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Dale Bowyer
San Francisco Bay Regional Water Quality Control Board
1515 Clay St. Suite 1400
Oakland, CA 94612

January 30, 2012

Subject: City of Albany Short Term Trash Load Reduction Plan

Dear Mr. Bower,

The City of Albany's Short-Term Trash Load Reduction Plan (Plan) is submitted in compliance with provision C.10.a(i) and C.10.a(ii) of the Municipal Regional Stormwater NPDES Permit for Phase I communities in the San Francisco Bay (Order R2-2009-0074). According to the submittal instructions contained in the "FTP Guide for Trash Load Reduction Plan", it seems a printed copy of the Plan is not required to be sent to the Regional Water Board. If Regional Water Board staff need a printed copy of the Plan in the future, one can be prepared and sent.

Please feel free to contact me at (510) 528-5754 if you have any questions regarding the information contained herein.

Respectfully submitted,

Nicole Almaguer
Environmental Specialist
City of Albany

cc:
Randy Leptien, Contract City Engineer, City of Albany
Richard Cunningham, Public Works Manager, City of Albany

Baseline Trash Load and Short-Term Trash Load Reduction Plan

Submitted by:

City of Albany

1000 San Pablo Ave

Albany, CA 94706

In compliance with Provisions C.10.a(i) and C.10.a(ii) of Order R2-2009-0074

January 31, 2012

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City of Albany
SHORT-TERM TRASH LOAD REDUCTION PLAN

CERTIFICATION STATEMENT

"I certify, under penalty of law, that this document and all attachments were prepared either under my direction or supervision, or were prepared by our consultants or consultants of the Alameda Countywide Clean Water Program 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:

Nick Moyer, Env. Specialist, 1/31/12

[Name] Date
[Title]

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ABBREVIATIONS

BASMAA	Bay Area Stormwater Management Agencies Association
BID	Business Improvement District
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CASQA	California Stormwater Quality Association
CDS	Continuous Deflection Separator
CEQA	California Environmental Quality Act
CY	Cubic Yards
EIR	Environmental Impact Report
EPA	Environmental Protection Agency
GIS	Geographic Information System
MRP	Municipal Regional Stormwater NPDES Permit
MS4	Municipal Separate Storm Sewer System
NGO	Non-Governmental Organization
NPDES	National Pollutant Discharge Elimination System
Q	Flow
SFRWQCB	San Francisco Regional Water Quality Control Board
SWRCB	State Water Resource Control Board
TMDL	Total Maximum Daily Load
USEPA	United States Environmental Protection Agency
Water Board	San Francisco Regional Water Quality Control Board
WDR	Waste Discharge Requirements

PREFACE

This Baseline Trash Load and Short-Term Trash Load Reduction Plan (Plan) is submitted in compliance with provision C.10.a(i) and C.10.a(ii)of the Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay (Order R2-2009-0074). This Plan was developed using a regionally consistent format developed by the Bay Area Stormwater Management Agencies Association (BASMAA). Based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas, etc), or if circumstances arise during implementation that were not anticipated at the time of this submission, the City of Albany may chose to amend or revise this Plan. If revisions or amendments are necessary, a revised Short-Term Plan will be submitted to the Water Board via the City of Albany's annual reporting process.

Please Note: This Baseline Trash Load and Short-Term Trash Load Reduction Plan template and guidance was prepared to assist cities and counties (i.e., Permittees) subject to requirements in provision C.10.a.i of the Municipal Regional Stormwater NPDES Permit (MRP) for Phase I communities in the San Francisco Bay (Order R2-2009-0074). The template and guidance are intended to provide Permittee's with a format for developing their Short-Term Plans and submitting to the San Francisco Bay Regional Water Quality Control Board by February 1, 2012 in compliance with MRP provision C.10.a.i. The template provides a mechanism to link the results of the *Trash Baseline Generation Rates Project* and the *Trash Load Reduction Tracking Method*, each coordinated by Bay Area Stormwater Management Agencies Association (BASMAA). The use of this document and associated guidance are done so under the discretion of each Permittee.

1.0 INTRODUCTION

The Municipal Regional Stormwater NPDES Permit for Phase I communities in the San Francisco Bay (Order R2-2009-0074), also known as the Municipal Regional Permit (MRP), became effective on December 1, 2009. The MRP applies to 76 large, medium and small municipalities (cities, towns and counties) and flood control agencies in the San Francisco Bay Region, collectively referred to as Permittees. Provision C.10 of the MRP (Trash Load Reduction) requires Permittees to reduce trash from their Municipal Separate Storm Sewer Systems (MS4s) by 40 percent before July 1, 2014.

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

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

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

Baseline Trash Generation Rates Project

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

Baseline trash loading rates are quantified on a volume per unit area basis and based on factors that significantly affect trash generation (e.g., land use, population density, and economic profile). The method used to the establish baseline trash loads for each Permittee builds off “lessons learned” from previous trash loading studies conducted in urban areas (Allison and Chiew 1995; Allison et al. 1998; Armitage et al. 1998; Armitage and Rooseboom 2000; Lippner et al. 2001; Armitage 2003; Kim et al. 2004; County of Los Angeles 2002, 2004a, 2004b; Armitage 2007). The method is based off a conceptual model developed as an outgrowth of these studies (BASMAA 2011b). Baseline trash loading rates were developed through the quantification and characterization of trash captured in Water Board recognized

full-capture treatment devices installed in the San Francisco Bay area. Methods used to develop trash baseline loading rates are more fully described in BASMAA (2011b, 2011c, and 2012).

