



2005 SEP 15 P 4: 22

SAN DIEGO REGIONAL
WATER QUALITY
CONTROL BOARD

SEMI-ANNUAL REPORT: ADDRESSING FLOATING MATERIAL IN CHOLLAS AND PALETA CREEKS

September 15, 2005

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I. BACKGROUND

Excessive trash is a societal and environmental issue that is broader than the storm water pollution prevention programs that are solely charged with improving water quality. Littering is a behavior reflecting society's general perspective that trash and litter is everyone else's problem to manage. The general population does not understand the incremental effects that littering has on San Diego's ecosystem, and their role in litter prevention. Residents and businesses have an even harder time understanding the cause and effect relationship between littering and water quality problems in the region and their role in creating and preventing this problem. And, in the Mid-City region of the City of San Diego, where Chollas and Paleta Creeks are located, efforts to reduce and eliminate trash and littering are further compounded by the economic and cultural make-up of the area. This region is home to numerous first generation and immigrant populations unfamiliar with American environmental ideals and laws. Persuading citizens to accept a sense of environmental responsibility and effectively change practices is a long-term prospect requiring resources beyond those available to local storm water programs.

Trash accumulates within the storm water conveyance system during periods of dry weather and then washes downstream during rain events. Although municipalities recognize this process, reducing littering and achieving behavioral change is a challenge that is beyond the scope, resources and authority of municipal storm water programs. Litter is an issue that must be tackled and sustained at the state level through integration of solid waste program expertise with other environmental issues and programs impacted by litter pollution. Lacking more effective methods and resources to tackle litter as a water quality pollutant, and recognizing that litter is a potential issue wherever there is development, the City of San Diego addresses litter consistently throughout the City without consideration of location.

Pursuant to Section C.2 of the Municipal Storm Water Permit (California Regional Water Quality Control Board – San Diego Region, Order No. 2001-01), the City of San Diego is required to report twice a year on existing and planned Best Management Practices (BMPs) to prevent or reduce trash, debris, and other floating materials in Chollas and Paleta Creeks. This report represents the third semi-annual report submitted to the California Regional Water Quality Control Board – San Diego Region (henceforth referred to as the Regional Board) in 2003 and reports activities conducted during the first half of fiscal year 2005 (July 1, 2004 through December 31, 2004).

Chollas and Paleta Creeks discharge into San Diego Bay. The Chollas Creek watershed is approximately 17,604 acres and the Paleta Creek watershed is approximately 2,089 acres. The majority of the Chollas Creek watershed is within the City of San Diego City limits. The Chollas and Paleta Creek watersheds are within the 2nd, 3rd, 4th, 7th and 8th City Council District boundaries. Portions of Lemon Grove and La Mesa are also within the watershed. The majority of the Paleta Creek watershed is within the City of San Diego limits; however, a portion of the City of National City is within the watershed as well. The mouths of both Chollas and Paleta

Creeks discharge on federal (U.S. Navy) land. GIS maps showing the storm water conveyance system and land use within the Chollas and Paleta Creeks watersheds were previously submitted in our report dated October 19, 2001.

The City of San Diego has many ongoing programs intended to keep San Diego beautiful and encourage proper disposal of trash and debris. The following activities remove or discourage the introduction of trash that would otherwise end up in receiving waters:

- Education and outreach, "Think Blue"
- Weekly residential trash pick up
- Trash pick up from public areas
- Recycling
- Household Hazardous Waste collection
- Volunteer cleanups
- Storm drain stenciling
- Drain and inlet cleaning
- Channel cleaning
- Street Sweeping
- Enforcement of the San Diego Municipal Code (SDMC)
- Enforcement of applicable state codes through court actions

The Environmental Services Department addresses reports of illegal dumping and littering, enforcing San Diego Municipal Code (SDMC) Sections 54.0208, 54.0209 and 54.0210. The Environmental Services Department has Solid Waste Code Enforcement Officers who are responsible for anti-waste education and enforcement of the City of San Diego Municipal Codes dealing with solid waste issues. The Environmental Services Department also works with community groups and/or volunteers in organizing community cleanup/recycling events to properly dispose of those items not collected by regular curbside collection services. Additionally, the Storm Water Pollution Prevention Division in the Metropolitan Wastewater Department enforces the City's *Storm Water Management and Discharge Control* ordinance, SDMC Section 43.03.

The Environmental Services Department also funds Community Cleanup events throughout the year. At these events, community residents take hands-on responsibility for keeping their neighborhoods clean. These beautification events work to clean up local areas including parks, canyons, and urban alleys. Each year, the Community Cleanup Program helps approximately 30 communities coordinate cleanups in neighborhoods throughout the City of San Diego.

The City Attorney's Consumer and Environmental Protection Unit prosecutes violations of the San Diego Municipal Codes and applicable state codes through court actions.

II. LIMITATIONS

State and local municipalities have been experiencing a difficult financial climate. As a result, spending restrictions are still occurring at the City of San Diego. For Fiscal Year 2006, the Storm Water Pollution Prevention Division experienced an approximate 10% reduction from their previous year's budget. This reduction resulted in the elimination of three positions. Since Fiscal Year 2003 (beginning in July 2002), the Storm Water Program has experienced a 13% reduction in budget. It is anticipated that the fiscal limitations and uncertainty will continue and additional reductions/spending restrictions will continue to occur in future fiscal years.

III. REPORT ORGANIZATION

This report is organized according to the outline provided below, as requested in the letter from Mr. John H. Robertus (Executive Office for the Regional Board) dated December 18th, 2002. Subsequent reports will conform to this format.

1. Public Education and Outreach Efforts
 - 1.1 Volunteer Cleanups
2. Enforcement
3. Storm Drain System and Creek Maintenance and Cleaning Efforts
4. Best Management Practices (BMPs)
 - 4.1 Structural Best Management Practices (BMPs)
 - 4.2 Non - Structural Best Management Practices (BMPs)
 - 4.3 BMP Action Plan
5. Creek Refuse Assessment Program
6. Collaborative Efforts
7. Trash Measures Effectiveness Assessment

CERTIFICATION

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 gather and evaluate the information submitted. Based upon 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.



