CITY OF
WALNUT
CREEK

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 Walnut Creek, 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.

Very truly yours,

Steve R. Waymire
Engineering Services Manager/City Engineer

Enclosure

Trash Management Plan

2014-2022

February 1, 2014

Submitted to the
California Regional Water Quality Control Board for the San Francisco Bay Region
in compliance with Provision C.10 of the Municipal Regional Stormwater Permit

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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 Permit[1] (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 although 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 reduce wind-blown trash. When visible trash is reduced, litter and dumping from all sources tends to become less frequent and severe.

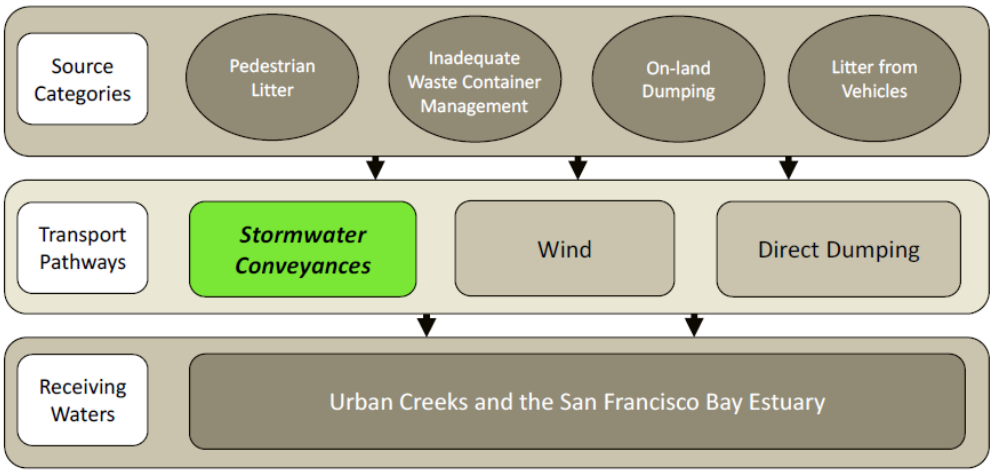


Figure 1. Trash sources and transport pathways.

Municipalities must balance their commitment to MRP compliance with their commitment to preserving and enhancing local environmental and life quality for their residents. This means 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 use 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.

[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.

Provision C.10.a.ii. requires 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 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 developed[2]:

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: 1) The model was used to generate a preliminary map designating very high, high, moderate, and low trash generation areas; 2) 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); and

[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.

3) 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.

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 with in 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 Walnut Creek Trash Management Overview

A. Characteristics Affecting Trash Generation and Management

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

Table 2-1. 2010 Census Data

Population	64,173
Under 18	16.7%
18-24	5.6%
25-44	23.6%
45-65	27.5%
65 and older	26.6%
Median household income	$83,419

Table 2-2 presents land uses within the City of Walnut Creek.

Table 2-2. 2005 Land Uses (ABAG)

Land Use Category	Jurisdictional Area	% of Jurisdictional Area
Commercial and Services	899.3	7.2%
Industrial	12.9	0.1%
Residential	6,218.2	50.1%
Retail	309.4	2.5%
K-12 Schools	237.8	1.9%
Urban Parks	242.3	2.0%
Other: Open Space	4,487.3	36.2%

The two largest land uses (over 85%) in the City are residential and public open spaces. Walnut Creek has one of the largest aggregations of city-owned open space in the United States – over 2,700 acres of oak woodland, savannah and chaparral. Most retails and commercial businesses are concentrated in the downtown core area, which continues to experience robust redevelopment growth since 2000. Over the next six years, it is estimated that 700 to 1,500 new units could be constructed. Outside downtown area, commercial businesses are contained within several major shopping centers and along arterial roads (such as North Main Street). The City has few businesses classified as light industry, which are located within Shadeland Business Park. Within the City, there are two major medical centers – John Muir Hospital and Kaiser Permanente Hospital.

There are twelve public K-12 schools operating in the City by five different school districts (Walnut Creek, Acalanes Union, Mt. Diablo Unified, Lafayette and San Ramon Valley Unified school districts). The City serves as a hub for neighboring cities within the Central Contra Costa County due to its location at the junction of two highways (I-680 and SR-24). Additionally, the City has a regional transit hub for bus and a BART station. Two regional trail networks (Iron Horse Trail and Contra Costa Canal Trail) connect the City with its neighboring communities. Schools, highways, transit hub, trail networks and BART station are outside the City's jurisdiction.

Our surveys showed sources of litter come from: 1) pedestrian litter due to high traffic areas near schools and businesses, special events, and transit areas; 2) vehicular litter occurs due to uncovered loads and littering; 3) inadequate trash bins management due to uncovered dumpsters and inadequate trash pickups; and 4) on-land illegal dumping. This report was prepared to focus on reducing trash from the City's stormwater conveyances within the City's jurisdiction as our priority. When feasible and economical, the City will strive to minimize trash in receiving waters from direct dumping into our creeks.

B. Drainage System and Water Resources Affected by Trash

The Walnut Creek watershed drains the central region of Contra Costa Country northward to Suisun Bay. Within it are the Grayson, Pine, San Ramon, and Las Trampas sub-watersheds through which flow the Walnut, Pine, San Ramon, Tice and Las Trampas Creeks. San Ramon and Las Trampas Creeks join under the fountain in downtown Liberty Bell Plaza to form the north-flowing Walnut Creek (see Figure 2 below).

