



*"Small Town Atmosphere
Outstanding Quality of Life"*

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 Town of Danville 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 possibility of fine and imprisonment for knowing violations.

Very truly yours,

TOWN OF DANVILLE

Joseph A. Calabrigo
Town Manager

Enclosure

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Danville

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

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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 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.

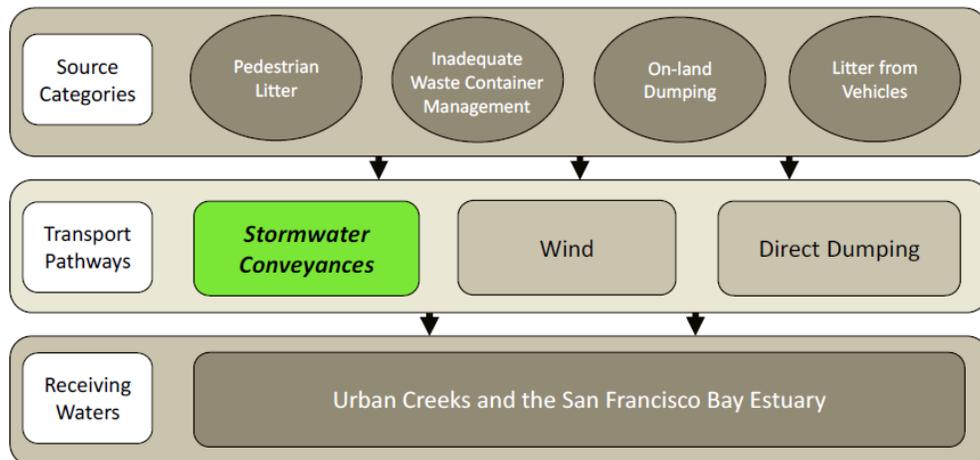


Figure 1. Trash sources and transport pathways.

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 uses 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. 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 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. Town of Danville 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	42,039
Under 18	26.6%
18-24	5.0%
25-44	19.1%
45-64	34.8%
65 and older	14.4%
Median household income	\$129,515 ⁴

Table 2-2 presents summarizes land uses within Danville.

Table 2-2. 2005 Land Uses (ABAG)

Land Use Category	Jurisdictional Area	% of Jurisdictional Area
Commercial and Services	216.5	1.9%
Industrial	13.9	0.1%
Residential	6,012.8	52.8%
Retail	159.3	1.4%
K-12 Schools	202.9	1.8%
Urban Parks	189.1	1.7%
Other	4,596.8	40.4%

Incorporated in 1982, the jurisdictional area of the Town of Danville (for purposes of this plan) covers 11,391 acres and is located in Contra Costa County. The majority of land in Danville is comprised primarily of single-family low density residential homes or is in large blocks of land preserved for open space or agriculture. In Danville, almost 78% of all households have families with school aged children. Most commercial land in Danville is small scale retail with little industrial land uses. The non-jurisdictional trash generator areas include freeways, schools, and mass transit stations

B. Drainage System and Water Resources Affected by Trash

San Ramon Creek is the primary tributary that flows north in general alignment with I-680 in Danville. Sycamore and Green Valley Creeks are tributary to San Ramon Creek. Only a small portion of Alamo Creek on the east end of Danville flows south from Contra Costa County through a small portion of Danville into the City of San Ramon.

Trash Problems and Priorities

The Town's Stormwater coordinator oversaw the development of the Trash Generation Maps. Initially, Land Use maps were provided to the Town by consultants. Town Engineering, Planning, and

⁴ From the 2000 Census. The median household income for the Town of Danville from 2010 Census is not currently available.

Maintenance staff thoroughly reviewed and corrected the land use data for accuracy with Town records and resources utilizing GIS, ownership information, aerial photography and staff knowledge. Corrections were made to the land use maps and sent to the consultant.

The second step included trash generation maps being produced by the consultants utilizing the land use data. These maps were also reviewed by Town staff for accuracy then all non-green (non-residential) mapped areas of town were inspected on foot by two staff members. This project was managed by the Town’s Stormwater coordinator. They utilized the BASMAA On-Land Visual Assessment Protocol to record data and make assessments.

All non-green sites were inspected and photographed to document the amount of trash at each site. The results yielded several sites needing to be re-designated from high (red), or medium (yellow) to low (green) trash generation areas. This resulted in the map having few non-green areas remaining in Danville. Only one red (high) area exists, which is the parking lot of the high school located at the north end of the downtown. This site was upgraded from a medium to a high trash generation category based on the protocol. The school site is a non-jurisdictional area, which is problematic. The medium sites comprise 62% retail/commercial and 30% school sites. The remaining green areas are mostly residential and open space.

Table 2-3 summarizes trash generation by land use:

Trash Generation Category	Jurisdictional Area (Acres)	Commercial and Services	Industrial	Residential	Retail	K-12 Schools	Urban Parks	Other
Very High	0.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
High	3.3	0.0%	0.0%	0.0%	0.0%	100%	0.0%	0.0%
Medium	105.9	29.2%	1.8%	0.5%	33.1%	30.3%	4.8%	0.0%
Low	11,282.0	1.6%	0.1%	53.8%	1.1%	1.5%	1.6%	41.1%

3. Danville 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.

Since Low Impact Development (LID) facilities are designed to meet more aggressive flow requirements than the full trash capture devices that are located in each drainage inlet, it stands to reason that they achieve and meet full trash capture requirements. This plan includes all LID sites to achieve full trash capture where appropriate. A map of C.3-Compliant LID Facilities is included in the Town’s Long-Term Trash Management Plan, and will be included in all future submissions as well as, each year’s Annual Report. The map will show the location of the facilities and the associated treatment area.