Chris Zirkle,
Deputy Director

PUBLIC EDUCATION AND OUTREACH EFFORTS

During this reporting period the City continued to identify behavior modification as the primary means to deal with trash as non-point source of pollution in our waterways. Because "midnight dumping" activities are relatively easy to conduct without consequences, educating citizens to prevent this from occurring in the first place is our best line of defense. As such, the focus of our education efforts is to raise public awareness and to foster behavior changes to ultimately reduce non-point source pollution, including trash and litter.

The fourth year of "Think Blue," the city's public education and outreach campaign, included continued airing of two English and one Spanish public service announcement (PSA) for television, and one English and one Spanish PSA for radio. The City aired the PSAs on four radio and two television stations. For fiscal year 2005, the City and our Think Blue contributors purchased \$80,000 in air time, and received an additional in-kind promotional match by the local broadcast entities. In addition to the airtime, two radio stations, KGB FM and 93.3 FM have published an anti-litter ad that repeats the final scene from the "Don't Trash Our Future" PSA.

We began airing the new PSAs on December 6, 2003. One PSA specifically addresses trash as a pollutant of concern. This PSA is digitally animated and titled, "Don't Trash Our Future." The "Photo Mosaic" PSA focuses on several pollutants of concern in our watersheds (including trash). These commercials were provided on VHS as an attachment to the March 2004 report.

The City has expended a substantial amount of time and energy seeking funds to cover the costs of PSA development and airing, and the cost would be prohibitive from a fiscal perspective without the financial support of Caltrans (District 11) and the Port of San Diego.

In the Fall of 2005, the City will begin production of two new PSAs, which are scheduled to begin airing early in 2006. With funding from the Port of San Diego, the first PSA will be a television ad addressing waterbody protection (such as Chollas Creek). The second PSA will be a radio ad addressing integrated pest management (IPM).

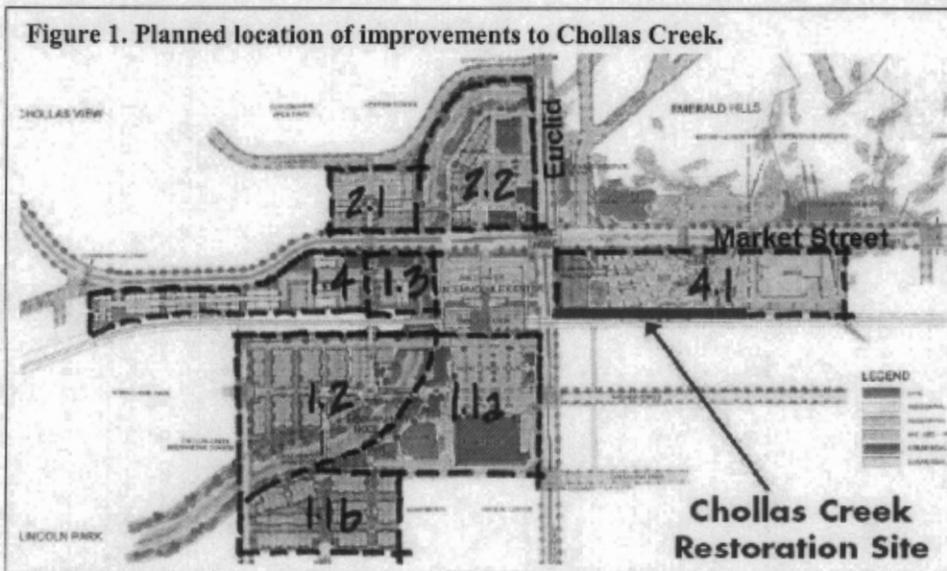
The results of our annual resident's survey entitled "City of San Diego Storm Water Pollution Program 2004 Follow-up Survey of City Residents" indicates the city has increased awareness of the program by another two percentage points to a three-year cumulative increase of 23 percent. Public awareness that the storm drain system is separate from the sewer system and flows directly to our creeks and bays remained essentially static between the 2002 and 2004 surveys, meeting but not exceeding expectations. With new PSAs having aired in FY 2004 through FY 2005, we anticipate making additional progress in meeting our awareness and behavior modification goals in the upcoming year.

The City of San Diego and its project partners for the *Chollas Creek Water Quality Protection & Habitat Enhancement Project* (the Port of San Diego, Environmental Health Coalition, and San

Diego Baykeeper, the Cities of La Mesa and Lemon Grove, San Diego Unified School District, and Southwestern College), have received a State Costa-Machado Act of 2000 (Proposition 13) grant in the amount of \$2,244,000 to implement portions of the *Chollas Creek Enhancement Program*, adopted by the San Diego City Council on May 14, 2002. Planned creek improvements as part of the grant project include: removal of concrete sections of the channel; widening of the floodplain; and, creation and restoration of wetland and transitional upland habitats. Improvements will be designed to re-establish the natural structure, dynamics and hydrologic functions within applicable creek segments and restore affected beneficial uses.

In concert with the planned improvements to Chollas Creek, the scope of work for the *Chollas Creek Water Quality Protection & Habitat Enhancement Project* details two related education and outreach campaigns that have begun implementation. First, the grant project has developed and is implementing a broad education outreach campaign within the Chollas Creek watershed administered jointly between the City of San Diego Storm Water Pollution Prevention Division and the Environmental Health Coalition with support from San Diego Baykeeper, the Port of San Diego and the cities of Lemon Grove and La Mesa. The purpose of the education program is to increase awareness about non-point sources of pollution while encouraging residents of the watershed to adopt appropriate behaviors in every-day activities around the home and business. Second, the grant project is developing watershed protection and urban runoff principles by implementing new environmental curricula for 5th and 6th grade schoolchildren in the area. These new curricula will include anti-litter principles.

The agreement with the State Water Resources Control Board was approved on July 6, 2004, and project implementation is underway. As of the writing of this report, the City has prepared 90%



design plans for restoring the creek segment immediately east of Euclid Avenue, and routed the plans to for City-wide plan check (see Figure 1). The construction plans and specifications are scheduled to be completed in October 2005, after which time the plans will be presented to

City Council to request approval to publicly bid the construction project. Construction is scheduled to begin in May 2006, and be completed by October 2006.

