



CITY OF SAN RAMON

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February 3, 2014

Bruce H. Wolfe, Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

Ms. Pamela Creedon, Executive Officer
California Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, #200
Rancho Cordova, CA 95670-6114

Dear Mr. Wolfe and Ms. Creedon:

Enclosed is the February 2014 Long-Term Trash Load Reduction Plan for the City of San Ramon, which is required by and in accordance with Provision C.10.c in National Pollutant Discharge Elimination System (NPDES) Permit Number CAS612008 issued by the San Francisco Bay Regional Water Quality Control Board and/or by Provision C.10.c in NPDES Permit Number CA0083313 issued by the Central Valley Regional Water Quality Control Board.

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 assure that qualified personnel properly gathered and evaluated 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 possibly of fine and imprisonment for knowing violations.

Sincerely,

Robin Bartlett
District Engineering Division Manager

City of San Ramon

Trash Management Plan

2014-2022



Submitted to the California Regional Water Quality Control Board for the San Francisco Bay Region, February 1, 2014.

In compliance with Provision C.10 of the Municipal Regional Stormwater Permit.

Contents

1. Introduction by the Contra Costa Clean Water Program (CCCWP)	1
A. Trash Sources, Pathways, and Loadings	1
B. Background for this Plan	1
C. Framework for Long-Term Trash Management	2
D. Identifying High-Trash Areas	2
E. Trash Management Strategy	3
F. Assessing Effectiveness	3
2. City of San Ramon Trash Management Overview	4
A. Characteristics Affecting Trash Generation and Management	4
B. Drainage System and Water Resources Affected by Trash	4
C. Trash Problems and Priorities	5
3. City of San Ramon Trash Management Strategy	5
A. Delineation of Trash Management Areas	7
B. Area-Specific Control Measures, Implementation Schedules, and Effectiveness Assessment	7
C. Creek and Shoreline Cleanups	8
D. Trash Reduction Policies	8
E. Public Education, Outreach, and Community Involvement	8
F. Jurisdiction-wide Progress Assessment and Continuous Improvement	10
4. Trash Management Area Plans	11
A. TMA-Specific Plans	11
5. References	11

Figures

1-1 Trash Sources and Transport Pathways

Tables

- 2-1 2010 Census Data
- 2-2 2005 Land Uses (ABAG)
- 2-3 Trash Generation Category Percentages by Land Use
- 3-1 Trash Generation Categories by Trash Management Area
- 3-2 Creek and Shoreline Hot Spot Cleanups

Attachments

Maps of City of San Ramon showing Trash Generation Rates, Trash Management Areas, and Full Capture Device Locations

1. Introduction by the Contra Costa Clean Water Program (CCCWP)

Contra Costa municipalities have prepared Long-Term Trash Reduction Plans (Plans) in compliance with Provision C.10.c. of the Municipal Regional Stormwater Permit¹ (MRP). Each municipal plan describes control measures and best management practices (BMPs) designed to attain a 70% trash load reduction by July 1, 2017 and a 100% reduction by July 1, 2022.

A. Trash Sources, Pathways, and Loadings

Figure 1 illustrates sources and pathways of trash that enters the region’s creeks and San Francisco Bay. Trash has multiple sources—all of which are episodic and widely dispersed.

In Figure 1, *Stormwater Conveyances* is highlighted because *only this pathway* is subject to MRP trash-reduction requirements. In reality, the other pathways are equally significant, depending on time and location. In practical terms, the pathways are intertwined. For example, on-land clean-ups reduce trash entering storm drains and also reduce wind-blown trash. When visible trash is reduced, litter and dumping from all sources tends to become less frequent and severe.

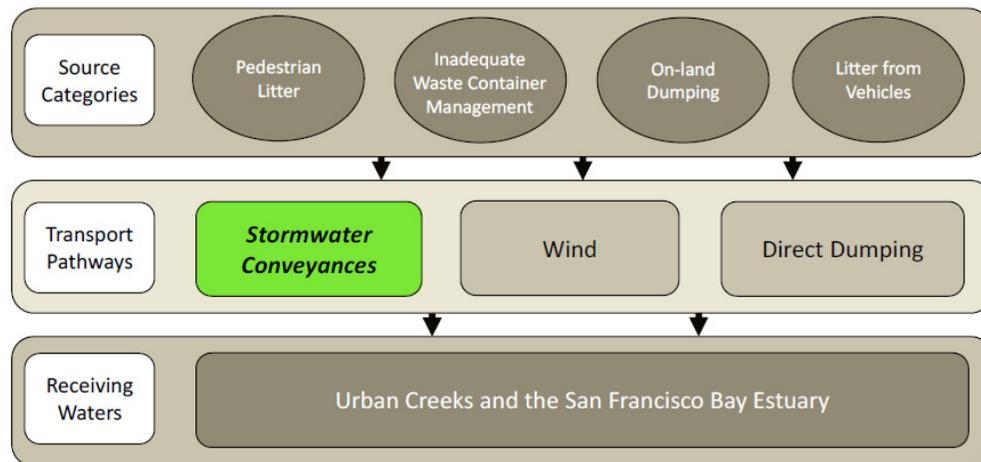


Figure 1. Trash sources and transport pathways.

Municipalities must balance their commitment to MRP compliance with their commitment to preserving and enhancing local environmental quality and quality of life for their residents. That is, municipalities seek to reduce trash on local streets and roads, and to reduce the *total* amount of trash in their creeks and on their shorelines—in addition to fulfilling the Water Board’s mandate to eliminate trash that flows through storm drains.

For these reasons, Contra Costa municipalities address trash holistically and comprehensively, integrating a variety of strategies, and using a variety of methods to assess the success of those strategies.

B. Background for this Plan

MRP Provision C.10 requires the Permittees to reduce trash loads from their storm drains by 40% by 2014, 70% by 2017, and 100% by 2022.

Provision C.10.a.ii. required each Permittee to determine a baseline trash load and a method for tracking reductions in trash loads. Working collectively through the Bay Area Stormwater Management Agencies

¹ Order R2-2009-0074, issued by the California Regional Water Quality Control Board for the San Francisco Bay Region, became effective on December 1, 2009 and applies to 76 cities, towns, counties, and flood control districts.