Following the adoption of the 2009 MRP, the Town took early measures to address the worst trash area in Danville which is San Ramon High School at the north end of the downtown. Since the high school site is not in Danville’s jurisdiction, it is difficult to implement full trash capture on-site. So Town staff evaluated the worst areas surrounding the site acknowledging that some of the trash from the school gets into the Town’s storm drains in the public streets. Next the Town took steps to adopt two capital

improvement projects to reduce trash downtown and near the school. The first measure was to install full trash capture devices in drainage inlets surrounding the school site and the second measure replaced and added trash and recycling receptacles throughout the downtown, especially around the high school. In addition, efforts were made to enhance outreach to the high school and to develop an effective public education program. These two efforts were in place by 2012 and now serve to address the Town’s 40% trash reduction goal in the MRP. It is also planned that improvement on these measures will also significantly help the Town achieve the 70% goal in 2017.

A. Delineation of Trash Management Areas

Trash Management Areas were identified primarily by land use and the characteristics of that land use.

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

TMA	Jurisdictional Area (Acres)	Trash Generation Category			
		Very High	High	Medium	Low
TMA 1-SRVHS	48.0	0.0%	7.0%	67.9%	25.2%
TMA 2- Downtown	184.1	0.0%	0.0%	13.1%	86.9%
TMA 3- Garden Centers	2.0	0.0%	0.0%	100%	0.0%
TMA 4- Club Houses	5.1	0.0%	0.0%	100%	0.0%
TMA 5- Misc. businesses/churches	9.7	0.0%	0.0%	100%	0.0%
TMA 6- Com'l E-side	30.3	0.0%	0.0%	91.2%	8.8%
TMA 7- U.S. Post Office E-side	4.7	0.0%	0.0%	100%	0.0%
TMA 8- Entire Town	11,107.4	0.0%	0.0%	0.0%	100.0%

Other than TMA 8, which is the entire town, the three largest TMA areas include San Ramon Valley High School (TMA 1), downtown Danville (TMA 2) and the east-end commercial near Blackhawk (TMA 6). The Misc. businesses/churches (TMA 5), Club Houses (TMA 4), U.S. Post Office (TMA 7), and Garden Centers (TMA 3) are primarily individual small sites scattered throughout town.

Although much of downtown Danville is a green zone, the entire area was blanketed in TMA 2 for marketing purposes since many publications and various methods of communication is done through the Town’s website, Chamber of Commerce, or other social media where all properties and businesses are targeted within the downtown area. Also many Town special events involving public gatherings take place throughout the downtown and all the trash control measures that are currently in place will need to be continued and/or enhanced.

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.

Creek cleanup activities are shown in Table 3-2.

Location	Description	Cleanup Frequency			
		Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Location 1	Hotspot #1 – clean-up and assessment	1/yr	1/yr	1/yr	1/yr
Location 2	San Ramon Creek – Earth Day clean-up	0/yr	1/yr	1/yr	1/yr
Location 3	Annual Creek Maintenance by TOD	1/yr	1/yr	1/yr	1/yr
Location 4	Local Creek Group clean-ups	0/yr	1/yr	1/yr	1/yr

Location 1: Hotspot #1 has always been one of the creek sites cleaned each fall prior to the rainy season. See Location 5 for more information on general Town-wide creek clean-up efforts. After adoption of the MRP in 2009, clean-up efforts for this site shifted to Hotspot assessment protocols and categorization. These results are reported in the Town’s Stormwater annual report each year. This site was selected for the Town’s Hotspot since it collects stormwater from a very large tributary area starting in the hills. Run-off is collected into pipes as it goes through a residential area and the entire south half of Danville’s commercial/retail area downtown. Finally, water in the pipe daylights just before it enters San Ramon Creek. In the past, a significant amount of trash accumulated in this section of creek. Since the implementation of the MRP Hotspot protocol, the Town has documented that it is a favorite spot for homeless people to loiter and litter. Bottles can often be found, but a minimal amount of light-weight litter is actually collected. The total amount of litter collected here is contrary to staff knowledge and routine visual inspections of the site. The banks of this section of creek are steep and hardened. The Town believes that much of the litter that accumulates in this Hotspot probably passes through and that is why the Hotspot assessment reports such little trash collected on an annual basis. So the Town is currently evaluating how to stay in compliance with the MRP Hotspot reporting requirements and still be allowed to implement measures to reduce trash in this area.

Location 2: All of San Ramon Creek is located within the jurisdiction of the Contra Costa County Flood Control and Water Conservation District (CCCFCWCD) or is on private property. Danville does not do maintenance in San Ramon Creek since it is not in our jurisdiction. Beginning in 2013, at the Town’s first Earth Day event, a local citizen’s creek advocacy group, Friends of San Ramon Creek, participated in the Town’s Earth Day event and teamed up with East Bay Regional Park District to do a creek/nature walk and talk and pick up litter too. It is hopeful that this event and activity will be an annual event. Since the CCCFCWCD does not have resources to clean up creeks in our jurisdiction, this annual activity is anticipated to be very effective and is supported by the Town.

Location 3: The Town has always done and will continue to do annual fall creek maintenance prior to the rainy season. Weeds, trash and debris are mostly removed by hand. In the fall of 2013, the Town was notified by Fish and Wildlife through the permitting process that access and maintenance in creeks is now more controlled and regulated. These new regulations make creek clean-up efforts difficult and much more expensive.

