COUNCIL AGENDA: 01-24-12
ITEM: 7.1

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: **TRASH LOAD REDUCTION PLAN**

DATE: January 3, 2012

Approved

Date 1/6/12

RECOMMENDATION

1. Authorize submittal of the City's Short Term Trash Load Reduction Plan to the San Francisco Bay Regional Water Quality Control Board in conformance with the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (Stormwater Permit) requirement, pursuant to the Federal Clean Water Act;

2. Direct staff to provide an update to the Transportation and Environment Committee in 2013 on the status of the City's efforts in attaining the Stormwater Permit's required trash reduction goals and potential trash reduction actions to be considered for attaining the Stormwater Permit's long term trash reduction goals of 70 percent by 2017 and 100 percent by 2022; and

3. Direct staff to take the following actions regarding polystyrene foam food service ware:

    a. Actively support a regional approach for countywide initiatives to reduce polystyrene foam food service ware litter as recommended by the Santa Clara County Recycling and Waste Reduction Commission;

    b. Support legislation that would implement a state-wide program that would significantly reduce the use of polystyrene foam food service ware for the purposes of reducing litter from this source; and

    c. Return to the Transportation and Environment Committee in 2013 with options that move the City toward eliminating polystyrene foam food ware litter including program components that address key stakeholder concerns, programmatic options that would minimize impacts of a potential prohibition, and any practicable alternatives and partnerships that would achieve the litter reduction goals of the Municipal Regional Stormwater Permit.

OUTCOME

Approval of the recommended strategy to meet the Stormwater Permit's requirement to reduce trash from the storm sewer system by 40 percent by 2014 will allow staff to submit the Short Term Trash Load Reduction Plan (Short Term 2014 Plan) to the San Francisco Bay Regional Water Quality Control Board by the February 1, 2012, deadline. The most recent analysis of the City's Trash Load Reduction efforts show that the City is well positioned to satisfy and potentially exceed the Stormwater Permit's 2014 goal of 40 percent trash reduction with actions that are already in place or programmed. This new information – based on ongoing refinement of credit methodologies and additional quantifiable data – provides the City with the opportunity to recalibrate the pace at which the next phase of trash reduction efforts come online. Prior to staff's next update to the Transportation and Environment Committee on these efforts in 2013, staff will continue to implement existing and new initiatives in accordance with the Short Term 2014 Plan (any new actions requiring budget approval will be considered as part of the City's annual budget process) and continue to leverage new and existing partnerships with the goal of reducing trash in local creeks and achieving broader community benefits in a cost effective manner.

Furthermore, approval of the staff recommendation would also provide staff adequate time to advance regional or statewide action to reduce polystyrene foam food service ware litter as well as conduct further research on and continue to work with stakeholders to develop San José-specific alternatives that would eliminate polystyrene foam food service ware litter impacts on neighborhoods and waterways in a way that meets regulatory requirements, contributes towards the City's Green Vision, improves the quality of life in our neighborhoods, and strives to balance the impact on the City, businesses, and community.

EXECUTIVE SUMMARY

The San Francisco Bay Regional Water Quality Control Board (Water Board) initiated more stringent regulation of trash as a pollutant under the Federal Clean Water Act. The City's storm sewer system is regulated under the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (Order R2 2009 0074) (Stormwater Permit) issued by the Water Board. The Stormwater Permit specifies actions necessary to reduce the discharge of pollutants, including trash, into the municipal storm sewer system to protect local creeks and the Bay, and requires all Permittees to reduce trash loading to the storm sewer system by 40 percent by 2014, 70 percent by 2017, and 100 percent by 2022. Each permittee must submit a Short Term Trash Load Reduction Plan (Short Term 2014 Plan) by February 1, 2012, to document how the 2014 trash reduction goal will be met.

The Bay Area Stormwater Management Agencies Association (BASMAA) is developing methodologies and tools for cities to quantify specific baseline trash levels and trash reduction mitigation crediting and tracking with input from member agencies, key stakeholders, and Water Board staff. These methodologies are currently undergoing refinement and final methodologies will be submitted to the Water Board concurrent with the permittees' Trash Baseline Loads and Short Term Trash Load Reduction Plans.

The City has made significant efforts to reduce trash and litter in neighborhoods and local waterways; the resulting 'in place' or programmed trash reduction actions are now preliminarily estimated to meet, and potentially exceed, the Stormwater Permit's 40 percent trash reduction goal by 2014. While these initial findings are positive, staff is very mindful that 1) the crediting methodology is evolving and may change once submitted to the Water Board, resulting in an adjustment to the current estimated credit total; and 2) it is expected that the actions needed to meet the 2017 goal of 70 percent trash reduction will be more challenging and require additional resources. As a result, staff recommends that the City's final Short Term 2014 Plan incorporate an adaptive approach, itemize the tactics San José intends to implement to reach the 40 percent requirement, and include several actions being considered that would contribute toward meeting the 70 percent by 2017 goal; and that these actions support trash reduction, meet service and program priorities, and provide broader community and quality of life benefits.

Modifications to the Short Term 2014 Plan will be communicated through the annual regulatory reporting process already in place for the Stormwater Permit. Additionally, because BASMAA is scheduled to approve the final methodologies for determining baseline trash loads and trash reduction crediting at the end of January, the draft of the Short Term 2014 Plan accompanying this staff report may undergo minor modification prior to final submittal.

BACKGROUND

Due to water quality impacts, trash in waterways has become a priority concern to the public, municipalities and water quality regulators. Several local waterways have been formally listed as "impaired by trash" under the Federal Clean Water Act. These include Silver Creek, Coyote Creek, Saratoga Creek, San Tomas Aquino Creek, the Guadalupe River, and the lower San Francisco Bay shoreline. Water quality regulators regard stormwater as the largest uncontrolled source of pollutants to creeks and the Bay, and trash has emerged as a critical pollutant impacting waterways. Trash in its many forms, including but not limited to litter or illegal dumping, has become a significant environmental issue in San José creeks and neighborhoods and for communities throughout the Bay Area.

The Stormwater Permit specifies actions necessary to reduce the discharge of pollutants, including trash, into stormwater to the maximum extent practicable and effectively prohibit non-stormwater discharges into the municipal storm sewer system to protect local creeks and the Bay. This Stormwater Permit regulates 76 municipalities, counties, and flood control agencies in the San Francisco Bay Region, and specifically requires all of these "Permittees" to implement measures to reduce trash loads from storm sewer systems by 40 percent by July 1, 2014. It also includes targets intended for future permit cycles—70 percent reduction by 2017 and 100 percent by 2022. To comply with these load reduction requirements, Permittees are required to determine how much trash is conveyed through the storm sewer system to creeks and waterways; implement actions to reduce trash; and document trash reductions achieved. The Water Board requires that the City's estimated baseline trash load from the storm sewer system and "Short Term Trash Load Reduction Plan" be submitted by February 1, 2012. A "Long Term Trash Load Reduction Plan" documenting how the City intends to meet the 2017 and 2022 trash reduction goals is to be submitted by February 1, 2014.

On December 5, 2011, staff provided an update on the development of the Trash Reduction Plan to the Transportation and Environment (T&E) Committee. The report included an overview of potential actions that the City could undertake to reduce trash entering local waterways with a preliminary analysis of the cost to implement each action, the trash reduction potential, and the related broader community benefits like blight mitigation. The T&E Committee accepted staff's report and also directed staff to bring forward a recommended collection of actions to include in the Short Term 2014 Plan which meet the 40 percent goal, and possible alternatives for consideration by the full City Council.

Polystyrene Foam Food Service Ware, especially foam food and beverage containers such as cups and hinged containers ("clamshells"), have been subject to local efforts to control litter and other environmental impacts since the 1980s, when the City of Berkeley passed an ordinance banning restaurants and takeout food vendors from using polystyrene foam food packaging effective January 1, 1990. The City of San José first passed an ordinance in 1990 to prohibit restaurants and take-out establishments from using food packaging made of any blown foam products manufactured with chlorofluorocarbons (CFCs). All such products are referred to in this report as expanded polystyrene (EPS) or as foam food ware.[1] This report does not address polystyrene foam packaging, whether formed into blocks or "peanuts" used for other purposes. These types of clean foam packaging materials are comparatively easy to recycle or reuse when separately collected. Plastic food service ware made from solid, unfoamed polystyrene and other types of plastic, such as cutlery, lids, and straws, are also not addressed.

EPS is lightweight and floats, making it a highly visible pollutant in creeks and local waterways, and it readily travels from land to inland waterways and out to the ocean. EPS easily breaks into small pieces which are commonly mistaken for food and ingested by birds and other marine wildlife. Due to the negative water quality impacts of EPS, reducing the amount of EPS foam food service ware has become a priority concern to environmental groups, municipalities, and water quality regulators. While there is no standard methodology to measure the proportion of EPS that comes from littered take-out food packaging versus other sources, it is clear from visual observations and surveys of trash floating in local creeks that EPS take-out food packaging is a ubiquitous creek pollutant.

At the December 5, 2011, T&E Committee meeting, staff also presented findings from the City's GreenToGo stakeholder engagement process for reducing EPS litter. This report included information on the potential financial impact such an action might have on local restaurants; that the impacts could affect a small restaurant differently than a larger restaurant or chain store; and that the impacts are influenced by many factors such as what product is substituted, how it is purchased, the quantity used by a restaurant, and what proportion take-out food sales represent for the restaurant. There are many programmatic options that can be incorporated into an ordinance to minimize the impact on small restaurants. Staff was directed to provide additional information on the issue to Council, including:

[1] "Styrofoam" is a trademark of The Dow Chemical Company for extruded foam products used as building materials and craft supplies. Although foam cups, bowls, clamshells, and trays made from expanded polystyrene foam beads (EPS) or from extruded polystyrene foam sheets (XPS) are commonly referred to as "Styrofoam" by the public and in the media, Dow's Styrofoam products are not used to make foam cups or any other food service products.

