Baseline Trash Load and Short-Term Trash Load Reduction Plan

Submitted by:

City of San José
200 E. Santa Clara Street, San José, CA 95113
In compliance with Provisions C.10.a(i) and C.10.a(ii) of Order R2-2009-0074

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

1/27/12

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CITY OF SAN JOSÉ
SHORT-TERM TRASH LOAD REDUCTION PLAN

CERTIFICATION STATEMENT

"I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted, is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature by Duly Authorized Representative:

NAPP FUKUDA
Acting Deputy Director
Environmental Services
Watershed Protection

Date: January 27, 2012

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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
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
Q	Flow
SFRWQCB	San Francisco Regional Water Quality Control Board
SWRCB	State Water Resource Control Board
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 Baseline Trash Load and Short-Term Trash Load Reduction Plan (Plan) is submitted in compliance with provision C.10.a(i) and C.10.a(ii)of the Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay (Order R2-2009-0074). This Plan was developed using a regionally consistent format developed by the Bay Area Stormwater Management Agencies Association (BASMAA). Based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas), the City of San José may chose to amend or revise this Plan. If revisions or amendments are necessary, a revised Short-Term Plan will be submitted to the Water Board via the City of San José's annual reporting process.

The San José City Council maintains discretion over the level of expenditures for control measures and service level implementation in accordance with the City's annual budgeting process, City Charter, and San José Municipal Code. Funding and direction for on-going implementation level and establishment of new control measures as outlined in this Plan are subject to annual appropriation by San José City Council and other Policy actions as needed. Inclusion in this Plan does not obligate the City to implementation of a proposed action. Any changes from the proposed implementation level or adjustments to the Plan will be reported in the annual reporting process.

1.0 INTRODUCTION

The Municipal Regional Stormwater 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 of the MRP (Trash Load Reduction) requires Permittees to reduce trash from their Municipal Separate Storm Sewer Systems (MS4s) by 40 percent before July 1, 2014.

Required submittals to the San Francisco Bay Regional Water Quality Control Board (Water Board) by February 1, 2012 under MRP provision C.10.a (Short-Term Trash Loading Reduction Plan) include:

1. (a) Baseline trash load estimate, and (b) description of the methodology used to determine the load level.
2. A description of the 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 levels.
3. A **Short-Term Trash Loading Reduction Plan** that describes control measures and best management practices that will be implemented to attain a 40 percent trash load reduction from its MS4 by July 1, 2014;

This Short-Term Trash Load Reduction Plan (Short-Term Plan) is submitted by the City of San José in compliance with the portions of MRP provision C.10.a.i listed as 1a and 3 above. In compliance with 1b, BASMAA submitted a progress report on behalf of Permittees that briefly describes the methodologies used to develop trash baseline loads (BASMAA 2011a). These methods are more fully described in BASMAA (2011b, 2011c). Lastly, the *Trash Load Reduction Tracking Method Technical Report* (BASMAA 2011d) was submitted by BASMAA on behalf of Permittees in compliance with submittal 2 described above. The Baseline Loading Rates and Tracking Method projects are briefly described below.

Baseline Trash Generation Rates Project

Through approval of a BASMAA regional project, Permittees agreed to work collaboratively to develop a regionally consistent method to establish baseline trash loads from their MS4s. The project, also known as the *BASMAA Baseline Trash Generation Rates Project* assists Permittees in establishing a baseline to demonstrate progress towards MRP trash load reduction goals (i.e., 40 percent by 2014). The intent of the project was to provide a scientifically-sound method for developing (default) baseline trash generation rates that can be adjusted, based on Permittee/site specific conditions; and used to develop baseline loading rates and loads. Baseline loads form the reference point for comparing trash load reductions achieved through control measure implementation.

Baseline trash loading rates are quantified on a volume per unit area basis and based on factors that significantly affect trash generation (e.g., land use, population density, and economic profile). The method used to the establish baseline trash loads 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 off a conceptual model developed as an outgrowth of these studies (BASMAA 2011b). Baseline trash loading 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. Methods used to develop trash baseline loading rates are more fully described in BASMAA (2011b, 2011c, and 2012).

Trash Load Reduction Tracking Method Summary

The trash load reduction tracking method, described in the *Trash Load Reduction Tracking Method Technical Report,* assists Permittees in demonstrating progress towards reaching trash load reduction goals defined in the MRP (e.g., 40 percent). The tracking method is based on information gained through an extensive literature review and Permittee experiences in implementing stormwater control measures in the San Francisco Bay Area. The literature review was conducted to evaluate quantification methods used by other agencies to assess control measure effectiveness or progress towards quantitative goals. Results are documented in the *Trash Load Reduction Tracking Method: Technical Memorandum # 1 – Literature Review* (BASMAA 2011d).

Methods attributable to specific trash control measures fall into two categories: 1) trash load reduction quantification formulas; and 2) load reduction credits (BASMAA 2012a). Quantification formulas were developed for those trash control measures that were deemed feasible and practical to quantify load reductions at this time. Load reduction credits were developed for all other control measures included in the methodology development. Both categories of methods assume that as new or enhanced trash control measures are implemented by Permittees, a commensurate trash load reduction will occur. Progress towards load reduction goals will be demonstrated through comparisons to established trash baseline load estimates developed through the BASMAA *Baseline Generation Rates Project*.

Short-Term Trash Load Reduction Plan

The purpose of this Short-Term Plan is to describe the current level of implementation of control measures and best management practices, and identify the type and extent to which new or enhanced control measures and best management practices will be implemented to attain a 40 percent trash load reduction from their MS4 by July 1, 2014. The Short-Term Plan was developed using a template created by BASMAA through a regional project. New and enhanced trash control measures (i.e., Best Management Practices) that Permittees may implement to demonstrate trash load reduction goals are included in Table 1.1. This list was developed collaboratively through the BASMAA Trash Committee, which included participation from Permittee, stormwater program, Water Board and non-governmental organization (NGO) staff. The list of control measures is based on: 1) the potential for Permittees to implement; 2) the availability of information required to populate formulas and develop credits; and 3) the expected benefit of implementation. Load reductions associated with each control measure are demonstrated either through a quantification formula (QF) or credits (CR) described in the *Trash Load Reduction Tracking Method Technical Report* (BASMAA 2012a).

In efforts to reduce trash discharged from MS4s, Permittees may choose to implement control measures that are not included in Table 1.1 or described more fully in BASMAA (2012a). If a Permittee chooses to do so, methods specific to calculating trash load reductions for that control measure would need to be developed. Additionally, at that point, consideration should be given to updating this Short-Term Plan.

Additionally, based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas), the City of San José may amend or revise this Plan. If revisions or amendments are necessary,

a revised Short-Term Plan will be submitted to the Water Board via the City of San José's annual reporting process.

Table 1.1: Trash control measures for which load reduction quantification credits or formulas were developed to track progress towards trash load reduction goals.

Load Reduction Credits
Single-use Carryout Plastic Bag Ordinances
Polystyrene Foam Food Service Ware Ordinances
Public Education and Outreach Programs
Activities to Reduce Trash from Uncovered Loads
Anti-Littering and Illegal Dumping Enforcement Activities
Improved Trash Bin/Container Management Activities
Quantification Formulas
On-land Trash Pickup (Volunteer and/or Municipal)
Enhanced Street Sweeping
Partial-Capture Treatment Devices
Full-Capture Treatment Devices
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal)

This Short-Term Plan is organized into the following sections:

- Introduction;
- Trash Baseline Load Estimate;
- Load Reduction Calculation Process;
- Planned Implementation of New or Enhanced Control Measures;
- Implementation Schedule; and
- References

2.0 BASELINE TRASH LOADING ESTIMATE

Note: *Tables and information presented in this section are subject to change based on the results of a third monitoring event of the BASMAA Baseline Trash Generation Rates Project. Therefore, this section of the Short-Term Plan may be updated with revised trash generation rates, baseline loading rates, and baseline loads.*

This section provides the estimated annual trash baseline load from the City of San José's Municipal Separate Storm Sewer System (MS4). In compliance with Provision C.10.a.ii of the MRP, the City of San José worked collaboratively with other MRP Permittees through BASMAA to develop data and the process necessary to establish baseline trash loading estimate from our MS4. The collaborative project was managed through the BASMAA Trash Committee and included a series of steps described in BASMAA (2012) and listed below. The approach was intended to be cost-effective and consistent, but still provide an adequate level of confidence in trash loads from MS4s, while acknowledging that uncertainty in trash loads still exists. The approach entailed the following steps:

1. Conduct literature review;
2. Develop conceptual model;
3. Develop and implement sampling and analysis plan;
4. Test conceptual model;
5. Develop and apply default trash **generation rates** to Permittee effective loading areas;
6. Adjust default trash generation rates based on baseline levels of control measure implementation by the Permittee to develop trash **baseline loading rates**; and,
7. Calculate Permittee-specific annual trash **baseline load**.

Through the collaborative BASMAA project, default baseline trash generation rates (volume per area) were developed for a finite set of categories, based on factors that significantly affect trash loads (e.g., land use). These trash generation rates were then applied to effective loading areas in applicable jurisdictional areas within the City of San José. Trash generation rates were then adjusted based on baseline street sweeping, storm drain inlet maintenance, and stormwater pump station maintenance conducted in each applicable area. The sum of the trash loads (i.e., rate multiplied by area) from each effective loading area represents the City of San José's baseline trash load from its MS4. A full description of the methods by which trash baseline loads were developed is included in BASMAA (2012a) and is summarized below.

Permittee Characteristics

Incorporated in 1850, the City of San José is located in Santa Clara County, and has a jurisdictional area of 114,511 acres. According to the 2010 Census, it has a population of 945,942, with a population density of 5,256.2 people per square mile, and average household size of 3.09. Of the 945,942 who call the City of San José home, 24.8% are under the age of 18, 9.5% are between 18 and 24, 31.1% are between 25 and 44, 24.5% are between 45 and 65, and 10.1% are 65 or older.

Companies such as Cisco Systems, IBM, eBay, Hitachi, Xilinx, Sanmina-SCI, and Adobe Systems are located in the City of San José. The median household income was $70,243 in 2000[1].

[1] From the 2000 Census. The median household income for the City of San José from the 2010 Census is not currently available.

Default Trash Generation Rates (Regional Approach)

A set of default trash generation rates was developed via the BASMAA regional collaborative project (BASMAA 2012a). Default generation rates were developed based on a comparison between trash characterization monitoring results, land uses, economic profiles, and other factors that were believed to possibly affect trash generation. Three trash characterization monitoring events were scheduled via the *Trash Generation Rates Project*. Due to the compliance timeline in the MRP, only two of three trash characterization monitoring events were used to develop trash generation rates described in BASMAA (2012a) and presented in this section. Following the completion of the third characterization event (Winter 2011/12), this section of the Short-Term Plan may be updated to reflect the most up-to-date trash generation and loading rates available. Trash generation rates based on the results of two of the three characterization events are shown in Table 2-1 for each trash loading category.

Table 2-1: Regional Default Annual Trash Generation Rates by Land Use Category.

Land Use Category	Generation Rates (Gallons/Acre)
High Density Residential	17.04
Low Density Residential	1.25
Rural Residential	0.17
Commercial and Services/ Heavy, Light and Other Industrial	7.08
Retail and Wholesale	29.99
K-12 Schools	13.14
Urban Parks	2.14

Jurisdictional and Effective Loading Areas

Default trash baseline generation rates presented in Table 2-1 were applied to effective loading areas with **jurisdictional areas** within the City of San José. The City of San José's jurisdictional areas includes all urban land areas within the City of San José boundaries that are subject to the requirements in the MRP. Land use areas identified by a combination of the ABAG 2005 land use dataset and Permittee knowledge that were not included within the City's jurisdictional areas include:

- Federal and State of California Facilities and Roads (e.g., Interstates, State Highways, Military Bases, Prisons);
- Roads Owned and Maintained by Santa Clara County;
- Colleges and Universities (Private or Public);
- Non-urban Land Uses (e.g., agriculture, forest, rangeland, open space, wetlands, water);
- Communication or Power Facilities (e.g., PG & E Substations);
- Water and Wastewater Treatment Facilities; and
- Other Transportation Facilities (e.g., airports, railroads, and maritime shipping ports).

Once the City of San José's jurisdictional area was delineated, an effective trash loading area was developed by creating a 200-foot buffer on each side of the streets within the City's jurisdictional area. The purpose of the effective loading area is to eliminate land areas not directly contributing trash to the City's MS4 (e.g., large backyards and rooftops). Both the jurisdictional and the effective loading areas for the City of San José are presented in Table 2-2.

Table 2-2: Jurisdictional areas and effective loading areas in the City of San José by land use classes identified by ABAG (2005).

Land Use Category	Jurisdictional Area (Acres)	Effective Loading Area (Acres)	% of Effective Loading Area
High Density Residential	7,043	6,238	10.6
Low Density Residential	41,085	39,452	66.8
Rural Residential	2,039	1,592	2.7
Commercial and Services/ Heavy, Light and Other Industrial	9,821	5,764	9.8
Retail and Wholesale	3,708	2,680	4.5
K-12 Schools	3,338	1,661	2.8
Urban Parks	3,931	1,674	2.8
TOTAL	**70,965**	**59,061**	**100%**

Permittee-Specific Baseline Trash Loading Rates

Regional default trash generation rates developed through the BASMAA regional collaborative project were applied to effective loading areas within the City of San José based on identified land uses. These generation rates were then adjusted based on the calculated effectiveness of baseline street sweeping, storm drain inlet maintenance and pump station maintenance implemented by the City. These adjustments were conducted in GIS due to the site specificity of baseline generation rates and baseline control measure implementation. The following sections describe the baseline level of implementation for these three control measures. A summary of trash baseline generation and loading rates for the City of San José are provided in Table 2-3 and areas associated with these rates are illustrated in Figure 2-1.

