



The City of San Diego Storm Water Department

Street Sweeping Water Quality Protection Project

Due to new Clean Water Regulations required by the EPA and the California State Water Resources Control Board, municipalities across the state are implementing projects and programs to address local water quality issues. Pollution (such as fine metal particles) washes down from the City's roadways, entering San Diego Bay, Mission Bay and the ocean off La Jolla Shores. The pollution in these water bodies includes bacteria, pesticides, metals, sediment and trash.

The City of San Diego is required to address the pollution in these water bodies, and has developed a Strategic Plan in order to do so. The Strategic Plan is intended to develop solutions that are cost effective, economical and have maximum impact in reducing pollutants while minimizing impacts to residents, businesses and local neighborhoods.

At the recommendation of the EPA, and based in part on their research, it was determined that one effective way to remove fine metal particles is by street sweeping. Therefore, the City is implementing a Street Sweeping Water Quality Protection Project, in the form of a Pilot Study to address pollution caused by dissolved metals in various water bodies in the city. The areas chosen are upstream and drain to the water bodies most impaired by metals pollution.

In response to residents' questions, the City is providing information to residents and businesses about the Project in the form of these Frequently Asked Questions (FAQs). These answers provide detailed information regarding the Street Sweeping Project.



The Street Sweeping Project:

Q: What is the “Street Sweeping Project” and what is the purpose?

- A Due to new Clean Water Regulations required by the EPA and the California State Water Resources Control Board, the Storm Water Pollution Prevention Division will be stepping up the City’s street sweeping efforts to help reduce pollution entering San Diego Bay, Mission Bay and the ocean off La Jolla Shores. The City developed a Street Sweeping pilot study project that will provide more frequent street sweeping in the developed areas that drain into these waters. The Pilot Study will last approximately 24 months (two wet seasons and two dry seasons), which helps increase the validity of the data collected.
- A The goals of the project are:
- 1) To help reduce pollution (such as debris and fine metal particles) that washes down from the City’s roadways, entering San Diego Bay, Mission Bay and the ocean off La Jolla Shores
 - 2) To determine if different street sweeping frequencies in both residential and commercial areas and/or newly acquired vacuum-assisted sweepers are more efficient or cost effective
 - 3) To help the City better comply with new obligatory local, state and federal clean water regulations.

Scientific Basis for the Project and Study:

Q: Why is this program being conducted?

- A The City is obligated to conduct pollution prevention projects based on new Clean Water Regulations required by the EPA and the California State Water Resources Control Board. In the City of San Diego, one of the pollutants of highest concern is dissolved metals, which are fine particles that collect like dust (from brake pads, for example) in the gutters along City streets. When it rains or there is urban runoff (over-irrigation, for example) these particles get washed down into the storm drain and end up in creeks, rivers and eventually the bay and ocean. The three pilot areas chosen contain water bodies that are impacted by this runoff. In the mid-City area, the water bodies most impacted are Chollas Creek and San Diego Bay. In the Clairemont area, the water bodies include Tecolote Creek and Mission Bay. In La Jolla, the Marine Protected Areas (MPAs) and Areas of Special Biological Significance (ASBS) are most impacted. Therefore, this project is very important to the City not only for regulatory compliance but for the clean water benefit that we hope to attain, especially in the waters downstream of these neighborhoods.

Q: Why are you sweeping my street when my street is clean?

- A One of the pollutants of highest concern in San Diego is dissolved metals, which are fine particles that collect like dust (from brake pads, for example) in the gutters along City streets. This dust is so fine, it is difficult to see and dissolves in water, which is why it is referred to as “dissolved metals”.

Q: Why was Street Sweeping chosen instead of another project?

- A The City will be implementing several projects over the next several years in addition to street sweeping. The Pilot Study springs from the City’s *Strategic Plan for Watershed Activity Implementation* www.sandiego.gov/thinkblue/programreports/index.shtml completed in November 2007. This Plan outlines a prioritization process that helped identify areas of the City to target for water quality activity implementation and what types of activities to implement to meet multiple storm water regulations in an integrated and efficient manner. Research indicates that one effective way to remove the fine metal particles is street sweeping.

Q: Is Street Sweeping really effective at removing pollutants and protecting water quality?

- A Yes. Decades of research are available on the effectiveness of street sweeping for the removal of pollutants from the environment. The major improvement that has occurred over the last several years is the development of street sweepers which are termed "regenerative". These sophisticated machines are capable of removing particulate matter in a lower particle size range than the older model mechanical sweepers. The EPA, other cities and agencies across the country have implemented Street Sweeping Programs with much success. Some programs have targeted the removal of trash and other debris, while some have

targeted the removal of dissolved metals, similar to this Study. In San Diego county, the City of San Diego, Caltrans, the Port and other cities such as Escondido, are also increasing street sweeping.

Please see the following articles for more information:

For studies conducted in other cities, please see: www.forester.net/sw_0407_street.html

For street sweeping recommend by the EPA and the State of California, please see:

www.fhwa.dot.gov/environment/ultraurb/3fs16.htm and www.coastal.ca.gov/la/docs/murp/4j.pdf

For more scientific information, please see: http://pubs.usgs.gov/sir/2005/5184/pdf/SIR2005_5184_all.pdf.