Trash Load Reduction Tracking Method Summary

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

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

Short-Term Trash Load Reduction Plan

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

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

Additionally, based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas, etc), or if circumstances arise during implementation of the Plan that were not anticipated at the time of submission, the City of Albany may amend or revise this Plan. If revisions or amendments are

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

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

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

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

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

2.0 BASELINE TRASH LOADING ESTIMATE

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

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

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

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

Permittee Characteristics

Incorporated in 1908, the City of Albany covers 1,270 acres in Alameda County, and has a jurisdictional area of 928 acres. According to the 2010 Census, it has a population of 18,539, with a population density of 33,92.1 people per square mile, and average household size of 2.49. Of the 18,539 who call the City of Albany home, 25.0% are under the age of 18, 5.4% are between 18 and 24, 33.2% are between 25 and 44, 26.4% are between 45 and 65, and 10.0% are 65 or older.

The City of Albany is home to Golden Gate Fields and major retail and buiness areas on Solano Ave, a more pedestrian-oriented street, and San Pablo Ave, a major arterial road. The median household income was $54,919 in 2000[1].

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

Default Trash Generation Rates (Regional Approach)

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

Table 2.1: Regional Default Annual Trash Generation Rates by Land Use Category.

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

Jurisdictional and Effective Loading Areas

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

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

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

Table 2.2 Jurisdictional areas and effective loading areas in the City of Albany by land use classes identified by City zoning designation (2008)*

Land Use Category	Jurisdictional Area (Acres)	Effective Loading Area (Acres)	% of Effective Loading Area
High Density Residential	62	55	7
Low Density Residential	529	528	71
Rural Residential	0	0	0
Commercial and Services/ Heavy, Light and Other Industrial	132	33	4
Retail and Wholesale	67	61	8
K-12 Schools	48	33	5
Urban Parks	114	31	4
TOTAL	950	741	**100%**

***ABAG 2005 land use designations for the City of Albany were inaccurate.**

Permittee-Specific Baseline Trash Loading Rates

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

Baseline Street Sweeping

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

The City of Albany's baseline and current street sweeping program includes sweeping most streets in residential areas once per month, and retail areas once per week. The baseline sweeping frequency of most arterial roads is twice per month. The City's current sweeping frequency of most arterial roads is once per week.

Parking enforcement signs for street sweeping exist on approximately one third of City streets. Parking enforcement equivalent exists on most arterial and retail streets within the City. The estimated trash load reduced via baseline street sweeping is presented in Table 2-3.

Baseline Storm Drain Inlet Maintenance

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

Baseline Stormwater Pump Station Maintenance

The City of Albany does not own any stormwater pump stations with trash racks.

Baseline Trash Loading Estimate

The estimated baseline trash load from the City of Albany was calculated as the sum of the loads from the City's effective loading area, adjusted for baseline implementation of street sweeping, storm drain inlet maintenance, and pump station maintenance. The preliminary annual trash baseline load for the City of Albany is presented in Table 2-3. Preliminary baseline trash loading rates are presented in Figure 2-1 to provide a geographical illustration of areas with estimated low, moderate, high and very high trash loading rates.

Table 2.3 Preliminary annual trash baseline load for the City of Albany.

Category	Annual Load (gallons)
Preliminary Generation Trash Load	4,169
Load Removed via Baseline Street Sweeping	1,899
Load Removed via Baseline Storm Drain Inlet Maintenance	114
Load Removed via Baseline Stormwater Pump Station Maintenance	0
Preliminary Trash Baseline Load	**2,157**