- Projected feasibility and effectiveness of recycling foam food service ware;
- Additional information on alternative food service ware products;
- Potential for a buyers' co-operative for bulk purchases of alternative food service ware for distribution to small businesses; and
- Discussions on potential partnerships between the City, the container industry, and the California Restaurant Association to address foam food service ware litter.

This memorandum also provides further discussion of key programmatic considerations and additional information as requested by the T&E Committee.

ANALYSIS

Methodologies for Determining Baseline Trash Load and Trash Load Reduction Credits

Baseline Trash Level Determination
Over the past year under the direction of BASMAA, Cascadia Consulting Group collected, sorted, and measured trash and debris from more than 160 storm drain inlets that have been outfitted with full trash capture devices from a cross sampling of land uses across the Bay Area. Many of these sampling sites are located in the South Bay, specifically in San José and Sunnyvale. The data from two initial sampling efforts is being reviewed and validated. The preliminary data is used in the determination of a city's Baseline Trash Load and in quantifying trash load reductions that would result from specific trash reduction measures such as street sweeping program improvements and structural trash controls. In general, the trash control actions implemented before the Stormwater Permit effective date of December 1, 2009, are considered part of the baseline trash load. Based on current data, the estimated Baseline Trash Load for the City is approximately 879 cubic yards. Additional sampling events will occur in early January and spring 2012. If the new results have sufficient statistical certainty, further refinements of the trash loading rates may be required.

Trash Load Reduction Credits Determination
A concurrent regional effort through BASMAA is also underway to develop and provide guidance and consistency in assessing and tracking trash load reductions for all Permittees. This effort uses best available information and experience in effectiveness of trash reduction initiatives in communities throughout the Bay Area, country, and internationally. The information gained through the process will be the foundation for trash reduction tracking methods, formulas, and credits that will be used to demonstrate progress toward the Permit's required goals. The information also is being shared and discussed with key stakeholders as well as Water Board staff. This strategy is designed to foster collaborative discussion among Permittees, regulators, and other stakeholders about the effectiveness of various ways to reduce trash deposited through the storm sewer system.

The approach for tracking trash reduction recognizes that for certain actions, there is little to no available data on reductions and that actual quantification of trash reduced is either infeasible or impractical. There is agreement among BASMAA agencies, stakeholders, and Water Board staff that a trash reduction "credit" for certain trash reduction actions is appropriate. A methodology

that incorporates a combination of 'credits' and trash load reduction quantification formulas will be used to demonstrate trash load reductions attributable to specific actions. To avoid penalizing early adopters of certain actions (such as full trash capture devices, single use bag ordinances, and expanded polystyrene food service ware ordinances) implemented prior to the Stormwater Permit's effective date, such actions will be credited towards the trash reduction goal.

The regional methodologies for determining the baseline trash load and trash reduction crediting are currently being finalized and are scheduled for approval by the BASMAA Board of Directors at the end of January. As a result, the draft Short Term 2014 Plan included as Attachment A to this report may undergo minor modification prior to final submittal to the Water Board.

Summary of Short Term 2014 Trash Plan

Trash reduction actions can be generally categorized into three major strategies: Prevention, Interception, and Cleanup. As shown in Table 1 below, most of the credit based actions are preventative while the tracking of reductions attributed to interception, and cleanup efforts are formulas based on actual trash removed and/or collected. Additionally, the table shows preliminary trash reductions that the City can attribute towards the 40 percent trash reduction requirement based on already programmed and/or ongoing initiatives. Environmental Services Department (ESD) staff is meeting with multiple City departments to assess existing programs to identify where reductions can already be claimed and what additional reductions should be considered. To facilitate ongoing coordination, ESD has established a Citywide Trash Reduction Working Group comprised of staff from the departments of Parks, Recreation, and Neighborhood Services; Public Works; Transportation; Housing; and the City Manager's Office.

Table 1: Summary of Trash Load Credits and Reductions

	Trash Reduction Action	Proposed Trash Reduction Credit	San José Specific Reductions (%)
I	Existing Enhanced Street Sweeping (beyond defined baseline service level)	Quantified based on service level	1
P	Single Use Plastic Bag Ordinance	6-12% credit	12
P	Polystyrene Foam Food Service Ware Prohibition (prohibit at Special Events on City property)	2-8 % credit	2
P	Public Education and Outreach Programs	4-8% credit	8
P	Activities to Reduce Trash from Uncovered Loads	1-5% credit	1
P	Anti-Littering and Illegal Dumping Enforcement Activities	2-6% credit	0
P	Improved Trash Bin/Container Management, including establishment of Business Improvement	1-6% credit plus reduction for	1.6

	Trash Reduction Action	Proposed Trash Reduction Credit	San José Specific Reductions (%)
	District(s) (BID)	BID efforts	
I	On-Land Trash Cleanups (volunteer and municipal)	Based on quantified amount of trash collected for enhanced efforts	15.3*
I	Expanded Street Sweeping		0
I	Partial Trash Capture Devices	Reductions quantified based on amount of trash collected or modeled amount of trash captured.	0
I	Expanded Storm Drain Inlet Cleaning		0
I	Full Trash Capture Devices (includes devices already installed and planned for installation in 2012)		4.7*
C	Creek Cleanups		11.6
		Estimated Total	57.2

P = Prevention; I = Interception; C= Cleanup

**This credit amount currently under discussion among BASMAA agencies and may change with finalization of credit methodology.*

Based on programs and policies that are currently in place or are ongoing, initial analysis indicates that currently the City may claim about 57.2 percent trash reduction from its estimated baseline trash load by 2014. Other actions may be programs that the City has established but are not provided to the extent needed to qualify for credits, such as the City's anti-litter program. The City's current total tally of trash reduction credits, and the City's revised estimated Baseline Trash Load, are significantly different from the preliminary estimates reported to the T&E Committee in early December due to several factors including: refinement of the regional crediting and baseline quantification methodologies, inclusion of more detailed information on street sweeping service levels in the calculations, the quantification of trash collected through the City's cleanup efforts, and the estimate of the trash removal efficiency of the structural trash controls that the City is scheduled to install in 2012. This information was not available at the time of the December 5, 2011, Committee report.

The City has already implemented or has plans to implement programs to fulfill the Stormwater Permit's initial requirement of achieving a 40 percent reduction in trash from the storm sewer system by July 1, 2014. This can be attributed to early investments made by the City to address trash such the City's adoption of the nation's most comprehensive Bring Your Own Bag

Ordinance and installation of structural retrofits for trash control, as well as other litter prevention and cleanup efforts. It is important to note that these estimates are based on the most recent regional proposal, and the crediting methodology is expected to change upon submittal to the Water Board.

Additional Trash Control Actions
Staff presented to the T&E Committee a comprehensive list of potential trash reduction actions along with preliminary cost estimates and benefits (Attachment B). Based on the latest assessment of trash reduction efforts, staff does not anticipate the need to immediately establish new trash reduction initiatives. However, staff continues to evaluate new and/or enhanced actions to address community and programmatic needs and yield additional trash load reductions. These actions could result in an additional trash load reduction of up to 10 percent and would contribute toward the City's efforts to meet the more challenging 70 percent trash reduction goal by 2017. While the current Plan is focused on reaching the 40 percent requirement, the next goal of 70 percent will need to be achieved within the next five years with a Long Term Trash Reduction Plan due by February 1, 2014. Staff recommends that these actions be identified in the City's Short Term 2014 Plan as potential measures under consideration as part of efforts for the 2017 goal. Candidate actions under evaluation for future consideration include:

- Expanding the parking prohibited street sweeping program by an additional 40-curb miles.
- Establishing a proactive enforcement program for uncovered loads, trash container services for private properties, and illegal dumping.
- Installing "partial capture" trash control devices, called Automatic Retractable Screens, over storm inlets. These are estimated to prevent up to 84 percent of trash on the street from entering the storm sewer system. Installation of up to 400 of these devices can be funded by American Reinvestment and Recovery Act of 2009 funds through an existing grant agreement between the City and the Association of Bay Area Governments.
- Proactively working to establish countywide or statewide actions related to expanded polystyrene foam food ware, and continuing to investigate and research options for moving the City toward elimination of expanded polystyrene foam food ware litter in a way that meets regulatory requirements, contributes towards the City's Green Vision, improves quality of life in our neighborhoods, and strives to balance the impact on the City and community.

Costs and benefits for each of these actions are summarized in the Table 2.