Location 4: The local Friends of San Ramon Creek group (previously mentioned above) also organizes various creek clean-ups and Arundo eradication projects. In addition, other creek clean-up projects are sometimes organized by community service groups, churches or Boy Scouts. For example, Boy Scout

community service activities occur each year in the Town of Danville. As a part of the Town's curb marker replacement program, scouts pick up litter and trash near each catch basin and have recently begun to report these quantities to the Town. They also replace the curb marker.

C. Trash Reduction Policies

In general, the Town of Danville is a pretty clean city because trash pick-up has always been a high priority throughout the community. In addition, sports programs and special events are required to work with Town staff to manage their trash pick-up efforts to Town standards. Other than the Town's Stormwater ordinance, which includes parking lot maintenance and litter control requirements, the Town does not have a ban on bags, foam or food service ware.

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, 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.

The only high trash area in Danville is located in the parking lot of San Ramon Valley High School near the Town's downtown. After adoption of the 2009 MRP, the Town teamed up with the Environmental Science teacher at the high school and agreed upon a plan of action and various methods to educate students on how to reduce trash in and near the school. The plan included Town actions as well as student involvement in developing various outreach methods to both students and parents. This approach will require periodic updating in coordination with the school and students.

Each year the Town also conducts various types of outreach at public events/fairs, in the schools and at Town-sponsored events. Beginning in 2013, the Town Stormwater Program and Recreation Department teamed up with Sustainable Danville Area and the Library to host Danville's first outdoor Earth Day event. It was a zero-waste event where visitors of all ages enjoyed many eco-conscience vendors, hands-on activities, exhibitors, educational speakers and an Earth Day art contest. Since there are a significant amount of school-aged families in Danville, the Town also conducts and funds school-age educational programs (e.g. Kids in Creeks) in the Town's elementary schools each year.

D. Jurisdiction-wide Progress Assessment and Continuous Improvement

The Town's Stormwater Coordinator is responsible for assessing jurisdiction-wide progress and continuous improvement towards trash reduction goals. In addition, Maintenance personnel will also be heavily involved in the day-to-day assessment of trash reduction progress. The quantity of trash that is picked up is not always a positive indicator that trash reduction efforts are working. More trash picked up in containers may mean that there are more containers in the right place. Conversely - less trash in containers could mean either less trash is being produced or the containers are in the wrong place. It seems the best evaluation of effectiveness is by conducting on-land visual assessments after trash reduction efforts have been implemented.

Adaptive management techniques will be employed to assess whether changes are necessary and/or to identify what obstacles need to be corrected in order to progress further. This will be accomplished by conducting regular meetings with maintenance staff responsible for trash pick-up efforts, analyzing billing records to see how much and where trash is being collected downtown and evaluating the amount

of trash that is picked-up. The Town maintenance staff tracks and records trash pick-up data in a computerized maintenance tracking system. This information can be matched against on-land assessments and special events and sports activity schedules. To see if new strategies being employed are effective, maintenance personnel working an event will be interviewed to gather their impressions and to assess whether the litter collection methods and containers are adequate and in the right place.

4. Trash Management Area Plans

A. TMA-Specific Plans

TMA-specific plans for 8 areas 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.

TMA 1 – San Ramon Valley High School: This TMA comprises the school and the area around the High School. Based on the in-field land assessment, a portion of the high school parking lot in this TMA was changed from medium generation to a high generation rate. This site is the only high trash generating area in Danville. Students have off-campus privileges during lunch that contribute to the litter problem on the school grounds and in the surrounding streets as well. This school site is tributary to and is located across Danville Blvd. from San Ramon Creek. Since both the school and creek are non-jurisdictional areas in the Town of Danville, special efforts are needed to coordinate with these two other jurisdictions. The Town is committed to working with the school to identify ways to reduce trash in and around the site. The County has also voiced their willingness to sit down with the School District and the Town to see how to reduce trash in San Ramon Creek.

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		
48	0%	7.0%	67.9%	25.2%	High School and residential	Pedestrian-generated litter

The majority (33 acres) of this TMA is in the medium trash generation category and only the high school parking lot (3.3 acres) off Love Lane is in a high trash generation category. The low generation portion of this TMA is entirely comprised of an attached single family housing development with private interior streets, which abuts the school on the northeast.

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	In 2011, REM full capture devices were installed in the public streets surrounding the school. These devices filter a portion of the high and medium generation area. The Town may possibly consider placing additional full capture devices on the school grounds or in the vicinity in future years if the problem persists.		X	X	X
School public education program	Re-establish program efforts each year to remind and encourage students to pick-up litter and use receptacles		X	X	X
Improved Trash Bins/Container Management	In 2012, new trash and recycling containers were installed throughout downtown and surrounding the high school site. Additional trash and recycling cans were placed at key pedestrian pathways surrounding the high		X		

	school site. The total number of trash and recycling containers in this area was increased by 50%.				
On-land Trash Cleanups	High school grounds cleaned bi-annually by students		X	X	X

After adoption of the 2009 MRP, the Town teamed up with the Environmental Science teacher at the high school and agreed upon a plan of action and various methods to educate students on how to reduce trash in and near the school. The school's environmental teacher and Town staff work together to coordinate and program activities on an annual basis. Students also conduct trash pick-up events and compile trash categorization data for the Town in the same format as the Town's Hotspot data is collected.

The trash plan for this area includes both Town actions/commitments as well as school involvement in developing various outreach methods to both students and parents. This approach will require periodic updating in coordination with school administrators, teachers and students.