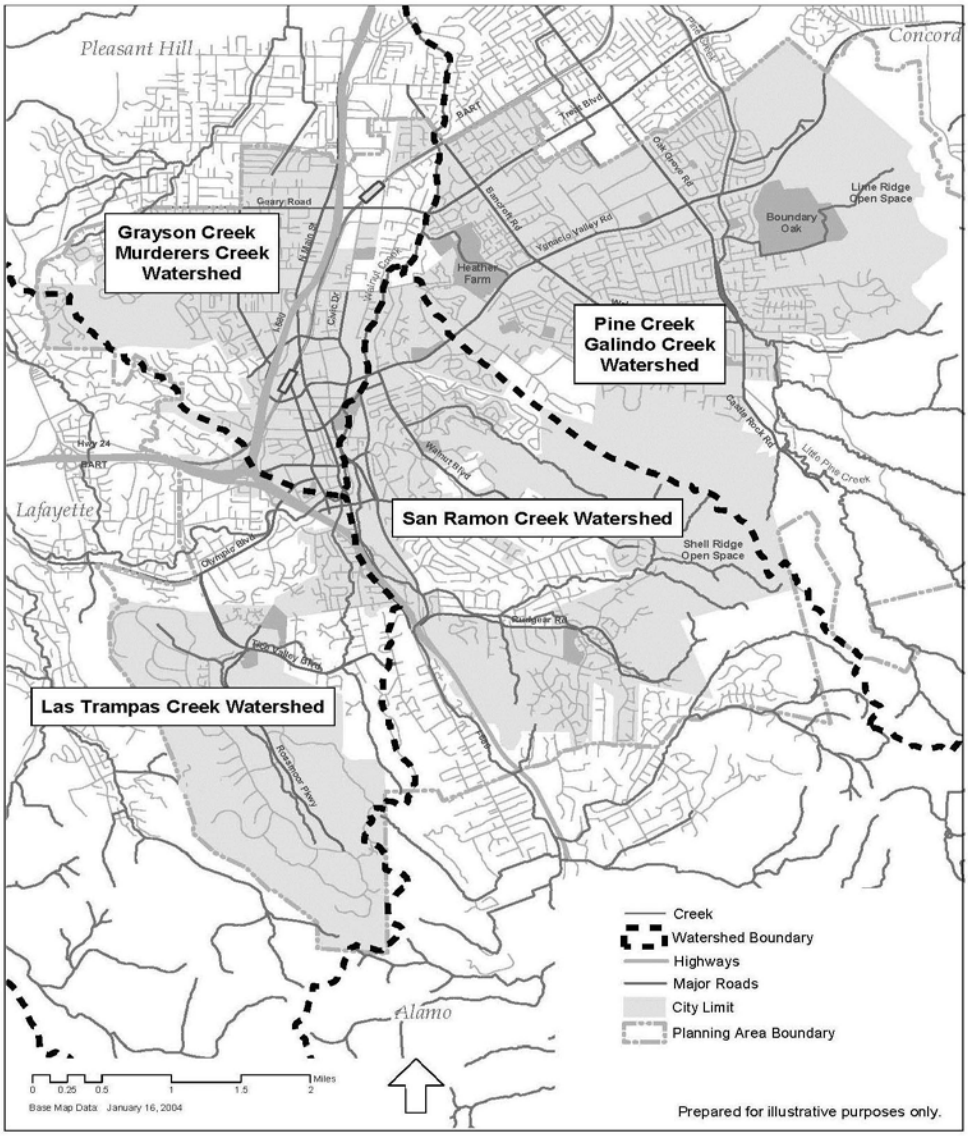


Figure 2. Watersheds and Creeks Map

Natural creeks traverse the open space areas and a few of the City's developed areas. Almost every creek in the City has been significantly altered from its natural condition and either channelized or undergrounded to control flooding and to allow development.

C. Trash Problems and Priorities

Since August 2013, City staff reviewed and updated maps of land uses and trash generation areas provided by EOA, Inc. A variety of tools were used to field-verify the maps and to ensure appropriate designated trash generation rates were assigned. These tools included using BASMAA On-Land Visual Assessment protocol, using Google maps/Street view, queries to municipal staff or members of the public, and reviews of maintenance (operation) data. Our maintenance staff was helpful in identifying areas where illegal dumping incidents or excessive trash problems had occurred in the past. A total of 72 changes were made to the land use maps resulting in 123 changes to the trash generation rates. All changes were tracked and documented along with pertinent photos.

The finalized maps produced four trash generation categories (see Map 1). Very High (VH) trash generation areas (highlighted in purple color) are located outside the City's jurisdiction. These are the State-owned freeways and BART station. City staff will attempt to work cooperatively with these agencies and to seek assistance from Water Board staff to address litter issues generated in these areas.

High (H) trash generation areas (highlighted in red color) are concentrated within the City's downtown core (refer to Map 2). These areas have high pedestrian and vehicular daily traffic. Between 700 to 1,500 new units can be constructed in downtown over the next six years. Special events brought additional visitors to these areas. Maintenance efforts will have to be adjusted according to the specific circumstances and areas within downtown. The City plans to work cooperatively with the Walnut Creek Downtown to address specific litter problems.

Based on our field-verification, almost all commercial businesses, schools and parks are considered Medium (M) trash generation areas (highlighted in yellow color). These areas require focused public outreach and specific maintenance efforts to reduce and eliminate litter problems. Because schools are outside the City's jurisdiction, we will cooperate with the school districts to reach specific solutions. Residential areas and the public open spaces are considered low trash generation areas (highlighted in green color). Litter issues will be addressed through municipal codes and general public outreach.

Considering our resources, the City's first priority will be to address litter issues in High (H) trash generation (i.e. downtown) areas by July 1, 2017. Medium (M) trash generation areas (i.e. parks, commercial centers and schools) will be addressed by July 1, 2018. Staff will continue to conduct public outreach and implement the Stormwater Ordinance to address litter issues citywide.

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 & Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
High	114.7	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Medium	963.3	38.8%	1.3%	6.0%	17.7%	16.3%	20.0%	0.0%
Low	11,329.1	4.6%	0.0%	54.4%	0.2%	0.7%	0.4%	39.6%

3. City of Walnut Creek Trash Management Strategy

The following trash management strategy is designed 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's trash management strategy will consist of both citywide control measures and those for specific trash management areas (see Table 3.1 below). We will take into account both the cost benefits of each control measure and how it will address the specific trash issues.

Table 3-1. City's Trash Management Strategy Summary

Type of Control Measures	Trash Generation Categories	Description of Control Measures
Citywide	Low, Medium and High	o Single-use carryout bag ordinance
		o Polystyrene foam food service ware ordinance
		o Public education and outreach programs
		o Street sweeping
Trash Management Areas	Medium and High	o Full-capture treatment devices
		o On-land trash cleanups
		o Activities to reduce trash from uncovered loads
		o Anti-littering and illegal dumping enforcement activities
		o Updated Special Events permitting process
		o Improved trash bins/container management

In implementing any of these control measures, the City will look to collaborate with other municipalities (cities of Pleasant Hill, Concord, Lafayette and the Contra Costa County) to address litter issues in neighboring areas, with the business improvement district for litter issues in downtown, property managers of commercial centers, BART and Caltrans for their respective areas. The City may choose to implement a specific control measure on limited bases (as a pilot program) before emulating it for other similar areas citywide. This Long-Term Trash Plan is a dynamic document which will be reviewed and revised accordingly as we obtain more information on our implementation efforts.

A. Delineation of Trash Management Areas

The City of Walnut Creek has five (5) primary trash management areas, which were delineated based on our current understanding of trash problems within our jurisdiction, costs of implementation and experience in implementing trash control measures (see Map 2). Information on the effectiveness of a few trash control measures is currently lacking. As knowledge is gained through implementation of these control measures, we may choose to refine our strategy described in this section. If significant amendments are necessary, a revised Long-Term Plan will be submitted to the Water Board through the City's annual report.

After verifying and confirming the accuracy of land use and trash generation maps, staff delineated and prioritized trash management areas based on the geographical distribution of trash generating areas, types of trash sources and current or planned control measures locations. Once delineated, TMAs were prioritized for control measure implementation.

The City's five primary trash management areas were selected based on the specific distribution of trash generating areas, current management actions (such as street sweeping and maintenance zones) and planned actions. Secondary trash management areas were delineated to emphasize specific areas with similar trash issues.

