



Trash Management in Santa Clara Valley

Reducing the impacts of litter on local creeks and San Francisco Bay

Trash is present at harmful levels in many San Francisco Bay Area creeks and shorelines. This can pose a threat to aquatic life and degrade recreational experiences. Recent studies suggest that plastic trash persists for hundreds of years in the environment and can impact wildlife that eat or get trapped in it. Plastic trash concentrates chemicals that can harm fish and other aquatic life. Cigarette butts leach toxic chemicals and are the most frequently littered item. In response to concerns about urban trash impacts on water bodies, in 2010 the San Francisco Bay Regional Water Quality Control Board (Regional Water Board) identified 27 creeks, rivers and shorelines as impaired by trash. A number of these waterways are located in the Santa Clara Valley.

Pathways

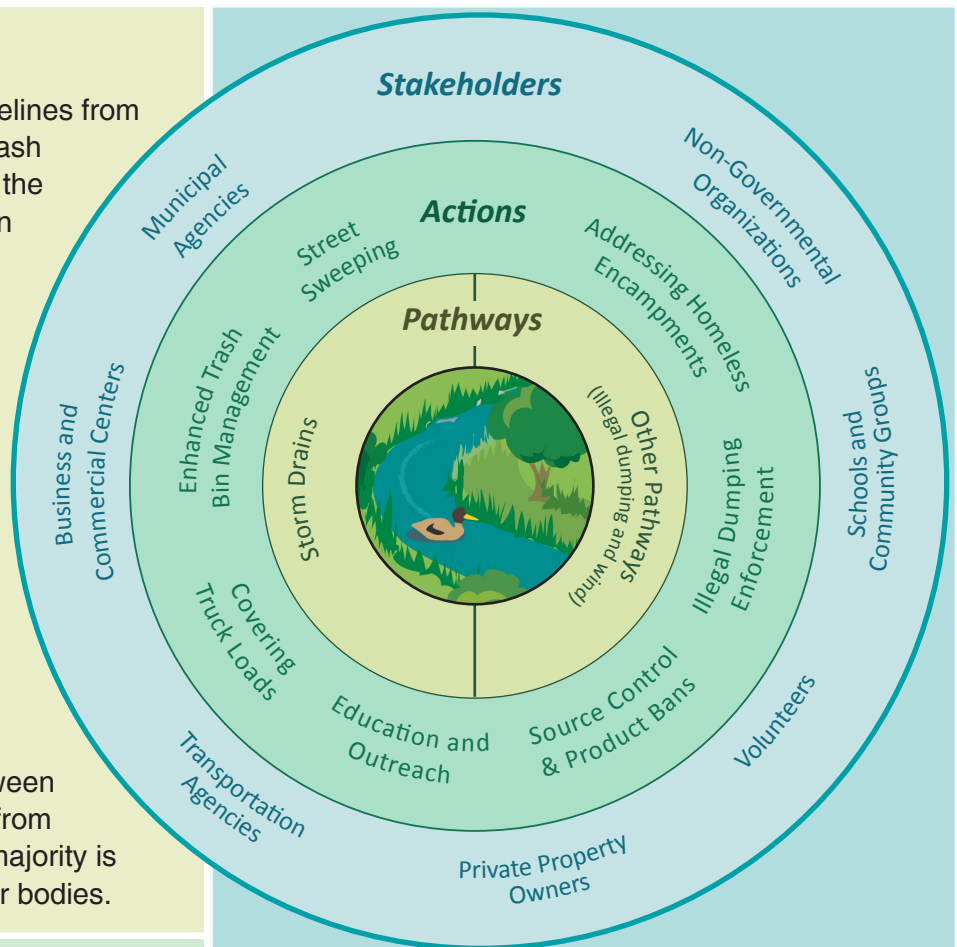
Trash enters local creeks and shorelines from various sources and pathways. Trash finds its way to waterways through the storm drain system, or is windblown or dumped directly in waterways. Recent trash characterization monitoring conducted in Santa Clara Valley provided valuable information about the importance of each of these pathways. This information is increasingly important as agencies and volunteer organizations work to combat the trash problem. The amount of trash that makes its way to Santa Clara Valley creeks and shorelines each year could fill more than 600 garbage trucks. Rough estimates suggest that between 10% and 25% of this trash comes from the storm drain system, while the majority is directly dumped or blown into water bodies.