The second Proposition 13 project proposal titled "*Water Quality Leaders*," mentioned in the February 14, 2003, Technical Report did not receive funding. This grant would have consisted of a pilot study for existing developed areas and would focus on the commercial corridors in three different watersheds, including the Chollas Creek watershed. This project would involve working with area businesses to install catch basin inserts that would be maintained and monitored through a partnership with San Diego Baykeeper, participating businesses, and the City. Both structural and educational BMPs would be implemented and monitored to determine the appropriateness and effectiveness of each application. The City believes this proposal has substantial merit because project implementation would cost-effectively help protect San Diego water bodies and beneficial uses. As such, the Storm Water Pollution Prevention Division will continue to pursue grant funding for this pilot project.

The City of San Diego also applied for \$2,950,000 in Integrated Regional Water Management (IRWM) Grant Program, (Proposition 50, Chapter 8, or "Prop 50") grant funding during this reporting period to implement another creek restoration project per the City-approved *Chollas Creek Enhancement Program*. The concept proposal was recently selected by the lead agencies preparing the IRWM Plan for the San Diego Region to be included in the proposal submitted to the State Water Resources Control Board (State Board) for consideration. The City will be completing a full project proposal by early 2006 in anticipation of being selected by the State Board for funding.

The City's already significant storm water educational challenges are compounded by the socio-economic make-up of the neighborhoods along Chollas and Paleta Creeks. The Mid-City community located in the Chollas Creek watershed is home to a large and diverse first generation immigrant population where environmental awareness as a community value is a new concept. It is estimated that there are approximately 75 dialects spoken within the area, representing a significant challenge in first, gaining access to these communities and secondly, achieving integration of environmental/storm water compliance behaviors.

A long term strategy for addressing water pollution and abatement of pollutants of concern in our recreational waters, including trash is to educate school-age children about San Diego's unique marine environment. An exciting development this past year is the joining together of the City of San Diego and the San Diego City School District to create K-12th grade science curricula to focus on San Diego watershed issues and characteristics, impact student behavior toward pollution prevention, link to and modify existing curricula, and serve as a model for schools county-wide. The curricula is entitled "Stewardship: Water Education for Lifelong Leadership," or Project SWELL. Project SWELL was launched in the Fall of 2003 and included in the curriculum of about half of all fifth grade classes. Project SWELL curricula is in the process of being written for three additional grades, and is scheduled to be implemented in Fall 2005. Our biggest obstacle is addressing the long-term funding requirements to sustain Project SWELL. We anticipate the annual budgetary needs for the entire program to approach \$500,000 annually. Given the severe financial realities the City, State, and San Diego City Schools are facing, the City and San Diego Baykeeper are actively seeking grant funding from various state grant programs, including Proposition 13. As an example, the Chollas Creek Restoration Project, with

the help of Proposition 13 grant monies, is developing and implementing the 5th and 6th grade Project SWELL curricula at San Diego City Schools in the Chollas Creek watershed beginning in Fall 2005.

Educational efforts planned for the remainder of Fiscal Year 2006 include continuing the Storm Water Pollution Prevention Division's Think Blue education efforts. The Storm Water Program will also be conducting outreach to businesses in the Chollas Creek watershed as part of the Chollas Creek Water Quality Protection & Habitat Enhancement Project grant. Additionally, the Storm Water Program will work collaboratively with the City's Metropolitan Wastewater, Park and Recreation and Environmental Services departments and Caltrans District 11 in the Chollas Creek and surrounding areas to leverage multi-media buys and outreach efforts we are each pursuing.

1.1 VOLUNTEER CLEANUPS

The California Coastal Cleanup Day is considered the premier volunteer event focused on the marine environment in the country. It is estimated that since the program started in 1985, over 552,000 Californians have removed almost 8.5 million pounds of debris from our state's shorelines and coast. Beginning in 2002, the annual event was expanded to include inland sites, thus linking inland sites to the ocean.

Staff from the Storm Water Pollution Prevention Division and other City departments led a clean up effort of 53 people in Chollas Creek at newly-restored creek segment west of 38th Street, north of Alpha Street on April 9, 2005. The cleanup effort removed over one ton of trash, including 30 shopping carts, a water heater and a sofa bed.

The City is participating in a second Chollas Creek cleanup on Coastal Cleanup Day on September 17, 2005 (see attached flyer). A summary of this cleanup will be provided in the next semi-annual report.

2. ENFORCEMENT

Illegal dumping is a difficult problem to control. In addition, studies show that approximately 60-70 % of trash that ends up in waterways is due to leaves and vegetation. Wind then transports light debris (usually floatables) into low-lying areas such as channels. Littering and illegal dumping can thus make source identification a moving target. Due to the difficulty in actually catching someone in the act of illegally dumping or proving the source of the trash, enforcement by means of imposing penalties or issuing Notices of Violation is rare. Therefore, most "enforcement" actions for gross pollutants consist of either requesting an owner to clean up his/her property or having the appropriate City department properly remove and dispose of trash from the public right-of-way after it has been dumped illegally.

As previously noted, the Environmental Services Department (Environmental Services) has had the primary responsibility for responding to waste/litter issues and operates under different

sections of the San Diego Municipal Code (SDMC, Sections 54.0208, 54.0209 and 54.0210) than does the Storm Water Pollution Prevention Division (SDMC, Section 43.03). Both programs have hotlines to which they respond. Environmental Services typically receives calls regarding litter or gross pollutants whereas Storm Water receives reports of liquid discharges into the storm drain system and/or receiving waters.

Environmental Services has a Code Compliance section that responds to reports and phone calls. Their process for enforcement includes a letter to the property owner notifying them of the time period in which the trash must be removed followed by a site visit to confirm compliance. Environmental Services also responds to calls from other City departments for illegal dumping on City property (which is the case for Chollas and Paleta Creeks). Therefore, based on historical records, each department within the City may have a budget for having Environmental Services pick up trash within another department's area of responsibility. Although Street Division is responsible for inspecting channels, it is from a flood control perspective; their crews would have to submit a request to Environmental Services to pick up smaller amounts of trash that are not causing a flooding hazard within the watercourse.

The Storm Water Pollution Prevention Division also has a Code Compliance section that responds to reports of illegal discharges. As previously mentioned, their focus is on liquid discharges that are generally more easily traced to the source than illegal dumping activities. Thus, illegal liquid discharge violations are often more easily enforceable. However, as a result of the September 27, 2001 letter distributed to the Copermitees by the Regional Board regarding litter, the Storm Water Code Compliance staff now considers trash in their enforcement actions. If they are unable to take enforcement action for trash, the issue is referred to Environmental Services. To date, there have been 50 Notices of Violation (NOV) issued Citywide by the Storm Water code compliance officers specifically for trash (four of these NOVs was issued during this reporting period). Within the Chollas and Paleta Creek watersheds, the Storm Water Program's code compliance officers have issued seven NOVs since December 2001, including two this reporting period.¹ Nine new cases of illegal trash discharges were investigated during this reporting period, including five cases in the Chollas and Paleta Creeks watersheds.