TMA 1 – Downtown core areas (highlighted in red color on the map)
TMA 2 – Commercial and shopping centers (highlighted in yellow color on the map)
TMA 3 – K-12 Schools (highlighted in yellow color on the map)
TMA 4 – Parks (highlighted in yellow color on the map)
TMA 5 – Residential and public open spaces (highlighted in green color on the map)

The City places higher priority to addressing trash problems in high- and medium-trash generation areas (highlighted in red and yellow colors on Map 2). All jurisdictional areas within the City of Walnut Creek are included within a TMA. The amount of jurisdictional land area and associated categories for each TMA are included in Table 3-1.

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

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
TMA 1	206.4	0.0%	55.1%	43.9%	1.0%
TMA 2A	310.8	0.0%	0.3%	98.6%	1.1%
TMA 2B	153.6	0.0%	0.0%	94.5%	5.5%
TMA 2C	11.1	0.0%	0.0%	99.9%	0.1%
TMA 2D	24.8	0.0%	0.0%	99.9%	0.1%
TMA 2E	19.0	0.0%	0.0%	100.0%	0.0%
TMA 2F	12.3	0.0%	0.0%	100.0%	0.0%
TMA 2G	11.9	0.0%	0.0%	100.0%	0.0%
TMA 2H	13.1	0.0%	0.0%	100.0%	0.0%
TMA 3A	16.1	0.0%	0.0%	100.0%	0.0%
TMA 3B	12.8	0.0%	0.0%	100.0%	0.0%
TMA 3C	8.9	0.0%	0.0%	100.0%	0.0%
TMA 3D	20.2	0.0%	0.0%	100.0%	0.0%
TMA 3E	53.1	0.0%	0.0%	100.0%	0.0%

TMA 4A	16.3	0.0%	0.0%	85.2%	14.8%
TMA 4B	100.1	0.0%	0.0%	90.7%	9.3%
TMA 4C	4.5	0.0%	0.0%	100.0%	0.0%
TMA 4D	17.4	0.0%	0.0%	100.0%	0.0%
TMA 4E	2.8	0.0%	0.0%	100.0%	0.0%
TMA 4F	26.8	0.0%	0.0%	100.0%	0.0%
TMA 5	11,365.4	0.0%	0.0%	0.5%	99.5%

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 in Section 4. Map 3 highlighted all installed full trash capture devices and their treatment areas.

C. Creek Cleanups

Table 3-2. Creek Cleanups

Location	Description	Cleanup Frequency			
		Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Location 1	Trash Hot Spot #1		X	X	X
Location 2	Trash Hot Spot #2		X	X	X
Location 3	Trash Hot Spot #3		X	X	X
Location 4	Walnut Creek segments (by Civic Park)	X	X	X	X
Location 5	Las Trampas Creek segments (*)			X	X
Location 6	San Ramon Creek segments (*)			X	X
Location 7	Pine Creek segments (*)			X	X

(*) Although the adjacent properties are within the City's jurisdiction, segments of these creeks are within the Contra Costa Flood Control District maintenance easement.

Mandated under MRP, the City has conducted assessment and cleanups of three designated trash hot spots since 2010. The collected data on the amounts of trash removed during cleanups at these locations had showed consistent reduction of trash at the receiving waters. This data is useful to determine the effectiveness of control measures implemented upstream of the hot spots. The City plans to continue conducting receiving water condition assessments at trash hot spots once per year. Assessment will be conducted consistent with BASMAA guidance for hot spot assessment and cleanup protocols.

Annual creek cleanups at either location #4, 5, 6 and 7 will be done by volunteers in cooperation with the Flood Control District. Direct dumping from homeless encampment continues to pose maintenance and water quality challenges at these locations. Occasionally, our maintenance staff will have to clean up the sites with assistance from our Police Department and the Flood Control District to minimize the problems. Additional creek cleanup by maintenance staff will vary from year to year depending on trash issues at specific locations.

D. Trash Reduction Policies

An amended Stormwater Ordinance, which was adopted by City Council on July 2013, contains expanded definition of litter, trash reduction provisions and strengthened administrative procedures for enforcement.

The City is currently seeking to pass ordinances that will ban the distribution of single-use carryout (plastic) bags at all retail stores and polystyrene-based food and beverage ware at all food service vendors. Enforcement of the product ordinances will be included in the City's ongoing commercial and industrial inspection program.

E. Public Education, Outreach, and Community Involvement

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, printed 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 17 school districts in the County, and distribution of flyers to students in 5 of those districts. Pre and post-campaign surveys were conducted.

Additionally through the CCCWP, Permittees also 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 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.

The Green Business Program, of which CCCWP is the largest contributing Partner in Contra Costa County, is designed to publicly recognize private businesses and public agencies that take extra steps, beyond baseline compliance with environmental regulations, 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, 530 businesses have been certified as Green Businesses in Contra Costa County. Of which, 334 are certified 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 the following: commitment to reduce waste in a minimum of five ways, maintaining parking areas free of litter, keeping dumpsters covered when not in use, using tarps in good condition and installed properly to cover loads, and purchasing a minimum of three recycled-content products.

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.

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 Contras 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.

The City launched "Keep Walnut Creek Clean" campaign to address cigarette-butts litter in 2013. Smoking in Walnut Creek has become more restricted since our City Council adopted a "Second Hand Smoking" ordinance in November 2013, which now prohibits smoking in pedestrian retail districts, recreation and dining areas and common areas of all multi-unit residences. Staff hopes the ordinance will indirectly reduce cigarette butt litter.

Anti-littering message is included in the City's watershed education program for elementary students and aired by the Walnut Creek TV in the public access channel. In addition to the annual Creek Cleanup in May, volunteers will work on environmental-type projects (i.e. on-land trash pickup, creek cleanups, and habitat restoration) as part of the City's annual Community Service Day. In October of 2013, a total of 230 volunteers worked on nine environmental-type projects.

F. Jurisdiction-wide Progress Assessment and Continuous Improvement

The City of Walnut Creek will collaborate with other agencies through BASMAA to develop a trash load reduction tracking method, which will be used to demonstrate progress toward our trash load reduction goals. In absence of a regional guidance, we will rely on our experience with implementation of the control measures and current tracking method.

We will look for measurement that shows progress toward reducing trash load and solving trash problems. An outcome-based assessment that correlates to trash reduction in our conveyance system will be our preferred method. It should provide us with considerable confidence that trash load from our drainage conveyance has been reduced while assessing if trash problems in receiving waters have been resolved. The City may use output-based assessment for certain control measures. Regardless of assessment methods used, we are interested in using those which are cost effective and able to show a comprehensive picture.

4. Trash Management Area Plans

A. TMA-Specific Plans

Starting on Page 14 of this Report are implementation plans for the following trash management areas:

TMA 1 – Downtown core areas
TMA 2 – Commercial and shopping centers
TMA 3 – K-12 Schools
TMA 4 – Parks
TMA 5 – Residential and public open spaces

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.