Evaluation of Program Effectiveness for Trash Management Area 1		
Control Measure	Evaluation Method	Evaluation Method Details
Full Capture	Document maintenance efforts	Track amount of trash removed for trend ID.
On-land Trash Clean-ups and assessment combined with a school public education program	Document efforts and track quantities	Ask for school involvement to evaluate progress and whether methods used for outreach were effective based on the amount of debris seen in and around campus. The Town will also conduct periodic assessments to evaluate whether progress is being made along the public streets. Since new students come and go each year, educational outreach needs to be performed each year. The Town will report progress in the annual report.

TMA 2 – Downtown: This TMA comprises the entire downtown area. Although most of this area contains retail/commercial land uses, the majority of the area is designated as low trash generation based on the BASMAA On-Land Visual Assessment Protocol. All properties in this TMA were inspected, data recorded, and photographed per the protocol. In some cases based on this protocol, sites were down-graded from medium to a low generation trash rate or from high to a medium trash generation. Picking up litter is a high priority for the Town of Danville in the downtown area. In addition to weekly street sweeping and regular trash/recycling can pick-up maintenance; manned crews do regular on-land trash pick-ups weekly and as needed.

Shortly after adoption of the 2009 MRP, the Town received an ABAG grant to install 61 full trash capture devices. Since this TMA is the Town’s primary commercial/retail area and old town Danville is where the majority of special events occur annually, the Town decided to install the majority of the full capture devices in the old town area of downtown.

Key Characteristics of Trash Management Area 2

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
184.1	0%	0%	13.1%	86.9%	Retail/Commercial and office	Pedestrian-generated litter

The majority of TMA 2 is in the low generation rate category due to good maintenance efforts by the Town. Based on the BASMA On-Land Assessment Protocol, much of the area was re-designated from medium to low trash generation. The primary source of trash on the north end may be from students at the nearby high school who can walk off-campus and go downtown to get food on their lunch hour.

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	In 2011, REM full capture devices were installed throughout old town and in the streets surrounding the school. The Town may possibly add more devices at the south and north ends of this TMA in future years if deemed necessary.		X	X	X

Improved Trash Bins/Container Management	In 2012, new trash and recycling containers were installed throughout downtown and surrounding the high school. Additional trash and recycling cans were placed at key pedestrian pathways. The total number of trash and recycling containers in this area was increased by 50%.		X		
Volunteer Creek Cleanups	Work with the County and the Contra Costa Flood Control and Water Conservation District to allow volunteers to do creek clean ups in San Ramon Creek.		X	X	X
Town Maintenance efforts	Regular street and muni-parking lot sweeping, on-land litter pick-up and trash/recycling can maintenance.	X	X	X	X
Public Education and Outreach	Spread anti-littering message through special events like Business expo, Earth Day, street fairs, special events and Farmers Market, etc.		X	X	X

The Town is in contract with a maintenance company to clean the 61 existing REM full trash capture devices three times a year. In each billing statement, the maintenance records contain a listing of each catch basin that was cleaned, total amount of debris collected and the type of trash removed is categorized.

The Town has an aggressive maintenance program downtown. In addition to weekly street sweeping and trash/recycling can pick-up, maintenance crews do regular on-land trash pick-up weekly and on an as needed basis. The maintenance supervisor responsible for litter pick-up does routine inspections of the downtown area to verify that Town standards are being maintained.

Evaluation of Program Effectiveness for Trash Management Area 2		
Control Measure	Evaluation Method	Evaluation Method Details
Full Capture	Document maintenance efforts	Verify routine maintenance and track amount of trash removed and look for trend identification.
Volunteer Creek Clean-ups	Document efforts and track quantities	This effort will require coordination and approval by the County and the Contra Costa Flood Control and Water Conservation District since the creek located in the downtown area is not in the Town's jurisdiction.
Public Education and Outreach	Number of outreach efforts conducted	Utilize forums such as business expos, Chamber events, fairs, parades, and Farmers Market to provide information and giveaways on trash reduction and pollution prevention. Also email, newsletters, website, direct mail, etc. can be used for information sharing. Keep track of efforts and evaluate the effectiveness based on level of interest and number of people that are reached.
Improved Trash Bins/Container Management	Monitor billing statements and conduct in-field observations.	Monitor whether receptacles are located properly and whether trash is reduced in the area. Combine records tracking (by volume) with visual assessment and monitoring.

Town
Maintenance
efforts

Document litter pick-up
efforts

Track efforts by use of an electronic tracking system.

These TMAs contain a plant nursery (TMA 3), club house (TMA 4) and misc. businesses and churches (TMA 5) on single parcels throughout Danville. Even though the land use activities on each of these sites differ, the trash reduction efforts employed by the Town will be similar. That is why this plan combines these TMAs in one TMA cut sheet since the approach is the same.

Key Characteristics of Trash Management Areas 3, 4, 5

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 – 2.0	0%	0%	100%	0%	Retail/Commercial	business user-generated litter
TMA 4 – 5.1	0%	0%	100%	0%	Club Houses	Pedestrian-generated litter
TMA 5 – 9.7	0%	0%	100%	0%	Misc. businesses/churches	Pedestrian-generated litter

All of these TMAs are designated medium trash generators scattered throughout town. They are non-residential uses but are located on individual parcels located in residential areas, not in a commercial business district. Their customers/users are primarily auto-oriented.

