

# Long-Term Trash Load Reduction Plan and Assessment Strategy



City of Milpitas  
CALIFORNIA

**Submitted by:**

**City of Milpitas**

455 E. Calaveras Blvd.

Milpitas, CA 95035

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

**January 27, 2014**

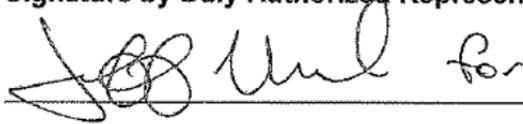
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**CITY OF MILPITAS  
LONG-TERM TRASH LOAD REDUCTION PLAN AND  
ASSESSMENT STRATEGY**

**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:**



A handwritten signature in black ink, appearing to read "T. Williams for", is written over a horizontal line.

For Thomas C. Williams  
City Manager

January 27, 2014

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## Abbreviations

BASMAA	Bay Area Stormwater Management Agencies Association
BID	Business Improvement District
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
CDS	Continuous Deflection Separator
CEQA	California Environmental Quality Act
CY	Cubic Yards
DPW	Department of Public Works (DPW)
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
GIS	Geographic Information System
MRP	Municipal Regional Stormwater NPDES Permit
MS4	Municipal Separate Storm Sewer System
MUSD	Milpitas Unified School District
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
URO	Urban Runoff
USEPA	United States Environmental Protection Agency
Water Board	San Francisco Regional Water Quality Control Board
WDR	Waste Discharge Requirements

## **PREFACE**

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



## 1.0 INTRODUCTION

### 1.1 Purpose of Long-Term Trash Reduction Plan

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

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

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

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

## 1.2 Background

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

A workgroup of MRP Permittee, Bay Area countywide stormwater program staff and Water Board staff met between October 2012 and March 2013 to better define the process for

developing and implementing Long-Term Plans, methods for assessing progress toward reduction goals, and tracking and reporting requirements associated with provision C.10. Through these discussions, an eight-step framework for developing and implementing Long-Term Plans was created by the workgroup (Figure 1).

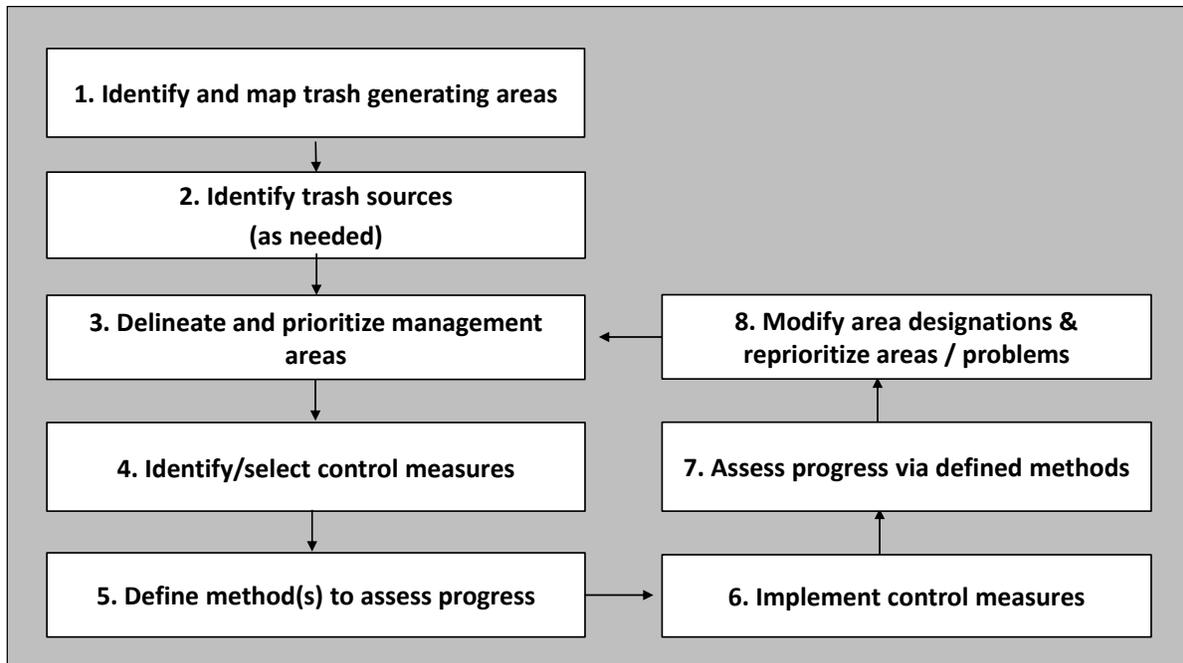


Figure 1. Eight-step framework for developing, implementing and refining Long-Term Trash Reduction Plans.

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

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

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

### 1.2.2 BASMAA Generation Rates Project

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

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

In contrast to trash generation, the term “trash loading” refers to the rate at which trash from MS4s enters receiving waters. Trash loading rates are also expressed as trash volume/acre/year and are equal to or less than trash generation rates because they account for the effects of control measures that intercept trash generated in an area before it is discharged to a receiving water. Trash loading rates are specific to particular areas because they are dependent upon the effectiveness of control measures implemented within an area. Figure 2 illustrates the difference between trash generation and loading.



Figure 2. Conceptual model of trash generation, interception and load.

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

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

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

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

<sup>a</sup> For residential and retail land uses, trash generation rates are provided as a range that takes into account the correlation between rates and household median income.

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

### 1.2.3 Short-Term Trash Load Reduction Plan

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

- **Single-use Carry Our Bag Ordinance:** After presenting a Milpitas-specific study in April 2011 and Council approval to proceed as a study area with the EIR process offered by San Mateo County, the Milpitas City Council denied approval of the model ordinance by a 3 – 2 vote. Staff may seek Council approval to conduct an EIR to again present a modified ordinance within the time frame of the upcoming permit.
- **Polystyrene Foam Food Service Ware Ordinance:** After presenting a Milpitas-specific study in April 2011 and receiving concerns of negative impacts to small businesses, staff decided to postpone presenting this ordinance to the Milpitas City Council. Staff may seek Council approval to conduct an EIR to again present a modified ordinance within the time frame of the upcoming permit.
- **Public Education and Outreach:** Maintained annual outreach described in annual reports while adding URO messages at special events and to citywide mailings. Posted watershed awareness signs among creek areas and culverts.
- **Full Capture Devices:** With use of a \$76,000 grant from the San Francisco Estuary Project, the City of Milpitas purchased a custom, fabricated full trash capture device at its Wrigley-Ford Pump Station. Installation, estimated at \$10,000 by the fabricator, was installed by the Department of Public Works.
- **Uncovered Load Management:** Increased awareness to cover loads while hauling on bi-weekly Household Dump Days (free landfill access offered to residents). Coordinated with police department to write citations for uncovered loads.
- **Anti-littering and Illegal Dumping Enforcement Activities:** Began annual visual assessments of management areas including reporting of excess litter and illegal dumping on private property.
- **Enhances Private / Public Container Management:** Ongoing work with contracted hauler to retrofit closing lids on front-end load bins.

- On Land Trash Pickup: 1) Targeted two open lots on private property for litter and illegal dumping abatement; 2) Established two joint use agreements between the Santa Clara Valley Water District and developers that require trail maintenance and cleanups for creeks adjacent to developments.
- Creek / Channel / Shoreline Cleanups: Continued annual creek cleanups and reporting of four “hot spots” including anti-litter outreach.

Control measures described in this Long-Term Plan build upon actions taken to-date via City of Milpitas Short-Term Plan. A full description of control measures implemented via short and long-term plans is included in section 3.3. Outcomes associated with short-term plan implementation will be reported in the City of Milpitas Fiscal Year 2013-14 Annual Report, scheduled for submittal to the Water Board by September 15, 2014.

### **1.3 Organization of Long-Term Plan**

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

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

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

## 2.0 SCOPE OF THE TRASH PROBLEM

### 2.1 Permittee Characteristics

Incorporated January 26, 1954, the City of Milpitas is located in Santa Clara County, and has a jurisdictional area of 8,640 acres. According to the 2010 Census, it has a population of 66,790, with a population density of 4,947.4 people per square mile and average household size of 3.34. Of the 66,790 residents who call the City of Milpitas home, 22.9% are under the age of 18, 8.9% are between 18 and 24, 32.7% are between 25 and 44, 26% are between 45 and 64, and 9.5% are 65 or older. The median household income was \$94,589 in 2010. The City of Milpitas is home to an array of high technology firms and retail centers. High tech companies, although located in commercial areas and assigned a medium trash generation category (yellow), are well designed with trash cans for employees and visitors and well maintained with regular cleaning of parking lots. Retail centers and some commercial areas in contrast have visible litter and trash handling problems. Milpitas is also surrounded by state-owned freeways and roads that contribute to litter in creeks (especially Coyote Creek under SE-237) and roadway litter.

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

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

Land Use Category	Jurisdictional Area (Acres)	% of Jurisdictional Area
Commercial and Services	1,104.0	13.5%
Industrial	972.4	11.9%
Residential	2,972.3	36.4%
Retail	462.4	5.7%
K-12 Schools	239.9	2.9%
Urban Parks	169.3	2.1%
Other (open space / hillsides)	2,236.9	27.4%

### 2.2 Trash Sources and Pathways

Trash in San Francisco Bay Area creeks and shorelines originates from a variety of sources and is transported to receiving waters by a number of pathways (Figure 3). Of the four source categories, pedestrian litter includes trash sources from high traffic areas near businesses and schools, transitional areas where food/drinks are not permitted (e.g. bus stops), and from public

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<sup>1</sup> A Permittee's jurisdictional area is defined as the urban land area within a Permittee's boundary that is not subject to stormwater NPDES Permit requirements for traditional and non-traditional small MS4s (i.e. Phase II MS4s) or the California Department of Transportation, or owned and maintained by the State of California, the U.S. federal government or other municipal agency or special district (e.g., flood control district).

or private special events with high volumes of people. Trash from vehicles occurs due to littering from automobiles and uncovered loads. Inadequate waste container management includes sources such as overflowing or uncovered containers and dumpsters as well as the dispersion of household and business-related trash and recycling materials before, during, and after collection. On-land illegal dumping of trash is the final source category.