Trash Management Area (TMA)
Specific Plans

TMA 1 encompasses the City's downtown core areas, BART station and a transit hub, Civic and Alma Parks. Retails, commercial businesses with surface parking lots as well as high-density residences are primary components of this TMA; several of which are located adjacent to Walnut Creek, the City's namesake creek. The diverse mix of established retailers and cultural centers makes the City a regional destination. Special events, ranging from a small Wine Walk to a large Walnut parade that attract 10,000 visitors occur frequently in downtown. Within this TMA, there is a designated trash hot spot (Trash Hot Spot #1) that the City has been monitoring since 2010.

Trash sources include those from pedestrians, vehicles (particularly from uncovered loads), and inadequate trash container management and from illegal dumping. Certain businesses (i.e. coffee shops, fast food restaurants and convenient stores) generate more trash than others. Overfilled trash bins from special events are common if not monitored regularly. Trash from uncovered dumpsters and scattering of materials after trash collection are common in commercial alleys (back of the buildings). Lack of dumpster space behind building forces some businesses to down-size their dumpster; this often contributes to overflowing containers. Under the City's current commercial inspection program, we inspect targeted businesses (such as restaurants, auto service facilities, retail gas stations and others) at least once in three years.

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		
206.4	0.0%	55.1%	43.9%	1.0%	Commercial, retails and high-density residential	Plastic bags, food and beverage containers, cigarette butts, and other commercial-generated litter. Sources of trash include windblown, overfilled trash bins, uncovered loads and illegal dumping (scavengers and homeless encampment)

There are two primary downtown districts. The areas south of Mt. Diablo Blvd. are considered traditional, old part of downtown with many structures built in as early as 1920's. The space behind many buildings is limited forcing several businesses to share common dumpster areas. Precious parking space restricts the ability to expand the dumpster area. As a business goes through tenant improvement or redevelopment, the City will require that improvements to the trash enclosure be brought up to current standards. The

areas north of Mt. Diablo Blvd. are mostly redeveloped plazas with carefully-sized trash areas to manage generated trash. Most trash enclosures are covered and contained with a connection to the sanitary sewer.

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	Thirty-four full trash capture devices were installed in FY 2012-13 within TMA1. Maintenance of these devices is on-going.		X	X	X
Street Sweeping	Downtown core areas are swept three times a week early morning to minimize impact of parked vehicles. To complement the street sweeping, staff hand-blows debris between parked cars at some locations to remove trash. This activity is ongoing.	X	X	X	X
Trash Hot Spots Assessment and Cleanup	One trash hot spot (located within Civic Park) will be assessed and cleanup per BASMAA protocols.		X	X	X
Anti-littering and Illegal Dumping Enforcement	Amended Stormwater Ordinance includes expanded anti-littering provisions and enforcement.		X	X	X
Creek Cleanups	Once a year, volunteers will remove trash along stretches of Las Trampas and Walnut Creeks.				X
On-land trash pickup	Additional monitoring and removal of trash from selected sites will be done by City's maintenance staff.			X	X
Updated Special Events Permitting process	Special event organizer will be required to pay a refundable deposit and assign a trash monitor and cleanup crew during the event as part of the special event permit application.			X	X
Improved trash bins/container management	City will explore and pilot test trash compactor at sites with heavy pedestrian traffic. Private dumpsters and bins will be monitored and enforced as part of ongoing inspection program.			X	X
Focused public education and outreach	Public outreach specifically targets the City's newly adopted Second-Hand Smoking ordinance and soon-to-be adopted bans of single-use plastic bags and polystyrene-based food service ware.			X	X

The maintenance responsibilities of trash bins/containers within TMA 1 vary location to location. Staff will monitor sites where overflowing trash bins are a persistent problem. A business can, consequently, be required to increase the frequency of trash pickup or improve the container. Where possible, the City will

collaborate with the downtown improvement district to engage new methods of cleaning sidewalks from litter and other nuisance (gums, pet waste and more).

Evaluation of Program Effectiveness for Trash Management Area 1		
Control Measure	Evaluation Method	Evaluation Method Details
Full Capture	Document Maintenance	Track frequency of clean outs and volume collected, capacity at cleaning and percentage of debris.
Street Sweeping	Visual Assessment	Track ability of sweeping to the curb and speed of sweeper. Visually assess before and after conditions.
On-land Trash Cleanups	Document Maintenance and Visual Assessment	Track location, frequency, and volume of clean-ups. Survey level of participation, and/or solicit feedback from volunteers on overall condition of site.
Anti-littering and Illegal Dumping Enforcement	Document Maintenance and Visual Assessment	Track number of enforcement cases, report on actions taken to decrease illegal dumping/litter (staff engagement, surveillance etc.)

TMA 2 consists of commercial areas bordering downtown and six (6) major shopping centers with surface parking lots. Businesses in TMA-2A include auto dealership, auto service facilities, a recycling center, several corporation yards (for the City of Walnut Creek, EBMUD, Caltrans and Allied Waste). Many businesses share common areas including trash dumpsters.

While the City is responsible for the streets fronting these facilities, owners and managers are responsible for maintenance of these centers. A few of the shopping centers went through recent redevelopment and had installed permanent low-impact development (LID) stormwater treatment facilities that are considered to be equivalent to full trash capture devices. Las Lomas High School and a designated trash hot spot (Trash hot spot #2, adjacent to Civic Park East) are also located within TMA 2.

Key Characteristics of Trash Management Area 2

Commercial Centers & Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
TMA 2-A 310.8 AC	0%	0.3%	98.6%	1.1%	Commercial and retail areas (adjacent to downtown).	Pedestrian- and vehicular-generated litter (some centers have persistent problems with scavengers) and uncovered dumpsters. Typical litter includes plastic bags, cigarette butts, food waste, beverage and food wrappers and containers.
TMA 2-B 153.6 AC	0%	0%	94.5%	5.5%	Commercial and retail areas (adjacent to downtown) and school.	See above.
TMA 2-C 11.1 AC	0%	0%	99.9%	0.1%	Shopping center	See above.
TMA 2-D 24.8 AC	0%	0%	99.9%	0.1%	Shopping center	See above.
TMA 2-E 19.0 AC	0%	0%	100%	0%	Shopping center	See above.
TMA 2-F 12.3 AC	0%	0%	100%	0%	Shopping center	See above.
TMA 2-G 11.9 AC	0%	0%	100%	0%	Shopping center	See above.
TMA 2-H 13.1 AC	0%	0%	100%	0%	Shopping center	See above.

Secondary TMAs were delineated based on current knowledge of trash problem areas and on-land visual assessment of segments within TMA-2 (i.e. level of trash present on the road, curb and gutter, sidewalk and adjacent areas). Although major shopping centers were individually delineated, they all shared common management practices dealing with trash load reduction.