Association (BASMAA)—and in close collaboration with Water Board staff—the Permittees developed methods, including a calculator, for tracking loads and load reductions.

The Permittees used these methods to develop Short-Term Trash Load Reduction Plans by February 1, 2012, and are implementing those plans through July 1, 2014 to achieve the 40% reduction. Progress has been documented in the Permittees' 2012 and 2013 Annual Reports.

Following their review of the Short-Term Plans, Water Board staff requested Permittees to change the methods used to evaluate trash load reductions. Working collectively through BASMAA—and again in close collaboration with Water Board staff—the Permittees developed the framework and planning tools to be used in the Permittees Long-Term Plans.

C. Framework for Long-Term Trash Management

The following 8-step framework was developed²:

1. Identify high, medium, and low trash generation areas, based on land use and other geographic data, local knowledge, and field verification.
2. Attempt to identify sources in high and medium trash generation areas to assist in focusing control measures.
3. Prioritize areas and problems/types.
4. Identify options (tools) for dealing with prioritized areas/problems.
5. Define success/goals and measurement type.
6. Select and implement tools.
7. Evaluate success.
8. Modify as needed.

Steps 5 and 7 of this framework acknowledge fundamental challenges presented by Provision C.10—how to define and evaluate success.

D. Identifying High-Trash Areas

To implement the first step of the framework—to identify high, medium, and low trash-generation areas—the Permittees collectively, through BASMAA, developed and calibrated a predictive model of trash generation.³ Model variables are designated land use and 2010 median household income; the model was calibrated based on trash collected in full-trash-capture devices (BASMAA, 2012a, BASMAA, 2012b).

The Permittees applied the model as follows: The model was used to generate a preliminary map designating very high, high, moderate, and low trash generation areas. Local municipal staff reviewed the preliminary map and identified areas that had incorrect designations based on local knowledge of actual land uses and of trash generation rates (CCCWP, 2013). Specific methods used to verify local trash generation rates are documented in Section 2 below and may include queries of municipal staff or members of the public, reviews of municipal operations data, viewing areas using Google Maps and Street View, application of BASMAA's On-Land Visual Trash Assessment Protocol (BASMAA, 2013), or other methods.

² The framework was developed in a November 1, 2012 meeting at Water Board staff offices and was refined in subsequent meetings with Water Board staff.

³ "Generation" is understood to be the volume of trash potentially available to be transported from the urban watershed (per acre, per year) into the storm drains in the absence of any control measures and BMPs.

E. Trash Management Strategy

Municipalities delineated Trash Management Areas (TMAs) within their jurisdictions. TMA boundaries are based on land uses, drainage areas, management areas, and/or geographic considerations, and are drawn to facilitate focused and efficient efforts to reduce trash in areas with very high, high, and medium trash generation rates. The rationale for delineating TMAs in the specific municipality, an overview of the municipality's trash management approach, and a description of activities that apply throughout the municipality (including hot spot cleanups, jurisdiction-wide policies, and jurisdiction-wide public outreach) is in Section 3.

Section 4 consists of individual summary plans for each municipal TMA. Each TMA plan describes the key TMA characteristics, summarizes control measures, and describes methods for evaluating effectiveness of efforts within the TMA.

F. Assessing Effectiveness

Each TMA summary plan includes methods to evaluate effectiveness. As indicated in the framework, the primary purpose of these evaluations is to facilitate continuous improvement of control measures within the TMA. Continuous improvement requires TMA-specific interpretation of results, including consideration of factors that may have contributed to success, or lack of success, at that locale during the evaluation period. Evaluations of effectiveness and adjustments to the TMA summary plans will be included in each annual report.

A secondary purpose of the evaluation methods is to contribute evidence toward an annual general evaluation of progress toward MRP goals. Such an evaluation will be based on weight-of-evidence, using the results from TMA-level evaluations of the effectiveness of specific actions within the TMA, and of the total of TMA-level actions, during the reporting period. A jurisdiction-wide assessment of progress will be compiled by combining this TMA-level evidence with the results of hot spot cleanups, visual assessments of creeks and shorelines, and observations by local residents and cleanup participants. As additional outcome-based assessment methods are devised and pilot tested, regionally and statewide, information derived from these methods will be incorporated into annual progress assessments.

2. City of San Ramon Trash Management Overview

A. Characteristics Affecting Trash Generation and Management

Demographic data from the 2010 census is presented in Table 2-1.

Category	Value
Population	72,148
Under 18	29.6%
18-24	4.9%
25-44	31.6%
45-64	26.1%
65 and older	7.8%
Median household income	\$95,856*

* From the 2000 Census. The median household income for the City of San Ramon from the 2010 Census is not currently available.

Table 2-2 presents summarizes land uses within City of San Ramon.

Land Use Category	Jurisdictional Area in Acres	% of Jurisdictional Area
Commercial and Services	835.5	7.1%
Industrial	130	1.1%
Residential	5179.9	44.2%
Retail	258.7	2.2%
K-12 Schools	332.8	2.8%
Urban Parks	317.2	2.7%
Other	4665.5	39.8%

The majority of the City of San Ramon land use is residential. The primary trash management strategies for residential areas is a bi-monthly street sweeping of all publically owned streets, response time goals of 48 to 72 hours for direct dumping and litter reports from residents, a minimum of once per month hotspot cleanups, and weekly trash removal along arterial and collector streets through the Citywide Landscaping and Lighting District. The City’s industrial area is relatively small compared to other cities and does not include “heavy” industrial uses such as foundries and auto dismantlers. At 585 acres, Bishop Ranch Business Park comprises the majority of our commercial land use area.

B. Drainage System and Water Resources Affected by Trash

The City of San Ramon is located at the top of two watersheds. The Walnut Creek Watershed and the Upper Alameda Creek Watershed. A small portion of the City drains north via the Walnut Creek Watershed while the majority of the City drains south to the Upper Alameda Creek Watershed. Walnut Creek Watershed's primary tributary is San Ramon Creek and the Upper Alameda Creek Watershed's primary tributaries are South San Ramon Creek and Alamo Creek.

The only jurisdiction that drains into San Ramon is a small portion of unincorporated Contra Costa County consisting largely of new residential development.

There are no shoreline outfalls located within the City of San Ramon.