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

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

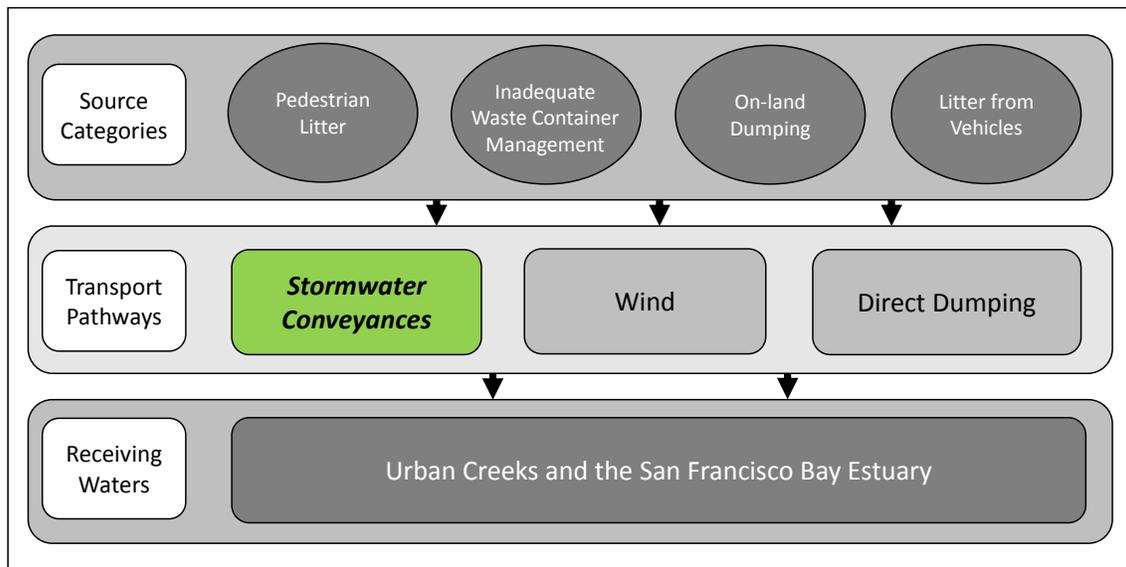


Figure 3. Trash sources categories and transport pathways to urban creeks.

Regarding wind and direct dumping transport pathways, the City of Milpitas will concentrate on the few open lots of private property that accumulate litter and attract illegal dumping. This will begin with direct contact of property owners, issuance of Notice of Violation letters for cleanup and possible fines and administrative action.

## 2.3 Trash Generating Areas

### 2.3.1 Generation Categories and Designation of Areas

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

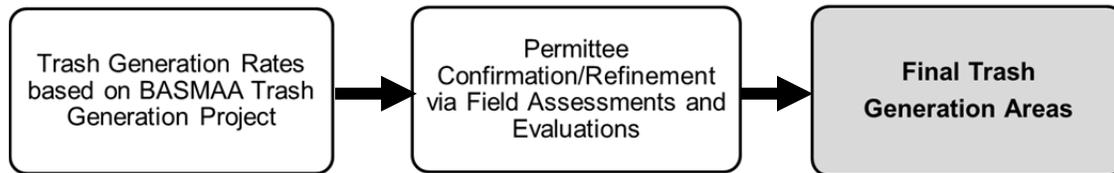


Figure 4. Trash sources categories and transport pathways to urban creeks.

As a first step, trash generation rates developed through *the BASMAA Trash Generation Rates Project* were applied to parcels within the City of Milpitas based on current land uses and 2010 household median incomes. A Draft Trash Generation Map was created as a result of this application. The draft map served as a starting point for the City of Milpitas to identify trash generating levels. Levels of trash generation are depicted on the map using four trash generation rate (gallons/acre/year) categories that are symbolized by four different colors illustrated in Table 3.

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

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

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

1. Based upon our knowledge of trash generation and problem areas within the City, staff identified areas on the draft map that potentially had incorrect trash generation category designations.
2. Trash generation category designations initially assigned to areas identified in step #1 were then assessed and confirmed/refined by the City using the methods listed below.

#### a. On-Land Visual Assessments

To assist Permittees with developing their trash generation maps, BASMAA developed a *Draft On-land Visual Trash Assessment Protocol (Draft Protocol)*. The Draft Protocol entails walking a street segment and visually observing the level of trash present on the roadway, curb and gutter, sidewalk, and other areas adjacent to the street that could potentially contribute trash to the MS4. Based on the level

of trash observed, each segment (i.e., assessment area) was placed into one of four on-land assessment condition categories that are summarized in Table 4. Using the Draft Protocol the City of Milpitas assessed a total of 20 areas to assist in conducting/refining trash generating area designations.

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

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

**b. Querying Municipal Staff or Members of the Public**

During the on-site assessments, staff made notations of litter / trash locations (such proximity to trash enclosures, convenience stores or fast food establishments). Where possible during this activity, and especially in areas reported for cleanup, business managers or employees were sought out to determine the path employees took to enclosures and, in the case of large developments with problems, which enclosures belonged to each business. On some occasions, pedestrians were asked about their opinions of the usual condition of parking lots around retail establishments. Except to determine if a high-trash problem area had previous citations or enforcement action, few private development areas lead to a query of municipal staff.

**c. Reviewing Municipal Operations Data**

Primarily, the Code Enforcement Section’s case load software, “Track It” was used to determine if a problem site from the on-site assessments had a previous citation of Notice of Violation. “Track It” is also used to open and document action of new cases stemming from on-site assessments. Staff was then able to refine map areas, especially those with retail businesses, based on where a concentration of violations had been reported in the past.

**d. Viewing Areas via Goggle Maps – Street View**

Overhead Google Maps were used to locate areas and confirm a specific, physical site within the map location. Staff experimented with street view maps and abandoned its use. Street views were either too old (facades or buildings / parcels had changed) or not enough visual data could be determined to show litter and illegal dumping.

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

### 2.3.2 Summary of Trash Generating Areas and Sources

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

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

Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	2.0	0.0	0.0	0.0	0.0	0.0	0.0	100%
High	43.8	0.0	0.0	0.0	38.8%	0.0	0.0	61.2%
Medium / High	43.8	0.0	0.0	88.9%	8.8%	0.5%	0.8%	1.0%
Medium	2,812.1	38.3%	34.6%	3.7%	9.3%	8.5%	5.7%	0.1%
Low / Medium	190.3	7.9%	0.4%	1.5%	89.8%	0.0	0.0	0.5%
Low	5,065.2	0.3%	0.0	55.8%	0.2%	0.0	0.2%	43.5%

An example of how to interpret the Milpitas data:

Of the 43.8 acres in the medium / high trash generation category, 88.9% are residential. Note that the low category has 5,065.2 acres.

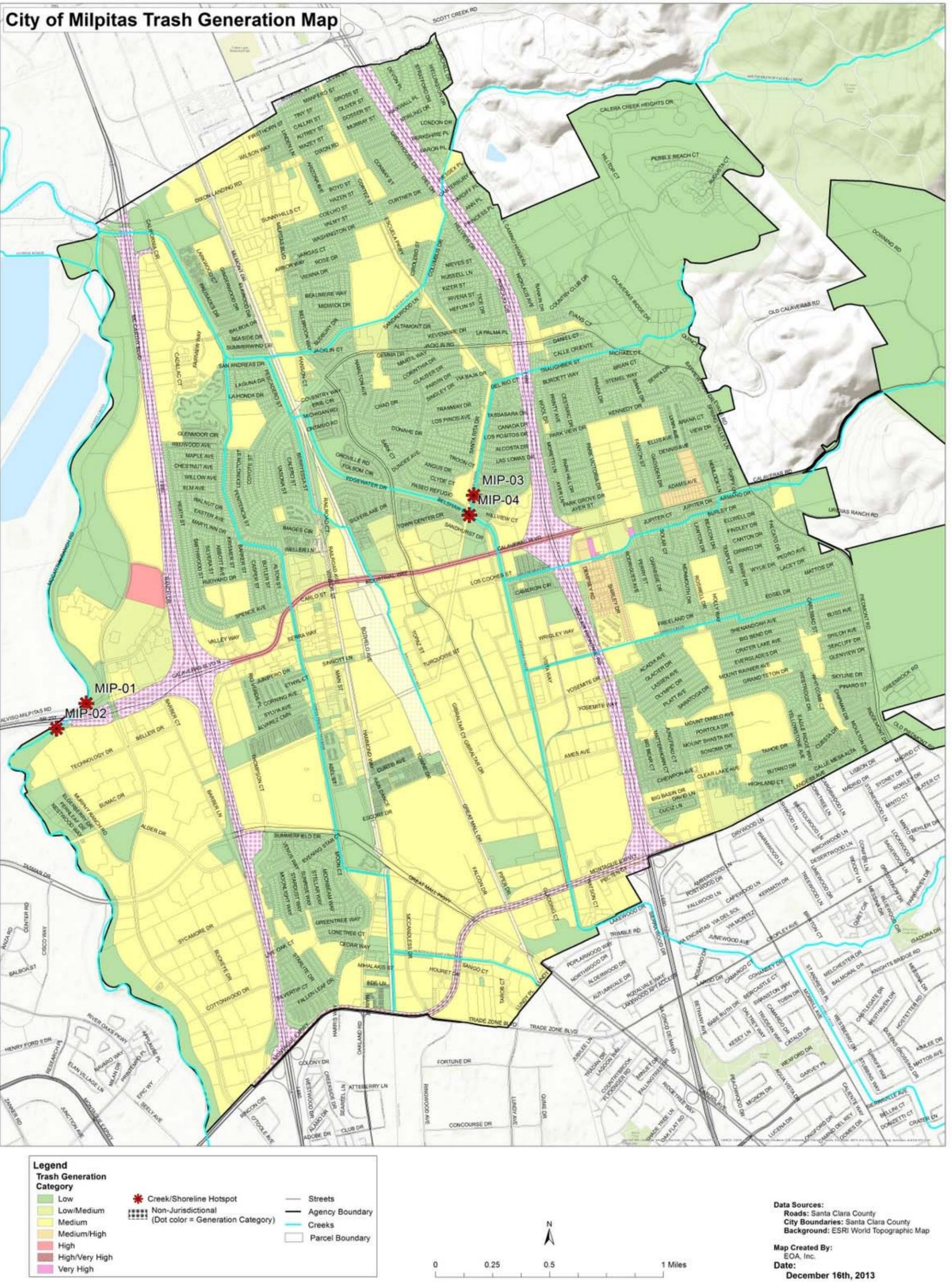


Figure 5. City of Milpitas Final Trash Generation Map

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

### **3.1 Introduction**

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

Information on the effectiveness of some trash control measures is currently lacking and therefore in the absence of this information, the City of Milpitas based its selection of control measures on existing effectiveness information, their experience in implementing trash controls and knowledge of trash problems, and costs of implementation. As knowledge is gained through the implementation of these control measures, the City of Milpitas may choose to refine their trash control strategy described in this section. If significant revisions or amendments are made, a revised Long-Term Plan will be submitted to the Water Board through the City of Milpitas' annual reporting process.