High employee turnover rate often contributed to poor housekeeping practices at some locations. Trash from overfilled bins and uncovered dumpster typically was observed at the back of the buildings. Shared use of inadequate-size dumpster by several businesses causes the trash to accumulate faster when trash collection (service) is inadequate. Trash may be blown over from overfilled or uncovered dumpsters from creek-side businesses with open fencing. Scavengers looking for recyclables from unlocked dumpsters often generate litter from leaving unwanted materials scattered.

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	Thirty-one full trash capture devices were installed on the public right-of-way within TMA 2. Maintenance of these devices by City staff is ongoing. A few shopping centers have on-site LID stormwater treatment facilities, which are maintained by the property owners.		X	X	X
Street Sweeping	Arterial roads and public parking lots are swept once a week. Temporary "No Parking" signage is installed at certain locations on as needed basis.			X	X
Anti-littering and Illegal Dumping Enforcement	Amended Stormwater Ordinance includes expanded anti-littering provisions and enforcement.		X	X	X
Improved Trash Bins/Container Management	Property owners will maintain private dumpsters and bins. Verification of this activity is included in the on-going commercial inspection program.		X	X	X

The City's ongoing commercial inspection program will verify compliance by businesses to reduce trash loads generated from their sites. Cigarette butts are commonly found litter in retail and shopping centers, particularly in areas where employees take breaks. Ash urns should be installed to dispose of cigarette butts where appropriate.

Evaluation of Program Effectiveness for Trash Management Area 2

Control Measure	Evaluation Method	Evaluation Method Details
Full Capture Devices, LID treatment facilities	Document Maintenance and Visual Assessment	Track amount of trash removed from public-owned devices. Verify effective operation and maintenance of LID treatment facilities by property owner as part of annual C3 verification program.

Enhanced Street Sweeping	Visual Assessment	Track ability of sweeping to the curb and speed of sweeper. Visually assess before and after conditions.
Improved Trash Bins/Container Management	Visual Assessment	Inspect and track compliance of businesses related to housekeeping practices to reduce trash loads generated.

Within the City of Walnut Creek, there are five unified school districts responsible for twelve public K-12 schools. The City's jurisdiction is limited to the public streets and sidewalks fronting these schools. Most schools are grouped together in TMA 3 to allow for planned and coordinated activities with respective school districts. Some schools, not included within TMA 3, have been observed to be relatively cleaner and included in TMA 5.

With the exception of Las Lomas High School (in TMA 1), most public schools are located adjacent to residential areas. Some schools (Las Lomas High School, Buena Vista Elementary, Walnut Heights Elementary, Walnut Intermediate and Northgate High School) are located near or directly upstream from a creek bringing the litter issue to a higher priority. Trash is commonly found along the pathway (trails, streets and sidewalks) leading to and from schools from pedestrians and vehicles.

Schools in Walnut Creek have litter management and practices in place already (with custodians, anti-littering signage/rules and trash pickups) for their grounds. Of the twelve schools, five were randomly selected and delineated as secondary TMAs in the first round. When staff determines trash is not an issue for a specific school through assessment and verification, that school is dropped off from TMA 3 and is moved to TMA 5 (low trash generation areas, shaded in green color on the map).

Key Characteristics of Trash Management Area 3

School & Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
TMA 3-A 16.1 AC	0%	0%	100%	0%	School	Pedestrian- and vehicular-generated litter such as food and beverage containers and wrappers, papers and plastics.
TMA 3-B 12.8 AC	0%	0%	100%	0%	School	See above.
TMA 3-C 8.9 AC	0%	0%	100%	0%	School	See above.
TMA 3-D 20.2 AC	0%	0%	100%	0%	School	See above.
TMA 3-E 53.1 AC	0%	0%	100%	0%	School	See above.

Initial assessments of TMA 3 showed that schools in Walnut Creek have few litter issues in general. Litter becomes an issue after large organized school events (such as football games or graduation). Our survey indicated transitional areas near schools (street crossings, trail head and parking lots) typically have more trash problems. Food wrappers, beverage containers and plastics are dominant types of trash. Specific to

high schools, cigarette butt litters are commonly found along the pedestrian pathway. Schools with strong parent volunteers have relatively fewer trash problems.

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
Full Capture Treatment Devices	Full trash capture devices were installed in storm drain inlets downstream of schools and parking lots in FY 2012-13. Maintenance of these devices is on-going.		X	X	X
Street Sweeping	Frequency of street sweeping near schools have been evaluated and determined to be adequate. No changes in the schedule will be proposed.		X	X	X
Anti-littering and Illegal Dumping Enforcement	The City's Stormwater Ordinance was recently updated to include anti-littering provisions and enforcement.		X	X	X
Improved Trash Bins/Container Management	Will evaluate adequacy of trash bins in strategic locations along the pedestrian pathway.			X	X
Focused public education	Collaborate with school district to launch anti-littering campaign (may include signage, contest and/or student activities).			X	X
On-land trash pickup	Additional trash pickup may be provided at areas where trash issue is prevalent (along the pedestrian pathway) especially near high schools.			X	X

Our Maintenance staff will evaluate if adequate trash bins are available along the main pathway frequently used by students and parents. We will collaborate with the school districts to identify additional areas of concern related to trash load reduction.

Evaluation of Program Effectiveness for Trash Management Area 3		
Control Measure	Evaluation Method	Evaluation Method Details
Full capture	Document Maintenance	Track and categorize the amount of trash removed in comparison to normal (organic) debris.
Focused public education	Document Maintenance	Pre- and post-survey of anti-littering campaign in partnership with a school district (as a pilot study) before expanding the campaign to other schools citywide.

City of Walnut Creek owns one public golf course (Boundary Oak Golf Course) and twenty public and neighborhood parks and recreational facilities. The parks located within or near the downtown core areas will be included in TMA 1 as they are adjacent to either high-density residential or commercial areas. (Refer to TMA 1 pages for trash management strategies).

In the first round, six public and neighborhood parks were randomly selected (out of 21 parks and golf course) to be assessed and evaluated. San Miguel, the smallest neighborhood park, was included in TMA 4 as a pilot study to verify if management practices implemented can achieve the goal of reducing trash load. If staff determines that trash is no longer an issue for a neighborhood park, that park will be dropped off from TMA 4 (Parks) and will be moved to TMA 5 (low trash generation areas, shaded in green color on the map). In the second round, other park(s) will be randomly selected to be delineated as a secondary to TMA 4.

Heather Farm Park, the largest and most visited public park, offers the most recreational amenities and heavily programmed for all-year round sports activities. Additionally, it hosts many special events annually such as the Walnut Festival, which attracts over 50,000 visitors, Kids Fest and Arts and Wine Festival. Trash sources typically come from park users. Most commonly trash found in parks include food waste, beverage and food wrappers or containers, sport-related items (tennis balls, gloves, and clothing).