An updated map depicting the locations of Environmental Services Department's tracking system of incidents of illegal dumping and litter problems between January 1, 2005 and June 30, 2005 is provided as an attachment to this report (Attachment 2). During this time, Environmental Services responded to 25 work requests from other departments, 326 calls for service involving minor litter, and 3,846 calls for service involving illegal dumps (4,172 total calls).

Staff from the Office of the City Attorney has also researched and identified state and local statutes that could be used to pursue further legal actions (beyond imposing penalties and/or issuing Notices of Violation), if necessary, against property owners or those responsible for illegal dumping activities. Further, staff from the Office of the City Attorney has also conducted

¹ The number of NOVs issued in the Chollas and Paleta Creek watershed areas was estimated using zip codes.

additional outreach efforts within City departments (reaching park rangers, lifeguards and police) to spread the word and encourage City personnel to be especially diligent in regard to illegal dumping activities. As part of this outreach, City staff has also been reminded about how to report violations and how pertinent San Diego Municipal Code sections are enforced.

The City of San Diego will continue to implement the enforcement programs described above.

3. STORM DRAIN SYSTEM AND CREEK MAINTENANCE AND CLEANING EFFORTS

The General Services Department's Street Division cleaned 435 drainage structures, 575 lineal feet of drainage pipes, and 2,600 square feet of drainage channel, removing 35.1 tons of trash and debris from the Chollas Creek and Paleta Creek watersheds from January 1, 2005 to June 30, 2005. Street Division staff also removed 1,026 tons of debris from the Chollas Creek watershed and 240 tons of debris from Paleta Creek watershed through the Street Sweeping Program.²

Chollas and Paleta Creeks are scheduled for annual inspection in March of each year. Should the inspection reveal the need for cleaning, the creeks are scheduled and cleaned as soon as possible. Additionally, during inclement weather the Street Division performs critical drain inspections. These inspections include known problem areas in the Chollas and Paleta Creek watersheds. The Urban Runoff Management Plan's *Storm Water Conveyance System Component* (component 2.1.11) identifies the known problem areas and the objective of the cleaning. Additional cleaning efforts are based on identified problem areas. The City will continue to carry out its standard annual inspections within the Creeks as described above as well as continue to perform critical drain system inspections during inclement weather. As previously noted, the City's ability to remove trash above and beyond what is currently done will depend on identification of a funding source.

The General Services Department's Street Division also has an agreement with the U.S. Navy to provide additional funding to clean trash and debris from Chollas Creek at the area where the Navy has installed a containment boom for the 2004-2005 wet season. No data has been reported from the Navy for this wet season. Summary data for the entire wet season will be provided in the next report.

Between January 1, 2005 and June 30, 2005, Environmental Services removed approximately 1,354.86 tons of vegetation, trash and debris from Chollas and Paleta Creek watersheds from 22 community clean up events, 25 work requests from other departments, 326 calls for service involving minor litter, and 3,846 calls for service involving illegal trash dumping.

As previously reported, studies have shown that trash re-accumulates approximately 7-10 days after cleaning efforts, which would negate channel cleaning as an effective permanent solution. Large-scale (mechanical) trash removal is an inefficient, expensive and reactive strategy that

² Note: Street Division estimates the tons of waste removed from street sweeping based on estimates of what percentage of sweeping routes occur within the Chollas and Paleta Creek watershed areas.

does nothing to eliminate the source of the trash problem (unless trash removal is combined with education and outreach). To tackle the source of trash issues proactively, and in the most effective manner, the City continues to focus its efforts on continuing anti-litter education to facilitate the cultural shift needed to reduce the sources of trash pollution.

A summary of the estimated trash removed from the Chollas and Paleta Creek watersheds is provided in Table 1, below.

Table 1. Estimated trash removed from Chollas and Paleta Creek watersheds, July 1, 2004-December 31, 2004.

Watershed:	Source of Trash Removal:			
	Environmental Services	Streets Division		Navy/City Trash Boom
		Street Sweeping	Storm Drain Cleaning	
Chollas Creek	1,354.86 (both watersheds)	1,026	35.1	unknown
Paleta Creek		240	0	unknown

1/1/05 to 6/30/05 Reporting Period Total (in tons): **2,655.96**

4. BEST MANAGEMENT PRACTICES (BMPs)

4.1 STRUCTURAL BEST MANAGEMENT PRACTICES

To date, the City has not been able to allocate funds to study the feasibility of the use of structural BMPs within this watershed, although the City's Urban Runoff Management Plan identifies the need for a drainage master plan (Component 1.6, *Watershed Planning*). The master drainage plan and watershed studies would identify deficiencies in the storm drain system, identify appropriate areas for storm water BMPs, and recommend improvements. Our *Water Quality Leaders* Proposition 13 grant proposal was not successful. Implementation of the *Water Quality Leaders* project would have provided the City with funding to implement structural BMPs and evaluate their effectiveness. The Storm Water Program will continue to pursue water quality grants, in partnership with other jurisdictions, agencies and organizations in the region, as a means of funding trash-abatement efforts.

In order for structural BMPs to be effective, they typically need to be installed in strategic locations in tributaries that have been identified as chronic sources of trash. Additionally, trash collecting BMPs located within main conveyance channels/creeks often fail because of their maintenance intensive nature and because they cannot sustain structural integrity due to the forces exerted by flows experienced during high intensity rain events. For example, the Navy's trash boom is susceptible to failure when large objects (e.g., shopping carts, couches, and tires) are carried downstream into the boom during high flows.

As a measure to prevent trash and debris from entering Chollas Creek, NASSCO continues to maintain fencing in the parking lot along the sides of the Creek.

