

# Trash Long-Term Reduction Plan and Progress Assessment Strategy

February 1, 2014



**Submitted by:**

**City of Dublin**

**100 Civic Plaza, Dublin, CA 94568**

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

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**CITY OF DUBLIN  
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:**



\_\_\_\_\_  
Roger Bradley  
Assistant to the City Manager

\_\_\_\_\_  
February 1, 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
DSRSD	Dublin San Ramon Services District
DUSD	Dublin Unified School District
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
GIS	Geographic Information System
MRP	Municipal Regional Stormwater NPDES Permit
MS4	Municipal Separate Storm Sewer System
NGO	Non-Governmental Organization
NPDES	National Pollutant Discharge Elimination System
Q	Flow
REM	Revel Environmental Manufacturing
SFRWQCB	San Francisco Regional Water Quality Control Board
SWRCB	State Water Resource Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
Water Board	San Francisco Regional Water Quality Control Board
WDR	Waste Discharge Requirements

## PREFACE

This 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 Dublin's current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with Municipal Separate Storm Sewer System (MS4) discharges. This Long-Term Plan is intended to be iterative and may be modified in the future based on information gained through the implementation of trash control measures. The City of Dublin 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 of Dublin such as changes to trash generation rates or enhanced/new trash control measures, 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 Area (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 Dublin 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 discharges of trash from the City of Dublin's MS4 that are regulated by NPDES Permit requirements. The Long-Term Plan includes:

1. Descriptions of the current level of implementation of trash control measures, and the type and extent to which new or enhanced control measures will be implemented to achieve a target of 100% (i.e. full) trash reduction from MS4s by July 1, 2022, with an interim milestone of 70% reduction by July 1, 2017;

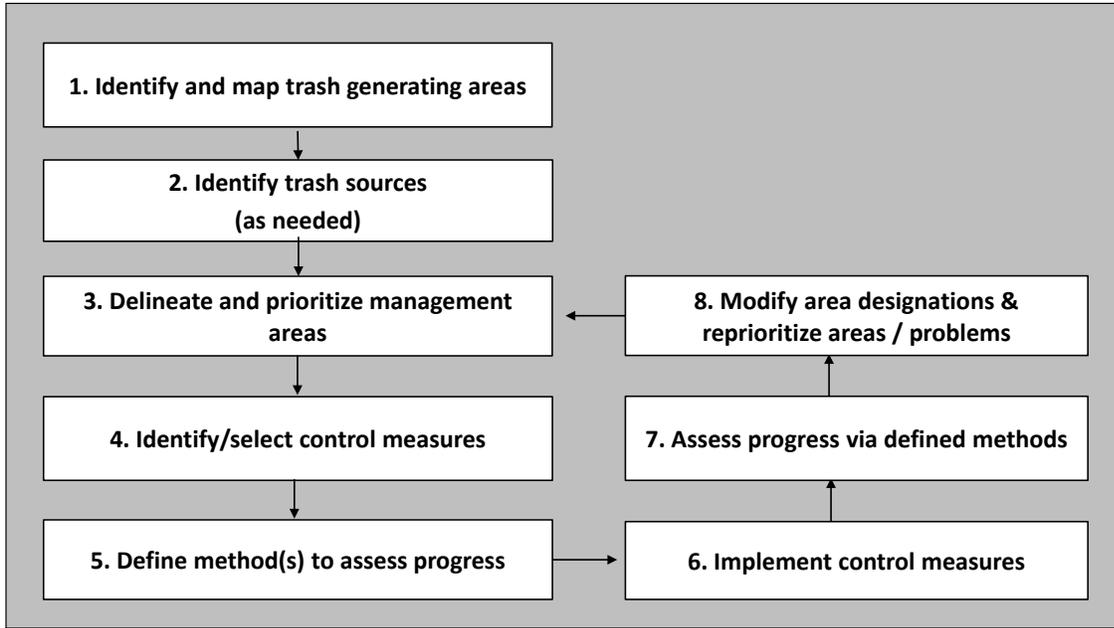
2. A description of the *Trash Assessment Strategy* that will be used to assess progress towards trash reduction targets achieved as a result of control measure implementation; and
3. Time schedules for implementing control measures and the assessment strategy.

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 Dublin's current understanding of trash problems within its jurisdiction and the effectiveness of control measures designed to reduce trash impacts associated with MS4 discharges. The Long-Term Plan builds upon trash control measures implemented by the City prior to the adoption of the MRP and during the implementation of the Short-Term Trash Load Reduction Plan submitted to the Water Board on February 1, 2012.

## **1.2 Background**

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

A workgroup of MRP Permittee representatives 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 1-1.** Eight-step framework for developing, implementing and refining Long-Term Trash Reduction Plans.

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

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

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

### **1.2.2 BASMAA Generation Rates Project**

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

trash generation and identifying very high, high, moderate and low trash generating areas.

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

In contrast to trash generation, the term “trash loading” refers to the rate at which trash from MS4s enters receiving waters. Trash loading rates are also expressed as trash volume/acre/year and are equal to or less than trash generation rates because they account for the effects of control measures that intercept trash generated in an area before it is discharged to a receiving water. Trash loading rates are specific to particular areas because they are dependent upon the effectiveness of control measures implemented within an area. Figure 1-2 illustrates the difference between trash generation and loading.



**Figure 1-2.** Conceptual model of trash generation, interception and load.

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

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

**Table 1-1.** 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.

### 1.3 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 Dublin. Control measures that will be implemented by the City of Dublin as a result of this Long-Term Plan are described in section 3.0. Section 4.0 describes the methods that will be used to assess progress toward trash reduction targets.

## 2.0 Scope of the Trash Problem

### 2.1 Permittee Characteristics

Incorporated in 1982, the City of Dublin is located in Alameda County, and has a jurisdictional area of 7,645.3 acres. Jurisdictional area does not include Camps Parks Reserve Forces Training Area, which is a United States Army facility.

According to the 2010 Census, it has a population of 46,036 and average household size of 2.70. Of the 46,036 residents who call Dublin home, 22.4% are under the age of 18, 8.0% are between 18 and 24, 38.2% are between 25 and 44, 24.1% are between 45 and 64, and 7.3% are 65 or older. The median household income was \$112,679 in 2010. The top employers in the City of Dublin include a Federal Correctional Institution, Carl Zeiss Meditec, SAP, Dublin Unified School District, Alameda County, Ross Corporate Headquarters, Epicor, Micro Dental and the City of Dublin.

Two major freeways transect the City of Dublin (Interstate 580 & Interstate 680). Additionally, there are two BART stations in the City of Dublin. The freeways and BART stations are both non-jurisdictional areas within the City; however, the freeways and BART stations have a very high trash generation rate, which creates windblown and pedestrian litter within the City.

Land uses within the City of Dublin identified by ABAG (2005) are provided in Table 2-1. The City of Dublin is comprised of seven land use categories. One of the categories, "other", includes the open space areas in the City. The six land uses that are developed in the City include Commercial & Services, Industrial, Residential, Retail, K-12 Schools and Urban Parks. Of these six categories, the land use category that comprises the largest percentage of jurisdictional area within Dublin is Residential. Residential comprises nearly 35% of the jurisdictional area within the City. Commercial & Services combined with the Retail category comprise 10% of the jurisdictional area within the City. A very small percentage of the City is Industrial (2%). The six land uses noted above make up just over half of the jurisdictional area within the City of Dublin. The remaining jurisdictional area within the City (47.6%) falls within the "other" category and comprises the open space areas in the City.

Some of the open space within the City, as designated by the City's General Plan, will eventually be developed. When development occurs in these areas, the land use category will be modified accordingly to reflect the land use.

The City's finances, like that of many cities in California, were severely impacted by the 2008 Recession. The recession resulted in the City cutting its budget and operating on limited fiscal resources. The City's limited resources influence the trash control measures that are realistic to implement.

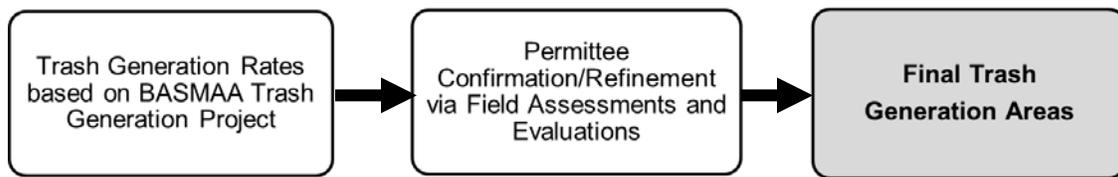
**Table 2-1.** Percentages of the City of Dublin’s jurisdictional area<sup>1</sup> within land use classes identified by ABAG (2005)

Land Use Category	Jurisdictional Area (acres)	% of Jurisdictional Area
Commercial & Services	410.6	5.4%
Industrial	155.1	2.0%
Residential	2,655.1	34.7%
Retail	349.9	4.6%
K-12 Schools	232.6	3.0%
Urban Parks	206.1	2.7%
Other (open space)	3,635.9	47.6%

## 2.2 Trash Generating Areas

### 2.2.1 Generation Categories and Designation of Areas

The process and methods used to identify the level of trash generation within the City of Dublin are described in this section and illustrated in Figure 2-1.



**Figure 2-1.** Development of Trash Generation Areas

As a first step, trash generation rates developed through the *BASMAA Trash Generation Rates Project* were applied to parcels within the City of Dublin 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 Dublin to identify trash generating levels. Levels of trash generation are depicted on the map using four trash generation rate (gallons/acre/year) categories that are symbolized by four different colors illustrated in Table 2-2.

<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).

**Table 2-2.** 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 Dublin 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 its 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 2-3. Using the Draft Protocol, the City assessed a total of 28 areas to assist in conducting/refining trash generating area designations.

Based on these inspections, City staff made the following revisions to its draft trash generation maps:

- The churches within the City (5 total) were changed from a medium trash generation rate to a low trash generation rate.
- The City fire stations (3 total) were changed from a medium trash generation rate to a low trash generation rate.
- The private schools within the City (3 total) were changed from a medium trash generation rate to a low trash generation rate.
- The majority of City parks (13 out of 15) were changed from a medium trash generation rate to a low trash generation rate.

- City staff observed very minimal trash in the inspections of the churches, fire stations, private schools and the majority of city parks. Staff completed inspection forms and took photos to document the changes made to the trash generation maps.

**Table 2-3.** 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**

City staff from various departments, including Public Works and Environmental Services, met to review the draft trash generation map. The interdepartmental discussion was essential in determining accurate trash generation rates.

City staff spoke with the City’s Maintenance Superintendent about the frequency that City parks are cleaned. City Maintenance staff clean each park within the City every other day and daily in the busier summer months (May – September). City staff observed very limited trash within the parks as a result of the frequent clean-ups.

**c. Reviewing Municipal Operations Data**

City staff spoke with the appropriate individual from the Public Works Department about the City’s street sweeping program. This individual played an important role in providing municipal operations data related to existing street sweeping practices in the City.

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 Dublin. Once assessments were completed, the draft trash generation map was adjusted appropriately to reflect the findings of the field assessments. 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 Dublin’s Final Trash Generation Map is included as Figure 2-2.

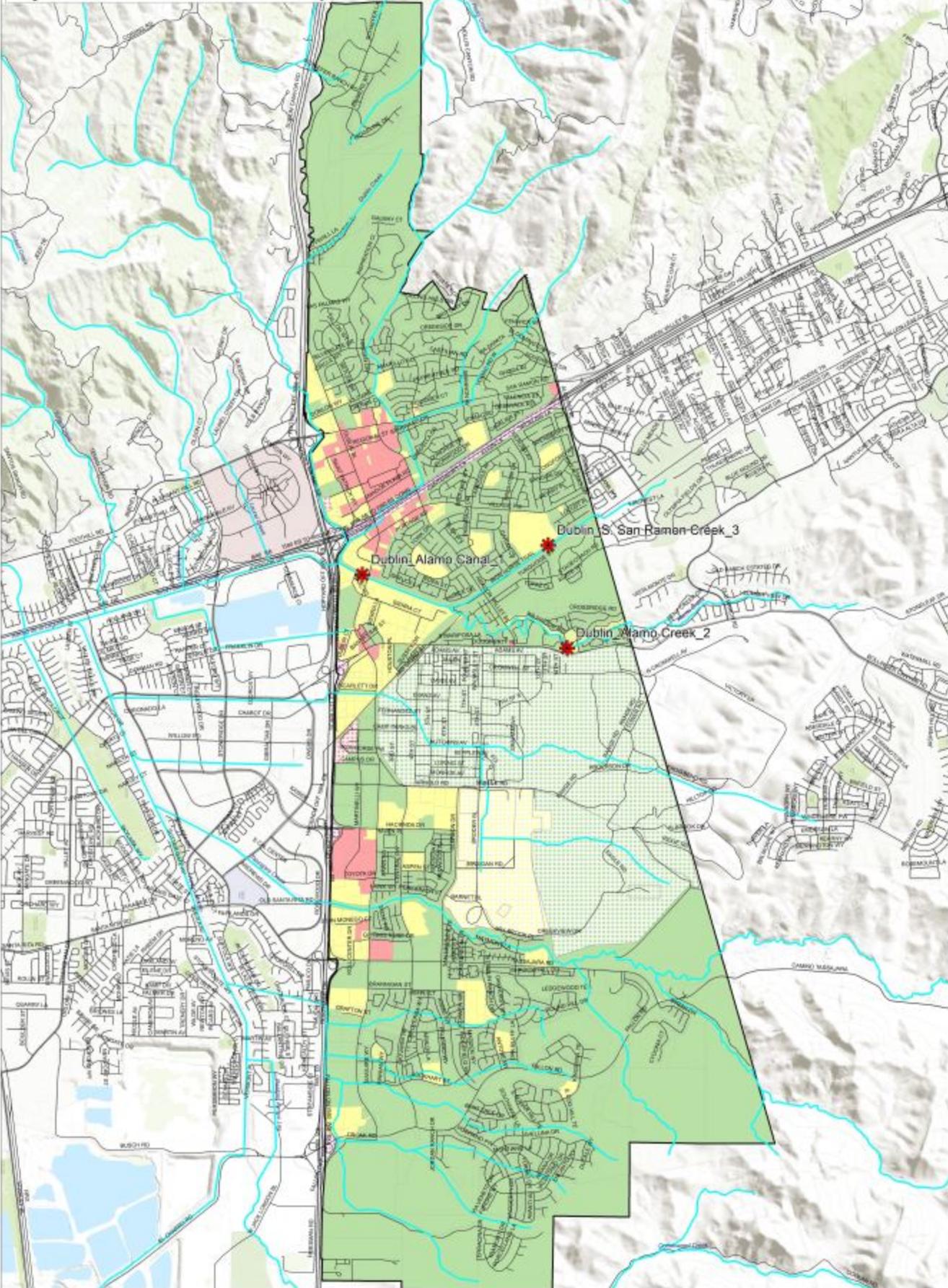
### 2.2.2 Trash Generating Areas and Sources

Summary statistics for land use and trash generation categories generated through the mapping and assessment process are presented in Table 2-4.

**Table 2-4.** Percentage of jurisdictional area within the City of Dublin assigned to each trash generation category.

Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
High	288.7	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Medium	821.5	45.7%	18.9%	0.0%	7.4%	23.3%	4.8%	0.0%
Low / Medium	37.0	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Low	6,498.2	0.5%	0.0%	40.9%	0.0%	0.6%	2.0%	56.0%

# City of Dublin Trash Generation Map



**Legend**

**Trash Generation Category**

- Low
- Low/Medium
- Medium
- Medium/High
- High
- High/Very High
- Very High

★ Creek/Shoreline Hotspot  
  Non-Jurisdictional (Dot color = Generation Category)  
 Streets  
 Agency Boundary  
 Creeks  
 Parcel Boundary

Figure 2-2. Final Trash Generation Map for the City of Dublin



**Data Sources:**  
 Roads: Alameda County  
 City Boundaries: Alameda County  
 Background: ESRI World Topographic Map  
**Map Created By:**  
 ECA, Inc.  
**Date:**  
 January 16th, 2014

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### 3.0 Trash management areas and control measures

This section describes the control measures that the City of Dublin 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 Dublin's current understanding of trash problems within its jurisdictional boundaries and the effectiveness of control measures designed to reduce trash impacts associated with MS4 discharges. Information on the effectiveness of some trash control measures is currently lacking and therefore in the absence of this information, the City based its selection of control measures on existing effectiveness information, their experience in implementing trash controls and knowledge of trash problems, and costs of implementation. As knowledge is gained through the implementation of these control measures, the City may choose to refine their trash control strategy described in this section. If significant revisions or amendments are made, a revised Long-Term Plan will be submitted to the Water Board through the City of Dublin's annual reporting process.

#### 3.1 Management Area Delineation and Prioritization

Consistent with the long-term plan framework, the City of Dublin 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. Prioritization has been given to the proposed trash management areas based on numerical value, with number one being the top priority. Priorities were determined based on the amount of area categorized with high trash generation rates. The City of Dublin's first three Trash Management Areas (1, 2 & 3) are the only areas that include high trash generation rates. The City of Dublin's primary management areas were selected based on the spatial distribution of trash generating areas and the location of specific existing or planned management actions within Dublin's jurisdictional boundaries.