Actions

To significantly reduce the amount of trash reaching local waterways, a wide array of actions are necessary. These include: 1) reducing the amount of waste created and preventing litter, 2) intercepting trash when it is littered onto streets and sidewalks, and 3) cleaning it up once it reaches local creeks and shorelines. Prevention and waste reduction actions are the most economical ways to reduce the impacts of trash.

Stakeholders

We all play a part in limiting trash and litter. Individuals, private businesses, schools and universities, non-governmental organizations (NGO's), volunteers, and public agencies need to be engaged. Santa Clara Valley municipalities are taking the lead in preventing, intercepting and cleaning up trash, in collaboration with NGO's. Additional coordination and actions targeting areas where trash is generated and at specific hot spots are needed.



Preventing Trash in Storm Drains

The storm drain system transports rain water from the urban environment, streets and buildings, into local creeks and shorelines without treating it. Many public agencies (e.g., cities/counties and transportation agencies) and private businesses own and maintain these systems. These entities are required by the Regional Water Board to significantly reduce the amount of trash coming to creeks and shorelines from their systems.



Santa Clara Valley Municipalities

Cities and counties in the Bay Area are required by the Regional Water Board to significantly reduce trash from their storm drain systems – 40% by 2014, 70% by 2017, and 80% by 2019. Municipalities demonstrate that they have met these targets using a variety of monitoring and assessment methods. The table below illustrates the progress made by municipalities through June 2015.

Stormwater Management Actions	Monitoring Method	Trash Reduction To-date*
Jurisdiction-Wide Source Controls – Municipal ordinances banning the distribution of litter-prone items, and public outreach and education campaigns.	Surveys and Monitoring – Assessment of business, customers, streets, storm drains, and creeks before and after ordinance adoption. Pre- and post-campaign surveys.	13%
On-land Institutional Actions <ul style="list-style-type: none"> ▶ Enhanced Street Sweeping ▶ On-land Street Cleanups ▶ Trash bin and container management ▶ Prevention of uncovered vehicle loads ▶ Business improvement plans 	On-Land Visual Assessments – Over 500 assessments consisting of scoring the level of trash on streets and sidewalks available to the storm drain system.	12%
Trash Full Capture Treatment Systems – Installation and maintenance of over 900 systems in storm drain inlets and conveyance pipes treating over 6,600 acres.	Operation and Maintenance – Ongoing operation and maintenance including clean-outs and repairs (as needed).	14%
Creek and Shoreline Cleanups – Removal of trash from over 80 trash hot spots to a level of no adverse impacts in local creeks and shorelines with the assistance of volunteers and the Santa Clara Valley Water District.	Assessments – Before and after photographs of creek/shoreline condition, documentation of trash sources, and volumes removed during cleanups.	16%

*Trash reductions in this table are based on calculation methods that may be revised in the future.

Transportation Agencies

To address trash on local roadways, near public transportation facilities, and State highways, the California Department of Transportation (Caltrans) and Valley Transportation Authority (VTA) are taking action. These important players in solving the trash problem in Santa Clara Valley are subject to requirements for trash reduction that are separate from the city/county permit requirements. Municipalities are collaborating with VTA on educating the public about litter reduction and Caltrans is conducting public education and outreach, street sweeping, litter removal (on-land cleanups) and improved trash bin/container management programs. These agencies have not yet reported on their progress towards trash load reduction goals.

Industrial Facilities and Construction Sites

Industrial businesses and construction sites operating under Regional Water Board issued stormwater permits are responsible for implementing controls to prevent trash from migrating from their locations. Trash controls are outlined in Stormwater Pollution Prevention Plans (SWPPP) required for these locations. Permitted businesses and developers have yet to report on their progress towards trash load reduction goals.

Addressing Other Trash Pathways

Trash is also deposited directly into local creeks and shorelines by wind or illegal dumping. These “non-point source” trash pathways are often more difficult to regulate and manage than storm drain sources, which are regulated through stormwater permits. The Regional Water Board sets policies and carries out programs to control these direct sources of trash water pollution. For some creeks and shorelines, direct dumping and wind-blown trash dominate. For example, after assessing the amount of trash originating from homeless encampments, the City of San José estimates that the vast majority of trash removed from Coyote Creek comes from pathways other than the storm drains.