Table 2: Candidate Trash Reduction Actions Under Consideration

Trash Reduction Action	Percent Trash Reduced	Year 1 Costs	Annualized 10-year Average Cost	Cost per percent Trash Reduction	Impacts and Benefits
Expanded Street Sweeping- *Add additional 40 curb miles of parking prohibited street sweeping*	0.7	$285,000	$124,000	$178,000	Improved neighborhood aesthetics, reduced litter

Trash Reduction Action	Percent Trash Reduced	Year 1 Costs	Annualized 10-year Average Cost	Cost per percent Trash Reduction	Impacts and Benefits
Activities to Reduce Trash from Uncovered Loads - *Allocate Environmental Inspector resources to support an enhanced enforcement program for vehicles with uncovered loads*	4	$237,000	$187,000	$47,000	Improved road safety. Potential increase in cost to individuals hauling materials. Improved creek and neighborhood aesthetics, reduced litter.
Improved Trash Bin/Container Management- *Allocate Environmental Inspector resources to support identification and enforcement of inadequate trash services for private properties*	2	$237,000	$187,0001	$93,000	Possible cost for upsized containers and increased frequency. Improved neighborhood and creek aesthetics, reduced litter
Anti-Littering and Illegal Dumping Enforcement Activities-*establish an investigation and enforcement program*	2	*Action included with staff for Improved Trash Bin/Container Management and Activities to Reduce Trash from Uncovered Loads*			Improved neighborhood aesthetics, increased municipal code compliance, decreased City maintenance and disposal costs
Partial Trash Capture Devices- *Install 400 Automated Retractable Screens over storm inlets*	1.3	should be remaining SFEP/ARRA Grant Funding	$20,000	$16,000	Reduced litter to creeks

Adaptive Management Approach

It is expected that upon receipt of the City's Short Term Trash Reduction Plan in February, the Water Board will post each permittee's Plan for public review and comment. San José's Baseline Trash load may also change based on additional data collection. An adaptive management approach will be used to ensure that the City can modify or course correct its approach to trash reduction based on updated information, experience with new technologies and tactics, and community feedback, as needed.

The Short Term 2014 Plan will also state that the City Council maintains discretion over the level of expenditures for trash control measure and service level implementation in accordance with the City's annual budgeting process, the City Charter, and the San José Municipal Code. Inclusion of a proposed action in the Plan does not obligate the City to implement a proposed action. Changes to the Trash Load Reduction Plan will be submitted to the Water Board annually as a part of the Stormwater Permit's Annual Reporting process.

Additional Information Related to Expended Polystyrene Foam Food Ware

The most recent analysis of the City's Trash Load Reduction efforts show that the City is well positioned to satisfy the Stormwater Permit's 2014 goal of 40 percent trash reduction with actions that are already in place or programmed. This new information provides the City with the opportunity to recalibrate the pace at which certain trash reduction efforts come online. It is recommended that Council direct staff to pursue the following actions related to controlling EPS litter:

- Proactively work with Santa Clara County cities to coordinate countywide action, implementation timeline, and requirements.
- Proactively work to ensure that SB 568 is considered and adopted by the State legislative during the 2012 legislative session.
- Work with the container industry and other interested stakeholders to evaluate feasibility of joint-effort opportunities to reduce EPS food foam litter.
- Conduct further research and continue to work with stakeholders to develop San José specific alternatives that would eliminate polystyrene foam food ware litter impacts on neighborhoods and waterways in a way that meets regulatory requirements, contributes towards the City's Green Vision, improves the quality of life in our neighborhoods, and balances the impact on the City, businesses, and the community.

Countywide Coordination

Many communities in California have already enacted prohibitions on EPS foam food service ware, while a few have also banned EPS and other plastic food service wares. Locally, several Santa Clara County jurisdictions have already taken action on EPS foam food ware. The City of Palo Alto adopted an ordinance in 2009 restricting food vendors from providing prepared food in disposable food service containers made from EPS or other non-recyclable plastic. In October 2011, the Santa Clara Valley Water District (Water District) Board of Directors adopted a resolution prohibiting District purchase of EPS food and beverage containers and also prohibiting their use at Water District facilities. They also adopted a general legislative position to support city and county ordinances banning EPS food and beverage containers throughout the County.

On December 13, 2011, the Santa Clara County Board of Supervisors voted unanimously to adopt an internal policy prohibiting EPS foam food ware and to move ahead with an ordinance for Unincorporated Santa Clara County regulating foam food ware containers.

Some concerns remain that action within a single community would create a competitive disadvantage for businesses across jurisdictional boundaries. In an effort to preserve a level playing field for the San José restaurant community, staff will continue to support and work to advance countywide implementation of a foam food ware ban. Staff will coordinate these efforts through the County's Recycling and Waste Reduction Commission's Technical Advisory Committee and through the Santa Clara Valley Urban Runoff Pollution Prevention Program.

Statewide Action

SB 568, Recycling: Polystyrene Food Containers, was introduced by Senator Alan Lowenthal, D-Long Beach, during the first half of the 2011-2012 legislative session. If passed, SB 568 would phase out EPS foam food ware in California beginning in 2016. SB 568 proposes to phase out cups, bowls, trays, containers and clamshells made from polystyrene foam and would be the first statewide ban on foam food ware in the United States. The proposed bill includes an exemption from the ban for communities that could demonstrate a 60 percent recycling rate for foam food ware. In addition, the bill gives school districts an additional 18 months to comply. A school district could qualify for an exemption from the ban if they establish a recycling program with a 60 percent recycling rate. While SB 568 was passed by the Senate in May, the bill was placed in the inactive file on September 8, 2011. Proponents of SB 568 expect the bill to be taken up before the end of the 2011-2012 legislative session. Staff will work with the City's Office of Intergovernmental Affairs to support Senate Bill 568 and to represent the City's interest in having the bill moved to the active file and to support its passage.

Container Industry and Other Stakeholder Collaboration

Staff began to hear from restaurants, container manufacturers, and other foam food ware stakeholders several years ago, when work began on a single-use carryout bag ordinance, and when Palo Alto and other cities acted on their EPS foam food service ware ordinances.

Since March 2011, staff has had discussions with the representatives of DART Container Corporation as well as other representatives of the plastics industry. During a March 29, 2011, discussion with DART, staff invited DART representatives to participate in the GreenToGo stakeholder process that was kicking-off in June. At that time, staff invited DART's representative to present any alternatives that would lead to a reduction in EPS litter. At the August 8, 2011, GreenToGo public meeting, DART made a series of proposals for reducing overall litter that focused in increasing the City's investment in structural trash control devices, public education, and enforcement. Each of these actions would be more costly to the City than a prohibition on EPS food ware.

In December 2011, the American Chemistry Council (ACC) provided the T&E Committee a proposal to partner with the City to implement its trash reduction efforts. The ACC has offered industry expertise and financial assistance with the intent of reaching the required 40 percent trash reduction goals by 2014. The ACC has requested that the City consider a partnership that includes:

- Promoting voluntary programs to manage EPS products at the end-of-life;
- Working with local stakeholders to develop joint programs providing outreach to the city's restaurants with a targeted public education campaign to reduce litter; and
- Promoting this public education campaign throughout San José.

Staff will meet with the ACC and DART Container Corporation to explore opportunities for such a partnership to control EPS foam food service ware litter in mid-January 2012.

Programmatic Options for an Ordinance Banning EPS Foam Food Ware

There are many programmatic options that can be incorporated into an ordinance to minimize the impact on restaurants. Staff will continue to work with the stakeholders and local restaurants to refine a strategy to best support the successful phase out of EPS foam food ware by all San José restaurants and return to Council in fall 2012 with options for consideration. Some options identified to date are highlighted below:

Materials Covered by Potential Ordinance – Staff has surveyed California cities with EPS bans and discovered that there is variation in the range of food packaging product types covered by these ordinances. In some cases specific material types such as natural fiber and compostable plastic are identified as the only acceptable materials for take-out food packaging due to the requirements of the local recycling service provider. This narrow specificity increases the cost for both restaurants in complying with the local ordinance and for the city that must enforce it. The broadest ordinances also ban other polystyrene foam food packaging, such as retail meat and produce trays, or cutlery and lids made from rigid polystyrene, not just foam. None of the ordinances cover foam used to pre-package retail food items such as instant noodle and soup products.

A report completed by the Cascadia Consulting Group commissioned by the City of Milpitas recommends focusing a ban on take-out food ware only on the most common types of packaging and where a readily-available substitute exists. Product types discussed include standard sized cups, hinged containers, plates, bowls, and trays. Specialized containers, such as oversized bowls or cups could be considered exempt if substitute packaging is either unavailable or if the cost was certain percentage greater than the cost of the product being replaced. The specific percentage would be established with the input from the local restaurant community.

Since San José's waste diversion and processing programs can handle nearly all material types except EPS, any take-out food packaging material that is not EPS could be considered acceptable and compliant with a proposed EPS food ware prohibition. Staff does not currently envision that a San José ordinance would specify replacement of EPS food ware with only compostable materials. Based on consultation with San José recycling facilities, non-EPS plastic, paper, and other natural fiber food ware would be readily recoverable and would have less impact on their operations.

Product Alternatives & Costs – The most common take-out food container products such as standard sized cups, plates, hinged containers (clamshells), bowls, and trays are manufactured in a range of materials that are readily available. Below is a summary of the most common materials, their availability, and whether or not they are recyclable or compostable in San José's waste diversion programs. Based on this analysis, all of the most common materials used in food take out packaging are readily recyclable or compostable in San José's waste diversion operations with the single exception of food contaminated EPS.

Table 3: Alternative Food Ware Packaging: Availability and Waste Diversion Potential

MATERIAL	ALTERNATIVE PRODUCT AVAILABILITY					WASTE DIVERSION POTENTIAL	
	Hot Cup	Cold Cup	Plates	Hinged Container	Soup Bowl	Recyclable in San José	Compostable in San José
EPS	Yes	Yes	Yes	Yes	Yes	No*	No
Rigid Plastic	No	Yes	Yes	Yes	Yes	Yes	No
Paper	Yes	Yes	Yes	Yes	Yes	No	Yes
Molded Natural Fiber	No	No	Yes	Yes	Yes	No	Yes
Compostable Plastic	No	Yes	Yes	Yes	No	No	Yes**

*EPS is not recyclable locally once it is soiled by food.
**Compostable Plastic is under review by the City and local composting operators.

