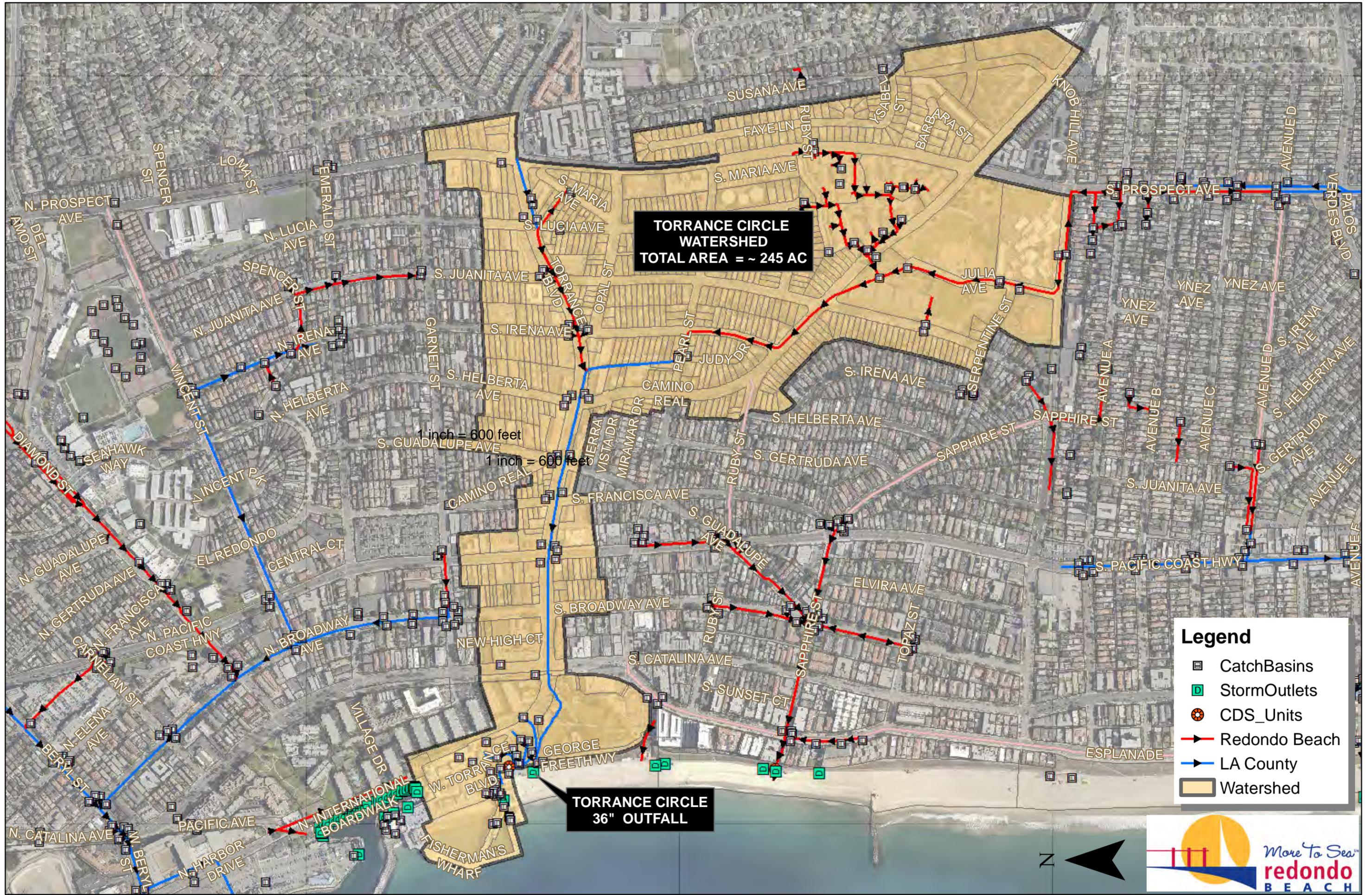


## Attachment 2: Figures of SMB-O-7



1 inch = 350 feet



**TORRANCE CIRCLE  
WATERSHED  
TOTAL AREA = ~ 245 AC**

1 inch = 600 feet  
1 inch = 600 feet

**TORRANCE CIRCLE  
36" OUTFALL**

**Legend**

- ☐ CatchBasins
- ◻ StormOutlets
- ⊗ CDS\_Units
- ➔ Redondo Beach
- ➔ LA County
- Watershed