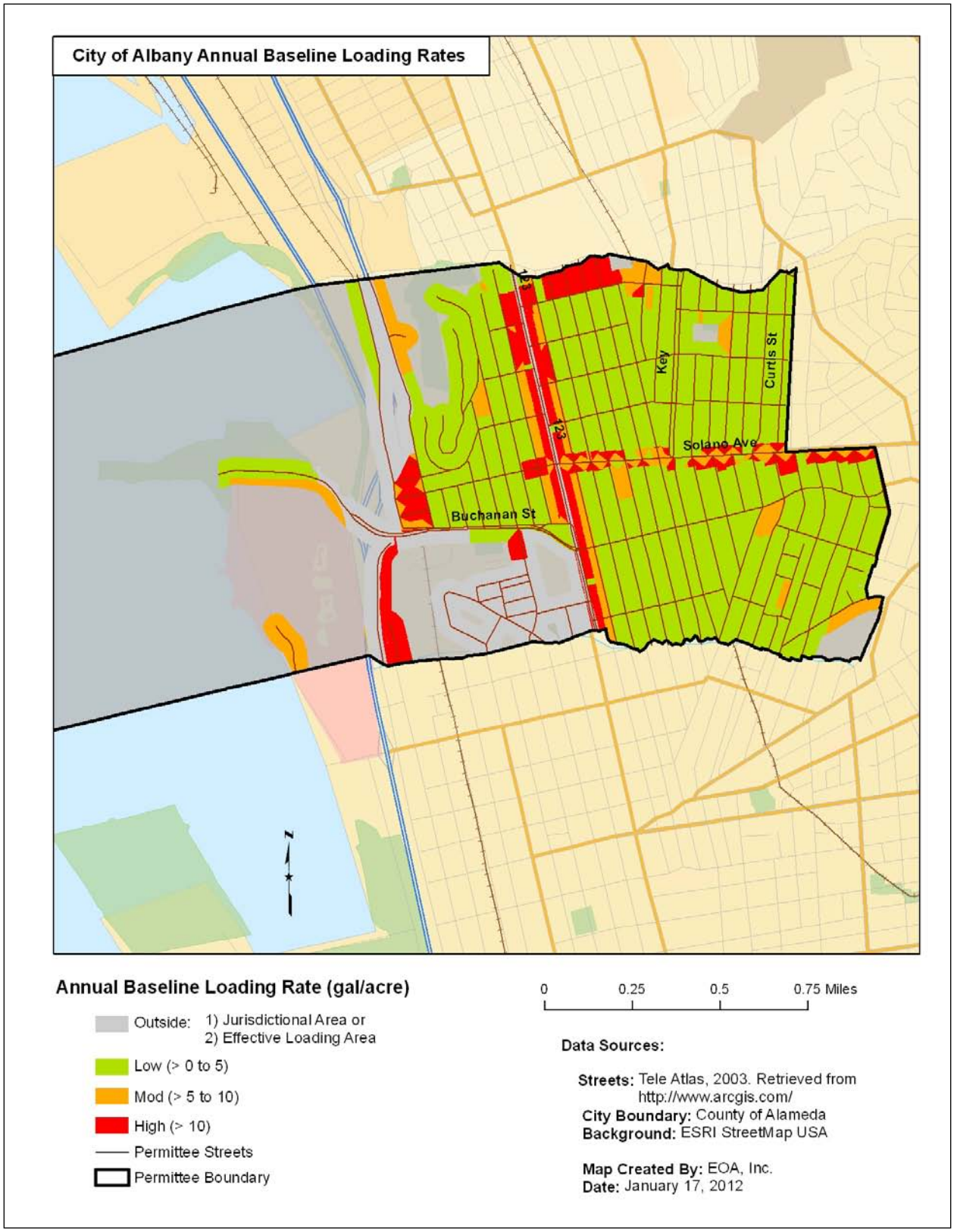

Figure 1: Estimated trash baseline loading rates for geographical areas in the City of Albany.

3.0 LOAD REDUCTION CALCULATION PROCESS

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

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

Step #1: Existing Enhanced Street Sweeping

Step#2: Trash Generation Reduction

Step #3: On-land Interception

Step #4: Trash Interception in the Stormwater Conveyance System

Step #5: Trash Interception in Waterways

Step #6: Comparison to Baseline Trash Load

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

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

Step #1: Existing Enhanced Street Sweeping

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

Step #2: Trash Generation Reduction Control Measures

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

CR-1: Single-Use Carryout Plastic Bag Ordinances

CR-2: Polystyrene Foam Food Service Ware Ordinances

CR-3: Public Education and Outreach Programs

CR-4: Reduction of Trash from Uncovered Loads

CR-5: Anti-Littering and Illegal Dumping Enforcement

CR-6: Improved Trash Bin/Container Management

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

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

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

Step #3: On-land Interception Control Measures

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

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

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

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

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

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

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

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

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

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

Step #5: Control Measures that Intercept Trash in Waterways

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

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

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

Step #6: Comparison to Baseline Trash Load

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

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

4.0 ENHANCED TRASH CONTROL MEASURES

This section describes the new or enhanced trash control measures planned for implementation by the City of Albany. The enhanced control measures described are designed to reach a 40% reduction by July 1, 2014. New and enhanced control measures that will be implemented by City of Albany include those listed in Table 4.1.

Table 4.1: Trash control measures that will be implemented by City of Albany to reach the 40% trash load reduction.

Control Measure
Single-use Carryout Plastic Bag Ordinances
Polystyrene Foam Food Service Ware Ordinances
Public Education and Outreach Programs
Activities to Reduce Trash from Uncovered Loads
Improved Trash Bin/Container Management (Municipally or Privately-Controlled)
Full-Capture Treatment Devices

CR-1: Single-use Carryout Plastic Bag Policy

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

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

Baseline Level of Implementation

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

Enhanced Level of Implementation

The City of Albany is a member agency of the Alameda County Waste Management Authority (ACWMA). ACWMA adopted an ordinance prohibiting the distribution of single-use carryout bags on January 25, 2012. The ordinance becomes effective on January 1, 2013. The purpose of the ordinance is to reduce the use of single use carryout bags and promote the use of reusable bags at the point of sale in Alameda County. The ordinance inhibits a store from providing a single-use carryout bag or reusable bag to a customer at the check stand, cash register, point of sale or other location for the purpose transporting the purchased food or merchandise out of the store. The ordinance defines a store as:

"Store" means any of the following stores located within Covered Jurisdictions:

(1) A full-line, self-service retail store with gross annual sales of two million dollars ($2,000,000), or more, that sells a line of dry grocery, canned goods, or nonfood items and some perishable items;
(2) A store of at least 10,000 square feet of retail space that generates sales or use tax pursuant to the Bradley-Burns Uniform Local Sales and Use Tax Law (Part 1.5 (commencing with Section 7200) of Division 2 of the Revenue and Taxation Code) and that has a pharmacy licensed pursuant to Chapter 9 (commencing with Section 4000) of Division 2 of the Business and Professions Code; or
(3) A drug store, pharmacy, supermarket, grocery store, convenience food store, foodmart, or other entity engaged in the retail sale of goods that include milk, bread, soda, and snack foods, including those stores with a Type 20 or 21 license issued by the Department of Alcoholic Beverage Control

The ordinance does not apply to food providers where the purpose of the single use bag is to safeguard public health and safety during the transportation of take-out foods and drinks. The ordinance also does not apply to public eating establishments or Nonprofit Charitable Reuse Organizations.

Violation of any provision of the ordinance constitutes a misdemeanor punishable by a fine not to exceed $500 for the first violation, a fine not to exceed $750 for the second violation within one year and a fine not to exceed $1,000 for each additional violation within one year. Violation of any provision of the ordinance also may be enforced as an infraction punishable by a fine not to exceed $100 for the first violation, a fine not to exceed $200 for the second violation within one year and a fine not to exceed $500 for each additional violation within one year. There shall be a separate offense for each day on which a violation occurs.

The total percent trash reduced from MS4s as a result of implementing a single-use carryout bag ordinance will be reported in the Annual Report submitted each September to the Water Board.

Additional Activities

Between January 25, 2912, the ordinance adoption date, and January 1, 2013, the effective date, ACWMA will notify retailers of the new requirements and conduct public education and outreach activities.

Section 4(b) and (c) of the ordinance require retailers to impose a $0.10 fee on the customer for a recycled paper bag or reusable through January 1, 2015, when at that time the fee increases to $0.25. This fee increase, however, will not apply if ACWMA finds, after January 1, 2014, that the ordinance has achieved its goal to substantially reduce the environmental impacts of the use of single use carryout bags, in which case the minimum ten cents ($0.10) per bag price remains in effect.

Reduction from Implementing Control Measure

The City of Albany will receive a ten (10) percent reduction credit for implementing specific enhanced control measures described in Enhanced Level of Implementation section above. The ten (10) percent reduction credit will be applied to the City of Albany's baseline trash load. This percent reduction credit is consistent with methods presented in the BASMAA (2012b). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5.0.

CR-2: Polystyrene Foam Food Service Ware Policy

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

Baseline Level of Implementation

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

Enhanced Level of Implementation

The City of Albany adopted an ordinance banning polystyrene foam food service ware at the point-of-sale by all food vendors, City Facilities, City franchises, and contractors and vendors doing business within City limits. The ordinance became effective in September 2008. The percent trash reduction from MS4s as a result of implementing a polystyrene foam food service ware ordinance will be reported in the Annual Report submitted each September.

The ordinance also requires all food vendor using any disposable food service ware to use biodegradable or compostable disposable food service ware. All City facilities, City franchises, and contractors and vendors doing business within the City limits are also required to use biodegradable or compostable disposable food service ware.

If a food vendor violates the provisions of the ordinance, a written warning notice is provided to the food vendor. If a subsequent violation of the ordinance is found, a penalty of up to one hundred dollars ($100) applies. Second and third violations constitute a two hundred dollar ($200) and five hundred dollar ($500) fine, respectively.

Percent Reduction from Enhancements

The City of Albany will receive an eight (8) percent reduction credit for implementing specific enhanced control measures described in *Enhanced Level of Implementation* section above. The (8) percent reduction credit will be applied to the City of Albany's baseline trash load. This percent reduction credit is consistent with methods presented in the BASMAA (2012b). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5.0.

CR-3: Public Education and Outreach Programs

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

Baseline Level of Implementation

The City of Albany has implemented a variety of public education and outreach control measures prior to the effective date of the MRP. Measures include general support to the Codornices Creek Watershed Council, Friends of 5 Creeks and other local organizations. The City also promotes Bay Friendly Gardening and the Bringing Back the Natives garden tours. In addition, the City hosts large scale events with opportunities for targeted public education. These events include the City of Albany Arts & Green Festival and the Solano Stroll, both public street fairs with an emphasis on lifestyle choices that are in harmony with environmental health.

These control measures, although not specific to trash reduction, promote consciousness around pollution prevention and environmental protection. These baseline measures will be continued during the term of the MRP.