Table 4: Per Unit Cost Comparison of Food Ware Alternatives

MATERIAL	CUPS	PLATES	CLAMSHELL
EPS	$0.035	$0.056	$0.09
Rigid Plastic	$0.026	$0.083	$0.25
Paper	$0.055	$0.02	$0.28
Molded Natural Fiber	n/a	$0.064	$0.22
Compostable Plastic	$0.07	$0.15	$0.33

Take-out food packaging that is manufactured from compostable plastic, derived from corn starch, is increasing in popularity. The City and the entire composting industry are working to provide the public with accurate information regarding the compostability of this material. Many recycling programs in the Bay Area accept food containers made from compostable plastic. However, the ability of a large scale industrial composter to turn this material to compost varies from facility to facility. ESD staff, working with other jurisdictions, the composting industry, and the plastics industry are developing testing protocols for local composters to determine if compostable plastics sufficiently breakdown in an acceptable timeframe. Staff expects to test these new protocols in 2012. Due to the higher cost of compostable plastics, staff expects lower cost alternatives made from rigid plastic, paper, and other natural fibers to be more popular substitute for EPS in the near term.

Options for Facilitating Small Business Transition

Staff received limited and varied feedback from the restaurant industry during the GreenToGo stakeholder process. Some restaurant operators have already eliminated the use of EPS food ware because they have operations in other communities that have already enacted prohibitions. Others have already voluntarily made the switch. Small restaurants, in particular, are concerned that the implementation of an EPS food Ware prohibition could impact their already tight profit

margins by creating an unexpected increase in take-out food packaging costs. In an effort to understand potential downside effects of increased packaging costs, staff has analyzed the economic impacts of increased packaging costs and has determined that potential negative effects are reduced due to the cost increases accruing to only that portion of the business costs that is take-out food containers – estimated to be no greater than six percent of total cost for a typical small restaurant conducting a significant portion of its business being take-out service. This represents a very conservative estimate and is based on best available information on industry trends.

To date, 53 California local governments have passed bans on EPS food ware in some fashion; 43 of these local ordinances apply to retail food vendors in their jurisdiction. Staff surveyed 28 of these communities, including every California jurisdiction with a population of more than 80,000 that have banned EPS food ware. Most cities reported some initial concerns from restaurant operators. However, all cities contacted thus far have reported high levels of compliance after passage of their local ordinance. The surveyed cities have received no indications of adverse business or other negative economic effects due to the EPS ban in their community.

A citywide prohibition of EPS food foam ware would represent a significant change for many restaurant operators. In the interest of seeking a policy response that is most appropriate for the City and would ensure that restaurants could successfully comply with the prohibition, staff has identified approaches to buffer against the broad change in business practice that an EPS ban may bring. There are three potential approaches to balance successful transition from EPS food ware litter and minimize the impact of a proposed EPS food ware ban on small restaurants.

1. Phase-in Ordinance over time – structuring an ordinance to regulate large chain restaurants first and small restaurants last.
2. Create a "Hardship Exemption" sufficiently broad such that restaurants, currently surviving in a slow economy, are not unnecessarily burdened because their packaging costs have increased due to an EPS ban.
3. Group Purchasing to provide small businesses access to discounted pricing for alternative containers.

These approaches would require the City to establish a framework to verify and administer hardship exemption requests or possibly to determine the appropriateness of a specific bracket for a restaurant to be categorized. The criteria would need to be appropriately defined including the consideration of the type of restaurant, a defined economic impact, or other critical factors. Periodic re-verification would need to be part of the administration to verify conformance with the exemption and phase-in requirements.

Phasing of Implementation

The City could choose to phase-in a ban by first establishing the ban on all large restaurants and those that are part of chains, with multiple outlets in San José or other cities. The expectation is that chains are best able to adapt to the change resulting from the switch to non-EPS food service ware as most have already adapted to the change where they have operations in communities that have already enacted local bans. Smaller family-owned restaurants could be required to start

using non-EPS food ware some period of time after the ordinance took effect on larger restaurants. Issues to be considered with this approach include:

1. How many tiers of restaurants are to be phased-in and how is each tier defined?
2. What is the appropriate period of time between phases?
3. How should phases be triggered?

As part of the annual report on the Environmentally Preferable Procurement Policy (EP3) to be submitted to the T&E Committee and City Council in February 2012, Council will be asked to consider an amendment to the EP3 to formalize the current Purchasing practice to not stock or provide EPS products and to expand the prohibition to cover vendors and other users of City facilities as well as vendors at City events.

Hardship Exemption
While Hardship Exemptions are included in most local ordinances that ban EPS, there is no established criteria for evaluating hardship claims. Cities surveyed stated that they handle hardship exemption requests on a case-by-case basis. Use of hardship exemptions to address the needs of a whole class of restaurants (i.e., small or family owned) has not been contemplated by any of the surveyed cities. Cities with hardship provisions have reported that very few restaurants have applied for the exemption. Surplus inventories of EPS have been a common issue for cities when they first implement an EPS ban. Many of these cities have expressed a willingness to work with their restaurants, allowing them to draw down their inventories before having to switch over to non-EPS alternatives.

Group Purchasing
Some small businesses may have limited access to bulk suppliers and discounted purchasing prices. In order to increase access to more competitive pricing for alternative products, some cities have assisting with establishing purchasing cooperatives to help small businesses purchase alternative products in bulk or at discounted prices during and after establishment of an EPS prohibition.

GreenTown Los Altos, a grassroots environmental group in the City of Los Altos, has established a cooperative through which businesses can take advantage of a 25% discount on purchases over $250. GreenTown Los Altos makes these discounted prices available Countywide, including the San José restaurant community. Staff has reviewed the pricing for the most common take-out packaging items and finds that GreenTown Los Altos is very competitive and in one key product category, hinged "clamshell" containers, their prices are lower than the quoted cash-and-carry prices used in the staff analysis.

Recycling of EPS

Recycling food contaminated EPS is being done on a very limited basis. DART Container Corporation, an active participant in the GreenToGo stakeholder process, provided the name of a single Material Recovery Facility (MRF) as the "best case" of a California company collecting food contaminated EPS for recycling. Burrtec Waste & Recycling Services provides recycling services to portions of Southern California, including the desert regions and portions of San

Bernardino and Los Angeles Counties. The marketing manager of the Burrtec recycling facility in Fontana reported that from December 2010 to October 2011, Burrtec recovered and marketed 106 tons of EPS from the recycling stream. Staff from cities served by Burrtec have reported that most of this material was EPS packaging, not EPS foam food service ware.

A limited number of cities in the Los Angeles area collect and process some food contaminated EPS. However, based on staff research less than half of the food contaminated EPS collected is actually recycled. At the December 5, 2011, T&E Committee meeting, the ACC stated that there are 32 California communities collecting EPS food ware for recycling. A November 2011 County of Los Angeles staff report on Expanded Polystyrene Food Containers in LA County indicates that 15 of these 32 communities are collecting the material but are currently landfilling it because the material too contaminated for recycling. Another eight of the 32 communities are no longer collecting EPS food service ware due to contamination issues. Only seven of the 32 communities are currently collecting the material for recycling.

Food contaminated EPS is not recycled in the Bay Area. Staff has contacted most of the Material Recovery Facilities (MRFs) in the San Francisco Bay Area and found only a few accepting EPS non-food related packaging. One MRF (The Recyclery at Newby Island Landfill in San José) reported that it accepts food-related EPS only if it is sufficiently cleaned. Local MRFs have stated that that there are no plans for expansion of their current programs regarding this material. The Recyclery which is the sole MRF with the ability to densifiy EPS – a necessary process for cost-effectively handling any EPS – has also stated that they have no plans for expanding their processing of EPS.

Cost of Managing EPS at San José MRFs

San José's residential garbage and recycling programs is served by several MRFs, including GreenWaste, GreenTeam, Z-Best, and California Waste Solutions. These facilities incur additional costs to their operation from having to mitigate EPS that blows around work facilities as well as from degraded market value for the commodities they recover due to EPS contamination in bales of material to be recycled, or in finished compost to be sold to the landscape industry. The MRFs report that it is difficult to quantify these costs since they do not keep track of contamination costs for each type of material collected.

EVALUATION AND FOLLOW-UP

Implementation efforts and reporting of progress toward the 40 percent reduction goal will be reported to the City Council and the Water Board through the Stormwater Permit's Annual Report. Staff will report to the T&E Committee in 2013 with an update on the Water Board's acceptance of the regional methodologies for determining baseline trash load and trash load reduction credits, status of the City's trash reduction efforts, and identification of potential actions that best balance the City's priorities and meet the long term trash reduction requirements of the Stormwater Permit.

Staff will also return to the T&E Committee in 2013 with additional analysis and evaluation of programmatic options to effectively reduce EPS food ware litter, reduce overall litter in our community, and balance City and community impact.