Key Characteristics of Trash Management Area 4

Park Name & Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
TMA 4-A Larkey 16.3 AC	0%	0%	85.2%	14.8%	Park, adjacent schools, residential	Park users-generated litter (food & beverage containers and wrappers, sports items, papers). Heavily used for picnics and sports activities. Adjacent to school and church.
TMA 4-B Heather Farm 100.1 AC	0%	0%	90.7%	9.3%	Park, adjacent school, residential	See above for types of trash. Heavily used and programmed for special events (festivals, races), sport activities, skate parks, aquatics center. Next to a K-8 school.

TMA 4-C San Miguel 4.5 AC	0%	0%	100%	0%	Park, residential	See above for types of trash. Neighborhood park heavily used as playground and informal dog park.
TMA 4-D Rudgear 17.4 AC	0%	0%	100%	0%	Park, residential	See above for types of trash. Heavily used for picnic and sport activities.
TMA 4-E Diablo Shadows 2.8 AC	0%	0%	100%	0%	Park, residential	See above for types of trash. Neighborhood park heavily used as playground and informal dog park.
TMA 4-F Arbolado 26.8 AC	0%	0%	100%	0%	Park, residential	See above for types of trash. Neighborhood park heavily used as playground and informal dog park.

Typical sources of trash come from park users, visitors or from incidental illegal dumping. Trash issues depend on the type of activities programmed for the specific park. In many parks, trash is commonly found near sport fields, restrooms, picnic areas, the trail head and parking lot. Larkey Park is located adjacent to a regional trail system (the Iron Horse trail) and is programmed for tennis, swimming and recreation (playground and picnic). Heather Farm Park is programmed for swimming, tennis, recreation (picnic, playground, fishing at nature pond), equestrian, skate park, off-leash dog park, biking, sand volleyball, baseball in addition to special events held annually. It is located adjacent to a regional trail system (the Contra Costa Canal trail).

The smallest public park, San Miguel Park, is programmed for tennis, recreation (playground and turf) and off-leash dog park. Rudgear Park offers amenities such as playground area, picnic area, basketball, baseball, soccer, tennis and connection to walking trails. Diablo Shadow Park has children's playground, picnic areas and offers a connection to walking trails. Arbolado Park offers amenities such as playground and picnic areas, basketball, soccer field, tennis courts, orchard and a connection to walking trails. The City requires organized groups to apply for a permit to use any facilities within the park. The permitting process provides an opportunity to institute trash control measures by the responsible party.

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
Full Capture Treatment Devices	Small full trash capture devices were installed in FY 2012-13 in the parking lots and downstream of the parks. Maintenance of these devices is ongoing.		X	X	X
Street Sweeping	Parking lots are swept once a week. Additional sweeping may be implemented after certain special events or as needed.			X	X

Anti-littering and Illegal Dumping Enforcement	The City's Stormwater Ordinance was recently updated to include anti-littering provisions and enforcement.		X	X	X
Improved Trash Bins/Container Management	City will investigate the adequacy of trash bins for each park. All trash bins will be fitted with lids and secured to prevent tipping-over. Maintenance is ongoing.			X	X
Special Event Permitting	Special event permit will be updated to include trash monitoring and deposit provisions.			X	X
On-land trash pickup	Staff will assess the need for additional trash pickup particularly near restrooms, parking lots, picnic areas and playground.			X	X

Public parks are grouped within one trash management area because our Maintenance staff implements similar trash control measures for trash pickups and enforcement, trash bins management and sweeping. For large organized special events (that attract more than 500 visitors), organizer will be required to pay a refundable deposit and to assign a trash monitor during the duration of the event. Trash monitor will be required for organized sports activities as part of permitting process.

Evaluation of Program Effectiveness for Trash Management Area 4		
Control Measure	Evaluation Method	Evaluation Method Details
Improved Trash Bins/Container Management	Document Maintenance Visual assessment	Track amount of trash removed. Conduct pre- and post-surveys of litter issues after installation of improved trash bins.
Special Event Permitting	Document Maintenance Visual assessment	Conduct pre- and post-surveys of litter issues after requiring organizer(s) to institute trash monitoring for their events.

TMA 5 covers all residential areas and over 3,000 acres of public open spaces (the City owns more open space per capita than any other community in the state of California). The amount of trash in this TMA is relatively small in comparison to those in other TMAs. Self-enforcement by neighborhood watch-groups and homeowner associations helps in reducing incidents of illegal dumping and litter problems.

The sources of trash may be from vehicles (usually garbage trucks after trash pick-up days), home improvement contractors or gardeners and visitors to the City's open spaces. Incidents in residential areas have been addressed on a complaint basis. Most incidents were due to lack of knowledge of best management practices. Litter issues at the public open spaces are rare and happen on parking lots or near restrooms.

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		
11,365.4	0.0%	0.0%	0.5%	99.5%	Residential and public open spaces	Resident-generated litter (typically occur after trash pick-ups), vehicular and visitors to open spaces.

The City's open spaces attract over 50,000 visitors annually through its special events (Festivals), nature-related education programs and stewardship activities. While the City's Open Space rangers and staff have done a good job in maintaining the areas, there are isolated spots within the open spaces prone to illegal dumping and homeless encampment. Our Open Space rangers or Police officers will address such incidents. The level of current street sweeping frequency has been determined to be adequate at this time. Our residential streets are typically clean and free of trash due to ongoing street sweeping program.

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
Full Capture Treatment Devices	Forty-one small full trash-capture devices were installed during FY 2012-13 in TMA 5 (typically near high-density residences, neighborhood daycare centers and downstream of large parking lots). Maintenance of these devices is on-going.		X	X	X

Street Sweeping	Residential streets are swept once a month while parking lots and arterial roads once a week. This activity is ongoing.	X	X	X	X
Anti-littering and Illegal Dumping Enforcement	The City's Stormwater Ordinance was recently updated to include anti-littering provisions and enforcement.		X	X	X
Single-use carryout bag ordinance	The ordinance will ban the distribution of single-use carryout bags (i.e. plastic bags) at all retailers, except restaurants. Ordinance adoption is anticipated in FY 2013-14. Enforcement of the ordinance is ongoing.			X	X
Polystyrene-based food service ware ordinance	The ordinance will ban the distribution of polystyrene-based food and beverage ware in all eating establishments. Ordinance adoption is anticipated in FY 2013-14. Enforcement of the ordinance is ongoing.			X	X
Public Outreach and Education	Provide public outreach as it relates to the product bans implementation. Collaborate with non-profit partners to offer workshop and youth education programs. Will investigate the feasibility of installing anti-littering signage where it is appropriate.	X	X	X	X