Baseline Street Sweeping

A "baseline" street sweeping program is defined as the sweeping frequency and parking enforcement implemented by the City of San José prior to effective date of the MRP. Baseline street sweeping differs from "enhanced" street sweeping, which includes increased parking enforcement and/or sweeping conducted at a frequency greater than baseline ceiling (i.e., once per week for retail land uses and twice per month for all other land uses). The baseline ceiling was created to not penalize implementers of enhanced street sweeping programs prior to the effective date of the MRP. For those Permittees that sweep less frequent than the baseline ceiling, their current sweeping frequency serves as their baseline.

The City of San José's street sweeping program includes four routes with four different sweeping frequencies. The residential route (RSS) sweeping frequency is once a month and includes most

residential streets. The arterial route (ACB) sweeping frequency is twice a month, and includes most arterial roads. The north business district route (NBD) sweeping frequency is once per week and includes many arterial roads and streets around the downtown area. The central business district route (CBD) sweeping frequency is twice a week and includes most of the downtown area. For RSS and ACB routes, there is no difference between baseline and current street sweeping. For the NBD route, the baseline street sweeping frequency is twice per month through non-retail areas. For the CBD route, the baseline street sweeping frequency is once per week through retail areas, and twice per month through non-retail areas. Parking enforcement signs for street sweeping exist on many residential streets and some arterial roads. Parking enforcement equivalent exists on approximately half of the CBD and NBD routes, and does not exist on the RSS or ACB routes. The estimated trash load reduced via baseline street sweeping is presented in Table 2-3.

Baseline Storm Drain Inlet Maintenance

Within the City of San José, storm drain inlets were cleaned at a baseline level of one time per year prior to the effective date of the MRP. Based on this baseline frequency and the effectiveness rating developed in BASMAA (2012b), the baseline storm drain maintenance program in the City of San José has an annual effectiveness rating of 5%. The estimated trash load reduced via baseline storm drain inlet maintenance is presented in Table 2-3.

Baseline Stormwater Pump Station Maintenance

The City of San José owns and maintains 25 stormwater pump stations. Of these stations, 13 have trash racks that capture trash and allow for removal during maintenance. For those pump stations with trash racks, the estimated volume of trash removed annually from each pump station prior to the effective date of the MRP is considered the baseline level of implementation. To determine the baseline volume of trash removed from pump stations, an effectiveness rating of 25% removal of the baseline trash load attributable to the area draining to the pump station is assumed. This effectiveness rating is based on methods developed in BASMAA (2012b). The estimated trash load reduced via baseline pump station maintenance is presented in Table 2-3.

Baseline Trash Loading Estimate

The estimated baseline trash load from the City of San José was calculated as the sum of the loads from the City's effective loading area, adjusted for baseline implementation of street sweeping, storm drain inlet maintenance, and pump station maintenance. Based on this calculation the City of San José's estimated baseline trash load is **972 cubic yards/year.** The preliminary annual trash baseline load for the City of San José is presented in Table 2-3. Preliminary baseline trash loading rates are presented in Figure 2-1a though Figure 2-1e to provide a geographical illustration of areas with estimated low, moderate, and high trash loading rates.

Table 2-3: Preliminary annual trash baseline load for the City of San José.

Category	Annual Load (gallons)	Annual Load (cubic yards)
Preliminary Generation Trash Load	302,474	1,743

Load Removed via Baseline Street Sweeping	122,060	703
Load Removed via Baseline Storm Drain Inlet Maintenance	9,021	52
Load Removed via Baseline Stormwater Pump Station Maintenance	2,721	16
Preliminary Trash Baseline Load	168,672	972

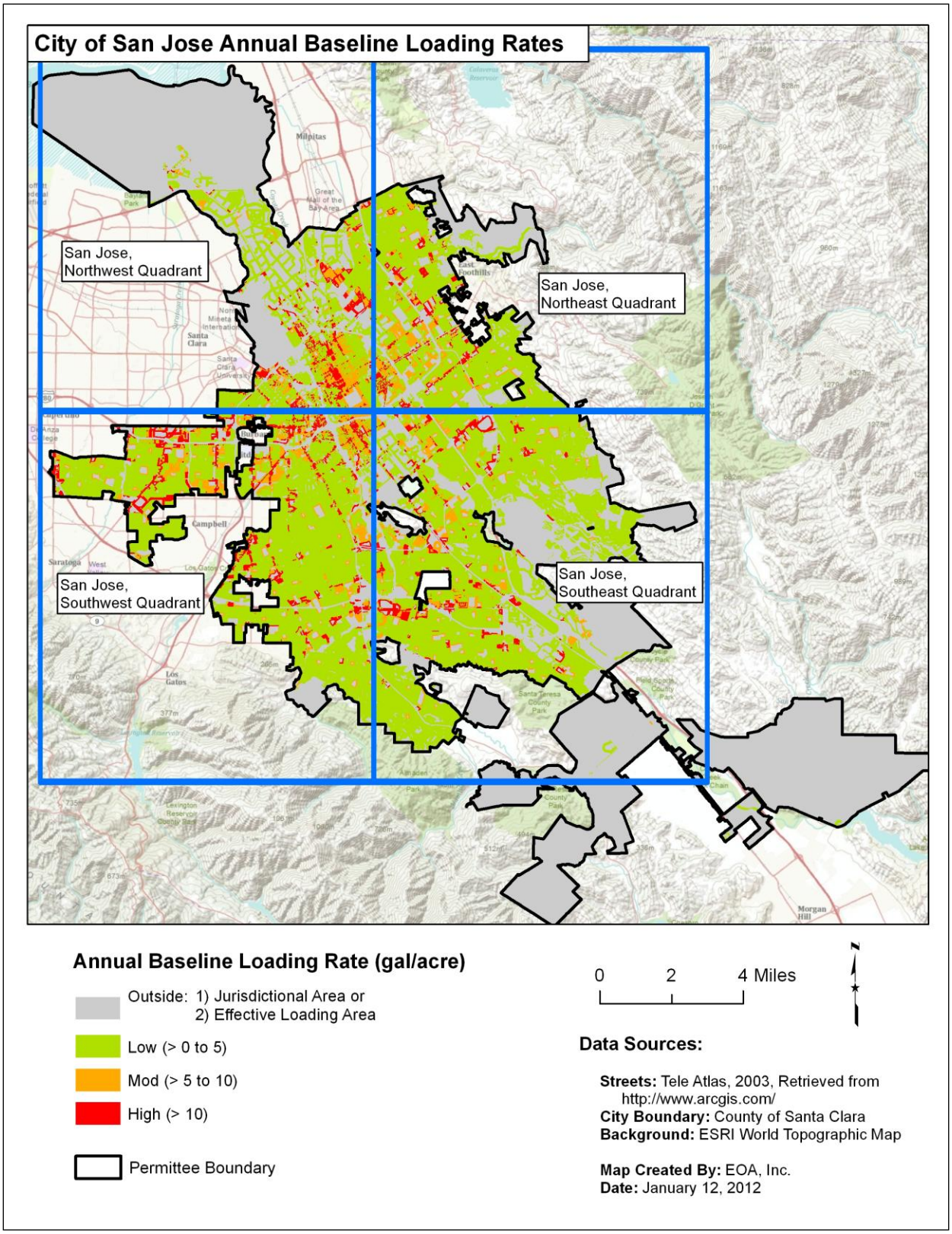

Figure 2-1a: Estimated trash baseline loading rates for geographical areas in the City of San José.

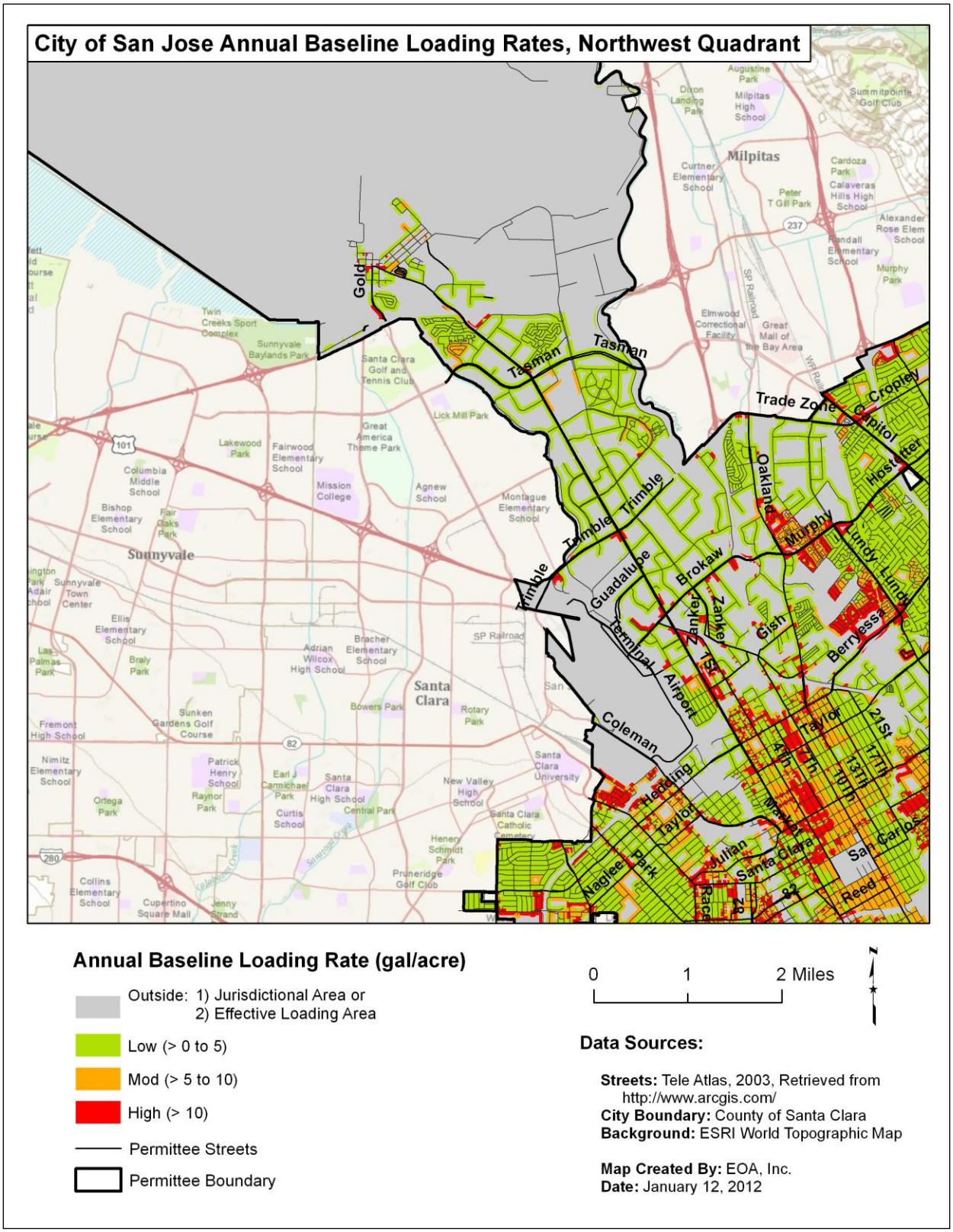

Figure 2-1b: Estimated trash baseline loading rates for geographical areas in the City of San José's Northwest Quadrant.

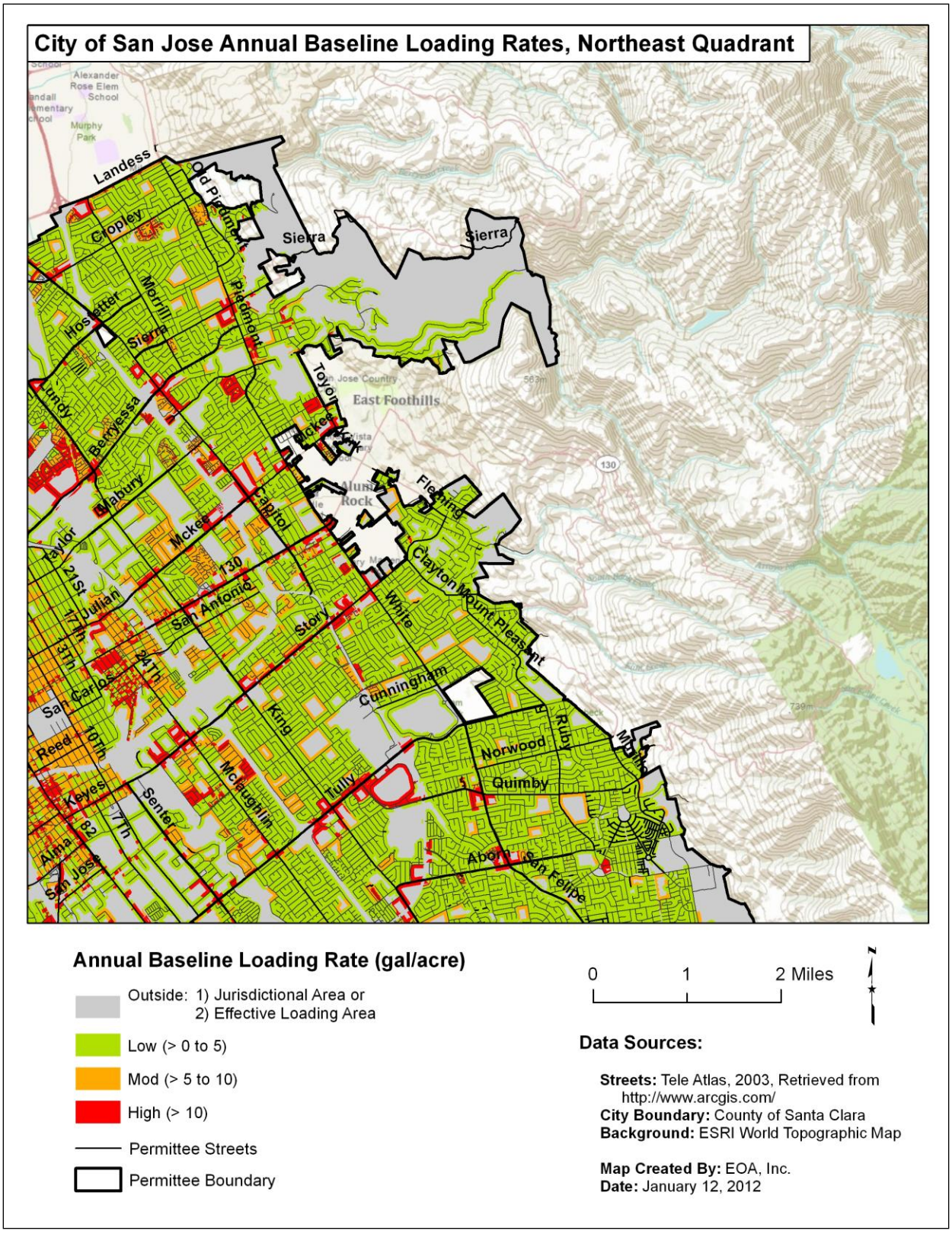

Figure 2-1c: Estimated trash baseline loading rates for geographical areas in the City of San José's Northeast Quadrant.