### **3.2 Management Area Delineation and Prioritization**

Consistent with the long-term plan framework, the City of Milpitas delineated and prioritized trash management areas (TMAs) based on the geographical distribution of trash generating areas, types of trash sources, and current or planned control measure locations. TMAs are intended to form the management units by which trash control measure implementation can be tracked and assessed for progress towards trash reduction targets. Once delineated, TMAs were also prioritized for control measure implementation. The City of Milpitas' primary management areas were selected based on the spatial distribution of trash generating areas and the location of specific existing or planned management actions within City's jurisdiction. City staff used the following procedure to designate TMAs:

- Outline separate areas in large retail, commercial and residential sections.
- Further delineate areas in retail and commercial sections that are 1) easily defined by streets, 2) within a named section (Great Mall, McCarthy Ranch), 3) large church properties, 4) owned by the Milpitas Unified School District, and 5) public parks maintained by the City of Milpitas.
- In some sections, further break into smaller areas where there are more parcels and balance these with larger areas that have larger-sized parcels.

A map depicting the City of Milpitas' TMAs is included as Figure 6.

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

TMA	Jurisdictional Area (Acres)	Trash Generation Category					
		Very High	High	Medium / High	Medium	Low / Medium	Low
1A	1.4	100.0%	0.0	0.0	0.0	0.0	0.0
1B	0.6	100.0%	0.0	0.0	0.0	0.0	0.0
1C	17.0	100.0%	0.0	0.0	0.0	0.0	0.0
1D	28.1	0.0	100.0%	0.0	0.0	0.0	0.0
1E	15.4	0.0	100.0%	0.0	0.0	0.0	0.0
2	49.8	0.0	0.0	0.0	60.5%	38.8%	0.7%
3	216.0	0.0	0.0	0.0	92.8%	5.8%	1.4%
4	124.0	0.0	1.6%	0.0	65.2%	29.1%	4.2%
5	27.3	0.0	0.0	0.0	98.6%	0.0	1.4%
6	56.6	0.0	11.6%	0.0	88.4%	0.0	0.0
7	100.9	0.0	0.0	0.0	41.0%	59.1%	0.0
8	158.6	0.0	0.0	0.0	81.0%	10.7%	8.3%
9	307.0	0.0	0.0	0.0	95.1%	0.0	4.9%
10	87.8	0.0	0.0	0.0	100.0%	0.0	0.0
11	133.2	0.0	0.0	0.0	100.0%	0.0	0.0
12	188.2	0.0	0.0	0.0	98.0%	0.7%	1.3%
13	259.4%	0.0	0.0	0.0	96.3%	0.3%	3.5%
14	301.5	0.0	0.0	0.0	100.0%	0.0	0.0
15	189.4	0.0	0.0	0.0	98.0%	0.0	2.0%
16	15.6	0.0	0.0	0.0	100.0%	0.0	0.0
17	235.8	0.0	0.0	0.0	100%	0.0	0.0
18	138.5	0.0	0.0	0.2%	96.0%	0.3%	3.4%
19	559.3	0.0	2.0%	0.0	83.3%	1.0%	13.7%
20	4945.9	0.0	0.0	0.0	0.3%	0.0	99.7%

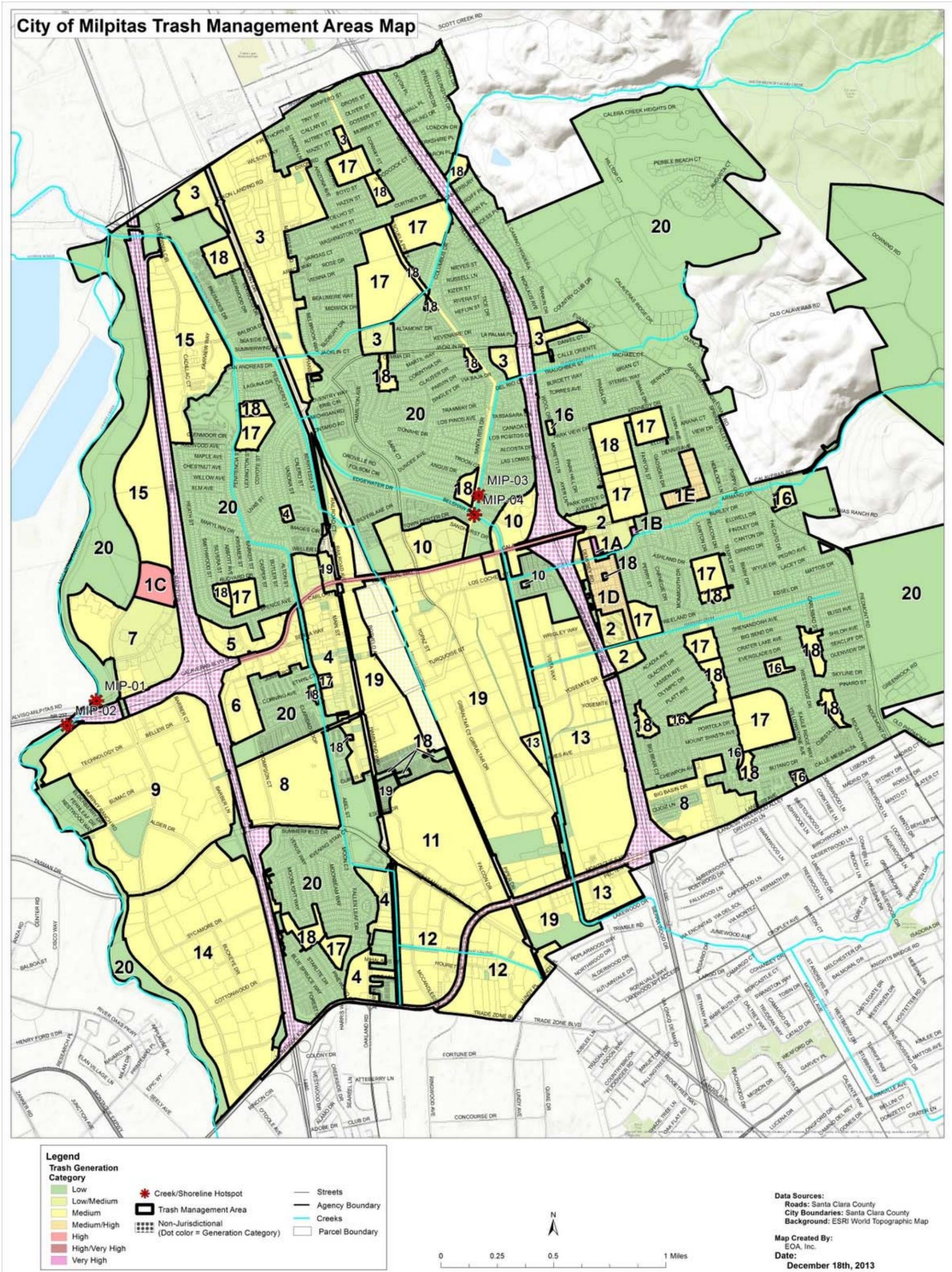


Figure 6. Trash Management Area Map for the City of Milpitas.

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### 3.3 Current and Planned Trash Control Measures

Trash Management Areas (TMAs) within the City of Milpitas are divided into 20 sections. Each section contains a specific use and may be further delineated to create manageable sections to provide outreach to businesses, property owners, and / or multi-family residents. Each section will include pre and post visual assessments of enacted control measures annually in July-August. TMAs are also grouped and staggered from FY2014-15 through FY 2021-22 for specific focus of control measures. The types of control measures currently being implemented are:

- Anti-littering and Illegal Dumping Enforcement Activities (includes first site assessments of 20 TMAs in May 2013 and then occurring annually in July-August through 2022)
- Full Capture Treatment Device Installed at Wrigley-Ford Pump Station
- Enhanced Private / Public Container Management
- On-Land Trash Pickup (limited areas)
- Creek / Channel / Shoreline Cleanups (four designated creek “hot spots”)

The types of control measures planned for all management areas are:

- Participation in a CalRecycle competitive grant for a three-year public information campaign about proper handling of used motor oil targeted to young Spanish-speaking men, 18 – 34 (a tie-in to expand a County of Santa Clara / City of San Jose campaign). Submission deadline is January 28, 2014. City of Milpitas submitted a grant application authorization letter to the County of Santa Clara and will update grant status in the FY2013-14 Annual Report.
- Annual citywide visual assessments with code enforcement follow-up conducted by TMA each July-August.
- Possible re-introduction of a Single-use Carry Out Bag Ordinance
- Possible introduction of a Polystyrene Foam Food Service Ware Ordinance
- Targeted Public Information and Outreach for Businesses and Residents
- Increased information to residents about removing cars on Street Sweeping service days, proper use of yard trimmings recycling carts and annual newsletters.

#### 3.3.1 Trash Management Area #1A & B, C, D, E

**1A & B – Open Private Property Lots:** These two properties (noted in purple to the central-east portion of the City of Milpitas) collect wind-blown litter from nearby retail and grocery stores and attract illegal dumping. Both are designated as a top priority due to the ongoing nature of litter and trash problems and also the proximity to low income housing that appears to attract “move-out” illegal dumping (furniture, tires, car parts, etc.). The primary approach to address these issues will be 1) direct contact and enforcement with property owners and, 2) direct contact with adjacent charity and retail stores to address housekeeping problems. To the open lot property owners, letters and photos will be sent including ideas for continuous abatement (such as monthly cleanups) and possible enforcement actions for non-compliance. A secondary approach will occur when outreach is sent to the nearby low-income housing units located in 1D and 1E. Site assessments with code enforcement reporting and actions will occur annually through July-August 2022.

### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Both parcels received informal contact from the City of Milpitas with a request to cleanup litter and debris from illegal dumping. These problems were usually abated upon request of the property owner. The property owner of Area 1A was fined with an administrative hearing held.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Both properties received two follow-ups from Utility Engineering and Code Enforcement staff. A community litter pickup was conducted on Area 1A in conjunction with the 9/21/13 Creek (Coastal) Cleanup Day (amounts were not reported as part of this annual event of "hot spot" cleanups), with over two cubic yards of trash and dumped debris collected.

3) Actions planned for future implementation between July 2014 and July 2022: Site assessments to determine levels of trash and debris. Hire temporary code enforcement personnel devoted to site inspections and follow-through to compliance. Follow through will include written notice to property owners requiring immediate cleanup to administrative hearing for non-compliance. Includes photos and ideas for continuous abatement (such as monthly cleanups, use of volunteer groups, and coordination with adjacent businesses). Ongoing annual site assessments will occur through July-August 2022.