The most impacted water resources affected by trash would be South San Ramon Creek due to the role it plays as the major tributary located in the City. Significant drainage system sections of the City terminate

at South San Ramon Creek. There are generally low trash volumes in Alamo Creek due to the pretreatment of runoff by water quality control ponds.

C. Trash Problems and Priorities

On January 31, 2012 the City of San Ramon submitted a Baseline Trash Load and Short-Term Trash Load Reduction Plan in compliance with Provisions C.10.a(i) and C.10.a(ii) of the Municipal Regional Permit. A preliminary estimate of trash loads in the City was provided in Section 2.0 Baseline Trash Loading Estimate. The resulting maps were produced as part of a BASMAA regional collaborative project to develop trash load estimates for all permittees in the Bay Area.

Maps displaying the jurisdictional loading areas for the City of San Ramon were further refined using a combination of interviews with City staff and field observations consisting of visits to all yellow and red areas of the trash load maps to verify conditions based on the BASMAA On-Land Visual Assessment Protocol. Based on the field observations and staff interviews, all red areas were removed from the map. The revised Trash Generation Rate Map is attached to this plan.

Trash has been a focus of the City of San Ramon since incorporation in 1983. Based on field observations and staff experience, the amount of trash present throughout the City has been managed effectively through on land cleanups, street sweeping, public education, inlet cleaning, frequent hot spot mitigation, installation of full trash capture devices, and extensive landscaping maintenance.

The main priority of the City of San Ramon Trash Management Plan is to continue to provide a high level of trash management under increasing financial constraints. At the same time, trash evaluation methods are being developed to provide data on the condition of litter in San Ramon. This data will be used to direct efforts to areas that may need additional mitigation and provide documentation regarding the levels of trash.

Table 2-3 summarizes trash generation by land use:

Table 2-3. Trash Generation Category by Land Use								
Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12	Urban Parks	Other
Very High	0	0%	0%	0%	0%	0%	0%	0%
High	0	0%	0%	0%	0%	0%	0%	0%
Medium	1183.7	25.9%	5.3%	0%	18.3%	26.3%	24.1%	.1%
Low	10535.9	5%	.6%	49.2%	.4%	.2%	.3%	44.3%

3. City of San Ramon Trash Management Strategy

The following trash management strategy is intended to attain a 70% trash load reduction by July 1, 2017 and a 100% reduction by July 1, 2022. The strategy may be updated and revised in response to changing conditions, including the amounts and location of trash generation, effectiveness of management actions, and available resources. Updates will be documented in Annual Reports.

The City of San Ramon’s trash management strategy is a combination multiple trash management activities and practices to prevent trash from accumulating. This is achieved through a high level of manual trash cleanup activities, frequent street sweeping, and the installation of trash capture devices. The overall trash management strategy of enhanced on-land cleanups combined with a comprehensive

street sweeping program and the strategic installation of full trash capture devices will help achieve current and future MRP trash reduction and elimination goals.

Landscape Maintenance

Manual trash removal activities are conducted by the City through a number of programs. The Citywide Landscaping and Lighting District provides weekly trash pickup in conjunction with manual weeding along arterial and collector streets. An additional benefit of extensive landscaping throughout the City is the capture of windblown trash in the vegetation. There are also 17 special districts within the Citywide Landscaping and Lighting District that include weekly trash removal as well.

Hot Spot Cleanups

The City also assigns a work crew to remove trash from all hotspots and areas of concern at a minimum frequency of once per month. Crews are assigned to trash removal if a complaint is received from a resident or business owner through an automated Citizens Response Management System (CRM) with a goal of removing the trash within a 24 to 72 hour period, but no later than 10 days from the complaint. This includes all cases of illegal dumping.

Park Maintenance

The City maintains 59 park sites including all elementary and middle schools sites which are co-located with City parks. Park maintenance crews provide trash removal at least once per week at all park sites, sometimes more frequent depending on the activities at the sites. The City also maintains over 200 trash cans installed at the parks and along trailheads. Parks maintenance crews remove trash at all trail heads at least one per week.

Creek Maintenance

Annual creek maintenance along City maintained tributaries includes the removal of trash as well. The City conducts manual removal of invasive plant material in and around local creeks on an annual basis. During the removal process, trash and illicit discharge items (shopping carts, tires, etc.) are removed during this process.

Bishop Ranch Business Park

As noted above, the Bishop Ranch Business Park encompasses approximately 585 of the 835 commercial acres within the City of San Ramon. Bishop Ranch employs 40 full time landscapers to maintain the extensive landscaping throughout the business park 5 days per week, with a renovation crew on Saturdays. All parking lots are manually swept and cleaned 3 to 5 days per week. Bishop Ranch management estimates 10,415 hours per year is spent on parking lot maintenance which includes trash removal.

Street Sweeping Program

The Citywide Street Sweeping Program includes bi-monthly sweeping of all residential streets, and weekly sweeping of all commercial and industrial areas. Residents and business owners are made aware of sweeping schedules in order to ensure vehicles are not parked at the curb on sweeping days. The City also maintains a backup sweeper for callouts and special event cleanup.

Trash Capture Devices

Trash capture devices of various designs have been installed in the City as part of new development and retrofit of the existing stormdrain system over the past 10 years. City staff participates in various stormwater forums in order to stay current with trash capture technology for implementation within the City as appropriate and where funding allows.

In October 2009 the ABAG and the San Francisco Estuary Project received a grant funded by the American Recovery and Reinvestment Act of 2009 for \$5 million. The grant funds the purchase and installation of trash capture devices within the Counties of Alameda, Contra Costa, Napa, Marin, San Mateo, Santa Clara, Solano, and Sonoma. The City of San Ramon was allotted approximately \$52,000 for the purchase of full trash capture devices. A total of 50 retractable screens and 83 connector pipe screen units were installed throughout the City.

The City also maintains several water quality control ponds that meet the requirements for full trash capture devices. The outfalls for some of the water quality ponds are fitted with 5mm mesh screens, the minimum requirement to be considered full trash capture. In the future, additional ponds could be retrofitted with 5mm mesh screens if trash becomes an issue in the treatment areas.

A. Delineation of Trash Management Areas

Trash Management Areas were initially defined using a combination of staff interviews and field observations. Further refinement may be necessary in future reports based on additional observation data and control measure effectiveness. The jurisdictional area and trash generation category percentage rate is shown in Table 3-1 below and on the attached map.

