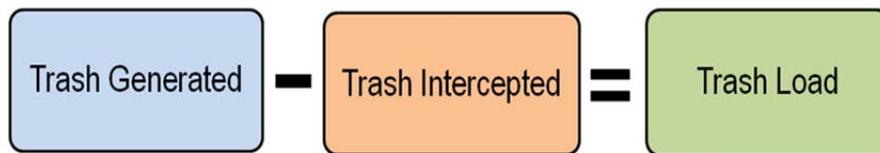
### 1.2.2 BASMAA Generation Rates Project

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 2 illustrates the difference between trash generation and loading.



**Figure 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).

**Table 1.** San Francisco Bay Area trash generation rates by land use (gallons/acre/year).

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

<sup>a</sup> For 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.

<sup>b</sup> 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 = 90<sup>th</sup> percentile; Best = mean generation rate; and, Low = 10<sup>th</sup> percentile.

### 1.2.3 Short-Term Trash Load Reduction Plan

In February 2012, the City of San Bruno developed a Short-Term Plan that described the current level of control measures implementation and identified the type and extent to which new or enhanced control measures would be implemented to attain a 40% trash load reduction from its MS4 by July 1, 2014. Since that time, the City has begun to implement its Short-Term Plan. Control measures implemented to date via the Short-Term Plan include the following:

- **Single-use Carryout Bag Policy** – In January 2013, the City Council added Chapter 10.25 (Reusable Bag Ordinance to Regulate the Distribution of Single-use Carryout Bags by Retail Establishments) to Title 10 (Municipal Services) of the San Bruno Municipal Code. The ordinance restricts the use of single-use carry-out bags by retailers, including grocery stores, convenience stores, pharmacies and other shops. It does not apply to single-use carry-out bags used for restaurant food take-outs or for produce, meats, bulk foods and prescription medicines. The County of San Mateo Bag Ordinance was adopted by reference and became effective on April 22, 2013.
- **Polystyrene Foam Food Service Ware Policy** – In January 2009, the City Council added Chapter 10.21 (Sustainable Food Packaging) to Title 10 (Municipal Services) of the San Bruno Municipal Code. The ordinance prohibits food vendors (i.e., any establishment located or providing food within the City) from dispensing prepared food to customers in disposable food service ware made from polystyrene (foam and solid) and requires disposable food service ware to be biodegradable, compostable, reusable or recyclable. Lids, plates, bowls, cups, utensils and straws made of polystyrene are also governed by the ordinance. The ordinance provides for exemptions due to extreme hardships, but no exemptions have been applied for to date. The Sustainable Food Packaging Ordinance became effective on April 1, 2010.
- **Public Education and Outreach Programs** – Through participation and funding of the SMCWPPP’s Public Information and Public Information and Participation program (PIP), the City continued implementing SMCWPPP and BASMAA public education and outreach programs. One program of interest implemented by the City is the BASMAA Youth Outreach Campaign. This Campaign was launched in September 2011 and aims to increase the awareness of Bay Area Youth (ages 16-24) on litter and stormwater pollution issues, and eventually change their littering behaviors.

- **Improved Trash Bin/Container Management** – The City is managing the volume of trash generated by pedestrians on San Mateo Avenue and El Camino Real by providing an adequate number of bins on both streets. The City also reaches out to businesses with inadequate trash containers to help them obtain the appropriate level of service to handle their respective trash loads.
- **On-land Cleanups** – One part-time employee patrols and removes trash (i.e., large items) from trash hot spots and known illegal dumping areas five days a week throughout the City. The City started tracks and reports the volume of trash collected. Since 2002, the City has partnered with Recology to support an annual volunteer-led on-land cleanup event called Operation Clean Sweep. Each May, city employees, residents and organization groups (e.g., Boy Scouts of America and San Bruno Rotary) remove litter and illegally dumped trash from schools, parks, streets, and other littered areas.
- **Street Sweeping** – The City’s street sweeping includes sweeping streets in residential areas twice/month, and sweeping large arterial roads (e.g., Sneath Lane and West San Bruno Avenue) once/month with the exception of El Camino Real and San Mateo Avenue (and surrounding streets once/week and five times/week, respectively. “No Parking- Street Sweeping” signs are posted for street sweeping within high density residential and commercial areas between El Camino Real and US Highway 101.
- **Full-Capture Devices** – In April 2011, the City installed 41 small full-capture devices (i.e., connector pipe screens) within an eastern neighborhood of the City. To supplement the April 2011 installation, the City installed an additional 9 small full-capture devices in July 2013. The area treated by the 50 small full capture devices is approximately 94 acres of land. This equates to approximately 3 % of the City’s jurisdictional area. These installations fulfill Permit Provision C.10.a.ii Minimum Full Trash Capture requirement of 41 acres. These devices are inspected and maintained a minimum of four times/year. Additional inspection and maintenance was conducted, as necessary after large storms.
- **Partial- Capture Devices** – In April 2011, the City installed 47 partial-capture devices (i.e., automated retractable screens) an eastern neighborhood of the City. To supplement the April 2011 installation, the City installed an additional 8 partial-capture devices in July 2013. These devices are inspected and maintained a minimum of four times/year. Additional inspection and maintenance was conducted, as necessary after large storms.
- **Creek Hot Spot Cleanup** – The City has one creek hot spot (i.e., SBO01) located on El Zanjon Creek within City Park. It is cleaned once/year in compliance with Permit Provision C.10.b. iii of the MRP. Approximately 5 gallons of uncompacted trash is removed from this site during the annual cleanup. Cleanups have been occurring annually since 2010.

Control measures described in this Long-Term Plan build upon actions taken to-date via City of San Bruno’s Short-Term Plan. A full description of control measures implemented via short and long-term plans is included in Section 3.2. Outcomes associated with short-term plan implementation will be reported in the City’s FY 2013-2014 Annual Report, scheduled for submittal to the Water Board by September 15, 2014.

### **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 San Bruno. Control measures that will be implemented by the City 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 1914, the City of San Bruno is located in San Mateo County, and has a jurisdictional area of 3,088 acres. According to the 2010 Census, it has a population of 41,114, with a population density of 7,505.3 people per square mile and average household size of 2.77. Of the 41,114 residents who call San Bruno home, 21.0% are under the age of 18, 8.7% are between 18 and 24, 29.3% are between 25 and 44, 28.3% are between 45 and 64, and 12.7% are 65 or older. The median age was 38.8 years. The median household income was \$72, 185 in 2011. The City is home to the Shops at Tanforan. Top employers in the City include YouTube, Lash Group, Sears, Target and IronPort.

Land uses within San Bruno depicted in ABAG (2005) are provided in Table 2. The City is primarily comprised of seven land uses. These include commercial and services, industrial, residential, retail, K-12 schools, urban parks, and other (i.e., urban open and open space land uses).

**Table 2.** Percentages of the City's jurisdictional area<sup>1</sup> within land use classes identified by ABAG (2005)

Land Use Category	Jurisdictional Area (Acres)	% of Jurisdictional Area
Commercial and Services	193.1	6.3%
Industrial	55.3	1.8%
Residential	1,848.0	59.8%
Retail	209.2	6.8%
K-12 Schools	185.2	6.0%
Urban Parks	68.0	2.2%
Other	529.0	17.1%

### 2.2 Trash Sources and Pathways

Trash in San Francisco Bay Area creeks and shorelines originates from a variety of sources and is transported to receiving waters by a number of pathways (Figure 3). Of the four source categories, pedestrian litter includes trash sources from high traffic areas near businesses and schools, transitional areas where food/drinks are not permitted (e.g. bus stops), and from public or private special events with high volumes of people. Trash from vehicles occurs due to littering from automobiles and uncovered loads. Inadequate waste container management includes sources such as overflowing or uncovered containers and dumpsters as well as the dispersion of household and

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<sup>1</sup> 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).

business-related trash and recycling materials before, during, and after collection. On-land illegal dumping of trash is the final source category.

Trash is transported to receiving waters through three main pathways: 1) Stormwater Conveyances; 2) Wind; and, 3) Direct Dumping. Stormwater or urban runoff conveyance systems (e.g., MS4s) consist of curbs/gutters, and pipes and channels that discharge to urban creeks and the San Francisco Bay shorelines. Wind can also blow trash directly into creeks or the Bay. Lastly, trash in receiving waters can also originate from direct dumping into urban creeks and shorelines.

This Long-term Plan and associated trash control measures described in Section 3.0 are focused on reducing trash from one of the transport pathways illustrated in Figure 3– **stormwater conveyances**. Specifically, the Long-term Plan is focused on reducing the impacts of discharges from MS4s to San Francisco Area receiving waters and the protection of associated beneficial uses.

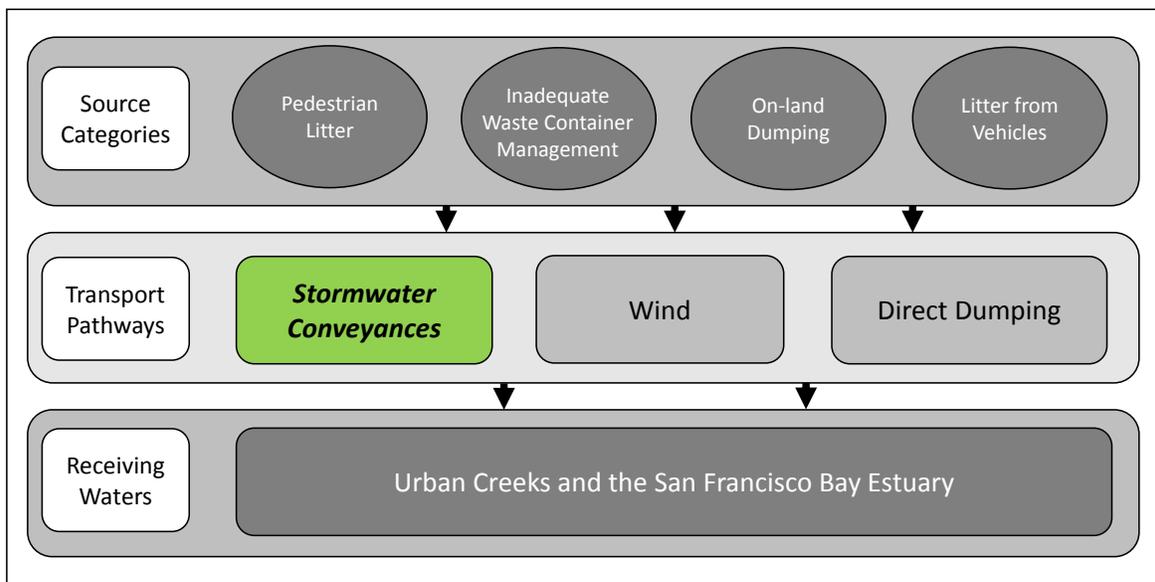


Figure 3. Trash sources categories and transport pathways to urban creeks.

## 2.3 Trash Generating Areas

### 2.3.1 Generation Categories and Designation of Areas

The process and methods used to identify the level of trash generation within the City of San Bruno are described in this section and illustrated in Figure 4.

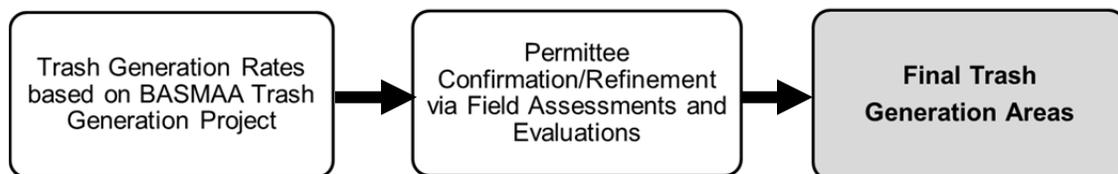


Figure 4. Trash sources categories and transport pathways to urban creeks.

As a first step, trash generation rates developed through *the BASMAA Trash Generation Rates Project* were applied to parcels within the City of San Bruno based on current land uses 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 the City 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 3.

**Table 3.** Trash generation categories and associated generation rates (gallons/acre/year).

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

The City of San Bruno 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. Based upon our knowledge of trash generation and problem areas within the City, staff identified areas on the draft map that potentially had incorrect trash generation category designations.
2. Trash generation category designations initially assigned to areas identified in step #1 were then assessed and confirmed/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 4. Public Services Department staff reviewed the preliminary Trash Generation Map provided by SMCWPPP staff and divided the map into manageable sections for field verification activities. Using the Draft Protocol, the City assessed areas of the map indicated as high (red) and medium (yellow) trash generating areas. Assessments were conducted by visiting these areas. The Trash Generation Map was revised to reflect the trash condition observed during the assessment.

**Table 4.** Definitions of on-land trash assessment condition categories.

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.

**b. Querying Municipal Staff**

Input and working field knowledge was gathered from Public Services Department staff. This input provided additional insight into the littering patterns and potential sources of trash around the City.

- Based on assessments conducted to confirm/refine trash generation category designations, the City created a final trash generation map that depicts the most current understanding of trash generation within the City of San Bruno. The City documented this process by tracking the information collected through the assessments and subsequent refinements to the Draft Trash Generation Map. The City of San Bruno’s Final Trash Generation Map is included as Figure 5.

**2.3.2 Summary of Trash Generating Areas and Sources**

Summary statistics for land use and trash generation categories generated through the mapping and assessment process are presented in Table 5.