Enhanced Level of Implementation

Litter Reduction Advertising Campaign(s)

BASMAA Youth Outreach Campaign (Regional)

Through participation and funding of the regional **BASMAA Youth Outreach Campaign** the City of Albany will implement an outreach campaign designed to reduce littering from the target audience in the Bay Area. The Youth Outreach Campaign was launched in September 2011 (post-MRP effective date) and aims to increase the awareness of Bay Area Youth (ages 16-24) on litter and stormwater pollution issues, and eventually change their littering behaviors. Combining the ideas of Community Based Social Marketing with traditional advertising, the Youth Campaign aims to engage youth to enable the peer-to-peer distribution of Campaign messages. The Campaign will at least run from FY 11-12 through FY 13-14. A brief description of the Campaign activities is provided below:

- Raising Awareness: The Campaign will begin by raising awareness of the target audience on litter and stormwater pollution issues. Partnerships with youth commissions, high schools, and other youth focused organizations will be developed to reach the target audience. Messages targeted to youth will be created and distributed via paid advertising, email marketing, Campaign website and social networking sites (e.g,, Facebook and twitter).
- Engage the Youth - The advertisements will encourage the audience to participate in the Youth Campaign by joining a Facebook page, entering a contest, taking an online quiz, etc., and providing their contact information. At the beginning of FY 12-13, a video contest

will be launched to get Bay Area youth further involved in the Campaign. An online voting system will be used to select the winning entry. Media advertising will be conducted to promote the winning entry.

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

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

Media Relations

BASMAA Regional Media Relations Project (Regional)

Through participation and funding of the **BASMAA Regional Media Relations Project**, the City of Albany plans to continue to implement a media relations project partially designed to reduce littering from target audiences in the Bay Area. The goal of the BASMAA Media Relations Project is to generate media coverage that encourages individuals to adopt behavior changes to prevent water pollution, including littering. At least two press releases or PSAs focus on litter issues each year (e.g., creek clean-up activities, preventing litter by using reusable containers, etc.).

Community Outreach Events

The Countywide Program will develop a "Litter Outreach" kit for community events. Going beyond the usual table with literature, the kit will include such interactive activities as pledge posters to foster commitment to behavior change, and directly relevant promotional items such as reusable bags. This kit will be provided to all Program member agencies for use at their local events. The City of Albany plans to use the Litter Outreach kit at events per three (3) year.

Percent Reduction from Enhancements

The City of Albany will receive a total of six (6)percent reduction credit for implementing specific enhanced control measures described in *Enhanced Level of Implementation* section above. This percent reduction is comprised of the following credits, consistent with the *Load Reduction Tracking Method*:

- Litter Reduction Advertising Campaigns – 3%
- Outreach to School-age Children or Youth – 2%
- Media Relations – 1%
- Community Outreach – 2%

These eight (8)percent reduction credits will be applied against the City of Albany's baseline trash load. This percent reduction credit is consistent with methods presented in the BASMAA (2012b). A summary of all load reductions anticipated through the implementation of this plan are included in Section 5.0.

CR-4: Reduction of Trash from Uncovered Loads

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

Baseline Level of Implementation

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

Enhanced Level of Implementation

The City of Albany plans to maintain the current language in the franchise hauling service contract that requires loads to be covered when transporting trash and debris to municipally or privately owned landfill and transfer stations. The current Collection Service Agreement executed between the City of Albany and Waste Management of Alameda County, Inc. on November 1, 2011 includes the following pertinent provisions:

> *7.02.7.1 Minimization of Spills. CONTRACTOR shall use due care to prevent Solid Waste, Recyclable Materials, Organic Materials, vehicle oil, and vehicle fuel from being spilled or scattered during the Collection or transportation process. If any materials are spilled or scattered during Collection, the CONTRACTOR shall promptly clean-up all spilled and scattered materials. CONTRACTOR shall not transfer loads from one vehicle to another on any public street, unless it is necessary to do so because of mechanical failure, hot load (combustion of material in the truck), accidental damage to a vehicle, or unless approved by the CITY.*
>
> *7.02.7.3 Covering of Loads. CONTRACTOR shall cover all open Debris Boxes, with an approved cover, at the pickup location before Transporting materials to he Approved Disposal Location or Processing Sites.*

Percent Reduction from Enhancements

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

The City of Albany will receive a one (1)percent reduction credit for implementing specific enhanced control measures described in *Description of Enhanced Level of Implementation* section above. The one (1) percent reduction credit will be applied to the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of Albany. This percent reduction credit was obtained from the *Trash Load Reduction Tracking Method Report* (BASMAA 2012b) and is presented in the Trash Load Reduction Summary Table included in Section 5.0.

CR-6: Improved Trash Bin/Container Management

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

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

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

Baseline Level of Implementation

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

Enhanced Level of Implementation

The City of Albany plans to implement the following improved trash bin/container management practices prior to July 1, 2014:

City Maintenance Workers will continue to make note of any business or household that has insufficient trash collection or is using bins that are too small. This information will continue to be provided to Waste Management of Alameda County, Inc., the City's franchise waste hauler. Waste Management then will work to solve the issue by providing an increased bin size for the business or household. This feedback loop of information is implemented on a continual basis.