Table 3-1. Trash Generation Category by Trash Management Area

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
TMA 1	10993	0%	0%	9.4%	90.6%
TMA 2	103	0%	0%	97.7%	2.3%
TMA 3	-	-	-	-	-
TMA 4	46.9	0%	0%	100%	0%
TMA 5	574.9	0%	0%	.7%	99.3%
TMA 6	1.9	0%	0%	100%	0%

B. Area-Specific Control Measures, Implementation Schedules, and Effectiveness Assessment

Long-Term Trash Reduction Plans for each Trash Management Area, including control measures, detailed implementation plans, and methods of assessing the effectiveness of control measures are attached.

C. Creek and Shoreline Cleanups

Table 3-2. Creek and Shoreline Cleanups

Location	Description	Cleanup Frequency			
		Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
SRM-01	South San Ramon Creek south of Alcosta Boulevard	Monthly	Monthly	Monthly	Monthly
SRM-02	South San Ramon Creek at the pedestrian bridge from Cal High to Mangos Drive	Monthly	Monthly	Monthly	Monthly

The City of San Ramon designated two hot spots along the creeks as required by the MRP. Both spots are cleaned at a minimum frequency of once per month. Dominant types of trash include cups, wrappers, and paper products. Typical volumes removed are between .13 and .27 cubic yards of debris.

D. Trash Reduction Policies

The City of San Ramon closely tracks local efforts to reduce the use of single-use plastic bags and polystyrene/foam food service containers. Through the Contra Costa Clean Water Program (CCCWP), staff has participated in the development of a model ordinance banning the use of plastic bags and polystyrene/foam food service containers. City staff has discussed the implementation of a county-wide ban with Contra Costa County Staff.

E. Public Education, Outreach, and Community Involvement

The City of San Ramon’s Stormwater Public Education Program includes outreach to residents and businesses through a variety of events, publications, and stormdrain inlet marking.

City Events

The City of San Ramon conducts a number of events each year for residents including a well attended Art and Wind Festival, a Fourth of July celebration, seasonal farmers markets, and a Government 101 Program. City information booths located at the events distribute stormwater program information which includes anti-dumping messages and general stormwater awareness education. Government 101 is a several month class for residents covering topics related to the operation of the City. Each Government 101 class includes a 30 to 45 minute presentation outlining the Stormwater Program. TMDLs are covered, including a section on the impacts of trash and the current MRP requirements.

City Publications

The City produces a citywide newsletter which is mailed to each resident on a quarterly basis. An article highlighting stormwater quality issues is typically included once per year. Topics covered in the newsletter include information on debris management with a reminder that all items entering the stormdrain system travel untreated to local creeks.

Stormdrain Inlet Marking

The City maintains over 4,000 stormdrain inlets on an annual basis. During inspection or call-outs, inlets are checked to ensure markers are present. The City uses a U.V. resistant marker with a clear

polyurethane dome that is self-healing and does not yellow over time. The marker provides a telephone number to report pollution or dumping.

Citizens Response Management System

The City implemented a Citizens Response Management (CRM) system consisting of an online request/reporting system for resident and business to contact the City regarding various issues. The system can be accessed either online or via smartphone app to report illegal dumping and issues with the stormdrain system. Requests are routed to the appropriate staff and can be tracked for reporting purposes. A summary of requests received is included in the Municipal Regional Permit report on an annual basis.

The City of San Ramon is a member of the Contra Costa Clean Water Program that conducts public education activities on a county-wide basis. A summary of county-wide educational efforts related to trash follows.

Litter Travels Campaign

Through the CCCWP, the Permittees conducted a “Litter Travels, But It Can Stop with You” multi-year campaign beginning in FY 2009-2010. The multi-media campaign was designed to educate Contra Costa’s citizens about the impacts of trash and litter in the County’s waterways and how they can help address this problem and included TV spots, billboards, posters at BART stations, placards on transit buses, print ads and updates to the CCCWP website. Other outreach included more than 10,000 letters to County residents, contact with youth sports leagues, outreach to the 17 school districts in the County, and distribution of flyers to students in 5 of those districts. Pre and post-campaign surveys were conducted.

California Product Stewardship Council

CCCWP permittees support the work of the California Product Stewardship Council (CPSC) and the Green Business Program. Both of these organizations address trash through source reduction and waste management. CPSC's mission is to promote Extended Producer Responsibility (EPR), which is based upon shifting California's product waste management system from one focused on government funded and ratepayer financed waste diversion to one that relies on producer responsibility in order to reduce public costs and drive improvements in product design that promote environmental sustainability. The CPSC's position is that the producers should have the primary responsibility to establish, fund, and manage end of life systems for their products. CPSC has advocated for EPR legislation affecting a wide-range of products including pharmaceuticals, batteries, paint, sharps, and mattresses.

Green Business Program

The CCCWP is the largest contributing partner to the Green Business Program in Contra Costa County. The Green Business Program is designed to publicly recognize private businesses and public agencies that take extra steps beyond baseline compliance with environmental regulations and to prevent pollution and save resources (e.g., conserve water and energy, reduce waste through reuse and recycling, prevent stormwater pollution through good housekeeping practices, etc.). To date, 334 businesses are certified including a large number of auto repair shops, landscapers, waste haulers, printers, grocery and hardware stores, solar panel installers, and home remodelers. Numerous public agencies have also been certified. Municipal stormwater and POTW inspectors assist the Green Business program by encouraging potential Green Business candidates. CCCWP staff serves on the Green Business Program's "Partners Committee" and actively engages in development of the Green Business checklist (i.e., the stormwater pollution prevention section that each business needs to complete before becoming certified as a green business).

Some of the more relevant actions that businesses have undertaken to become certified or recertified, that also reduce trash loads include:

- Committing to reduce waste in a minimum of five ways.
- Maintain parking areas free of litter.
- Keep dumpsters covered when not in use.
- Ensure tarps for covering loads are in good condition and used correctly.
- Purchase a minimum of three recycled-content products.