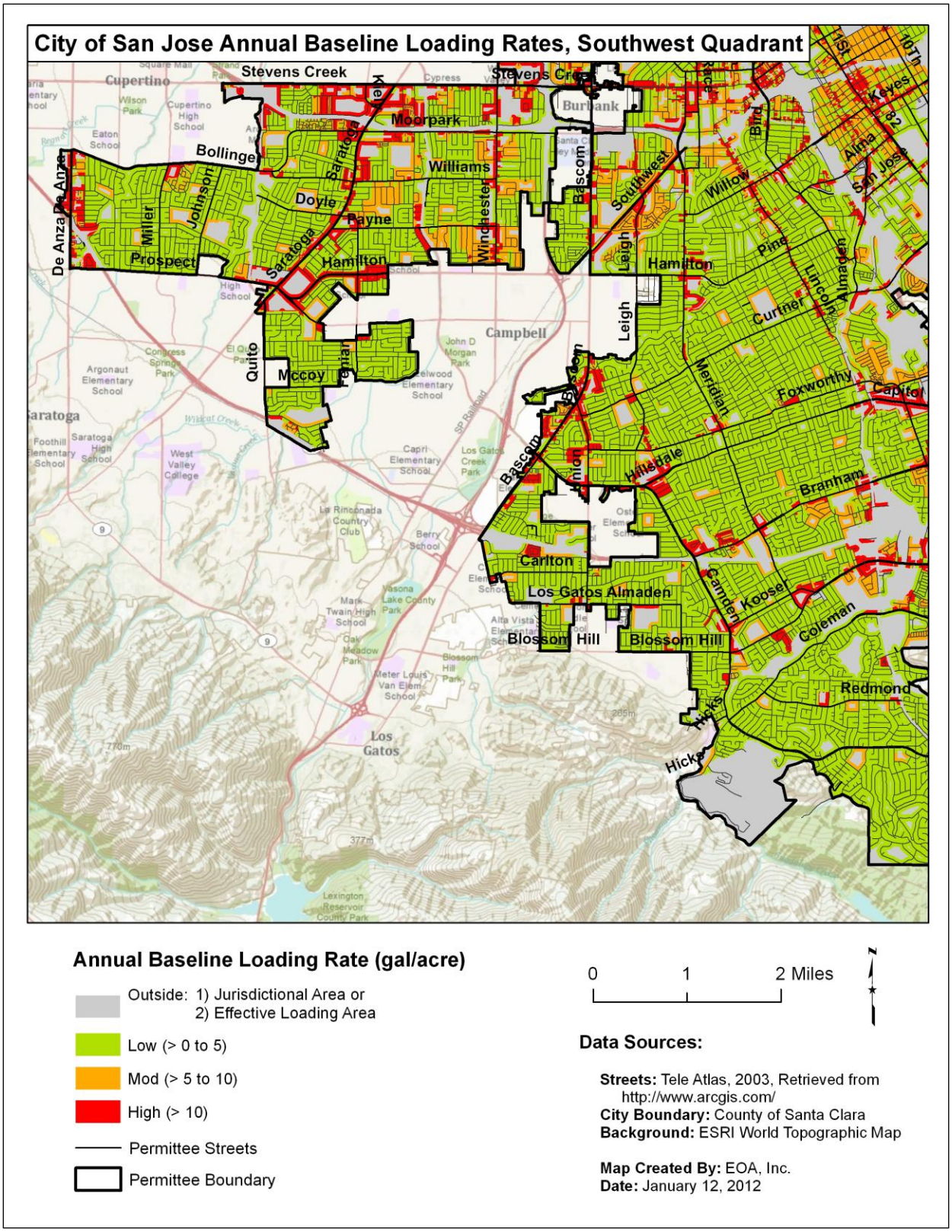

Figure 2-1d: Estimated trash baseline loading rates for geographical areas in the City of San José's Southwest Quadrant.

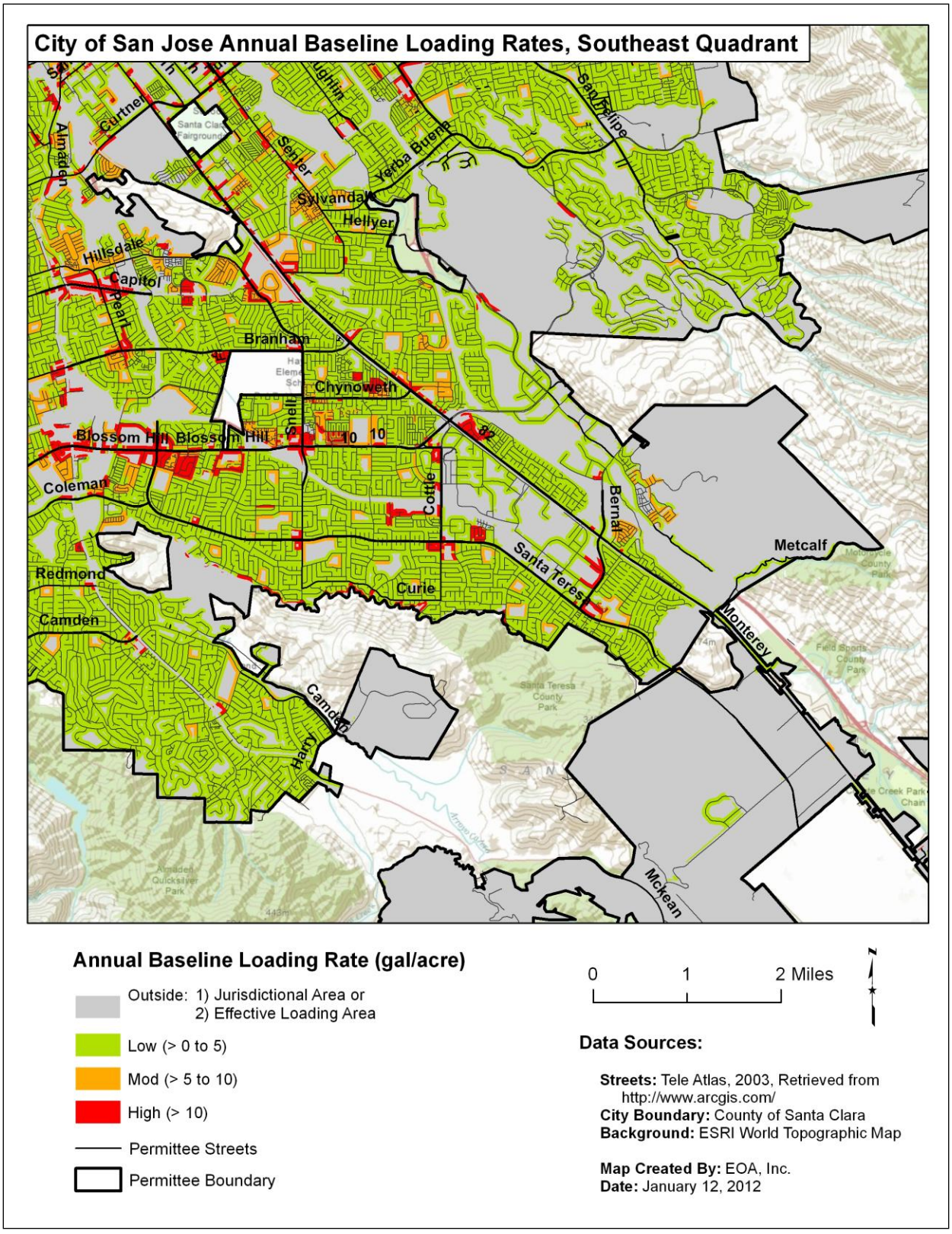

Figure 2-1e: Estimated trash baseline loading rates for geographical areas in the City of San José's Southeast Quadrant.

3.0 LOAD REDUCTION CALCULATION PROCESS

Using the guiding principles and assumptions described BASMAA (2012a), a stepwise process for calculating trash load reductions was developed collaboratively through BASMAA. This process is fully described in Trash Load Reduction Tracking Method Technical Report (BASMAA 2012a) and is briefly summarized in this section. The process takes into account at what point in the trash generation and transport process a trash control measure: 1) prevents trash generation, 2) intercepts trash in the environment prior to reaching a water body, or 3) removes trash that has reached a water body. In doing so, it avoids double-counting of trash load reductions associated with specific control measures.

To demonstrate trash load reductions, baseline trash loading rates will be adjusted using the following process:

Step #1: Existing Enhanced Street Sweeping
Step#2: Trash Generation Reduction
Step #3: On-land Interception
Step #4: Trash Interception in the Stormwater Conveyance System
Step #5: Trash Interception in Waterways
Step #6: Comparison to Baseline Trash Load

Reductions calculated in Steps 2, 3 (on-land cleanup) and 5 are assumed to be implemented at a constant rate on an "area-wide" basis. For example, if a new region-wide public education strategy is implemented within the San Francisco Bay area, all Permittees can apply load reduction credits associated with this control measure. In contrast, Steps 1, 3 (street sweeping)and 4 are "area-specific" reductions that only apply to specific areas within a Permittee's jurisdiction. Area-specific control measures include full-capture treatment devices and enhanced street sweeping. Area-specific reductions may require the use of a Geographic Information System (GIS) to calculate.

Reductions are generally applied in the sequence as presented in Figure 2-1 and described below, although some reductions may be applied "in-parallel" and calculated during the same sub-step in the process.

Step #1: Existing Enhanced Street Sweeping

Trash load reductions due to existing enhanced street sweeping implemented prior to the effective date of the MRP and conducted at levels above baseline levels are not incorporated into each Permittee's trash baseline load. Therefore, load reductions associated with existing enhanced street sweeping are accounted for first in the trash load reduction calculation process. Existing enhanced street sweeping includes street sweeping conducted at a frequency greater than **1x/week** for streets within retail land use areas or greater than **2x/month** for streets in all other land use areas. The result of adjustments made to trash baseline loads due to the implementation of existing enhanced street sweeping is a set of **current baseline loading rates** and a **current baseline load**.

Step #2: Trash Generation Reduction Control Measures

Trash generation reduction control measures prevent or greatly reduce the likelihood of trash from being deposited onto the urban landscape. They include the following area-wide control measures:

CR-1: Single-Use Carryout Plastic Bag Ordinances

CR-2: Polystyrene Foam Food Service Ware Ordinances

CR-3: Public Education and Outreach Programs

CR-4: Reduction of Trash from Uncovered Loads

CR-5: Anti-Littering and Illegal Dumping Enforcement

CR-6: Improved Trash Bin/Container Management

CR-7: Single-Use Food and Beverage Ware Ordinances

Load reductions associated with trash generation reduction control measures are applied on an area-wide basis.[2] Therefore, reductions in current baseline loading rates are adjusted uniformly based on the implementation of the control measure and the associated credit claimed.

Baseline loading rate adjustments for all generation reduction controls measures implemented may be applied in-parallel, but should be applied prior to calculating on-land interception measures discussed in Step #3. The result of adjustments to trash baseline loading rates due to the implementation of these enhanced control measures will be a set of **street loading rates**. The **street load** is the volume of trash estimated to enter the environment and available for transport to the MS4 if not intercepted via on-land control measures described in Step #2.

Step #3: On-land Interception Control Measures

Once trash enters the environment, it may be intercepted and removed through the following control measures prior to reaching the stormwater conveyance system:

QF-1: On-land Trash Cleanups (Volunteer and/or Municipal) (Area-wide)

QF-2: Enhanced Street Sweeping (Area-specific)

Since on-land trash cleanups can affect the amount of trash available to street sweepers, load reductions associated with their implementation will be quantified first, followed by street sweeping enhancements. On-land trash cleanups will be applied as an area-wide reduction and all effective loading rates will be adjusted equally. Enhanced street sweeping, however, is an area-specific control measure and only those effective loading rates associated with areas receiving enhancements will be adjusted. Due to the spatial nature of enhanced street sweeping, GIS may be needed to conduct this step.

The result of adjustments to effective loading rates due to the implementation of these enhanced control measures will be a set of **conveyance system loading rates**. The **conveyance load** is the volume of trash estimated to enter the stormwater conveyance system (e.g., storm drains).

[2] The only exception to this statement are load reductions associated with the establishment of Business Improvement Districts (BIDs) or equivalent, which are specific to geographic areas and considered "area-specific."

Step #4: Control Measures that Intercept Trash in the MS4

Control measures that intercept trash in the stormwater conveyance system are area-specific. Therefore, they only apply to land areas and associated trash loads reduced. Conveyance system loading rates developed as a result of Step #3 should be adjusted in-parallel for the following control measures:

- QF-3a: Partial-capture Treatment Device: Curb Inlet Screens (Area-specific)
- QF-3b: Partial-capture Treatment Device: Stormwater Pump Station Trash Racks Enhancements (Area-specific)
- QF-4: Enhanced Storm Drain Inlet Maintenance (Area-specific)
- QF-5: Full-Capture Treatment Devices (Area-specific)

Load reductions for these control measures are calculated in-parallel because they are applied to independent geographical areas. Reductions from all control measures described in this step are area-specific and may require the use of GIS to calculate a set of **waterway loading rates**. Once waterway loading rates have been determined, a **waterway load** will be developed and used as a starting point for calculating load reductions associated with trash interception in waterways discussed in Step #5.