### **Enhanced Private / Public Container Management**

Both open lots have adjacent retail businesses and parking lots that are sources of business-generated waste debris and pedestrian litter.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: As part of the site assessments, check adjacent business solid waste bins for lids that close automatically during the collection service. Work with contracted hauler to swap bins / repair lids as needed.

### **On-Land Trash Pickup**

Community volunteer groups can be used to pickup litter and light debris from both sites when permission is obtained by the property owner.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: A cleanup of Area 1A was conducted on 9/21/13. The group collected over two cubic yards of trash and debris.

3) Actions planned for future implementation between July 2014 and July 2022: Continue offering one free annual cleanup to Area 1A and start with Area 1B in conjunction with Creek (Coastal) Cleanup Day.

**Targeted Public Education and Outreach for Businesses**

As part of targeted outreach to businesses and property owners, the businesses adjacent to these open lots will receive information about litter abatement and housekeeping practices.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

**Street Sweeping**

Both open parcels are located along commercial streets that receive street sweeping services once a week. There is 'no parking' signage on adjacent streets at these parcels. TMA #1 A and B each face a street and a parking lot; the curb in front of both parcels is accessed by the street sweeper.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

**1C – Walmart Shopping Center**

Reinforcement of responsibility to keep parking lot free of litter, solid waste enclosures clean and prohibited storage near storm drains will occur on an annual basis through July-August 2022.

**Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessment in May 2013 resulted in code enforcement action that cleaned-up the store entrance area and parking lot, including retail shelves and other furniture debris stored around a storm drain.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash in parking lot. Ongoing annual site assessments will occur through July-August 2022. Hire temporary

code enforcement personnel devoted to site inspections and follow-through to compliance.

**Enhanced Private / Public Container Management**

This parking lot has adjacent food establishments, including one inside WalMart, that are sources of pedestrian and vehicle-generated waste.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessment in May 2013 resulted in code enforcement action that cleaned-up WalMart's solid waste enclosure areas.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to enclosure areas with follow-up to include code enforcement follow-up and swapping bins / repairing lids as needed.

**Targeted Public Education and Outreach for Businesses**

As part of targeted outreach to businesses and property owners, the businesses adjacent to these open lots will receive information about litter abatement and housekeeping practices.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

**Street Sweeping**

Area 1C is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

**1D & E – Low Income Multi-Family Housing**

Both of these areas have trash in gutters and on properties, particularly around solid waste bins.

### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Limited to code enforcement response based on complaints from residents.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessment in May 2013 to identify problems. Two properties were reported for overflowing bins resulting in an increase in service frequencies.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual area assessment in July-August 2013 to identify specific problem sites for code enforcement action. Ongoing annual site assessments will occur through July-August 2022. Hire temporary code enforcement personnel devoted to site inspections and follow-through to compliance.

### **Enhanced Private / Public Container Management**

Most common problems are properties that have service frequencies set too low for amount of garbage generated by residents in multi-family units. This results in overflowing garbage bins and contaminated recycling.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Service levels were reviewed in both areas with required increases in garbage service and contact directly with property owners and tenants to reduce contamination in recycling bins.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Continued site visits by the contracted haulers Commercial Recycling Representative (a contractually required position by the City) to properties with high contamination in no cost recycle bins, a first indicator that volume based garbage services are too low.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual area assessment in July-August 2014 to identify specific problem sites for code enforcement action.

### **Targeted Public Education and Outreach to Multi-family Property Owners and Residents**

The City of Milpitas mails an annual brochure to property owners and residents about recycling services. This mailer will be changed to include anti-litter and proper garbage service handling messages.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Began inserting urban runoff pollution prevention messages to door hangers and mailers.

3) Actions planned for future implementation between July 2014 and July 2022: Include anti-litter and urban runoff messages with the annual recycling mailer to property owners and residents.

### **Street Sweeping**

Multi-family complexes are included in residential neighborhoods that receive bi-monthly street sweeping. These areas have a high concentration of cars on the street that often block street sweeper access to the curb.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Bi-weekly street sweeping.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Conduct the second annual area assessment in July-August 2014 on street sweeping days to determine the problem on cars left on the street. Include these areas in separate citywide outreach about street sweeping.

3) Actions planned for future implementation between July 2014 and July 2022: Continue annual site assessment and code enforcement reporting in July-August of each year.

### **3.3.2 Area #2 – Small Retail Areas**

This area includes three separate sub-areas, with two adjacent to each other, retail “strip malls” constructed in the 1970s. One sub-area houses a charity store that directly contributes to problems in Area 1A. Another sub-area houses an ethnic grocery store that contributes to problems in Area 1B. Common problems are pedestrian and vehicular litter. Two of the three areas have difficulties with generated trash management due to small enclosures.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Periodic code enforcement actions based upon neighborhood complaints.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in code enforcement action that cleaned-up the parking lot at a charity store site.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash in parking lots. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Enhanced Private / Public Container Management**

When issues with trash management are reported as part of the site assessments, property owners and retail tenants need to be advised of code violations and given housekeeping and maintenance tips to improve container management.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Code enforcement response based upon neighborhood complaints.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in code enforcement action that cleaned-up the enclosure at the charity store site.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual area assessment in July-August 2014 to identify specific problem sites for code enforcement action.

**Targeted Public Education and Outreach to Property Owners and Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

**Street Sweeping**

Area #2 is located along commercial streets that receive street sweeping services once a week. There is ‘no parking’ posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

**3.3.3 Area #3 – Medium Commercial Area (Milmont / Dixon Landing / Milpitas Blvd.)**

This area includes a large ethnic grocery store with restaurants, 1980s retail “strip malls” and small office buildings. Problems vary by site, with concentration needed at the ethnic store and restaurants. Enclosures at the older retail sites are small and require improved use of housekeeping methods. Overall litter sources are vehicular and business trash management.

**Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Limited to ethnic grocery store based on neighborhood complaints.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013. No code violations were found.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash in parking lots.

Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **Enhanced Private / Public Container Management**

Container management and regularly applied housekeeping procedures are key to solving trash and litter problems with all businesses in Area #3.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Limited to enforcement actions taken with the ethnic grocery store.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulting in no further actions.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual area assessment in July-August 2014 to identify specific problem sites for code enforcement action.

### **Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

Area #3 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.4 Area #4 – Midtown (Main Street)**

The Midtown area comprises many small businesses on individual lots. This area is predominately clean of pedestrian and vehicular litter. Although enclosure areas are small or

non-existent here, the small businesses accomplish an excellent job of keeping containers clean and free of debris. There are a few businesses that accumulate non-putrescible waste. TMA #4 is partially treated by full-capture treatment serving all of, and reference in, TMA #19.

**Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulting in code enforcement follow-up to abate two instances of accumulated waste / illegal storage.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation by businesses. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Enhanced Private / Public Container Management**

Although lots are small and enclosure areas limited, businesses in Area #4 are adept at managing trash areas.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulting in no further actions.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual area assessment in July-August 2014 to identify specific problem sites for code enforcement action.

**Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

**Street Sweeping**

Area #4 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009):  
Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.5 Area #5 – Medium Commercial Area (North of Calaveras Blvd.)**

This area is a 1970s-style retail and restaurant layout that has been improved in some areas to accommodate increased storage for solid waste containers. Some litter accumulates in planting areas, but the parking lot is predominately free of loose trash. The west side of the development has limited storage area for the individual garbage bins resulting in temporary storage of trash along the back of the stores. There is a predominance of restaurants at this site.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009):  
None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014:  
Site assessments in May 2013 resulting in verbal request to property management and subsequent compliance to cleanup litter in planting areas.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and planting areas. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Enhanced Private / Public Container Management**

The east side of this development presents a space limitation problem for solid waste containers. Since store and restaurant personnel must walk trash bags among the back of the structure to trash and recycle bins, there is often short-term storage along the back, outside of the structure.

1) Actions initiated prior to and continued after the MRP effective date (December 2009):  
Limited to increasing storages areas for solid waste containers (were possible) and increasing trash service frequencies for the grocery store and restaurants throughout the development.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014:  
Site assessments in May 2013 resulting in verbal request and subsequent compliance to stop storing trash bags behind stores and restaurants.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.
- 3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

Area #4 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.
- 3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.6 Area #6 – Medium Commercial Area with Some Light Industrial (South of Calaveras Blvd.)**

This area includes retail commercial with restaurants and stores, and industrial buildings along I-880. The retail includes stores, restaurants and small businesses. This portion of Area #6 was found to be mostly free of litter with trash cans located outside of businesses. All solid waste containers are housed within enclosures and well maintained. Parking lots for the adjacent industrial businesses are very clean, including solid waste enclosures.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.
- 3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **Enhanced Private / Public Container Management**

Area #6 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.
- 3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.
- 3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

Area #6 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.
- 3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.7 Area #7 – McCarthy Ranch Retail / Commercial Mix**

This area is relatively free of pedestrian and vehicular litter in parking lots with the exception of smaller sections surrounding fast food restaurants. Sections in front of and to the rear of the retail stores are very clean. Solid waste enclosures are spread throughout the development and

shared by various stores. These appear clean and well maintained. Food establishments have separate enclosures that are surrounded by some litter.

**Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Enhanced Private / Public Container Management**

Area #7 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

**Street Sweeping**

Area #7 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.
- 3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.8 Area #8 – Medium Commercial Area (adjacent east of I-880)**

This area mostly consists of research and development firms and fulfillment centers. It is free of pedestrian and vehicular litter. It is a well-designed area with adequate storage area for solid waste containers. There is some temporary illegal outdoor storage of accumulated waste at the fulfillment centers.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.
- 3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Enhanced Private / Public Container Management**

Area #8 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.
- 3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

Area #8 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.9 Area #9 – Large Commercial Area (adjacent west of I-880)**

This is a newly-developed area, exclusively supporting research and development high tech firms. It is free of pedestrian and vehicular litter. It is a well-designed area with adequate storage area for solid waste containers.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Enhanced Private / Public Container Management**

Area #9 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

**Street Sweeping**

Area #9 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

**3.3.10 Area #10 – Milpitas Town Center plus retail adjacent to Hillview Blvd.**

This is an area of three developments. Two are redeveloped with enhanced site improvements supporting public trash cans and adequate storage for solid waste containers. Two of the three are mostly free of litter. The third, houses a stand-alone corner restaurant, has some trash throughout the parking lot, planting areas and a messy enclosure area. A portion of TMA #10 is treated by the full-capture treatment serving all of, and referenced in, TMA #19.

**Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulting in verbal request to property management of the stand-alone corner restaurant and subsequent compliance to cleanup litter in planting

areas. Enclosure area was locked upon follow-up site check, but trash around it was abated.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and planting areas. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **Enhanced Private / Public Container Management**

Two of the three sites in this area have adequate enclosure areas that are well maintained. Also, both have public trash cans available to the public. The stand-alone corner restaurant has a limited solid waste enclosure area. Restaurant personnel must walk trash bags along the back of the structure to trash and recycle bins, which may create some of the trash leading to the enclosure.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulting in verbal request and subsequent compliance to cleanup parking lot and enclosure area of the standalone restaurant.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

Area #10 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.11 Area #11 – Great Mall of the Bay Area**

This area houses the largest shopping mall and adjacent parking lots in the City of Milpitas. Divided into 10 service zones for solid waste services, it is well maintained in most enclosures (or zones). Parking lots are mostly free of pedestrian litter, with more litter in the areas leading up to the food court entrance. Most notably, there are large amounts of cigarette butts at most of the mall entrances.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulting in no actions taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and planting areas. Code enforcement follow-up – with special attention given to the problem of cigarette butts at entrances – and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Enhanced Private / Public Container Management**

Compactors are housed in the service zones for recycling and garbage collection. One restaurant and the movie theatres have separate enclosures. Service zones are clean and well maintained. One exception is the enclosure serving the food court that has markings of grease and other liquids from food service on the asphalt. The separate restaurant and movie theatre enclosures are clean and well maintained.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulting in verbal request and subsequent compliance to cleanup parking lot and enclosure area of the standalone restaurant.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

Area #11 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.12 Area #12 – Large Commercial Area (bisected by Montague Expy at southern border)**

This area exclusively supports research and development high tech firms. It is free of pedestrian and vehicular litter. It is a well-designed area with adequate storage area for solid waste containers.

### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **Enhanced Private / Public Container Management**

Area #12 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

#### **Street Sweeping**

Area #12 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.13 Area #13 – Large Commercial / Industrial Mix (adjacent west of I-680)**

This area is predominately light industrial and high tech research and development firms. It is free of pedestrian and vehicular litter. It is a well-designed area with adequate storage area for solid waste containers.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Enhanced Private / Public Container Management**

Area #13 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

**Street Sweeping**

Area #13 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.14 Area #14 – Large Commercial / Industrial Mix (adjacent south of Tasman; west of I-880)**

This is a newly developed area that predominately supports high tech research and development firms. It is free of pedestrian and vehicular litter. It is a well-designed area with adequate storage area for solid waste containers.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Enhanced Private / Public Container Management**

Area #14 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

#### **Street Sweeping**

Area #14 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.
- 3) Actions planned for future implementation between July 2014 and July 2022: No change.

**3.3.15 Area #15 – Medium Commercial Area (north of Area 1C & west of I-880)**

This area is a newly developed area that houses high tech firms and other business offices. Located north of McCarthy Ranch Retail Center and WalMart, limited amounts of vehicular litter along public right-of-ways occur. The developments are well designed and provide adequate space for solid waste enclosures. On-property assessments found these businesses to be immaculately maintained with trash cans at entrances for employees and visitors.

**Anti-littering and Illegal Dumping Enforcement Activities**

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.
- 3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Enhanced Private / Public Container Management**

Area #15 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.
- 3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

Area #15 is located along commercial streets that receive street sweeping services once a week. There is 'no parking' posted along these streets and curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.16 Areas #16 – Large Churches**

There are three large church properties located with single family residential areas. All are well maintained with adequate recycling and garbage services.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Enhanced Private / Public Container Management**

Church properties designated as Areas #16 have adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

#### **Targeted Public Education and Outreach to Churches**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

#### **Street Sweeping**

Church properties designated as Areas #16 are located along single family residential streets that receive bi-weekly street sweeping services. 'No parking' posting in front of these parcels varies, however curbs are accessed by the street sweeper. Effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once Bi-weekly service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.17 Areas #17 – Milpitas Unified School District (MUSD) Properties**

School properties are remarkably free of litter at the elementary and middle school levels. Milpitas has one large high school (3,000 students) that has some litter along fences and surrounding areas. This mostly consists of pedestrian litter and cigarette butts. All schools have adequate space for recycling and garbage containers and are well maintained by MUSD custodial staff.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009):  
None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014:  
Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **Enhanced Private / Public Container Management**

MUSD properties designated as Areas #17 have adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

1) Actions initiated prior to and continued after the MRP effective date (December 2009):  
None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014:  
Site assessments in May 2013 resulted in no action taken.

3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

### **On-Land Trash Pickup**

There are no specific projects at this time. However City of Milpitas staff will work closely with Milpitas High School administration to provide incentives (gift certificates, program funding) to extracurricular student groups to conduct annual cleanups of pedestrian areas surrounding the school with a special focus on collecting small trash pieces and cigarette butts.

1) Actions initiated prior to and continued after the MRP effective date (December 2009):  
None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014:  
None

3) Actions planned for future implementation between July 2014 and July 2022: Annual contact with school administrators to offer incentives for extracurricular student groups that conduct a cleanup.

### **Targeted Public Education and Outreach for Schools**

School maintenance and operations staff provide recycling and garbage services similar to those of office buildings. Factsheets for these types of businesses can be distributed to custodians through the MUSD Director of Transportation and Operations.

1) Actions initiated prior to and continued after the MRP effective date (December 2009):  
None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None

3) Actions planned for future implementation between July 2014 and July 2022: City staff will research possibility of providing SCVURPPP awareness and training to MUSD operations staff. Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

School properties designated as Areas #17 are located along residential that receive bi-weekly street sweeping services and commercial streets that receive weekly sweeping. Predominately, 'no parking' posting on streets surrounding schools exists. Curbs are accessed by the street sweeper and effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once Bi-weekly service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.18 Areas #18 – City of Milpitas Parks**

Public parks are operated by the City of Milpitas and maintained by outsourced services. The City of Milpitas is extremely proud of the clean conditions that exist throughout the year. Public trash carts are situated in every park for easy disposal around picnic areas and along trails. Three parks of TMA #18 are treated by full-capture treatment serving all of, and reference in, TMA #19.

### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Consistent on-site clean up by City Public Works Department.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None

3) Actions planned for future implementation between July 2014 and July 2022: Semi-annual inspections conducted by the Public Works Department to maintain service levels provided by the contractor.

### **Enhanced Private / Public Container Management**

The City upgraded to semi-automated garbage collection services in 1999 and deployed garbage carts at greater locations than previous smaller garbage cans.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): The amount of garbage carts were increased and re-situated in all parks.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: None.

#### **On-Land Trash Pickup**

There are no specific projects at this time. However City of Milpitas staff will work closely with its contractor for park maintenance to provide cleanup of overflowing trash carts and other isolated litter incidents. Additionally, DPW crews are deployed when illegal dumping is reported.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Park maintenance procedures for weekly garbage collection of carts within each park. Immediate cleanup response to reports of illegal dumping.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Park maintenance outsourced to reduce costs and increase maintenance efficiencies.

3) Actions planned for future implementation between July 2014 and July 2022: None.

#### **Street Sweeping**

Public parks designated as Areas #18 are primarily located along residential streets that receive bi-weekly street sweeping services. 'No parking' posting varies along streets adjacent to parks. Curbs are accessed by the street sweeper and effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once Bi-weekly service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.19 Area #19 – Total Trash Capture Area (commercial areas with flows to Wrigley – Ford Pump Station)**

Two trash full - capture treatment devices were installed within this stormwater pump station, and manufactured by the Roscoe Moss Company. The Short-term Plan originally targeted two other pump stations, McCarthy and Bellevue, but it was determined that Wrigley-Ford offered the most access for installation while serving the greatest area, 551 acres or 17.8% of the City of Milpitas. See Figure 7 – Trash Full Capture Treatment Device Map for the service area. Installation was completed in October 2012.

Storm Flo Panel Screens, which are metallic, louver panels were installed in the inclined flat form. This form involved installation of individual louver panel screens side - by - side to span

the width of the detention basin and/or forebay. Commercially available louvers have slot widths of 3" and openings of 0.200" that would permit passage of stormwater but retain trash and debris measuring 0.200" (5mm) and larger. Another form, the cylindrical form (i.e., Storm Flo Screen) has been installed as in-line trash management devices within California.

Storm Flo Panel Screens were mounted horizontally or vertically to cover the area designed for treatment. They were mounted on H - beam supports that are anchored in concrete at the base. Individual panel dimensions are 8 ft x 5 ft with a 1/4" thickness and were also custom made, up to 8 ft x 10 ft with a 3/8" thickness.

Wrigley-Ford Pump Station receives a weekly visual site check. An inspection is conducted after each rain event. However, there were only two large rain events since installation: weeks of 12/04/12 and 12/26/12. No maintenance, other than graffiti removal, was conducted as of 1/17/14 due to low material load.

This is a newly developed commercial area that predominately supports high tech research and development firms. There are islands of residential redevelopment in recent years. It is free of pedestrian and vehicular litter. It is a well-designed area with adequate storage area for solid waste containers. This area also includes one-half of the Great Mall of the Bay Area's parking lot. For this reason, all of the Great Mall will be incorporated in activities and outreach for TMA #11.

**Anti-littering and Illegal Dumping Enforcement Activities**

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.
- 3) Actions planned for future implementation between July 2014 and July 2022: Although this is a full-trash capture area, a second annual site assessment in July-August 2014 to inspect for litter and trash accumulation in parking lots and solid waste enclosures. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Enhanced Private / Public Container Management**

Area #19 has adequate storage and solid waste services, including properly sized bins with lids that close during service delivery.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Site assessments in May 2013 resulted in no action taken.
- 3) Actions planned for future implementation between July 2014 and July 2022: Second annual site assessment in July-August 2014 to inspect for litter and proper trash handling. Code enforcement follow-up and actions taken as needed. Ongoing annual site assessments will occur through July-August 2022.

**Targeted Public Education and Outreach for Businesses**

Targeted outreach to businesses and property owners will include general information about housekeeping tips and requirements for bin management and litter abatement.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: None.

3) Actions planned for future implementation between July 2014 and July 2022: Factsheets of how-to information to accompany code enforcement actions. Includes new annual mailing to all businesses.

### **Street Sweeping**

Area #19 is located along commercial streets that receive street sweeping services once a week. The outside perimeters of the residential housing with private streets located to the north of this area are adjacent to stretches of commercial streets. Curbs are accessed by the street sweeper and effective parking enforcement is provided by the Milpitas Police Department.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Once per week service.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: No change.