City staff divided the City of Dublin into seven trash management areas. Existing Specific Plan boundaries and land use categories were used to delineate the TMAs in the City. City staff selected land use to delineate the TMA's because similar uses have the same trash generation rates and similar strategies for addressing the identified trash problems within each TMA. The TMAs in Dublin include the following:

Trash Management Area 1: Downtown Dublin area:

The City of Dublin has prioritized the Downtown Dublin area as its highest priority. The City recently adopted a Downtown Dublin Specific Plan, which includes three sub-areas (Retail District, Transit-Oriented District and Village Parkway District). The boundaries of the Downtown Dublin Specific Plan were used to create the boundaries of the Downtown Dublin Trash Management Area.

The downtown area of the City includes numerous fast food restaurants and commercial retail centers. Additionally, this trash management area is intersected by two major freeways (Interstate 580 & Interstate 680). The Transit-Oriented District of the Downtown Dublin area includes a BART station and several high density residential developments. A substantial portion of the City's downtown area is designated as having a high trash generation rate. Trash Management Area 1 is 272.7 acres and nearly 65% of the area has a high trash generation rate.

Trash Management Area 2: Eastern Dublin Commercial:

The divide between West Dublin and East Dublin is Dougherty Road, which traverses the City in a north south direction. This trash management area includes the various retail/commercial uses located in the eastern portion of the City, east of Dougherty Road. These commercial uses, for the most part, are located along Dublin Boulevard, which is a major arterial that traverses the City from west to east. This trash management area includes a mix of parcels with a high trash generation rate and parcels with a medium trash generation rate. Trash Management Area 2 is 286.1 acres. Approximately 30% of the area in Trash Management Area 2 has a high trash generation rate and approximately 70% has a medium trash generation rate.

The City's General Plan and Eastern Dublin Specific Plan allows for additional general commercial uses in Eastern Dublin. There are still large areas of undeveloped land that will be developed with commercial uses in the future. This future development will consist of a variety of land uses, including General Commercial, Campus Office, Business Park/Industrial, and Residential. This area is currently in the "other" category; however, it will be re-classified to the appropriate trash management area once development occurs. The majority of land that is not yet developed will most likely become part of TMA 2. Therefore, the size of TMA 2 will grow; however, since new development is required to be trash neutral, the percentage of area within TMA 2 that is treated by full trash capture will increase.

Trash Management Area 3: Western Dublin Commercial

The divide between West Dublin and East Dublin is Dougherty Road, which traverses the City in a north south direction. This trash management area includes the various retail/commercial uses located in the western portion of the City, west of Dougherty Road. These commercial uses are located mainly along Dublin Boulevard, which is a major arterial that traverses the City from west to east. Trash Management Area 3 includes a mix of parcels with a high trash generation rate and parcels with a medium trash generation rate. Trash Management Area 3 is 199.8 acres. Approximately 13% of the area in Trash Management Area 3 has a high trash generation rate and approximately 87% has a medium trash generation rate.

Trash Management Area 4: Business/Office Park District:

There is a limited amount of Business/Office Parks in Dublin. There are a few Business/Office Parks in both the western and eastern portion of the City. Parcels within this area have a medium trash generation rate. The office uses were separated from the commercial areas since this land use generates less trash and the strategy for dealing with trash in these areas is different than the higher generating commercial uses. Trash Management Area 4 is 119.7 acres and 100% of the area has a medium trash generation rate.

Trash Management Area 5: Dublin Unified School District:

The areas included in this trash management area are the schools and facilities owned by the Dublin Unified School District. There are a total of 10 public schools (7 elementary schools, 2 middle schools and 1 high school) in addition to the district office. Additional public schools will be coming on-line soon. When the new schools are completed, they will become a part of this trash management area. Parcels within this area have a medium trash generation rate. Trash Management Area 5 is approximately 182.9 acres and 100% of the area has a medium trash generation rate.

Trash Management Area 6: City Owned Facilities:

The areas included in this trash management area consist of facilities owned by the City and include two City parks, the Civic Center, the City's Corporation Yard and the City's Public Safety Complex. The Corporation Yard and Public Safety Complex are both currently under construction. Both projects are anticipated to be completed in FY 14-15. Parcels within this trash management area have a medium and a low/medium trash generation rate. Trash Management Area 6 is 86.5 acres and approximately 57% has a medium trash generation rate and approximately 43% has a low/medium trash generation rate. The City has designated two parks as having a low/medium trash generation rate. These parks were inspected as part of the on-land visual assessments; however, their trash generation rates were not switched to low because City staff observed more trash at these particular two parks than at the other parks whose trash generation rates were switched to low.

Trash Management Area 7: All Other Areas:

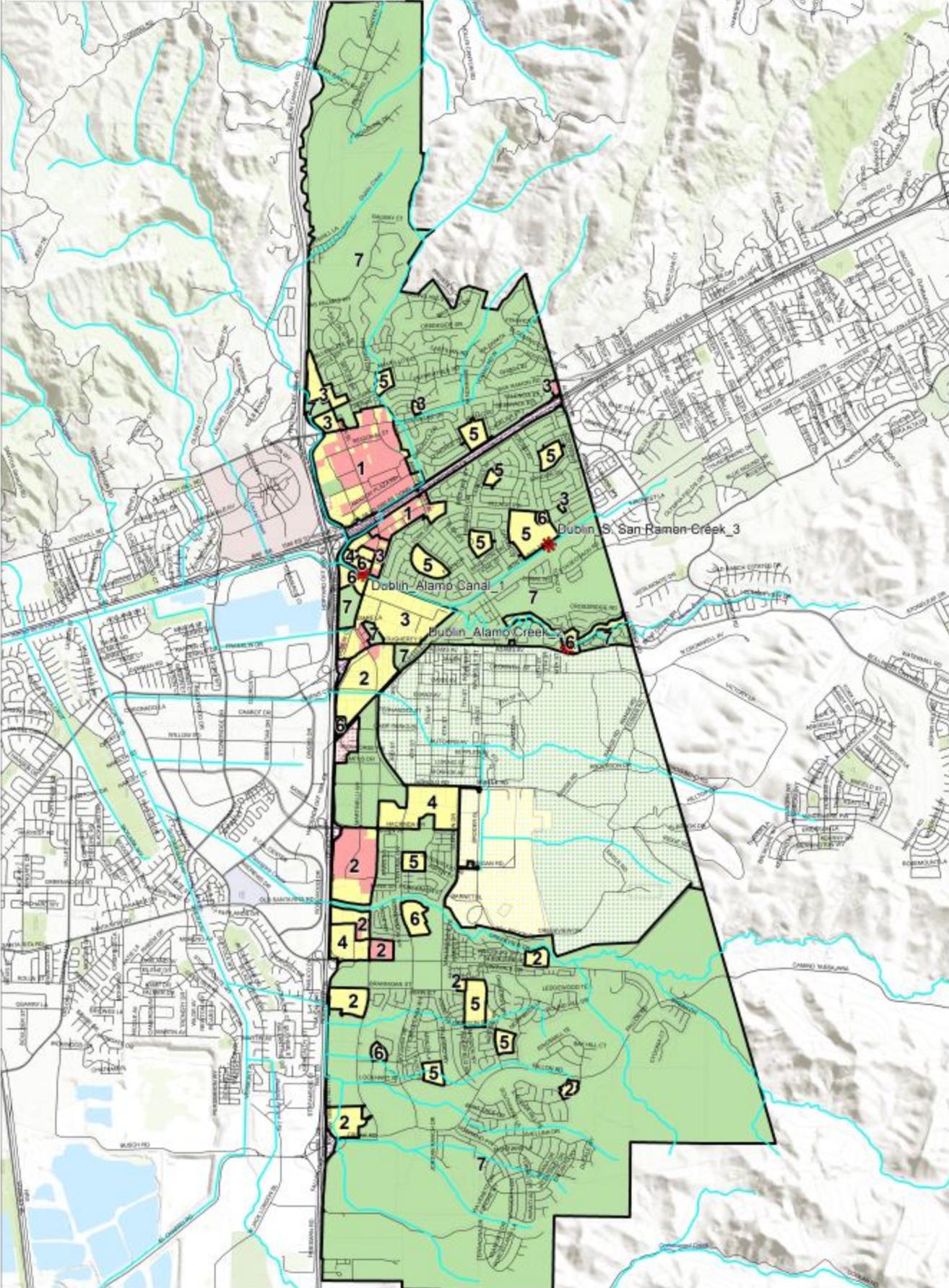
The areas included in this trash management area are the parcels within the City that have a Low Trash Generation Rate. Land uses include residential, open space, the majority of City parks (13), fire stations (3), churches (5) and private schools (3). The private schools were inspected during the on-land visual assessments and very little trash was observed; therefore, the private schools were separated out from the publicly owned schools.

A map depicting the City's trash management areas is included as Figure 3-1. All jurisdictional areas within the City are included within a trash management area. The amount of jurisdictional land area and associated trash condition categories for each trash management area are included in Table 3-1.

Table 3-1. Jurisdictional area and percentage of each Trash Management Area (TMA) comprised of trash generation categories

TMA	Jurisdictional Area (Acres)	Trash Generation Rate				
		Very High	High	Medium	Low / Medium	Low
1	272.7	0.0%	64.7%	29.6%	0.0%	5.7%
2	286.1	0.0%	30.4%	69.6%	0.0%	0.0%
3	199.8	0.0%	12.7%	87.3%	0.0%	0.0%
4	119.7	0.0%	0.0%	100.0%	0.0%	0.0%
5	182.9	0.0%	0.0%	100.0%	0.0%	0.0%
6	86.5	0.0%	0.0%	57.3%	42.7%	0.0%
7	6,497.7	0.0%	0.0%	0.2%	0.0%	99.8%

# City of Dublin Trash Management Areas Map



**Legend**

**Trash Generation Category**

- 1 (Very High)
- 2 (High)
- 3 (Medium/High)
- 4 (Medium)
- 5 (Low/Medium)
- 6 (Low)
- 7 (Very Low)

**Hotspot**

- Red Star: Creek/Shoreline Hotspot

**Boundaries**

- Thick Black Line: Agency Boundary
- Thin Black Line: Parcel Boundary

**Other Features**

- Blue Line: Creeks
- Grey Line: Streets
- Grey Dotted Area: Non-Jurisdictional (Dot color = Generation Category)

Figure 3-1. Trash Management Area Map for the City of Dublin

0 0.25 0.5 1 Miles

Data Sources:  
 Roads: Alameda County  
 City Boundaries: Alameda County  
 Background: ESRI World Topographic Map  
 Map Created By:  
 ECA, Inc.  
 Date:  
 January 16th, 2014

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### 3.2 Current and Planned Trash Control Measures

The City of Dublin has implemented, and will continue to implement a variety of control measures to reduce trash within our MS4 system. These control measures include the following:

- Full trash Capture Devices;
- Street Sweeping;
- Improved Trash Bin/Container Management;
- Grant Reimbursement Program for Improvements on Private Property;
- Business Outreach & Education;
- Participation in the Single-Use Bag Ban;
- Polystyrene Foam Food Service Ware Policies;
- Activities to Reduce Trash from Uncovered Loads;
- Drain Inlet Maintenance;
- Anti-littering and Illegal Dumping Activities;
- Creek Clean-ups;
- On-land Clean-ups; and
- Public Education and Outreach Programs.

The City of Dublin was proactive and began to install full trash capture devices prior to MRP adoption. The City began installing full trash capture devices in 2002. At that time, the City also began requiring developers to install full trash capture devices. As of the writing of this plan, the City owns and maintains 15 hydrodynamic separators. The City will be accepting 4 additional hydrodynamic separators by the end of 2014. The City is currently working to identify an appropriate location for an additional hydrodynamic separator in the Downtown Dublin Area. The City is exploring options to partner with the development community on the funding of this device as areas of the downtown area are redeveloped. The City's Downtown Dublin Specific Plan was developed to incentivize development in the downtown area; therefore, the City anticipates that opportunities to partner with a developer to install full trash capture devices will be available in the future. Should a partnership opportunity with the development community not present itself to install the device, the City intends to fund the full completion of this capital improvement. This device will be installed prior to July 1, 2017.

The City contracts with the Dublin San Ramon Services District (DSRSD) to inspect and clean the City owned hydrodynamic separators each fall. Additionally, the City has installed 76 inlet filters ("baskets") within the City. The City contracts with Revel Environmental Manufacturing (REM) for the cleaning of the publicly owned inlet filters ("baskets"). These filters are inspected and cleaned three times per year – once in the fall, winter and spring.

The trash capture devices installed within the City of Dublin satisfy the City's requirement to treat 30% of Dublin's commercial land area, as specified by the MRP provision C.10.a.iii. Full trash capture devices installed in Dublin treat a total of 430.67 acres of land. The City of Dublin does not have any very high trash generating areas within its jurisdictional area. There are 288.7 acres that are designated as having a high trash generation rate. Of the areas in the City designated as high trash generating, 37.8% are

treated by full trash capture devices. Please refer to Figure 3-2 for the location and area treated by the full trash capture devices installed within the City.

The City of Dublin requires new development projects to be trash neutral. As part of the entitlement process, Conditions of Approval are placed on development projects that require the installation of full trash capture devices on private property. In these cases, the property owner maintains the full trash capture device. The City requires that property owners who have full trash capture devices installed on their private property (baskets and/or hydrodynamic separators) to annually submit their maintenance records to the City for review to ensure that the devices are being properly maintained. The City sends letters each fall to remind the property owners and follows up as necessary until the maintenance records are received. As of the writing of this plan, there are 127 privately owned baskets and 9 privately owned hydrodynamic separators with the City.

There are several development projects in the City that are either under construction or have been approved that will include full trash capture devices. Several of these units will be installed after 2014 and are part of the City's long term strategy to reduce trash. These projects include:

- Three Hydrodynamic Separator units will be installed as part of the Esprit development in the Eastern Dublin Transit Center (residential project on approximately 5 acre site). This project is currently under construction. This project is located in Trash Management Area 7.
- A Hydrodynamic Separator will be installed as part of the Kingsmill mixed-use project (residential & commercial project on an approximately 6 acre site). This project has been approved by the City. Building permits have not yet been issued. This project is located in Trash Management Area 1.
- A Hydrodynamic Separator will be installed as part of the Village project (commercial project on an approximately 14 acre site). This project has been approved by the City. Building permits have not yet been issued. This project is currently in Trash Management Area 7 (open space); however, once the site is developed it will be moved to Trash Management Area 2.
- Inlet filters will be installed as part of the Car West Auto Body project (1.6 acre site). This project is currently under construction. This project site is located in Trash Management Area 2.
- Inlet filters will be installed in the Fallon Gateway Commercial Center (retail on 34 acre site). Portions of this project have been completed and other portions are currently under construction. This project site is located in Trash Management Area 2.

In many instances, the City has required developers to install a hydrodynamic separator within the public right-of-way as part of the entitlement process. In these instances, the City takes over the maintenance of the unit following completion of the project to offset the ongoing maintenance cost for the private property owners. The City has had success with this approach because the larger units installed in the public right-of-way treat more land than just the project site. The City encourages private developers to install larger units in the public right-of-way versus installing a unit on-site to maximize the

trash capture area. The City has found that developers are often willing to install a larger, more expensive unit as a trade-off for the on-going maintenance of the unit.

Table 3-2 includes the number and type of full trash capture device installed within each of the seven trash management areas within the City. The table also differentiates if the device is privately or publicly owned & maintained.

**Table 3-2: Full Trash Capture Devices Installed in Dublin**

TMA	Acres of Treatment	Baskets (public)	Hydrodynamic Separators (public)	Baskets (private)	Hydrodynamic Separators (private)
1	138.26	12	3	53	1
2	29.08	2	1	53	2
3	12.40	6	1	1	2
4	18.94	2	0	20	0
5	20.27	8	0	0	0
6	14.52	1	2	0	0
7	180.16	45	9*	0	4
None	17.04	0	3**	0	0

\*4 of the units in TMA 7 have been installed, but not yet accepted by the City

\*\*units located on non-jurisdictional area at East Dublin BART station

One of the primary ways that the City reduces trash is through its street sweeping program. The City of Dublin’s street sweeping program includes sweeping all publicly maintained streets in the City twice per month with the exception of August, when streets are swept once. There is additional sweeping during November and December because of the large amounts of leaves that fall in the street. During November and December streets in the commercial district are swept weekly. The City doesn’t permit parking on most of the arterial streets within the City. Posting of parking enforcement signs for street sweeping does not occur on residential streets; however, the City encourages residents to not park on the street on the day street sweeping occurs. There is a brochure on the City website that provides information on the City’s street sweeping service and the benefits of moving cars and/or trash receptacles on the day when the street is swept. On a complaint basis, the City places door hangers in neighborhoods that don’t move their cars and/or trash bins on the street sweeping day. Please refer to Attachment 1 for a brochure distributed to residents on the City’s Street Sweeping program.