Step #5: Control Measures that Intercept Trash in Waterways

The load of trash that passes through the stormwater conveyance system without being intercepted may still be removed through interception in waterways. There are two control measures associated with interception in waterways:

- QF-3c: Partial-capture Treatment Device: Litter Booms/Curtains (Area-wide)
- QF-7: Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (Area-wide)

As these control measures are implemented, load reduction estimates can be calculated in-parallel for these two measures.

Step #6: Comparison to Baseline Trash Load

Applying the four steps described in the processes above will provide an estimated trash load (volume) remaining after trash control measures are implemented. As depicted in the following equation, the relative percent difference between the baseline load and the load remaining after control measures are implemented is the percent reduction that will be used to assess progress towards MRP trash load reduction goals.

$$\frac{\text{Baseline Load} - \text{Remaining Load}}{\text{Baseline Load}} = \%\ \text{Reduction}$$

4.0 ENHANCED TRASH CONTROL MEASURES

This section describes the new or enhanced trash control measures planned for implementation by the City of San José. The enhanced control measures described are designed to reach a 40% reduction by July 1, 2014. New and enhanced control measures that will be implemented by City of San José include those listed in Table 4-1.

Table 4-1: Trash control measures that will be implemented by City of San José to reach the 40% trash load reduction.

Control Measure
Single-use Carryout Plastic Bag Ordinances
Polystyrene Foam Food Service Ware Ordinances
Public Education and Outreach Programs
Activities to Reduce Trash from Uncovered Loads
Anti-Littering and Illegal Dumping Enforcement Activities
Improved Trash Bin/Container Management (Municipally or Privately-Controlled)
On-land Trash Pickup (Volunteer and/or Municipal)
Enhanced Street Sweeping
Partial-Capture Treatment Devices
Full-Capture Treatment Devices
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal)

CR-1: Single-use Carryout Plastic Bag Ordinance

Single-use plastic carryout bags have been found to contribute substantially to the litter stream and to have adverse effects on marine wildlife (United Nations 2009, CIWMB 2007, County of Los Angeles 2007). The prevalence of litter from plastic bags in the urban environment also compromises the efficiency of systems designed to channel storm water runoff. Furthermore, plastic bag litter leads to increased clean-up costs for the Permittees and other public agencies.

Based on recent experiences of municipalities throughout the State, the process Permittees must go through to enact a single-use carryout plastic bag ordinance is difficult due to intense scrutiny and opposition from not only public interest groups and lobbyists, but also merchants and community members. In most cases, most opposition groups are pressing for the development of Environmental Impact Reports (EIRs) in accordance with the California Environmental Quality Act (CEQA).

Baseline Level of Implementation

Prior to adoption of the MRP, Permittees within the Bay Area have enacted ordinances on Single-use Carryout Plastic Bags. To avoid penalizing these early implementers, an applicable control measure implemented by a Permittee prior to the effective date of the MRP will be credited equally to a control measure implemented after the effective date. Therefore, the baseline level of implementation is not applicable for this control measure.

Enhanced Level of Implementation

The City of San José adopted a "Bring Your Own Bag" ordinance prohibiting the distribution of single-use carryout plastic bags in December 2010. Effective January 1, 2012, the ordinance applies to all grocery and retail stores located within or doing business within the City limits. It prohibits single-use plastic bags and allows for the sale of recycled content paper bags for a minimum price. The minimum price for each paper bag is currently set at 10 cents and will increase to 25 cents beginning January 1, 2014. Public eating establishments as well as non-profit charitable reusers are exempt from the ordinance; protective bags without handles, such as those used to hold produce or bulk items, are allowed under the ordinance. Supplemental Food Program or WIC Program transactions can be exempt from the costs of recycled paper bags at checkout until January 1, 2014.

Implementation of San José's Bring Your Own Bag ordinance was accompanied by significant outreach to consumers as well as businesses. Several notification letters as well as retailer Frequently Asked Questions, customer factsheet, ordinance brochure, and supplier lists for recycled paper bag and reusable bag suppliers were sent to all retailers. Retailer outreach was also conducted through vendor education meetings, retail property managers, and chambers of commerce. Posters, tent-cards, and window clings were developed and provided to retailers to utilize to educate their customers. Outreach to the general public included distributing reusable bags and promotion items that included a 'Bring reusable bags' reminders such as dry erase grocery lists at community events. Paid advertising included grocery cart ads, participation in a regional radio campaign through the Bay Area Recycling Outreach Coalition (BayROC) with additional radio spots purchased by the City of San José, print advertisements, bus advertising, press events, and social media. In addition, a hotline and email were set up to respond to retailer and consumer questions.

Compliance with the ordinance will be verified on a complaint basis. Complaints are received by a live person during business hours and a recording outside of business hours. Each complaint is investigated by the City; possible enforcement action includes fines up to $1,000.

Reduction from Implementing Control Measure

The City of San José will receive a 12 percent reduction credit for implementing specific enhanced control measures described in Enhanced Level of Implementation section above. The 12 percent reduction credit will be applied to the City of San José's baseline trash load. This percent reduction credit is consistent with methods presented in BASMAA (2012a). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5 in Table 5-1A. The total percent of credit for trash reduced from MS4s as a result of implementing a single-use carryout plastic bag ordinance will be reported in the Annual Report submitted each September to the Water Board.

CR-2: Polystyrene Foam Food Service Ware Policy

Polystyrene foam is used as food ware in the food service industry. According to the USEPA, floatable debris in waterways, such as products made of polystyrene, is persistent in the environment and has physical properties that can have serious impacts on human health, wildlife, the aquatic environment and the economy (USEPA 2002). Due to its properties, polystyrene foam used as food ware is typically not recycled. Since 1990, over 100 government agencies within the United States, including over twenty within the Bay area have enacted full or partial bans on polystyrene foam food service ware.

Baseline Level of Implementation

Prior to adoption of the MRP, over twenty agencies within the Bay area enacted full or partial bans on polystyrene foam food service ware. To avoid penalizing these early implementers, an applicable control measure implemented by a Permittee prior to the effective date of the MRP will be credited equally to a control measure implemented after the effective date. Therefore, the baseline level of implementation is not applicable for this control measure.

Enhanced Level of Implementation

Effective May 1, 2010, the City of San José adopted a policy prohibiting food vendors from distributing polystyrene foam food and beverage ware at large events on Permitee-owned property. The City established the Zero Waste Events program to support waste prevention and reduction, recycling, and composting efforts at events held in the City of San José. For events with 1,000 attendees of more, the Zero Waste Events team collects and reviews materials management plans, loans eco-station waste diversion supplies, and verifies compliance with City solid waste policies at the event. For events that target a high level of waste diversion the Green Events team can provide acknowledgement with a Green Event certification. The percent trash reduction from MS4s as a result of implementing a polystyrene foam food service ware ordinance will be reported in the Annual Report submitted each September.

In March 2012, the City will also be considering an amendment to the City's Environmental Preferable Procurement Policy to formalize the current Purchasing practice to not stock or provide EPS products and to expand the prohibition to cover vendors, Permitee-sponsored events, and other users of City facilities.

The City is considering actions to reduce polystyrene foam food service ware litter from food service vendors. In 2011, the City initiated its Green-To-Go stakeholder process to gather input and feedback on policy alternatives for reducing litter from polystyrene foam food service ware from key stakeholders including restaurant operators, non-governmental organizations, plastics and container manufacturer industry, and the general public. The City also continues to work towards countywide and statewide actions, and explore options for moving the City toward actions to reduce polystyrene foam food ware litter. Timing of actions based on this additional research and analysis, could support the City's efforts towards reaching the Permit's 70% trash reduction goal by 2017.

Percent Reduction from Enhancements

The City of San José will receive a 2 percent reduction credit for the adopted policy prohibiting the distribution of polystyrene foam food and beverage ware at Permittee-sponsored events or on Permitee-owned property, as described in *Enhanced Level of Implementation* section above. The 2 percent reduction credit will be applied to the City of San José's baseline trash load. This percent reduction credit is consistent with methods presented in the BASMAA (2012a). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5 in Table 5-1A.

If after further consideration the City of San José implements a citywide prohibition of polystyrene foam food ware or other action to eliminate expanded polystyrene foam food ware litter, as described in *Enhanced Level of Implementation* section above, it will receive a 6 percent reduction credit. The 6 percent reduction credit will be applied to the City of San José's baseline trash load and would support the City's efforts towards compliance with the 70% trash load reduction goal in MRP provision C.10 should it be implemented by 2017.

CR-3: Public Education and Outreach Programs

Permittees in the San Francisco Bay Area have implemented public education and outreach programs to inform residents about stormwater issues relating to pollutants of concern, watershed awareness and pollution prevention. Public education and outreach efforts include developing and distributing brochures and other print media; posting messages on websites and social networking media (Facebook, Twitter etc.), attending community outreach events, and conducting media advertising. In recent years, some municipal agencies have implemented anti-litter campaigns to increase public awareness about the impacts of litter on their communities and water quality; and to encourage the public to stop littering.

Baseline Level of Implementation

The City of San José implemented the following public education and outreach control measures prior to the effective date of the MRP. The City participates in a multi-media county-wide outreach and education campaign called Watershed Watch, as part of SCVURPPPP, an association of thirteen cities and towns in the Santa Clara Valley, the County of Santa Clara, and the Santa Clara Valley Water District. The City also conducts outreach at public events targeted at youth and the general public. The City individually and as part of SCVURPPP has promoted messages related to a variety of stormwater pollutants such as motor oil, pesticides, mercury, and pet waste. These control measures are considered baseline because either the outreach message was not specifically related to trash reduction or was a time specific campaign. New actions or actions started prior to the effective date of the MRP and continued into the future are described under the next section.

Enhanced Level of Implementation

The City of San José will implement the following public education and outreach control measures prior to July 1, 2014.

Advertising Campaigns –

BASMAA Youth Outreach Campaign (Regional)

Through participation and funding of the regional BASMAA Youth Outreach Campaign the City of San José will implement an outreach campaign designed to reduce littering from the target audience in the Bay Area. The Youth Outreach Campaign was launched in September 2011 (post-MRP effective date) 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 from FY 11-12 through FY 13-14. A brief description of the Campaign activities is provided below:

- Raising Awareness: The Campaign will begin by raising awareness of the target audience on litter and stormwater pollution issues. Partnerships with youth commissions, high schools, and other youth focused organizations will be developed to reach the target audience. Messages targeted to youth will be created and distributed via paid advertising, email marketing, Campaign website and social networking sites (e.g,, Facebook and twitter).

- Engage the Youth - The advertisements will 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 12-13, a video contest will be launched to get Bay Area youth further involved in the Campaign. An online voting system will be used to select the winning entry. Media advertising will be conducted to promote the winning entry.
- Change Behaviors: To move the audience along the behavior change continuum, the Campaign will use 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 will continue to interact with the target audience through email marketing and social media websites.

The Youth Campaign will include a pre and post campaign survey to evaluate the effectiveness of outreach. The pre-campaign survey will be conducted in FY 11-12 and the post campaign survey in FY 13-14. Other evaluation mechanisms, such as website hits, number of youth engaged in the Campaign's social networking website, etc. will also be used to evaluate its effectiveness in increasing awareness and changing behavior.

Watershed Watch Campaign (Countywide)

In addition to the BASMAA Campaign, the City of San José will continue to implement the countywide Watershed Watch Campaign through active participation and funding of the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). This Campaign conducts media advertising that includes anti-litter messages. Anti-litter advertisements for television, print, transit and radio have been developed and are used each year and will continue in the future. A telephone survey is conducted every five years to measure the effectiveness of outreach and increase in awareness about liter and stormwater related messaging.

Outreach to School-age Children or Youth –

ZunZun (Countywide)

Through participation and funding of the SCVURPPP countywide ZunZun Program the City of San José plans to continue to implement litter reduction outreach to elementary school-age children. Up to 50 ZunZun assemblies at elementary schools are conducted in the Santa Clara Valley each year. These bilingual musical assemblies educate elementary school students and their teachers on watersheds and urban runoff pollution prevention, including litter. ZunZun performances use physical comedy, audience participation and musical instruments to educate teachers and children. Handouts, including teacher and student activity sheets, are distributed following the assembly.

The SCVURPPP Schools and Youth Education and Outreach Work Group provides a list of schools for ZunZun to contact. In addition to schools with high Hispanic populations, the list includes schools with high Asian/Pacific Islander populations.

ZunZun assemblies are evaluated using postage-paid evaluation cards that are distributed to all teachers present at the performances. Teachers mail the completed evaluation cards to SCVURPPP, and results are compiled by SCVURPPP staff. Based on the teacher feedback, changes are made to future assemblies and/or handouts.

Creeks Come to Class and Don Edwards Environmental Education Center Partnership (Local)

In addition to the Zun Zun assemblies, the City of San José will continue to implement its local stormwater education programs, the Creeks Come to Class presentations and the field trip program at the Don Edwards San Francisco Bay Wildlife Refuge. For the Creeks Come to Class program a San José Park Rangers visit elementary school classrooms and conduct activities focused on preventing pollution to our neighborhood creeks, including litter and trash pollution. Park Rangers use a model of a watershed to demonstrate how litter and other pollution can travel through the stormdrain system from neighborhoods to local creeks. The Park Rangers also teach about the importance of the riparian habitat and what children can do to protect it. The City also has a partnership the Don Edwards San Francisco Bay National Wildlife Refuge Environmental Education Center in Alviso (EEC) to provide fieldtrip opportunities for middle and high school students. The field trip program includes classroom presentations, teacher-led activities and a field trip to the EEC, which teach students about water use and watershed stewardship, including prevention of pollution like litter that can harm wildlife and water quality in the San Francisco Bay.