**Table 5.** Percentage of jurisdictional area within the City of San Bruno assigned to each trash generation category.

Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
High	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Medium/High	57.3	4.6%	8.5%	9.4%	74.1%	0.0%	0.0%	3.3%
Medium	965.0	15.0%	4.6%	38.4%	15.0%	19.2%	6.5%	1.4%
Low	2,065.4	2.2%	0.3%	71.3%	1.1%	0.0%	0.3%	24.9%

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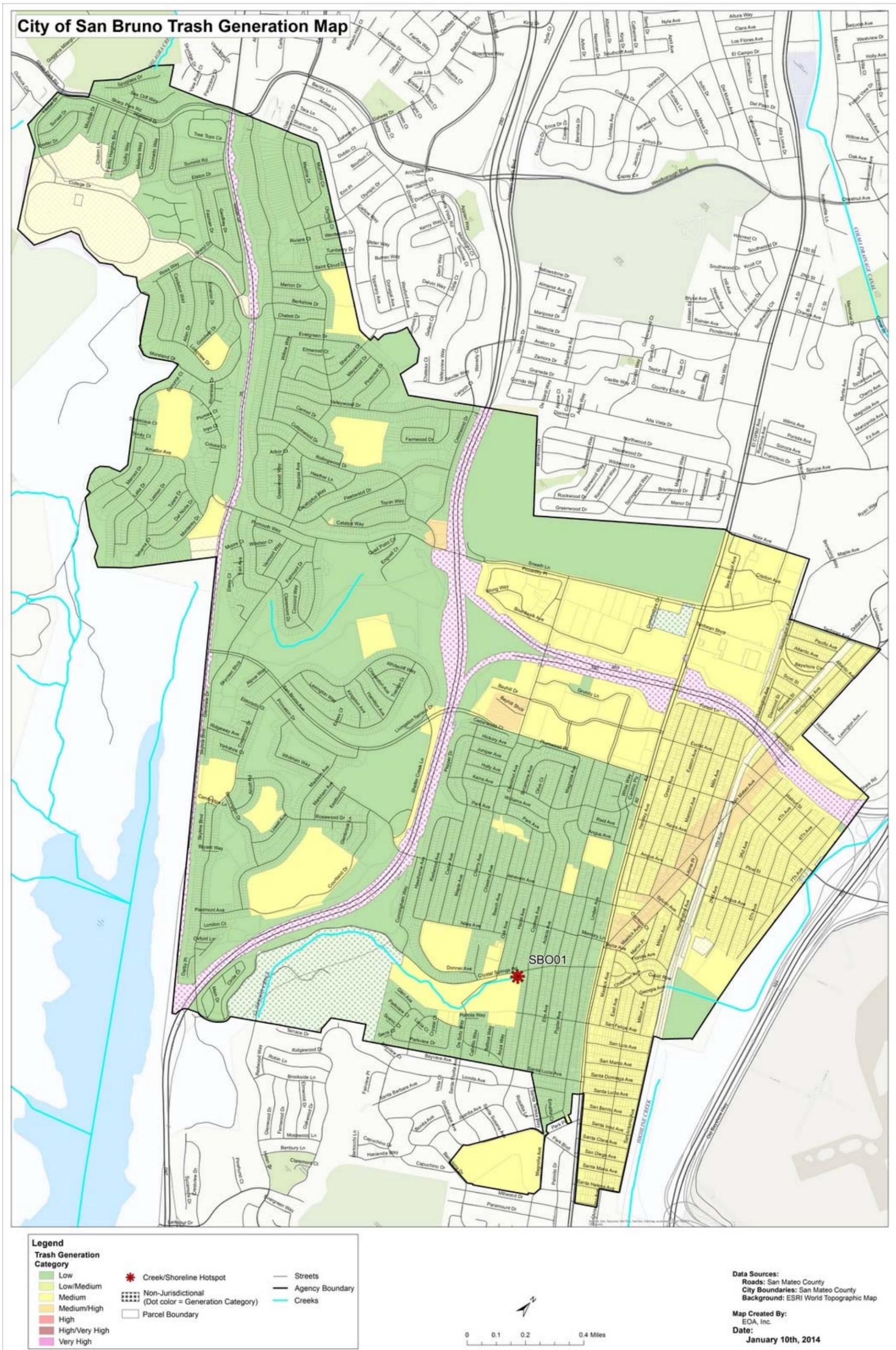


Figure 5. Final Trash Generation Map for the City of San Bruno

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### **3.0 TRASH MANAGEMENT AREAS AND CONTROL MEASURES**

This section describes the control measures that the City of San Bruno has or plans to implement to solve trash problems and achieve a target of 100% (i.e., “No Visual Impact”) trash reduction from their MS4 by July 1, 2022. The selection of control measures described in this section is based on the City’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 and therefore in the absence of this information, the City based its selection of control measures on existing effectiveness information, their experience in implementing trash controls and knowledge of trash problems, and costs of implementation. As knowledge is gained through the implementation of these control measures, the City may choose to refine their trash control strategy described in this section. If significant revisions or amendments are made, a revised Long-Term Plan will be submitted to the Water Board through the City’s annual reporting process.

#### **3.1 Management Area Delineation and Prioritization**

Consistent with the long-term plan framework, the City of San Bruno delineated and prioritized trash management areas (TMAs) based on the geographical distribution of trash generating areas, types of trash sources, and current or planned control measure locations. 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. Once delineated, TMAs were also prioritized for control measure implementation. The City’s primary management areas were selected based on the spatial distribution of trash generating areas and the location of specific existing or planned management actions within City’s jurisdiction. City staff used the following procedure to designate TMAs:

Public Services Department staff delineated nine (9) Trash Management Areas (TMAs) based on a combination of land usage, geographic boundaries, trash generation rates and the installation of full-capture devices. The “downtown area” (e.g., San Mateo Avenue) and surrounding streets, the area served by full-capture devices, residential areas east of El Camino Real and El Camino Real were delineated as separate TMAs. A TMA consisting primarily of retail and commercial land uses was also created. Parks and schools were delineated as separate TMAs. To address a specific land use and potential implementation of a control measure, Shelter Creek Lane was delineated as a TMA. The remaining area, consisting of all “low trash generating” areas was delineated as the final TMA. In addition, Public Services Department staff prioritized the eight (8) trash generation areas that contain medium/ high and medium trash generating areas based on factors that include trash generation rate, land usage, population density, traffic density, public presence and trash sources within each TMA. The City has identified medium/high trash generating areas as their highest priority over medium trash generating areas. Areas which have a higher population density, traffic density and public presence were assigned a higher priority. The City’s priority is based on the desire to avoid any further negative effects of trash accumulation and to address the current trash condition within visible areas of the City.

A map depicting the City’s TMAs is included as Figure 6. 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 in Table 6.

**Table 6.** Jurisdictional area and percentage of each Trash Management Area (TMA) comprised of trash generation categories

TMA	Jurisdictional Area (Acres)	Trash Generation Category				
		Very High	High	Medium/High	Moderate	Low
1	34.6	0.0%	0.0%	87.0%	13.0%	0.0%
2	114.9	0.0%	0.0%	6.0%	93.6%	0.4%
3	288.9	0.0%	0.0%	2.6%	97.4%	0.0%
4	29.9	0.0%	0.0%	0.0%	100.0%	0.0%
5	295.3	0.0%	0.0%	4.3%	95.0%	0.7%
6	9.2	0.0%	0.0%	0.0%	100.0%	0.0%
7A	4.1	0.0%	0.0%	0.0%	100.0%	0.0%
7B	3.0	0.0%	0.0%	0.0%	100.0%	0.0%
7C	6.0	0.0%	0.0%	0.0%	100.0%	0.0%
7D	2.9	0.0%	0.0%	0.0%	100.0%	0.0%
7E	4.2	0.0%	0.0%	0.0%	100.0%	0.0%
7F	15.7	0.0%	0.0%	0.0%	100.0%	0.0%
7G	33.5	0.0%	0.0%	0.0%	100.0%	0.0%
7H	11.3	0.0%	0.0%	0.0%	100.0%	0.0%

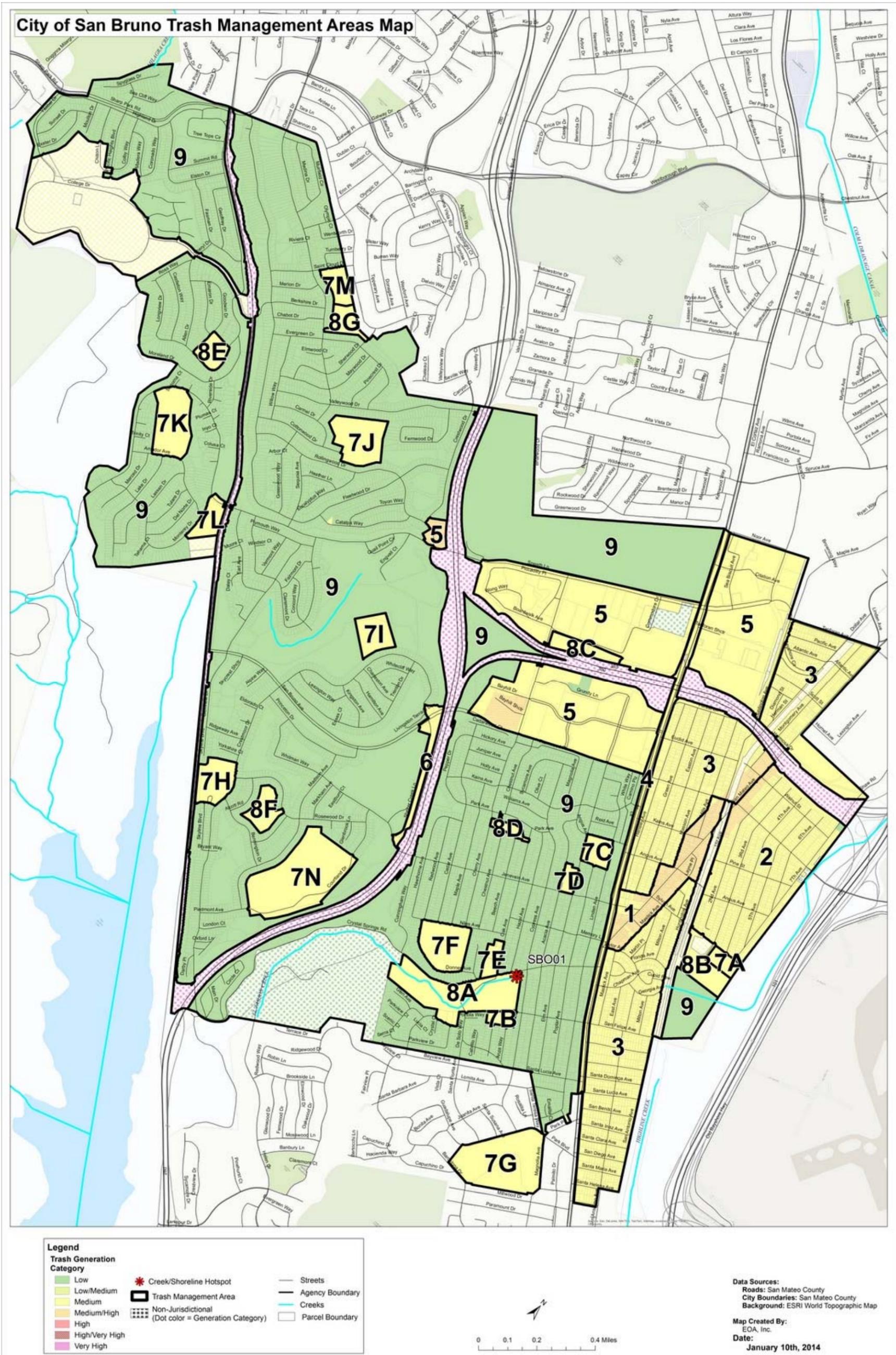


Figure 6. Trash Management Area Map for the City of San Bruno.

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## 3.2 Current and Planned Trash Control Measures

The City of San Bruno has taken an aggressive approach to trash reduction and has implemented a variety of trash control measures to reduce trash loads throughout the City. As illustrated in Figure 6, there are nine trash management areas (TMA) within the City limits. Numerical map identification and designation of each TMA begins first with the identification of one high-medium trash generating area (1), followed by seven medium trash generating areas (2-8) and one low generating area (9). Discussion of each TMA and associated current and planned control measures will follow in this order.

### 3.2.1 Jurisdiction-wide Control Measures

To reduce trash loads within the City, the following control measures are being implemented or are planned to be implemented at the jurisdiction-wide level:

#### ► ON-LAND CLEANUPS

##### **Implemented Prior to and Continued After MRP Effective Date:**

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- Prior to the effective date of the MRP, one part-time employee started patrolling and removing trash (i.e., large items) from trash hot spots and known illegal dumping areas **five days/week throughout the City**. After the effective date of the MRP, the City started tracking and reporting the volume of trash collected. This program has been successful at removing large illegally dumped items throughout the City.
- Since 2002, the City has partnered with Recology to support an annual volunteer-led on-land cleanup event called Operation Clean Sweep. Each May, City employees, residents and organization groups (e.g., Boy Scouts of America and San Bruno Rotary) remove litter and illegally dumped trash from schools, parks, streets, and other littered areas. Volunteers also beautify trash bins on San Mateo Avenue. Each event has been a great success at bringing volunteers together in beautifying the City.

##### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- One part-time employee continued the “trash patrol” program **five days/week throughout the City** during this time period. Approximately 975 hours were devoted to the program during FY 2012-13 with a total volume of 7,560 gallons of trash removed from cleanup activities. The dominant types of trash removed were large items. Additional City staff assisted with emergency cleanups.
- The City continued Operation Clean Sweep during this time period. Between 90 and 100 people participated in the May 2013 event. The participants were largely individual residents and families.

##### **Planned for Future Implementation between July 2014 and July 2022:**

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- The City plans to evaluate the following on-land cleanup effort for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - To address small trash items (i.e., plastics, cigarette butts, food wrappers, beverage containers, straws, lids and all other types of litter generated from vehicles and pedestrians) observed during “trash patrol”, the City will consider expanding the responsibility of the one part-time employee to include the removal of small trash items.

If implemented, the City will consider improving recordkeeping to include the total volume of small trash collected. Implementation will begin by **July 1, 2018** if a decision is made to expand the responsibility of the one part-time employee.

- The City plans on continuing Operation Clean Sweep during this time period. This on-land cleanup event has been successful in bring attention to problematic trash areas within the City.

## ► IMPROVED TRASH BIN/CONTAINER MANAGEMENT

### **Implemented Prior to and Continued After MRP Effective Date:**

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- Cigarette butt litter is the most prevalent trash type (by number count) observed on City streets and sidewalks. Prior to the effective date of the MRP, the City did not add specialty cigarette butt bins within public areas or consider adopting an ordinance that requires specific types of businesses (e.g., restaurants, liquor stores, convenience stores, bars, night clubs, coffee shops, bus stops) to provide specialty cigarette butt bins for the proper disposal of cigarette butt litter.

### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- The City did not add specialty cigarette butt bins within public areas or consider adopting an ordinance that requires specific types of businesses (e.g., restaurants, liquor stores, convenience stores, bars, night clubs, coffee shops, bus stops) to provide specialty cigarette butt bins for the proper disposal of cigarette butt litter during this time period.

### **Planned for Future Implementation between July 2014 and July 2022:**

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- The City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - To remedy cigarette butt litter, the City will consider the development of an ordinance that requires specific types of businesses to provide specialty cigarette butt bins for the proper disposal of cigarette butt litter. Each business would be responsible for maintaining their specialty cigarette butt bins. The City would be responsible for enforcing non-compliance with installation and maintenance. Affected businesses would be required to install specialty cigarette butt bins by **July 1, 2019** if a decision is made to require such bins.