PUBLIC OUTREACH/INTEREST

- ☐ **Criteria 1**: Requires Council action on the use of public funds equal to $1 million or greater. **(Required: Website Posting)**
- ☐ **Criteria 2:** Adoption of a new or revised policy that may have implications for public health, safety, quality of life, or financial/economic vitality of the City. **(Required: E-mail and Website Posting)**
- ☐ **Criteria 3:** Consideration of proposed changes to service delivery, programs, staffing that may have impacts to community services and have been identified by staff, Council or a Community group that requires special outreach. **(Required: E-mail, Website Posting, Community Meetings, Notice in appropriate newspapers)**

This report does not meet any of the criteria listed above, however it will be posted on the City's website for the January 24, 2012 City Council agenda.

COORDINATION

This report has been coordinated with the Departments of Public Works; Transportation; Parks, Recreation and Neighborhood Services; Housing; the City Attorney's Office; and the City Manager's Budget Office.

COST SUMMARY/IMPLICATIONS

Funding for the current trash reduction actions identified in the Trash Reduction Plan is included in the Operating Budgets of the responsible departments. Cost implications for any new initiatives will be included when the specific new initiatives are brought forward for City Council consideration.

CEQA

Not a project, File No. PP10-069(a), City Organizational & Administrative Activities.

/s/
Kerrie Romanow
Acting Director, Environmental Services

Attachments:

A. Final Draft Short Term Trash Load Reduction Plan
B. Trash Action Cost and Benefit Summary

For questions please contact Elaine Marshall, Environmental Services Program Manager, Environmental Services, at (408) 793-5355

Attachment A

FINAL DRAFT

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

1/4/11

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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:

_____

MELODY TOVAR, P.E.
Deputy Director
Environmental Services
Watershed Protection

Date: January 31, 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 Jose 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.

DRAFT

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

DRAFT

2.0 BASELINE TRASH LOADING ESTIMATE

Note: Based on the results of a third monitoring event for the BASMAA Baseline Trash Generation Rates Project, this section will be updated with default trash generation rates and provided to Permittees. Tables and sections are therefore subject to change.

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 estimates to MS4s. The collaborative project was managed through the BASMAA Trash Committee and included a series of steps described in BASMAA (2012b) 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 municipal separate storm sewer systems (MS4s), while acknowledging that uncertainty in trash loads still exists.

Step #1: Conduct literature review

Step #2: Develop conceptual model

Step #3: Develop and implement sampling and analysis plan

Step #4: Test conceptual model

Step #5: Develop default trash generation rates

Step #6: Develop trash baseline loading rates by adjusting trash generation rates based on existing levels of control measure implementation

Step #7: Apply trash baseline loading rates and calculate baseline load

Through the collaborative BASMAA project, default baseline trash generation rates (volume per area) for wet and dry seasons 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 pump station maintenance conducted in each applicable area. The sum of the trash loads (i.e., rate multiplied by area) from each jurisdictional 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.

This section provides a summary of land use characteristics and demographics in the City of San José that, based on the results of the BASMAA *Trash Generation Rates Project*, appear to affect trash generation rates. The process by which the City of San José's trash baseline loading estimate was developed is also more fully described below.

Default Trash Generation Rates (Regional Approach)

A set of default trash generation rates for wet and dry seasons were 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 (early 2012), this section of the Plan will 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 Trash Generation Rates.

Land Use Category	Generation Rates (Gallons/acre/year)
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

Permittee Characteristics

Incorporated in 1850, the City of San José is located in Santa Clara County, and has a jurisdictional area of 70,965 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].

Land Use

Land uses within the City of San José depicted in ABAG (2005) are provided in Table 2-2. The majority of the City of San José (57.9%) is low density residential housing. The land uses with the next highest percentages are commercial and industrial, high density residential, and urban parks with 13.8%, 9.9%, and 5.5% respectively.

Table 2-2: Percentages of the City of San José's jurisdictional area[2] within land use classes identified by ABAG (2005).

Land Use Category	Jurisdictional Area (Acres)	% of Jurisdictional Area
High Density Residential	7,043	9.9

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

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

Low Density Residential	41,085	57.9
Rural Residential	2,039	2.9
Commercial and Services/ Heavy, Light and Other Industrial	9,821	13.8
Retail and Wholesale	3,708	5.2
K-12 Schools	3,338	4.7
Urban Parks	3,931	5.5
TOTAL	**70,965**	**99.9**

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 the areas' 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. These adjustments were conducted in GIS due to the site specificity of baseline generation rates and baseline control measure implementation. A summary of trash baseline generation 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.

Accounting for Baseline Street Sweeping

Within the City of San José, streets were sweep at least monthly prior to the effective date of the MRP. Commercial and industrial areas were swept twice per month, residential areas monthly, and retail areas varied from twice per month to twice per week depending on location. Parking enforcement occurs on streets throughout the City of San José as determined by the City's Parking Prohibited Street Sweeping Program. Parking enforcement equivalent occurs on all downtown and arterial streets within the City and parking enforcement signs are posted on 8.6% of City streets. The estimated trash load reduced via baseline street sweeping is presented in Table 2-3.

Accounting for 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 (2012a), the baseline storm drain maintenance program in the City of San José has an annual effectiveness rating of 5%.

Accounting for Baseline Pump Station Maintenance

The City of San José owns and maintains 25 stormwater pump stations, covering 11 drainage areas[3]. Of these stations, 13 have trash racks that capture trash, allowing 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 (2012a).

[3] More than one pump station may drain the same area

Baseline Trash Loading Estimates

The estimated baseline trash load from the City of San José was calculated as the sum of loads from the geographical areas included in Table 2-2 and illustrated in Figure 2-1a through Figure 2-1e. The baseline load is the sum of the wet and dry season baseline loads, which were each calculated as the product of the baseline loading rate of each loading area multiplied by its respective area. Based on this calculation, the City of San José's estimated baseline trash load is **879 cubic yards/per year**.

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

Category	Load (gallons)	Load (cubic yards)
Preliminary Baseline Trash Generation Load	301,672	1,738
Load Removed via Baseline Street Sweeping	138,429	798
Load Removed via Baseline Storm Drain Inlet Maintenance	8,162	47
Load Removed via Baseline Stormwater Pump Station Maintenance	2,514	14
Preliminary Baseline Trash Load	152,567	879

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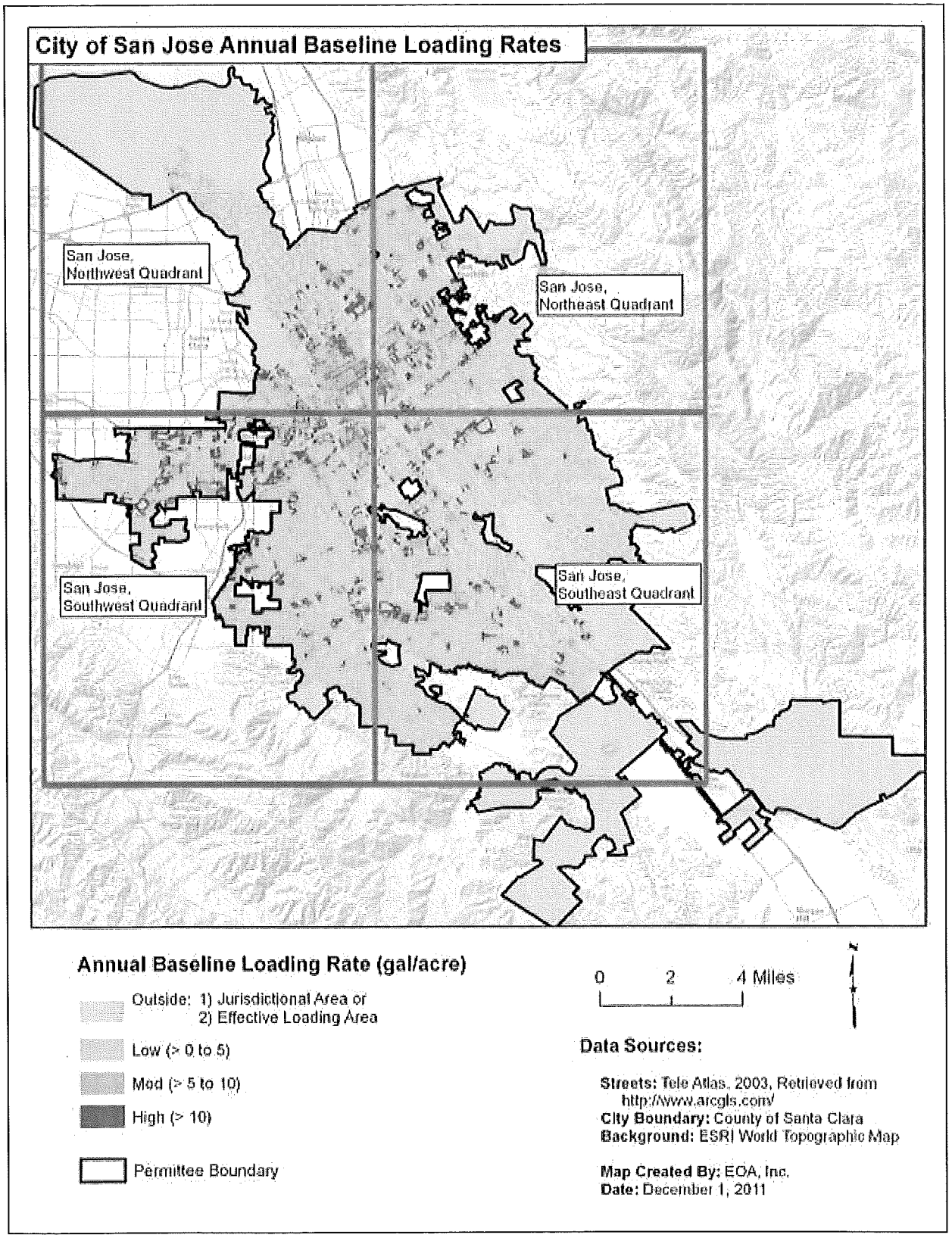

Figure 2-1a: Estimated trash baseline loading rates for geographical areas in the City of San José.