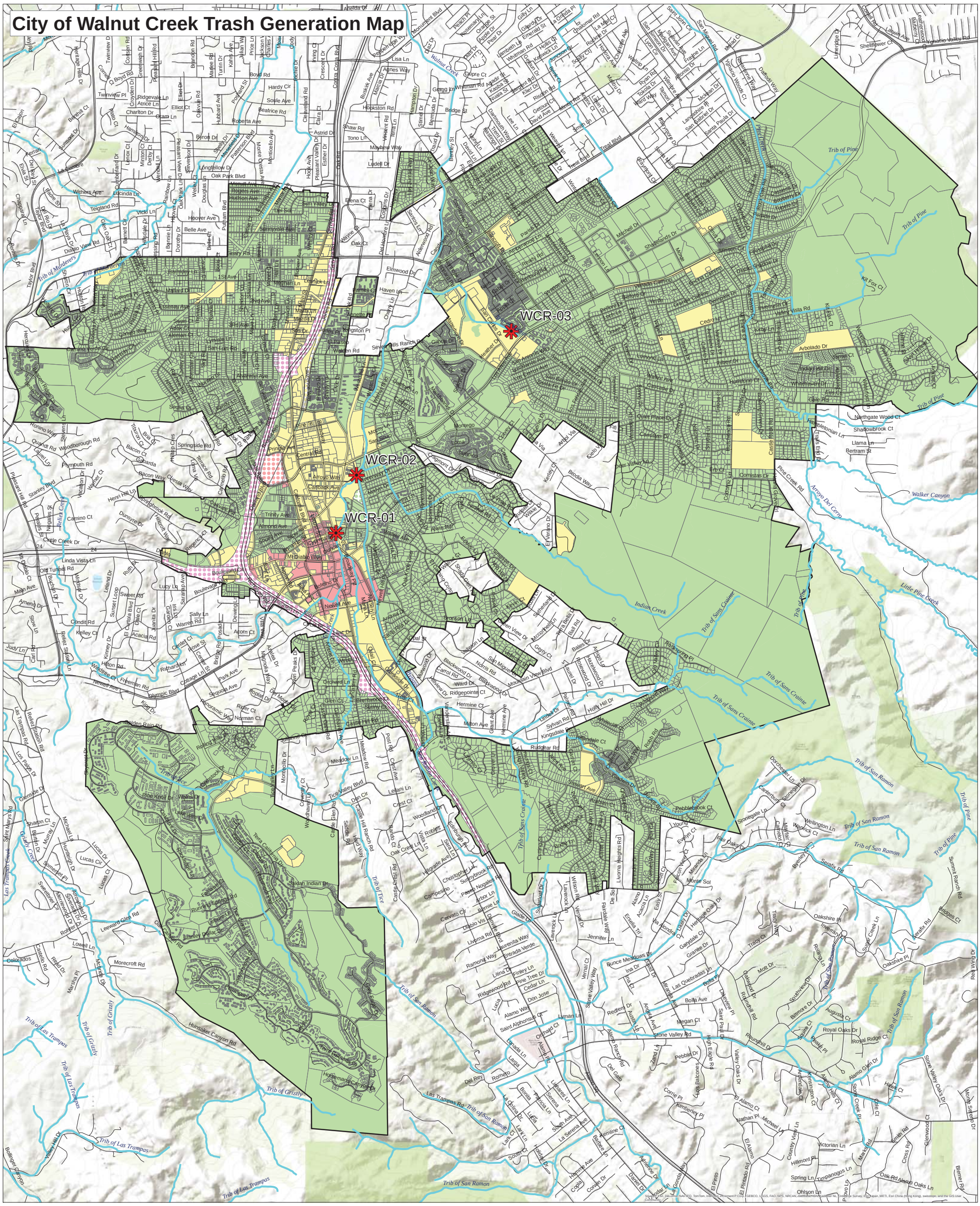
To prevent littering at isolated areas leading to the City's Open Space, staff installed physical barriers (barricades) to deter loitering and limit vehicular access. Survey of pre- and post-barricades will help to determine if physical barriers are effective before being replicated to other similar areas.

Each year, Division managers evaluate effectiveness of municipal activities (i.e. street sweeping, trash capture devices maintenance and on-land trash pickups) to identify areas of improvement and make adjustments accordingly. TMA 5 (highlighted in green color on Map 1), generally has little or no trash issues. Trash issues, if any, are isolated to certain locations and are incidental in nature. The City will maintain our current municipal activities as they have adequately addressed the need for this TMA. Current frequency of street sweeping for residential areas and parking lots has been determined to be adequate at this time. Staff is in the process of developing ordinances that will prohibit the distribution of single-use carryout (plastic) bags and polystyrene-based food service ware. Adoption of the product bans is anticipated by summer 2014.

Evaluation of Program Effectiveness for Trash Management Area 5		
Control Measure	Evaluation Method	Evaluation Method Details
Street Sweeping	Document Maintenance Visual Assessment	Track ability of sweeping to the curb and speed of sweeper. Visually assess before and after conditions of randomly selected streets.
Single-use carryout bag ordinance	Document Maintenance	Track compliance of stores as part of the City's ongoing Commercial and Industrial inspection program. Track volume of product in creek and on-land cleanups.

Polystyrene-based food service ware ordinance	Document Maintenance	Track compliance of stores as part of the City's ongoing Commercial and Industrial inspection program. Track volume of product in creek and on-land cleanups.
Public Outreach and Education	Document Maintenance	Conduct pre- and post-surveys of campaign and actions taken as part of the public education campaign.