## ► SINGLE-USE CARRYOUT BAG POLICIES

### **Implemented Prior to and Continued After MRP Effective Date:**

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- Prior to the effective date of the MRP, the City did not have single-use carryout bag policies restricting the use of single-use carry-out bags by retailers,

### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- In January 2013, the City Council added Chapter 10.25 (Reusable Bag Ordinance to Regulate the Distribution of Single-use Carryout Bags by Retail Establishments) to Title 10 (Municipal Services) of the San Bruno Municipal Code. The ordinance restricts the use of single-use carry-out bags by retailers, including grocery stores, convenience stores, pharmacies and other shops. It does not apply to single-use carry-out bags used for restaurant food take-outs or for produce, meats, bulk foods and prescription medicines. If retail customers do not bring a reusable bag, the retailer will charge a fee of 10

cents/paper bag until January 1, 2015. After this date, a fee of 25 cents/per paper bag may apply. Consumers using reusable bags are encouraged to practice “healthy bag habits” that include washing reusable bags regularly to remove bacteria and other potential food contaminants. Prior to the adoption of the Reusable Bag Ordinance by the City Council, the City held outreach meetings with businesses and residents and received generally positive feedback. The County of San Mateo Bag Ordinance was adopted by reference and became effective on April 22, 2013.

- The County of San Mateo Environmental Health Division will enforce the Reusable Bag Ordinance within the City limits. To date, San Mateo County Environmental Health staff has not provided a status result of any enforcement activities. Additional information about the Countywide Bag Ban is available on the San Mateo County website at [www.smchealth.org/ban](http://www.smchealth.org/ban). Chapter 10.25 (Reusable Bag Ordinance to Regulate the Distribution of Single-use Carryout Bags by Retail Establishments) to Title 10 (Municipal Services) of the San Bruno Municipal Code is available on-line at <http://qcode.us/codes/sanbruno/>.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City will continue supporting Chapter 10.25 (Reusable Bag Ordinance to Regulate the Distribution of Single-use Carryout Bags by Retail Establishments) to Title 10 (Municipal Services) of the San Bruno Municipal Code.

**► POLYSTYRENE FOAM FOOD SERVICE WARE POLICIES**

**Implemented Prior to and Continued After MRP Effective Date:**

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- Prior to the effective date of the MRP, the City did not have polystyrene foam food service ware policies restricting the use of polystyrene by food vendors,

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- In January 2009, the City Council added Chapter 10.21 (Sustainable Food Packaging) to Title 10 (Municipal Services) of the San Bruno Municipal Code. The ordinance prohibits food vendors (i.e., any establishment located or providing food within the City) from dispensing prepared food to customers in disposable food service ware made from polystyrene (foam and solid) and requires disposable food service ware to be biodegradable, compostable, reusable or recyclable. Lids, plates, bowls, cups, utensils and straws made of polystyrene are also governed by the ordinance. The ordinance provides for exemptions due to extreme hardships, but no exemptions have been applied for to date. The Sustainable Food Packaging Ordinance became effective on April 1, 2010.
- The City is responsible for enforcing the Sustainable Food Packaging Ordinance within the City limits. Food vendors determined to be out of compliance may be fined up to \$500 for the third and subsequent violation of the chapter. Chapter 10.21 (Sustainable Food Packaging) to Title 10 (Municipal Services) of the San Bruno Municipal Code is available on-line at <http://qcode.us/codes/sanbruno/>.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City will continue enforcing Chapter 10.21 (Sustainable Food Packaging) to Title 10 (Municipal Services) of the San Bruno Municipal Code.

## ► PUBLIC EDUCATION AND OUTREACH PROGRAMS

### **Implemented Prior to and Continued After MRP Effective Date:**

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The City of San Bruno implemented the following public education and outreach programs prior to the effective date of the MRP and has continued to implement these programs since MRP adoption.

#### ***SMCWPPP Public Information and Participation Program (Countywide)***

Through participation and funding of the San Mateo Countywide Water Pollution Prevention Program's (SMCWPPP) Public Information and Participation program (PIP), the City of San Bruno plans to continue implementing litter reduction outreach to school-age children and youth. SMCWPPP currently oversees a contract to provide direct outreach to grades K-5 in a school setting on behalf of all Permittees. The contract is currently held by the Banana Slug String Band, which performs a presentation called "We All Live Downstream." Through songs and interactive exercises, the message of not putting anything in the storm drains (including trash) is delivered, along with basic concepts of the water cycle and the impact of pollution on aquatic life. In addition, SMCWPPP has developed a presentation entitled "Water Pollution Prevention: Problems and Solutions" that is delivered to high school students. This presentation is dedicated to watershed and storm drain education, and the impact of litter on local creeks and waterways. Both efforts are managed to ensure that schools in each community in the County are reached. For communities without High Schools, the feeder schools in neighboring communities are specifically targeted for presentations. In addition to outreach at the school sites, a number of student activity guides and coloring books related to watershed health and littering are provided to children who attend outreach events. Schools are also directly targeted in promotion of Coastal Cleanup Day.

PIP also participates in a regional anti-littering campaign developed by BASMAA targeted at youth ages 14 to 24. As acting chair of the BASMAA PIP committee, SMCWPPP PIP has participated in the development and dissemination of campaign materials, and has conducted local events on behalf of all jurisdictions to promote the campaign. The campaign, entitled "Be The Street You Want to See", will soon transition from building a community of youth dedicated to not littering to engaging that community in action.

SMCWPPP, through its PIP program, plans to continue to conduct community outreach events on behalf of Permittees who request support. Outreach materials related to litter that are distributed include, in addition to the children's materials listed above under Outreach to School-age Children or Youth, a promotional sign for cigarette smokers to discourage cigarette litter, and pocket ashtrays are given out. A general stormwater pollution prevention flyer in English and Spanish that includes litter reduction in its messaging is distributed.

In addition to table outreach events conducted for specific Permittees, PIP also conducts a Countywide Event aimed to reach residents from throughout the County. PIP manages an online calendar which promotes clean-up events by non-profit organizations throughout the County. In FY 2012, PIP completed its 7th year acting as the county coordinator for Coastal Cleanup Day, increasing volunteer participation by 400% in that time, and trash removal increased by 300%.

During the term of the MRP, new outreach materials have been disseminated to the public, including reusable shopping bags to encourage reduction in use of carryout plastic bags; PIP has supported a countywide ban on carryout bags that began implementation on April 22, 2013. In addition, spring cleanups taking place in individual jurisdictions are promoted under one theme by PIP, entitled Spring Cleaning SMC. PIP assists in directing volunteers to cleanup events in

their communities. SMCWPPP conducted a total of 11 outreach events on behalf of various jurisdictions within the County in the FY 2012-2013. SMCWPPP will also continue maintaining an online calendar of cleanups on a monthly basis. In addition to using the SMCWPPP website, flowstobay.org, to promote cleanups, PIP is actively involved in social media platforms such as Facebook, Twitter, You Tube, and Instagram to deliver anti-littering and cleanup messages.

#### ***Coastal Cleanup Day Promotion (Countywide)***

On the countywide level, SMCWPPP also conducts annual press releases for Coastal Cleanup Day, and uses Twitter to promote cleanup events. These releases are intended to gain support and assistance for cleanup events conducted each September in local water bodies.

#### ***BASMAA Regional Media Relations Project (Regional)***

Through participation and funding of the **BASMAA Regional Media Relations Project**, the City of San Bruno is continuing to implement a media relations project partially designed to reduce littering from target audiences in the Bay Area. The goal of the BASMAA Media Relations Project is to generate media coverage that encourages individuals to adopt behavior changes to prevent water pollution, including littering. At least two press releases or PSAs focus on litter issues each year (e.g., creek clean-up activities, preventing litter by using reusable containers, etc.). In FY 2012-2013, the Media Relations project developed a press release new and recent bag bans in cities around the region. The pitch included information on the litter caused by plastic bags. Information ran on KBAY, KCBS and on eight Bay Area Patch.com sites.

#### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

In addition to the public education and outreach programs implemented after the adoption of the MRP, the City is currently implementing or planning to implement the following public education and outreach control measures that were initiated after the MRP was adopted.

#### ***BASMAA Youth Outreach Campaign (Regional)***

Through participation and funding of the regional **BASMAA Youth Outreach Campaign**, the City of San Bruno is implementing an outreach campaign designed to reduce littering from the target audience in the Bay Area. The Youth Outreach Campaign was launched in September 2011 and aims to increase the awareness of Bay Area Youth (ages 16-24) on litter and stormwater pollution issues, and eventually change their littering behaviors. Combining the ideas of Community Based Social Marketing with traditional advertising, the Youth Campaign aims to engage youth to enable the peer-to-peer distribution of Campaign messages. The Campaign will at least run through FY 2013-2014. A brief description of the Campaign activities is provided below:

- **Raising Awareness:** The Campaign is raising awareness of the target audience on litter and stormwater pollution issues. Partnerships with youth commissions, high schools, and other youth focused organizations have been developed to reach the target audience. Messages targeted to youth have been created and distributed via paid advertising, email marketing, Campaign website and social networking sites (e.g., Facebook and Twitter).
- **Engage the Youth** - The advertisements encourage the audience to participate in the Youth Campaign by joining a Facebook page, entering a contest, taking an online quiz, etc., and providing their contact information. At the beginning of FY 2012-2013, a video contest was launched to get Bay Area youth further involved in the Campaign. An online voting system was used to select the winning entry. Media advertising was conducted to promote the winning entry.

- Change Behaviors: To move the audience along the behavior change continuum, the Campaign is using electronic platforms such as email marketing and social networking sites to encourage participants to engage in increasingly more difficult behavior changes, such as participating in a clean-up, organizing a clean-up, etc.
- Maintain Engagement: The Campaign continues to interact with the target audience through email marketing and social media websites.

The Youth Campaign includes a pre and post campaign survey to evaluate the effectiveness of outreach. The pre-campaign survey was conducted in FY 2011-2012 and the post campaign survey will begin in FY 2013-2014. Other evaluation mechanisms, such as website hits, number of youth engaged in the Campaign's social networking website, etc. are also being used to evaluate its effectiveness in increasing awareness and changing behavior.

Activities in FY 2012-2013 included maintaining the website [www.BetheStreet.org](http://www.BetheStreet.org), Facebook page, and Instagram account. A video contest asking participants to submit their best anti-litter video was also conducted. The "Be the Street" campaign received 52 entries in response to the contest. The winning video was promoted on television, Pandora (online music site), YouTube, Google, and Facebook.

**Planned for Future Implementation between July 2014 and July 2022:**

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- Through participation and funding of the SMCWPPP's Public Information and Participation program (PIP), the City will continue implementing SMCWPPP and BASMAA public education and outreach programs during this time period.,

### 3.2.2 Trash Management Area #1

Trash Management Area #1 (TMA #1) includes approximately 35 acres of land bordered by portions of El Camino Real, Easton Avenue, Mills Avenue and Masson Avenue to the west, portions of Sylvan Avenue, Angus Avenue, Kains Avenue and West San Bruno Avenue to the north, Mastick Avenue and Huntington Avenue to the east, and Taylor Avenue to the south. Visual on-land assessments conducted by City staff within TMA #1 indicate that approximately 87 % of the jurisdictional area is considered a medium/high trash generating area with the remaining 13 % as a medium trash generating area. TMA #1 includes the “downtown business district” and contains mostly retail and commercial land uses with residential adjacent to these land uses, It includes San Mateo Avenue which results in large volumes of vehicular and pedestrian traffic who generate trash within the area. Full-capture devices have not been installed within TMA #1. To date, street sweeping and on-land clean-ups have been implemented to address trash. In addition, Recology maintains a network of 38 public trash bins. TMA #1 has been identified as the first priority for the City due to having the highest level of trash generation.

#### ► FULL-CAPTURE TREATMENT DEVICES

##### **Implemented Prior to and Continued After MRP Effective Date:**

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- The City did not install any full-capture devices within TMA #1 prior to the effective date of the MRP.

##### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- The City did not install any small full-capture devices within TMA #1 during this time period. The majority of catch basins on San Mateo Avenue are too shallow for the installation of small full-capture devices

##### **Planned for Future Implementation between July 2014 and July 2022:**

---

- TMA #1 is the highest trash generating area within the City. The City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - As part of the City’s proposed Storm Drain Improvement Plan, the City will evaluate and determine the feasibility of installing large full-capture devices (i.e., hydrodynamic separators or gross solids removal devices) to treat trash loads generated within TMA #1. If it is determined to be feasible and resources are available, the City will install large full-capture devices to treat TMA #1 and adjacent TMAs by **July 1, 2020**. Note: Due to the small size and irregular shape of TMA #1, it is highly likely that large full-capture devices installed within TMA #1 would treat trash loads within surrounding TMAs.

#### ► STREET SWEEPING

##### **Implemented Prior to and Continued After MRP Effective Date:**

---

- Installed “No Parking-Street Sweeping” signs to prohibit parking during sweeping hours. All streets within TMA #1 are posted except for San Mateo Avenue. Layne Place, Maryland Place and Hensley Avenue (between Sylvan Avenue and West Angus Avenue) are also not posted because they are not swept due to being narrow alleys between buildings.
- The City developed the street sweeping program to minimize inconvenience to residents by sweeping within an established two-hour window, and limiting sweeping to one side of the street on the scheduled day. As a result, residents may park on the opposite side of the

street that is not swept that day. All streets with TMA #1 except San Mateo Avenue, Jenevein Avenue (between El Camino Real and San Mateo Avenue) and Sylvan Avenue (between San Mateo Avenue and Mastick Avenue) are swept **twice/month** (1st and 3rd Monday on one side of the street and 1st and 3rd Tuesday). On scheduled sweeping days where signs are present, the sweeper is preceded by a City Community Service Officer who issues citations to vehicles in violation of the posted signs. As a result, cars are consistently not present when sweeping is conducted. Therefore, sweeping practices are effective since the sweeper is reaching the curb.