Summary of Control Measures and Implementation Schedule for Trash Management Areas 3, 4, 5

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Anti-littering and Illegal Dumping Enforcement	Targeted business inspections			X	X
Improved Trash Bins/Container Management	Targeted business inspections with public outreach and enforcement if this is an on-site business practice issue			X	X

The Town has a business inspection program that can target these businesses. Inspectors will be notified to look for litter and trash sources and educate the operator if there is a problem. These sites should be monitored and a follow-up site inspection/assessment should be done again. If the status of the trash generation rate doesn't get better, an enforcement letter could be sent notifying them of the Town's enforcement procedures.

Evaluation of Program Effectiveness for Trash Management Areas 3, 4, 5

Control Measure	Evaluation Method	Evaluation Method Details
Business/site inspections	Town Inspection program	Track results

Visual assessments per the BASMA On-Land Protocol will be employed at a future point to evaluate effectiveness of targeted inspection and enforcement program.

TMA 2 – Commercial East Side: This TMA comprises the commercial area near Blackhawk. All of this area contains retail/commercial land uses and is designated as medium trash generation based on the BASMAA On-Land Visual Assessment Protocol. All properties in this TMA were inspected, data recorded, and photographed per the protocol. In some cases based on this protocol, sites were down-graded from high to a medium trash generation.

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		
30.3	0%	0%	91.2%	8.8%	Retail/Commercial and office	Pedestrian-generated litter

The trash issue in this TMA is primarily located in the shopping center parking lots, not in the surrounding public streets. The entire shopping center is privately maintained.

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
Improved Trash Bins/Container Management	Trash bin/container management will be monitored through the Town's enforcement program			X	X
Business Inspection Program with Public Education and Outreach	During the course of routine business inspections, educate the business owners on anti-littering. Work with Property Management Company and targeted businesses on code enforcement issues in the parking lots.			X	X

Evaluation of Program Effectiveness for Trash Management Area 6

Control Measure	Evaluation Method	Evaluation Method Details
Improved Trash Bins/Container Management	Conduct in-field inspections as a part of business inspection program.	Monitor whether shopping center trash and recycling receptacles are properly maintained through the business inspection program. Track and monitor if there's a problem.
Business Inspection Program with Public Education and Outreach	Check parking lot maintenance practices as a part of the business inspection program.	Monitor whether shopping center parking lot is being properly maintained through the business inspection program. Educate property manager and track and monitor if there's a problem.

This TMA includes the U.S. Post Office on the east side of Danville on Camino Tassajara. Based on the Town’s results from the BASMA On-Land Assessment Protocol, this site was designated as a medium trash generator. The land use activities on this site involves a lot of paper and traffic.

Key Characteristics of Trash Management Area 7

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
TMA 7 – 4.7	0%	0%	100%	0%	Retail/Commercial	Auto and pedestrian-generated litter

This is a non-jurisdictional site in Danville. It is a non-residential use located in a residential area, not in a commercial business district. Their customers/users are primarily auto-oriented.

Summary of Control Measures and Implementation Schedule for Trash Management Area 7

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Direct communication and outreach with operator	Targeted business outreach			X	X
Improved Trash Bins/Container Management	Targeted business outreach			X	X

Since this is a Federal operation it will be difficult for the Town to do enforcement. Town inspectors will have to try and educate the operator of the problem and try to work out solutions to the problem. The site should be monitored and a follow-up site inspection/assessment should be done again in the future.

Evaluation of Program Effectiveness for Trash Management Area 7

Control Measure	Evaluation Method	Evaluation Method Details
Periodic Inspection and outreach with operator	BASMA On-Land Assessment Protocol Inspection	Track findings

Visual assessments per the BASMA On-Land Protocol will be employed at a future point to evaluate effectiveness of targeted inspection and public education efforts.

TMA 8 comprises the entire Town. The Town does regular outreach to residents through the Town’s website, direct mail/email and through special events. Various outreach efforts are directed to the general public to educate residents on pollution prevention and how to reduce trash in our watershed. In addition, the Town conducts daily and weekly routine maintenance in parks, public parking lots, along roadsides, in creeks, etc. and addresses trash needs at all special events throughout the year.

Key Characteristics of Trash Management Area 8

Total Jurisdictional Area (Acres)	Percent in Trash Generation Category				Dominant Land Uses	Dominant Types and Sources of Trash
	Very High	High	Medium	Low		
11,391	0.0%	.03%	.93%	99.04%	Single Family detached residential	Auto, pedestrian and blow-off litter from garbage truck pick-up

The majority of this TMA is in the low trash generation category since Danville is mostly comprised of detached single family homes on traditional suburban streets. The second largest land use category in TMA 8 is “Other”, which in Danville’s case includes large open spaces and agricultural lands. Most all the ridgelines in Danville have been preserved for open space through Deed Restrictions. A small portion of TMA 8 includes the commercial/retail area of Danville which is relatively minor in comparison to the Town and it is fairly clean and well maintained. Most of the school sites are very clean as well and earned a low trash generation category based on the BASMAA On-Land Assessment Protocol. The measures outlined for this TMA do not include the efforts outlined in all the other TMAs.