The current Collection Service Agreement executed between the City of Albany and Waste Management on November 1, 2011 also requires the clean-up of litter in the vicinity of trash containers. The provision is as follows:

> *7.02.7.2 Clean-Up During Collection, the CONTRACTOR shall clean-up litter in the immediate vicinity of any Container storage area (including the areas where Containers are delivered for Collection) whether or not CONTRACTOR has caused the litter. Each Collection vehicle shall carry protective gloves, a broom, and shovel at all times for the purpose of cleaning up litter. Cat-litter or similar absorbent material shall be used by CONTRACTOR for cleaning up liquid spills. The CONTRACTOR shall discuss instances of repeated spillage not caused by it with the Customer of the Premise where spillage occurs, and CONTRACTOR shall report such*

instances to CITY. If the CONTRACTOR has attempted to have a Customer stop creating spillage but is unsuccessful, the CITY will attempt to rectify such situation with the Customer.

In addition, the City will continue to strategically manage public area trash containers. The City is in the process of purchasing fifteen (15) new Big Belly Solar Trash Compactors to be installed on Solano Avenue, one of the main retail corridors in the City. The new trash container type will reduce the maintenance frequency of these public area trash containers and will reduce the potential for overflowing litter from these receptacles. The Big Belly Solar Trash Compactors also have a separate recycling receptacles, something the current trash containers do not. This corridor was selected due to the high rates of trash generation given the particular land use of Solano Ave.

Percent Reduction from Enhancements

The City of Albany will receive a six (6) percent reduction credit for implementing specific enhanced control measures described in *Description of Enhanced Level of Implementation* section above. The six (6) percent reduction credit will be applied to the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of Albany. This percent reduction credit was obtained from the *Trash Load Reduction Tracking Method Report* (BASMAA 2012b) and is presented in the Trash Load Reduction Summary Table included in Section 5.0.

QF-2: Enhanced Street Sweeping

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

Baseline Level of Implementation

The baseline trash load described in Section 2.0 incorporates the trash load reductions due to baseline street sweeping. The City of Albany's baseline street sweeping program includes sweeping at a frequency of four times per month on average in retail areas and one time per month on average in all other areas.

The City of Albany street sweeping program is comprised of areas with permanent street sweeping signs and areas of temporary, non-fixed signs that property owners can voluntarily post on street sweeping day. Parking citations are issued in areas with the permanent signage, which represents approximately 35% of the program by curb length.

Enhanced Level of Implementation

Enhancements to street sweeping frequencies and parking enforcement (or equivalent measures) control measures will be used to calculate loads reduced from enhanced street sweeping, consistent with the trash load reduction tracking method (BASMAA 2012b).

The City of Albany's existing program sweeps retail districts on a weekly basis, the baseline ceiling frequency. However, all the parcels in these retail districts are not designated as retail/wholesale and therefore have a lower baseline ceiling of twice per month. Since the existing program sweeps the entire retail district on a weekly basis, an existing enhanced credit was granted. An illustration of existing enhancements is included in Figure QF-3-1.

Percent Reduction from Enhancements

The total estimated annual volume of trash that will be reduced by July 1, 2014 as a result of enhanced street sweeping is 166 gallons. As described in Trash Load Reduction Summary Table included in Section 5, this volume is equal to approximately a 7.7 percent reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) Owned and

operated by the City of Albany.