- San Mateo Avenue, Jenevein Avenue (between El Camino Real and San Mateo Avenue) and Sylvan Avenue (between San Mateo Avenue and Mastick Avenue) are **swept five days/week** (Monday- Friday) between 6:00 a.m. and 7:15 a.m. using a Green Machine street sweeper. These streets are not posted “No Parking- Street Sweeping”. However, cars are consistently not present when sweeping is conducted since the vast majority of retail and commercial businesses within the downtown area are closed. Therefore, sweeping practices are effective since the sweeper is reaching the curb. Due to the very frequent sweeping of San Mateo Avenue, very minimal trash is present on streets during the week (Monday-Friday).
- Prior to sweeping San Mateo Avenue, City staff blow trash from the sidewalk into the street along the stretch **five days/week** (Monday-Friday). As a result, the sweeper is removing additional trash that otherwise would stay on the sidewalk. This practice has been effective in reducing trash loads on San Mateo Avenue resulting in very minimal trash present on sidewalks during the week (Monday-Friday).
- All City-owned parking lots within TMA #1 are swept **twice/week** between the hours of 6:00 a.m. and 7:15 a.m.

#### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

---

- No additional street sweeping was implemented within TMA #1 during this time period. The street sweeping program has been designed to maximize effectiveness.
- Prior to sweeping San Mateo Avenue, City staff continued blowing trash from the sidewalk into the street along the stretch **five days/week** (Monday-Friday).

#### **Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to increase street sweeping frequency within TMA #1 during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.
- Prior to sweeping San Mateo Avenue, City staff will continue blowing trash from the sidewalk into the street along the stretch **five days/week** (Monday-Friday).

### **► ON-LAND CLEANUPS**

#### **Implemented Prior to and Continued After MRP Effective Date:**

---

- The City’s Public Services Department performs on-land cleanup of the San Mateo Avenue corridor and City-owned parking lots **five days/week** (Monday/Friday) between the

hours of 6:00 a.m. and 7:15 a.m. On-land cleanup activities include City staff blowing trash from the sidewalk into the street along San Mateo Avenue, and removing trash from San Mateo Avenue and City-owned parking lots. On-land cleanups have been effective in reducing trash loads and improving overall aesthetics on San Mateo Avenue and City-owned parking lots resulting in very minimal trash present within these areas during the work week (Monday-Friday).

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- On-land cleanup activities continued within TMA #1. The City did not implement additional on-land cleanups during this time period since existing on-land cleanup efforts are already conducted **five days/week** (Monday/Friday).

**Planned for Future Implementation between July 2014 and July 2022:**

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- Existing on-land cleanup activities will continue within TMA #1. The City has no additional on-land cleanups planned for TMA #1 since existing on-land cleanup efforts are already conducted **five days/week** (Monday/Friday).

**► IMPROVED TRASH BIN/CONTAINER MANAGEMENT**

**Implemented Prior to and Continued After MRP Effective Date:**

---

- The City’s trash hauler, Recology maintains a total of 38 public trash bins on San Mateo Avenue. Trash is removed from public trash bins **six days/week** (except Sunday). Additional trash collection occurs by request. Recology is not aware of any chronic overflowing bins on San Mateo Avenue.
- Prior to the effective date of the MRP, the City has worked and will continue to work with Recology to identify businesses that do not subscribe to trash collection services by comparing Recology’s list of subscribers with the City’s business license list. This is important on San Mateo Avenue since businesses may try to use the public trash bins to dispose of their trash rather than subscribe to trash service. The implementation of this monitoring program has reduced trash levels in public trash bins on San Mateo Avenue resulting in fewer overflowing trash bins.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- The City did not add additional public trash bins on San Mateo Avenue during this time period. The number of public trash bins is adequate to manage the volume of trash generated by pedestrians on San Mateo Avenue.
- The City continued working with Recology during this time period to identify businesses that do not subscribe to trash collection services by comparing Recology’s list of subscribers with the City’s business license list. Businesses that were identified to not have trash collection service were contacted to start service.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to add additional public trash bins on San Mateo Avenue during this time period. However, they are open to adding additional public trash bins in the future based on property owner, transit authority or City request.
- The City will continue working with Recology in the future to identify businesses that do not subscribe to trash collection services by comparing Recology’s list of subscribers with

the City's business license list. Businesses that are identified to not have trash collection service will be contacted to start service.

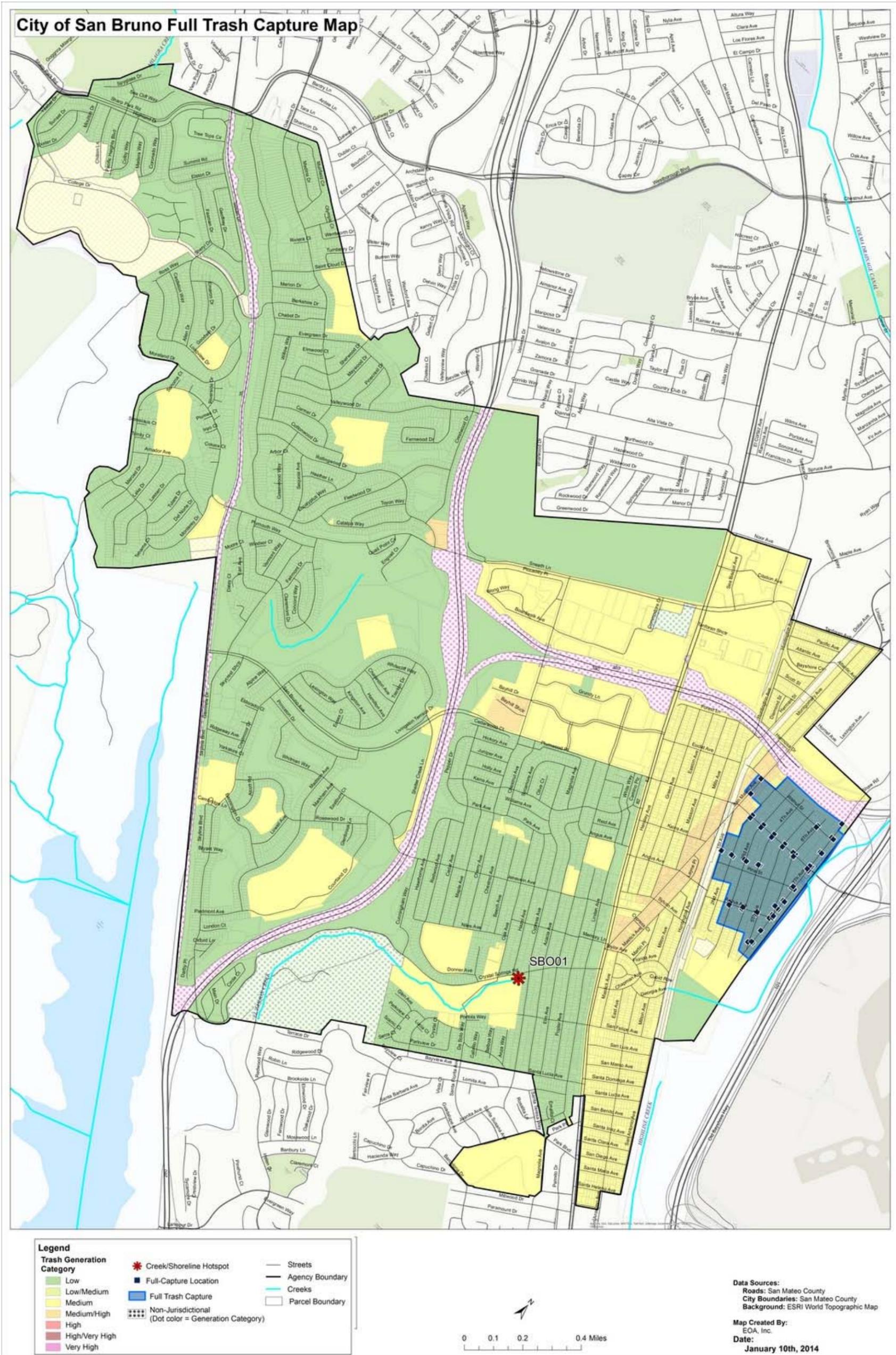


Figure 7. Trash Full Capture Device Map for the City of San Bruno.

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### 3.2.3 Trash Management Area #2

Trash Management Area #2 (TMA #2) includes approximately 115 acres of land bordered by Caltrain and San Mateo Avenue to the west, Interstate 380 to the north, San Bruno city limits to the east, and California National Guard Armory and Belle Air Elementary School to the south. Visual on-land assessments conducted by City staff within TMA #2 indicate that approximately 94 % of the jurisdictional area is considered as a medium trash generating area and the remaining 6 % as a medium/high trash generating area. The vast majority of land area is high-density residential with retail, industrial and commercial land uses occupying the remaining area. Trash sources include pedestrians and vehicles. Streets within TMA #2 are very narrow. Due to being a high-density residential area, many cars are parked on streets. TMA #2 also includes two parks not included within TMA #8. To date, full-capture devices, partial-capture devices, street sweeping and on-land clean-ups have been implemented within this area to address trash.

#### ► FULL-CAPTURE TREATMENT DEVICES

##### **Implemented Prior to and Continued After MRP Effective Date:**

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- The City did not install any full-capture devices within TMA # 1 prior to the effective date of the MRP.

##### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- In April 2011, the City installed 41 small full-capture devices (i.e., connector pipe screens) within TMA #2. This installation was funded by the Association of Bay Area Governments (ABAG) and the California State Water Resources Control Board (State Water Board) Bay Area-Wide Trash Capture Demonstration Project through the federal American Recovery and Reinvestment Act of 2009. This funding was primarily intended to provide preliminary resources to Bay Area municipalities in purchasing a limited number of the Permit-required trash full capture treatment devices for installation in municipally-owned stormwater conveyance systems. To supplement the April 2011 installation, the City installed an additional 9 small full-capture devices (i.e., connector pipe screens) in July 2013. The area treated by the 50 small full capture devices is approximately 94 acres of land. This equates to approximately 3 % of the City's jurisdictional area.
- These devices are inspected and maintained prior to the "first flush" with additional inspection and maintenance conducted, as necessary after major storm events (may be up to four times/year). The first maintenance event occurred in October 2011. Small full-capture devices are maintained by using a combination sewer truck (i.e. Vactor truck) to pressure wash and vacuum all debris from the catch basin and connector pipe screen. In some instances, the catch basins are shoveled and swept. A Trash Capture Device Maintenance Report is filled out for every maintenance event and is logged on the City's municipality page on [www.bayareatrashtacker.org](http://www.bayareatrashtacker.org). Paper copies of the Maintenance Reports are also kept at the Public Services Department. To date, the City has experienced no failures or other issues with these devices. Figure 7 (Trash Full Capture Device Map) includes the areas within the City that are treated with these devices.

##### **Planned for Future Implementation between July 2014 and July 2022:**

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- The City will continue inspecting and maintaining all small full-capture devices to ensure proper performance. The City does not plan installing additional full-capture devices since the vast majority of TMA #2 is already served. The City selected TMA #2 as the primary site for full-capture devices because the area drains directly to two County-owned

stormwater pump stations, generates large amounts of leaf debris and has a narrow street configuration. Public Services Department staff report that these installations have greatly reduced the volume of trash reaching the stormwater pump stations.

## ► PARTIAL-CAPTURE TREATMENT DEVICES

### **Implemented Prior to and Continued After MRP Effective Date:**

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- The City did not install any partial-capture devices prior to the effective date of the MRP.

### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- In April 2011, the City installed 47 partial-capture devices (i.e., automated retractable screens) within TMA #2. This installation was funded by the Association of Bay Area Governments (ABAG) and the California State Water Resources Control Board (State Water Board) Bay Area-Wide Trash Capture Demonstration Project through the federal American Recovery and Reinvestment Act of 2009. To supplement the April 2011 installation, the City installed an additional 8 partial-capture devices in July 2013. These devices are inspected and maintained a minimum of four times/year. A Trash Capture Device Maintenance Report is filled out for every maintenance event and is logged on the City's municipality page on [www.bayareatrashtacker.org](http://www.bayareatrashtacker.org). Paper copies of the Maintenance Reports are also kept at the Public Services Department. To date, the City has experienced only minor issues with partial-capture devices.

### **Planned for Future Implementation between July 2014 and July 2022:**

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- The City will continue inspecting and maintaining all partial-capture devices to ensure proper performance. The City does not plan installing additional partial-capture devices since the vast majority of TMA #2 is already served by small full capture devices.

## ► STREET SWEEPING

### **Implemented Prior to and Continued After MRP Effective Date:**

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- Installed "No Parking-Street Sweeping" signs to prohibit parking during sweeping hours. All streets within TMA #2 are posted.
- The City developed the street sweeping program to minimize inconvenience to residents by sweeping within an established two-hour window, and limiting sweeping to one side of the street on the scheduled day. As a result, residents may park on the opposite side of the street that is not swept that day. Within TMA #2, all streets are swept **twice/month** (1st and 3rd Monday on one side of the street and 1st and 3rd Tuesday). On scheduled sweeping days, the sweeper is preceded by a City Community Service Officer who issues citations to vehicles in violation of the posted signs. As a result, cars are not present when sweeping is conducted. Therefore, sweeping practices are effective since the sweeper is reaching the curb.

### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- To address areas with heavy leaf drop, the City has increased sweeping to **once/week (as needed)** during the wet season on the following streets or areas:

- 500-700 blocks of 1st Avenue through 7th Avenue. Approximately 6.39 curb miles. The street sweeper is reaching the curb since these blocks are posted “No Parking- Street Sweeping”.
- San Bruno Avenue between Huntington Avenue and 7th Avenue. The street sweeper is reaching the curb since San Bruno Avenue is a major through fare with no parking.
- Updated the “Street Sweeping” webpage on the City’s website. This webpage provides the street sweeping frequency by residential area within the City. Residents may view a list of streets within a residential area to determine when their street is swept. The webpage is available at: [http://sanbruno.ca.gov/pw\\_streetsweep.html](http://sanbruno.ca.gov/pw_streetsweep.html).

**Planned for Future Implementation between July 2014 and July 2022:**

- The City does not plan to increase street sweeping frequency within TMA #2 during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.

**► ON-LAND CLEAN-UPS**

**Implemented Prior to and Continued After MRP Effective Date:**

- The City’s Community Services Department performs on-land cleanups and services trash containers **five days a week** (Monday-Friday) as part of their maintenance and landscaping activities in the following two parks located within TMA #2. A total of eight full-time employees are dedicated to maintaining parks within the City.
  - 7th Avenue Park. The park is located on 7th Avenue near Angus Avenue. It is adjacent to a residential neighborhood and US Highway 101. 7th Avenue Park features a play area.
  - 7th Avenue and Walnut Avenue Park. The park is located at the corner of 7th Avenue and Walnut Avenue. It is adjacent to a residential neighborhood, Interstate 380 and US Highway 101. 7th Avenue and Walnut Avenue Park features a basketball court and play area.
- City staff did not conduct other on-land cleanups with TMA #2 during this time period.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

- On-land cleanup activities and trash container servicing continued in parks within TMA #2 during the time period. The City did not implement additional on-land cleanups within parks since existing on-land cleanup efforts are adequately addressing trash loads.
- City staff did not conduct other on-land cleanups with TMA #2 during this time period.