Summary of Control Measures and Implementation Schedule for Trash Management Area 8

Control Measure	Control Measure Details	Pre-MRP	12/2009 to 7/2014	7/2014 to 7/2017	After 7/2017
Full Capture Treatment Devices	In 2011, REM full capture trash devices were installed in the old town area of downtown and the nearby high school (see TMA 1 and 2). The Town will evaluate and may add additional devices for other drainage areas in future years if problems arise.		X	X	X
School public education program	Utilized watershed outreach programs such as Kids for the Bay each year to remind and encourage students to pick-up litter, use trash/recycling receptacles and educate students on pollution prevention in general.		X	X	X
Improved Trash Bins/Container Management	In 2012, new trash and recycling containers were installed throughout the downtown and the nearby high school. Additional trash and recycling cans may be added in the parks and throughout Town at key locations based on need.		X	X	X

Volunteer On-land and Creek Cleanups	Encourage volunteer and community service groups to do on-land and creek clean-ups.		X	X	X
Special Events Management and Public Outreach	Spread anti-littering message through special events like Earth Day, street fairs, 4 th of July parade and Farmers Market, etc. Ensure proper trash management at special events.		X	X	X
General litter pick-up and creek maintenance by Town staff	Town maintenance crews conduct routine maintenance efforts on a daily and weekly basis throughout town.	X	X	X	X

Town staff work with the school system to coordinate and program educational activities on stormwater pollution prevention on an annual basis (e.g. Kids for the Bay). Although the Town has been conducting outreach to various schools in town for a long time, a stronger anti-littering message will be incorporated into the outreach efforts. The Town also strives to rotate these educational programs around town to various schools geographically. In addition, Town staff may also be involved in school environmental fairs, speaking engagements, and/or assisting schools in doing trash pick-up service projects. Anti-littering and trash reduction message will become a primary message in these educational outreach efforts.

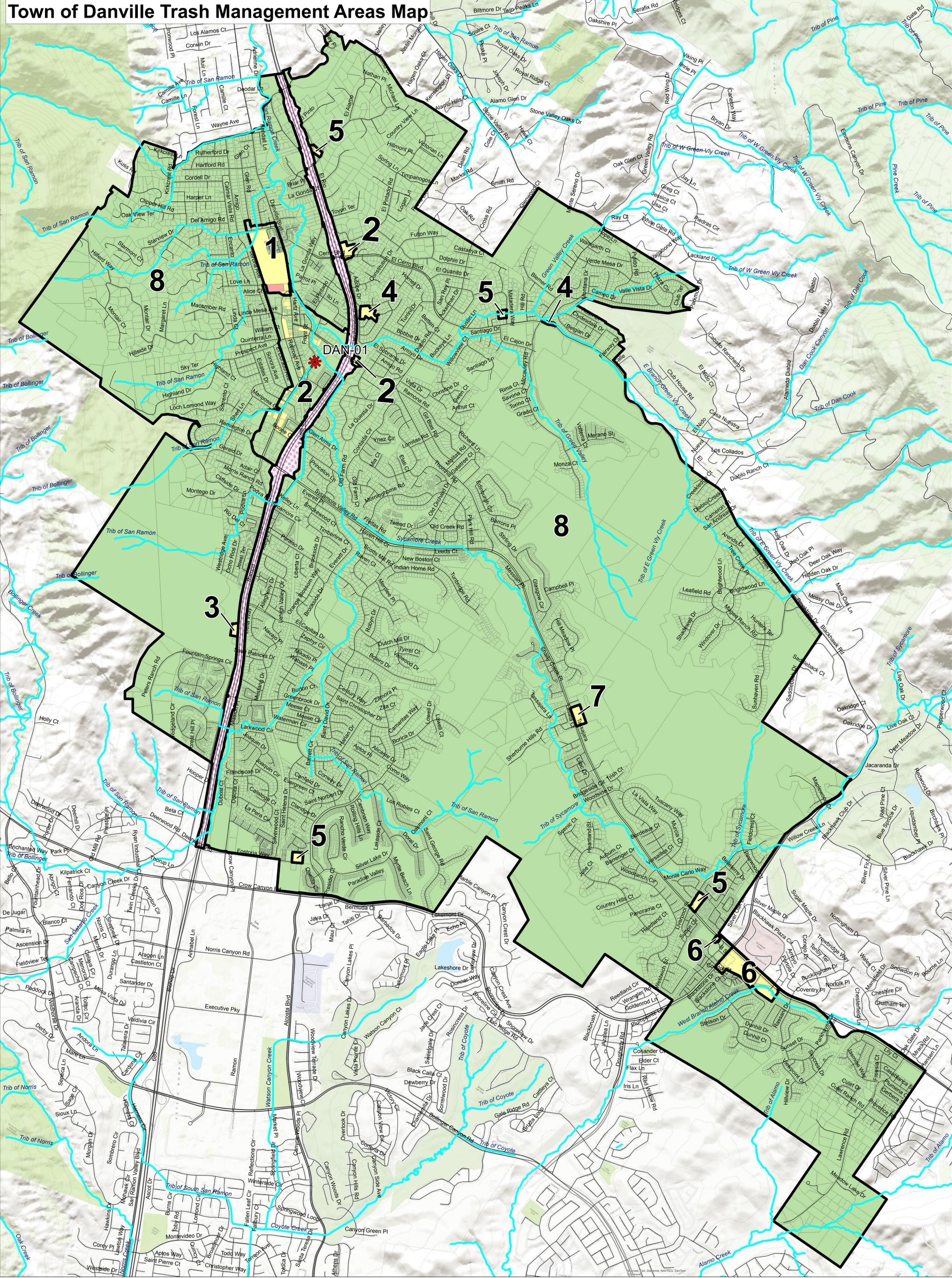
Public outreach for special events includes both Town actions/commitments as well as involvement from special event vendors. Although the Town has always required vendors to be responsible for handling their trash, the Town will now require the vendors to do a trash management plan for both during and after the event. Trash containment and clean-up requirements for special events will become more formalized. In 2013, the Town hosted a community Earth Day event outdoors in addition to the annual art contest. The Town achieved the zero waste goal for the event.