1-800-NODUMPING Hotline

To address trash from illegal dumping, the CCCWP operates a 1-800-No-Dumping hotline. The hotline is used by both businesses and the public to report potentially illegal dumping activities. All hotline calls are referred to the appropriate municipality for follow-up and, if necessary, enforcement. Calls have been logged since FY 2004-2005. Calls to the hotline are combined with calls that come directly to municipalities and Contra Costa County Hazardous Materials (Hazmat) Division and are tracked and documented annually in the municipal annual reports.

Source Reduction

The CCCWP will continue to identify new partners and areas of outreach for source reduction and measures to reduce trash in the environment. CCCWP is currently in contact with California Department of Transportation (Office of Stormwater Program Development) and hopes to identify trash load reduction projects in Contra Costa County that would be financially and strategically feasible for all involved parties. CCCWP has also made contact with the California Highway Patrol, Contra Costa County Solid Waste Authority, and a number of transfer stations to potentially develop additional outreach materials to reduce litter from uncovered loads.

F. Jurisdiction-wide Progress Assessment and Continuous Improvement

Jurisdiction-wide progress will be assessed using a GIS reporting system based on the BASMAA On-Land Trash Assessment Protocol. The data gathered will be used to analyze trash load trends and assess trash management methods. Staff will continue to evaluate new methods of reducing trash via product bans, ordinance revisions, mechanical devices, and manual trash removal techniques. If changes to the trash management strategy are necessary, staff will outline a plan to implement proposed changes and the associated costs during the fiscal year budgeting process to the San Ramon City Council.

4. Trash Management Area Plans

A. TMA-Specific Plans

TMA-specific plans for TMA 1-6 are attached.

5. References

BASMAA 2012a. Bay Area Stormwater Management Agencies Association. Trash Generation Rates for San Francisco Bay Area MS4s (Draft Final). Presentation to the BASMAA Trash Committee, August 2012. Prepared by EOA, Inc.

BASMAA 2012b. Baseline Trash Generation Rates, Preliminary Calibration of Modeled Results, Presentation to BASMAA Trash Committee, September, 2012. Prepared by EOA, Inc.

BASMAA 2013a. Visual On-Land Trash Assessment Protocol for Stormwater, Version 1.0 (Draft). April 30, 2013. Prepared by EOA, Inc.

CCCWP, 2013. Contra Costa Clean Water Program. Long-Term Trash Load Reduction Plan Development—Trash Generation Map Refinements. Technical Memorandum, May 20, 2013. Prepared by EOA, Inc.

City of San Ramon Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

1

Trash Management Area 1 encompasses the City jurisdictional boundary. The purpose of this TMA is to summarize activities implemented on a citywide basis.

Key Characteristics of Trash Management Area 1

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
10993	0%	0%	9.4%	90.6%	Residential	Pedestrian and vehicle.

Summary of Control Measures and Implementation Schedule for Trash Management Area 1

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	Treatment devices include water quality control ponds with 5mm mesh screens and connector pipe screens prior to MRP.		X	X	X
Street Sweeping	All residential swept twice per month, commercial/industrial swept weekly.	X	X	X	X
On-land Trash Cleanups	Please refer to Section 3 for further details.	X	X	X	X
Partial-Capture Treatment Devices	Auto retractable screens installed as part of ABAG pilot project. Future installations considered on an as needed basis as funding becomes available.		X	X	X
Enhanced Storm Drain Inlet Maintenance	All inlets cleaned every other year. Other inlets cleaned on an as needed basis.	X	X	X	X
Activities to Reduce Trash from Uncovered Loads	City inspectors monitor loads on construction sites. Police department issues violations for uncovered loads.	X	X	X	X
Anti-littering and Illegal Dumping Enforcement	Citations issues when violators are identified.	X	X	X	X
Improved Trash Bins/Container Management	City ordinance requires all trash bin lids closed, new development requires trash bin enclosures with roof to reduce runoff during storm events. Staff actively enforces poor trash bin management.	X	X	X	X
Creek, Channel, Shoreline Cleanups	Please refer to section 3 for further details.	X	X	X	X
[Other Control Measures]					

Evaluation of Program Effectiveness for Trash Management Area 1

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Devices	Document maintenance.	Track amount of trash removed using a GIS based system.
Enhanced Street Sweeping	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
On-land Trash Cleanups	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
Enhanced Storm Drain Inlet Maintenance	Document amounts and types of debris removed.	Use a GIS based system to track debris amounts and types. Evaluate data to determine effectiveness and develop a priority schedule for inlet cleaning.
Creek, Channel, Shoreline Cleanups	Document condition of creek.	Use a GIS based system to document the general condition of embankments and creeks. Evaluate the data to determine trends and direct manual cleanup efforts.

City of San Ramon Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

2

Trash Management Area 2 is the primary industrial area of the City. There are no “heavy” industrial uses in this area. This TMA has been a focus of increased on land cleanups and enhanced street sweeping in order to manage trash in the area.

Key Characteristics of Trash Management Area [1]

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
103	0%	0%	99.7%	2.3%	Industrial	Pedestrian and vehicle

Summary of Control Measures and Implementation Schedule for Trash Management Area 2

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	Treatment devices include water quality control ponds with 5mm mesh screens and connector pipe screens prior to MRP.		X	X	X
Street Sweeping	All residential swept twice per month, commercial/industrial swept weekly.	X	X	X	X
On-land Trash Cleanups	Please refer to Section 3 for further details.	X	X	X	X
Enhanced Storm Drain Inlet Maintenance	All inlets cleaned every other year. Other inlets cleaned on an as needed basis.	X	X	X	X
Activities to Reduce Trash from Uncovered Loads	City inspectors monitor loads on construction sites. Police department issues violations for uncovered loads.	X	X	X	X
Anti-littering and Illegal Dumping Enforcement	Citations issued when violators are identified.	X	X	X	X
Improved Trash Bins/Container Management	City ordinance requires all trash bin lids closed, new development requires trash bin enclosures with roof to reduce runoff during storm events. Staff actively enforces poor trash bin management.	X	X	X	X

Evaluation of Program Effectiveness for Trash Management Area 2

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Treatment Devices	Document maintenance.	Track amount of trash removed using a GIS based system.
Enhanced Street Sweeping	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
On-land Trash Cleanups	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
Enhanced Storm Drain Inlet Maintenance	Document amounts and types of debris removed.	Use a GIS based system to track debris amounts and types. Evaluate data to determine effectiveness and develop a priority schedule for inlet cleaning.