**Planned for Future Implementation between July 2014 and July 2022:**

- Existing on-land cleanup activities and trash container servicing will continue in parks within TMA #2. The City has no additional on-land cleanups planned for parks within TMA # 2 since existing on-land cleanup efforts are an adequate level of effort to achieve “no adverse impact”. The trash condition of parks will be confirmed via assessments described in Section 4.0.

- The City plans to evaluate the following on-land cleanup effort for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - To address small trash items (i.e., plastics, cigarette butts, food wrappers, beverage containers, straws, lids and all other types of litter generated from vehicles and pedestrians) observed on sidewalks, streets, roads, medians and City right-of-way, the City will consider assigning one part-time employee to remove trash **in littered areas within TMA #2 currently not covered by small full-capture devices**. To determine the extent of trash within this localized area, the City will conduct additional visual on-land assessments. Assessment results will determine where the City will focus future on-land cleanup efforts. If on-land cleanups are implemented, the City will consider tracking the total volume of small trash collected. Implementation will begin by **July 1, 2018** if a decision is made to conduct on-land cleanups within “visually impacted” areas of TMA #2.

### 3.2.4 Trash Management Area #3

Trash Management Area #3 (TMA #3) includes approximately 289 acres of land consisting of three separate areas east of El Camino Real. Two areas are north of TMA #1 and one area is south of TMA #1. Visual on-land assessments conducted by City staff within TMA #3 indicate that approximately 97 % of the jurisdictional area is considered as a medium trash generating area and the remaining 3 % as a medium/high trash generating area. The majority of the land area within TMA #3 is residential with retail and commercial land uses adjacent to El Camino Real and West San Bruno Avenue, and industrial land uses east of Caltrain to San Mateo Avenue and north of Interstate 380. TMA #3 also includes four parks not included within TMA #8. Trash sources include pedestrians and vehicles. Full-capture devices have not been installed within TMA #3. However, approximately 0.9 acres of TMA #3 are being treated by small full-capture devices installed in TMA #5. To date, street sweeping and on-land cleanups have been implemented within these areas to address trash.

#### ► STREET SWEEPING

##### **Implemented Prior to and Continued After MRP Effective Date:**

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- Installed “No Parking-Street Sweeping” signs to prohibit parking during sweeping hours. All streets within TMA #3 are posted except for short stretches of San Bruno Avenue (between El Camino Real and Huntington Avenue) and Huntington Avenue north of Interstate 380.
- The City developed the street sweeping program to minimize inconvenience to residents by sweeping within an established two-hour window, and limiting sweeping to one side of the street on the scheduled day. As a result, residents may park on the opposite side of the street that is not swept that day. All streets within TMA #3 are swept **twice/month**. Most streets north of TMA #1 are swept the 1st and 3rd Monday on one side of the street and 1st and 3rd Tuesday. All streets south of TMA #1 are swept the 1st & 3rd Wednesday on one side of the street and 1st & 3rd Thursday on the opposite side. Some streets north of Interstate 380 between Huntington Avenue are swept the 1st & 3rd Wednesday on one side of the street and 1st & 3rd Thursday. On scheduled sweeping days where signs are present, the sweeper is preceded by a City Community Service Officer who issues citations to vehicles in violation of the posted signs. As a result, cars are not present when sweeping is conducted. Therefore, sweeping practices are effective since the sweeper is reaching the curb. Since San Bruno Avenue is a major through fare, there are no shoulders or parking along the curb. As a result, the sweeper is reaching the curb on this stretch of San Bruno Avenue.
- Huntington Avenue north of Interstate 380 is swept the 1st and 3rd Tuesdays of each month. It is not posted “No Parking- Street Sweeping” but the outside curbs are red (i.e., no parking) resulting in a parking enforcement equivalent. In addition, cars do not park along the median curbs since it is an active lane of traffic. As a result, sweeping along the median curb and along the red outside curb are effective since the sweeper is reaching the curb.

##### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- In February 2013, the City implemented a delayed street sweeping start time in all residential areas which have not been installed with “No Parking-Street Sweeping” signs. City staff has noted that moving the residential sweeping times later in the day have resulted in better curb access since more people are at work later in the day. Sweeping practices are more effective since the sweeper is more likely to reaching the curb.

- To address areas with heavy leaf drop, the City has increased sweeping to **once/week (as needed)** during the wet season on the following streets or areas:
  - San Bruno Avenue between El Camino Real and Huntington Avenue. The street sweeper is reaching the curb since San Bruno Avenue is a major through fare with no parking.
  - Euclid Area (800-900 blocks of Huntington, Mills, Masson, Easton, Green and Hensley Avenues, Euclid Avenue and Forest Lane. Approximately 4.09 curb miles. The street sweeper is reaching the curb since this entire areas is posted with “No Parking- Street Sweeping” signs.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to increase street sweeping frequency within TMA #3 during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.

► **PARTIAL-CAPTURE TREATMENT DEVICES**

**Implemented Prior to and Continued After MRP Effective Date:**

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- The City did not install any partial-capture devices within TMA #3 prior to the effective date of the MRP.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- The City did not install any partial-capture devices within TMA #3 during this time period.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - The City will evaluate and determine the feasibility of installing partial-capture devices (i.e., automated retractable screens) within selected littered areas of TMA #3. Partial-capture devices keep litter and debris on the street surface, making it more available to be collected by the street sweeper. These devices would be inspected and maintained by City staff. If partial-capture devices are determined to be feasible and resources are available, the City will install partial-capture devices by **July 1, 2020**.

► **ON-LAND CLEANUPS**

**Implemented Prior to and Continued After MRP Effective Date:**

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- The City’s Community Services Department performs on-land cleanups and services trash containers **five days a week** (Monday-Friday) as part of their maintenance and landscaping activities in the following four parks located within TMA #3. A total of eight full-time employees are dedicated to maintaining parks within the City.
  - Bayshore Circle Park. The park is located on Bayshore Circle east of Tanforan Shopping Center within a residential neighborhood. Bayshore Circle Park features a basketball court and play area.

- Forest Lane Park. The park is located on Forest Lane near Huntington Avenue and Interstate 380, Forest Lane Park features a grassy area, basketball court, play area, picnic area and BBQ pits.
- Herman Tot Lot. The park is located at the corner of Diamond Street and Herman Street, east of Tanforan Shopping Center, Herman Tot Lot is home to a play area.
- Lomita Park. The park is located at the corner of Santa Lucia Avenue and San Anselmo Avenue within a residential neighborhood. Lomita Park features a picnic and play area.
- City staff did not conduct other on-land cleanups with TMA #3 during this time period.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- On-land cleanup activities and trash container servicing continued in parks within TMA #3 during the time period. The City did not implement additional on-land cleanups within parks since existing on-land cleanup efforts are adequately addressing trash loads.
- City staff did not conduct other on-land cleanups with TMA #3 during this time period.

**Planned for Future Implementation between July 2014 and July 2022:**

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- Existing on-land cleanup activities and trash container servicing will continue in parks within TMA #3. The City has no additional on-land cleanups planned for parks within TMA #3 since existing on-land cleanup efforts are an adequate level of effort to achieve “no adverse impact”. The trash condition of parks will be confirmed via assessments described in Section 4.0.
- The City plans to evaluate the following on-land cleanup effort for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - To address small trash items (i.e., plastics, cigarette butts, food wrappers, beverage containers, straws, lids and all other types of litter generated from vehicles and pedestrians) observed on sidewalks, streets, roads, medians and City right-of-way, the City will consider assigning one part-time employee to remove trash **within littered areas of TMA #3 not covered by partial-capture devices**. If partial-capture devices are not implemented within TMA #3, the City will consider removing trash from littered areas within TMA #3. To determine the extent of trash within TMA #3, the City will conduct additional visual on-land assessments. Assessment results will determine where the City will focus future on-land cleanup efforts. If on-land cleanups are implemented, the City will consider tracking the total volume of small trash collected. Implementation will begin by **July 1, 2018** if a decision is made to conduct on-land cleanups within “visually impacted” areas of TMA #3.

### 3.2.5 Trash Management Area #4

Trash Management Area #4 (TMA #4) consists of the entire El Camino Real corridor (i.e., 2.38 mile stretch) between Noor Avenue (northern city limits) to San Juan Avenue (southern city limits). Visual on-land assessments conducted by City staff within TMA #4 indicate that approximately 100 % of the jurisdictional area is considered as a medium trash generating area. Large volumes of vehicular and pedestrian traffic travel on El Camino Real resulting in trash observed long the stretch. Full-capture devices have not been installed within this area. To date, street sweeping, on-land cleanups and improved trash bin/container management has been implemented to address trash. In addition, Recology maintains a total of nine public trash containers on El Camino Real.

#### ► STREET SWEEPING

##### **Implemented Prior to and Continued After MRP Effective Date:**

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- The City entered into a maintenance agreement with CalTrans to sweep the entire 2.38 mile stretch (9.52 curb miles which includes outside and median curbs) of El Camino Real (CA Highway 82) between Noor Avenue (northern city limits) to San Juan Avenue (southern city limits). The entire stretch of El Camino Real is swept **twice/month**. Outside curbs are swept on the 1st and 3rd Mondays and the median curbs are swept on the 2nd and 4th Fridays. El Camino Real is swept between the hours of 5:30 a.m. and 6:30 a.m.
- El Camino Real is not posted “No Parking- Street Sweeping” but certain stretches of the outside curbs are red (i.e., no parking) resulting in a parking enforcement equivalent. In addition, cars do not park along the median curbs of El Camino Real since it is an active lane of traffic. As a result, sweeping along the median curb and along certain stretches of the red outside curb are effective since the sweeper is reaching the curb. Since sweeping is conducted early in the morning, cars are consistently not present when sweeping is conducted along the outside curb resulting in the sweeper reaching the curb. As a result, sweeping practices are effective since the sweeper is reaching the curb.
- To address areas with heavy leaf drop, the City sweeps the entire outside curb of El Camino Real (approximately 4.76 curb miles) **once/week (as needed)** during the wet season.

##### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- In February 2013, the City increased their street sweeping frequency of the outside and median curbs of El Camino Real from **twice/month to once/week**. Currently, the outside curbs are swept on Mondays and the median curbs are swept on Fridays. Street sweeping frequency was adjusted to maximize effectiveness.

##### **Planned for Future Implementation between July 2014 and July 2022:**

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- The City will collaborate with Caltrans to revise their existing maintenance agreement. The City will request full cost recovery for current street sweeping practices and future increases in street sweeping frequency on El Camino Real.
- The City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.

► **ON-LAND CLEANUPS**

**Implemented Prior to and Continued After MRP Effective Date:**

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- The City’s Community Services Department performs on-land cleanup of the El Camino Real median as part of their **weekly** maintenance and landscaping activities. Trash types removed include food and beverage ware, food packaging, cigarette butts, and other trash from patronizing retail and commercial establishments along El Camino Real.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- On-land cleanup activities of the El Camino Real median continued during this time period. The City did not implement additional on-land cleanups since existing on-land cleanup activities are adequately addressing trash loads along the El Camino Real median.

**Planned for Future Implementation between July 2014 and July 2022:**

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- Existing on-land cleanup activities of the El Camino Real median will continue during this time period. The City has no additional on-land cleanups planned for the El Camino Real median since existing on-land cleanup activities are adequately addressing trash loads.

► **IMPROVED TRASH BIN/CONTAINER MANAGEMENT**

**Implemented Prior to and Continued After MRP Effective Date:**

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- The City’s trash hauler, Recology maintains a total of nine public trash bins on El Camino Real. Trash is removed from public trash bins six days/week (except Sunday). Additional trash collection occurs by request. Recology is not aware of any chronic overflowing bins on El Camino Real.
- Prior to the effective date of the MRP, the City has worked and will continue to work with Recology to identify businesses that do not subscribe to trash collection services by comparing Recology’s list of subscribers with the City’s business license list. This is important on El Camino Real since businesses may try to use the public trash bins to dispose of their trash rather than subscribe to trash service. The implementation of this monitoring program has reduced trash levels in public trash bins on El Camino Real resulting in fewer overflowing trash bins.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- The City did not add additional public trash bins on El Camino Real during this time period. The number of public trash bins is adequate to manage the volume of trash generated by pedestrians on El Camino Real.
- The City continued working with Recology during this time period to identify businesses that do not subscribe to trash collection services by comparing Recology’s list of subscribers with the City’s business license list. Businesses that were identified to not have trash collection service were contacted to start service.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to add additional public trash bins on El Camino Real during this time period. However, they are open to adding additional public trash bins in the future based on property owner, transit authority or City request.
- The City will continue working with Recology in the future to identify businesses that do not subscribe to trash collection services by comparing Recology’s list of subscribers with

the City's business license list. Businesses that are identified to not have trash collection service will be contacted to start service.

► **FULL-CAPTURE TREATMENT DEVICES**

► **PARTIAL-CAPTURE TREATMENT DEVICES**

**Implemented Prior to and Continued After MRP Effective Date:**

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- The City did not install any full-capture or partial-capture devices on El Camino Real prior to the effective date of the MRP.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- The City did not install any full-capture or partial-capture devices on El Camino Real during this time period.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - In accordance with their NPDES stormwater permit, Caltrans is required to implement trash control measures to reduce trash loads on state-owned streets, roads and highways. The City will collaborate with Caltrans to determine the possibility of entering into an agreement to offset the cost of installing small full- capture and/or partial-capture devices on El Camino Real. The City would be responsible for maintaining small full-capture and/or partial capture devices. Implementation of small full- capture and/or partial-capture devices on El Camino Real will occur by **July 1, 2021** if the City executes an agreement with Caltrans regarding installation.