3) Actions planned for future implementation between July 2014 and July 2022: No change.

### **3.3.20 Area #20 – Single Family Residential**

These neighborhoods represent the highest land use in the City of Milpitas with moderate to high income households. The areas are predominately free of pedestrian and vehicular litter as well as illegal dumping. There are few trash handling problems even though City of Milpitas solid waste services use a combination of carts and optional customer-supplied cans. The largest problem is leaves and other small debris in the fall and winter. Residents are advised to use their yard trimmings recycling carts to help keep streets clean as well as to move cars on street sweeping days.

#### **Anti-littering and Illegal Dumping Enforcement Activities**

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Limited to code enforcement response based on complaints from residents.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Continue code enforcement response based in complaints.

3) Actions planned for future implementation between July 2014 and July 2022: Continue code enforcement response based in complaints.

#### **Enhanced Private / Public Container Management**

The only problem is with limited numbers of households that use garbage cans with lids that are not tightly set or too damaged to continue use.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Non-collection notices issued by contracted hauler and placed on cans. In most cases, the garbage is collected with the notice left on the can.

3) Actions planned for future implementation between July 2014 and July 2022: Continue issuance of non-collection notices.

### **Targeted Public Education and Outreach to Multi-family Property Owners and Residents**

The City of Milpitas mails an annual newsletter to residents about recycling services. This mailer will be changed to include anti-litter and proper garbage service handling messages.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Began inserting urban runoff pollution prevention messages to door hangers and mailers.

3) Actions planned for future implementation between July 2014 and July 2022: Include anti-litter and urban runoff messages with the annual recycling mailer to property owners and residents. Coordinate with street sweeping services to promote proper use of the Yard Trimmings Recycling Program.

### **Street Sweeping**

Single family neighborhoods receive bi-weekly street sweeping in 10 service areas. There are five neighborhoods with old growth sycamore trees that are swept weekly in November and December. There is 'open parking' with no street sweeping signage. Parking enforcement (abandoned cars, neighbors not moving cars on sweep days, etc.) is handled on a complaint / call-in basis by Neighborhood Preservation / Code Enforcement. Approximately 25 – 30% of curbs are not effectively accessed by the sweeper due to parked cars.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Bi-weekly street sweeping and weekly service in five neighborhoods for two months. Annual mailing of street sweeping calendar in early January. Street sweeping articles placed in annual newsletters.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Continued bi-weekly street sweeping and weekly service in five neighborhoods for two months and street sweeping articles placed in annual newsletters. Addition of doorhanger distributions to problem service areas, and full-page print advertising in *The Milpitas Post* on a quarterly basis.

3) Actions planned for future implementation between July 2014 and July 2022:  
Continue bi-weekly street sweeping and weekly service in five neighborhoods;  
doorhanger distributions to problem service areas; street sweeping articles placed in  
annual newsletters, and full-page print advertising in *The Milpitas Post* on a quarterly  
basis. Expanded outreach of new messages about using the Yard Trimmings Recycling  
Program, not piling leaves in streets, and keeping cars off the street on sweep days.

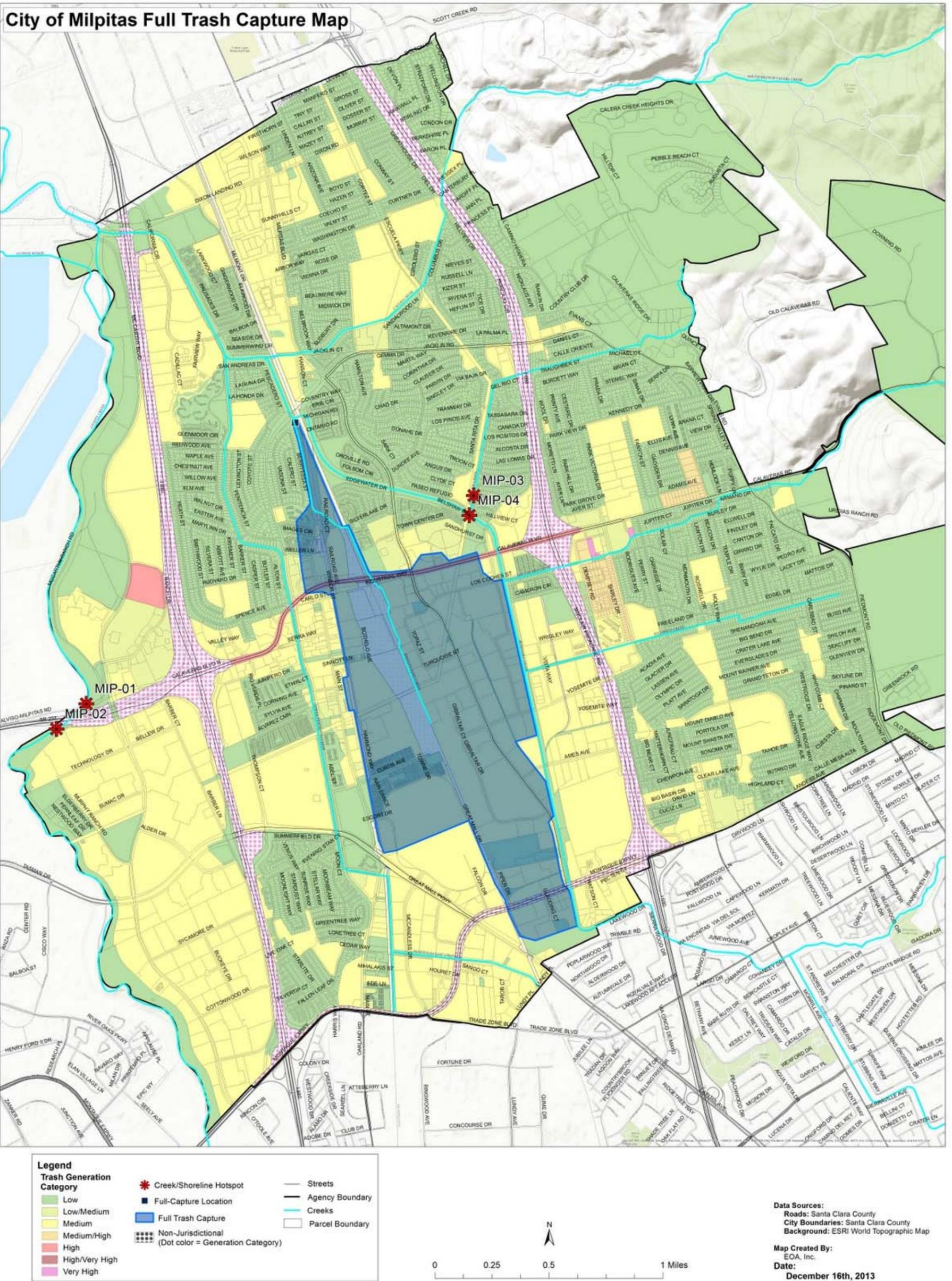


Figure 7. Trash Full Capture Device Map for the City of Milpitas.

### **3.3.21 Jurisdiction-wide Control Measures**

Litter from pedestrian and vehicular litter is the predominant trash problems that need to be addressed, particularly in commercial / retail areas with food establishments. The general approach to addressing these issues are citywide ordinances restricting single-use carryout bags, polystyrene foam food service ware, and a dovetailed approach of public education and outreach that incorporates regional and local campaigns.

#### **Single-use Carryout Bag Policies**

After presenting a Milpitas-specific study in April 2011 and Council approval to proceed as a study area with the EIR process offered by San Mateo County, the Milpitas City Council denied approval of the model ordinance by a 3 – 2 vote in December 2013. Staff may seek Council approval to conduct an EIR to again present a modified ordinance within the time frame of the upcoming permit.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Conducted a study of single-use bag ordinances, the effect in other jurisdictions, and a personal interview survey of 24 small businesses and statistically-reliable phone survey of Milpitas residents. Informed City Council of the need to meet trash load reduction requirements and introduce an ordinance restricting single-use bags.
- 3) Actions planned for future implementation between July 2014 and July 2022: Conduct a modified or new EIR and introduce a modified ordinance to the City Council by June 2015.

#### **Polystyrene Foam Food Service Ware Policies**

After presenting a Milpitas-specific study in April 2011 and receiving concerns of negative impacts to small businesses, staff decided to postpone presenting this ordinance to the Milpitas City Council. Staff will conduct an EIR and present an ordinance similar to neighboring communities by June 2016.

- 1) Actions initiated prior to and continued after the MRP effective date (December 2009): None.
- 2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Conducted a study of polystyrene foam food service ware ordinances, the effect in other jurisdictions, and a personal interview survey of 25 small businesses and statistically-reliable phone survey of Milpitas residents. Informed City Council of the need to meet trash load reduction requirements.
- 3) Actions planned for future implementation between July 2014 and July 2022: Conduct an EIR and introduce an ordinance to the City Council by June 2016.

#### **Public Education & Outreach Programs**

Maintain annual outreach described in annual reports while adding anti-litter and trash reduction messages at special events and in citywide mailings supporting the commercial and residential recycling programs.

1) Actions initiated prior to and continued after the MRP effective date (December 2009): Limited to urban runoff messages supporting publicity for household hazardous waste collection events and Pollution Prevention Week promotions.

2) Actions initiated after the MRP effective date and implemented prior to July 1, 2014: Increased outreach to include door-to-door distributions of safe product alternatives and anti-litter to both single and multi-family households twice per year (June for HHW events and September for creek cleanups). Staff support and local implementation of SCVURPPP campaigns,

3) Actions planned for future implementation between July 2014 and July 2022: Continue actions in item 2 and include anti-litter information to annual citywide recycling program publications (single and multi-family, commercial recycling programs).

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

The City of Milpitas conducts annual creek cleanups of four sites: two combined sites along Coyote Creek, and one site each at the confluence of Berryessa and Tularcitos Creeks. The locations are shown on the trash generation / management areas map for the City of Milpitas. Below is a description of dominant trash / litter pathways and sources and the amount of trash generally removed from each site. There were no cleanup actions taken prior to the MRP effective date at the Coyote Creek sites. Annual litter pickups at the adjacent park to Tularcitos Creek and trails of Berryessa Creek were conducted annually since 1985. However, these were not concentrated creek cleanups until these areas were declared “hot spots” as part of the MRP. Aside from the hot spot cleanups, no new or enhanced actions have been taken after the MRP effective date.