Location Selection:

Q: How/why did you choose my neighborhood/street?

- A Locations for this Study were selected based on monitoring data (such as the results of aerial deposition studies) showing that these areas have a high potential for metal contaminants. In other words, the pilot areas typically have, or are near, high concentrations of industrial and commercial facilities, auto facilities, and/or are crisscrossed with heavily traveled major streets and highways.

Q: Why wasn't my street chosen for the Pilot Study?

- A Unfortunately, the City doesn't have the resources or staff to sweep every street in the City at an increased frequency. This Pilot Study is a test to determine the most effective sweeping schedules and sweepers. If this study is shown to reduce pollutants, the City will assess adding more streets and areas across the City. If this study shows that current levels of sweeping are effective, the City may implement other programs to help reduce pollution.

Scheduling, Signs and Parking Information:

Q: Why are there new Street Sweeping signs on my block and/or marks in the street?

- A There are new "No Parking" signs are related to the Street Sweeping Study. The City is mandated by law (California Vehicle Code 22507.6.) to display signs that indicate when street sweeping occurs, so that businesses and residents are aware of the activity. The law requires that, at minimum, signs be placed at both ends of a City block, with one sign in the middle, for a total of three signs per block, per side. To place signs, Street Division uses a service called DigAlert for projects that could impact any water, sewer, phone or electrical lines. DigAlert indicates the location of underground lines by marking the street so that City crews can install the signs in safe locations, and avoid existing underground utility lines.

Q: Why do I have to move my car?

- A Since the majority of brake dust collects in the gutters, street sweeping has the highest success rate when cars and other vehicles are moved away from the curb and the sweepers can reach the gutters.

Q: Where am I supposed to park?

- A Routes alternate each day on the opposite sides of the street. The best place to park is on the side of the street where the sweeping is not occurring, if parking is available. We apologize for this inconvenience, but it is a necessary aspect of the Study to sweep the debris and fine particles out of the gutters.

Q: When will the sweeper come down my street?

- A The City has posted and will be posting new signs in each neighborhood indicating the new routes. Street sweeping only occurs during the week (not on weekends) in the mornings (generally from 2:00am-6:00am for commercial areas and generally 7:00am-11:00am for residential areas). Please be aware that it is the City's policy to avoid sweeping both sides of the street on the same day, due to the hardship it creates for parking. Therefore, the sweeper will sweep one side of the street on one day, and the other side on another day. Please refer to the posted signs for the new schedule on each street.

Q: What happens if the sweeper doesn't come down my street on the posted day?

- A Occasionally, street sweepers suffer from mechanical issues or break down before or during a route. This project only has the funding to purchase two new street sweeping machines. Since the Study is testing the effectiveness of the new machines, posted routes will be cancelled if the new machines break down or experience any failures to perform to expected standards.

Funding and Costs:

Q. What is the estimated cost of the Study?

- A Below are the rounded cost figures for the entire Street Sweeping Pilot Study project (all three community areas for the full two years). Currently, all funding comes from the Storm Water's operating budget (the City's General Fund). Storm Water is seeking grant funding for this project.

\$ 384,000 2 new street sweeping machines (1 regenerative air; 1 pure vacuum)

\$ 136,000 signs indicating new routes and times

\$ 330,000 monitoring/assessment of debris collected

\$ 23,000 roll-off bins to store debris during testing (quantity 6)

\$ 5,000 outreach material for public education

\$ 878,000 Total*

* *This cost estimate does not include labor*

Q: Why is this money being spent on street sweeping when our City is in a financial crisis?

- A New state and federal clean water act regulations require that municipalities engage in water quality improvement projects in impacted areas around the County. Many of these regulations are required by the Regional Water Quality Control Board, Region 9 here in San Diego. Please see <http://www.swrcb.ca.gov> and reference the "Storm Water" section for more information. The City is committed to improving water quality throughout San Diego. Water quality protection and improvement projects are an important part of maintaining our quality of life. The City is also obligated to conduct pollution prevention projects based on new Clean Water Regulations required by the EPA and the State Water Resources Control Board.

For more information regarding clean water regulations, please see:

California State Water Resources Control Board: <http://www.swrcb.ca.gov>

Regional Water Quality Control Board, San Diego Region (9): www.waterboards.ca.gov/sandiego

9174 Skypark Court, Suite 100,

San Diego, CA 92123 info9@waterboards.ca.gov

Phone: (858) 467-2952

U.S. Environmental Protection Agency

Clean Water Act: <http://www.epa.gov/watertrain/cwa>

California / Region 9: <http://www.epa.gov/watershed/region/region9>

Office of Wetlands, Oceans, and Watersheds (4503T)

1200 Pennsylvania Avenue, N.W.,

Washington, D.C. 20460

Phone: 202-566-1155

For additional information on Street Sweeping or routes in a particular area, please call (619) 527-7500. For questions regarding the pilot study and other water quality improvement programs, please see the Think Blue website at www.ThinkBlue.org or call the Storm Water Department, Pollution Prevention Division Hotline at (619) 235-1000.