City of San Ramon Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

3

Trash Management Area 3 encompasses the ramps to and from I-680 that are owned by Caltrans. It is included in the map for completeness because the City desires these areas to be kept as trash free as possible. The City has worked with and will continue to work with Caltrans with regard to trash management in these areas.

Key Characteristics of Trash Management Area 3

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
-	-	-	-	-	Freeway	Vehicle

Summary of Control Measures and Implementation Schedule for Trash Management Area 3

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
On-land Trash Cleanups	Please refer to Section 3 for further details.	X	X	X	X

Evaluation of Program Effectiveness for Trash Management Area 3

Control Measure	Evaluation Method	Evaluation Method Details
On-land Trash Cleanups	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.

City of San Ramon Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

4

Trash Management Area 4 is a retail shopping center located at the intersection of two arterial roadways and the on/off ramps of I-680. This area is a focus for enhanced trash mitigation activities due to the volume of pedestrian and vehicle traffic.

Key Characteristics of Trash Management Area 4

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
46.9	0%	0%	100%	0%	Commercial	Pedestrian and vehicle.

Summary of Control Measures and Implementation Schedule for Trash Management Area 4

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Street Sweeping	All residential swept twice per month, commercial/industrial swept weekly.	X	X	X	X
On-land Trash Cleanups	Please refer to Section 3 for further details.	X	X	X	X
Enhanced Storm Drain Inlet Maintenance	All inlets cleaned every other year. Other inlets cleaned on an as needed basis.	X	X	X	X
Activities to Reduce Trash from Uncovered Loads	City inspectors monitor loads on construction sites. Police department issues violations for uncovered loads.	X	X	X	X
Improved Trash Bins/Container Management	City ordinance requires all trash bin lids closed, new development requires trash bin enclosures with roof to reduce runoff during storm events. Staff actively enforces poor trash bin management.	X	X	X	X

Evaluation of Program Effectiveness for Trash Management Area 4

Control Measure	Evaluation Method	Evaluation Method Details
Enhanced Street Sweeping	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
On-land Trash Cleanups	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
Enhanced Storm Drain Inlet Maintenance	Document amounts and types of debris removed.	Use a GIS based system to track debris amounts and types. Evaluate data to determine effectiveness and develop a priority schedule for inlet cleaning.

City of San Ramon Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

5

Trash Management Area 5 is Bishop Ranch Business Park. The 585 acre commercial business park located in the center of the City of San Ramon. Please refer to page 6, paragraph 4 of the Long-Term Trash Reduction Plan for further details.

Key Characteristics of Trash Management Area 5

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
46.9	0%	0%	100%	0%	Commercial	Pedestrian and vehicle.

Summary of Control Measures and Implementation Schedule for Trash Management Area 5

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Street Sweeping	All residential swept twice per month, commercial/industrial swept weekly.	X	X	X	X
On-land Trash Cleanups	Please refer to Section 3 for further details.	X	X	X	X
Enhanced Storm Drain Inlet Maintenance	All inlets cleaned every other year. Other inlets cleaned on an as needed basis.	X	X	X	X
Activities to Reduce Trash from Uncovered Loads	City inspectors monitor loads on construction sites. Police department issues violations for uncovered loads.	X	X	X	X
Improved Trash Bins/Container Management	City ordinance requires all trash bin lids closed, new development requires trash bin enclosures with roof to reduce runoff during storm events. Staff actively enforces poor trash bin management.	X	X	X	X

Evaluation of Program Effectiveness for Trash Management Area 5

Control Measure	Evaluation Method	Evaluation Method Details
Enhanced Street Sweeping	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
On-land Trash Cleanups	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
Enhanced Storm Drain Inlet Maintenance	Document amounts and types of debris removed.	Use a GIS based system to track debris amounts and types. Evaluate data to determine effectiveness and develop a priority schedule for inlet cleaning.

City of San Ramon Long-Term Trash Reduction Plan

TRASH MANAGEMENT AREA

6

Trash Management Area 6 is a small retail center consisting of a convenience store and an auto service station located on Alcosta Boulevard. This site requires a higher frequency of on-land trash cleanup than other retail locations due to the volume of vehicles and pedestrians utilizing the services.

Key Characteristics of Trash Management Area 6

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
1.9	0%	0%	100%	0%	Commercial	Pedestrian and vehicle.