### 3.2.6 Trash Management Area #5

Trash Management Area #5 (TMA #5) includes approximately 295 acres of land consisting of four separate areas. It is deemed to have a medium trash generation rate. Visual on-land assessments conducted by City staff within TMA #5 indicate that approximately 95 % of the jurisdictional area is considered as a medium trash generating area, 4 % as a medium/high trash generating area, and 1 % as a low generating area. The majority of the land area within TMA # 5 is retail and commercial land uses. The two largest areas are directly north and south of Interstate 380 between El Camino Real and Interstate 280. The other two areas are the retail shopping area of Tanforan Mall and other surrounding commercial businesses east of EL Camino Real, north of Interstate 380, south of Noor Avenue, and west of Huntington Avenue; and a small retail area directly west of Interstate 280 and north of Sneath Lane. TMA #5 also includes a large multi-family residential apartment complex, Kaiser Permanente, Veterans Administration Hospital, Leo J. Ryan Memorial Federal Building and the San Mateo County Office of Education. Trash sources include pedestrians and vehicles. Full-capture devices have not been installed within TMA #5. To date, street sweeping and on-land cleanups have been implemented within these areas to address trash. Current trash generation rates may be high in some areas of TMA #5. To refine current trash generation rates, the City will conduct additional on-land visual assessments to accurately depict trash generation rates.

#### ► STREET SWEEPING

##### Implemented Prior to and Continued After MRP Effective Date:

- The City sweeps a limited number of streets within TMA #5 since most streets are private and managed by private owners.
- The following streets within TMA #5 are swept **once/week**:
  - Cherry Lane between San Bruno Avenue and Sneath Lane
  - Grundy Lane between Cherry Lane and Elm Avenue
  - Elm Avenue between Interstate 380 and San Bruno Avenue
  - Traeger Avenue
  - Bayhill Drive Between Cherry Lane and El Camino Real
  - San Bruno Avenue between El Camino Real and Interstate 280
  - Huntington Avenue north of Interstate 380
  - Commodore Drive adjacent to Commodore Park and the Leo J Ryan Memorial Federal Building
- The City sweeps the following street within TMA #5 **twice/week**:
  - Sneath Lane between El Camino Real and Rollingwood Drive
- Streets within TMA #5 are not posted with “No Parking-Street Sweeping” signs to prohibit parking during sweeping hours. All streets except Cherry Lane are either red-curbed, too narrow for parking, an active lane of traffic or are a major through fare (e.g., San Bruno Avenue) with no parking. As a result, the City is achieving a parking enforcement equivalent. Therefore, sweeping practices are effective since the sweeper is reaching the curb. Cherry Lane was observed to be a low trash generating area on Google Earth™

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- In February 2013, the City implemented a delayed street sweeping start time in all residential areas which have not been installed with “No Parking-Street Sweeping” signs. City staff has noted that moving the residential sweeping times later in the day have resulted in better curb access since more people are at work later in the day. Sweeping practices are more effective since the sweeper is more likely to reaching the curb.
- To address with heavy leaf drop, the City has increased sweeping to **once/week (as needed)** during the wet season on the following streets or areas:
  - Bayhill Commercial Area (Bayhill Drive between El Camino Real and Cherry Avenue, Elm Avenue from San Bruno Avenue to Grundy Lane, Traeger Avenue from San Bruno Avenue to Bayhill Drive. Approximately 1.61 curb miles. The street sweeper is reaching the curb since these streets are red-curbed, too narrow for parking or an active lane of traffic where you cannot park.
  - San Bruno Avenue between El Camino Real and Interstate 280. Approximately 0.95 curb miles. The street sweeper is reaching the curb since San Bruno Avenue is a major through fare with no parking.
- Updated the “Street Sweeping” webpage on the City’s website. This webpage provides the street sweeping frequency by residential area within the City. Residents may view a list of streets within a residential area to determine when their street is swept. The webpage is available at: [http://sanbruno.ca.gov/pw\\_streetsweep.html](http://sanbruno.ca.gov/pw_streetsweep.html).

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to increase street sweeping frequency within TMA #5 during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.

► **ON-LAND CLEANUPS**

**Implemented Prior to and Continued After MRP Effective Date:**

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- As part of their maintenance and landscaping activities within TMA #5, the City’s Community Services Department performs on-land cleanups of selected medians and City right-of-ways **twice/week**. City staff removes litter from the roadway, as necessary.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- On-land cleanups of selected medians and City right-of-ways within TMA #5 continued during the time period. The City did not implement additional on-land cleanups within these areas during this time period since existing on-land cleanup efforts are adequately addressing trash loads.

**Planned for Future Implementation between July 2014 and July 2022:**

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- Existing on-land cleanup activities at selected medians and City right-of-ways within TMA #5 will continue during this time period. The City has no additional on-land cleanups

planned for these areas since existing on-land cleanup efforts are adequately addressing trash loads.

### 3.2.7 Trash Management Area #6

Trash Management Area #6 (TMA #6) consists of the entire stretch of Shelter Creek Lane between West San Bruno Avenue and Jenevein Avenue; and the parcel of land which includes a convenience store on the corner of West San Bruno Avenue and Crestmoor Drive. The total area of TMA #6 is approximately 9 acres. Visual on-land assessments conducted by City staff within TMA #6 indicate that approximately 100 % of the jurisdictional area is considered as a medium trash generating area. A very large multi-family condominium complex (i.e., Shelter Creek Condominiums) is adjacent to Shelter Creek Lane. As a result, many cars are parked on Shelter Creek Lane. Trash sources include pedestrians and vehicles. Full-capture devices have not been installed within TMA #6. To date, street sweeping and on-land cleanups have been implemented within these areas to address trash.

#### ► STREET SWEEPING

##### **Implemented Prior to and Continued After MRP Effective Date:**

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- TMA #6 (i.e., Shelter Creek Lane) is swept **twice/month** on the 2nd and 4th Thursday. The City has not installed “No Parking-Street Sweeping” signs to prohibit parking during sweeping hours. Since Shelter Creek Lane is adjacent to a large multi-family condominium complex, the sweeper seldom reaches the curb due to the presence of cars. As a result, street sweeping practices are not effective.

##### **Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- No additional street sweeping was implemented on Shelter Creek Lane during this time period. However, the City’s Traffic and Parking Committee is currently considering the installation of “No Parking-Street Sweeping” signs to prohibit parking during sweeping hours. If signs were present, cars would likely not be present when sweeping is conducted. Therefore, sweeping practices would be effective since the sweeper is reaching the curb. If signs are approved for installation by the Committee, the City Council would have to give final approval.
- Updated the “Street Sweeping” webpage on the City’s website. This webpage provides the street sweeping frequency by residential area within the City. Residents may view a list of streets within a residential area to determine when their street is swept. The webpage is available at: [http://sanbruno.ca.gov/pw\\_streetsweep.html](http://sanbruno.ca.gov/pw_streetsweep.html).

##### **Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to increase street sweeping frequency on Shelter Creek Lane during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2015**:
  - Installation of “No Parking-Street Sweeping” signs on Shelter Creek Lane to prohibit parking during sweeping hours. On scheduled sweeping days where signs are present, the sweeper would be preceded by a City Community Service Officer who issues citations to vehicles in violation of the posted signs. If signs are posted, cars are likely not present when sweeping is conducted. Therefore, sweeping practices would be effective since the sweeper is reaching the curb. Implementation will begin by **July 1, 2016** if a decision is made to install “No Parking-Street Sweeping” signs on Shelter Creek.

- The City does not plan to increase street sweeping frequency within TMA #6 during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.

► **ON-LAND CLEANUPS**

**Implemented Prior to and Continued After MRP Effective Date:**

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- Prior to the effective date of the MRP, the City’s Public Services Department started performing on-land cleanups of Shelter Creek Lane **twice/year**.
- The Shelter Creek Condominiums Home Owner’s Association routinely performs on-land cleanups of the condominium complex and the sidewalks along Shelter Creek Lane. Trash is removed up to the curb. On occasion, litter is removed from the curb.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- On-land cleanups of Shelter Creek Lane at a frequency of **twice/year** continued during the time period.
- On-land cleanup activities conducted by the Shelter Creek Condominiums Home Owner’s Association continued during the time period.

**Planned for Future Implementation between July 2014 and July 2022:**

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- Existing on-land cleanup activities will continue on Shelter Creek Lane during this time period. The City plans to evaluate the following on-land cleanup effort for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - If the City decides to not install “No Parking Street Sweeping “ signs on Shelter Creek Lane, the City will consider assigning one part-time employee to routinely remove trash on Shelter Creek Lane. Implementation will begin by **July 1, 2018** if a decision is made to conduct on-land cleanups on Shelter Creek Lane.
- Existing on-land cleanup activities conducted by the Shelter Creek Condominiums Home Owner’s Association will continue during this time period.

### 3.2.8 Trash Management Area #7

Trash Management Area #7 (TMA #7) includes 14 public and private schools within the City. The total land area covered by schools is approximately 179 acres. Visual on-land assessments conducted by City staff within TMA #7 indicate that approximately 100 % of the jurisdictional area is considered as a medium trash generating area. Trash sources include vehicles and pedestrians. Full-capture devices have not been installed within TMA #7. To date, on-land cleanups are conducted daily during the school week (Monday-Friday). Street sweeping is also conducted **twice/month** on surrounding streets. In addition, the City participates and funds the regional BASMAA Youth Outreach Campaign. This campaign aims to increase the awareness of Bay Area Youth (ages 16-24) on litter and stormwater pollution issues, and eventually change their littering behaviors. The following schools have been delineated as separate trash management areas:

- 7-A: Belle Air Elementary School. The school is located at 450 Third Avenue and is adjacent to the California National Guard Armory, Lions Field and a residential neighborhood.
- 7-B: El Crystal Elementary School. The school is located at 201 North Balboa Way and is adjacent to City Park and a residential neighborhood.
- 7-C: Decima Allen Elementary School. The school is located at 875 West Angus Avenue and is adjacent to a residential neighborhood. It is directly east of San Bruno City Hall and the San Bruno Library.
- 7-D: Edgemont School and District Office. The school and district offices are located at 500 Acacia Avenue and are surrounded by a residential neighborhood.
- 7-E: Saint Robert Catholic School. The school is located at 1380 Crystal Springs Road and is affiliated with Saint Robert's Catholic Church. It adjacent to City Park and a residential neighborhood.
- 7-F: Parkside Intermediate School. The school is located at 1801 Niles Avenue and is surrounded by a residential neighborhood. It is in close proximity to City Park
- 7-G: Capuchino High School. The school is located at 1501 Magnolia Avenue and is surrounded by the City of Millbrae.
- 7-H: John Muir Elementary School. The school is located at 130 Cambridge Lane and is adjacent to CA Route 35 (Skyline Blvd) and a residential neighborhood.
- 7-I: Crestmoor Elementary School and Athletic Fields. The school is located at 2322 Crestmoor Drive and is adjacent to the Crestmoor Athletic Fields, open space and a residential neighborhood. The Crestmoor Athletic Fields occupy twelve acres and features a baseball diamond, running track, soccer fields, an exercise course and restrooms.
- 7-J: Rollingwood Elementary School. The school is located at 2500 Cottonwood Drive and is surrounded by a residential neighborhood.
- 7-K: Portola Elementary School and Portola Highlands Park. The school is located at 300 Amador Avenue and is adjacent to Portola Highlands Park, open space and a residential neighborhood. Portola Highlands Park is a large grassy area directly north of the school.
- 7-L: Highland Christian Schools. These private schools are located at 1900 Monterey Drive and are adjacent to CA Route 35 (Skyline Blvd.), a PG&E substation and a residential neighborhood.
- 7-M: Monte Verde Elementary School. The school is located at 2551 Saint Cloud Drive and is adjacent to Monte Verde Park and a residential neighborhood.

- 7-N: Peninsula High School. The school is located at 300 Piedmont Avenue and is surrounded by a residential neighborhood and open space. It is in directly west of Interstate 280 and in close proximity to Buckeye Park. Peninsula High School occupies 42.5 acres and is the largest school within the City.

► **ON-LAND CLEAN-UPS**

**Implemented Prior to and Continued After MRP Effective Date:**

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- School personnel perform daily on-land cleanups on school property during the **school week (Monday-Friday)**. Trash is removed up to the curb. On occasion, school personnel will remove litter within the roadway. On-land cleanups are an effective control measure for reducing trash at schools.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- On-land cleanup activities conducted by school personnel continued at schools during the time period. The City did not implement additional on-land cleanups during this time period since existing on-land cleanup efforts are adequately addressing trash loads at schools.

**Planned for Future Implementation between July 2014 and July 2022:**

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- Existing on-land cleanup activities conducted by school personnel will continue at schools during this time period. The City has no additional on-land cleanups planned at schools since existing on-land cleanup efforts are an adequate level of effort to achieve “no adverse impact”. The trash condition of schools will be confirmed via assessments described in Section 4.0.

► **STREET SWEEPING**

**Implemented Prior to and Continued After MRP Effective Date:**

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- All schools are surrounded by residential neighborhoods. Some schools are in close proximity to parks. Only one school, Belle Air Elementary School is adjacent to a commercial land use (i.e., California National Guard Armory). Sweeping is conducted **twice/month** on surrounding streets. Except for the entry street into Belle Air Elementary School, the City has not installed “No Parking-Street Sweeping” signs to prohibit parking during sweeping hours in residential neighborhoods within TMA #7. In some instances, cars may not be present when sweeping is conducted because some streets are red-curbed (i.e., no parking) or a City street is not directly adjacent or surrounding its perimeter. In one case, the streets surrounding 7G- Capuchino High School are within the City of Millbrae. Where cars are present in front of schools within residential neighborhoods, the sweeper may not be reaching the curb in all stretches. **However, it is important to note that the surrounding streets around schools have been assigned a low trash generation rate.**

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- No additional street sweeping was implemented near schools delineated as TMA #7 during this time period. In February 2013, the City implemented a delayed street sweeping start time in all residential areas which have not been installed with “No Parking-Street Sweeping” signs. City staff has noted that moving the residential sweeping times later in the day have resulted in better curb access since more people are at work later in the day.

Sweeping practices are more effective since the sweeper is more likely to reaching the curb.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to increase street sweeping frequency near schools delineated as TMA #7 during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.