## Attachment 3: TMRP for the City of Torrance

# City of Torrance



## **Santa Monica Bay Nearshore and Offshore Debris TMDL Monitoring and Reporting Plan**

**September 11, 2012 (revised September 10, 2015)  
By: John C. Dettle, P.E.**



**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

## **BACKGROUND**

The Environmental Protection Agency (EPA) is required to establish limits for pollutants to navigable waters referred to as Total Maximum Daily Loads (TMDLs). The Los Angeles Regional Water Quality Control Board (Board) is the regulatory agency assigned by the EPA to set the TMDLs for Los Angeles County. The Board adopted the Santa Monica Bay Nearshore and Offshore Debris TMDL via Resolution No. R10-010, dated November 4, 2010 amending Chapter 7 of the Water Quality Control Plan for the Los Angeles Region, as set forth in Attachment A, **see Appendix A**.

Before the Santa Monica Bay Debris TMDL was adopted the City of Torrance installed four CDS units at Torrance Beach to prevent direct discharges of trash and Debris onto Torrance Beach.

The stormwater from the City of Torrance that requires treatment for bacteria comes from the portion of Torrance north of Torrance Boulevard and west of Prairie Avenue is tributary to the County's Herondo Drain. Most of this watershed area is tributary to the Amie, Henrietta and Entradero stormwater detention basins. To address the Santa Monica Bay Beaches Bacteria TMDL the City Council approved the Stormwater Basin Enhancement Project, CIP No. I-102, to fund the following opportunities for these basins:

- Amie Basin could provide passive wetland treatment and additional infiltration,
- Henrietta Basin could provide passive wetland treatment, additional infiltration and habitat restoration, and
- Entradero Basin could provide passive wetland treatment, additional infiltration, habitat restoration and improved public access without affecting the existing park and baseball activities.

Each watershed for the aforementioned basins will have automatic retractable screens installed at every catch basin and "No Parking" signs will be installed to enhance street sweeping. This project is fully funded and under final design.

## **BMP EVALUATION AND SELECTION**

The City of Torrance conducted a two year study of full capture catch basin trash screen inserts and automatic retractable curb grates to select which products the City would specify in future projects for Machado Lake Trash TMDL and now the Santa Monica Bay Debris TMDL.

The City of Torrance Public Works Department conducted a two-year pilot study of a variety of full-capture catch basin trash screen inserts and automatic retractable curb

**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

grates installed in a limited number of selected catch basins in areas with and without "No Parking" signs for street sweeping. The areas were tributary to Machado Lake.

In order to effectively achieve compliance with the Trash TMDLs, the City conducted a pilot study to evaluate the operation, maintenance and efficiency of a variety of full-capture catch basin trash screen inserts and retractable catch basin curb grates that would ultimately be installed in all catch basins in TMDL tributary areas, and to determine the effectiveness of posting "No Parking" signs.

The City wanted to evaluate the use of full-capture catch basin screen inserts and flow-activated, automatic retractable curb grates to test if they can be used effectively without causing localized flooding and if posting "No Parking" signs helps the effectiveness of these systems. The City engaged the services of three selected firms to design, furnish, and install their full-capture catch basin trash screen inserts and/or retractable curb grates in the selected catch basins, followed by a two-year monitoring period to assess their performance through two consecutive wet seasons. The intent of the pilot study was to install full-capture catch basin trash screen inserts and retractable curb grates, from a variety of vendors, in order to assess their performance with and without "No Parking" signs posted, and select the most effective products that would have minimal impact on the existing storm drain system and require the lowest maintenance. Three companies were selected based on the varying designs of full-capture catch basin trash screen inserts and retractable catch basin curb grates they offer. The selected firms included West Coast Storm, Inc. (San Bernardino, CA), which provided both screen inserts and curb grates, Ecology Control Industries dba American Storm Water (Torrance, CA), which provided both screen inserts and curb grates, and Advanced Solutions (Corona, CA), which provided screen inserts only.