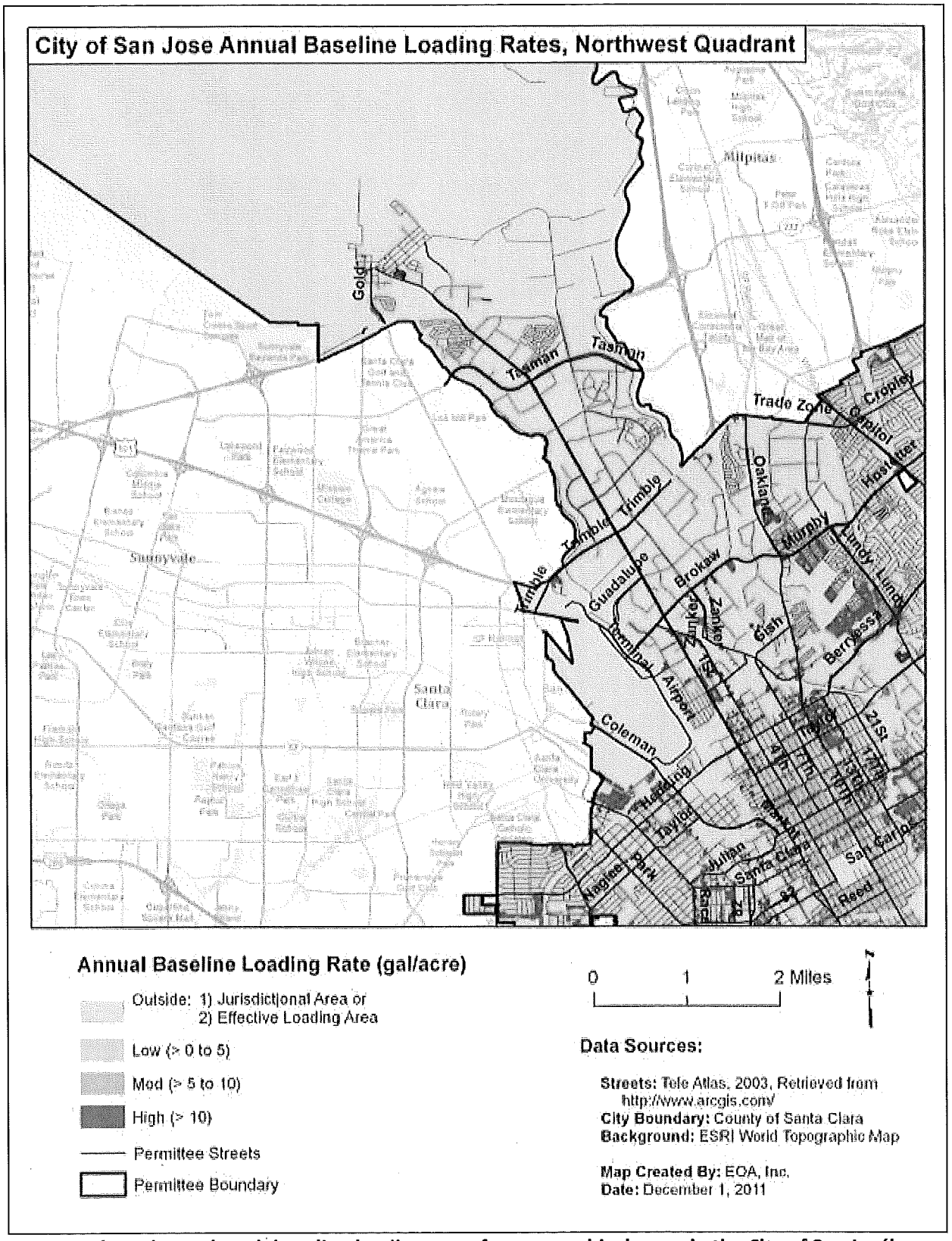

Figure 2-1b: Estimated trash baseline loading rates for geographical areas in the City of San José's Northwest Quadrant.

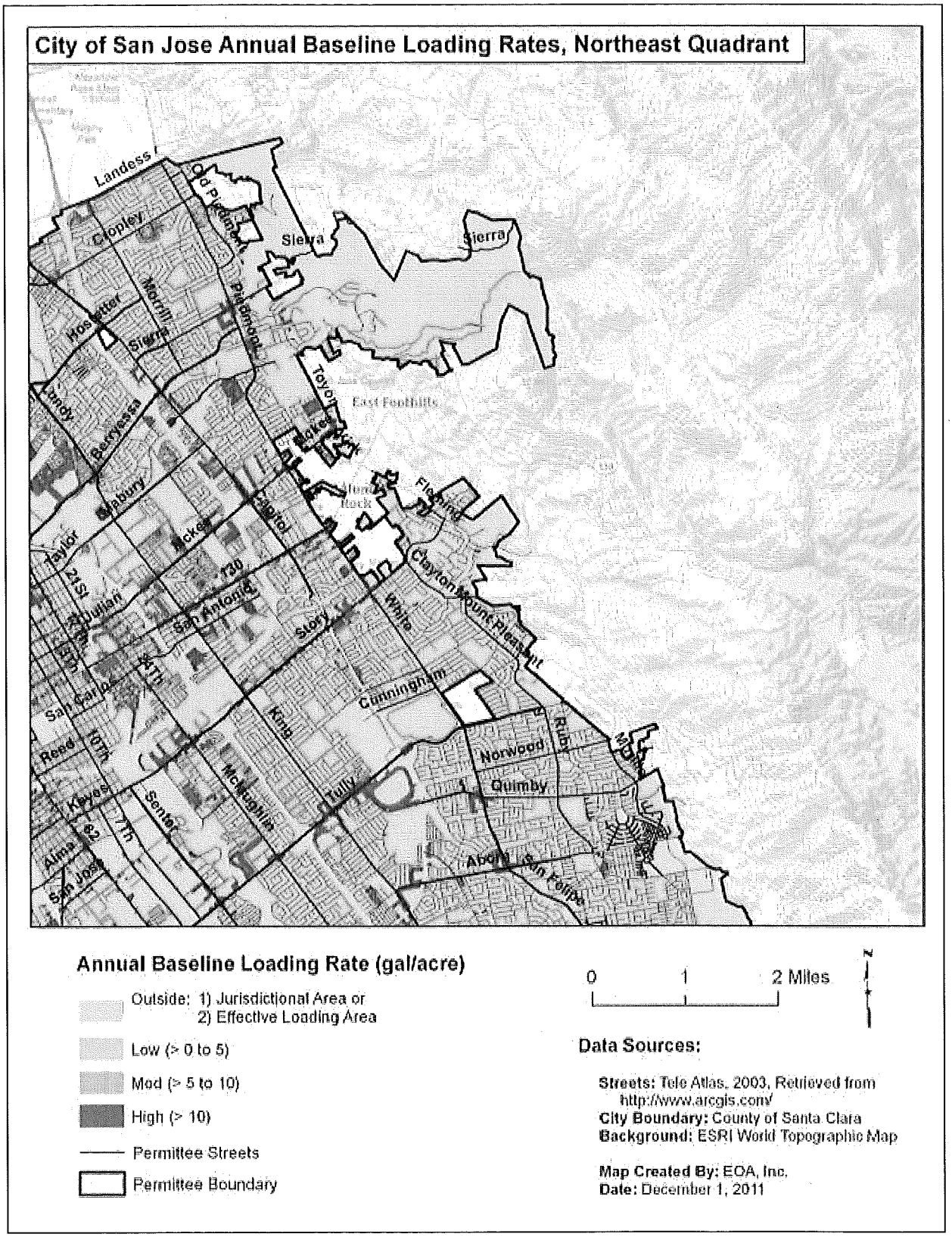

Figure 2-1c: Estimated trash baseline loading rates for geographical areas in the City of San José's Northeast Quadrant.