Coyote Creek, MIP01 & MIP02 (TMA #20): This area is underneath bridges of SR-237 and stretches beyond tunnel pathways to include trails and creek-side landscape, rock walls and the trail head. Both areas average two to three cubic yards of trash removal per annual cleanup. The five most prevalent trash types are convenience / fast food items, bottles and cans, paper and cardboard, mattresses and plastic bags. Trash sources are predominately vehicular litter and illegal dumping.

Tularcitos Creek, MIP03 (TMA #20): This area is adjacent to a city park that includes a softball field. It averages about one cubic yard of trash removal per annual cleanup. The five most prevalent trash types are bottles, aluminum cans, convenience / fast food items, plastic bags and paper and cardboard.

Berryessa Creek, MIP04 (TMA #20): This area is adjacent to a shopping center and includes creek side trails and a pedestrian bridge. It averages one to two cubic yards of trash removal per annual cleanup. The five most prevalent trash types are bottles, aluminum cans, convenience / fast food items, plastic bags and Styrofoam. Trash sources are predominately pedestrian litter.

### **3.3.23 Summary of Trash Control Measures**

Below is a listing of trash control measures for each of the 20 management areas in the City of Milpitas. Control measures listed below are believed to achieve the full trash reduction level possible in each management area.

**Trash Management Area 1.A & 1.B**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management (of adjacent shopping centers contributing to windblown litter)
- On-Land Trash Pickup
- Targeted Outreach Specific to Open-lot Property Owners
- Weekly Street Sweeping

**Trash Management Area 1.C**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 1.D**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for multi-family property owners and residents.
- Bi-weekly Street Sweeping

**Trash Management Area 1.E**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for multi-family property owners and residents.
- Bi-weekly Street Sweeping

**Trash Management Area 2**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 3**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 4**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management

- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 5**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 6**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 7**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 8**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 9**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 10**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 11**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management

- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 12**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 13**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 14**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 15**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 16**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses (large church properties)
- Bi-weekly Street Sweeping

**Trash Management Area 17**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- On-Land Trash Pickups
- Targeted Public Education and Outreach for Schools
- Combined Weekly and Bi-weekly Street Sweeping

**Trash Management Area 18**

- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)

- Enhanced Private / Public Container Management
- On-Land Trash Pickups (as needed for isolated litter incidents)
- Combined Weekly and Bi-weekly Street Sweeping

**Trash Management Area 19**

- Full-Capture Treatment Devices (Wrigley-Ford Pump Station)
- Anti-littering and Illegal Dumping Enforcement Activities (includes annual site assessments in July-August that will occur through July-August 2022)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Weekly Street Sweeping

**Trash Management Area 20**

- Anti-littering and Illegal Dumping Enforcement Activities (excludes annual site assessment)
- Enhanced Private / Public Container Management
- Targeted Public Education and Outreach for Businesses
- Bi-weekly Street Sweeping

### **3.4 Control Measure Implementation Schedule**

With 20 active trash management areas, the City of Milpitas will take every opportunity to provide information to residents and businesses. In commercial areas, this will involve annual site assessments in July-August that will occur through July-August 2022, an annual newsletter, and factsheets for businesses with code violations. Targeted multi-family housing with litter and trash handling problems will receive annual site assessments in July-August, an annual newsletter for residents and property owners, and direct coordination with property owners that have trash handling and litter problems. To accomplish this in both the commercial and targeted residential areas, outreach and awareness campaigns may or may not overlap site assessments and contact with businesses and property owners that have code violations. To address this, factsheets will be available for businesses and additional recycling program and housekeeping tips will be given to property owners.

Table 7. City of Milpitas trash control measure implementation schedule.

Note: After FY 2014-15, all TMAs continue to receive the annual site assessment, with follow-up code enforcement actions as necessary and jurisdiction-wide public education outreach. Each 'X' represents when a control measure is implemented. Control measures are staggered to provide Milpitas staff reasonable time to focus on TMAs and control measures in a fiscal year. No change in street sweeping schedules.

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 <sup>a</sup>	FY 2014-2015	FY 2015-2016	FY 2016-2017 <sup>b</sup>	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 <sup>c</sup>
<b>TMA 1A &amp; 1B</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X	X			X			X	
Enhanced Private / Public Container Mgmt.							X			X			X	
On-land Trash Pickup							X	X		X			X	
<b>TMA 1C</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X	X			X			X	
Enhanced Private / Public Container Mgmt.							X			X			X	
Targeted Public Education & Outreach							X			X			X	
<b>TMA 1D</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X	X			X			X	
Enhanced Private / Public Container Mgmt.					X	X	X			X			X	
Targeted Public Education & Outreach							X			X			X	
<b>TMA 1E</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X	X			X			X	
Enhanced Private / Public Container Mgmt.					X	X	X			X			X	
Targeted Public Education & Outreach							X			X			X	
<b>TMA #2</b>														

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 <sup>a</sup>	FY 2014-2015	FY 2015-2016	FY 2016-2017 <sup>b</sup>	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 <sup>c</sup>
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X		X			X		X	
Enhanced Private / Public Container Mgmt.					X	X		X			X		X	
Targeted Public Education & Outreach					X	X		X			X		X	
<b>TMA #3</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X		X			X		X	
Enhanced Private / Public Container Mgmt.								X			X		X	
Targeted Public Education & Outreach								X			X		X	
<b>TMA #4</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X		X			X		X	
Enhanced Private / Public Container Mgmt.								X			X		X	
Targeted Public Education & Outreach								X			X		X	
<b>TMA #5</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X		X			X		X	
Enhanced Private / Public Container Mgmt.								X			X		X	
Targeted Public Education & Outreach								X			X		X	
<b>TMA #6</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X		X			X		X	
Enhanced Private / Public Container Mgmt.								X			X		X	
Targeted Public Education & Outreach								X			X		X	
<b>TMA #7</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X		X			X		X	
Enhanced Private / Public Container Mgmt.								X			X		X	

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 <sup>a</sup>	FY 2014-2015	FY 2015-2016	FY 2016-2017 <sup>b</sup>	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 <sup>c</sup>
Targeted Public Education & Outreach								X			X		X	
<b>TMA #8</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X			X					X
Enhanced Private / Public Container Mgmt.									X					X
Targeted Public Education & Outreach									X					X
<b>TMA #9</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X			X					X
Enhanced Private / Public Container Mgmt.									X					X
Targeted Public Education & Outreach									X					X
<b>TMA #10</b> (same schedule as TMAs 2 – 7)														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X		X			X		X	
Enhanced Private / Public Container Mgmt.								X			X		X	
Targeted Public Education & Outreach								X			X		X	
<b>TMA #11</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X			X			X		X
Enhanced Private / Public Container Mgmt.									X			X		X
Targeted Public Education & Outreach									X			X		X
<b>TMA #12</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X			X			X		X
Enhanced Private / Public Container Mgmt.									X			X		X
Targeted Public Education & Outreach									X			X		X
<b>TMA #13</b>														

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 <sup>a</sup>	FY 2014-2015	FY 2015-2016	FY 2016-2017 <sup>b</sup>	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 <sup>c</sup>
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X			X			X		X
Enhanced Private / Public Container Mgmt.								X			X		X	
Targeted Public Education & Outreach								X			X		X	
<b>TMA #14</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X			X		X		X	
Enhanced Private / Public Container Mgmt.								X			X		X	
Targeted Public Education & Outreach								X			X		X	
<b>TMA #15</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X			X		X		X	
Enhanced Private / Public Container Mgmt.								X			X		X	
Targeted Public Education & Outreach								X			X		X	
<b>TMA #16</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X	X		X			X		
Enhanced Private / Public Container Mgmt.							X		X			X		
Targeted Public Education & Outreach							X		X			X		
<b>TMA #17 (MUSD)</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X	X		X		X		X	
Enhanced Private / Public Container Mgmt.							X		X		X		X	
On-Land Trash Pickups							X		X		X		X	
Targeted Public Education & Outreach							X		X		X		X	
<b>TMA #18 (City Parks)</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X		X			X			

Trash Management Area and Control Measures	Pre-MRP	Short-Term					Long-Term							
		FY 2009-2010	FY 2010-2011	FY 2011-2012	FY 2012-2013	FY 2013-2014 <sup>a</sup>	FY 2014-2015	FY 2015-2016	FY 2016-2017 <sup>b</sup>	FY 2017-2018	FY 2018-2019	FY 2019-2020	FY 2020-2021	FY 2021-2022 <sup>c</sup>
Enhanced Private / Public Container Mgmt.								X				X		
On-Land Trash Pickups								X				X		
<b>TMA #19 (Trash Capture Area)</b>														
Anti-littering and Illegal Dumping Enforcement Activities (annual site assessment)					X	X			X			X		X
Enhanced Private / Public Container Mgmt.									X			X		X
Targeted Public Education & Outreach									X			X		X
<b>TMA #20 (Single Family Residential – Green)</b>														
Anti-littering and Illegal Dumping Enforcement Activities (as reported)		X	X	X	X	X	X	X	X	X	X	X	X	X
Enhanced Private / Public Container Mgmt.		X	X	X	X	X	X	X	X	X	X	X	X	X
Targeted Public Education & Outreach		X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Jurisdiction-wide Control Measures</b>														
Single-use Carry Out Bag Ordinance														
Polystyrene Foam Food Service Ware Ordinance														
Public Education and Outreach to Businesses and Residents					X	X	X	X	X	X	X	X	X	X
<b>Creek and Shoreline Hot Spot Cleanups</b>														
Coyote Creek, MIP01		X	X	X	X	X	X	X	X	X	X	X	X	X
Coyote Creek, MIP02		X	X	X	X	X	X	X	X	X	X	X	X	X
Tularcitos Creek, MIP03		X	X	X	X	X	X	X	X	X	X	X	X	X
Berryessa Creek, MIP04		X	X	X	X	X	X	X	X	X	X	X	X	X

<sup>a</sup>July 1, 2014 40% trash reduction target

<sup>b</sup>July 1, 2017 70% trash reduction target

<sup>c</sup>July 1, 2022 100% trash reduction target

## 4.0 PROGRESS ASSESSMENT STRATEGY

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

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

### 4.1 SCVURPPP Pilot Assessment Strategy

The following SCVURPPP Pilot Trash Assessment Strategy (SCVURPPP Pilot Strategy) was developed by SCVURPPP on behalf of the City of Milpitas and other Santa Clara Valley Permittees. The SCVURPPP Pilot Strategy will be implemented at a pilot scale on a countywide basis and includes measurements and observations in the City of Milpitas.

#### 4.1.1 Management Questions

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

- Are the MS4 trash load reduction targets being achieved?
- Have trash problems in receiving waters been resolved?
- If trash problems in receiving waters exist, what are the important sources and transport pathways?