Since adoption of the MRP, the City of Dublin has adopted a Solid Waste and Recycling Enclosure Ordinance. The purpose of the ordinance is to ensure that new development within the City has adequate sized trash enclosures. Improper trash container management at commercial facilities can be a significant source of trash to the storm drain system. All new development projects are required to appropriately size their enclosures to account for all types of waste streams that the business will be producing. The City works with its waste hauler during the entitlement process to verify that the trash enclosures are appropriately sized. The City has found that appropriately sized

enclosures play an important role in controlling litter on a site. The City's Solid Waste and Recycling Enclosure Standards are included as Attachment 2.

Since adoption of the MRP, the City has partnered with its waste hauler, Amador Valley Industries, to provide grant funding to existing commercial businesses within the City. The grant reimbursement program is a part of the City's contract with its waste hauler. The amended contract was approved by the City Council in 2013. The City awarded the first grants in 2013. Each year the City awards up to \$75,000 to property owners to make improvements on private properties. Among other things, the money can be used to construct trash enclosures. The City will continue to explore other options that the grant funding can be used for to reduce trash on private property, such as the installation of full trash capture devices on private property. The grant funds could be utilized to pay for the full trash capture devices; however, the property owner would be obligated to pay for the maintenance of these devices. The City will be promoting this program to businesses within specific trash management areas. The Small Business Assistance Program Guidelines and application is included as Attachment 3.

Since adoption of the MRP, the City has instituted an annual cleanup of its three required trash hot spots. See Figure 3-2 for locations of the City of Dublin's hot spots. The City's current trash hot spots will be evaluated and moved if the trash problem is significantly reduced or if another trash hot spot within the City is found to require additional cleanup. Hot spot evaluations and location changes will be included in this Long Term Plan and in future annual stormwater reports. Please refer to Section 3.2.9 for more information on Dublin's hot spot cleanups.

The City of Dublin is supportive of source control – eliminating the distribution of items that are thrown away as trash. The City of Dublin opted in to the Alameda County Waste Management Authority Single-Use Bag Ban Ordinance. This ordinance took effect on January 1, 2013, and it bans the distribution of plastic bags at stores, pharmacies, drug stores or other entities that sell milk, bread, soda and snack foods (all four items) and/or alcohol (Type 20 or 21 license). Additionally, the City has adopted policies that ban polystyrene foam food service ware at Dublin sponsored events and activities. The City will be exploring expanding the polystyrene foam food service ware ban to include restaurants within the City. Please refer to Section 3.2.8 for more information on the product bans.

The above mentioned trash reduction activities will continue to serve as the City's main trash reduction efforts and will be enhanced, as necessary. The following sections include a description of the various trash reduction activities that will be implemented in each of the City's seven trash management areas.

### **3.2.1 Trash Management Area #1**

#### Trash Management Area 1: Downtown Dublin Area:

The City of Dublin has prioritized the Downtown Dublin area as its highest priority. This trash management area is 272.7 acres in size. The City recently adopted a Downtown Dublin Specific Plan, which includes three sub-areas (Retail District, Transit-Oriented District and Village Parkway District). The boundaries of the Downtown Dublin Specific

Plan were used to create the boundaries of the Downtown Dublin Trash Management Area because a large percentage of the downtown has a high trash generation rate. This trash management area is generally bound by Village Parkway to the east, Interstate 580 to the south, San Ramon Road to the west and Amador Valley Boulevard to the north. A substantial portion of the City's downtown area is designated as having a high trash generation rate (64.7%). Predominant existing land uses in Trash Management Area 1 include regional-serving retail, restaurant and commercial services. Exceptions include some limited light industrial businesses along Village Parkway, auto sales/service businesses south of Dublin Boulevard, offices and a senior housing development and senior center just south of Amador Valley Boulevard. This area also includes a BART station and several high-density residential complexes. Additionally, Interstate 680 traverses the downtown area in a north-south direction.

Trash sources within Trash Management Area 1 are likely from the fast food restaurants, the commercial/retail centers, pedestrian litter at the BART station and wind-blown litter from Interstate 680.

The general approach to addressing litter in this trash management area is through the installation of full trash capture devices, street sweeping, improved container/bin management, promoting the grant reimbursement program, business outreach & education and the Jurisdiction-wide control measures.

### **Full Trash Capture Devices**

The City is addressing litter in Trash Management Area 1 most notably through the installation of full trash capture devices. As shown in Figure 3-2, a large percentage of the downtown area is currently treated with full trash capture devices. Trash Management Area 1 is 272.7 acres in size and 138.26 acres is currently treated by a full trash capture device (50.7% of the area within TMA1). As previously noted, a large portion of Trash Management Area 1 is designated as having a high trash generation rate (64.7%). Of the area within Trash Management Area 1 that has a high trash generation rate (176.4 acres), approximately 54% is treated by full trash capture.

The City owns 12 inlet filters ("baskets") and 3 hydrodynamic separators within Trash Management Area 1. Additionally, there are 53 privately owned baskets and one privately owned hydrodynamic separators in Trash Management Area 1.

There is a project that was recently construction in the downtown area that was required to install a hydrodynamic separator. Staff worked with the developer to select a location that would treat a much larger area (approximately 10 times larger) than the project site alone. This unit was recently accepted by the City.

The City utilized grant money from the Bay Area Wide Full Trash Demonstration Project to install a hydrodynamic separator adjacent to the newly constructed West Dublin Bart station, which is located in Trash Management Area 1. This unit treats approximately 25 acres, which is a large portion of the Transit-Oriented District of the Downtown Dublin Specific Plan. The Transit-Oriented District of the Downtown Dublin Specific Plan has been identified as a high trash generation area because of the high density residential

complexes and commercial uses located within its boundaries. Additionally, this area has high pedestrian traffic as a result of the West Dublin BART station.

As part of its stormdrain maintenance program, the City of Dublin was proactive and began to install full trash capture devices prior to MRP adoption. The City began installing full trash capture devices in 2002. At that time, the City also began requiring developers to install full trash capture devices. As of the writing of this plan, the City owns and maintains 15 hydrodynamic separators. The City will be accepting 4 additional hydrodynamic separators by the end of 2014. The City is currently working to identify an appropriate location for an additional hydrodynamic separator in the Downtown Dublin Area. The City is exploring options to partner with the development community on the funding of this device as areas of the downtown area are redeveloped. The City's Downtown Dublin Specific Plan was developed to incentivize development in the downtown area; therefore, the City anticipates that opportunities to partner with a developer to install full trash capture devices will be available in the future. Should a partnership opportunity with the development community not present itself to install the device, the City intends to fund the full completion of this capital improvement. This device will be installed prior to July 1, 2017.

As part of the planning project review process, the City will continue its practice to require private property owners within this trash management area to install full trash capture devices on their property when entitlements are requests (i.e. Conditional Use Permits and Site Development Review Permits).

To date, the City has not had any maintenance or performance issues associated with any of the full trash capture devices installed in Trash Management Area 1.

### **Street Sweeping**

The City of Dublin's street sweeping program includes sweeping all publicly maintained streets in the City twice per month with the exception of August, when streets are swept once. There is additional sweeping during November and December because of the large amounts of leaves that fall in the street. During November and December streets in the commercial district are swept weekly. The City doesn't permit parking on most of the arterial streets within the City. Posting of parking enforcement signs for street sweeping does not occur on residential streets; however, the City encourages residents to not park on the street on the day street sweeping occurs. Additionally, there is a brochure on the City website that provides information on the City's street sweeping service and the benefits of moving cars and/or trash receptacles on the day when the street is swept. On a per complaint basis, the City places door hangers in neighborhoods that do not move their cars and/or trash bins on the street sweeping day. The City receives complaints more frequently in the fall (2-3 complaints a month). The City receives approximately one complaint every other month the rest of the year.

The City has not made any changes to its street sweeping program since the adoption of the MRP. Existing activities will continue.

### **Improved Trash Bins/Containers Management**

The City adopted a Solid Waste and Recycling Enclosure Ordinance in June 2011 to require new development projects within the City to construct trash enclosures that are adequately sized to meet their trash and recycling needs. This control measure was implemented after MRP adoption.

As required by the ordinance, all enclosures must have a roof and a connection to the sanitary sewer. In many instances, tenant improvements also trigger the requirements to construct or reconstruct an enclosure that is consistent with the City's Solid Waste and Recycling Enclosure Ordinance. During the entitlement process, the City and its waste hauler (Amador Valley Industries) work together to review trash enclosures to verify that they are properly sized. The City has found that appropriately sized enclosures play an important role in controlling litter on a site.

Additionally, the City has a successful solid waste and recycling program to manage trash using containers, collection and recycling programs. The City has installed trash receptacles throughout the City on roads that have high pedestrian traffic. The City will continue to evaluate locations where additional trash containers should be installed.

The City adopted its Waste and Recycling Enclosure Ordinance after MRP adoption.

### **Grant Reimbursement Program**

The City has partnered with its waste hauler, Amador Valley Industries, to provide grant funding to existing commercial businesses within the City. Among other things, the money can be used to construct trash enclosures. The City will continue to explore other options that the grant funding can be used for to reduce trash on private property, such as the installation of full trash capture devices on private property. Each year the City reviews grant requests and awards up to \$75,000 to property owners to make improvements to their properties, which results in new or expanded trash enclosures that prevents litter from leaving the site. In September 2013, the City awarded grants to two property owners for trash enclosures in the amounts of \$15,000 and \$40,000. The City will be promoting this program to businesses in the commercial areas of the City. The City will be targeting locations that have had problems in the past controlling their on-site litter.

The grant reimbursement program is a new control measure that was implemented after MRP adoption.

### **Business Outreach & Education**

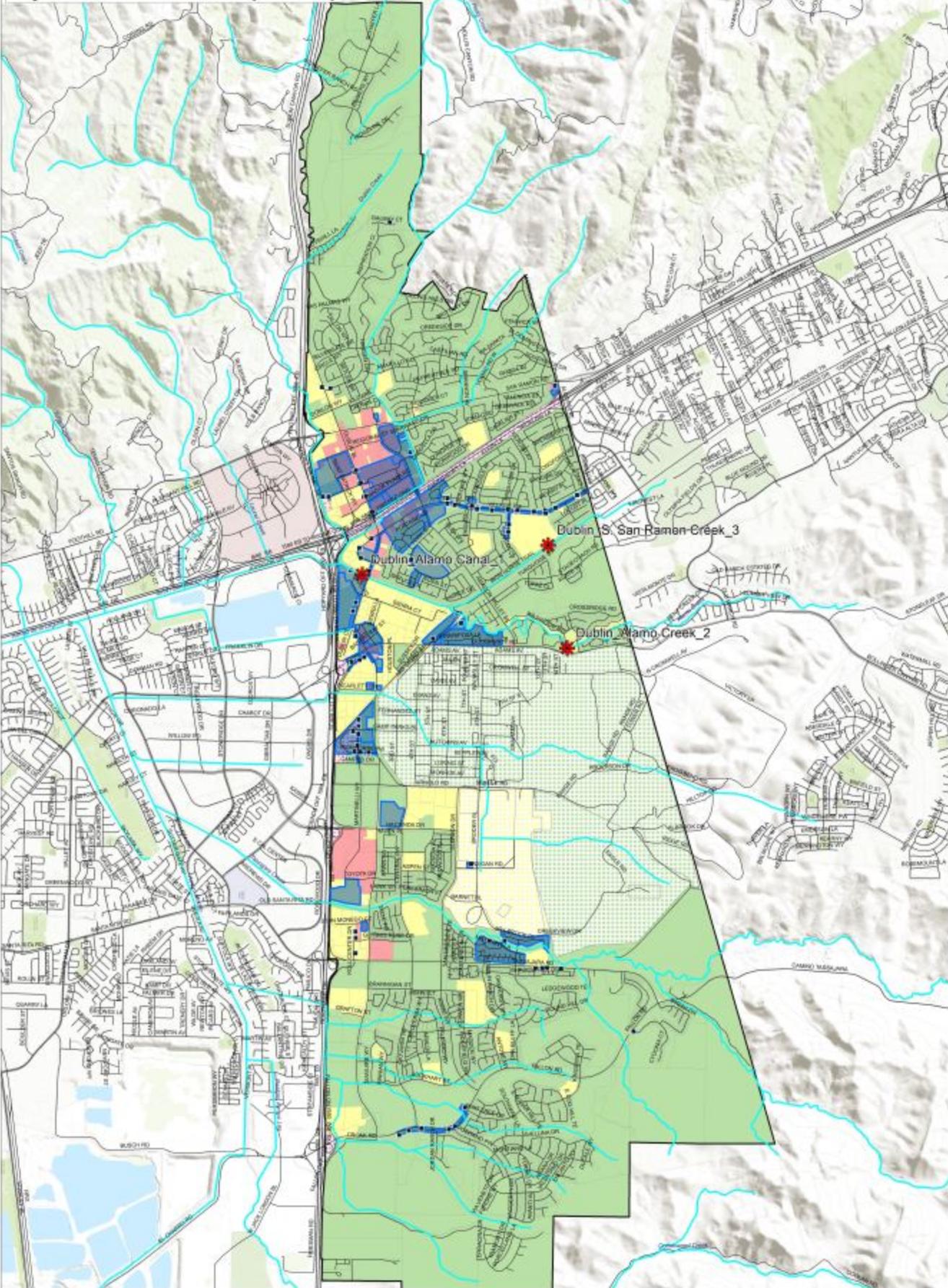
As part of the City's Business Inspection Program, City staff inspects approximately 150 businesses per year. As part of these inspections, City staff verifies that the trash is being controlled on-site. Inspection of trash containers and bins on private property is provided in conjunction with the business inspection program that is required under C.4 of the MRP. In instances where trash is observed within the parking lot or other areas of the property, City staff works with the property manager or property owner to solve any identified trash problems. In instances where the trash observed on the property is a result of inadequate trash containers, the City educates the business about the City's grant program and encourages the property owner to apply for a grant to expand an

existing trash enclosure or construct a new enclosure. As part of these business inspections, City staff also provides education to property owners and property managers about the importance of keeping pollutants, including trash, out of the storm drain system. This control measure is a pre-MRP action. Existing activities will continue.

**Jurisdiction-wide Control Measures**

Please refer to Section 3.2.8 for the Jurisdiction-wide control measures implemented within the City of Dublin, which also reduce trash within this trash management area.

# City of Dublin Full Trash Capture Map



**Legend**

<b>Trash Generation Category</b>	Creek/Showline Hotspot	Streets
Low	Full-Capture Location	Agency Boundary
Low/Medium	Full Trash Capture	Creeks
Medium/High	Non-Jurisdictional (Dot color = Generation Category)	Parcel Boundary
High		
High/Very High		
Very High		

Figure 3-2. Trash Full Capture Device Map for the City of Dublin



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

Map Created By:  
 ECA, Inc.

Date:  
 January 16th, 2014

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### 3.2.2 Trash Management Area #2

#### Trash Management Area 2: Eastern Dublin Commercial:

Trash Management Area 2 includes the various retail/commercial uses located in the eastern portion of the City, east of Dougherty Road. These commercial uses, for the most part, are located along Dublin Boulevard, which is a major arterial that traverses the City from west to east. This trash management area includes a mix of parcels with a high trash generation rate and parcels with a medium trash generation rate. Trash Management Area 2 is 286.1 acres. Approximately 30% of the area in Trash Management Area 2 has a high trash generation rate and approximately 70% has a medium trash generation rate.

Trash sources within Trash Management Area 2 are likely from the commercial/retail centers, pedestrian litter and wind-blown litter from Interstate 580 and Dublin Blvd.

The general approach to addressing litter in this trash management area is through the installation of full trash capture devices, street sweeping, improved container/bin management, promoting the grant reimbursement program, business outreach & education and the Jurisdiction-wide control measures.

#### **Full Trash Capture**

Trash Management Area 2 is 286.1 acres in size and 29.08 acres is currently treated by full trash capture devices (10% of the area within the TMA). The City owns and maintains 2 inlet filter ("baskets") and 1 hydrodynamic separator within Trash Management Area 2. Additionally, there are 53 privately owned baskets and 2 privately owned hydrodynamic separators in Trash Management Area 2.

There are currently two large retail centers that have full trash capture devices installed within Trash Management Area 2; however, the City has not shown these centers as being treated by full trash capture on Figure 3-2 because the City does not currently have an operation and maintenance (O&M) agreement executed with the property owner. The O&M Agreement requires the property owner to maintain the full trash capture devices. The City will be approaching the property owners of these two centers to request that the owners execute an O&M agreement. This would allow the City to take credit for these commercial centers, which are both designated as having a high trash generation rate. Currently, only 2% of the area designated as having a high trash generation is treated by full capture; however, if the City executes O&M agreements with the two commercial centers in this trash management area, that percentage would increase to approximately 75%.

As part of the planning project review process, the City will continue its practice to require private property owners within this trash management area to install full trash capture devices on their property when entitlements are requested (i.e. Conditional Use Permits and Site Development Review Permits). There are still large areas of undeveloped land that will be developed with a variety of land uses in the future, including General Commercial, Camps Office, Industrial Park, Business Park/Industrial and Residential. It is the City's practice to require new development to be trash neutral. Therefore, as projects are approved in this trash management area, additional full trash

capture devices will be installed. The size of TMA 2 will grow; however, since new development is required to be trash neutral, the percentage of area within TMA 2 that is treated by full trash capture will increase. The City will work with project applicants and developers to select the location of these devices.