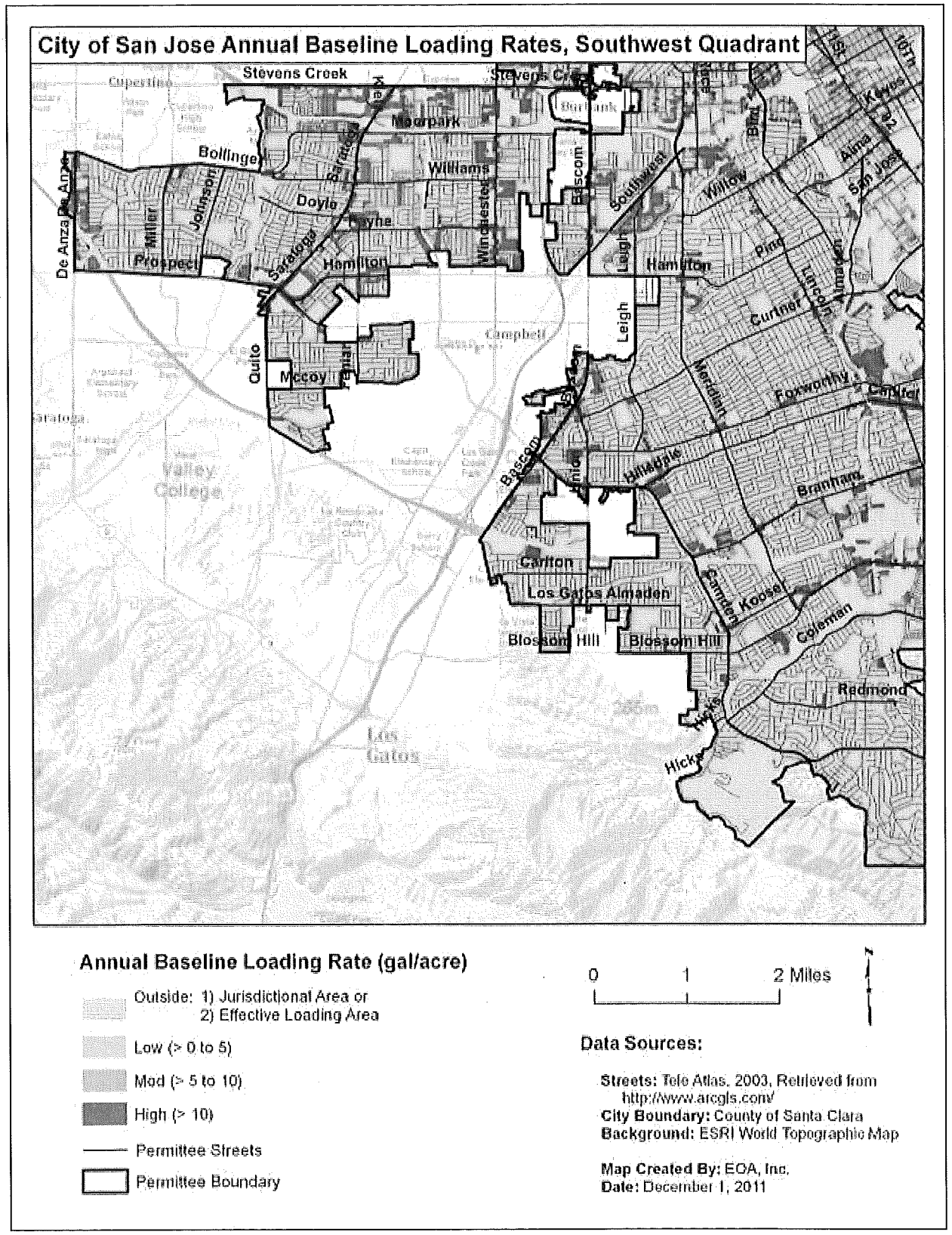

Figure 2-1d: Estimated trash baseline loading rates for geographical areas in the City of San José's Southwest Quadrant.

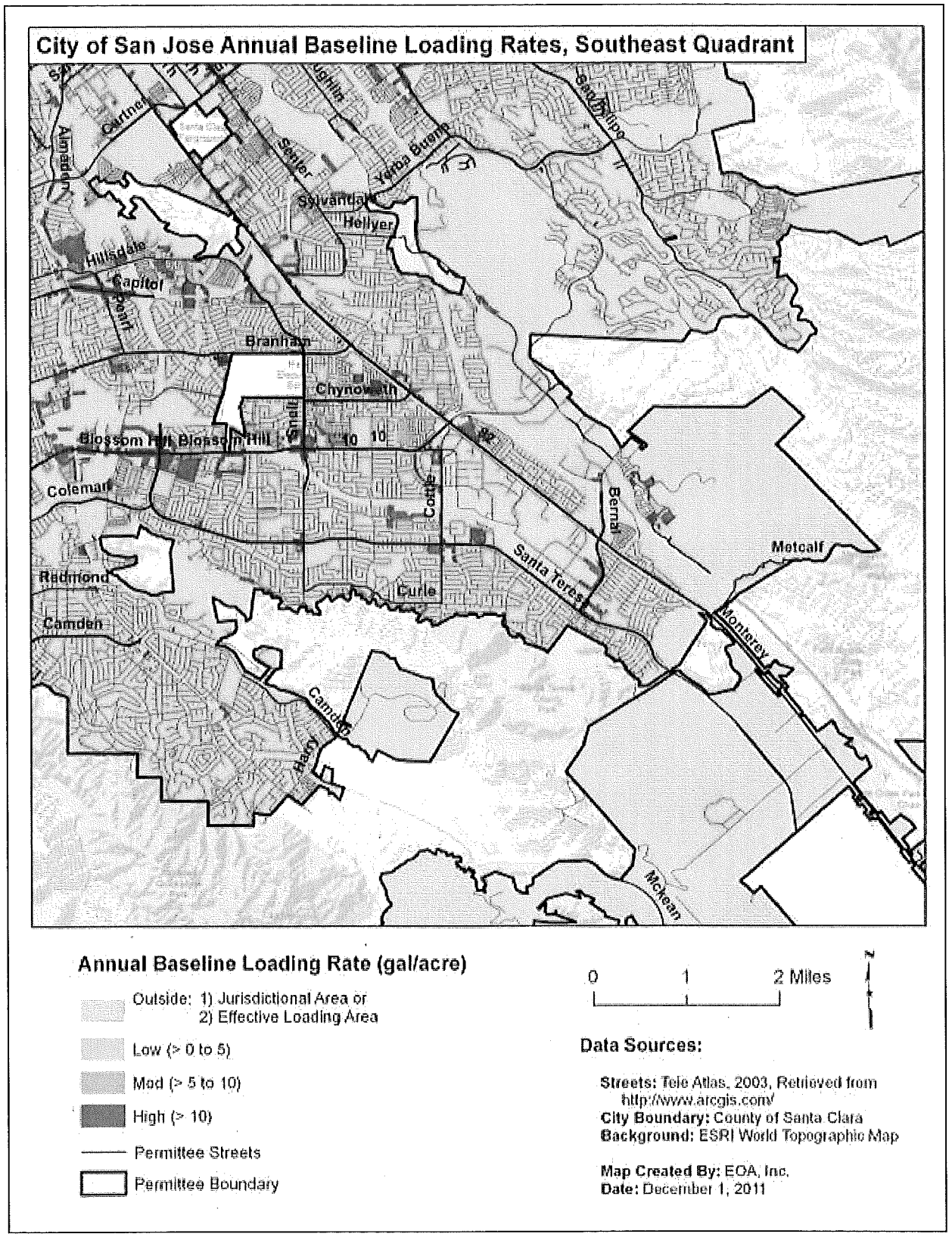

Figure 2-1e: Estimated trash baseline loading rates for geographical areas in the City of San José's Southeast Quadrant.

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.[4] 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).

[4] 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 <u>in-parallel</u> 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 Jose'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 Jose, 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 Permittee-sponsored events or 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 February 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 and other users of City facilities as well as vendors at City events.

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 two 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 two 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 six percent reduction credit. The six 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 Jose 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 eight 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 eight 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[5], 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.

[5] 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 one 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 one 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 four percent reduction, as described in the *Enhanced Level of Implementation* section above. The four 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 two percent reduction, as described in the *Enhanced Level of Implementation* section above. The two 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 Jose 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)[6] . The Downtown San José BID, among its enhanced services, incorporates sidewalk sweeping, litter pickup and maintenance of public area trash 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 one 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 Jose 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 two percent reduction credit, as described in the *Enhanced Level of Implementation* section above. The two 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.

[6] 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.

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 existing cleanup programs, 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.

New or Enhanced Permittee-led On-land Cleanups:

- *Illegal Dump Site Response and Abatement*
- *Litter Pickup Event Coordination and Cleanup*[7]

New or Enhanced Volunteer-led On-land Cleanups:

- *Single-day Efforts*
  -Anti Litter Program Volunteer 'Shed' Program

[7] **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. Examples include the annual Great American Pickup Event and other one-day or on-going cleanup events.

- *On-going Efforts:*
  -Pick-Up San José Program
  -Other Organized Cleanup Events

Percent Reduction from Enhancements

The total estimated annual volume of trash that will be reduced beginning July 1, 2014 as a result of implementing on-land trash cleanups is 135.15 cubic yards. This volume will account for a 15.3% 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. 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.

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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. For the baseline trash load described in Section 2.0 it is assumed that all of San Jose's ACB, NBD, and CBD routes have parking enforcement or parking enforcement equivalency due to off hours sweeping. This information along with the data for signed RSS streets will be re-verified and, if necessary, updated in the City of San José's next reporting period.