Media Relations (Use of Free Media) –

BASMAA Regional Media Relations Project (Regional)

Through participation and funding of the BASMAA Regional Media Relations Project, the City of San José plans to continue 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.).

Community Outreach Events –

The City of San José will organize and participate in neighborhood outreach events focused on litter prevention and other trash reduction actions in high priority communities where litter is prevalent. The City of San José Anti-Litter Program attends community festivals and resource fairs throughout the year encourage community clean-up of trash in the environment and offering supplies. In addition starting in FY 09-10 the City has undertaken a Bring Your Own Bag education campaign whereby City Staff attend community events and distribute reusable bags, collect pledges to prevent litter with reusable products, and educate the public about the impacts of litter on the environment. The City outreach events and programs work with community partners and festivals, in order to maximize the reach of the messages in the community. The complete list of outreach events attended by the City to promote litter prevention messages will be reported in the Annual Report submitted each September to the Water Board.

Percent Reduction from Enhancements

The City of San José will receive a total of 8 percent reduction credit for implementing specific enhanced control measures described in *Enhanced Level of Implementation* section above. This percent reduction is comprised of the following credits, consistent with the *Load Reduction Tracking Method*:

- Litter Reduction Advertising Campaigns – 3%

- Outreach to School-age Children or Youth – 2%
- Media Relations – 1%
- Community Outreach Events - 2%

These 8 percent reduction credits will be applied against the City of San José's baseline trash load. This percent reduction credit is consistent with methods presented in the BASMAA (2011e). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5 in Table 5-1A.

CR-4: Reduction of Trash from Uncovered Loads

Although it is currently illegal to operate a vehicle that is improperly covered and which its' contents escapes[3], vehicles remain an important trash source to MS4s and local waterways. Specifically, vehicles that do not secure or cover their loads when transporting trash and debris have a high risk of contributing trash to MS4s. Land areas that generate trash from vehicles include roads, highways (on/off ramps, shoulders or median strips) and parking lots. To help address the dispersion of trash from unsecured or uncovered vehicles destined for landfills and transfer stations, Permittees may require municipally-contracted trash haulers to cover or secure loads or work with municipal or private landfill and transfer station operators to educate waste haulers on securing loads and/or to enhance enforcement of existing regulations.

Baseline Level of Implementation

The baseline trash load described in Section 2.0, assumes that prior to adoption of the MRP the City of San José has not adopted control measures to reduce trash from vehicles with uncovered loads. Therefore, implementation of any of the control measures described in this section is considered to be enhanced implementation.

Enhanced Level of Implementation

The City of San José continues to implement the following enhanced control measures to reduce trash from vehicles with uncovered loads prior to July 1, 2014.

Require Municipal Trash Haulers to Cover Loads – The City of San José has included language in **Title 9.10.550 of the San José Municipal Code**, and in hauling service contracts, that requires contracted trash, recycling, commercial, and construction debris haulers to collect and transport material in such a way that no material spills out of the container or collection vehicle. Any spill or material blown out of the collecting or transporting container or vehicle must be immediately cleaned up.

Implement an Enhanced Enforcement Program for Vehicles with Uncovered Loads – The City of San José is considering establishing an enhanced enforcement program for vehicles with uncovered loads. This enhanced enforcement program may include the following:

- Enforcement of the City's ordinance prohibiting the transportation of trash or debris without a cover;
- Citations and fines for vehicles spotted on roads in the City's jurisdictional area with uncovered loads; or,
- Distribution of tarps for a fee to haulers or other vehicles that arrive at landfills and transfer stations with uncovered loads. Each subsequent visit without a tarp will result in an additional fee for a tarp, prompting haulers to bring their own tarp.

[3] In accordance with the California Vehicle Code Sections 23114 and 23115, it is against the law to operate a vehicle on the highway which is improperly covered, constructed, or loaded so that any part of its contents or loads spills, drops, leaks, blows, or otherwise escapes from the vehicle. Exempted materials include hay and straw, clear water and feathers from live birds. Additionally, any vehicle transporting garbage, trash, or rubbish, used cans or bottles, waste papers, waste cardboard, etc. must have the load covered to prevent any part of the load from spilling on the highway (CVC 2011). Significant fines are possible for non-compliance.

Percent Reduction from Enhancements

The City will receive a 1 percent reduction for language included in hauling service contracts that requires contracted trash, recycling, commercial, and construction to collect and transport material in such a way that no material spills out, as described in *Enhanced Level of Implementation* section above. The 1 percent reduction credit will be applied to the City of San José's baseline trash load. This percent reduction credit is consistent with methods presented in the BASMAA (2012a). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5 in Table 5-1A.

If the City moves forward with the implementation of an enhanced enforcement program for vehicles with uncovered loads the City would receive a 4 percent reduction, as described in the *Enhanced Level of Implementation* section above. The 4 percent reduction credit would be applied to the City of San José's baseline trash load and would be intended to support the City's efforts towards compliance with the 70% trash load reduction goal in MRP provision C.10 and would be implemented by 2017. A summary of all load reductions anticipated through existing and proposed trash control measures are included in Section 5 in Table 5-1B.

CR-5: Anti-Littering and Illegal Dumping Enforcement Activities

Successful anti-littering and illegal dumping enforcement activities include laws or ordinances that make littering or dumping of trash illegal. Laws are enforced by various municipal agency staff (e.g., police, sheriff, code enforcement, or public works/environmental services department staff) who issue citations in response to citizen complaints or other enforcement methods (e.g., surveillance cameras, signage and/or physical barriers installed at illegal dumping hot spots). In some California jurisdictions, the minimum fine for littering is $500 and the maximum penalty for highway littering is $1000 (City of San Francisco 2001). However, it is difficult to enforce small littering events unless they are witnessed or solid proof exists linking the offender to the litter. As a result, enforcement tends to focus on larger scale illegal dumping activities.

Baseline Level of Implementation

The baseline trash load described in Section 2.0, assumes that the City of San José has adopted a basic anti-littering and illegal dumping enforcement program that entails receiving and responding to complaints from citizens as resources allow. The City of San José has a well established Anti-Litter Program which provides supplies for volunteer litter cleanups and responds to illegal dumpsites reported by the community, and works to abate illegal dumpsites on a limited basis.

Enhanced Level of Implementation

The City of San José is considering establishing and implementing an active anti-littering and illegal dumping enforcement program. If implemented, the City intends to develop an enforcement program that would investigate complaints of illegal dumping, collect evidence (e.g., names, addresses, etc.) from illegal dump sites in an attempt to identify offenders, and proceed with enforcement procedures including citations (as warranted).

Percent Reduction from Enhancements

If the City moves forward with implementation of an enhanced enforcement program, the City would receive a 2 percent reduction, as described in the *Enhanced Level of Implementation* section above. The 2 percent reduction credit would be applied to the City of San José's baseline trash load and support the City's efforts towards compliance with the 70% trash load reduction goal in MRP provision C.10 if implemented by 2017. A summary of all load reductions anticipated through existing and proposed trash control measures are included in Section 5 in Table 5-1B.

CR-6: Improved Trash Bin/Container Management

Receptacles used to place/store trash or recyclables prior to collection by a public agency or private waste hauler reduce the potential for littering and trash loading to stormwater conveyance systems and receiving waters (City of Los Angeles 2004). For the purposes of assigning trash load reduction credits, receptacles fall into the following two categories:

- **Private Trash/Recycling Bins**: A receptacle for placing trash or recyclables generated from a household, business, or other location that is serviced by a trash hauler. Bins are specifically-designed, heavy-duty plastic wheeled containers with hinged lids; or large multi-yard metal or plastic containers rectangular in shape.
- **Public Area Trash Containers**: A receptacle for placing incidental trash generated in public spaces that provides people with a convenient and appropriate place to dispose of trash. The design and size of public area trash containers vary widely, depending on their setting and use.

The effectiveness of private bins/containers and public containers in reducing trash in the environment is likely dependent upon: the location and density of the receptacles, size of the bin/container in relationship to the size needed to service users, frequency of maintenance, and the ability of the bin/container to capture and contain the trash deposited.

Baseline Level of Implementation

The baseline trash load described in Section 2.0, assumes that the City of San José has not implemented enhanced trash bin/container management practices prior to effective date of the MRP.

Enhanced Level of Implementation

The City of San José proposes to implement the following improved trash bin/container management practices prior to July 1, 2014.

Ordinance for Appropriate Trash Services for Private Properties – The City of San José has included language in **Title 9.10.530 and 9.10.540 of the San José Municipal Code** that grants the City authority to require adequate service level of trash collection and prohibits overfilled and overflowing rubbish containers. The City also requires its commercial service provider to evaluate the service level of each commercial customer to ensure adequate service level. When solid waste service level is deemed to be insufficient, the contractor shall adjust the service level appropriately and provide the City with a report of this action. The administrative framework for these actions is memorialized in the standard contract compliance documentation submitted to the City per the agreement with its solid waste service provider.

Successful Establishment of Business Improvement Districts with Trash Reduction Control Measures – The City supported the successful establishment of the Downtown San José Business Improvement District (BID)[4] . The Downtown San José BID, among its enhanced services, incorporates sidewalk sweeping, litter pickup and maintenance of public area trash

[4] BIDs are districts or areas in central cities in which the private sector delivers services for revitalization beyond what the local government can reasonably be expected to provide. The property or business owner within the BID pays a special tax or assessment to cover the cost of services. Cities provide some oversight but the BID controls its finances.

containers at least once per week in this retail/wholesale and commercial area. An area-specific credit of 50% will be given for the BID successfully established within a Permittee's jurisdictional area that has specific trash reduction language in the agreement. For the Downtown San José BID, the area specific credit accounts for a 0.6 percent reduction.

Identification and Enforcement of Adequate Private Trash Service– The City of San José is considering establishing an enforcement program for ensuring adequate trash collection services. The program will identify businesses and/or households that have inadequate trash service (i.e., insufficient trash collection or use of bins which are too small), and require the businesses/households to sufficiently remedy the issue with appropriate sizing of containers or frequency of service.

Percent Reduction from Enhancements

The City of San José will receive a 1 percent reduction credit for having included language in the municipal code requiring appropriate trash services for private properties, as described in the *Enhanced Level of Implementation* section above. The existing Downtown San José Business Improvement District's enhanced trash management actions will result in the estimated cleanup of 5.2 cubic yards annually. This volume will account for a 0.6 percent reduction. In total, the 1.6 percent reduction will be applied to the City of San José's baseline trash load. This percent reduction is consistent with methods presented in the BASMAA (2012a). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5 in Table 5-1A.

If the City moves forward with implementation of an enforcement program for ensuring adequate trash collection services the City would receive a 2 percent reduction credit, as described in the *Enhanced Level of Implementation* section above. The 2 percent reduction credit would be applied to the City of San José's baseline trash load and support the City's efforts towards compliance with the 70% trash load reduction goal in MRP provision C.10 if implemented by 2017. A summary of all load reductions anticipated through existing and proposed trash control measures are included in Section 5 in Table 5-1B.

QF-1: Enhanced On-Land Trash Cleanups (Volunteers and/or Municipal)

On-land cleanups conducted by Permittees and volunteers have been successful in removing trash from identified trash hot spots and engaging local citizenry in improving their communities. Permittees have several programs in place to address on-land trash. Municipal efforts relate to ongoing beautification of impacted areas and coordination of cleanup events. Volunteer on-land cleanups involve the meeting of individuals, creek and watershed groups, civic organizations, businesses and others at designated or adopted on-land sites to remove trash. On-land trash cleanups may be conducted as single-day events or throughout the year.

Baseline Level of Implementation

The City of San José implemented the following on-land cleanup activities prior to the effective date of the MRP. The City has established an Anti-Litter Program which provides volunteer opportunities for individuals and groups, as well as organizing the annual Great American Litter Pick-Up. Municipal crews also remove litter from parks, streets and City-owned properties. These control measures are considered baseline because they were accounted for in the preliminary trash generation rates established through the BASMAA *Baseline Trash Loading Rates Project*. New or enhanced actions that began or are planned to begin after the effective date of the MRP are described under the next section.

Enhanced Level of Implementation

Prior to July 1, 2014, the City of San José will conduct or coordinate the following new or enhanced on-land trash cleanup activities listed below. These on-land cleanups will be conducted or coordinated each year and the volume of trash removed will be tracked to demonstrate trash loads reduced. For on-going cleanup programs that existed prior to the MRP adoption, the City of San José will quantify only the volume of trash removed that exceeds the average volume of trash removed by that same program prior to the adoption of the MRP.

Only trash that has the potential of entering the MS4 will be tracked. As a result, large items (e.g., appliances, shopping carts, furniture, mattresses, televisions, tires, lumber, etc.) that will be removed during on-land trash cleanups are not part of the volume determination since they do not have the potential of entering the MS4.

Enhanced or On-Going Permittee-led On-land Cleanups:

- ***Illegal Dump Site Response and Abatement:*** The San Jose Department of Transportation operated a complaint truck that responds to and removes items abandoned in the public right of way, including alleyways. Currently this program is intended to continue at its existing level.

- ***Litter Pickup Event Coordination and Cleanup:*** On-land cleanups coordinated and publicized by the municipality but conducted by volunteers and/or adult/juvenile offenders. The municipality provides trash bags and disposes of collected trash. Currently the largest event, coordinated by the Anti-Litter Program, is the annual Great

American Litter Pickup Event. The Anti-Litter Program continues to promote and expand the volunteer base of the Great American Litter Pickup Event each year.

Enhanced or On-Going Volunteer-led On-land Cleanups:

- ***Single-day Efforts:*** Anti Litter Program operates a 'Shed' Program which allows volunteer groups and organizations to borrow supplies from the Anti-Litter Program to organize a litter cleanup event at the location of their choice. This program can flexibly accommodate the participation of a broad range of volunteer groups, from the Boy Scouts to a company day-of-service.