To date, the City has not had any maintenance or performance issues associated with any of the full trash capture devices installed in Trash Management Area 2.

### **Street Sweeping**

The City of Dublin's street sweeping program includes sweeping all publicly maintained streets in the City twice per month with the exception of August, when streets are swept once. There is additional sweeping during November and December because of the large amounts of leaves that fall in the street. During November and December streets in the commercial district are swept weekly. The City doesn't permit parking on most of the arterial streets within the City. Posting of parking enforcement signs for street sweeping does not occur on residential streets; however, the City encourages residents to not park on the street on the day street sweeping occurs. Additionally, there is a brochure on the City website that provides information on the City's street sweeping service and the benefits of moving cars and/or trash receptacles on the day when the street is swept. On a per complaint basis, the City places door hangers in neighborhoods that do not move their cars and/or trash bins on the street sweeping day. The City receives complaints more frequently in the fall (2-3 complaints a month). The City receives approximately one complaint every other month the rest of the year.

The City has not made any changes to its street sweeping program since the adoption of the MRP. Existing activities will continue.

### **Improved Trash Bins/Containers Management**

The City adopted a Solid Waste and Recycling Enclosure Ordinance in June 2011 to require new development projects within the City to construct trash enclosures that are adequately sized to meet their trash and recycling needs. This control measure was implemented after MRP adoption.

As required by the ordinance, all enclosures must have a roof and a connection to the sanitary sewer. In many instances, tenant improvements also trigger the requirements to construct or reconstruct an enclosure that is consistent with the City's Solid Waste and Recycling Enclosure Ordinance. During the entitlement process, the City and its waste hauler (Amador Valley Industries) work together to review trash enclosures to verify that they are properly sized. The City has found that appropriately sized enclosures play an important role in controlling litter on a site.

Additionally, the City has a successful solid waste and recycling program to manage trash using containers, collection and recycling programs. The City has installed trash receptacles throughout the City on roads that have high pedestrian traffic. The City will continue to evaluate locations where additional trash containers should be installed.

The City adopted its Waste and Recycling Enclosure Ordinance after MRP adoption.

### **Grant Reimbursement Program**

The City has partnered with its waste hauler, Amador Valley Industries, to provide grant funding to existing commercial businesses within the City. Among other things, the money can be used to construct trash enclosures. The City will continue to explore other options that the grant funding can be used for to reduce trash on private property, such as the installation of full trash capture devices on private property. Each year the City reviews grant requests and awards up to \$75,000 to property owners to make improvements to their properties, which results in new or expanded trash enclosures that prevents litter from leaving the site. In September 2013, the City awarded grants to two property owners for trash enclosures. One of the grants awarded was to a commercial center within Trash Management Area 2. The grant was in the amount of \$15,000 and will be used by a commercial center with a high trash generation rate to expand their existing enclosure (which is covered and has a sanitary sewer connection). This enclosure is too small to fit all of the trash/recycling bins. Once the enclosure is expanded using the grant money provided by the City, the enclosure will be large enough to fit all of the trash and recycling bins. The City will be promoting this program to businesses in the commercial areas of the City. The City will be targeting locations that have had problems in the past controlling their on-site litter.

The grant reimbursement program is a new control measure that was implemented after MRP adoption.

### **Business Outreach & Education**

As part of the City's Business Inspection Program, City staff inspects approximately 150 businesses per year. As part of these inspections, City staff verifies that the trash is being controlled on-site. Inspection of trash containers and bins on private property is provided in conjunction with the business inspection program that is required under C.4 of the MRP. In instances where trash is observed within the parking lot or other areas of the property, City staff works with the property manager or property owner to solve any identified trash problems. In instances where the trash observed on the property is a result of inadequate trash containers, the City educates the business about the City's grant program and encourages the property owner to apply for a grant to expand an existing trash enclosure or construct a new enclosure. As part of these business inspections, City staff also provides education to property owners and property managers about the importance of keeping pollutants, including trash, out of the storm drain system. This control measure is a pre-MRP action. Existing activities will continue.

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

Please refer to Section 3.2.8 for the Jurisdiction-wide control measures implemented within the City of Dublin, which also reduce trash within this trash management area.

## **3.2.3 Trash Management Area #3**

### Trash Management Area 3: Western Dublin Commercial:

The divide between West Dublin and East Dublin is Dougherty Road, which traverses the City in a north south direction. This trash management area includes the various retail/commercial uses located in the western portion of the City, west of Dougherty

Road. These commercial uses are located mainly along Dublin Boulevard, which is a major arterial that traverses the City from west to east. Trash Management Area 3 includes a mix of parcels with a high trash generation rate and parcels with a medium trash generation rate. Trash Management Area 3 is 199.8 acres. Approximately 13% of the area in Trash Management Area 3 has a high trash generation rate and approximately 87% has a medium trash generation rate.

Trash sources within Trash Management Area 3 are likely from the commercial/retail centers, pedestrian litter and wind-blown litter from Interstate 580 and Dublin Blvd.

The general approach to addressing litter in this trash management area is through the installation of full trash capture devices, street sweeping, improved container/bin management, promoting the grant reimbursement program, business outreach & education and Jurisdiction-wide control measures.

### **Full Trash Capture**

Trash Management Area 3 is 199.8 acres in size and 12.4 acres is currently treated by full trash capture devices (6% of the area within TMA3). The City owns and maintains 6 inlet filter ("baskets") and 1 hydrodynamic separator within Trash Management Area 3. Additionally, there is 1 privately owned basket and 2 privately owned hydrodynamic separators in Trash Management Area 3.

There is a 8.4 acre parcel that has full trash capture devices installed within Trash Management Area 3; however, the City has not shown this parcel as being treated by full trash capture on Figure 3-2 because the City does not currently have an O&M agreement executed with the property owner. The O&M Agreement requires the property owner to maintain the full trash capture device. The City will be approaching the property owner to request that the owner execute an O&M agreement. This would allow the City to take credit for this parcel, which is designated as having a medium trash generation rate. Currently, only 6% of the area within TMA is treated by full capture; however, if the City executes an O&M agreement with the property owner in this trash management area, that percentage would increase to 10.4%.

As part of the planning project review process, the City will continue its practice to require private property owners within this trash management area to install full trash capture devices on their property when entitlements are requested (i.e. Conditional Use Permits and Site Development Review Permits). This will result in additional full trash capture devices within this trash management area.

To date, the City has not had any maintenance or performance issues associated with any of the full trash capture devices installed in TMA 3.

### **Street Sweeping**

The City of Dublin's street sweeping program includes sweeping all publicly maintained streets in the City twice per month with the exception of August, when streets are swept once. There is additional sweeping during November and December because of the large amounts of leaves that fall in the street. During November and December streets in the commercial district are swept weekly. The City doesn't permit parking on most of

the arterial streets within the City. Posting of parking enforcement signs for street sweeping does not occur on residential streets; however, the City encourages residents to not park on the street on the day street sweeping occurs. Additionally, there is a brochure on the City website that provides information on the City's street sweeping service and the benefits of moving cars and/or trash receptacles on the day when the street is swept. On a per complaint basis, the City places door hangers in neighborhoods that do not move their cars and/or trash bins on the street sweeping day. The City receives complaints more frequently in the fall (2-3 complaints a month). The City receives approximately one complaint every other month the rest of the year.

The City has not made any changes to its street sweeping program since the adoption of the MRP. Existing activities will continue.

### **Improved Trash Bins/Containers Management**

The City adopted a Solid Waste and Recycling Enclosure Ordinance in June 2011 to require new development projects within the City to construct trash enclosures that are adequately sized to meet their trash and recycling needs.

As required by the ordinance, all enclosures must have a roof and a connection to the sanitary sewer. In many instances, tenant improvements also trigger the requirements to construct or reconstruct an enclosure that is consistent with the City's Solid Waste and Recycling Enclosure Ordinance. During the entitlement process, the City and its waste hauler (Amador Valley Industries) work together to review trash enclosures to verify that they are properly sized. The City has found that appropriately sized enclosures play an important role in controlling litter on a site.

Additionally, the City has a successful solid waste and recycling program to manage trash using containers, collection and recycling programs. The City has installed trash receptacles throughout the City on roads that have high pedestrian traffic. The City will continue to evaluate locations where additional trash containers should be installed.

The City adopted its Waste and Recycling Enclosure Ordinance after MRP adoption.

### **Grant Reimbursement Program**

The City has partnered with its waste hauler, Amador Valley Industries, to provide grant funding to existing commercial businesses within the City. Among other things, the money can be used to construct trash enclosures. The City will continue to explore other options that the grant funding can be used for to reduce trash on private property, such as the installation of full trash capture devices on private property. Each year the City reviews grant requests and awards up to \$75,000 to property owners to make improvements to their properties, which results in new or expanded trash enclosures that prevents litter from leaving the site. In September 2013, the City awarded grants to two property owners for trash enclosures in the amounts of \$15,000 and \$40,000. One of the grants awarded was to a commercial center within Trash Management Area 3. The grant was in the amount of \$40,000 and was used by a commercial center to construct a new enclosure. This particular center previously stored their trash, recycling and food waste containers outside. Construction of the enclosure was recently completed. The City will be promoting this program to

businesses in the commercial areas of the City. The City will be targeting locations that have had problems in the past controlling their on-site litter.

The grant reimbursement program is a new control measure that was implemented after MRP adoption.

### **Business Outreach & Education**

As part of the City's Business Inspection Program, City staff inspects approximately 150 businesses per year. As part of these inspections, City staff verifies that the trash is being controlled on-site. Inspection of trash containers and bins on private property is provided in conjunction with the business inspection program that is required under C.4 of the MRP. In instances where trash is observed within the parking lot or other areas of the property, City staff works with the property manager or property owner to solve any identified trash problems. In instances where the trash observed on the property is a result of inadequate trash containers, the City educates the business about the City's grant program and encourages the property owner to apply for a grant to expand an existing trash enclosure or construct a new enclosure. As part of these business inspections, City staff also provides education to property owners and property managers about the importance of keeping pollutants, including trash, out of the storm drain system. This control measure is a pre-MRP action. Existing activities will continue.

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

Please refer to Section 3.2.8 for the Jurisdiction-wide control measures implemented within the City of Dublin, which also reduce trash within this trash management area.

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

### Trash Management Area 4: Business/Office Park District:

There is a limited amount of Business/Office parks in Dublin. There are a few Business/Office Parks in both the western and eastern portion of the City. Parcels within this area have a medium trash generation rate. Trash Management Area 4 is the second smallest of the trash management areas. Trash Management Area 4 is 119.7 acres and 100% of the area has a medium trash generation rate.

Trash sources within Trash Management Area 4 are likely from general litter from the office/business parks and wind-blown litter from adjacent roadways.

The general approach to addressing litter in this trash management area is through the installation of full trash capture devices, street sweeping, improved container/bin management, Business Outreach & Education and Jurisdiction-wide control measures.

### **Full Trash Capture**

Trash Management Area 4 is 119.7 acres in size and 18.94 acres is currently treated by full trash capture devices (15.8% of the area in TMA4). The City owns and maintains 2 inlet filter ("baskets") within Trash Management Area 4. Additionally, there are 20 privately owned baskets in Trash Management Area 4.

As part of the planning project review process, the City will continue its practice to require private property owners within this trash management area to install full trash capture devices on their property when entitlements are requested (i.e. Conditional Use Permits and Site Development Review Permits). This will result in additional full trash capture devices within this trash management area.

To date, the City has not had any maintenance or performance issues associated with any of the full trash capture devices installed in TMA 4.

### **Street Sweeping**

The City of Dublin's street sweeping program includes sweeping all publicly maintained streets in the City twice per month with the exception of August, when streets are swept once. There is additional sweeping during November and December because of the large amounts of leaves that fall in the street. During November and December streets in the commercial district are swept weekly. The City doesn't permit parking on most of the arterial streets within the City. Posting of parking enforcement signs for street sweeping does not occur on residential streets; however, the City encourages residents to not park on the street on the day street sweeping occurs. Additionally, there is a brochure on the City website that provides information on the City's street sweeping service and the benefits of moving cars and/or trash receptacles on the day when the street is swept. On a per complaint basis, the City places door hangers in neighborhoods that do not move their cars and/or trash bins on the street sweeping day. The City receives complaints more frequently in the fall (2-3 complaints a month). The City receives approximately one complaint every other month the rest of the year.

The City has not made any changes to its street sweeping program since the adoption of the MRP. Existing activities will continue.

### **Improved Trash Bins/Containers Management**

The City adopted a Solid Waste and Recycling Enclosure Ordinance in June 2011 to require new development projects within the City to construct trash enclosures that are adequately sized to meet their trash and recycling needs. This control measure was implemented after MRP adoption.

As required by the ordinance, all enclosures must have a roof and a connection to the sanitary sewer. In many instances, tenant improvements also trigger the requirements to construct or reconstruct an enclosure that is consistent with the City's Solid Waste and Recycling Enclosure Ordinance. During the entitlement process, the City and its waste hauler (Amador Valley Industries) work together to review trash enclosures to verify that they are properly sized. The City has found that appropriately sized enclosures play an important role in controlling litter on a site.

Additionally, the City has a successful solid waste and recycling program to manage trash using containers, collection and recycling programs. The City has installed trash receptacles throughout the City on roads that have high pedestrian traffic. The City will continue to evaluate locations where additional trash containers should be installed.

The City adopted its Waste and Recycling Enclosure Ordinance after MRP adoption.

### **Business Outreach & Education**

As part of the City's Business Inspection Program, City staff inspects approximately 150 businesses per year. As part of these inspections, City staff verifies that the trash is being controlled on-site. Inspection of trash containers and bins on private property is provided in conjunction with the business inspection program that is required under C.4 of the MRP. In instances where trash is observed within the parking lot or other areas of the property, City staff works with the property manager or property owner to solve any identified trash problems. In instances where the trash observed on the property is a result of inadequate trash containers, the City educates the business about the City's grant program and encourages the property owner to apply for a grant to expand an existing trash enclosure or construct a new enclosure. As part of these business inspections, City staff also provides education to property owners and property managers about the importance of keeping pollutants, including trash, out of the storm drain system. This control measure is a pre-MRP action. Existing activities will continue.

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

Please refer to Section 3.2.8 for the Jurisdiction-wide control measures implemented within the City of Dublin, which also reduce trash within this Trash Management Area.

## **3.2.5 Trash Management Area 5**

### Trash Management Area 5: Dublin Unified School District:

The areas included in this trash management area are the schools and facilities owned by the Dublin Unified School District (DUSD). There are a total of 10 public schools (7 elementary schools, 2 middle schools and 1 high school) in addition to the district office. Additional public schools will be coming on-line soon. When the new schools are completed, they will become a part of this trash management area. Parcels within this area have a medium trash generation rate. Trash Management Area 5 is 182.9 acres and 100% of the area has a medium trash generation rate.

Trash sources within Trash Management Area 5 are likely from pedestrian litter, litter generated along access routes to schools and litter from sporting events.

The general approach to addressing litter in this trash management area is by working collaboratively with the Dublin Unified School District, container/bin management and Jurisdiction-wide control measures.

### **Full Trash Capture**

Trash Management Area 5 is 182.9 acres in size and 20.27 acres is currently treated by full trash capture devices (11.1% of the area in TMA5). The City owns and maintains 8 inlet filter ("baskets") within Trash Management Area 5.

To date, the City has not had any maintenance or performance issues associated with any of the full trash capture devices installed in TMA 5.

### Work Collaboratively with the Dublin Unified School District

The City is fortunate in that it has built a collaborative relationship with the school district. The City has built this relationship largely through its involvement promoting recycling and waste reduction at the Dublin schools. The City has provided financial support to our waste hauler, Amador Valley Industries, which has enabled Amador Valley Industries to provide the schools with equipment, training and other resources that have enabled the schools recycling programs to succeed.

Below is summary of efforts of what the City has done to help facilitate its partnership with DUSD over the past few years:

- Provided thousands of dollars of resources (through City funds and EAB grants) to pay for hundreds of indoor and outdoor recycling containers and other recycling equipment, helping the District's recycling efforts transition from a variety of programs that sprouted up at each school (and operating at varying degrees of success) to one where all schools have active and successful recycling programs that include recycling in all classrooms, lunch areas and administrative offices.
  - Indoor containers for classrooms, administrative offices and other rooms.
  - Outdoor containers for collecting bottles and cans in the quad areas, eating areas and playgrounds to support their recycling fundraiser programs.
  - Transport equipment for custodians.
  - Trash pickers and vests for lunch area student recycling monitors (trash pickers also used for litter pickup).
- Created and administered 4R Challenge Contest to fund the efforts listed above, which included providing acknowledgements, prizes/financial incentives for exceptional custodial support of their school's recycling efforts.
- Supported the District in joining the StopWaste.org Schools Partnership Program.
- Funded or secured funding for each school to have an annual recycling assembly to train kids on lunch area food waste recycling and educate kids on the general recycling at their school.
- Helped create and currently administer the Go Green school quarterly grant program, providing grants to individual schools to support their environmental and other school projects.
- Arranged for DUSD to get a 50% reduction in their garbage disposal fees.
- Arranged for "free" food waste/organics collection for all schools and the District office, facilitating a significant increase in waste diversion and resulting savings for the District on their waste disposal costs.
- Developed, paid for and provided complimentary custom container decals (food waste, bottle/can recycling, paper recycling, etc.).