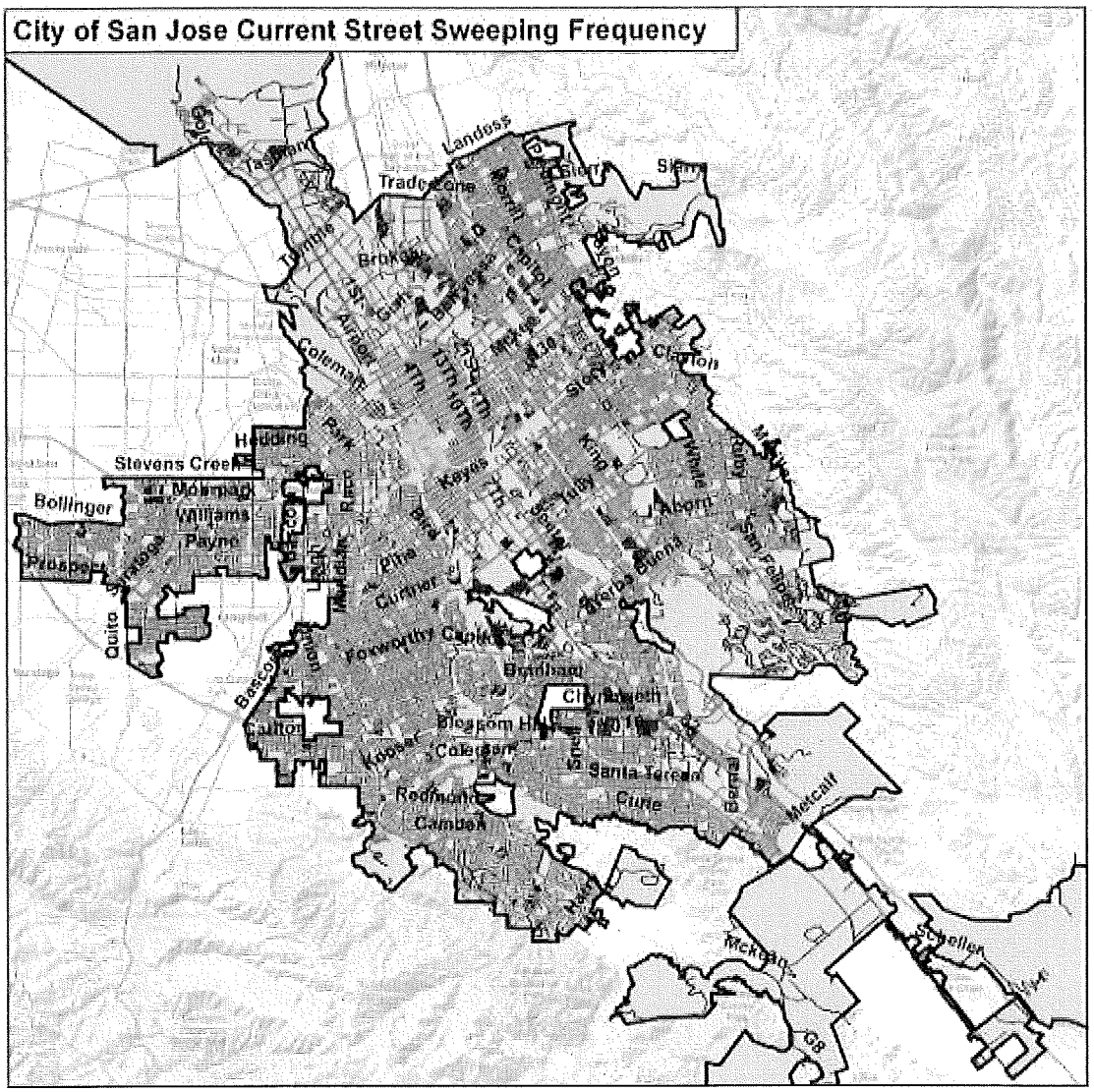

Figure QF-3-1. Current street sweeping frequencies in the City of San José.

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 8.8 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 5.95 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 9.6 cubic yards. This volume would be equal to approximately a 1.1 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 5-1A.

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 28.2 cubic yards. This volume is equal to approximately a 3.2 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 6.8 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 35 cubic yards. This volume is equal to approximately a 4 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.

Table QF-6-1: Continuous deflection 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[8].

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

[8] 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-6-2: 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)

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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[9] and the following non MRP-required creek/channel/shoreline cleanups[10] 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.

<u>City & Volunteer Collaborative Activities</u>

Single-day Efforts

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

<u>City-led Cleanup Activities</u>

On-going Efforts

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

<u>Clean Creeks, Healthy Communities</u>

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,

[9] 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 102.3 cubic yards. This volume is equal to approximately a 11.6 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.

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5.0 SUMMARY OF TRASH CONTROL MEASURE ENHANCEMENTS

The City of San Jose 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 Jose 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.

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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	Cumulative % Reduction (Compared to Baseline)
Existing Enhanced Street Sweeping	Sweeping above baseline frequency	NA	1.0	8.79	1
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	104.4	12.9
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	17.4	14.9
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	69.6	22.8
Activities to Reduce Trash from Uncovered Loads (CR-4)	Contract requirements for municipal trash haulers to cover load	1.0	NA	8.7	23.8
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6)	Ordinance for appropriate trash services for private properties, and establishment of Downtown San Jose BID	1.6	NA	13.9	25.4
On-land Trash Cleanups (Volunteer and/or Municipal) (QF-1)	Enhanced Volunteer Clean-up	NA	15.3	135.15	40.7
Full-capture Treatment Devices (QF-5)[11]	Installation of 118 connector pipe screens	NA	1.0	7.9	41.7
Full-capture Treatment Devices (QF-5)	Installation of up to 9 HDS	NA	3.8	32.9	45.5
Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (QF-6)	Annual cleanup of 32 Trash Hot Spots	NA	11.6	102.3	57.1

[11] 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	Cumulative % Reduction (Compared to Baseline)
Existing Enhanced Street Sweeping	Sweeping above baseline frequency	NA	1.0	8.79	1
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	104.4	12.9
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	17.4	14.9
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	69.6	22.8
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	5.0	NA	43.5	27.7
Anti-Littering and Illegal Dumping Enforcement Activities (CR-5)	Potential Anti-litter and illegal dumping enforcement program	2.0	NA	17.4	29.7
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	3.6	NA	26.7	33.3
On-land Trash Cleanups (Volunteer and/or Municipal) (QF-1)	Enhanced Volunteer Clean-up	NA	15.3	135.15	48.6
Enhanced Street Sweeping (QF-2)	Potential Expansion of 'no parking' enforcement on 40 curb miles	NA	0.7	5.9	49.2
Curb Inlet Screens (Partial-capture Treatment Device) (QF-3a)	Installation of up to 400 ARS	NA	1.2	9.6	50.3
Full-capture Treatment Devices (QF-5)	Installation of 118 connector pipe screens	NA	1.0	6.8	51.1
Full-capture Treatment Devices (QF-5)	Installation of up to 9 HDS	NA	3.2	28.2	54.3

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Creek/Channel/Shoreline Cleanups (Volunteer and/or Municipal) (QF-6)	Annual cleanup of 32 Trash Hot Spots	NA	102.3	11.6	65.9

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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.

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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)	**Under consideration for**

Expansion of 'no parking' enforcement on 40 curb miles	**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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Attachment B: Trash Action Cost and Benefit Summary

Trash Reduction Action	Trash Reduction Credit	Estimated Annualized Cost per 1% Trash Reduction*	Benefits
Prohibition of Expanded Polystyrene Food Service Ware: Establish an ordinance to prohibit Expanded Polystyrene Food Service Ware for food establishments citywide.	6%	$3,200	Improved creek and neighborhood aesthetics, reduced litter
Litter from Uncovered Loads: Establish a program to enforce and deter uncovered loads entering San José solid waste facilities	4%	$ 47,000	Improved creek and neighborhood aesthetics, reduced litter
Trash Container Management: Establish a program to enforce inadequate service for private trash and recycling containers	2%	$ 93,000	Improved neighborhood and creek aesthetics, reduced litter
Trash Container Management: Install solar-powered compacting trash containers in key City parks locations that can contribute trash/litter to storm drains or creeks	TBD	TBD	Improved park and creek aesthetics, reduced liter, potential reduction in Parks maintenance
Anti-Litter and Illegal Dumping: Establish an proactive program deter illegal dumping through monitoring illegal dumping, collecting evidence, and taking enforcement actions	2%	$ 93,000	Improved neighborhood aesthetics, increased municipal code compliance, decreased City maintenance and disposal costs
Anti-Litter and Illegal Dumping: Deploy surveillance equipment to deter Illegal Dumping at up to 90 hot spots	1-2%	$ 21,000-$10,000	Improved neighborhood aesthetics, increased municipal code compliance, decreased City maintenance and disposal costs, deterrent for graffiti/taggers
Anti-Litter and Illegal Dumping: Additional staffing to respond and collect Illegal Dumping, and utilize existing resources to expand volunteer litter cleanup efforts	TBD	TBD	Increased community involvement/stewardship, improved neighborhood aesthetics, decreased City maintenance and disposal costs
Expanded Street Sweeping: Increase Citywide Residential Street Sweeping Frequency from monthly to twice monthly	3.6%	$S93,000	Improved neighborhood aesthetics, reduced litter
Expanded Street Sweeping: Add additional 40 curb miles of parking prohibited street sweeping in FY 2012-2013	0.7%	$ 178,000	Improved neighborhood aesthetics, reduced litter
Expanded Street Sweeping: Add additional 100 curb miles of parking prohibited street sweeping over a multi-year period	1.9%	$ 185,000	Improved neighborhood aesthetics, reduced litter
Partial Trash Capture Devices: Install 400 Automated Retractable Screens to increase trash capture for street sweeping	1.3%	$ 16,000	Reduced litter to creeks
Full Trash Capture: Install additional connector pipe screens in storm drains to treat high trash generating land uses	Based on implementation level	$ 51,000	Reduced litter to creeks
Full Trash Capture: Install additional large trash capture devices to treat high trash generating land uses	Based on implementation level	$ 127,000	Reduced litter to creeks
Creek Cleanups: Conduct additional Creek Hot Spot Cleanups	0.2% per cleanup	$6,300	Improved creek aesthetics
Creek Cleanups: Explore new options for managing trash and other impacts from creek homeless encampments	TBD	TBD	Proactive rather than reactive solution, partnership opportunities with social services and organizations, reduced homelessness, improved neighborhood safety and aesthetics

**Based on 10-year annualized cost*