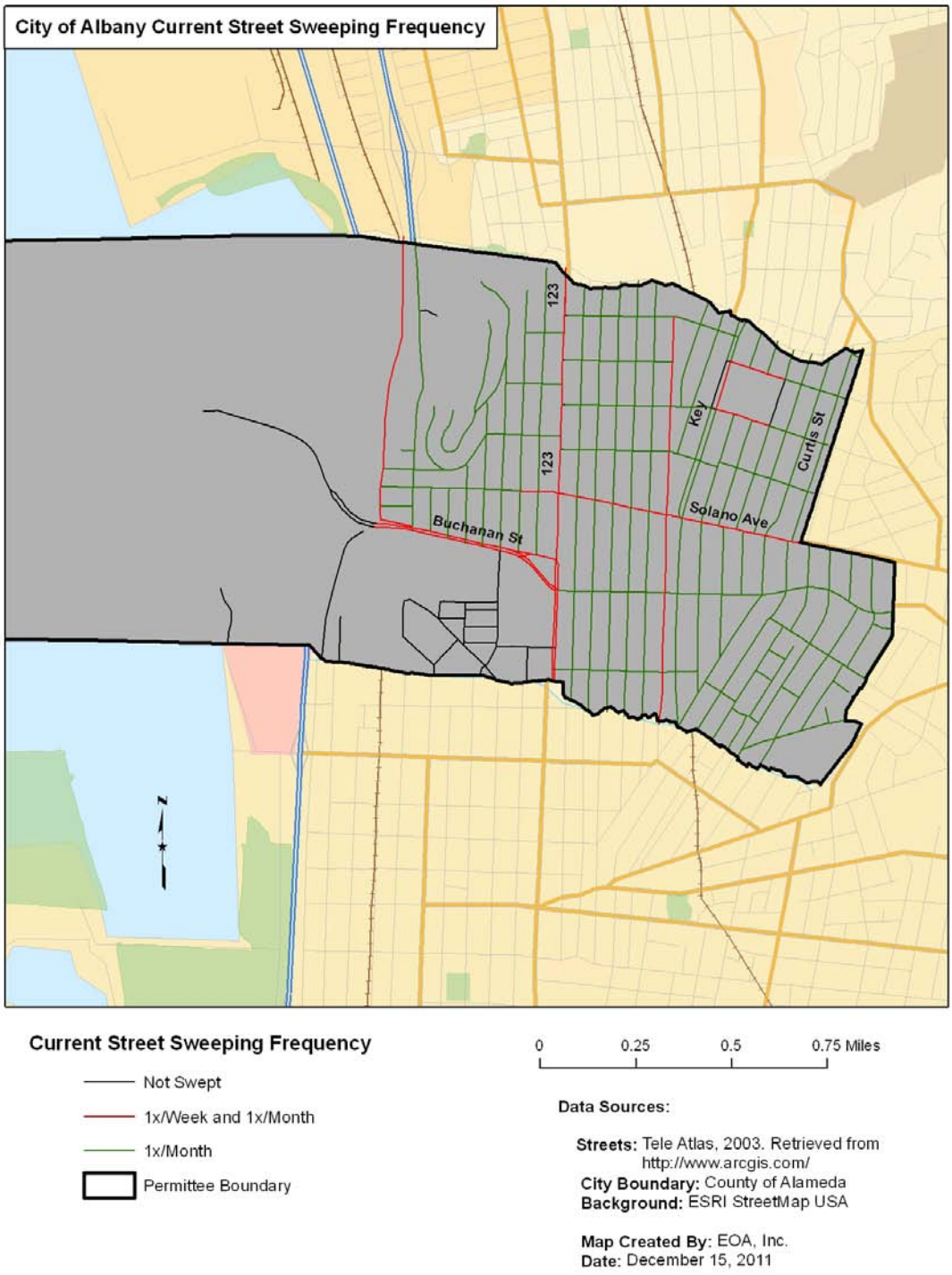

Figure 2: City of Albany Current Street Sweeping Frequency

QF-5: Full-Capture Treatment Devices

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

Baseline Level of Implementation

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

Enhanced Level of Implementation

A total of 17 trash full-capture treatment devices are planned to be installed in the City of Albany prior to July 1, 2014. A list of these full-capture devices is included in Table QF-6-1. All devices listed within this table are enhanced trash control measures. Table QF-6-1 also includes the area treated and the calculated trash load reduced from each full-capture treatment device. These calculations are consistent with the approach described in the *Trash Load Reduction Tracking Method Report* (BASMAA 2012b).

Percent Reduction from Enhancements

The total estimated annual volume of trash that will be reduced by July 1, 2014 as a result of implementing full capture devices is 138 gallons/year. This volume is equal to approximately a 49.3% percent cumulative reduction in the baseline trash load to urban creeks from the municipal separate storm sewer system (MS4) owned and operated by the City of Albany. Both values provided within this section are included in Trash Load Reduction Summary Table included in Section 5.

Table QF 6.1 Trash full-capture treatment devices within the jurisdictional boundaries of the City of Albany that are planned for installation by July 1, 2014

Device ID	Public or Private	Device Name	Location (Cross Streets)	Installation Date/Anticipated Installation Date	Total Area Treated (acres)	Trash Load Reduced
MAR22-014	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Evelyn	Summer 2013	0.67	9.43
MAR26-003	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Evelyn	Summer 2013	0.50	9.43
MAR22-015	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Talbot	Summer 2013	0.54	9.43
MAR25-005	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Talbot	Summer 2013	0.51	9.43
MAR22-010	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Cornell	Summer 2013	0.54	9.43
MAR21-004	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Stannage	Summer 2013	0.54	9.43
MAR23-007	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Stannage	Summer 2013	0.46	9.43
MAR21-009	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Kains	Summer 2013	0.53	9.43
MAR23-012	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Kains	Summer 2013	0.44	9.43
MAR17-018	Public	*BioClean Grate Inlet Skimmer Box*	Solano & San Pablo	Summer 2013	0.42	9.43
MAR16-002	Public	*BioClean Grate Inlet Skimmer Box*	Solano & Adams	Summer 2013	0.63	9.43
MAR16-005	Public	*BioClean Grate Inlet Skimmer Box*	Adams (West) @ Solano	Summer 2013	0.46	9.43
VIL02-003	Public	*BioClean Grate Inlet Skimmer Box*	1061 Eastshore Hwy S. of Target Ent	Summer 2013	3.27	9.43
VIL02-011	Public	*BioClean Grate Inlet Skimmer Box*	1061 Eastshore Hwy N. of Target Ent	Summer 2013	5.17	9.43
CER04-001	Public	*BioClean Grate Inlet Skimmer Box*	540 Cleveland Ave	Summer 2013	0.72	2.33
CER03-003	Public	*BioClean Grate Inlet Skimmer Box*	532 Cleveland Ave	Summer 2013	1.06	2.33
CER03-001	Public	*BioClean Grate Inlet Skimmer Box*	500 Cleveland Ave	Summer 2013	4.79	2.33

5.0 SUMMARY OF TRASH CONTROL MEASURE ENHANCEMENTS

The City of Albany has been and will continue to be committed to reducing the potential for trash impacts in local water bodies in the San Francisco Bay Area. The planned enhanced trash control measures described in Section 4.0 are also summarized in Table 5-1 below. The existing and enhanced measures are intended to comply with the 40% trash load reduction goal in MRP provision C.10.