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

#### 4.1.2 Indicators of Progress and Success

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

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

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

**Primary Indicators:**

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

**Secondary Indicators:**

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

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

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

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

**4.1.3 Pilot Assessment Methods**

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

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

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

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

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

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

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

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

Consistent with the MRP, adequate inspection and maintenance of trash full capture devices is required to maintain full capture designation by the Water Board. The City of Milpitas is

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

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

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

In addition to on-land trash assessments and full capture operation and maintenance verification, the City of Milpitas will also conduct assessments of trash control measures implemented within their jurisdictional area. Assessment methods will be selected based on trash sources and the type of control measure being implemented. Control measure effectiveness evaluations are more fully described in the SCVURPPP Pilot Trash Assessment Strategy. The following are example assessment methods that may be used to demonstrate successful control measure implementation and progress towards trash reduction targets:

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

visually assessing and documenting the conditions in targeted areas before and after implementing control measures.

- Partial Capture Devices – Reporting the magnitude and extent of enhanced actions; and/or visually assessing and the amount of trash in storm drains or downstream of partial capture devices.

### **2-C. Receiving Water Condition Assessments**

The ultimate goal of stormwater trash management in the Bay Area is to significantly reduce the amount of trash found in receiving waters. In the last decade, Santa Clara Valley Permittees and volunteers have collected data on the amounts of trash removed during cleanup events. More recently, Permittees have conducted trash assessments in creek and shoreline hotspots using standardized assessment methods. In an effort to answer the core management question *Have trash problems in receiving waters been resolved?*, the City of Milpitas plans to continue conducting receiving water condition assessments at trash hot spots a minimum of one time per year. Assessment will be conducted consistent with Permit hot spot cleanup and assessment requirements. Additional information on receiving water assessment methods can be found in the SCVURPPP Pilot Trash Assessment Strategy (SCVURPPP 2014).

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

The SCVURPPP Pilot Assessment Strategy described in the previous section recognizes that outcome-based trash assessment methods needed to assess progress toward trash reduction targets are not well established by the scientific community. In an effort to address these information gaps associated with trash assessment methods, the Bay Area Stormwater Management Agencies Association (BASMAA), in collaboration with SCVURPPP, the 5 Gyres Institute, San Francisco Estuary Partnership, the City of Los Angeles, and other stormwater programs in the Bay Area, developed the *Tracking California’s Trash* Project. The Project is funded through a Proposition 84 grant awarded to BASMAA by the State Water Resources Control Board (SWRCB) who recognized the need for standardized trash assessment methods that are robust and cost-effective.

The Project is intended to assist BASMAA member agencies in testing trash assessment and monitoring methods needed to evaluate trash levels in receiving waters, establish control measures that have an equivalent performance to trash full capture devices, and assess progress in trash reduction over time. The following sections provide brief descriptions of tasks that BASMAA will conduct via the three-year Project. Full descriptions of project scopes, deliverables, and outcomes will be developed as part of the task-specific Sampling and Analysis Plans required by the SWRCB during the beginning of the Project. The Project is currently underway and will continue through 2016.

#### 4.2.1 Testing of Trash Monitoring Methods

BASMAA and the 5 Gyres Institute will evaluate the following two types of assessment methods as part of the Project:

- **Trash Flux Monitoring** – Trash flux monitoring is intended quantify the amount of trash flowing in receiving waters under varying hydrological conditions. Flux monitoring will be tested in up to four receiving water bodies in San Francisco Bay and/or the Los Angeles areas. Methods selected for evaluation and monitoring will be based on a literature review conducted during this task and through input from technical advisors and stakeholders. Monitoring is scheduled to begin in 2014 and will be completed in 2016.
- **On-land Visual Assessments** – As part of the Project, BASMAA will also conduct an evaluation of on-land visual assessment methods that are included in the SCVURPPP Pilot Assessment Strategy. The methods are designed to determine the level of trash on streets and public right-of-ways that may be transported to receiving waters via MS4s. BASMAA plans to conduct field work associated with the evaluation of on-land visual assessment at a number of sites throughout the region. To the extent practical, sites where the on-land methods evaluations take place will be coordinated with trash flux monitoring in receiving waters. On-land assessments will occur in areas that drain to trash full capture devices, and all sites will be assessed during wet and dry weather seasons in order to evaluate on-land methods during varying hydrologic conditions. Monitoring is scheduled to begin in 2014 and will be completed in 2016.

#### 4.2.2 Full Capture Equivalent Studies

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

### 4.3 Long-Term Assessment Strategy

The City of Milpitas is committed to implementing standardized assessment methods post-2016 based on the lessons learned from pilot assessments and studies that will occur between 2014 and 2016. Assessment activities described in the previous sections will evaluate the utility of different assessment methods to demonstrate progress towards trash reduction targets and provide recommended approaches for long-term implementation. Lessons learned will be submitted to the Water Board with the FY 2015-2016 Annual Report and a revised Strategy will be developed and submitted, if necessary. The revised Strategy will include agreed upon assessment methods that will be used to demonstrate progress during the remaining term of trash reduction requirements. Reporting using the new/revised methods will begin with the FY 2016-17 Annual Report.

### 4.4 Implementation Schedule

The implementation schedule for the SCVURPPP Pilot Implementation Strategy, BASMAA’s Tracking California’s Trash project, and the Long-Term Assessment Strategy are included in Table 9. Load reduction reporting milestones are also denoted in the table. The schedule is consistent with the need for near-term pilot assessment results to demonstrate progress toward short-term targets, while acknowledging the need for testing and evaluation of assessment methods and protocols prior to long-term implementation. For more detailed information on implementation timelines, refer to the SCVURPPP Pilot Trash Assessment Strategy (SCVURPPP 2014) and monitoring plans developed as part of BASMAA’s Tracking California’s Trash project.

Table 9. The City of Milpitas trash progress assessment implementation schedule.

Trash Assessment Programs and Methods	Prior to FY 2013-14	Fiscal Year								
		2013-14 <sup>a</sup>	2014-15	2015-16	2016-17 <sup>b</sup>	2017-18	2018-19	2019-20	2020-21	2021-22 <sup>c</sup>
<b>Pilot Trash Assessment Strategy (SCVURPPP)</b>										
On-land Visual Assessments										
Initial (Baseline) Assessments	X									
Pilot Progress Assessments		X	X	X	X					
Full Capture Operation and Maintenance Verification			X	X	X					
Control Measure Effectiveness Evaluations	X	X	X	X	X					
Receiving Water Condition Assessments	X	X	X	X	X					
<b>Tracking California’s Trash Project (BASMAA)</b>										
Testing of Trash Monitoring Methods										
Trash Flux Monitoring Protocol Testing			X	X	X					
On-land Visual Assessment Evaluations			X	X	X					
Full Capture Equivalent Studies			X	X	X					
<b>Additional Assessments (City of Milpitas)</b>										
Annual Site Assessments by TMA (July-August)		X	X	X	X	X	X	X	X	X
<b>Long-Term Trash Assessment Strategy (SCVURPPP)</b>						X	X	X	X	X

<sup>a</sup>July 1, 2014 40% trash reduction target

<sup>b</sup>July 1, 2014 70% trash reduction target

<sup>c</sup>July 1, 2022 100% trash reduction target

## 5.0 REFERENCES

- Allison R.A. and F.H.S. Chiew 1995. Monitoring stormwater pollution from various land uses in an urban catchment. Proceedings from the 2<sup>nd</sup> International Symposium on Urban Stormwater Management, Melbourne, 551-516.
- Allison, R.A., T.A. Walker, F.H.S. Chiew, I.C. O'Neill and T.A. McMahon 1998. From Roads to rivers: Gross pollutant removal from urban waterways. Report 98/6. Cooperative Research Centre for Catchment Hydrology. Victoria, Australia. May 1998.
- Armitage, N. 2003. The removal of urban solid waste from stormwater drains. Prepared for the International Workshop on Global Developments in Urban Drainage Management, Indian Institute of Technology, Bombay, Mumbai India. 5-7 February 2003.
- Armitage, N. 2007. The reduction of urban litter in the stormwater drains of South Africa. *Urban Water Journal* Vol. 4, No. 3: 151-172. September 2007.
- Armitage N., A. Rooseboom, C. Nel, and P. Townshend 1998. "The removal of Urban Litter from Stormwater Conduits and Streams. *Water Research Commission* (South Africa) Report No. TT 95/98, Pretoria.
- Armitage, N. and A. Rooseboom 2000. The removal of urban litter from stormwater conduits and streams: Paper 1 – The quantities involved and catchment litter management options. *Water S.A.* Vol. 26. No. 2: 181-187.
- ABAG (Association of Bay Area Governments). 2005. Bay Area Land Use Geographical Information Systems Datalayer.
- BASMAA (Bay Area Stormwater Management Agencies Association). 2011a. Progress Report on Methods to Estimate Baseline Trash Loads from Bay Area Municipal Stormwater Systems and Track Loads Reduced. February 2011.
- BASMAA (Bay Area Stormwater Management Agencies Association). 2011b. Method to Estimate Baseline Trash Loads from Bay Area Municipal Stormwater Systems: Technical Memorandum #1. Prepared by EOA, Inc. April 2011.
- BASMAA (Bay Area Stormwater Management Agencies Association). 2011c. Sampling and Analysis Plan. Prepared by EOA, Inc. April 2011.
- BASMAA (Bay Area Stormwater Management Agencies Association). 2012. Trash Baseline Generation Rates: Technical Report. Prepared by EOA, Inc. February 1, 2012.
- County of Los Angeles. 2002. Los Angeles County Litter Monitoring Plan for the Los Angeles River and Ballona Creek Trash Total Maximum Daily Load. May 30, 2002.
- County of Los Angeles. 2004a. Trash Baseline Monitoring Results Los Angeles River and Ballona Creek Watershed. Los Angeles County Department of Public Works. February 17, 2004.
- County of Los Angeles 2004b. Trash Baseline Monitoring for Los Angeles River and Ballona Creek Watersheds. Los Angeles County Department of Public Works. May 6, 2004.
- Kim, L.H, M. Kayhanian, M.K. Stenstrom 2004. Event mean concentration and loading of litter from highways during storms. *Science of the Total Environment* Vol 330: 101-113.
- Lippner, G., R. Churchwell, R. Allison, G. Moeller, and J. Johnston 2001. A Scientific Approach to Evaluating Storm Water Best Management Practices for Litter. *Transportation Research Record*. TTR 1743, 10-15.
- SCVURPPP (Santa Clara Valley Urban Runoff Pollution Prevention Program). 2014. Pilot Trash Assessment Strategy. Prepared by EOA. February 1.