4.2 NON - STRUCTURAL BEST MANAGEMENT PRACTICES (BMPs)

As previously reported, trash is removed from or discouraged from entering the storm drain system and receiving waters in the Chollas and Paleta Creek watersheds due to the following non-structural activities:

- Education & Outreach, "Think Blue"
- Weekly residential trash pick up
- Trash pick up from public areas
- Recycling
- Household Hazardous Waste collection
- Storm Drain Stenciling
- Volunteer cleanups
- Drain and inlet cleaning
- Channel cleaning
- Street Sweeping
- Enforcement of the San Diego Municipal Code (SDMC)
- Enforcement of applicable state codes through court actions

Through these services, the City of San Diego is effectively preventing tons of trash from entering into our waterways. However, physical cleaning of the entire reaches of Chollas and Paleta Creeks by City crews is not an environmentally optimal option because it is an "end of pipe" solution that fails to eliminate the source of the problem (people's behaviors), and is therefore, inherently less effective than source controls (education). Studies have shown that trash re-accumulates approximately 7-10 days after cleaning efforts, which would negate channel cleaning as an effective permanent solution. Large-scale (mechanical) trash removal is an inefficient, expensive and reactive strategy that does nothing to eliminate the cause of the litter problem (unless trash removal is combined with education and outreach). In addition, property and environmental constraints may make regular creek cleaning difficult. Research into property boundaries in Chollas Creek reveal that private ownership extends into the creek bed in many locations. In those locations, the City would have to request permission to access the property. The same is true for volunteer clean up events. Coordinating a cleanup event and securing all of the necessary approvals is very time consuming and potentially prohibitive. Additionally, restrictions on impacting native habitat may also reduce access to portions of the creeks.

Therefore, to tackle the source of trash issues proactively, and in the most cost-effective manner, the City continues to focus its efforts on continuing anti-litter education to facilitate the cultural shift needed to reduce the sources of trash pollution through the Think Blue program. As reported previously in this report, the fourth year of the Think Blue campaign (FY 2005) includes airing both English and Spanish PSAs for television and radio. One PSA, "Don't Trash Our Future," specifically addresses trash as a pollutant of concern.

In addition to the airtime, two radio stations have published an anti-litter ad that repeats the final scene from the "Don't Trash Our Future" PSA. The ad was placed in CD inserts and calendars and cumulatively distributed to more than 50,000 San Diegans.

The Storm Water Pollution Prevention Division also joined together with the San Diego City School District to create and implement Project SWELL (Stewardship: Water Education for Lifelong Leadership) K-12th grade science curricula focusing on San Diego watershed issues and characteristics, impacting student behavior toward pollution prevention, and serving as a model for schools county-wide.

Also during this reporting period, the Storm Water Program continued to use the Think Blue anti-litter storm drain stencil (see Figure 2). The stencil is being used in City municipal yards and facilities, including the Chollas Yard located within the Chollas Creek watershed. Stencils were also distributed to I Love A Clean San Diego so that volunteers may stencil storm drains throughout San Diego, including the Chollas and Paleta Creek watershed areas. The

Figure 2. City of San Diego Think Blue Storm Drain Stencil.



stencil specifications have been posted on the City's Think Blue website (thinkbluesd.org) so that contractors and environmental organizations can make their own stencils using the City standard. A similar concrete stamp is required on all new development projects which build new storm drain inlets.

The General Services Department's Street Division cleaned 435 drainage structures, 575 lineal feet of drainage pipes, and 2,600 square feet of drainage channel, removing 35.1 tons of trash and debris from the Chollas Creek and Paleta Creek watersheds from January 1, 2005 to June 30, 2005. Street Division staff also removed 1,026 tons of debris from the Chollas Creek watershed and 240 tons of debris from Paleta Creek watershed through the Street Sweeping Program.

During the reporting period, the Environmental Services Department also collected 571.35 tons of trash at 22 community clean up events. These events provide residents with an opportunity to properly dispose of wastes and reduce the likelihood of waste ending up in creeks and drainages including those within the Chollas and Paleta Creek watersheds. In total, between January 1, 2005 and June 30, 2005, Environmental Services removed approximately 1,354.86 tons of vegetation, trash and debris from Chollas and Paleta Creek watersheds from 22 community clean up events, 25 work requests from other departments, 326 calls for service involving minor litter, and 3,846 calls for service involving illegal trash dumping.

In order to prevent trash and debris from entering the creek bed from parking lots due to wind or storm water, NASSCO contracts with St. Madeleine's Sophie Center to conduct trash pick-ups twice a week.

The Storm Water Pollution Prevention Division plans to continue an aggressive education and outreach campaign targeted at litter abatement, continue the implementation of the *Chollas Creek Water Quality Protection and Habitat Enhancement Project*; consider implementation of a

criminal prosecution process for the Storm Water Pollution Prevention Division; and continue maintenance activities and participation in volunteer cleanup efforts. The Streets Division may implement additional trash awareness outreach and cleaning (pending additional funding). In addition, Caltrans has recently initiated a statewide, multi-lingual anti-litter campaign that includes materials for students, flyers, and other handouts, which the City will distribute in the Chollas and Paleta Creeks Areas.

4.3 BMP ACTION PLAN

Table 2 below provides an update on the potential BMPs reported previously in the February 13, 2003 letter. Please note that to maintain consistency, we've kept all of the activities reported previously, even if they have been completed, delayed or postponed.

Table 2. Potential & actual BMPs implemented to address trash in the Chollas and Paleta Creek watersheds.

BMP	ESTIMATED IMPLEMENTATION DATE	COMMENTS
<i>NON-STRUCTURAL BMPs:</i>		
<i>EDUCATION</i>		
Public Service Announcements	Fall 2003 and ongoing	PSAs are in partnership with Caltrans – District 11 and the Port of San Diego. Two new PSAs scheduled to be developed and aired in early 2006.
Materials with Trash Focus	As-Needed	During previous reporting periods, anti-litter messages were advertised in calendars and CD inserts. Other Think Blue materials will be created and updated as appropriate. In October 2003, the Storm Water Program conducted a number of Business Outreach workshops. In addition to informing business owners how to properly clean impervious surfaces, the workshops included other site best management practices including an anti-litter.
Tailored brochures	FY 2005	Originally slated for FY2004, FY 2005, and FY 2006, postponed for FY2007 (pending council approval or identification of grant funding). Caltrans has provided "Don't Trash California" anti-litter campaign materials which will be used in Chollas Creek watershed.
District 4 Storm Water Outreach module	Originally FY2004	Funding unidentified.
Trash & Litter Impact Module for Watershed Display Boards	FY2006	Delayed a third year to FY 2007 pending Copermittee agreement on WURMP education elements. Intend to add litter education module and materials to watershed display boards shared by Copermittees.
Project SWELL (Stewardship: Water Education for Lifelong Leadership)	Fall 2003	New K-12 th grade education program. Began implementation in Fall 2003 school year in San Diego City Schools. 5 th Grade curricula completed and being implemented. 6 th grade curricula planned to begin implementation in Fall 2005.