### 3.2.9 Trash Management Area #8

Trash Management Area #8 (TNA #8) includes the various parks under City ownership and management. The total land area covered by parks is approximately 73 acres. Visual on-land assessments conducted by City staff within TMA #7 indicate that approximately 100 % of the jurisdictional area is considered as a medium trash generating area. Trash sources include vehicles and pedestrians. Full-capture devices have not been installed within TMA #8. To date, on-land cleanups are conducted routinely at parks, in some cases on a daily basis. Street sweeping is also conducted **twice/month** on surrounding streets. The following parks have been delineated as separate trash management areas:

- **8-A: City Park.** The park is located at the corner of Crystal Springs Avenue and Oak Avenue adjacent to residential and commercial land uses. El Crystal Elementary School and Saint Roberts School are also nearby. City Park occupies 33 acres and is the largest park in San Bruno. It has 13 picnic sites, 2 separate play areas, BBQ pits, one swimming pool, tennis and basketball courts, an exercise course, and baseball fields. The City’s creek hot spot is also located in City Park. It is cleaned at least once/year in accordance with MRP requirements.
- **8-B: Lions Park.** The park is located at the end of 1st Avenue. It is adjacent to the California National Guard Armory and Belle Air Elementary School and includes Lions Field (a baseball diamond), a new play structure and grass area and ball field.
- **8-C: Commodore Park.** The park is located at the cross streets of Commodore Drive and Cherry Avenue adjacent to Interstate 380, Leo Ryan Memorial Federal Building and the San Mateo County Office of Education, It features play areas, a baseball diamond, picnic tables, BBQ pits, restroom facilities and a fully enclosed dog exercise area located at the eastern end of the park.
- **8-D: Grundy Park.** The park is located between Cherry Avenue and Oak Avenue. It is surrounded by a residential neighborhood and features a large open lawn area, two play areas, one picnic site and a restroom.
- **8-E: Pacific Heights Park.** The park is located on Longview Drive near Skyline College. . It is surrounded by a residential neighborhood and features benches, play area, baseball diamond, basketball court, and walking trail.
- **8-F: Buckeye Park.** The park is nestled in the hillside on Rosewood Drive near Madison Avenue. It is surrounded by a residential neighborhood and features a play area, a picnic site and BBQ pits. The park occupies 7.5 acres within a beautiful setting.
- **8-G: Monte Verde Park.** The park is located at the corner of Oakmont Drive and Evergreen Drive. It is adjacent to Monte Verde Elementary Schools and a residential neighborhood. It features a large open grass area where soccer games and has picnic tables.

► **ON-LAND CLEANUPS**

► **IMPROVED TRASH BIN/CONTAINER MANAGEMENT**

**Implemented Prior to and Continued After MRP Effective Date:**

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A total of eight full-time employees are dedicated to maintaining parks within the City. The City’s Community Services Department performs on-land cleanups and services trash containers as part of their **daily** (i.e., seven days/week) maintenance and landscaping activities within the following four parks.

- **8-A: City Park-** A total of 76 automatic closure tops have also been installed on trash containers within City Park. The closure tops have eliminated birds and other vectors from disturbing trash and spreading it into the environment.
- 8-B: Lions Park
- 8-C: Commodore Park
- 8-D: Grundy Park

The City's Community Services Department performs on-land cleanups and services trash containers **five days/week (Monday-Friday)** as part of their maintenance and landscaping activities within the following three parks.

- 8-E: Pacific Heights Park
- 8-F: Buckeye Park
- 8-G: Monte Verde Park

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- On-land cleanup activities and trash container servicing continued within parks delineated as TMA #8 during the time period. The City did not implement additional on-land cleanups since existing on-land cleanup efforts are adequately addressing trash loads within parks.

**Planned for Future Implementation between July 2014 and July 2022:**

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- Existing on-land cleanup activities and trash container servicing will continue within parks delineated as TMA #8. The City has no additional on-land cleanups planned for parks since existing on-land cleanup efforts are an adequate level of effort to achieve "no adverse impact". The trash condition of parks will be confirmed via assessments described in Section 4.0.

► **STREET SWEEPING**

**Implemented Prior to and Continued After MRP Effective Date:**

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- All parks except Commodore Park and Lions Park are adjacent or are surrounded by residential neighborhoods. Some parks are in close proximity to schools. Sweeping is conducted **twice/month** on surrounding streets. The City has not installed "No Parking-Street Sweeping" signs to prohibit parking during sweeping hours in residential neighborhoods within TMA #8. As a result, the sweeper may not be reaching the curb since cars may be present. **However, it is important to note that the surrounding streets around parks except for streets surrounding Commodore Park and Lions Park have been assigned a low trash generation rate.**
- The sweeper is reaching the curb on First Avenue adjacent to Lions Park since the street is posted "No Parking Street Sweeping". Therefore, sweeping practices are effective on 1st Avenue since the sweeper is reaching the curb. The stretch of Commodore Drive in front of Commodore Park was observed to be a low trash generating area on Google Earth™. Street sweeping on Commodore Drive is conducted once/week.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- No additional street sweeping was implemented near parks delineated as TMA #8 during this time period. In February 2013, the City implemented a delayed street sweeping start

time in all residential areas which have not been installed with “No Parking-Street Sweeping” signs. City staff has noted that moving the residential sweeping times later in the day have resulted in better curb access since more people are at work later in the day. Sweeping practices are more effective since the sweeper is more likely to reaching the curb.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to increase street sweeping frequency near parks delineated as TMA #8 during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.

### 3.2.10 Trash Management Area #9

Trash Management Area #9 (TMA #9) includes the low trash generation areas within the City that are not included in any other trash management area. The area covers approximately 2,063 acres (approximately 67 % of the City's jurisdictional area) and is mostly comprised of residential, urban open and open space land uses. TMA #9 also includes parks, churches and schools located sporadically within the City, and some industrial, retail commercial areas on West San Bruno Avenue east of Skyline Blvd. Street sweeping is conducted **twice/month**. Full-capture devices have not been installed within TMA #9. On-land cleanups are conducted at three parks not included within TMA #8 and several through fares within the City. The entire area benefits from jurisdictional- wide efforts which include single-use carryout bag and polystyrene foam food service ware policies, and public outreach and education programs. This area is the City's lowest priority due to having a low trash generation rate.

#### ► STREET SWEEPING

##### Implemented Prior to and Continued After MRP Effective Date:

- Sweeping is conducted **twice/month** in residential neighborhoods within TMA #9. The City has not installed "No Parking-Street Sweeping" signs to prohibit parking during sweeping hours within these areas. In some cases, cars may not be present when sweeping is conducted because some streets are red-curbed (i.e., no parking) or the street is a major through fare where parking is not permitted. In most cases, the sweeper may not be reaching the curb since streets are not posted with "No Parking- Street Sweeping" signs. **However, it is important to note that the streets within residential neighborhoods have been assigned a low trash generation rate.**

##### Implemented after MRP Effective Date and Prior to July 1, 2014:

- No additional street sweeping was implemented in residential neighborhoods within TMA #9 during this time period. In February 2013, the City implemented a delayed street sweeping start time in all residential areas which have not been installed with "No Parking-Street Sweeping" signs. City staff has noted that moving the residential sweeping times later in the day have resulted in better curb access since more people are at work later in the day. Sweeping practices are more effective since the sweeper is more likely to reaching the curb.
- To address areas with heavy leaf drop, the City has increased sweeping to **once/week (as needed)** during the wet season on the following streets or areas:
  - Upper Sneath Lane between Rollingwood Drive and Skyline Blvd. Approximately 1.39 curb miles. The street sweeper is reaching the curb since Sneath Lane is a narrow winding road in the hills with very limited shoulders.
  - San Bruno Avenue between Interstate 280 and west most intersection of Crestmoor Drive. Approximately 1.22 curb miles. The street sweeper is reaching the curb since this section of San Bruno Avenue is a major through fare with limited shoulders.
  - Crystal Springs Road between Hazel Avenue and Cunningham Way. Approximately 0.83 curb miles. The street sweeper is reaching the curb since Crystal Springs Road is narrow with no shoulders.
  - Jenevein Avenue between El Camino Real and Cunningham Way. Approximately 1.32 curb miles. The street sweeper may not be reaching the curb in all stretches since

Jenevein Avenue is primarily residential and is not posted “No Parking- Street Sweeping”.

- Glenview Area (Glenview Drive from Estates to Plymouth, Claremont from Vermont to Concord, Fairmont from Claremont to Concord. Approximately 1.35 curb miles. The street sweeper may not be reaching the curb since the Glenview Area is primarily residential and is not posted “No Parking- Street Sweeping”.

**Planned for Future Implementation between July 2014 and July 2022:**

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- The City does not plan to increase street sweeping frequency in residential neighborhoods within TMA #9 during this time period. However, the City plans to evaluate the following for potential implementation. A decision regarding implementation will be made by **July 1, 2017**.
  - Use of cameras mounted on sweepers to monitor sweeper effectiveness and to photograph license plates of cars parked in violation of posted signage. Implementation will begin by **July 1, 2019** if a decision is made to use cameras on street sweepers.

► **ON-LAND CLEANUPS**

**Implemented Prior to and Continued After MRP Effective Date:**

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- The City’s Community Services Department performs on-land cleanups and services trash containers **five days a week** (Monday-Friday) as part of their maintenance and landscaping activities in the following three parks located within TMA #9. A total of eight full-time employees are dedicated to maintaining parks within the City.
  - Catalpa Tot Lot. The park is located on Catalpa Way at Toyon Way in the Rollingwood area. It is surrounded by a residential neighborhood and offers a basketball court.
  - Fleetwood Tot Lot. The park is located on Fleetwood Drive near Rollingwood Drive in the Rollingwood area. It is surrounded by a residential neighborhood and offers benches, a play area, and a basketball court.
  - Ponderosa Park. The park is located on Pacific Heights Blvd just off of Sharp Park Road. Hidden in the hills above Pacifica, this four-acre park features benches and a play area, with the remainder of the park being undeveloped.
- City staff did not conduct other on-land cleanups with TMA #9 during this time period.

**Implemented after MRP Effective Date and Prior to July 1, 2014:**

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- On-land cleanup activities and trash container servicing continued in parks within TMA #9 during the time period. The City did not implement additional on-land cleanups since existing on-land cleanup efforts are adequately addressing trash loads within parks.
- City staff did not conduct other on-land cleanups with TMA #9 during this time period.

**Planned for Future Implementation between July 2014 and July 2022:**

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- Existing on-land cleanup activities and trash container servicing will continue in parks within TMA #9. The City has no additional on-land cleanups planned for parks within TMA #9 since existing on-land cleanup efforts are an adequate level of effort to achieve “no adverse impact” and the fact that these three parks have been determined to be within low trash generating areas.

### **3.2.11 Creek and Shoreline Hot Spot Cleanups**

The City has one creek hot spot (i.e., SB001) located on El Zanjon Creek within City Park, as indicated on the Trash Generation, Trash Management Area, and Full Capture Device maps included within this Plan. The creek hot spot is cleaned annually in compliance with Permit Provision C.10.b. iii of the MRP. The trash found in this location can be attributed to pedestrian litter from City Park users. Approximately 5 gallons of uncompacted trash is removed from this site during annual cleanups and consists mainly of convenience and fast food items, bottles, cans, paper and other plastic products. Cleanups started in 2010.

### 3.2.12 Summary of Trash Control Measures

#### Jurisdiction-wide Control Measures

- On-land cleanups (currently implemented and planned for future implementation)
- Improved trash bin/container management (considered for future implementation)
- Single-use carryout bag policy (currently implemented)
- Polystyrene foam food service ware policy (currently implemented)
- Public education and outreach programs (currently implemented)

*The implementation of jurisdiction-wide trash control measures are expected to achieve the trash reduction goal of “No Adverse Impact” by July 1, 2022.*

#### Trash Management Area #1

- Large full-capture treatment devices (considered for future implementation )
- Street sweeping with parking enforcement (currently implemented)
- Use of cameras on sweepers (considered for future implementation)
- On-land cleanups (currently implemented)
- Improved trash bin/container management (currently implemented )

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of “No Adverse Impact” within Trash Management Area #1 by July 1, 2022.*

#### Trash Management Area #2

- 50 small full-capture treatment devices (currently implemented)
- 9 partial-capture treatment device (currently implemented)
- Street sweeping with parking enforcement (currently implemented)
- Street sweeping with parking enforcement equivalent (currently implemented)
- Street sweeping in high leaf drop areas during the wet season (currently implemented)
- Use of cameras on sweepers (considered for future implementation)
- On-land cleanups at parks (currently implemented)
- On-land cleanups at areas not served by small full-capture devices (considered for future implementation)

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of “No Adverse Impact” within Trash Management Area #2 by July 1, 2022.*

#### Trash Management Area #3

- Street sweeping with parking enforcement (currently implemented)
- Street sweeping with parking enforcement equivalent (currently implemented)
- Street sweeping with delayed starting time (currently implemented)

- Street sweeping in high leaf drop areas during the wet season (currently implemented)
- Use of cameras on sweepers (considered for future implementation)
- Partial-capture devices (considered for future implementation)
- On-land cleanups at parks (currently implemented)
- On-land cleanups at areas not served by partial-capture devices (considered for future implementation)

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of "No Adverse Impact" within Trash Management Area #3 by July 1, 2022.*

#### **Trash Management Area #4**

- Street sweeping (currently implemented)
- Street sweeping in high leaf drop areas during the wet season (currently implemented)
- Use of cameras on sweepers (considered for future implementation)
- Collaborate with Caltrans to revise existing maintenance agreement (considered for future implementation)
- On-land cleanups of El Camino Real (currently implemented)
- Improved trash bin/container management (currently implemented )
- Small full-capture devices (collaboration with Caltrans regarding future implementation)
- Partial-capture devices (collaboration with Caltrans regarding future implementation)

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of "No Adverse Impact" within Trash Management Area #4 by July 1, 2022.*

#### **Trash Management Area #5**

- Street sweeping (currently implemented)
- Street sweeping with parking enforcement equivalent (currently implemented)
- Street sweeping with delayed starting time (currently implemented)
- Street sweeping in high leaf drop areas during the wet season (currently implemented)
- Use of cameras on sweepers (considered for future implementation)
- On-land cleanups (currently implemented)

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of "No Adverse Impact" within Trash Management Area #5 by July 1, 2022.*

#### **Trash Management Area #6**

- Street sweeping (currently implemented)
- Street sweeping with parking enforcement (considered for future implementation)
- Use of cameras on sweepers (considered for future implementation)
- On-land cleanups (currently implemented)

- Additional on-land cleanups (considered for future implementation)

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of “No Adverse Impact” within Trash Management Area #6 by July 1, 2022.*

#### **Trash Management Area #7**

- On-land cleanups (currently implemented)
- Street sweeping (currently implemented)
- Street sweeping with delayed starting time (currently implemented)
- Use of cameras on sweepers (considered for future implementation)

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of “No Adverse Impact” within Trash Management Area #7 by July 1, 2022.*

#### **Trash Management Area #8**

- On-land cleanups (currently implemented)
- Improved trash bin/container management (currently implemented)
- Street sweeping (currently implemented)
- Street sweeping with delayed starting time (currently implemented)
- Use of cameras on sweepers (considered for future implementation)

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of “No Adverse Impact” within Trash Management Area #8 by July 1, 2022.*

#### **Trash Management Area #9**

- Street sweeping (currently implemented)
- Street sweeping with delayed starting time (currently implemented)
- Street sweeping in high leaf drop areas during the wet season (currently implemented)
- Use of cameras on sweepers (considered for future implementation)
- On-land cleanups at parks (currently implemented)

*The implementation of current and planned trash control measures are expected to achieve the trash reduction goal of “No Adverse Impact” within Trash Management Area #9 by July 1, 2022.*

#### **Creek Hot Spot Cleanups**

- Annual MRP-required creek hot spot cleanups (currently implemented)

*The implementation of creek hot spot cleanups are expected to achieve the trash reduction goal of “No Adverse Impact” by July 1, 2022.*

### **3.3 Control Measure Implementation Schedule**

Based on current knowledge of trash control measure effectiveness and characteristics of the City's TMAs, the following schedule for control measure implementation has been proposed. The City considers this Plan and schedule as a working guide. As such, the City may, at its discretion, modify or reprioritize trash control measure implementation during the term of this Plan. Any changes to the trash control measures proposed or to the implementation timeframe will be reported through the annual report process.