General litter clean-up and creek maintenance is done routinely Town wide. Illegal roadside trash dumps are cleaned up 2-3 per month by staff. Litter is picked up routinely along streets, sidewalks, and parking lots 2-3 times a week downtown. Also litter is picked up 2-3 times a week along the roadsides of Camino Tassajara and Sycamore Valley Road and on sidewalks, medians and on the creekside trail. Camino Ramon roadside litter is also picked up once per week. Other roadsides in Town are done on an as-needed basis based on a routine visual assessment. The Maintenance supervisor in charge of litter pick-up conducts daily inspections looking for areas in need of trash and litter pick-up. Along creekside trails, dog bag dispensers (supplied by the Town) are adjacent to trash receptacles. Trail litter is generally picked up once per week in the winter, then at a minimum of two times a week in the summer based on need. In general, Maintenance staff knows which receptacles are used the most and those are checked more frequently. For Town sponsored sports leagues like Bocce, and organized youth sports leagues like soccer and baseball, litter is picked up daily during the spring, summer and fall. Trash and recycling cans are frequently picked up during that time of year as well. Sports on the

natural grass fields slows down in the winter, but the artificial turf fields are played on year round and have daily litter pick-up when they are in season.

Evaluation of Program Effectiveness for Trash Management Area 8		
Control Measure	Evaluation Method	Evaluation Method Details
Full Capture	Document maintenance efforts	Track amount of trash removed for trend ID.
On-land Trash Clean-ups and assessment combined with a school public education program	Document efforts and track quantities	Ask for school involvement to evaluate progress and whether methods used for outreach were effective based on the amount of debris seen in and around campus. The Town will also conduct periodic assessments to evaluate whether progress is being made along the public streets. Since new students come and go each year, educational outreach needs to be performed each year. The Town will report progress in the annual report.
General litter pick-up and creek maintenance by Town staff	Document efforts	Track efforts by use of an electronic tracking system.

Town of Danville Trash Management Areas Map



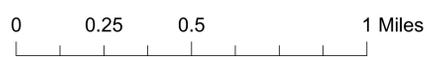
Legend

Trash Generation Category

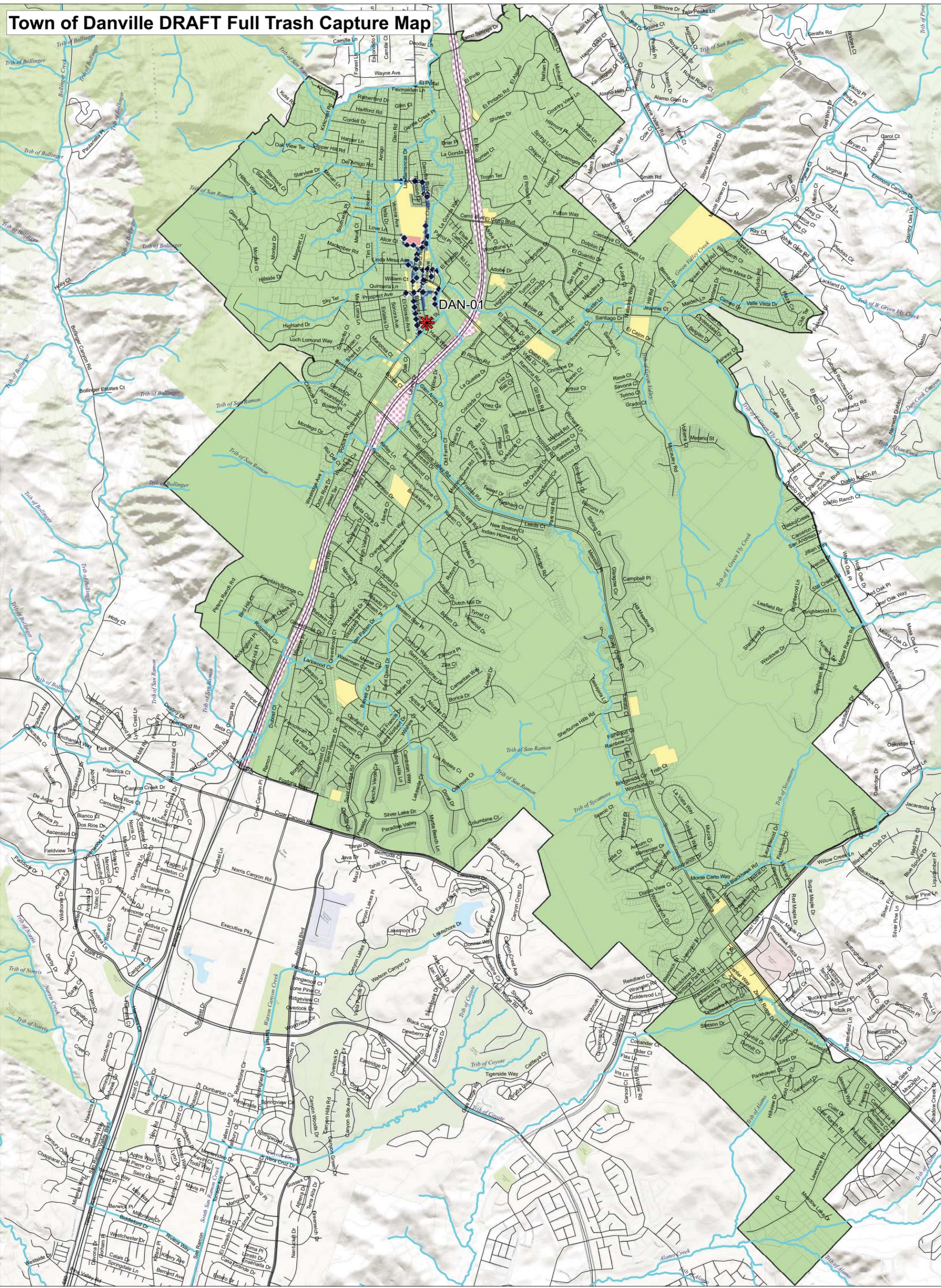
- Low
- Medium
- High
- Very High
- * Creek/Shoreline Hotspot
- Trash Management Area
- Non-Jurisdictional (Dot color = Generation Category)
- Streets
- Agency Boundary
- Creeks
- Parcel Boundary