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BMP	ESTIMATED IMPLEMENTATION DATE	COMMENTS
Letters to Property Owners	Ongoing	Outreach to property owners done as part of September 2002 Clean-Up event – Proposed to expand to all property owners in FY 2004, but budget for this activity was not approved. Activity to be postponed and carried out in conjunction with outreach to be implemented as part of the <i>Chollas Creek Water Quality Protection and Habitat Enhancement Project</i> beginning in 2004.
Letters with brochures to residents in Council District 4	Completed	Councilmember Charles Lewis' office distributed 200.
Letters to Copermittees	Completed	Reached all Copermittees within Chollas and Paleta Creeks watersheds via e-mail correspondence on 8/7/02.
Inter- and Intra-Agency Coordination	Ongoing	Outreach to other City departments has been done by the Office of the City Attorney as described in Section 3 "Enforcement" above. The City will continue discussions with Caltrans staff in order to identify opportunities for partnership between our agencies in order to abate trash concerns. As already noted, Caltrans is a valuable partner to the City providing financial support to the Think Blue PSAs.
<i>Chollas Creek Water Quality Protection and Habitat Enhancement Project-Prop 13</i>	2004	State agreement approved, and began implementation on July 6, 2004. 90% project design completed, scheduled to begin construction in May 2006.
<i>Water Quality Leaders</i>	N/A	Proposition 13 grant application denied. No longer pursuing funding.
<i>Chollas Creek Restoration Project (Prop 50)</i>	2006	\$2,950,000 proposal submitted in Spring 2005. If approved, scheduled to begin design in 2006
ENFORCEMENT		
Criminal Prosecution	Calendar Year 2005	Currently under consideration.
Illegal Dumping Enforcement	Ongoing	
MAINTENANCE		
<u>Street Division</u> – Cleaning efforts	Ongoing	The General Services Department's Street Division cleaned 435 drainage structures, 575 lineal feet of drainage pipes, and 2,600 square feet of drainage channel, removing 35.1 tons of trash and debris from the Chollas Creek and Paleta Creek watersheds from January 1, 2005 to June 30, 2005. Street Division staff also removed 1,026 tons of debris from the Chollas Creek watershed and 240 tons of debris from Paleta Creek watershed through the Street Sweeping Program.
<u>Street Division</u> – Added trash awareness and cleaning efforts	Unknown	Pending identification of funding.
<u>Environmental Services:</u> Abatement of Illegal Dumping and Clean-Up & Recycling Events	Ongoing.	Between January 1, 2005 and June 30, 2005, Environmental Services removed approximately 1,354.86 tons of vegetation, trash and debris from Chollas and Paleta Creek watersheds from 22 community clean up events, 25 work requests from other departments, 326 calls for service involving minor litter, and 3,846 calls for service involving illegal trash dumping.

BMP	ESTIMATED IMPLEMENTATION DATE	COMMENTS
Volunteer Clean-ups	Ongoing, prior to next rainy season	City led cleanup in Chollas Creek on April 9, 2005 as part of the Creek to Bay Cleanup. Also leading a cleanup in Chollas Creek on September 17, 2005. Additional events to be implemented as staffing and budget allows.
Parking Lot Clean Up at Chollas mouth	Ongoing	Coordination with Port District, NASSCO. NASSCO parking lots were cleaned during the September 2003 Cleanup Event and implemented permanent good housekeeping practices to periodically clean the parking lot in combination with fencing and new trash cans.
Boom Cleaning	Ongoing	Collaborative agreement with the Navy. Data reporting the tons of trash removed in the 2004/05 rainy season to be provided in the next report.
<i>OTHER</i>		
Pursue Grant Funding	Ongoing	The City will continue to research grant opportunities that may support implementation of structural and non-structural BMPs to address trash in intensely urbanized watersheds within the City of San Diego, including the Paleta and Chollas Creek watersheds. Constrained by staffing and budget limitations.
<i>STRUCTURAL BMPs:</i>		
Master Drainage Plan	Unknown	To date, the City has not been able to allocate funds to study the feasibility of the use of structural BMPs within this watershed. The master drainage plan and watershed studies would identify deficiencies in the storm drain system, identify appropriate areas for storm water BMPs, and recommend improvements. The City is exploring the possibility of placing a proposal for a storm drain fee increase on the November 2005 ballot. If approved, this fee could fund the preparation of a Master Drainage Plan.
Fencing at NASSCO Parking Lot	Ongoing	Fencing at NASSCO parking lot completed in September of 2002. Other opportunities for fencing as a trash BMP are currently being considered. No funding to install fencing has been identified to date.

5. CREEK REFUSE ASSESSMENT PROGRAM

The Storm Water Pollution Prevention Division is implementing the Creek Refuse Assessment Program as part of our Dry Weather Monitoring activities in the Chollas and Paleta Creek watersheds. A description of the assessment strategy follows.

The Dry Weather Monitoring component of the updated Municipal Storm Water Permit (Order No. 2001-01) expanded the physiochemical monitoring conducted under the previous Municipal

Figure 3. Dry Weather Storm Drain Field Monitoring Data Sheet.