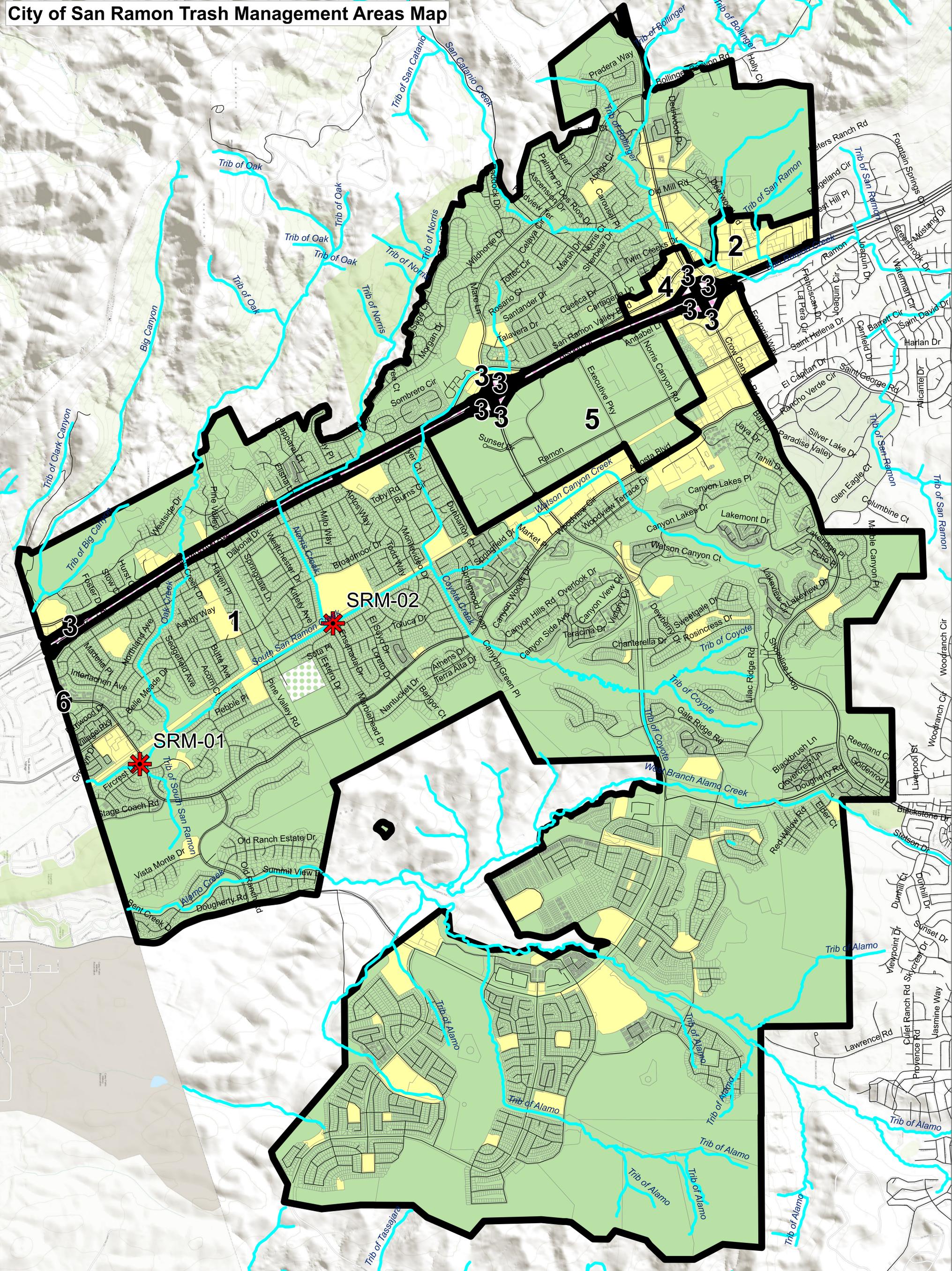
Summary of Control Measures and Implementation Schedule for Trash Management Area 6

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Street Sweeping	All residential swept twice per month, commercial/industrial swept weekly.	X	X	X	X
On-land Trash Cleanups	Please refer to Section 3 for further details.	X	X	X	X
Enhanced Storm Drain Inlet Maintenance	All inlets cleaned every other year. Other inlets cleaned on an as needed basis.	X	X	X	X
Anti-littering and Illegal Dumping Enforcement	Citations issues when violators are identified.	X	X	X	X

Evaluation of Program Effectiveness for Trash Management Area 6

Control Measure	Evaluation Method	Evaluation Method Details
Enhanced Street Sweeping	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
On-land Trash Cleanups	Document condition of curb.	Use a GIS based system to implement the BASMAA On-Land Trash Assessment Protocol. Evaluate the data provided to determine effectiveness of trash management activities implemented.
Enhanced Storm Drain Inlet Maintenance	Document amounts and types of debris removed.	Use a GIS based system to track debris amounts and types. Evaluate data to determine effectiveness and develop a priority schedule for inlet cleaning.

City of San Ramon Trash Management Areas Map



Legend

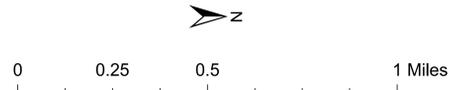
Trash Generation Category

- Low
- Medium
- High
- Very High
- Non-Jurisdictional (Dot color = Generation Category)
- Trash Management Area
- Streets
- Agency Boundary
- Creeks
- Parcel Boundary

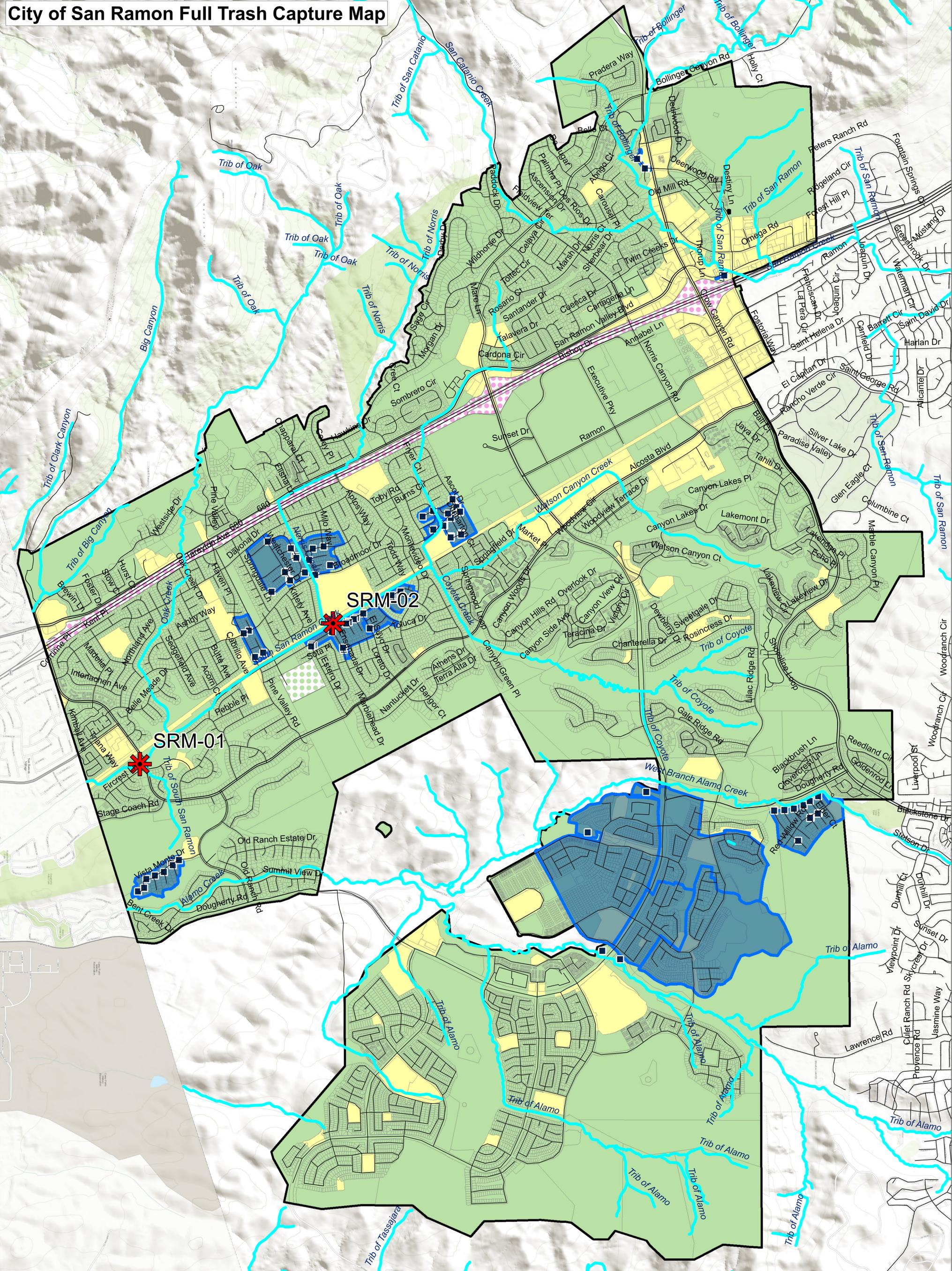
Data Sources:
 Roads: Tele Atlas
 City Boundaries: Contra Costa County
 Background: ESRI World Topographic Map