- ***Year-Round Efforts:*** Anti Litter Program coordinates the broad Pick-Up San José Program. Individual residents joint the Pick-Up San Jose program and are provided supplies to remove litter in their neighborhood and nearby litter hot spots. The Anti-Litter Program continues to promote and recruit new volunteers to this program.

Percent Reduction from Enhancements

The total estimated annual volume of trash that will be reduced by July 1, 2014 as a result of implementing on-land trash cleanups is 135.15 cubic yards. This volume will account for a 13.9% percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of San José. Both values provided within this section are included in Trash Load Reduction Summary in Section 5 in Table 5-1A. The enhanced volume of trash collected reported above was the result of an increased number of volunteers participating at litter cleanup events since the adoption of the MRP. The volume was quantified by calculating the difference between the average volume of trash collected from the Anti-Litter Program volunteer events annually for four years prior to the adoption of the MRP and after the adoption of the MRP.

QF-2: Enhanced Street Sweeping

Street sweeping is conducted by most, if not all, Bay Area municipalities to remove trash and debris that collect in the gutters at the edge of streets. Parked cars and large storms that produce significant runoff can impact the effectiveness of street sweepers. However, increasing parking enforcement or more frequent street sweeping (as compared to the frequency of storm events) may increase the trash load reduced to MS4s. Permittees who choose to enhance street sweeping may do so to demonstrate trash load reductions to their MS4s and progress towards trash load reduction goals required by the MRP.

Baseline Level of Implementation

The trash load reduction tracking method (BASMAA 2012a) establishes a frequency ceiling for a baseline street sweeping program; these frequencies are 1x/week for retail land uses and 1x/month for all other land uses. This baseline street sweeping program is incorporated into the baseline trash load described in Section 2.0. Municipalities whose existing street sweeping programs sweep more frequently than this baseline may account for trash reductions attributable to the frequencies above this ceiling via the trash load reduction tracking method.

The City of San José's baseline street sweeping program includes multiple sweeper routes, conducted in-house and contractually, that serve different land uses at different frequencies. A general summary of these routes, frequencies, and land uses is provided in Table QF-3-1 and displayed in Figure QF-3-1. Some of these frequencies exceed the baseline described above; reductions due to existing sweeping that exceeds the baseline level are referred to as existing enhanced street sweeping and described in more detail in the "Percent Reduction from Enhancements" section.

Table QF-3-1: Existing street sweeping program in the City of San José.

Route	***Frequency***	***Predominant Land Use***
Residential (RSS)	1x/month	Residential
Arterials and Commercial Streets and Bikeways (ACB)	2x/month	Retail & Industrial/Commercial
Neighborhood Business Districts (NBD)	1x/week	Retail
Central Business District (CBD)	2x/week	Retail

Parking enforcement control measures or their equivalency serve to increase sweeper efficiency. Traditional parking enforcement includes signage on streets indicating sweeping schedules and 'no-parking is allowed' during scheduled street sweeping and enforcement of parking prohibitions via citations. Parking enforcement equivalency may be achieved due to the timing of sweeping (no parked cars), no parking being allowed, or the lack cars parked on street segments. As described in the Section 2.0, many residential and some arterial streets have parking enforcement signs. It is assumed that approximately half of the NBD and CBD routes have parking enforcement equivalency due to off hours sweeping. This information along with the data for signed streets will be re-verified and, if necessary, updated in the City of San José's next reporting period.

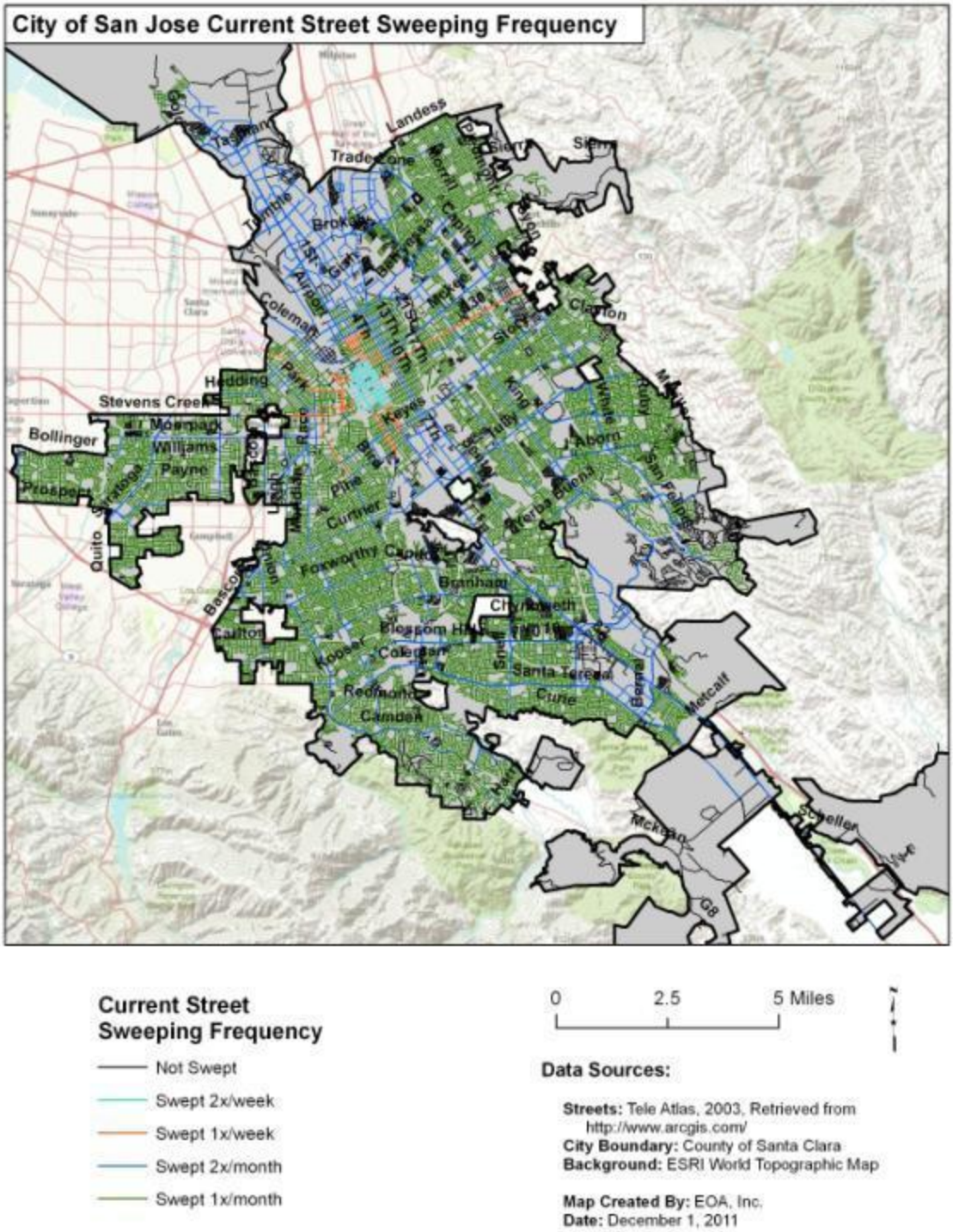

Figure QF-3-1. Current street sweeping frequencies in the City of San José.

Enhanced Level of Implementation

Enhancements to street sweeping frequencies and parking enforcement (or equivalent measures) will be used to calculate loads reduced from enhanced street sweeping, consistent with the trash load reduction tracking method (BASMAA 2012a). The City of San José is considering adding parking restrictions to 40 additional curb miles (CM) within residential neighborhoods as part of enhanced levels of implementation.

Percent Reduction from Enhancements

Current sweeping by the City of San José that exceeds the baseline frequencies results in a 1% reduction, and an estimated of 8.3 cubic yards of trash removed. A summary of all load reductions anticipated through existing trash control measures are included in Section 5 in Table 5-1A.

If implemented, the enhancement of the street sweeping program to include an additional 40 CM would result in an estimated reduction of 6.5 cubic yards. As described in Trash Load Reduction Summary Table 5-1B, this volume is equal to approximately a 0.7 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of San José. The .07 percent reduction would be applied to the City of San José's baseline trash load and support the City's efforts towards compliance with the 70% trash load reduction goal in MRP provision C.10 if implemented by 2017. A summary of all load reductions anticipated through existing and proposed trash control measures are included in Section 5 in Table 5-1B.

QF-3: Partial-Capture Treatment Devices

Partial-capture devices are treatment devices that have not been approved as full-capture by the San Francisco Bay Regional Water Quality Control Board but capture trash at a known effectiveness value. Partial-capture devices may be similar to full-capture devices but do not meet the full capture definition due to engineering challenges, or they may be completely different types of devices. Partial-capture devices include curb inlet screens (e.g., automated retractable screens), litter booms/curtains, and stormwater pump station track racks. Trash loads reduced via partial-capture devices within a Permittee's jurisdictional boundaries may be used to demonstrate attainment of trash load reduction goals.

Baseline Level of Implementation

Curb Inlet Screens and Litter Booms/Curtains

Prior to effective date of the MRP, some Permittees within the Bay area have installed and maintained curb inlet screens and litter booms/curtains. To avoid penalizing these early implementers, the applicable control measure implemented by a Permittee prior to the effective date of the MRP will be credited equally to a control measure implemented after the effective date. Furthermore, the trash load removed via these devices installed prior to the MRP is not accounted for in baseline trash loads. Therefore, the baseline level of implementation is not applicable for this control measure, as devices installed prior to the effective date of the MRP and associated loads reduced will be grandfathered in as enhanced measures.

The City of San José currently does not have any such devices installed.

Enhanced Level of Implementation

The City proposes to install up to 400 partial-capture treatment devices (automated retractable screens over storm inlets) in residential areas by July 1, 2014. Calculation of loads reduced from partial-capture devices will be consistent with the approach described in the *Trash Load Reduction Tracking Method Report* (BASMAA 2012a).

Percent Reduction from Enhancements

The total estimated annual volume of trash that would be reduced as a result of the proposed implementation of partial-capture treatment devices in residential land uses would be 9.9 cubic yards. This volume would be equal to approximately a 1 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of San José. Both values provided within this section are included in Trash Load Reduction Summary in Section 5 in Table 5-1B.

QF-5: Full-Capture Treatment Devices

As defined by the Municipal Regional Stormwater Permit (MRP), a full-capture system or device is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one-hour, storm in the sub-drainage area. A list of the full-capture systems and devices recognized by the San Francisco Bay Regional Water Quality Control Board (Water Board) is included in *Trash Load Reduction Tracking Method Report* (BASMAA 2012a). Trash loads reduced via publically or privately owned and operated devices within a Permittee's jurisdictional area that have been recognized by the Water Board as full-capture may be used to demonstrate attainment of trash load reduction goals.

Baseline Level of Implementation

Prior to adoption of the MRP, some Pemittees installed and maintained full capture devices. To avoid penalizing these early implementers, an applicable control measure implemented within a Permittee's jurisdictional area prior to the effective date of the MRP will be credited equally to a control measure implemented after the effective date. Therefore, the baseline level of implementation is no trash full-capture devices have been installed.

Enhanced Level of Implementation

A total of nine continuous deflection separation devices have been or will be installed in the City of San José prior to July 1, 2014. Two devices were installed in 2011 and up to seven additional units are scheduled for installation in 2012. A list of these full-capture devices is included in Table QF-6-1. All devices listed within this table are enhanced trash control measures. The estimated reduction from these units is 29.5 cubic yards. This volume is equal to approximately a 3 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of San José. Table QF-6-1 also includes the area treated and the calculated trash load reduced from each full-capture treatment device. These calculations are consistent with the approach described in the *Trash Load Reduction Tracking Method Report* (BASMAA 2012a).

A total of 118 connector pipe screens have been installed in the City of San José. The locations of these units are included in Table QF-6-2. The actual locations are under verification, and if needed, update locations will be reported with City of San José's next reporting period. The estimated reduction from these units is 7.4 cubic yards. This volume is equal to approximately a 0.8 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of San José. These calculations are consistent with the approach described in the *Trash Load Reduction Tracking Method Report* (BASMAA 2012a).

Percent Reduction from Enhancements

The total estimated annual volume of trash that will be reduced by July 1, 2014 as a result of implementing full capture devices is 36.9 cubic yards. This volume is equal to approximately a 3.8 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of San José. Both values provided within this section are included in Trash Load Reduction Summary in Section 5 in Table 5-1B.

Table QF-5-1: Continuous deflective separators trash full-capture treatment devices within the jurisdictional boundaries of the City of San José that are planned for installation by July 1, 2014[5].

Device ID	Public or Private	Device Name	Location (Cross Streets)	Installation Date/Anticipated Installation Date	Estimated Total Area Treated (Acres)	Trash Load Reduced (Cubic Yards)
1	Public	Wool Creek	Rock Springs Drive	Installed Summer 2011	48	1.3
2	Public	Bulldog Boulevard	24th Street	Installed Summer 2011	207	9.0
3	Public	Virginia Street	Palm Street	Planned for Summer 2012	223	11.7
4	Public	Woodborough Drive	Woodborough Court	Planned for Summer 2012	105	3.3
5	Public	William Street Park	East Williams Street	Planned for Summer 2012	74	0.2
6	Public	7th Street	Phelan Avenue	Planned for Summer 2012	178	2.5
7	Public	Balbach Street	Almaden Avenue	Planned for Summer 2012	38	1.6
8	Public	Pierce Avenue	Almaden Avenue	Planned for Summer 2012	58	3.0
9	Public	South Sunset Avenue	Shortridge Avenue	Planned for Summer 2012	173	4.1

[5] Units 3-9 are proposed units and thus subject to change. Information updates regarding these devices will be provided via Annual Reports submitted by the City of San José.

Table QF-5-2: Connector pipe screens trash full-capture treatment devices within the jurisdictional boundaries of the City of San José that are planned for installation by July 1, 2014.