City of Walnut Creek Trash Generation Map



Legend

Trash Generation Category

- Low
- Medium
- High
- Very High

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

- Streets
- Agency Boundary
- Creeks

N

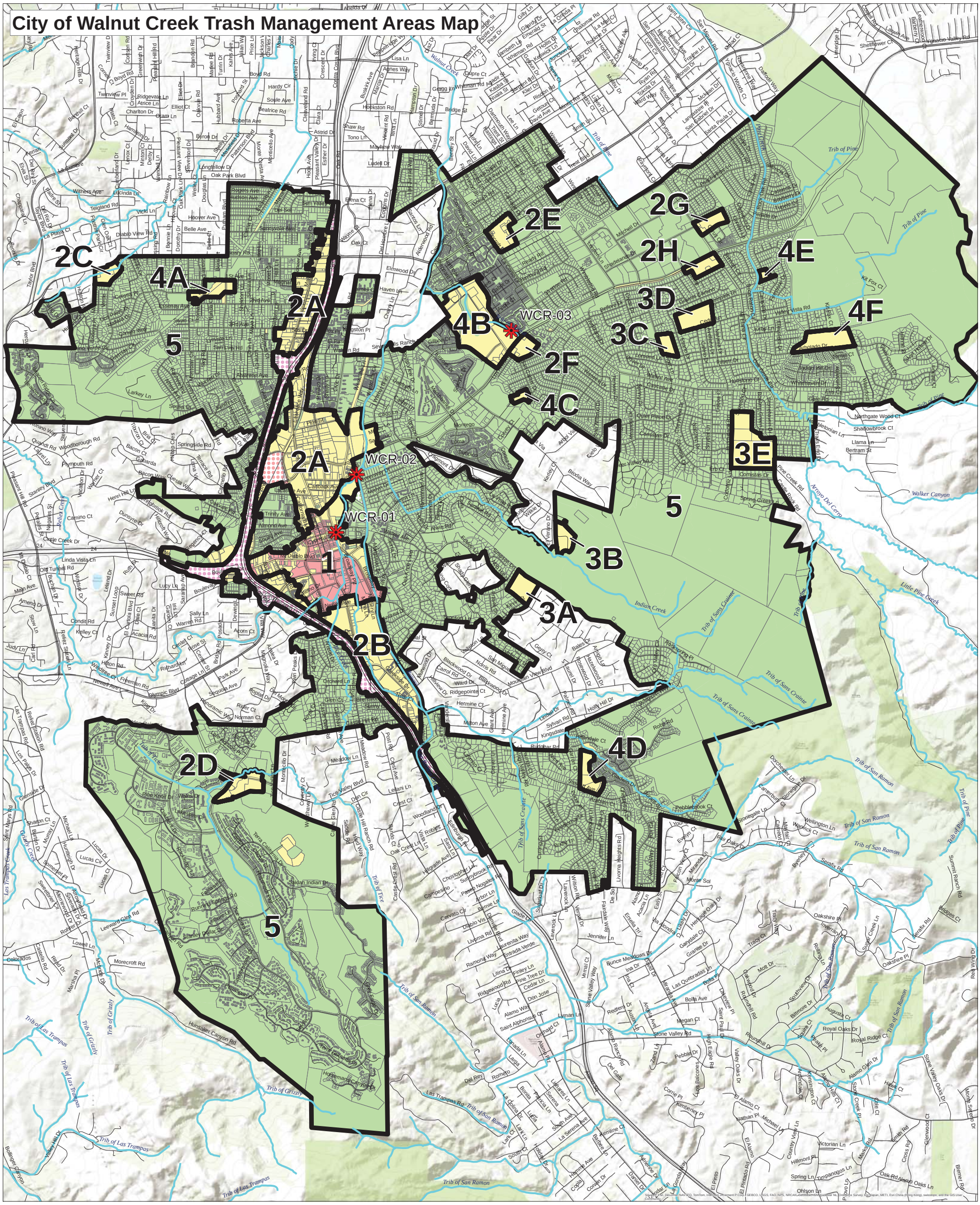
0 0.25 0.5 1 Miles

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

Map Created By:
EOA, Inc.

Date:
November 13th, 2013

City of Walnut Creek Trash Management Areas Map



Legend

Trash Generation Category

- Low
- Medium
- High
- Very High

- Creek/Shoreline Hotspot
- Trash Management Area
- Non-Jurisdictional (Dot color = Generation Category)

- Streets
- Agency Boundary
- Creeks
- Parcel Boundary

N

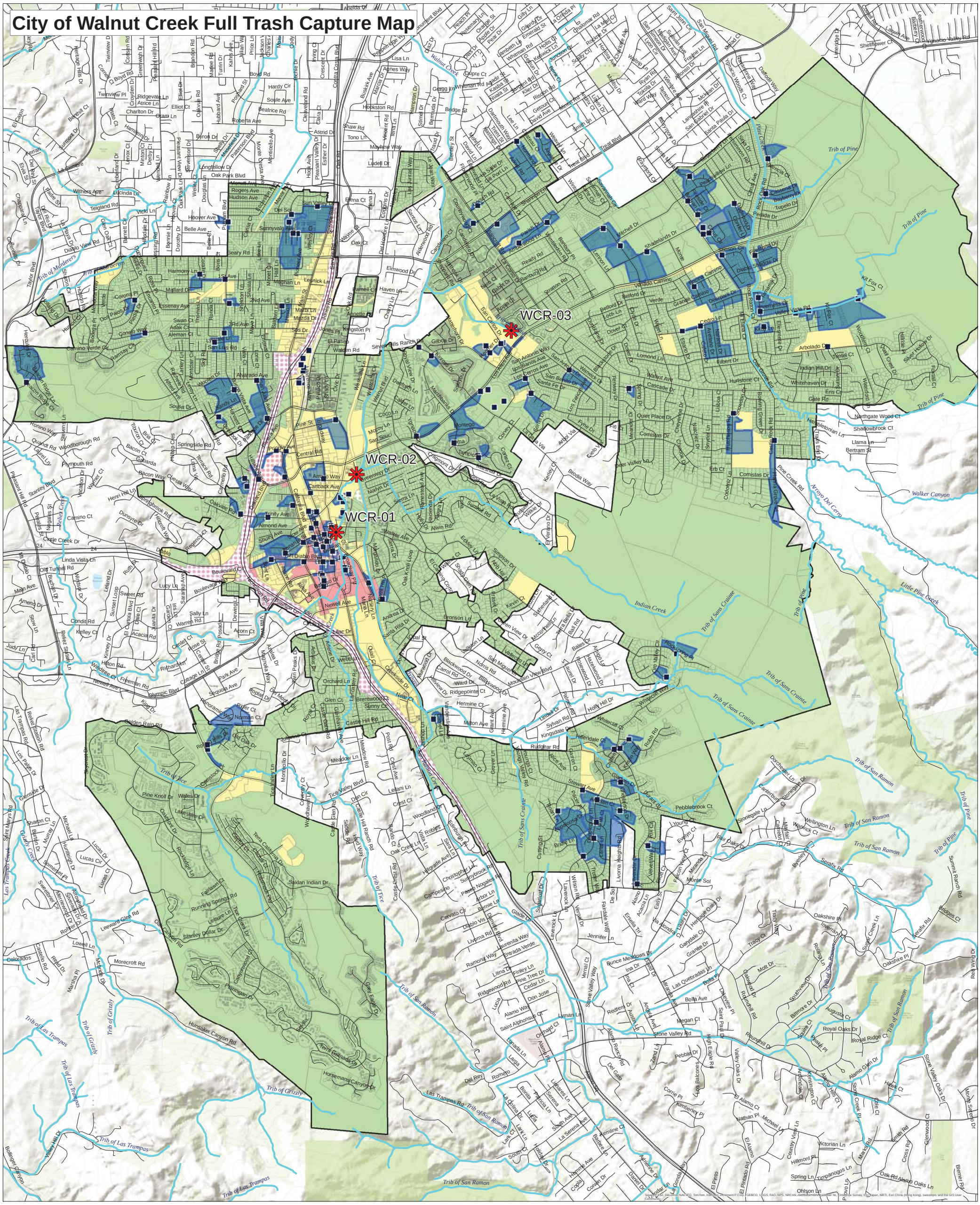
0 0.25 0.5 1 Miles

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

Map Created By:
EOA, Inc.

Date:
November 13th, 2013

City of Walnut Creek Full Trash Capture Map



Legend

Trash Generation Category

- Low
- Medium
- High
- Very High

- Creek/Shoreline Hotspot
- Full-Capture Location
- Full Trash Capture
- Non-Jurisdictional (Dot color = Generation Category)

- Streets
- Agency Boundary
- Creeks
- Parcel Boundary

N

0 0.25 0.5 1 Miles

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

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Date:
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