Map Created By:
 EOA, Inc.

Date:
 December 2nd, 2013

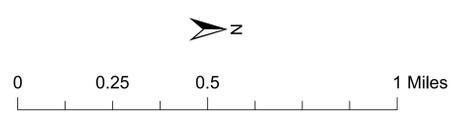


City of San Ramon Full Trash Capture Map



Legend

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

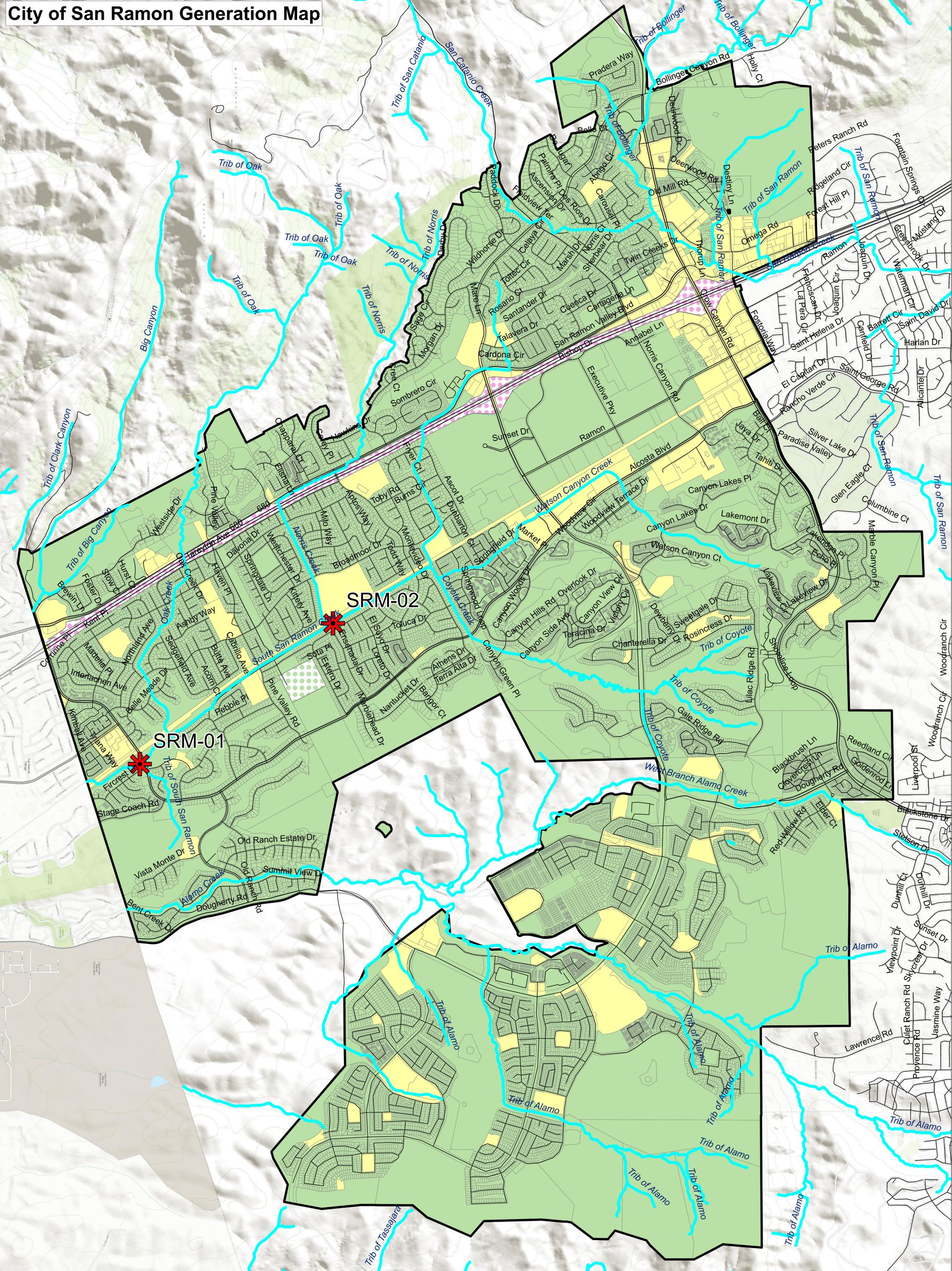


Data Sources:
 Roads: Tele Atlas
 City Boundaries: Contra Costa County
 Background: ESRI World Topographic Map

Map Created By:
 EOA, Inc.

Date:
 December 2nd, 2013

City of San Ramon Generation Map



Legend

Trash Generation Category

- Low
- Medium
- High
- Very High
- Creek/Shoreline Hotspot
- Non-Jurisdictional (Dot color = Generation Category)
- Streets
- Agency Boundary
- Creeks
- Parcel Boundary

Data Sources:
 Roads: Tele Atlas
 City Boundaries: Contra Costa County
 Background: ESRI World Topographic Map

Map Created By:
 EOA, Inc.

Date:
 December 2nd, 2013