City Inlet ID	BASMAA Device ID	Public or Private	Location	Installation Date/Anticipated Installation Date	Total Area Treated (Acres)
5270	SJ01	Public	End of Dobbin Drive in cul-de-sac, (northeastern-most catch basin)	November 2007	1.97 (estimated)
17588	SJ02	Public	End of Dobbin Drive in cul-de-sac, (northwestern-most catch basin)	November 2007	1.97 (estimated)
5269	SJ03	Public	End of Dobbin Drive in cul-de-sac, southside	November 2007	1.97 (estimated)
5275	SJ04	Public	Dobbin Drive about 325 ft east of SJ05, southside (near entrance to Chong's Produce)	November 2007	1.97 (estimated)
5278	SJ05	Public	Dobbin Drive about 750 ft east of North King Rd, northside (near entrance to Eastern – the Furniture Company)	November 2007	1.97 (estimated)
5279	SJ06	Public	Corner of North King Rd and Dobbin Dr (on Dobbin Drive, northside)	November 2007	1.97 (estimated)
5363	SJ07	Public	In front of 697 Lenfest Road (Jalimex Foods Corporation), about 400 ft south of Maybury Road, Westside	November 2007	1.97 (estimated)
5367	SJ08	Public	Lenfest Road, about 175 ft south of Nicora Avenue, Westside	November 2007	1.97 (estimated)
5380	SJ09	Public	Las Plumas and Nipper avenues (on Las Plumas Avenue, northside), western-most of the two catch basins	November 2007	1.97 (estimated)
5379	SJ10	Public	Las Plumas and Nipper avenues (on Las Plumas Avenue, northside), about 50 ft east of SJ09	November 2007	1.97 (estimated)
5323	SJ11	Public	In front of 551 Avalani Ave., at bend of the road, northside	November 2007	1.97 (estimated)
5322	SJ12	Public	In front of 589 Avalani Ave. (small apartment building), near bend of the road, southside	November 2007	1.97 (estimated)
9883	SJ13	Public	NE corner of Alum Rock and North Sunset avenues	June 2008	1.97 (estimated)
29592	SJ14	Public	About 75 feet south of the corner of Mervyn's Way and South Capitol Avenue, near East Capitol Expressway entrance road (adjacent to Mt Hamilton CTA on South Capitol Avenue)	June 2008	1.97 (estimated)

City Inlet ID	BASMAA Device ID	Public or Private	Location	Installation Date/Anticipated Installation Date	Total Area Treated (Acres)
10614	SJ15	Public	Corner of Leeward Drive and north entrance to Dumont Circle (on Dumont Circle, northside)	November 2007	1.97 (estimated)
10637	SJ16	Public	Leeward Drive, about 250 ft south of north entrance to Dumont Circle, eastside	November 2007	1.97 (estimated)
10634	SJ17	Public	South of corner of Leeward Drive and Leeward Court (on Leeward Drive, eastside)	November 2007	1.97 (estimated)
10623	SJ18	Public	Corner of Leeward Drive and Arden Way (on Leeward Drive, near street sign), eastside	November 2007	1.97 (estimated)
29636	SJ19	Public	Story Road, adjacent to Home Depot, near main entrance	June 2008	1.97 (estimated)
29619	SJ20	Public	SW corner of Story Road and South White Road (on Story Road, adjacent to Burger King)	June 2008	1.97 (estimated)
10861	SJ21	Public	NE corner of Story Road and South White Road (on Story road, adjacent to 76 gas station)	November 2007	1.97 (estimated)
10776	SJ22	Public	NW corner of Murtha and Farringdon drives (on Murtha Drive)	June 2008	1.97 (estimated)
10778	SJ23	Public	SE corner of Murtha and Farringdon drives (on Farringdon Drive)	June 2008	1.97 (estimated)
29634	SJ24	Public	Corner of South White Road and Candler Avenue (on Candler Avenue, near Murtha Drive)	June 2008	1.97 (estimated)
10831	SJ25	Public	Corner of Mount Vista and Mount Polomar drives (on Mount Polomar Drive, under tree, westside)	June 2008	1.97 (estimated)
10830	SJ26	Public	Corner of Mount Vista and Mount Polomar drives, (on Mount Polomar Drive, eastside)	June 2008	1.97 (estimated)
7568	SJ27	Public	Alvin Avenue and Fontaine Road (on Alvin Avenue, near entrance to U.S. Post Office and stop light pole/newspaper stand)	June 2008	1.97 (estimated)
7565	SJ28	Public	Alvin Ave between Fountaine Road and Burdette Drive, eastside	June 2008	1.97 (estimated)
7509	SJ29	Public	Flanigan Drive about 175 ft west of South Kind Road	June 2008	1.97 (estimated)
7557	SJ30	Public	Corner of Tully Road and Seacliff Way (on Tully Road, near street pole adjacent to Huong Lan Sandwiches)	June 2008	1.97 (estimated)
7553	SJ31	Public	NE corner of Tully Road and South King Road (on South King Road, adjacent to Pho Bang)	November 2007	1.97 (estimated)

City Inlet ID	BASMAA Device ID	Public or Private	Location	Installation Date/Anticipated Installation Date	Total Area Treated (Acres)
7537	SJ32	Public	Tully Road between South King Road and Huran Drive, near shopping center sign, southside	November 2007	1.97 (estimated)
7546	SJ33	Public	NE corner of Tully Road and Huran Drive (on Tully Road, near stop light, adjacent to Kragen-O'Reilly Auto Parts)	November 2007	1.97 (estimated)
7520	SJ34	Public	NE corner of Tully Road and Quimby Road (on Tully Road, next to street light, near entrance to shopping center)	November 2007	1.97 (estimated)
18495	SJ35	Public	Corner of Senter Road and Wool Creek Drive (on Wool Creek Drive, adjacent to fire hydrant), northside	March 2011	1.97 (estimated)
12116	SJ36	Public	Santee River Court about 275 ft west of Lone Bluff Way, adjacent to "No Parking" sign, northside	March 2011	1.97 (estimated)
15812	SJ37	Public	Corner of East Capitol Expressway and Tuers Road (on Tuers Road, on one-way entrance road, adjacent to Denny's Restaurant), eastside	March 2011	1.97 (estimated)
7887	SJ38	Public	East Capitol Expressway about 375 ft east of Senter Road, adjacent to baseball field, southside	March 2011	1.97 (estimated)
37465	SJ39	Public	Corner of Tenley Drive and Albemar court (on Tenley Drive), eastside	March 2011	1.97 (estimated)
36128	SJ40	Public	Michaelangelo Drive, about 50 ft west of Evergreen Village Square (in front of Quiznos Sub), northside	March 2011	1.97 (estimated)
34941	SJ41	Public	SE corner of Fontenay Way and Trabuco Court (on Fontenay Way, adjacent to street light)	March 2011	1.97 (estimated)
14600	SJ42	Public	Delta Road between Linkfield and Pinot Blanc ways, about 120 ft west of Pinot Blanc Way, (adjacent to street light and wooden fence), southside	March 2011	1.97 (estimated)
14788	SJ43	Public	Corner of Paseo de Arboles and San Felipe Road (on Paseo de Arboles, adjacent to stop light), southside	March 2011	1.97 (estimated)
32930	SJ44	Public	Corner of Hillstone and Byington drives (on Hillside Drive, adjacent to street light), northside	March 2011	1.97 (estimated)
27007	SJ45	Public	In front of 5845 Scenic Meadow Lane, adjacent to driveway and yellow fire hydrant, westside	April 2011	1.97 (estimated)
30435	SJ46	Public	800 Rue Ferrari	March 2011	1.97 (estimated)
31432	SJ47	Public	Las Colinas Lane about 250 ft west of Great Oaks Boulevard, (directly across from catch basin at driveway	March 2011	1.97 (estimated)

City Inlet ID	BASMAA Device ID	Public or Private	Location	Installation Date/Anticipated Installation Date	Total Area Treated (Acres)
			entrance), northside		
23019	SJ48	Public	In front of 6309 Channel Dr. (at bend in the road, under the tree), westside	March 2011	1.97 (estimated)
4507	SJ49	Public	Corner of Finchwood and Royalwood Way (in front of 796 Finchwood Way), southside	March 2011	1.97 (estimated)
7016	SJ50	Public	Grimley Lane and Cold Creek Way (on Cold Creek Way, adjacent to trees and ground ivy), eastside	March 2011	1.97 (estimated)
18675	SJ51	Public	Almaden Expressway about 525 ft south of Coleman Road, adjacent to exit road from Almaden Lake Park and "No Parking" sign, eastside	March 2011	1.97 (estimated)
38136	SJ52	Public	Blossom Hill Road about 400 ft east of Santa Teresa Boulevard (adjacent to Party city parking lot and two small trees), northside	April 2011	1.97 (estimated)
22146	SJ53	Public	Corner of Santa Teresa Boulevard and Thornwood Drive in right-turning lane (on Santa Teresa Boulevard near stop light, adjacent to Mandarin Gourmet restaurant), eastside	March 2011	1.97 (estimated)
20049	SJ54	Public	Corner of Michon Dr and Cordoy Lane (on Cordoy Lane, under tree, directly across street from 5057 Cordoy Lane), eastside	March 2011	1.97 (estimated)
8439	SJ55	Public	Union Avenue and Woodard Road (on Union Avenue, near PG&E electric box and stop light, adjacent to Rangoli Indian Restaurant), westside	March 2011	1.97 (estimated)
18364	SJ56	Public	In front of 2666 S. Bascom Ave. (adjacent to green PG&E electric box and driveway to Lunardi's Market between Union and Curtner avenues), eastside	April 2011	1.97 (estimated)
1862	SJ57	Public	In front of 967 Twin Brook Dr., under tree, 15 ft north of Twin Brook Court, westside	April 2011	1.97 (estimated)
1154	SJ58	Public	Corner of Payne Avenue and Essex Way (on Essex Way adjacent to yellow fire hydrant), westside	April 2011	1.97 (estimated)
2478	SJ59	Public	Essex Way about 150 ft south of Payne Avenue, in front of first house after condominiums, westside	April 2011	1.97 (estimated)
1857	SJ60	Public	Corner of Littleoak Drive and Littleoak Circle (on Littleoak Circle, under street light), northside	April 2011	1.97 (estimated)

City Inlet ID	BASMAA Device ID	Public or Private	Location	Installation Date/Anticipated Installation Date	Total Area Treated (Acres)
1003	SJ61	Public	SW corner of Royal Ann Drive and Tartarian Way (in front of 1411 Tartarian Way, adjacent to small tree), westside1.97 (estimated)	April 2011	1.97 (estimated)
2973	SJ62	Public	In front of 2105 Forest Ave., directly across from Di Salvo Avenue (at entrance to O'Connor Hospital, adjacent to blue O'Connor Hospital sign and crosswalk), westside	April 2011	1.97 (estimated)
25078	SJ63	Public	In parking lot bordered by West Julian Street and North Almaden Boulevard	April 2011	1.97 (estimated)
26376	SJ64	Public	Poco Way about 225 ft east of McCreery Avenue (or 30 ft east of large driveway), in front of 1897 Poco Way Units 302/303, southside	March 2011	1.97 (estimated)
25790	SJ65	Public	North 1st Avenue and Century Center Court (on Center Center court, adjacent to stop sign), southside	March 2011	1.97 (estimated)
25941	SJ66	Public	Ridder Park Drive about 225 ft south of the bend in the road, near northernmost entrance to the San José Mercury News parking lot (directly across from catch basin adjacent to Interstate 880), eastside	March 2011	1.97 (estimated)
26313	SJ67	Public	Near cornder of Kruse and Dado Street (on Dado Street, about 50 ft west of bend in the road with Kruse Street, directly across screet from large tank farm, adjacent to street light), northside	March 2011	1.97 (estimated)
35247	SJ68	Public	Baypointe Parkway about 325 ft south of Descanso Drive, adjacent to large driveway, eastside	April 2011	1.97 (estimated)
28049	SJ69	Public	NW corner of Murphy and Ringwood avenues (on Ringwood Avenue, in front of Willow Lake Apartments), adjacent to street light, westside	March 2011	1.97 (estimated)
24193	SJ70	Public	Old Stone Place about 125 ft south of Old Post Way, at bend in the road, adjacent to driveway, westside	March 2011	1.97 (estimated)
22541	SJ71	Public	In front of 895 Creek Pointe Drive, at bend in the road with Salt Take Drive, westside	March 2011	1.97 (estimated)
21182	SJ72	Public	Proud Drive about 200 ft north of Vistaview Drive, (adjacent to green PG&E electric box), westside	March 2011	1.97 (estimated)
10652	SJ73	Public	Corner of Tallahassee Drive and Samoa Way (on Samoa Way, adjacent to crosswalk and school crossing sign),	November 2007	1.97 (estimated)

City Inlet ID	BASMAA Device ID	Public or Private	Location	Installation Date/Anticipated Installation Date	Total Area Treated (Acres)
			northside, behind 1196 Tallahassee Dr.)		
26118	SJ74	Public	Corner of El Rancho Verde Drive and Palacio Verde court (on Palacio Verde Court, adjacent to tree and "Not a Through Street" sign, eastside), eastside1.97 (estimated)	November 2007	1.97 (estimated)
26121	SJ75	Public	Corner of El Rancho Verde Drive and Palacio Verde Court (on Palacio Verde Court, adjacent to street light and stop sign), westside	November 2007	1.97 (estimated)
26105	SJ76	Public	El Rancho Verde Drive about 175 ft west of José Figueres Avenue (or about 60 ft west of Aquacate Court), northside	November 2007	1.97 (estimated)

QF-6: Creek/Channel/Shoreline Cleanups

Creek/channel/shoreline cleanups have been successful in removing large amounts of trash from San Francisco Bay area creeks and waterways; and increasing citizen's awareness of trash issues within their communities. Creek/channel/shoreline cleanups are conducted as single-day events or throughout the year by volunteers and municipal agencies. Since volunteers and municipal agencies have the common goal of clean creeks and waterways, their efforts sometimes overlap. This is apparent with some municipal agencies using volunteers to help assess and clean designated trash hot spots during single-day volunteer events.