The flow-activated, automatic retractable curb grates used in the study encompassed the entire curb opening. The grates were designed to block trash, while allowing surface runoff to enter the catch basin. The trash would then be removed from the in front of the catch basin openings (gutter) through regular street sweeping operations. The study also considered the effectiveness of "No Parking" signs associated with the street sweeping operations. In the event that material obstructs the runoff to enter the catch basin, and/or runoff flow is excessive due to a moderate or severe storm, the grates would swing open from the hydraulic force (flow-activated) in order to prevent any localized ponding or flooding.

The full-capture catch basin trash screen inserts used in the study were installed inside the catch basins and covered the outlet opening, with either the screen height ending at the top of the catch basin outlet, or overflow openings at the top of the inserts above the top of the catch basin outlet. The function of the inserts is to capture all trash washed (or blown) into the catch basin while maintaining adequate drainage capacity of the catch basin. The catch basins were periodically inspected and cleaned out by normal Vactor Truck cleaning operations.

**Trash Monitoring & Reporting Plan:  
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Thirty-five (35) selected catch basins were selected. The catch basins were selected based on their varying designs, their tributary area's history of trash generation, and streets both with and without current "No Parking" restrictions adjacent to the basins. Catch basin locations included the area generally surrounding the intersection of Crenshaw Boulevard and Sepulveda Boulevard (primarily commercial and residential), in the area just west of Arlington Avenue between 229<sup>th</sup> Street and 235<sup>th</sup> Street (primarily residential), on 223<sup>rd</sup> Street just east of Arlington Avenue (primarily residential), and on Torrance Boulevard just east of Madrona Avenue (primarily commercial).

Currently, the City's Sewer/Storm Drain Maintenance and Sweeping Field Crews clean all catch basins in the City at least once a year, prior to the wet weather season. For this Pilot Study, field crews inspected the installation of screens and grates in the selected catch basins, and performed data collection and measurements during the 2009-2010 and 2010-2011 wet seasons. Field crews cleaned out the retro-fitted catch basins at the beginning of the study, then once every year prior to the wet season, and also after significant rain events upon observation and as necessary for proper drainage. The City's Public Works Department currently owns and operates three Vactor Trucks that are used for cleaning out catch basins, manholes, and storm drains.

Existing data collection procedures were employed and amended as necessary for the pilot study. Data from individual events were recorded in tabular form. Existing historical catch basin observation and cleaning records were reviewed and compared with that of the data collection from this study.

Field conditions observed and recorded by field crews during the study included weather conditions, catch basin location, observations of street surroundings, observations of the exterior and interior of the retro-fitted catch basins including localized ponding and accumulated trash, structural conditions of the screens and grates, and street cleaning status at time of observation. Photos were taken to complement the data.

Determination of overall catch basin trash screen and curb grate effectiveness relied on field observations, trash collection and measurement, and street sweeping/cleaning frequency. Tabular results and associated photos compiled by field crews are provided in **Appendix B**. The photos are arranged chronologically by manufacturer, and are labeled and referenced by Photo Number, Catch Basin Number, and Base Map Reference Number, see **Appendix C** for a map of catch basin locations.

During the study, there were two rain events of a significant magnitude to trigger cleaning events for flood control. One event occurred January 19 – 21, 2010 and a second occurred January 27 – 28, 2010 (see Photo Nos. 92 – 106). Precipitation data for the rain events and for the days which field crews were observing and recording field conditions were compiled from the Torrance Airport and are included in **Appendix D**.

**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

The intent of the trash screens was to collect trash and debris behind the screens with the stormwater filtering through them, unless the combination of debris and hydraulic flow during a moderate or severe storm was excessive enough to where the water would overflow and bypass the screens, thus preventing any localized ponding or flooding.

More sediment and vegetation was observed in those catch basins in the residential areas (see Catch Basin Nos. 11 – 32) , while those catch basins in commercial areas had more trash, i.e., cups, bottles, bags, newspaper, and other Styrofoam, plastic and paper products (see Catch Basin Nos. 1 – 10).

Vegetation (leaves, grass) lowered the effectiveness of the retro-fitted catch basins and exacerbated their cleaning frequency (see Catch Basin No. 11 -32). Based on the size of the screen and grate openings, the lack of more frequent cleaning would result in clogging, diminishing the ability of the screens and grates to retain trash, essentially decreasing the volume of the catch basin, and increasing the probability of localized ponding or flooding.