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

Map Created By:
 EOA, Inc.
Date:
 January 23rd, 2014



Town of Danville DRAFT 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

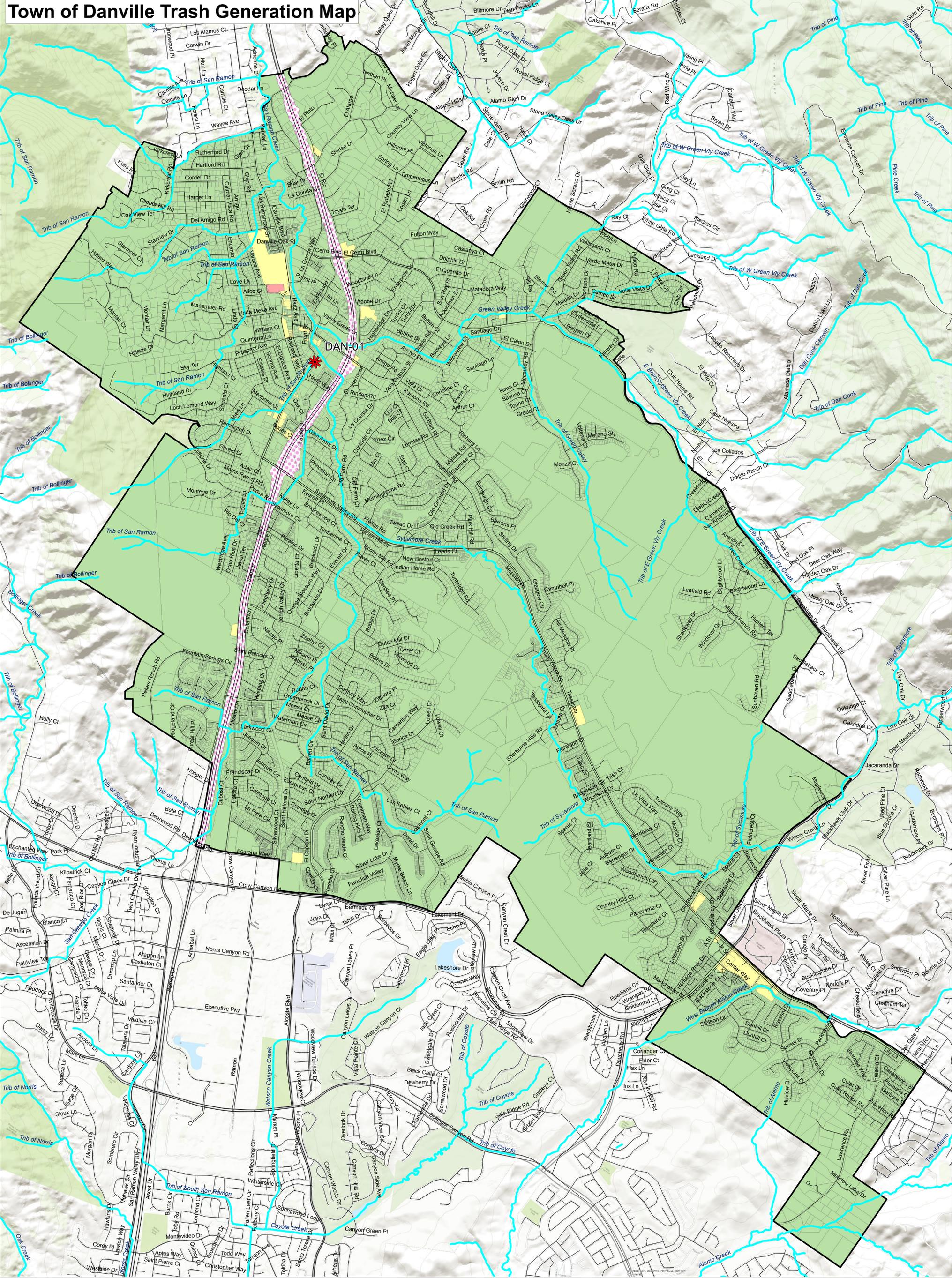


Data Sources:
 Roads: Tele Atlas
 City Boundaries: Contra Costa County
 Background: ESRI World Topographic Map

Map Created By:
 EOA, Inc.

Date:
 August 30th, 2013

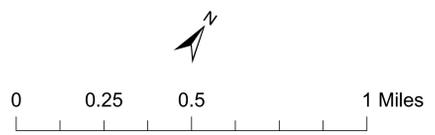
Town of Danville Trash Generation Map



Legend

Trash Generation Category

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



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Map Created By:
 EOA, Inc.

Date:
 January 23rd, 2014