**Table 7.** City of San Bruno trash control measure implementation schedule.

**Key:** X = Control Measure Implemented, **Green** = Control Measure Implemented and Ongoing, **Purple** = Additional Enhanced Control Measures Implemented and Ongoing

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY2009-2010	FY2010-2011	FY2011-2012	FY2012-2013	FY2013-2014 <sup>a</sup>	FY2014-2015	FY2015-2016	FY2016-2017 <sup>b</sup>	FY2017-2018	FY2018-2019	FY2019-2020	FY2020-2021	FY2021-2022 <sup>c</sup>
<b>Jurisdiction-wide Control Measures</b>														
On-land Cleanups	X										X			
Improved Trash Bin/Container Management												X		
Single-use Carryout Bag Policies						X								
Polystyrene Foam Food Service Ware Policies			X											
Public Education and Outreach Programs	X													
<b>TMA #1</b>														
Full-Capture Devices													X	
Street Sweeping	X											X		
On-land Cleanups	X													
Improved Trash Bin/Container Management	X													
<b>TMA #2</b>														
Full-Capture Devices				X										
Partial-Capture Devices						X								
Street Sweeping	X											X		
On-land Cleanups	X										X			
<b>TMA #3</b>														
Street Sweeping	X					X						X		
Partial-Capture Devices													X	
On-land Cleanups	X										X			
<b>TMA #4</b>														
Street Sweeping	X											X		

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY2009-2010	FY2010-2011	FY2011-2012	FY2012-2013	FY2013-2014 <sup>a</sup>	FY2014-2015	FY2015-2016	FY2016-2017 <sup>b</sup>	FY2017-2018	FY2018-2019	FY2019-2020	FY2020-2021	FY2021-2022 <sup>c</sup>
On-land Cleanups	X													
Improved Trash Bin/Container Management	X													
Full-Capture Devices														X
Partial-Capture Devices														X
<b>TMA #5</b>														
Street Sweeping	X					X						X		
On-land Cleanups	X													
<b>TMA #6</b>														
Street Sweeping	X								X			X		
On-land Cleanups	X										X			
<b>TMA #7</b>														
On-land Cleanups	X													
Street Sweeping	X					X						X		
<b>TMA #8</b>														
On-land Cleanups	X													
Improved Trash Bin/Container Management	X													
Street Sweeping	X					X						X		
<b>TMA #9</b>														
Street Sweeping	X					X						X		
On-land Cleanups	X													
<b>Creek Hot Spot Cleanups</b>														
On-land Cleanup		X												

<sup>a</sup>July 1, 2014 - 40% trash reduction target  
<sup>b</sup>July 1, 2017 - 70% trash reduction target  
<sup>c</sup>July 1, 2022 - 100% trash reduction target

## 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, the Bay Area Stormwater Management Agencies Association (BASMAA) submitted Version 1.0 to the Water Board on February 1, 2012.

The Trash Assessment Strategy (Strategy) described in this section is intended to serve as Version 2.0 of the trash tracking method and replace version 1.0 previously submitted to the Water Board. The Strategy is specific to Permittees participating in the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP), including the City of San Bruno. The City intends to implement the Strategy in phases and at multiple geographical scales (i.e., jurisdiction-wide and trash management area) in collaboration with SMCWPPP. Pilot implementation is scheduled for the near-term and as assessment methods are tested and refined, the Strategy will be adapted into a longer-term approach. The Strategy selected by the City is described in the following sections.

### 4.1 SMCWPPP Pilot Assessment Strategy

The following SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP Pilot Strategy) was developed by SMCWPPP on behalf of the City and other San Mateo County Permittees. The SMCWPPP Pilot Strategy will be implemented at a pilot scale on a countywide basis and includes measurements and observations in the City of San Bruno.

#### 4.1.1 Management Questions

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

- Are the MS4 trash load reduction targets (i.e., 40%, 70%, and No Adverse Impacts) being achieved?
- Are there trash problems in receiving waters (e.g., creeks and rivers)?
- If trash problems in receiving waters exist, what are the important sources and transport pathways?

The SMCWPPP Pilot Strategy, including indicators and methods, is summarized in this section and fully described in the SMCWPPP Pilot Trash Assessment Strategy, a compendium document submitted to the Water Board on February 1, 2014 on behalf of all SMCWPPP Permittees (SMCWPPP 2014).

#### 4.1.2 Indicators of Progress and Success

The management questions listed in the previous section will be addressed by tracking information and collecting data needed to report on a set of key environmental indicators. Environmental indicators are simple measures that communicate what is happening in the environment. Since trash in the environment is very complex, indicators provide a more practical and economical way to track the state of the environment than if we attempted to record every possible variable.

With regard to municipal stormwater trash management, indicators are intended to detect progress towards trash load reduction targets and solving trash problems. Ideally, indicators should be robust and able to detect progress that is attributable to multiple types of trash control measure implementation scenarios. Assessment results should also provide Permittees with an adequate level of confidence that trash load reductions from MS4s have occurred, while also assessing whether trash problems in receiving waters have been resolved. Indicators must also be cost effective, relatively easy to generate, and understandable to stakeholders.

Primary and secondary indicators that SMCWPPP Permittees will use to answer core management questions include:

**Primary Indicators:**

- 1-A Reduction in the level of trash present on-land and available to MS4s
- 1-B Effective full capture device operation and maintenance

**Secondary Indicators:**

- 2-A Successful levels of trash control measures implementation
- 2-B Reductions in the amount of trash in receiving waters

In selecting the indicators above, the City of San Bruno in collaboration with SMCWPPP and other SMCWPPP 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.

The ultimate goal of municipal stormwater trash reduction strategies is to reduce the impacts of trash associated with MS4s on receiving waters. Indicators selected to assess progress towards this goal should ideally measure outcomes (e.g., reductions in trash discharged). The primary indicators selected by SMCWPPP are outcome-based and include those that are directly related to MS4 discharges. Secondary indicators are outcome or output-based and are intended to provide additional perspective on and evidence of, successful trash control measure implementation and improvements in receiving water condition with regard to trash.

As described in Section 2.2, trash is transported to receiving waters from pathways other than MS4s, which may confound our ability to observe MS4-associated reductions in creeks and shorelines. Due to this challenge of linking MS4 control measure implementation to receiving water conditions, the receiving water based indicator is currently considered a secondary indicator. Evaluations of data on the amount of trash in receiving waters that are conducted over time through the Pilot Assessment Strategy will assist the City in further determinations of the important sources and pathways causing problems in local creeks, rivers and shorelines.

**4.1.3 Pilot Assessment Methods**

This section briefly summarizes the preliminary assessment methods that the City of San Bruno will implement through the SMCWPPP Pilot Strategy to generate indicator information described in the previous section. Additional information on each method can be found in the SMCWPPP Pilot Trash Assessment Strategy submitted to the Water Board by SMCWPPP on behalf of the City.

**1-A. On-land Visual Assessments**

As part of the Trash Generation Map assessment and refinement process (see Section 2.3.1), a draft on-land visual assessment method was developed to assist Permittees in confirming and refining trash generating area designations (i.e., very high, high, moderate and low trash generating categories). The draft on-land visual assessment method is intended to be a cost-effective tool and provide Permittees with a viable alternative to quantifying the level of trash discharged from MS4s. As part of BASMAA’s *Tracking California’s Trash* grant received from the State Water Resources Control Board (see Section 4.2), quantitative relationships between trash loading from MS4s and on-land visual assessment condition categories will be established. Condition categories defined in the draft on-land assessment protocol are listed in Table 8

**Table 8.** Trash condition categories used in the draft on-land visual assessment protocol.

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

On-land visual assessments will be conducted in trash management areas within the City of San Bruno as part of the SMCWPPP Pilot Trash Assessment Strategy. On-land assessments are intended to establish initial conditions and detect improvements in the level of trash available to MS4s over time. More specifically, on-land visual assessment methods will be conducted in areas not treated by trash full capture devices in an attempt to evaluate reductions associated with other types of control measures. Assessment methods for areas treated by full capture devices are described in this next section.

Given that the on-land assessment method and associated protocol have not been fully tested and refined, initial assessments will occur at a pilot scale in the City and in parallel to the *Tracking California’s Trash* project. The frequency of assessments and number of sites where assessments will occur during the pilot stage are more fully described in the SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP 2014).

## **1-B. Full Capture Operation and Maintenance Verification**

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 San Bruno is currently developing an operation and maintenance verification program (Trash O&M Verification Program), via SMCWPPP, to ensure that devices are inspected and maintained at a level that maintains this designation.

The SMCWPPP Trash O&M Verification Program will be modeled on the current O&M verification program for stormwater treatment controls implemented consistent with the Permit new and redevelopment requirements. Additional details regarding the Trash O&M Verification Program can be found in the SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP 2014).

## **2-A. Control Measure Effectiveness Evaluations**

In addition to on-land trash assessments and full capture operation and maintenance verification, the City will also conduct assessments of trash control measures implemented within their 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 SMCWPPP 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 – Descriptions of outreach efforts, tracking and reporting business compliance rates, or other metrics of control measure performance.
- Street Sweeping- Identification sweeping frequency and the ability to sweep to the curb by primary TMA, including any enhancements that have been implemented; and any other metrics demonstrating the enhanced performance of street sweeping.
- Public/Private Trash Container Management - Descriptions of control measures implemented to prevent overflowing trash containers or promoting the more effective use of public/private bins, including any new or enhancements to existing actions; and any other metrics demonstrating the performance of the control measure.
- Public Outreach and Education – Descriptions of outreach and education actions specific to trash deduction, including the number of events conducted within the municipality; descriptions of effectiveness measurements, including the results of pre- and post-implementation surveys or other metrics.
- On-land Cleanups and Enforcement – Descriptions of on-land cleanup actions, including any enhancements that have been implemented; identification of whether on-land cleanup are Permittee or volunteer-led; or other metrics of control measure performance.
- Storm Drain Inlet Maintenance – Descriptions of the level of maintenance, including any enhancement to maintenance frequency; the numbers of inlets where enhanced maintenance is being implemented; and any other metrics demonstrating the performance of inlet maintenance.
- Anti-littering and Illegal Dumping Prevention/Enforcement - Descriptions of control measures implemented to prevent littering and illegal dumping, including any new or

enhancements to existing actions; descriptions and results of enhanced enforcement actions; and any other metrics demonstrating the performance of the control measure.

- Prevention of Uncovered Loads - Descriptions of control measures implemented to prevent trash dispersion from uncovered loads, including any new or enhancements to existing actions; descriptions and results of enhanced enforcement actions; and any other metrics demonstrating the performance of the control measure.
- Partial Capture Devices - Descriptions, numbers and types of devices implemented; maintenance frequencies by device or groups of devices; and any other metrics demonstrating the partial capture device performance.
- Other Control Measures - Descriptions of control measures implemented to prevent or intercept trash before discharge to receiving waters, and any other metrics demonstrating the performance of the control measure.

### 2-C. Receiving Water Condition Assessments

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, San Mateo County 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 San Bruno 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. Additional information on receiving water assessment methods can be found in the SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP 2014).

## 4.2 BASMAA “Tracking California’s Trash” Project

The SMCWPPP 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, the Bay Area Stormwater Management Agencies Association (BASMAA), in collaboration with SMCWPPP, the 5 Gyres Institute, San Francisco Estuary Partnership, the City of Los Angeles, and other stormwater programs in the Bay Area, developed the *Tracking California’s Trash* Project. The Project is funded through a Proposition 84 grant awarded to BASMAA by the State Water Resources Control Board (SWRCB) who recognized the need for standardized trash assessment methods that are robust and cost-effective.

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 SMCWPPP 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 Long-Term Assessment Strategy

The City of San Bruno is committed to implementing 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. Reporting using the new/revised methods will begin with the FY 2016-20 17 Annual Report.

### 4.4 Implementation Schedule

The implementation schedule for the SMCWPPP Pilot Implementation Strategy, BASMAA's *Tracking California's Trash* project, and the Long-Term Assessment Strategy are included in Table 9. 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. For more detailed information on implementation timelines, refer to the SMCWPPP Pilot Trash Assessment Strategy (SMCWPPP 2014) and monitoring plans developed as part of BASMAA’s Tracking California’s Trash project.

**Table 9.** City of San Bruno trash progress assessment implementation schedule.

Trash Assessment Programs and Methods	Prior to FY 2013-14	Fiscal Year								
		2013-14 <sup>a</sup>	2014-15	2015-16	2016-17 <sup>b</sup>	2017-18	2018-19	2019-20	2020-21	2021-22 <sup>c</sup>
<b>Pilot Trash Assessment Strategy (SMCWPPP)</b>										
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					
<b>Tracking California’s Trash Project (BASMAA)</b>										
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					
<b>Long-Term Trash Assessment Strategy (SMCWPPP)</b>						X	X	X	X	X

<sup>a</sup>July 1, 2014 - 40% trash reduction target  
<sup>b</sup>July 1, 2017 - 70% trash reduction target  
<sup>c</sup>July 1, 2022 - 100% trash reduction target

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