The trash load reduction tracking methods were developed in a manner so as to not penalize implementers of enhanced trash reduction measures prior to the effective date of the MRP. The City of Albany is an early implementer of trash reduction measures. City Council established in 2007 a Sustainability Committee to advise the Council on pertinent policies, programs, and issues. The Committee also is tasked with providing leadership, technical assistance, education, and outreach to members of the public, schools, local businesses, and city agencies on innovative programs to promote environmental sustainability through energy conservation, solid waste reduction and recycling, water conservation, pollution prevention, transportation efficiency, and other means. With an informed Council, the City of Albany was able to adopt in 2008 a Polystyrene Ordinance, which prohibits the use of polystyrene foam food service ware at the point-of-sale by all food vendors, City Facilities, City franchises, and contractors and vendors doing business within City limits. The Polystyrene Ordinance continues to be an important trash generation reduction control measure for the City.

In addition, the City of Albany began its street sweeping program in October 2005 for the collection and removal of trash that gather in the gutters. The existing enhanced sweeping program will be continue to be a critical on-land trash interception control measure.

The City of Albany now plans to implement the newly adopted Alameda County Waste Management Authority ordinance prohibiting the distribution of single-use carryout bags at the cash register at retail stores covered by the ordinance. Also, through participation and funding of the regional BASMAA Youth Outreach Campaign , the BASMAA Regional Media Relations Project and the distribution of the countywide program “Litter Outreach” kit at three (3) targeted community events per year, the City will continue to raise awareness about impacts of trash in local water bodies. These enhanced trash generation reduction control measures, combined with existing measures, will assist the City in attaining the 40% trash load reduction goal.

The City will also continue to implement on-land interception control measures including measures to prohibit litter from uncovered loads, improved trash container management practices and as mentioned earlier, the enhanced street sweeping program.

As a control measure that intercepts trash in the MS4, the City of Albany plans to install and maintain 17 full capture treatment devices. The majority of the devices will be installed in retail districts, the land use with the highest trash generation rate.

Table 5-1: Planned enhanced trash control measure implementation within the jurisdictional boundaries of the City of Albany and associated trash loads reduced.

Trash Control Measure	Summary Description of Control Measure	% Reduction (Credits)	Trash Load Reduced	Cumulative % Reduction (Compared to Baseline)
Enhanced Street Sweeping (QF-2)	Continue implementation of the City's Existing Enhanced Street Sweeping Program	NA	166 gallons	7.7%
Single-use Carryout Plastic Bag Ordinance (CR-1)	Tier 2 – Prohibit Distribution at Retail Establishments that Sell Packaged Foods	10	199 gallons	16.9%
Polystyrene Foam Food Service Ware Ban (CR-2)	Tier 2 – Prohibit distribution by Food Service Vendors	8	159 gallons	24.3%
Public Education and Outreach Programs (CR-3)	Advertising Campaigns, Outreach to School-age Youth, Media Relations and Community Outreach Events	8	159 gallons	31.7%
Activities to Reduce Trash from Uncovered Loads (CR-4)	Require Municipal Trash Haulers to Cover Loads	1	20 gallons	32.6%
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6)	Policy of identification and enforcement of inadequate trash service for private trash and recycling bins/containers; Implementation of Strategic Plan for Public Area Trash Containers	6	119 gallons	38.6%
Full-capture Treatment Devices (QF-5)	Install 17 Grate Inlet Skimmer Box (BioClean) Full-capture Treatment Devices	NA	138 gallons	49.3%

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

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

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

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

5.2 Considerations of Uncertainties

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

6.0 IMPLEMENTATION SCHEDULE

Implementation of enhanced trash control measures by the City of Albany is currently planned to occur in a timeframe consistent with MRP requirements. A preliminary implementation schedule for all planned enhancements is described in Table 5-1. This schedule provides a timeframe for reducing trash discharged from the City of Albany's MS4 by at least40%.

Based on new information that becomes available during the implementation of this Short-Term Plan (e.g., revisions to baseline loading estimates or load reduction credits of quantification formulas, etc), or if circumstances arise during implementation of the Plan that were not anticipated at the time of submission, the City of Albany may chose to amend or revise this Plan and/or the associated implementation schedule. If revisions or amendments occur, a revised Short-Term Plan and implementation schedule will be submitted to the Water Board via the City of Albany's annual reporting process.

Table 6-1: Preliminary implementation schedule for enhanced trash control measures in the City of Albany.

Trash Control Measure	Beginning Date of Implementation
Single-use Carryout Plastic Bag Ordinance (CR-1)	January 1, 2013
Polystyrene Foam Food Service Ware Ban (CR-2)	2008
Public Education and Outreach Programs (CR-3)	Ongoing
Activities to Reduce Trash from Uncovered Loads (CR-4)	Ongoing
Improved Trash Bin/Container Management (Municipally or Privately-Controlled) (CR-6)	Ongoing
Enhanced Street Sweeping (QF-2)	Ongoing
Full-capture Treatment Devices (QF-5)	Summer 2013

7.0 REFERENCES

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