The City and its waste hauler have used solid waste management principles at the Dublin schools to reduce litter. Promoting how to use containers and providing the schools with adequate containers has had an impact on the amount of litter at the schools.

The City will continue to collaborate with the school district and discuss solutions to further reduce trash at the school sites. The City will conduct an audit of each school to

verify that there is adequate trash and recycling containers at each of the ten public schools in the City. Additionally, City staff will explore solutions to reduce the litter that originates from the Dublin High School site. The sporting fields (football & baseball) abut one of the City's identified hot spots (South San Ramon creek). Wind-blown litter from the sporting fields often ends up along the hot spot.

City staff has reached out to and will continue to work with the school district to discuss ideas to reduce trash on the school sites.

### **Container/Bin Management**

Dublin High School is located on Village Parkway. The high school is in walking distance to numerous fast food restaurants located on Village Parkway (Taco Bell, Caspers Hot Dogs, Jack & the Box, McDonalds, Wendy's, Kentucky Fried Chicken and A&W). The City will evaluate if there is adequate trash bins located on this particular access route to the school, and if not explore possible opportunities to install additional trash/recycling containers along the corridor.

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

Please refer to Section 3.2.8 for the Jurisdiction-wide control measures implemented within the City of Dublin, which also reduce trash within this trash management area.

## **3.2.6 Trash Management Area 6**

### Trash Management Area 6: City Owned Facilities:

The areas included in this trash management area consist of facilities owned by the City and include two City parks, the Civic Center, the City's Corporation Yard and the City's Public Safety Complex. The Corporation Yard and Public Safety Complex are both currently under construction. Construction is anticipated to be completed in FY 14-15. Parcels within this trash management area have a medium and a low/medium trash generation rate. Trash Management Area 6 is the smallest of the management areas in the City. This trash management area is approximately 86.5 acres and approximately 57% has a medium trash generation rate and approximately 43% has a low/medium trash generation rate.

Trash sources within Trash Management Area 6 are likely from pedestrian litter and wind-blown litter from picnic areas.

The general approach to addressing litter in this trash management area is through the installation of full trash capture devices and on-land pick-ups.

### **Full Trash Capture**

Trash Management Area 6 is 86.5 acres in size and 14.5 acres is currently treated by full trash capture devices (17% of the area in TMA6). The City owns and maintains 1 inlet filter ("baskets") and 2 hydrodynamic separators within Trash Management Area 6.

The City's is in the process of completing capital improvement projects at the Public Safety Complex and Corporation Yard. Both projects are anticipated to be completed

in FY 14-15. Once construction is completed at the Corporation Yard and Public Safety Complex, the City will install inlet filters (baskets) within all of the on-site inlets.

To date, the City has not had any maintenance or performance issues associated with any of the full trash capture devices installed in TMA 6.

**On-land Clean-ups**

The City’s maintenance staff clean all City owned parks every other day and daily during the busier summer months (May – September). As a result of the frequent clean-ups, the majority of City parks are designated as having a low trash generation rate. There are currently two parks that have a low/medium trash generation rate. Maintenance staff will continue to clean the parks within the City frequently. Staff will observe if the amount of trash at the two parks in Trash Management Area 6 decreases over time. City staff will conduct visual assessments of these parks to verify if the amount of trash is decreasing, increasing or staying the same.

**3.2.7 Trash Management Area 7**

Trash Management Area 7: All Other Areas

The areas included in Trash Management Area 7 are the parcels within the City that have a Low Trash Generation Rate. Land uses include residential, open space, the majority of City parks (13), City fire stations (3), churches (5) and private schools (3).

Trash Management Area 7 is by far the largest trash management area in the City. Trash Management Area 7 is 6,497.7 acres and is comprised of the City’s low trash generating areas.

There are still large areas of undeveloped land within the City that will be developed with commercial and residential land uses in the future. These areas are currently designated as open space and are within Trash Management Area 7. As these areas are developed, they will be removed from this trash management area if the future land use has a trash generation rate other than low.

Trash sources within Trash Management Area 7 are likely from pedestrian litter and wind-blown litter from the Interstates and adjacent streets.

The general approach to addressing litter in this trash management area is through the installation of full trash capture devices, street sweeping and Jurisdiction-wide control measures.

**Full Trash Capture**

Trash Management Area 7 is 6,497.7 acres in size and 180.16 acres is currently treated by full trash capture devices (3% of the area in TMA 7). The City owns and maintains 45 inlet filters (“baskets”) and 9 hydrodynamic separators within Trash Management Area 7. Four of the hydrodynamic separators in this trash management area have been installed, but not yet accepted by the City. Additionally, there are four privately owned hydrodynamic separators in Trash Management Area 7.

To date, the City has not had any maintenance or performance issues associated with any of the full trash capture devices installed in TMA 7.

### **Street Sweeping**

The City of Dublin's street sweeping program includes sweeping all publicly maintained streets in the City twice per month with the exception of August, when streets are swept once. There is additional sweeping during November and December because of the large amounts of leaves that fall in the street. During November and December streets in the commercial district are swept weekly. The City doesn't permit parking on most of the arterial streets within the City. Posting of parking enforcement signs for street sweeping does not occur on residential streets; however, the City encourages residents to not park on the street on the day street sweeping occurs. Additionally, there is a brochure on the City website that provides information on the City's street sweeping service and the benefits of moving cars and/or trash receptacles on the day when the street is swept. On a per complaint basis, the City places door hangers in neighborhoods that do not move their cars and/or trash bins on the street sweeping day. The City receives complaints more frequently in the fall (2-3 complaints a month). The City receives approximately one complaint every other month the rest of the year.

The City has not made any changes to its street sweeping program since the adoption of the MRP. Existing activities will continue.

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

Please refer to Section 3.2.8 for the Jurisdiction-wide control measures implemented within the City of Dublin, which also reduce trash within this trash management area.

## **3.2.8 Jurisdiction-wide Control Measures**

### **Alameda County Waste Management Authority Single-Use Bag Ban Ordinance**

Single-use plastic bags were a significant component of the litter found in storm drains and water bodies throughout Alameda County and within the City of Dublin. To address this issue, the Alameda County Waste Management Authority has adopted a single-use bag ban. As of January 1, 2013, all grocery stores, pharmacies, drug stores or other entities that sell milk, bread, soda and snack foods (all four items) and/or alcohol (Type 20 or 21 license) in Alameda County must comply with the Single-Use Bag Ban Ordinance.

Single-Use Bag Requirement: Covered stores may no longer provide customers with single-use bags at check-out.

Bag Sales Requirements:

- Covered stores that distribute recycled paper or reusable bags must charge a minimum of 10 cents per bag. These bags must meet the specifications in the Ordinance.

- All proceeds from the sale of recycled paper bags and reusable bags are retained by the retailer without any restrictions on their use

A copy of the Ordinance is available on the Alameda County Waste Management Authority's website: <http://reusablebagsac.org/ordinancetext.html>

The City of Dublin is a member of ACCWP. The jurisdiction-wide control measures described below will be conducted through participation in ACCWP.

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

Polystyrene foam is a significant component of the litter found in storm drains and water bodies throughout Alameda County. The City of Dublin has adopted policies that ban polystyrene foam food service ware at Dublin sponsored events. On December 15, 2009, the Dublin City Council adopted a Resolution requiring the use of environmentally acceptable food utensils and packaging at large City events. Subsequently, on September 21, 2010, the Dublin City Council adopted a Resolution establishing a policy that bans the City's purchase and use of single-use plastic bottles and polystyrene products at City sponsored activities.

In FY 14-15, City staff will be exploring expanding the polystyrene foam food service ware ban to include restaurants in the City.

### **Litter Outreach to K-12 Schools**

K-12 schools are often high litter generation areas. ACCWP has developed a request for proposal for a four-year litter reduction education/outreach grant directed at K-12 schools throughout Alameda County. ACCWP intends to fund multiple projects, each focused on a specific age group. Proposals for \$10,000 or more per project and school year will be considered, for a total of up to \$125,000 per school year, for up to four years. Eligible organizations include for-profit and non-profit groups, as well as government agencies. The goals of the project are to clearly reduce the amount of litter at the participating schools and incorporate institutional changes at the schools so that litter will continue to be reduced in the future. Implementation is scheduled to begin in the 2014-15 school year. The request for proposal will include a requirement to evaluate the level of litter reduction achieved. A description of the successful proposals will be included in the ACCWP FY 13-14 Annual Report.

### **"Be the Street" Youth Anti-Litter Advertising Campaign**

Intentional litter by youth has been found to be a significant contributor to litter problems. To address this issue, ACCWP has participated in the development and implementation of the Be the Street campaign. Be the Street is a Bay Area wide outreach effort that takes a Community Based Social Marketing approach to encourage youth to keep their community clean (<http://www.bethestreet.org/>). The intent of the campaign is to make "no-littering" the norm among the target audience (youth between the ages of 14 and 24). The campaign is a three-year effort that began in FY 11-12 and will run through FY 13-14. ACCWP has been participating in and providing financial support to the Be the Street campaign since its inception. The campaign will be evaluated in the spring of 2014. Depending upon the results of the evaluation, ACCWP may continue to participate in this or similar efforts in future years.

As part of efforts to support the Be The Street anti-litter youth campaign, Clean Water Program member agencies purchased additional mass media distribution of a video contest entry, entitled "Pick Up Trash." CWP edited the spot to include a Be The Street Watermarked logo, and to add the website url at the end of the spot.

The video was distributed at movie theaters and through an online ad campaign as follows:

- *Regional Movie Theater Ad Buy: \$19,028*
  - 637,000 projected impressions
  - 9 Theaters in Alameda County, 132 screens
  - 4-week run: 07/05/13-08/01/13
  
- *Individual Theater Ad Buy: \$4,208*
  - Approximately 150,000 projected impressions
  - 3 Theaters in Livermore and Castro Valley (areas not covered in the Regional Buy)
  - Ad runs run from 4 weeks to 28 weeks
  
- *Online Video Ad Campaign: \$4,000*
  - Google Display Network and YouTube Pre-Roll
  - Estimated impressions: 300,000
  - Estimated views: 24,000
  - Estimated Click-throughs 1,500 to the Be The Street webpage

### **Multi-Family Dwelling Litter Outreach**

Multi-family dwellings (i.e., apartment buildings and condominium complexes) are often areas of high trash generation. ACCWP is working with the City of Livermore to develop a litter reduction pilot targeting multi-family complexes known to be sites with significant litter issues. The pilot includes the following apartment building and condominium complexes: Livermore Garden Apartments (5720 East Avenue), La Castilleja (975 Murrieta Boulevard), and Castilleja Del Arroyo (1001 and 1009 Murrieta Boulevard).

- December 2013: Pre-campaign Measurement – ACCWP and the City of Livermore took baseline measurements of all three sites. Methods of measurement included taking photos of on-site litter, as well as collecting, characterizing and counting the litter using the Ocean Conservancy's Volunteer Trash Data Form. (Adopt A Creek Spot volunteers use this Data Form to characterize and count the trash collected from the Trash Hot Spot located behind the condominium complexes on Coastal Clean-up Day.) Areas measured included landscaped and other common areas, the sidewalk, gutter and streets located in front of the sites. All three property managers/volunteers collected one week's worth of on-site litter.
  
- November – December 2013: Research – All three property managers were interviewed by City staff using twenty-five questions developed by the ACCWP. The interview results helped define the target audience(s) (i.e., age groups, income level, ethnic groups, etc.) and determine outreach tactics (i.e., face-to-

face, signage, printed materials, etc.) This information will also assist the City of Livermore and ACCWP in developing appropriate messaging.

- November 2013 – January 2014: Plan – One of the three sites was chosen as the “Control” site. In addition, outreach strategies and tactics were selected for the “Active” sites.
- February 2014: Concept/Design/Content Production – Selected outreach tactics will be designed and produced for the Active sites.
- February 2014: Multi-cultural Advising, Translation – Consultant will advise on outreach tactics and messaging, and will provide translation as needed.
- March 2014 – May 16, 2014: Outreach – Outreach tactics will be rolled out at Active sites.
- May 17, 2014 – May 31, 2014: Post-campaign Measurement — City of Livermore staff and ACCWP will duplicate the pre-campaign measurement methodologies at all three sites, including the Control. All three property managers/volunteers will collect one week’s worth of on-site litter. On-site and off-site litter will be characterized and counted by Livermore City staff using the Ocean Conservancy’s Volunteer Trash Data Form. All three property managers will be interviewed by Livermore City staff to help determine residents’ attitudes/change in behavior, etc.
- June 1, 2014 – June 30, 2014: Reporting – Final Pilot Report will be presented to ACCWP member agencies.

Depending on the success of the pilot, it may be replicated at other multi-family complexes throughout the County.

The Public Information and Participation Subcommittee of ACCWP also is in the process of identifying other litter-related areas and activities that affect jurisdictions throughout the County, and will implement pilot projects to address the high priority issues over the next several years. One issue being considered is cigarette butt litter.

### **Community Stewardship Grants**

Through its Community Stewardship Grants program, ACCWP provides up to \$20,000 per year to individuals and community groups to implement stormwater and watershed enhancement and education projects. The grants range from \$1,000 to \$5,000. Starting in FY 14-15 ACCWP will specifically encourage and support litter reduction grant applications. The projects of the FY 14-15 grant recipients will be described in the ACCWP FY 13-14 Annual Report.

### **Anti-Litter Outreach to Residents**

Through its Public Information and Participation program, ACCWP encourages residents to adopt less polluting behaviors. One targeted behavior is littering, both intentional and unintentional. ACCWP uses a variety of mechanisms to influence residents

including public service announcements, online and movie theater advertising, and participating in outreach events. The ACCWP Public Information and Participation Subcommittee is in the process of developing a three-year budget/strategic plan for FY 14-15 through 16-17. One of the strategic objectives of the plan will be to reduce litter. This plan will be described in the ACCWP FY 13-14 Annual Report. Since MRP adoption, the City of Dublin has increased the number of outreach events that we participate in. Anti-litter materials are provided to residents at these outreach events.

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

City Code Enforcement Officers patrol the City daily. Upon noticing any items that have been illegally dumped (either on public or private property), City staff work with maintenance staff or property owners to address the illegal dumping on private property and to require the removal of all items. Items that are illegally dumped on public property are removed by City maintenance staff.

Additionally, the City's waste hauler, Amador Valley Industries, provides up to three annual on-call large item pick-ups per year as part of the minimum level of garbage service. These pick-ups allow residents to dispose of any unwanted material that has been stored away or could not be thrown away as part of the regular garbage pick-up. A resident can dispose of up to seven cubic yards of material per pick-up. The City of Dublin does not have a problem with illegal dumping within the City, the large pick-ups is one of the reasons why this is the case.

### **Storm Drain Inlet Maintenance**

City maintenance staff inspects every publicly owned drain inlet in the City once per year prior to the rainy season. Drain inlets that require maintenance are marked. These drain inlets are subsequently cleaned and the materials are vacuumed out. On average, 20-30% of the drain inlets are cleaned each year.

### **Activities to Reduce Trash from Uncovered Loads**

The City has language in its solid waste franchise agreement to require waste haulers to cover loads when in transporting trash, recyclables and construction debris throughout the City.

### **Anti-Litter Outreach Using Trash Receptacles**

The City of Dublin will work with the ACCWP PIP and Trash subcommittee to develop outreach material to post on trash receptacles strategically throughout the City to encourage pedestrians to deposit their trash in the receptacles and improve water quality. This localized outreach campaign will focus on areas where littering is more prevalent. Future design, implementation and assessment of this outreach campaign will be described in the ACCWP and the City's Fiscal Year 13-14 Annual Report.