Preventing Direct Dumping and Homeless Encampment Impacts

The effect of illegal dumping and homeless encampments on the amount of trash in local waterways is evident in one of the largest creeks in the Santa Clara Valley - Coyote Creek. The most-heavily affected areas along the creek are mostly located in San José, the 3rd largest city in California. San José and other municipalities have carried out extensive efforts to reduce the trash impacts associated with homeless encampments along Coyote Creek and other waterways in the Valley. Through partnerships with NGO's, San José has worked to relocate homeless individuals, clean up encampments and prevent their reestablishment near local waterways. Through partnerships with Park Rangers and the non-profit *Downtown Streets Team*, San José recently initiated a pilot Placed-Based Rapid Re-Housing Program that aims to provide housing to homeless individuals and families. Many of these individuals occupied one of the largest encampments in the nation, which was closed and cleaned up in December, 2014 by the Santa Clara Valley Water District and San José. A number of cities in the Valley have also installed barriers, including gates and boulders, to prevent vehicle access to encampment areas, reduce illegal dumping, and hopefully reduce the amount of trash present in and near creeks.



Santa Clara Valley municipalities partners with Downtown Streets Team to conduct litter cleanups in local creeks.

Reducing Trash Transported by Wind

Trash items that are light weight and mobile can be blown into local creeks and the Bay. Controls focused on reducing trash in storm drains and illegal dumping also reduce the litter available for transport by wind. Management actions such as banning litter-prone products, education and outreach, street sweeping, improved trash bin/container management, preventing uncovered loads, and on-land cleanups all have an effect on reducing the trash available for wind to blow into local creeks and shorelines.

Zero Litter Initiative (ZLI)

The Santa Clara Valley Zero Litter Initiative (ZLI) was formed in 2010 as a subcommittee of the Santa Clara Basin Watershed Management Initiative. The ZLI was formed to bring together stakeholders interested in eliminating litter and its impacts throughout the Santa Clara Valley. The ZLI combats this multi-faceted problem by bringing stakeholders together to identify collaborative solutions. Since forming, ZLI has conducted roundtables about litter associated with garbage/recycling collection including a Right-Size Right-Service campaign for locations where dumpsters are contributing litter to the storm drain, transport and disposal pathways. Other topics of interest identified by ZLI stakeholders include litter reduction solutions via business engagement, law/code enforcement and highway/freeway controls. For additional information on the ZLI visit www.scbwmi.org.

Cleaning Up Creeks and Shorelines

Although trash management actions by municipalities and other government agencies are primarily focused on stopping the generation of trash at its source and intercepting it before impacts to water quality can occur, considerable efforts are also made by these entities, NGO's and volunteers to clean up trash that has already made its way to creeks and shorelines. Millions of gallons of trash have been cleaned up from Santa Clara Valley creeks and San Francisco Bay shorelines over the last decade.

Between July 2014 and June 2015 alone, more than 21,000 cubic yards (4.3 million gallons) of trash was cleaned up from Valley waterways. Scheduled creek and shoreline cleanups are conducted by Santa Clara Valley cities, the County, the Santa Clara Valley Water District, NGO's and/or volunteers during Earth Day, National River Cleanup Day, Coastal Cleanup Day, routine maintenance events, homeless encampment response and removals, and illegal dumping response and abatement actions. Annual cleanups occur at over 80 trash hot spots in Santa Clara Valley creek and shorelines.



Cupertino Creek Cleanup with students from De Anza College



Downtown Streets Team works with homeless individuals to perform litter cleanups along Coyote Creek.

Through public agency and non-profit partnerships, innovative cleanup strategies are also in place. For example, the City of San José's Housing Department recently implemented a Homelessness Response Team that helped remove 1,152 tons of trash and debris from creeks and riparian corridors during 224 cleanups. Palo Alto, Sunnyvale and San José have also partnered with the non-profit organization *Downtown Streets Team* to recruit and organize homeless individuals to perform litter cleanup along creeks and within their watersheds. In return, participants receive training, food and housing vouchers, and a case worker to assist them in finding permanent housing and employment.

Trash Management Webinar Series

In 2016 the Santa Clara Valley ZLI plans to begin hosting a webinar series on Trash Management and Assessment covering a range of topics. The webinars will be focused on sharing the trash management experiences of public agencies and open to the public.

For more details, visit
www.scbwmi.org

This fact sheet was developed by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) for the Zero Litter Initiative, with input from the Valley Transit Authority (VTA). SCVURPPP is an association of the thirteen cities and towns (Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Milpitas, Monte Sereno, Mountain View, Palo Alto, San José, Santa Clara, Saratoga, and Sunnyvale) in the Santa Clara Valley, together with Santa Clara County and the Santa Clara Valley Water District. Program participants share a common permit to discharge stormwater to South San Francisco Bay. Additional information on the Program can be found at www.scvurppp.org.