Ten full capture trash screen inserts experienced structural failure due to the excessive weight of trash and vegetation captured by them, and were subsequently removed to prevent localized flooding (see Photo Nos. 31, 32, 81, 83, 85, 86, 88, 89, 90, and 91). The main problem stemmed from twigs and branches, blown onto the streets during rain events, clogging the screen overflows. The full capture screens were clogged primarily by leaves also blown into the streets. The frequency of street sweeping or placement of “No Parking” signs did not impact this failure in as much as the leaves and twigs were blown from trees during rain events.

The automatic retractable curb grates were observed to work satisfactorily with associated street sweeping operations (see Photos Nos. 4, 5, 6, 7, 15, 17, 18, 22, 23, 25, 33, 34, 52, 56, 57, 58, 59, 60, 63, 66, 67, 68, and 70 -77). The grates and swing mechanisms manufactured by West Coast Storm appeared to operate more effectively during a moderate to severe storm event. Improvements to the design and operation of the swing mechanism, and its ability to relock itself after it is opened from a significant rain event, would need to be addressed. There was a noticeable difference in the amount of trash observed blocked by the curb grates or washed into the catch basins in neighborhoods without “No Parking” signs.

The City also recently completed the installation of 41 automatic retractable curb grates as part of the Madrona Marsh Restoration and Enhancement Project, manufactured by West Coast Storm. These grates were also observed to work satisfactorily with associated street sweeping operations, and the installation of “No Parking” signs.

The use of any of the full capture trash screen inserts utilized in this study is not recommended at this time due to their excessive clogging and structural deficiencies, resulting in localized ponding/flooding which poses a potential liability to the City.

**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

The use of automatic retractable curb grates is selected as a structural Best Management Practice (BMP), along with regular street-sweeping operations and associated "No Parking" signs to achieve compliance with the Trash TMDLs. The automatic retractable curb grates are more structurally sound and pose less liability to the City from flooding, while preventing trash from entering the storm drain system. The trash remaining in the street/gutter is removed weekly and efficiently by street-sweeping operations.

The City will continue to evaluate curb grate designs and work with the manufacturers to improve the effectiveness of automatic retractable curb grates based on the following criteria:

- Prevent trash from entering the catch basins and maximize the amount of trash kept in the street/gutter;
- Minimize ponding/flooding potential;
- Improvements to the grate's opening and closing operation; and
- Ease of maintenance.

Field crews will also conduct: (1) "drive-by" inspections to look for "open" grates following storm events; (2) "closed" grates during a storm event; and (3) any clogging caused by trash build up on the grate that could cause flooding.

## **MONITORING AND REPORTING**

The City of Torrance cleans all catch basins annually and documents the volume of trash from the catch basins. The waste collected by street sweeping is weighed at the landfill and records for pounds of trash per year are maintained. The City of Torrance has four (4) major watersheds, the Machado Lake, Dominguez Channel, Santa Monica Bay and Retention Basin watersheds. The street sweeper routes do not coincide with the watershed boundaries. Street sweeping occurs every day for four (4) days a week and bins of street sweeper trash are hauled to the landfill daily. Debris from each street sweeper is dewatered before placement into the bins to lower dumping fees and prevent spillage on the roads.

The City of Torrance proposes to comply with the Santa Monica Bay Debris TMDL by installing automatic retractable curb grates on all catch basins in the watershed along with weekly street sweeping and installation of "No Parking" signs for street sweeping to enhance the effectiveness of the program. To demonstrate compliance the City shall use a mass balance approach based on the Waste Load Allocation trash generation rate. During the next catch basin cleaning cycle the trash in catch basins within the Santa Monica Bay Watershed representing the different land uses will be collected in 5 gallon containers and weighed. A "pounds per gallon" conversion factor will be developed this way and compared to the assigned Waste Load Allocation of 807 gallons per square mile per year. A prorated share of trash hauled to the landfills will be compared to the Waste Load Allocation to demonstrate compliance with the Waste

**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

Load Allocations. Additionally, the City of Torrance owns and maintains the Amie, Henrietta and Entradero Detention Basins. Observations of trash collected in these detention basins after installation of automatic retractable curb grates and "No Parking" signs will also be used to confirm the zero trash numeric target. Observations of the Madrona Marsh sump where the automatic retractable screens and "No Parking" signs have been installed for the Madrona Marsh Restoration and Enhancement Project have already confirmed a zero trash loading for that watershed.