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

The City of Dublin annually cleans three creeks within the City, as required by the MRP. The City's identified Hot Spots include the following site:

1. Alamo Canal (hot spot length: 300 feet):
  - a. Site location: This hot spot is transected by Dublin Boulevard. The selected hot spot is 300 feet immediately north of Dublin Boulevard. The Dublin Civic Center is located south of the hot spot. Commercial uses are located on the west side of the hot spot and industrial uses are located to the east side of the hot spot. This hot spot is shown on Figure 2-2 with a red asterisk.
  - b. Likely sources of trash: The cars on Dublin Boulevard and adjacent businesses are likely the biggest contributor to the trash issue in this section of Alamo Canal.
  - c. Frequency of clean-ups: This hot spot is cleaned every fall as part of Coastal Clean-up day.
  - d. Trash generally removed: The volume of trash removed in each of the past three years is as follows:
    - i. FY 12-13: 0.37 cubic yards of trash removed
    - ii. FY 11-12: 0.38 cubic yards of trash removed
    - iii. FY 10-11: 0.46 cubic yards of trash removed
  
2. Alamo Creek (hot spot length: 800 feet):
  - a. Site location: the portion of Alamo Creek selected as the hot spot is located within Alamo Creek Park. Alamo Creek Park is surrounded by residential uses. The major cross street is Dougherty Road, located east of Alamo Creek Park. This hot spot is shown on Figure 2-2 with a red asterisk.
  - b. Likely sources of trash: Alamo Creek Park – most notably the picnic area is the biggest contributor to the trash issue in this section of Alamo Creek.
  - c. Frequency of clean-ups: This hot spot is cleaned every fall as part of Coastal Clean-up day.
  - d. Trash generally removed: The volume of trash removed in each of the past three years is as follows:
    - i. FY 12-13: 0.29 cubic yards of trash removed
    - ii. FY 11-12: 0.76 cubic yards of trash removed
    - iii. FY 10-11: 0.35 cubic yards of trash removed
  
3. South San Ramon Creek (hot spot length: 1500 feet)
  - a. Site location: the portion of South San Ramon Creek selected as the hot spot is located adjacent to Dublin High School. The high school is located west of South San Ramon Creek. The Iron Horse Trail, which runs in a north-south direction, is located east of the selected hot spot.
  - b. Likely sources of trash: this hot spot is located adjacent to the baseball field, football field and bleachers at Dublin High School. The high school sporting events are likely the biggest contributor to the trash issue in this section of the South San Ramon Creek.
  - c. Frequency of clean-ups: This hot spot is cleaned every fall as part of Coastal Clean-up day.
  - d. Trash generally removed: The volume of trash removed in each of the past three years is as follows:
    - i. FY 12-13: 1.14 cubic yards of trash removed
    - ii. FY 11-12: 0.59 cubic yards of trash removed
    - iii. FY 10-11: 0.40 cubic yards of trash removed

Prior to MRP adoption, the City of Dublin did not coordinate annual Creek Clean-up events on a regular basis. The City of Dublin held its first regular Annual Creek Clean-up event in September 2010. As part of this event volunteers cleaned the three identified hot spots in the City. Since 2010 the City has coordinated a clean-up event in September in conjunction with Coastal Clean-up Day.

### **3.2.10 Summary of Trash Control Measures**

#### **Trash Management Area 1**

- Full Trash Capture – 138.26 acres of TMA 1 is treated by full trash capture. Within this TMA there are 12 publicly owned baskets, 3 publicly owned hydrodynamic separators, 53 privately owned baskets and 1 privately owned hydrodynamic separators.
- Street Sweeping – existing schedule is 2x/month, with the exception of November and December (weekly street sweeping in the commercial districts).
- Improved Trash Bins/Containers Management – require new development projects and certain tenant improvements to construct trash enclosures that meet the City's Solid Waste and Recycling Enclosure Ordinance.
- Grant Reimbursement Program – program that provides grants to businesses to make improvements to private property includes the construction of trash enclosures.
- Business Outreach & Education – As part of the City's Business Inspection Program, City staff inspects approximately 150 businesses per year. City staff verifies that trash is being controlled on-site as part of these inspections.

#### **Trash Management Area 2**

- Full Trash Capture – 29.08 acres of TMA 2 is treated by full trash capture. Within this TMA there are 2 publicly owned baskets, 1 publicly owned hydrodynamic separators, 53 privately owned baskets and 2 privately owned hydrodynamic separators.
- Street Sweeping – Existing schedule is 2x/month, with the exception of November and December (weekly street sweeping in the commercial districts).
- Improved Trash Bins/Containers Management – Require new development projects and certain tenant improvements to construct trash enclosures that meet the City's Solid Waste and Recycling Enclosure Ordinance.
- Grant Reimbursement Program – Program that provides grants to businesses to make improvements to private property, includes the construction of trash enclosures.
- Business Outreach & Education – As part of the City's Business Inspection Program, City staff inspects approximately 150 businesses per year. City staff verifies that trash is being controlled on-site as part of these inspections.

### Trash Management Area 3

- Full Trash Capture – 12.40 acres of TMA 3 is treated by full trash capture. Within this TMA there are 6 publicly owned baskets, 1 publicly owned hydrodynamic separators, 1 privately owned basket and 2 privately owned hydrodynamic separators.
- Street Sweeping – Existing schedule is 2x/month, with the exception of November and December (weekly street sweeping in the commercial districts).
- Improved Trash Bins/Containers Management – Require new development projects and certain tenant improvements to construct trash enclosures that meet the City’s Solid Waste and Recycling Enclosure Ordinance.
- Grant Reimbursement Program – Program that provides grants to businesses to make improvements to private property, includes the construction of trash enclosures.
- Business Outreach & Education – As part of the City’s Business Inspection Program, City staff inspects approximately 150 businesses per year. City staff verifies that trash is being controlled on-site as part of these inspections.

### Trash Management Area 4

- Full Trash Capture -18.94 acres of TMA 4 is treated by full trash capture. Within this TMA there are 2 publicly owned baskets and 20 privately owned baskets.
- Street Sweeping – Existing schedule is 2x/month, with the exception of November and December (weekly street sweeping in the commercial districts).
- Improved Trash Bins/Containers Management – Require new development projects and certain tenant improvements to construct trash enclosures that meet the City’s Solid Waste and Recycling Enclosure Ordinance.
- Business Outreach & Education – As part of the City’s Business Inspection Program, City staff inspects approximately 150 businesses per year. City staff verifies that trash is being controlled on-site as part of these inspections.

### Trash Management Area 5

- Full Trash Capture – 20.27 acres of TMA 5 is treated by full trash capture. Within this TMA there are 8 publicly owned baskets.
- Work Collaboratively with the Dublin Unified School District – Collaborate with the school district to reduce trash at schools.
- Container/Bin Management – Future assessment of trash receptacles located along access route from Dublin High School to nearby fast food restaurants.

### Trash Management Area 6

- Full Trash Capture -14.52 acres of TMA 6 is treated by full trash capture. Within this TMA there are is 1 publicly owned basket and 2 publicly owned hydrodynamic separators.
- On-land clean-ups – City parks and facilities are cleaned by maintenance staff every other day and daily during the busier summer months (May – September).

### **Trash Management Area 7**

- Full Trash Capture – 180.16 acres of TMA 7 is treated by full trash capture. Within this TMA there are 45 publicly owned baskets, 9 publicly owned hydrodynamic separators and 4 privately owned hydrodynamic separators.
- Street Sweeping – Existing schedule is 2x/month, with the exception of November and December (weekly street sweeping in the commercial districts).

The control measures described above in each of the City's identified trash management areas are designed to achieve full trash reduction (100% trash reduction by 2022).

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

Please refer to Table 3-3 for the City of Dublin's detailed time schedule to implement all control measures for trash reduction within the City.

**Table 3-3.** City of Dublin completed and planned trash control measure implementation schedule.

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 #1: Downtown Dublin</b>														
Full Trash Capture	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Street Sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/Container Management				X	X	X	X	X	X	X	X	X	X	X
Grant Reimbursement Program					X	X	X	X	X	X	X	X	X	X
Business Outreach & Education	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>TMA #2: Eastern Dublin Commercial</b>														
Full Trash Capture	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Street sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/Container Management				X	X	X	X	X	X	X	X	X	X	X
Grant Reimbursement Program					X	X	X	X	X	X	X	X	X	X
Business Outreach & Education	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>TMA #3: Western Dublin Commercial</b>														
Full Trash Capture	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Street Sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/Container Management				X	X	X	X	X	X	X	X	X	X	X
Grant Reimbursement Program					X	X	X	X	X	X	X	X	X	X
Business Outreach & Education	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>TMA #4: Business/Office Park</b>														
Full Trash Capture	X	X	X	X	X	X	X	X	X	X	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>
Street Sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/Container Management				X	X	X	X	X	X	X	X	X	X	X
Business Outreach & Education	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>TMA #5: Dublin Unified School District</b>														
Full Trash Capture	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Work collaboratively with School District				X	X	X	X	X	X	X	X	X	X	X
Improved Trash Bin/Container Management						X	X	X	X	X	X	X	X	X
<b>TMA #6: City Owned Facilities</b>														
Full Trash Capture	X	X	X	X	X	X	X	X	X	X	X	X	X	X
On-land Cleanup	X	X	X	X	X	X	X	X	X	X	X	X	X	
<b>TMA #7: All Other Areas</b>														
Full Trash Capture	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Street Sweeping	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>Jurisdiction-wide Control Measures</b>														
Single-Use Bag Ban					X	X	X	X	X	X	X	X	X	X
Polystyrene Foam Food Service Ware Policies		X	X	X	X	X	X	X	X	X	X	X	X	X
K-12 School Outreach						X	X	X	X	Activities to be determined				
Be the Street Campaign				X	X	X	Activities to be determined							
Multi-Family Dwelling Outreach						X	Activities to be determined							
Community Stewardship Grants (litter)							X	Activities to be determined						
Litter Related Outreach to Residents	X	X	X	X	X	X	X	X	Activities to be determined					
Anti-littering & Illegal Dumping Activities	X	X	X	X	X	X	X	X	X	X	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>
Drain Inlet Maintenance	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Activities to Reduce Trash from Uncovered Loads	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Anti-litter Outreach Using Trash Receptacles Control						X	X	Activities to be determined						
<b>Creek Hot Spot Cleanups</b>														
Annual Cleanups		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, 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 Alameda Countywide Clean Water Program (ACCWP), including the City of Dublin. 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 ACCWP. Pilot implementation is scheduled for the near-term and as assessment methods are tested and refined, the Strategy will be adapted into a longer-term approach. The Strategy selected by the City is described in the following sections.

### 4.1 ACCWP Pilot Assessment Strategy

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

#### 4.1.1 Management Questions

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

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

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

#### 4.1.2 Indicators of Progress and Success

To track progress, both outcome and output indicators will be assessed. Outcome-based indicators are those that measure the result of litter reduction efforts. This type of indicator could include measurements of litter in and around the storm drain system or

local water bodies. Output-based indicators are those that assess the implementation of control measures. This type of indicator could include assessing the maintenance of trash capture devices or compliance with product bans. Indicators that ACCWP Permittees will use to answer the management questions include:

**Outcome-Based Indicators:**

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

**Output-Based Indicators:**

- 2-A Full capture device operation and maintenance
- 2-B Compliance with the Single-Use Bag Ban Ordinance
- 2-C Implementation of an effective street sweeping program
- 2-D Commercial Trash Container Management
- 2-E Residential Trash Container Management

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

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. Evaluations of data on the amount of trash in receiving waters that are conducted over time through the Pilot Assessment Strategy will assist the City in further determinations of the important sources and pathways causing problems in local creeks, rivers and shorelines.

**4.1.3 Pilot Assessment Methods**

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

## OUTCOME-BASED INDICATORS

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

ACCWP participated in the development of the BASMAA baseline trash generation rate study. A total of 47 drop inlet full trash capture devices located throughout Alameda County were included in the study. The study included an assessment of the volume and number of single-use plastic bags found in these 47 inlets as well as over 100 other inlets from throughout the Bay Area. Since the conclusion of the study, the Alameda County Waste Management Authority has adopted a single-use bag ban. As of January 1, 2013, all grocery stores, supermarkets, mini-marts, convenience stores, liquor stores, pharmacies, drug stores or other entities that sell milk, bread, soda and snack foods (all four items) and/or alcohol (Type 20 or 21 license) in Alameda County must comply with the Single-Use Bag Ban Ordinance.

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

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

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

ACCWP will conduct a follow-up study to assess the effectiveness of the EPS food ware bans at reducing the amount of EPS entering the storm drain system. As San Leandro and Pleasanton have adopted their ban since the completion of the baseline study, the follow-up study will compare the volume and number of EPS food ware items in the full trash capture devices in San Leandro and Pleasanton before and after the

implementation of the bans. ACCWP will also sample a total of up to 100 full trash capture inlet devices from throughout the County and compare the number and volume of EPS food ware items in cities that have adopted EPS bans versus cities that have not. A detailed study design is included in the ACCWP Pilot Assessment Strategy to be submitted separately.

The City has adopted policies that ban polystyrene foam food service ware at Dublin sponsored events and activities. The City will be exploring expanding the polystyrene foam food service ware ban to include restaurants within the City.

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

ACCWP member agencies collect trash annually from a total of 47 Hot Spots as well as numerous additional creek and shoreline cleanup events. Each member agency will gather data from these events that will allow for long term tracking of trends. The data to be collected include the volume and/or weight of trash removed, the number of people and/or the total number of person-hours for each event, the length of creek or shoreline cleaned, and the dominant types of trash at each location. ACCWP will compile the data from these events and track the long term trends in trash along these water bodies throughout the County. Member agencies will also track trends at their specific cleanup locations.

**1-D Amount of Litter at Schools Participating in the Litter Outreach Program**

ACCWP has developed a request for proposal for a four-year litter reduction education/outreach grant directed at K-12 schools throughout Alameda County. ACCWP intends to award a total of up to \$125,000 per year to the successful applicant(s). The goals of the project are to clearly reduce the amount of litter at the participating schools and incorporate institutional changes at the schools so that litter will continue to be reduced in the future. Implementation is scheduled to begin in the 2014/15 school year. The request for proposal will include a requirement to evaluate the level of litter reduction achieved. A copy of the request for proposals is included in the ACCWP Pilot Assessment Strategy. A description of the assessment mechanism(s) of the successful proposal(s) will be included in the ACCWP FY13-14 Annual Report.

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

Multi-family dwellings (i.e., apartment buildings and condominium complexes) are often areas of high trash generation. ACCWP is working with the City of Livermore to develop a litter reduction pilot targeting multi-family complexes known to be sites with significant litter issues. The pilot includes the following apartment building and condominium complexes: Livermore Garden Apartments (5720 East Avenue), La Castilleja (975 Murrieta Boulevard), and Castilleja Del Arroyo (1001 and 1009 Murrieta Boulevard). The planned assessment mechanisms include:

- December 2013: Pre-campaign Measurement – ACCWP and the City of Livermore staff took baseline measurements of all three sites on December 12,

December 16 and December 26. Most of the on-site litter collected, characterized and counted included some of the Coastal Commission's "most likely to find items". These items include: cigarette butts, food (i.e., candy, chip) wrappers, and loose paper pieces (i.e., napkins, receipts, tissues junk mail and newspaper).

- December 2013: Property Manager Interviews – All three property managers were interviewed by City of Livermore staff using twenty-five questions developed by the ACCWP on December 12, 13 and 27. The interview results helped define the ACCWP and City's target audiences. These audiences include: low and medium income, school-aged children and adults, and Hispanic and Caucasian ethnic groups. Also, the interview results helped determine that in-person conversation and written notices posted to residents' front doors were the most effective outreach tactics used by property managers.
- January 2014: Plan – ACCWP and City of Livermore staff will be testing the merits of a more traditional multi-touch campaign versus a norming-only campaign. Both will be measured against a "control". Control site and active sites with assigned outreach tactics listed below:

Active Sites:

*Castilleja Del Arroyo Condominiums*

1001 & 1009 Murrieta Boulevard

Multi-touch Campaign:

- Content in HOA Newsletter (tentatively an ad box &/or resident Q&A)
- Litter Signage
- Notice on Bulletin Board &/or on Unit Doors

*La Castilleja Condominiums*

975 Murrieta Boulevard

Norming Campaign:

- Volunteer will clean up every day instead of once-twice/week.

Control Site:

*Livermore Garden Apartments*

5720 East Avenue

No Campaign

- May 17, 2014 – May 31, 2014: Post-campaign Measurement — City of Livermore staff and ACCWP will duplicate the pre-campaign measurement methodologies at all three sites, including the control site. All three property managers/volunteers will collect one week's worth of on-site litter. On-site and off-site litter will be characterized and counted by City of Livermore staff using the Ocean Conservancy's Volunteer Trash Data Form. All three property managers will be interviewed by Livermore City staff to help determine residents' attitudes/change in behavior, etc.
- June 1, 2014 – June 30, 2014: Reporting – Final Pilot Report will be presented to ACCWP member agencies.

## **1-F Self-Reported Litter Related Attitude and Behavior of Residents**

Through its Public Information and Participation program ACCWP, encourages residents to adopt less polluting behaviors. One targeted behavior is littering. ACCWP uses a variety of mechanisms to influence residents including public service announcements, online and movie theater advertising, outreach to K-12 schools, and participating in outreach events. ACCWP conducts telephone surveys of residents every several years to gauge Alameda County residents' awareness and attitude regarding stormwater related issues. These surveys include questions regarding respondents' reported behavior and attitudes regarding litter and littering. Future surveys will continue to track the long term trends in residents' awareness and attitudes regarding litter and littering.

## **OUTPUT-BASED INDICATORS**

### **2-A Full capture device operation and maintenance**

Consistent with the MRP, adequate inspection and maintenance of full trash capture devices is required to maintain full capture designation by the Water Board. The City of Dublin is currently developing an operation and maintenance verification program (Trash O&M Verification Program), via ACCWP, to ensure that devices are inspected and maintained at a level that maintains this designation. The ACCWP Trash O&M Verification Program will be modeled on the current O&M verification program for stormwater treatment controls implemented consistent with the Permit's new development and redevelopment requirements.

### **2-B Compliance with the Single-Use Bag Ban**

The Alameda County Waste Management Authority is taking the lead on inspection and enforcement of the Single-Use Bag Ban. ACCWP will coordinate with the Waste Management Authority and report on the results of their inspection and enforcement program.

### **2-C Implementation of an effective street sweeping program**

Street sweeping can be very effective in reducing the amount of trash entering the storm drain system. However, its effectiveness is dependent upon the frequency of sweeping and the ability of the sweeper to sweep along the edge of the curb. Parked cars can significantly reduce the effectiveness of a street sweeping program. The City of Dublin will coordinate with ACCWP to develop and implement an assessment of its street sweeping program.