City of San Diego Storm Water Pollution Prevention Program Dry Weather Storm Drain Field Monitoring Data Sheet										
ROUTING: 7/20/01-9/22/01										
SITE DESCRIPTION										
Observed Land Use	Residential	Commercial	Industrial	Open Channel	Wastewater	Other (NAD 30)	Site ID	Site Description	TIN Page	Date/Time
Conveyance Type	Manhole	Outfall	Open Channel	Storm	Other	Other				
Construction	Concrete	Steel	Plastic							
OBSERVATIONS (1" Above Outlet)										
Channel										
Color	None	Minor	Clear	Orange	Light	Dark	Orange	Orange	Orange	Orange
Clarity	None	None (0/1)	White (0/1)	Clear	Light	Dark	< 12 bars	< 12 bars	< 12 bars	> 12 bars
Flow	None	Composed	Single Channel	Orange	Orange	Orange	None	None	None	None
Structure	None	None	None	None	None	None	None	None	None	None
Depth	None	Shallow	Medium	Deep	None	None	None	None	None	None
Hydrology										
Flow	None	Shallow	Medium	Deep	None	None	None	None	None	None
Depth	None	Shallow	Medium	Deep	None	None	None	None	None	None
DISCHARGE ESTIMATION										
Emptying Creek at Box Catcher*										
Flow	None	Shallow	Medium	Deep	None	None	None	None	None	None
Depth	None	Shallow	Medium	Deep	None	None	None	None	None	None
Flow	None	Shallow	Medium	Deep	None	None	None	None	None	None
Flow Observed? Yes/No (Printed)										
Presence of untreated raw water sampling site? Yes/No (1" Above Outlet)										
WATER SAMPLING										
Field Screening Sample Collected? Yes/No										
Field	Yes	No	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
Flow	Yes	No	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
Depth	Yes	No	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
Flow	Yes	No	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled	Sampled
Comments - Notes										
Quality Check _____ Date _____										

Storm Water Permit. The City's standard procedure for evaluating and recording observations now includes trash observations, as shown on the Dry Weather Storm Drain Field Monitoring Data Sheet (see Figure 3). Monitoring staff identify trash characteristics in the storm drain's discharge "plume area" at storm drain outlets where they discharge into a large open conveyance channels or the natural drainages and creeks. We have defined the "plume area" as approximately 10-20 yards (30-60 feet) upstream and downstream of the storm drain outlet. Trash monitoring within open conveyance channels and manholes/catch basins uses similar criteria; staff notes conditions within a 20-yard diameter of the monitoring point and in the visible areas within manholes/catch basins. To complete this assessment, our standard procedure for evaluating and recording observations has been

expanded to include a photo documentation of the trash in these two creek watersheds.

The third year of the Creek Refuse Assessment Program being completed as of the writing of this report. The results of the assessment will be provided to the Regional Board in the March 2006 report.

Future assessments will assist in identifying sources and "hot spots" of trash from the tributary land uses and neighborhoods. In addition to trash, monitoring staff will continue to document unique deposition characteristics near outlets and monitoring sites looking for particulates that might identify sources of waste and trash.

The Creek Refuse Assessment Program will provide the City and the Regional Board with quantifiable trash data that can be used as a baseline and to evaluate the effectiveness of BMPs. We will review the Creek Refuse Assessment Program on an annual basis to determine if enhancements are needed and if there is funding available to make the enhancements.

6. COLLABORATIVE EFFORTS

During the reporting period, the Storm Water Pollution Prevention Division participated in implementation meetings for the San Diego Bay Watershed Urban Runoff Management Plan. This Plan fosters collaboration between Chollas Creek watershed Copermittees, businesses, interested public, and other stakeholders. The City of San Diego will collaborate with the Port of San Diego, as lead Copermittee in the San Diego Bay watershed, to ensure that trash issues are addressed in the San Diego Bay Watershed Urban Runoff Management Program's implementation. In addition, the City continues to participate in other watershed efforts in the area, such as the "Groundwork Chollas" watershed meetings. This group consisting of a diverse group of agencies, residents, and activists, meets regularly with a goal of forming a watershed network focused on protecting and restoring Chollas Creek.

In addition, as detailed in this report, the Storm Water Pollution Prevention Division coordinated with the Port of San Diego, City of La Mesa, City of Lemon Grove, Environmental Health Coalition, San Diego Baykeeper, San Diego Unified School District, and Southwestern College to continue the implementation of the *Chollas Creek Water Quality Protection and Habitat Enhancement Project* grant; continued to coordinate with Caltrans and the Port of San Diego to create PSAs focused on trash issues; coordinated with San Diego Baykeeper, the San Diego City Schools to continue the implementation of the Project SWELL school curricula; coordinated with I Love A Clean San Diego to use their volunteers to stencil storm drain inlets and lead a second Chollas Creek cleanup event, and coordinated with the U.S. Navy and Port of San Diego to continue to maintain trash booms in Chollas Creek.

The Storm Water Program and other City departments will continue to work collaboratively with other agencies, businesses and organizations to leverage additional energies towards cleaning our beaches and bays.

7. TRASH MEASURES EFFECTIVENESS ASSESSMENT

While there is no baseline data that would allow the City to assess effectiveness of measures taken to date to address trash issues within the Chollas and Paleta Creeks watersheds, and while there is no legal or functional standard for determining whether trash is impacting beneficial uses, the City believes that positive steps have been taken as measured by the amount of trash removed reported in this and previous reports. Additionally, we believe the groundwork has been established for the City to make a significant contribution towards the long-term health of these watersheds through the City's collaborative participation in annual California Coastal Clean-Up events. Seeds have been planted to allow the City to continue to participate in similar events in subsequent years as funding and staffing resources permit, as evidenced by the City's participation in this year's California Coastal Clean Up event.

The City has implemented extensive measures to prevent trash from entering into our storm drain system and will continue to explore cost-effective and meaningful ways of reducing illegal dumping of gross pollutants. We recognize that littering and illegal dumping are the major

causes of trash and debris in receiving waters and related exceedances of water quality standards. We also recognize that trash in the urban environment is not limited to Chollas and Paleta Creeks: it is an issue for every urban creek, river, and canyon in San Diego. As such, the City has chosen to spend their scarce resources to address trash by incorporating litter prevention in our public education and outreach program, Think Blue. Our emphasis will continue to be on education via our Think Blue program and its mission, "to raise public awareness and to foster behavior changes to reduce non-point source pollution." Simply stated we want, and need, to reach as many people as possible of the City's 1.2 million residents and not limit our efforts to one geographic area.

Toward that end, in 2003 we began implementing the water quality-based school curricula called Project SWELL (Stewardship: Water Education for Lifelong Leadership) in San Diego City Schools in partnership with San Diego Baykeeper, the school district and others, and began airing a new Think Blue anti-litter public service announcement "Don't Trash Our Future." Our Think Blue program is highly acclaimed and has been selected as EPA's outreach model for large urban watersheds. Think Blue is making a difference by changing behaviors of people who live in the region.