Baseline Level of Implementation

Trash reduced via creek/channel/shoreline cleanups was not accounted for in the City of San José's baseline trash load described in Section 2.0. Therefore, implementation of any of the control measures described in this section is considered to be an enhancement and can be used to demonstrate progress towards load reduction goals.

Enhanced Level of Implementation

The City of San José will annually conduct MRP-required[6] and the following non MRP-required creek/channel/shoreline cleanups[7] listed below. Both types of cleanups will be conducted each year and the volume of trash removed will be tracked to demonstrate trash loads reduced. For existing creek cleanup programs, the City of San José will quantify and take credit for only the volume of trash removed that exceeds the average volume of trash removed by that same program prior to the adoption of the MRP.

City & Volunteer Collaborative Activities

Single-day Efforts

- *National River Cleanup Day (third Saturday in May)*
- *Coastal Cleanup Day (third Saturday in September)*
- *Other Organized Single-day Events*

City-led Cleanup Activities

On-going Efforts

- *Removal of Homeless Encampments*
- *Trash Hot Spot Cleanups*
- *Other On-going Cleanup Efforts*

Clean Creeks, Healthy Communities

On June 7, 2011, the City of San José entered into an agreement with the US EPA to fund the Clean Creeks, Healthy Communities Project (CCHCP), a pilot program designed to reduce trash along a targeted three mile reach of Coyote Creek. The CCHCP leverages the resources of homeless community service providers, the City, the Santa Clara Valley Water District, and others to employ homeless people to clean the targeted area of Coyote Creek. Along a parallel track, the project seeks to engage communities living immediately adjacent to the creek in order to raise creek awareness and develop local stewards. In the first three months of the project,

[6] Creek/channel/shoreline cleanups conducted in accordance with Permit Provision C.10.b.

[6]All "other" creek/channel/shoreline cleanups conducted by a municipality that are not required by Provision C.10.b.

the homeless participants working in the grant project area removed an additional 401 cubic yards of debris from the Coyote Creek project area. This volume of material is not included in the enhanced clean-up reduction calculation. Currently, this pilot project continues in a start-up mode. However, the CCHCP appears to have significant potential for reducing trash from Coyote Creek and can serve as a model and scaled in order to clean-up other creeks in San José. The City hopes to engage in discussions with Regional Board staff as to the best means of incorporating successes of the CCHCP, and similar efforts into trash reduction calculations hereafter.

Percent Reduction from Enhancements

The total estimated annual volume of trash that will be reduced by July 1, 2014 as a result of implementing creek/channel/shoreline cleanups is 103.7 cubic yards. This volume is equal to approximately a 10.7 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of San José. Both values provided within this section are included in Trash Load Reduction Summary in Section 5 in Table 5-1A.

5.0 SUMMARY OF TRASH CONTROL MEASURE ENHANCEMENTS

The City of San José is committed to reducing the potential for trash impacts in locate water bodies in the San Francisco Bay Area. Based on the crediting methodology developed by BASMAA and assessment of the programs and policies that already implemented or programmed, the City will be able to reach and exceed the trash load reduction requirement of 40% by 2014. This can be attributed to early investments made by the City to address trash such as the City's adoption of the nation's most comprehensive Single-use Carryout Plastic Bag Ordinance, installation of structural retrofits for full trash capture, as well as other litter prevention and cleanup efforts. In addition the City will continue to enhance outreach to the public on trash pollution at both a local level and through the Watershed Watch campaign and the BASMAA regional campaign. The City will also promote increasing the number of volunteers participating in litter cleanup from neighborhoods and waterways, and municipal staff will continue to lead the cleanup of trash hot sports in creeks. The already implemented or programmed enhanced trash control measures as described in Section 3.0 are also listed in Table 5-1A. These enhancements are intended to demonstrate compliance with the 40% trash load reduction goal in MRP provision C.10.

The City of San José is considering additional trash control measure enhancements that will support the City's early efforts toward the 70% trash reduction goal by 2017. These candidate enhancements may establish enforcement of trash from uncovered loads, deter illegal dumping activities, and improve trash and recycling container management. In addition to these preventative measures the City of San José may expand the existing street sweeping program and add partial trash capture devices such as automated retractable screens and continuous deflection separation units. Any action the City takes to address polystyrene foam food service ware litter from eating establishments will also contribute towards the 70% goal. These candidate enhanced trash control measures which are under consideration as described in Section 3.0 are also listed in Table 5-1B and are would support the City's efforts towards compliance with the 70% trash load reduction goal in MRP provision C.10 and may be implemented by 2017.

Table 5-1A: Ongoing and already programmed trash control measure implementation within the jurisdictional boundaries of the City of San José and associated trash loads reduced.

Trash Control Measure	Summary Description Control Measure Action	% Reduction (Credits)	% Reduction (Quantifications)	Trash Load Reduced (Cubic Yards)	Cumulative % Reduction (Compared to Baseline)
Existing Enhanced Street Sweeping	Sweeping above baseline frequency	NA	0.8	8.0	0.8
Single-use Carryout Plastic Bag Ordinance (CR-1)	Ordinance prohibiting single-use plastic bags and assessing a fee on recycled paper bags	12.0	NA	115.7	12.7
Polystyrene Foam Food Service Ware Ban (CR-2)	Policy prohibiting food vendors from distributing polystyrene foam food and beverage ware at City sponsored events	2.0	NA	19.3	14.7
Public Education and Outreach Programs (CR-3)	Advertising campaign, outreach to school-aged children or youth, media relations, and community outreach events	8.0	NA	77.1	22.6
Activities to Reduce Trash from Uncovered Loads (CR-4)	Contract requirements for municipal trash haulers to cover load	1.0	NA	9.6	23.6
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6)	Ordinance for appropriate trash services for private properties and establishment of Downtown San José BID	1.6	NA	15.4	25.2
On-land Trash Cleanups (Volunteer and/or Municipal) (QF-1)	Enhanced Volunteer Clean-up	NA	13.9	135.2	39.1
Full-capture Treatment Devices (QF-5)[8]	Installation of 118 connector pipe screens	NA	0.8	8.2	40.0
Full-capture Treatment Devices (QF-5)	Installation of up to 9 HDS	NA	3.5	33.8	43.4
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (QF-6)	Annual cleanup of 32 Trash Hot Spots	NA	10.7	103.7	54.1

[8] The percentage of trash reduction compared to baseline trash load achieved by the full capture treatment devices will change dependent on the percent of trash reduction achieved through preventative methods.

Table 5-1B: Enhanced trash control measure under consideration for implementation within the jurisdictional boundaries of the City of San José and associated trash loads reduced.*

Trash Control Measure	Summary Description Control Measure Action	% Reduction (Credits)	% Reduction (Quantifications)	Trash Load Reduced (Cubic Yards)	Cumulative % Reduction (Compared to Baseline)
Existing Enhanced Street Sweeping	Sweeping above baseline frequency	NA	0.8	8.0	0.8
Single-use Carryout Plastic Bag Ordinance (CR-1)	Ordinance prohibiting single-use plastic bags and assessing a fee on recycled paper bags	12.0	NA	115.7	12.7
Polystyrene Foam Food Service Ware Ban (CR-2)	Policy for prohibiting food vendors from distributing polystyrene foam food and beverage ware at City sponsored events	2.0	NA	19.3	14.7
Public Education and Outreach Programs (CR-3)	Advertising campaign, outreach to school-aged children or youth, media relations, and community outreach events	8.0	NA	77.1	22.6
Activities to Reduce Trash from Uncovered Loads (CR-4)	Contract requirements for municipal trash haulers to cover load, **potential enhanced enforcement program for vehicles with uncovered loads**	1.0 **4.0**	NA	48.2	27.6
Anti-Littering and Illegal Dumping Enforcement Activities (CR-5)	**Potential Anti-litter and illegal dumping enforcement program**	**2.0**	**NA**	**19.3**	**29.6**
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6)	Ordinance for appropriate trash services for private properties, Downtown BID, **potential program for identification and enforcement for inadequate trash service**	1.6 **2.0**	NA	34.7	33.2
On-land Trash Cleanups (Volunteer and/or Municipal) (QF-1)	Enhanced Volunteer Clean-up	NA	13.9	135.2	47.1
Enhanced Street Sweeping (QF-2)	**Potential Expansion of 'no parking' enforcement on 40 curb miles**	**NA**	**0.7**	**6.5**	**47.7**
Curb Inlet Screens (Partial-capture Treatment Device) (QF-3a)	**Installation of up to 400 ARS**	**NA**	**1.0**	**9.9**	**48.8**
Full-capture Treatment Devices (QF-5)	Installation of 118 connector pipe screens	NA	0.8	7.4	49.5
Full-capture Treatment Devices (QF-5)	Installation of up to 9 HDS	NA	3.0	29.1	52.5
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (QF-6)	Annual cleanup of 32 Trash Hot Spots	NA	10.7	103.7	63.2

*Enhanced trash control measures under consideration for implementation are indicated in bold font and categories with additional percent reductions are shaded.

5.1 Annual Reporting and Progress Towards Trash Load Reduction Goal(s)

Consistent with MRP Provision C.10.d (i), the City of San José intends to report on progress towards MRP trash load reduction goals on an annual basis beginning with the Fiscal Year 2011-2012 Annual Report. Annual reports will include:

1. A brief summary of all enhanced trash load reduction control measures implemented to-date;
2. The dominant types of trash likely removed via these control measures;
3. Total trash loads removed (credits and quantifications) via each control measure implementation; and
4. A summary and quantification of progress towards trash load reduction goals.

Similar to other MRP provision, annual reporting formats will be consistent region-wide. Annual reports are intended to provide a summary of control measure implementation and demonstrate progress toward MRP trash reduction goals. For more detailed information on specific control measures, the City of San José will retain supporting documentation on trash load reduction control measure implementation. These records should have a level of specificity consistent with the trash load reduction tracking methods described in the *BASMAA Trash Load Reduction Tracking Method Technical Report* (BASMAA 2012a).

5.2 Considerations of Uncertainties

Baseline trash loading and load reduction estimates are based on the best available information at the time this Short-Term Plan was developed. As with any stormwater loading and reduction estimate, a number of assumptions were used during calculations and therefore uncertainty is inherent in the baseline trash load estimate presented in Section 2.0 and the load reduction estimate presented in this section. For these reasons, the baseline loading estimates presented in this plan should be considered first-order estimates. During the implementation of this Short-Term Plan and subsequent plans, additional information may become available to allow the calculation of a more robust baseline load.

6.0 IMPLEMENTATION SCHEDULE

Implementation of enhanced trash control measures by the City of San José is currently planned to occur in a timeframe consistent with MRP requirements. A preliminary implementation schedule for all planned enhancements is described in Table 6-1. This schedule provides a timeframe for reducing trash discharged from the City of San José's MS4 by 40%.

Based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas), the City of San José may chose to amend or revise this Plan and/or the associated implementation schedule. If revisions or amendments occur, a revised Short-Term Plan and implementation schedule will be submitted to the Water Board via the City of San José's annual reporting process.

The San José City Council maintains discretion over the level of expenditures for control measures and service level implementation in accordance with the City's annual budgeting process, City Charter, and Municipal Code. Funding and direction for on-going implementation level and establishment of new control measures as outlined in this Plan are subject to annual appropriation by San José City Council and other policy actions as needed. Inclusion in this Plan does not obligate the City to implementation of a proposed action. Any changes from the proposed implementation level or adjustments to the Plan will be reported in the annual reporting process.

Table 6-1. Preliminary implementation schedule for enhanced trash control measures in the San José

Trash Control Measure	Beginning Date of Implementation
Single-use Carryout Plastic Bag Ordinance (CR-1) Prohibits the Distribution of Single-use Bags at all Retail Establishments (with the exception of restaurants)	**FY 10-11 and 11-12**
Polystyrene Foam Food Service Ware Ban (CR-2) Prohibit Distribution at Permittee-sponsored Events or Permittee-owned Property	**FY09-10**
Public Education and Outreach Programs (CR-3) Advertising campaign, outreach to school-aged children or youth, media relations, and community outreach events	**FY09-10**
Activities to Reduce Trash from Uncovered Loads (CR-4) Prescriptive Language in Municipal Contracts for Trash and Debris Haulers	**Currently Implemented**
Activities to Reduce Trash from Uncovered Loads (CR-4) Implementation of an Enhanced Enforcement Program for Vehicles with Uncovered Loads	**Under consideration for implementation by 2017***
Anti-Littering and Illegal Dumping Enforcement Activities (CR-5) Anti-Littering and Illegal Dumping Investigation and Enforcement Program	**Under consideration for implementation by 2017***
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6) Development and Approval of Ordinance (or equivalent) for Appropriate Trash Services (Bin/Enclosure Design) for Private Properties	**Currently Implemented**
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6) Identification and Enforcement of Inadequate Trash Service for Private Trash and Recycling Bins/Containers	**Under consideration for implementation by 2017***
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6) Successful Establishment of Each Business Improvement District (BID) that Includes Trash Reduction Control Measures	**Currently Implemented**
On-land Trash Cleanups (Volunteer and/or Municipal) (QF-1) Volunteer cleanup and the Anti-Litter Volunteer Program	**FY09-10**

Enhanced Street Sweeping (QF-2) Expansion of 'no parking' enforcement on 40 curb miles	**Under consideration for implementation by 2017***
Curb Inlet Screens (Partial-capture Treatment Device) (QF-3a) 400 Curb Inlet Screens	**FY12-13***
Full-capture Treatment Devices (QF-5) 118 connector pipe screens	**FY 07-08, 09-10, and 10-11**
Full-capture Treatment Devices (QF-5) 9 Hydrodynamic Separators	**FY10-11 and 11-12**
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (QF-6) 32 trash Hot Spot Cleanups, and volunteer cleanup events	**FY09-10**

*These are proposed actions that will contribute towards the City's efforts to reach the 70% trash reduction by 2017. Actual implementation dates may change based on City evaluation.

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