### **2-D Commercial Trash Container Management**

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

## 2-E Residential Trash Container Management

Fugitive trash from residential trash collection can be a significant source of trash to the storm drain system. The City of Dublin will coordinate with ACCWP to develop and implement an assessment of its residential trash collection program.

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

The ACCWP Pilot Assessment Strategy described in the previous section recognizes that outcome-based trash assessment methods needed to assess progress toward trash reduction targets are not well established. In an effort to address these information gaps associated with trash assessment methods, BASMAA, in collaboration with ACCWP, the 5 Gyres Institute, San Francisco Estuary Partnership, the City of Los Angeles, and other stormwater programs in the Bay Area, developed the *Tracking California’s Trash Project*. 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 & 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 to 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 the San Francisco Bay and/or the Los Angeles metropolitan areas. Methods selected for evaluation and monitoring will be based on a literature review conducted during this task and through input from technical advisors and stakeholders. Monitoring is scheduled to begin in 2014 and will be completed in 2016.
- **On-land Visual Assessments** – As part of the project, BASMAA will also conduct an evaluation of on-land visual assessment methods that are included in the ACCWP Pilot Assessment Strategy. The methods are designed to determine the level of trash on streets and public right-of-ways that may be transported to receiving waters via MS4s. BASMAA plans to conduct field work associated with the evaluation of on-land visual assessment at a number of sites throughout the region. To the extent practical, sites where the on-land methods evaluations take place will be coordinated with trash flux monitoring in receiving waters. On-land assessments will occur in areas that drain to trash full capture devices, and all

sites will be assessed during wet and dry weather seasons in order to evaluate on-land methods during varying hydrologic conditions. Monitoring is scheduled to begin in 2014 and will be completed in 2016.

#### **4.2.2 Full Capture Equivalent Studies**

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

### **4.3 Additional Progress Assessments**

The City of Dublin plans to assess the trash control measures implemented in the City and track the success of trash reduction. City staff will conduct quarterly visual assessments within each of the trash management areas to demonstrate trash reduction. Selected sites will be assessed during wet and dry weather seasons. The City will select locations within each trash management area (the number of locations will be determined based on size of the trash management area). The City will conduct street assessments of trash in these same assigned locations on a quarterly basis and report trash loads by completing forms and photo-documentation. The City will enter the quantity and types of trash collected in a database. The City will utilize this database to track trends over time.

### **4.4 Long-Term Assessment Strategy**

The City of Dublin is committed to implementing standardized assessment methods post FY 2016-17 based on the lessons learned from pilot assessments. 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 15-16 Annual Report and a revised Strategy will be developed and submitted, if necessary. The revised Strategy will include assessment methods that will be used to demonstrate progress during the remaining term of trash reduction requirements.

### **4.5 Implementation Schedule**

The implementation schedule for the ACCWP Pilot Implementation Strategy, BASMAA's *Tracking California's Trash* project, and the Long-Term Assessment Strategy are included in Table 4-1. Load reduction reporting milestones are also denoted in the table. The schedule is consistent with the need for near-term pilot assessment results to demonstrate progress toward short-term targets, while acknowledging the need for testing and evaluation of assessment methods and protocols prior to long-term implementation.

**Table 4-1.** City of Dublin planned 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 (ACCWP)</b>											
Single-Use Plastic Bag Assessment	X	X				X					
Expanded Polystyrene Assessment	X	X				X					
Trash Hot Spot Cleanup Assessment	X	X	X	X	X						
K-12 School Litter Reduction Outreach Program						X					
Multi-Family Dwelling Litter Outreach Program	X	X									
Residents' Self-Reported Litter-Related Behavior	X					X					
Full Capture Operation and Maintenance Verification			X	X	X						
Single-Use Bag Ban Compliance		X	X	X	X						
Street Sweeping Effectiveness Evaluation			X	X	X						
Commercial Trash Container Management Assessment			X	X	X						
Residential Trash Container Management Assessment			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 Dublin)</b>											
Street Trash Assessments			X	X	X	X	X	X	X	X	X
<b>Long-Term Trash Assessment Strategy (ACCWP)</b>											
						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

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# SWEEPING SERVICES

# ZONE MAP

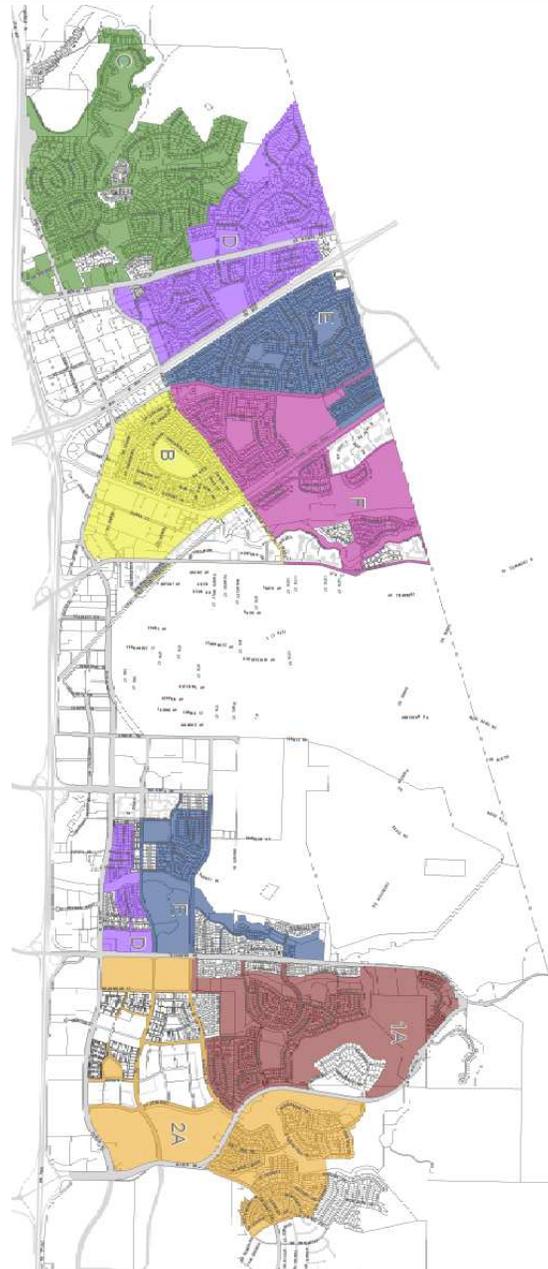
# BENEFITS

The City of Dublin provides street sweeping on residential streets two times per month with the exception of August, when streets are swept once. Street sweeping on commercial streets occurs two times per month from January through October and four times per month during the heavy leaf-fall months of November and December. These services are provided through the City's vendor, Contract Sweeping Services.

Residential areas are usually swept between the hours of 8:00 a.m. and 5:00 p.m. on the following days:

- Area 1A – 1st and 3rd Monday
- Area 2A—2nd and 4th Monday
- Area B – 2nd and 4th Tuesday
- Area C – 2nd and 4th Wednesday
- Area D – 2nd and 4th Thursday
- Area E – 2nd and 4th Friday
- Area F – 1st and 3rd Tuesday

See zone map for sweeping boundaries for each area



In addition to improving the appearance of our City, street sweeping helps to remove dirt and debris from the street which would otherwise be washed into the City's storm drain system and ultimately pollute our streams and San Francisco Bay.



The cost of street sweeping and public storm drain cleaning is paid from the City's General Fund. Street sweeping is an important part of the federally-mandated Clean Water Program.

## HOW YOU CAN HELP

## QUESTIONS OR COMMENTS

Street Sweepers are large vehicles and are not able to efficiently sweep the streets when there are obstacles such as cars, trash bins, or basketball hoops on the street. Please help keep our streets clean by keeping these items off the street on your designated street sweeping day.

Street Sweepers are designed to sweep leaves and debris that naturally fall onto the street. The sweepers are not able to pick up piles of leaves and debris. Please **DO NOT** place piles of leaves and debris in the street. Green waste bins are a suitable alternative for this type of disposal.



Please contact the City of Dublin Public Works Department at (925) 833-6630 or visit the City's website at [www.dublin.ca.gov](http://www.dublin.ca.gov)



100 Civic Plaza  
Dublin, CA 94568  
925.833.6650

# STREET SWEEPING SERVICES

CITY OF DUBLIN



PUBLIC WORKS DEPARTMENT

**ORDINANCE NO. 9 - 11**

**AN ORDINANCE OF THE CITY COUNCIL  
OF THE CITY OF DUBLIN**

\*\*\*\*\*

**ADOPTING A NEW CHAPTER 7.98 RELATING TO SOLID WASTE AND RECYCLING  
ENCLOSURE STANDARDS**

The City Council of the City of Dublin does hereby ordain as follows:

**Section 1:**

**Compliance with California Environmental Quality Act (“CEQA”):** This Ordinance is exempt from CEQA per CEQA Guidelines Section 15061(b)(3). Section 15061(b)(3) states that CEQA applies only to those projects that have the potential to cause a significant effect on the environment. The adoption of this Ordinance is exempt from CEQA because the Ordinance does not, in itself, allow the construction of any building or structure, but it sets forth the regulations that shall be followed if and when a building or structure is proposed to be constructed or a site is proposed to be developed. This Ordinance of itself, therefore, has no potential for resulting in significant physical change in the environment, directly or ultimately.

**Section 2:** A new Chapter 7.98 is hereby added to the Dublin Municipal Code to read as follows:

**CHAPTER 7.98 SOLID WASTE AND RECYCLING ENCLOSURE STANDARDS**

**7.98.010 Applicability.**

- A. The requirements of this Chapter shall apply to all building or development permits for:
1. New commercial development projects.
  2. New multi-family development projects with 5 units or more that will utilize shared waste and recycling enclosures.
  3. Commercial development projects that trigger a Planning entitlement (such as a Site Development Review or Conditional Use Permit) and consist of the following types of uses: grocery stores, restaurants, markets, daycare centers and auto repair/use.
  4. Any other project, including tenant improvements, where the Public Works Department concludes that the proposed use has the potential to discharge pollution into the City’s storm sewer system. When this Chapter applies to a tenant improvement, the property owner or Applicant shall be responsible for making improvements only to the solid waste and recycling enclosure used by the tenant.

## **7.98.020 Definitions.**

The terms used in this Chapter have the meaning set forth below:

“Collection” means the removal and transportation of solid waste, recycling and organics by the collector from the place of delivery to a disposal facility approved under the collector’s agreement with the city or by a nonexclusive franchise agreement.

“Collector” means that person or business having an exclusive franchise agreement with the city granting to him/her or it the exclusive privilege of collecting or causing to be collected or transported for a fee any solid waste within the city or any portion thereof.

“Commercial Development” means construction of buildings consisting of retail, professional, wholesale, or industrial facilities.

“Compactor” means any roll-off container or bin which has a compaction mechanism, whether stationary or mobile.

“Discharge” means a) any addition of any pollutant that has potential to enter navigable waters from any point source or b) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft.

“Food Service Establishments” include restaurants, markets, bakeries, grocery stores and all other establishments that prepare and/or serve fresh food on the premise.

“Illicit discharge” means any discharge to the city storm sewer system that is not composed entirely of stormwater, except discharges pursuant to a NPDES permit and discharges resulting from firefighting activities.

“Mixed Recycling” consists of any clean, dry paper, plastic and glass (bottles, jars and jugs only), and metal cans (tin and aluminum) placed in a single container. Note: cardboard is also accepted in Mixed Recycling bins and carts; however, recycling boxes in the carts is often impractical due to the limited capacity and tendency for even flattened boxes to get jammed in the carts.

“National Pollutant Discharge Elimination System (NPDES)” means a national program under Section 402 of the Clean Water Act for regulation of discharges of pollutants from point sources to waters of the United States. Discharges are illegal unless authorized by a NPDES permit.

“Organics” means all types of green waste including grass and weed clippings shrub and tree prunings, branches (less than four feet in length and four inches in diameter), leaves, plants, flowers, food scraps and food-soiled paper products.

“Owner” means the owner or owners of real property having fee title to the property as identified in the most recent equalized assessment roll of the Alameda County Assessor.

“Point Source Pollution” means a single identifiable localized source of air, water, thermal, noise or light pollution. A point source has negligible extent, distinguishing it from other pollution sources.

“Pollutant” means dredged soil, solid waste, incinerator residue, sewage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, dirt and industrial, municipal and agricultural waste discharge into water.

“Public Works Director” means the City of Dublin Public Works Director or his or her designee.

“Recycling” means processing recovered used resources (waste) into new products to prevent waste of potentially useful resources, reduce the consumption of virgin materials, reduce energy usage, reduce greenhouse gas emissions and water pollution (from landfilling), by reducing the need for solid waste disposal.

“Recyclable Materials” for the purpose of this document, means all items accepted in the City’s Commercial Recycling Program, including mixed recycling (paper, bottles and cans), cardboard and food waste/organics.

“Roll-off Container” means a metal container that is normally loaded onto a motor vehicle and transported to an appropriate facility.

“Solid waste” means all putrescible and nonputrescible solid waste (garbage), including, paper, ashes, industrial or commercial wastes, demolition and construction wastes, discarded home and industrial appliances, animal solid and semi-solid wastes other than fecal matter, vegetable wastes, and other discarded solid and semi-solid wastes, but does not include hazardous waste, as herein defined, sewage, or abandoned automobiles.”

“Stormwater” means stormwater runoff, snow-melt runoff, surface runoff and drainage.

“Tenant” means any person or persons other than the owner occupying or in possession of the residence or commercial space.

#### **7.98.030 General Construction and Design Standards.**

The location, design and construction of enclosures for the set out and collection of garbage, recyclables, food waste, landscaping debris or other discarded materials shall conform to all applicable regulations set out in these standards and to all other provisions of the Dublin Municipal Code. A development may have multiple solid waste and recycling enclosures to meet the required amount of capacity. The Public Works Director shall review the design of all enclosures. All enclosures are subject to a Site Development Review permit.

The Public Works Director may waive some or all of the location, design and construction requirements upon findings that the existing solid waste and recycling enclosure is adequate to provide the required level of services, including capacity and access, for trash and recycling collection for the facility.

Standard enclosures shall have a minimum inside usable floor and wall dimension of 18 feet wide by 10 feet deep, to allow tenant and Collector access to the bins/carts and placement of bins sideways in the enclosure if necessary. In some instances, the required enclosure size may be greater than 18 feet by 10 feet.

All commercial uses within the City must at a minimum provide adequate space for separate garbage bins, cardboard only bins and mixed recycling bins. In addition, food service establishments shall provide adequate space for food waste/organics. If a food establishment will generate grease, fat or tallow, adequate space for those containers is also required. The types and size of bins shall be based on the volume of tonnage generated by the development activity, as estimated by the Public Works Director, and with the aim of reducing, as much as possible, the number of service trips per week by the Collector.

**A. Height Clearance of the Enclosure Approach.**

The entire approach to and from the front of the enclosure shall have at least 18 feet of vertical clearance to accommodate refuse truck height. The area immediately in front of the enclosure itself, or the location where the bin will be serviced, shall have at least 32 feet of vertical clearance to accommodate the servicing of the bin.

All projects shall provide clearance for front end loading vehicles, as defined below:

Vertical (approach and exit)	18 feet high
Vertical (when dumping bin)	32 feet high
Lateral	15 feet wide

**B. Driveways.**

An asphalt or concrete driveway with 50 feet of straight, direct access that leads to and from the enclosures to the bin is required and shall be built to withstand trucks weighting up to 62,000 pounds Gross Vehicle Weight (GVW). The driveway shall be built in accordance with the City Standard Plans and Specifications.

**C. Concrete Apron at the Approach.**

1. The apron surface shall be the same elevation as the enclosure pad threshold and the surrounding surfaces, with a minimum slope of 1/8 inch (1% grade) per foot away from the enclosure pad so as to direct runoff away from the enclosure.
2. The apron shall extend 10 feet from the enclosure pad and be the width of the enclosure opening. To prevent damage to the asphalt paving caused by receptacle impact, the enclosure base shall be designed to withstand up to 20,000 pounds of direct force from a single truck axle. A sufficient strength concrete shall be used to prevent chipping.

**D. Concrete Enclosure Pad.**

1. The enclosure pad shall be engineered to withstand up to 20,000 pounds of direct force from a single truck axle for any portion of the pad that is subject to vehicle traffic.
2. The enclosure pad surface shall be the same elevation as the apron threshold.
3. On the open side of the enclosure, a grade break line shall be constructed at the inside edge of the wall with the slab sloping inwards on the inside of the structure and away from the structure on the outside.
4. The ground on all other sides of the structure shall be sloped away from the structure.

## E. Enclosure Design.

Enclosures shall be designed to provide adequate space for collecting and storing solid waste and recyclable materials, including mixed recycling, separated cardboard and food waste/organics (when appropriate). All solid waste and recycling enclosures shall be designed to provide for adequate capacity, based on the volume and tonnage generated by the development activity, as estimated by the Public Works Director, and with the aim of reducing, as much as possible, the number of service trips per week by the Collector.