Because the Chollas and Paleta Creeks watersheds are not entirely within the City of San Diego, we also recognize the importance of coordinating our efforts with those of other jurisdictions within these watersheds. The City has already ventured into a watershed approach to address trash by working with the United States Navy, Caltrans, the City of Lemon Grove, the Port District, and NASSCO, and we will engage willing stakeholders in developing and implementing solutions to address excessive trash in our watersheds that may impact beneficial uses. The City will continue to address trash concerns through a comprehensive and cost-effective approach that focuses on pollution prevention and participatory decision-making.

In summary, the City will continue to work diligently within its constraints to ameliorate the trash issues in this and other watersheds. The City's Environmental Services Department, Street Division, and Storm Water Pollution Prevention Division continue to work to remove trash from Chollas and Paleta creeks, among other water bodies throughout the City. Clearly, support from our leadership, and professional skill and technical knowledge in water quality and urban runoff issues and solutions from City staff is not lacking. Rather, the City's ability to undertake additional trash removal and abatement efforts will be largely regulated by the availability of additional funding. The City would have liked to have additional City employees pick up trash by hand within the creeks as other jurisdictions have done. However, investing our dollars in Think Blue or pollution prevention is currently the best use of our limited funds and staffing to reduce pollution at our beaches and bays. We offer that best management practices are not all created equal, nor is dividing up one's resources between numerous best management practices always the best approach. However, by investing our limited resources in Think Blue, or pollution prevention, we believe that we are realizing the greatest water quality benefit.

We believe that it is premature to state that the City's existing BMPs are ineffective. Rather, we need to explore additional alternatives for reducing illegal dumping of gross pollutants beyond

what storm water programs can provide. It is evident that the City's current practices, are effective in ensuring proper disposal of trash, and thus preventing tons of trash from entering into our storm drain system and receiving waters.

Attachments:

1. Chollas Creek Cleanup flyer.
2. City of San Diego Environmental Services Department's map of calls for service.

Help Clean Up Chollas Creek!



**Be sure to wear
gloves, work clothes,
shoes, and hats.**

What?

You, your friends and family are invited to join in the fun as we gather to clean up Chollas Creek.

When?

Saturday, September 17th,
9AM - 12NOON

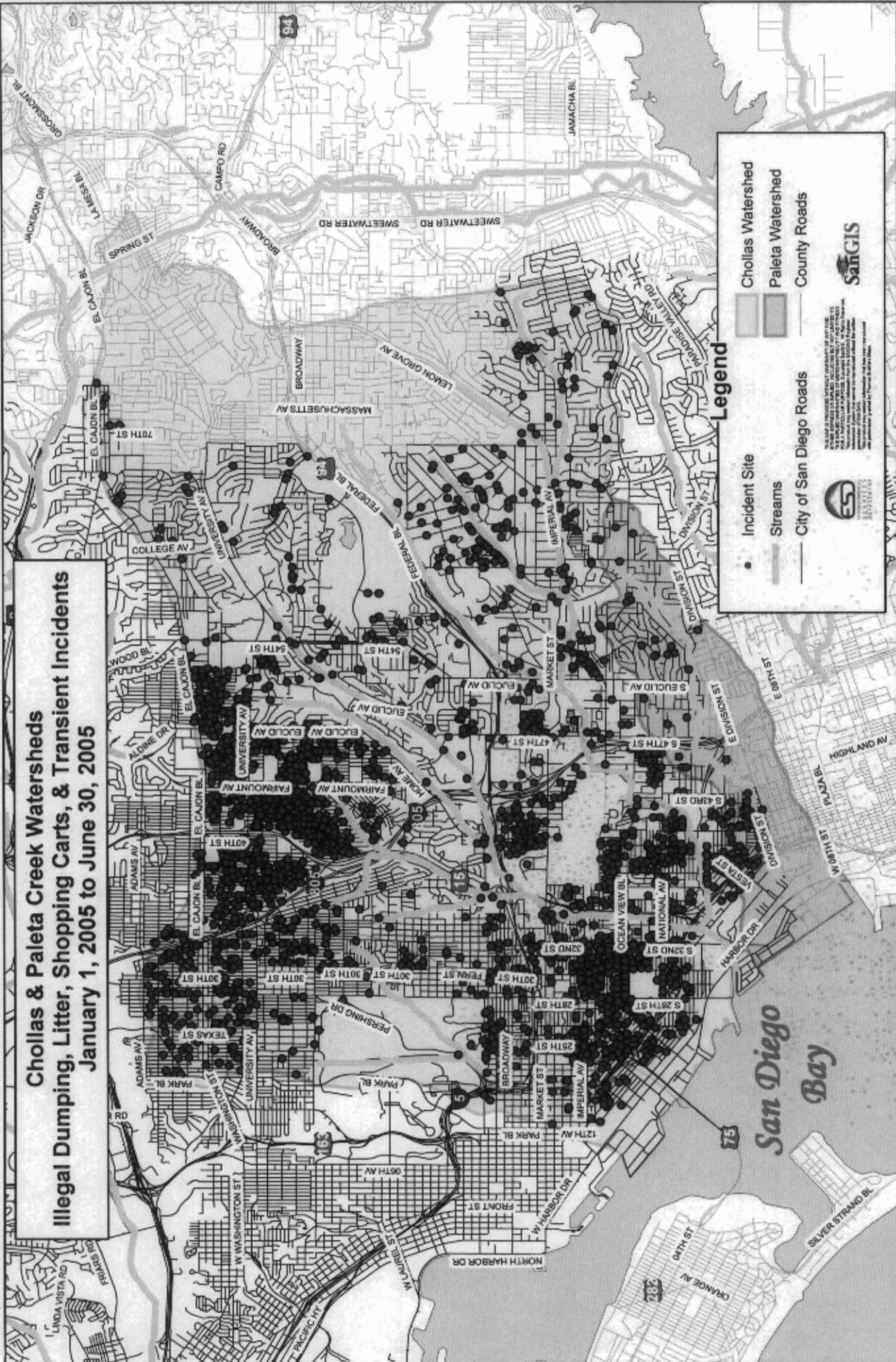
Where?

At 47th & Castana Streets

Mark your calendars now!



**Chollas & Paleta Creek Watersheds
 Illegal Dumping, Litter, Shopping Carts, & Transient Incidents
 January 1, 2005 to June 30, 2005**



Legend

- Incident Site
- ▬ Streams
- ▬ City of San Diego Roads
- ▬ County Roads
- ▭ Chollas Watershed
- ▭ Paleta Watershed

SanGIS

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