1. **Material:** The design of the enclosure shall incorporate the same materials used for the primary buildings for a coordinated look and feel to the development.
2. **Landscaping:** In instances where the enclosure is visible from roadways or other public spaces, an irrigated 5-foot wide landscape strip running the length of the three non-gated enclosure walls shall be provided to allow for vines or large shrubs to shield the walls and discourage graffiti.
3. **Height of walls:** All enclosures shall have walls with a minimum height of 6 feet.
4. **Roof:** All solid waste and recycling area enclosures that are not located inside a building shall have roofs to prevent contaminants from washing into the storm drain system. The lowest part of the ceiling cannot be lower than 9 feet high. The roof shall extend past any open sides. Additionally, the roof shall not overhang the front gate so that the garbage trucks can access the bins.
5. **Inside Dimension**
  - a. All enclosures must have sufficient space for at least one bin for solid waste, a second bin of at least equal size for storing and collecting separated cardboard, and either a mixed recycling bin or cart for mixed paper, bottles and cans of sufficient size to collect mixed recycling items generated on-site. Enclosures that will be used by food establishments must also allow space for a separate food waste/organics bin of sufficient size to collect food waste generated on-site.
  - b. The required interior dimensions shall not include space required for protective curbs or bumpers and shall allow for pairing of trash and recycling container(s) in the same enclosure. All bins must be configured inside the enclosure so as to ensure full access to the entire front area of the bin.
  - c. If the enclosure will service food service establishments, adequate space must also be provided for waste cooking oil storage containers, which must be placed so that they will not interfere with the Collector's ability to service the enclosure, either by blocking access or as a result of leaking oil that creates a hazard for drivers.

- d. The enclosure shall be large enough to provide a minimum of 24 inches on each side of the bins, 24 inches between bins placed side by side and 36 inches from the front of the bin to the gate. If bins are placed facing each other, a minimum of 36 inches between bins is required. A protective buffer (cement curb, bollards or wood/rubber bumper) is required around all interior walls, including partial walls on the gated side, to prevent damage to the enclosure during servicing. Enclosure dimensions will increase depending on the size and number of required bins, which is dependent upon the use. Multiple enclosures may also be required, depending on the size of the development and type(s) of use. If there are multiple enclosures required, each enclosure shall have enough space to pair trash and recycling containers in the same enclosure, to ensure optimum diversion and to minimize contamination of recycling loads. All enclosures shall conform to the standards listed above.

#### 6. Recycling Only Enclosures

Smaller "recycling only" enclosures may be allowed in certain cases where an existing site has adequate enclosure space for trash, but it is not possible to locate the required recycling containers within the trash enclosure, based on the Public Works Director's estimate of required volume. Drainage requirements for recycling only enclosures will depend on the types of materials stored for recycling. Recycling only enclosures designated for separated non putrescible waste (i.e. cardboard only or mixed recycling bins or carts) shall be subject to a Site Development Review permit.

#### 7. Gates Pedestrian Doors

- a. Double gates are required for enclosures that contain two or more trash or recycling bins.
- b. Gates shall be free hanging with no center pole. The gates/doors shall be designed to ensure access and removal of each bin from the enclosure without having to move another bin.
- c. Gates shall be solid metal painted to incorporate the overall design theme of the development with outside handles on each door and a slide latch to secure the doors. The solid waste and recycling area should not be visible through the gates. In addition, gates must be approximately the same size as the enclosure walls.
- d. The gated opening shall be a minimum of 16 feet wide. Gate posts shall be placed outside this span.
- e. Bolts shall be used to secure the gate to the poles or walls.

- f. The gate doors must be constructed with a mechanism that will provide a means of securing the gate doors in both an opened and closed position. All gates must be lockable using a standard padlock.
- g. A pedestrian entrance shall be provided for all enclosures. All pedestrian doors shall open outward to avoid interfering with placement of, and access to, containers.
- h. An accessible path of travel shall be provided from the main building to the pedestrian entrance door described above.

8. Lighting

The area around and inside the enclosure must be lit with a minimum of 1.0 foot candle. A motion sensor is required.

9. Storage inside the Enclosure/ Maintenance

- a. The enclosure is for the storage of solid waste, mixed recycling, cardboard, organics and grease containers only.
- b. Enclosures shall be kept clean, with all recyclables and garbage to be placed in the proper receptacle. No trash or recyclables may be stored on the enclosure floor on either a temporarily or permanent basis. Storage of hazardous materials is not allowed in the enclosure.
- c. All solid waste, mixed recycling, cardboard, organics and grease containers are required to have lids that must be closed when not in use to contain litter and to prevent odor, pests and possible storm water pollution. In addition, all waste cooking oil storage containers must be leak proof and/or have secondary containment that does not interfere with access to cooking oil, trash or recycling containers. In addition, the waste oil hauler or property manager shall keep a supply on hand of material designed to absorb oil near the container in case there is a spill.

10. Waste Water Pollution Prevention

- a. Solid waste and recycling enclosures, with the exception of industrial uses, shall have a drain connected to the sanitary sewer. A hose bib shall be available for periodic wash down.
- b. The Applicant must contact the Dublin San Ramon Services District (DSRSD) for specific sanitary sewer connection and discharge requirements. Sanitary sewer connections and inclusion of a grease or sand/oil interceptor shall be in accordance with DSRSD standard specifications.

- c. In accordance with DSRSD discharge regulations, solid waste and recycling enclosures servicing industrial uses are prohibited from draining into the sanitary sewer system. Waste generated from these users shall be directly taken to the appropriate waste facility.
- d. Stormwater is prohibited from entering the sanitary sewer system; therefore, all solid waste and recycling enclosures that are connected to the sanitary sewer system shall have a roof to prevent stormwater from entering the sanitary system. Grading around the solid waste and recycling enclosure shall be designed to drain stormwater away from the enclosure.

**F. Enclosure Location & Accessibility.**

- 1. All solid waste, recycling and organics receptacles shall be placed so as to be readily accessible for removal and emptying by the collector, but they shall not be placed within the vehicle traveled portion of any street, road, avenue, way or alley, or at any location so as to constitute a nuisance, pursuant to Section 5.32.070.
- 2. All bins/enclosures are required to have direct access for collection trucks during normal solid waste, recycling and organics collection days and hours. Direct access means the collection truck can directly access the bin, and insert the forks into the sides of the bin without the driver having to get out of the truck to move the bin. A minimum straight approach of 50 feet is necessary to line up directly with the bin.
- 3. Provide a turn around or separate exit that allows the truck to move forward rather than backwards. Maximum back-up distance is 50 feet (unless a greater distance is approved by the Franchise Hauler) for any maneuver and shall be in a straight line.
- 4. Solid waste and recycling enclosures shall not be placed in front of fire hydrants and no enclosure shall be placed within 5 feet of a combustible building wall, opening, or combustible roof eave line.
- 5. Solid waste and recycling enclosures shall not be installed behind parking spaces except for instances with unusual site constraints.
- 6. For safety reasons, the turning radius shall be adequate for a 3-axle truck and shall have a minimum outside turning radius of 45 feet. A turnaround must be provided for any street, driveway or travel aisle that would otherwise require the collection truck to back up a distance greater than 150 feet.
- 7. Truck Specifications:
  - a. Front End Loader vehicles need a minimum of 50 feet of unobstructed clearance to access the solid waste and recycling enclosure. Commercial collection vehicles access the solid waste and recycling enclosure at the front of the vehicle.

- b. Vehicles servicing Roll-off containers need a minimum of 132 feet to approach and load the container, and 30 feet of overhead clearance. Roll-off containers are 20 feet in length and 8 feet wide. The weight of a Roll-off container cannot exceed 10 tons when full.

**G. Exceptions for Existing Development.**

If an existing development does not have an existing trash enclosure, the development may be required to install a trash enclosure that meets the requirements of this Section 7.98.030. If it is determined by the Public Works Director that there is insufficient space to construct a trash and recycling enclosure, the Public Works Director, may approve modifications to the requirements of this Section 7.98.030.

**7.98.040 Multi-family Requirements.**

- A. Multifamily complex enclosures in the City of Dublin are required to contain space for separate collection of solid waste, mixed recycling and organics as shown in the table below. Front loader bins shall be used to collect mixed recycling, so that the large quantities of cardboard typically generated at multi-family complexes can be easily recycled by residents.
- B. Solid waste and recycling enclosures for collection of solid waste, recyclables and organics at multi-family apartment and condominium housing shall observe the requirements of the California Building Code and the requirements of Title 24, regarding accessibility to solid waste and recycling collection containers for persons with disabilities (CCR Title 24, Part 2).
- C. Minimum requirements for an enclosure or multiple enclosures by dwelling units are as follows:

Dwelling Units (#)	Garbage (sq ft.)	Mixed Recyclables (sq ft.)	Organics (sq ft.)	Total Enclosure Area (sq ft.)
2 -- 6	30	30	30	90
7 -- 15	60	60	60	180
16 -- 25	100	100	100	300
26 -- 50	200	200	200	600
51 -- 75	300	300	300	900
76 -- 100	400	400	400	1200
101 -- 125	490	490	490	1470
126 -- 150	590	590	590	1770
151 -- 175	690	690	690	2070
176 -- 200	790	790	790	2370
> 200	Every additional 25 dwelling units shall require an additional 100 square feet for solid waste, 100 square feet for recyclables and 100 square feet for organics.			

**7.98.050 Compactors.**

- A. Compactors are generally not permitted unless pre-approved by the Public Works Director. Inclusion of a compactor shall not supplant the requirement that a site provide adequate enclosure space for recycling. If a compactor is installed, space for recycling (including organics if applicable) shall be provided in accordance with the requirements discussed above.
- B. Compactors may require additional space and electrical connections, as well as separate building permits.
- C. Compactors are required to be covered and shall include plumbing to capture possible leaks and spills.
- D. Compactors containing solid waste must be serviced at least once per week. The Applicant must provide written confirmation from the Collector that servicing of the compactor is feasible.
- E. In order to allow adequate space to hook and unhook the compactor from the roll-off truck, a back up distance of three times the length of the 35 foot truck is required (minimum 105 feet). This distance must extend straight ahead from the end of the compactor. For safety reasons, a site plan requiring a back up distance less than 105 feet to service the compactor will not be approved. Width must be at least 12 feet to allow room to maneuver and to provide clearance from objects/structures/vehicles on either side of the backup length. Immediate approach (minimum 30 feet) to a compactor or roll off box should be on a flat, level surface. Adequate room for backing-up and turning shall be provided on-site, and shall not require use of the public right-of-way.

**7.98.060 Roll-off Boxes.**

- A. Roll-off boxes for on-going uses are generally not permitted.
- B. Roll-off containers shall be placed directly behind a building where space is available at a loading dock to allow loading from above.
- C. Roll-off containers shall be placed on a level surface, unless roll-away protection is required. Placement of roll-off boxes shall be subject to approval by the Public Works Director.
- D. Loading docks shall be equipped with bumper pads or 8 inch high curbs to avoid undue dock damage from heavy containers.
- E. All projects shall provide clearance for roll-off vehicles as follows:
  - 1. Vertical (approach and exit): 14 feet high
  - 2. Vertical (rails raised with bin): 25 feet high
  - 3. Lateral: 10 feet wide
  - 4. Service Area Length Minimum: 75 feet long

**7.98.070 Storm Water Pollution Prevention.**

- A. All properties shall comply with the Federal Clean Water Act and the provisions of Chapter 7.74.
- B. Solid waste and recycling enclosures within the City that are subject to these standards must have a roof to comply with the City of Dublin's National Pollution Discharge Elimination System (NPDES) Stormwater Permit.

**7.98.080 Permits.**

All necessary permits shall be obtained prior to the construction of any enclosures within the City of Dublin.

**7.98.090 Exceptions.**

Applicants that believe they need a smaller enclosure than required in the City's Enclosure Design Standards, may request an exception from the Public Works Department.

The Public Works Director shall have the authority to grant exceptions to the requirements of this Chapter based on space and access considerations. The determination of the Public Works Director may be appealed to the City Manager.

**Section 3.** Severability. The provisions of this Ordinance are severable and if any provision, clause, sentence, word or part thereof is held illegal, invalid, unconstitutional, or inapplicable to any person or circumstances, such illegality, invalidity, unconstitutionality, or inapplicability shall not affect or impair any of the remaining provisions, clauses, sentences, sections, words or parts thereof of the ordinance or their applicability to other persons or circumstances.

**Section 4.** Effective Date. This Ordinance shall take effect and be enforced thirty (30) days following its adoption.

**Section 5.** Posting. The City Clerk of the City of Dublin shall cause this Ordinance to be posted in at least three (3) public places in the City of Dublin in accordance with Section 36933 of the Government Code of the State of California.

**PASSED, APPROVED AND ADOPTED** this 21<sup>st</sup> day of June, 2011 by the following vote.

**AYES:** Councilmembers Biddle, Hildenbrand, Swalwell, and Mayor Sbranti

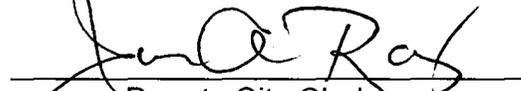
**NOES:** None

**ABSENT:** Councilmember Hart

**ABSTAIN:** None

  
 \_\_\_\_\_  
 Mayor

**ATTEST:**

  
 \_\_\_\_\_  
 Deputy City Clerk



# SMALL BUSINESS ASSISTANCE PROGRAM GUIDELINES

## I. PROGRAM OVERVIEW

The Small Business Assistance Program (“Program”) is an endeavor of the City of Dublin to assist Dublin-based businesses with the cost of complying with federal, state and local laws relating to disability access requirements, trash enclosures, sewer connections and other such obligations imposed on small businesses.

One hundred thousand dollars (\$100,000) is available annually to fund the Program. The City has selected the Alameda County Small Business Development Center (ACSBDC) as the Program administrator.

## II. GRANT AND SUPPORT PROGRAMS

### A. Grant Program for Small Business Regulatory Compliance

The Grant Program for Small Business Regulatory Compliance (“Grant Program”) shall be utilized to support Dublin-based businesses seeking to comply with various requirements including, but not limited to the Solid Waste and Recycling Enclosure Standards contained in Chapter 7.98 of the City’s Municipal Code. This grant provides for reimbursement of up to Seventy Five Thousand dollars (\$75,000) per fiscal year (July 1<sup>st</sup> – June 30<sup>th</sup>).

*Disbursement of grant proceeds to approved applicants will be in a reimbursement payment issued after City deems the project complete, and upon the submission of invoices and proof of payment and subject to approval of those invoices and proofs of payment by City staff. The actual reimbursement will be made by the ACSBDC.*

### B. Small Business Support Program

The Small Business Support Program (“Support Program”) shall be utilized for One-on-One Business Advising targeted at Dublin-based businesses as well as for special events designed to support and assist small business.

## III. ELIGIBILITY

### A. Eligible Applicants

The Grant Program and Support Program are available to commercial, industrial and retail businesses located in the City of Dublin, as well as owners of property located in Dublin.

### B. Eligible Types of Improvements

Eligible improvements include, but are not limited to:

- Solid Waste and Recycling Enclosure Standards contained in Chapter 7.98 of the City’s Municipal Code
- Federal, state and local laws relating to disability access requirements







# SMALL BUSINESS ASSISTANCE PROGRAM APPLICATION

Please fill out this application completely and submit to:

City of Dublin  
Attention: Economic Development Department  
100 Civic Plaza  
Dublin, CA 94568  
(925) 833-6650

## **SECTION 1. APPLICANT INFORMATION**

Please Select One:        Grant Program for Small Business Regulatory Compliance  
                                      Small Business Support Program

Name: \_\_\_\_\_

Circle All That Apply:            Property Owner            Business Owner

Business Name: \_\_\_\_\_

Property Address: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Assessor's Parcel Number: \_\_\_\_\_

Daytime Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

Total Number of Businesses in Building: \_\_\_\_\_

Name(s) of Other Businesses: \_\_\_\_\_

\_\_\_\_\_

## **SECTION 2. PROPERTY OWNER INFORMATION** *(complete if business owner is applicant)*

Property Owner Name: \_\_\_\_\_

Property Owner Mailing Address: \_\_\_\_\_

Property Owner Daytime Phone Number: \_\_\_\_\_



**SECTION 3. FUNDING**

Grant Amount Requested: \$ \_\_\_\_\_

Estimated Total Project Cost: \$ \_\_\_\_\_

**SECTION 4. SCOPE OF WORK**

Grant Program Applicants - General Description of Work to be Performed Using Grant Funds:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Support Program Applicants – General Description of One-on-One Business Advising Needs:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**SECTION 5. ACKNOWLEDGMENT**

We certify that the owner is the property owner of record and that there are no current code enforcement actions pending against the property.

I have read and understand the Program Guidelines and accept them.

I certify that I am qualified and will abide by such conditions set forth in this application and all reasonable conditions which may be issued by the City of Dublin in the implementation of this project.

Property Owner(s) Signature\*: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_  
Date: \_\_\_\_\_

Business Owner(s) Signature: \_\_\_\_\_ Date: \_\_\_\_\_

\_\_\_\_\_  
Date: \_\_\_\_\_

*\*Property Owner signature required if Business Owner is applicant for the Grant Program.*