Twenty (20) months from the receipt of the letter of approval for the Trash Monitoring and Reporting Plan from the Regional Board Executive Officer, and annually thereafter, the City shall submit results of implementing the Trash Monitoring and Reporting Plan toward meeting the TMDL Waste Load Allocation and zero target.

**PRIORITIZATION OF AREAS FOR BMP IMPLEMENTATION**

The Santa Monica Bay watersheds within the City of Torrance are 2,313 acres broken down into two parts in the northeast part of Torrance and southeast part of Torrance by Torrance Beach. See Figure 1 for City of Torrance Santa Monica Bay Drainage Area. These watersheds are further broken down into the Storm Water Basin Enhancement Project watershed (1,427.4 acres, Figure 2) and 190<sup>th</sup> Street Watershed (157.3 Acres, Figure 4) in the northeast and the Torrance Beach Watershed (569.7 acres, Figure 3) and the Doris Sump Watershed (161.3 acres, Figure 5) in the southeast.

The Santa Monica Bay Debris TMDL requires the prioritization of areas that have the highest trash generations rates. Commercial, High Density Residential and Industrial areas have the highest trash generation rates and pursuant to Zoning Categories shown on Figure 1 those areas are in the Storm Water Basin Enhancement Project and Torrance Beach watersheds. The Storm Water Basin Enhancement Project watershed currently has a project of the same name fully funded and under final design with construction proposed to start March 2013. The areas of Commercial and High Density Residential within the Torrance Beach watershed have already been addressed with the installation of four CDS units at Torrance Beach, see Figure 3.

The Stormwater Basin Enhancement Project is a \$4.4 million dollar project that is 75% funded by State Proposition 84 Grant Funds, 7% funded by Federal WATERwise grant funding and the remaining is 18% is local funding. The Torrance Beach CDS units were fully funded State grant. The City of Torrance has no dedicated funding for installation of trash screens. Schedules proposed in Table 1 are dependent on the City obtaining sufficient funding.

The Doris Basin watershed flows to a Los Angeles County storm drain pump station and Avenue I watershed flows to a Los Angeles County Low Flow Diversion Pump Station. Both pump stations have trash screens ahead of the pump systems. Therefore the 23% of the Santa Monica Bay catch basins within these watersheds are already addressed. Combined with the 65% of catch basins screened with the completion of the Stormwater Basin Enhancement Project, the percentage of complete is 88%. The City proposes to

**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

contract directly with Stormwater Basin Enhancement Project sub-contractor for the ARS units to complete all ARS installations in 2015.

**Table 1. City of Torrance CB retrofit schedule to meet the Santa Monica Bay Debris Trash TMDL.**

<b>Compliance Date</b>	<b>Actions Proposed</b>	<b>City of Torrance (No. of CB Addressed/% of Goal) (cumulative by year)</b>
<b>Year 1</b> March 2013	Submit TMRP & Obtain EO Approval (CDS units existing at Torrance Beach and Doris and Ave. I P.S.)	36/31%
<b>Year 2</b> March 2014	Award contract for installation of ARS and No Parking Signs for Stormwater Basin Enhancement Project	36/31%
<b>Year 3</b> March 2015	Complete construction of ARS and No Parking Signs. Submit first Annual Monitoring Report	309/88%
<b>Year 4</b> March 2016	Submit Annual Monitoring Report	309/88%
<b>Year 5</b> March 2017	Contract and install ARS 190 <sup>th</sup> Street watershed Submit Annual Monitoring Report	470/100%
<b>Year 6</b> March 2018	Submit Annual Monitoring Report	470/100%
<b>Year 7</b> March 2019	Submit Annual Monitoring Report	470/100%
<b>Year 8</b> March 2020	Submit Annual Monitoring Report	470/100%



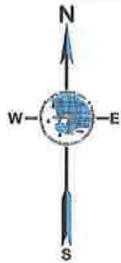
Figure 1

# City of Torrance Santa Monica Bay Drainage Area

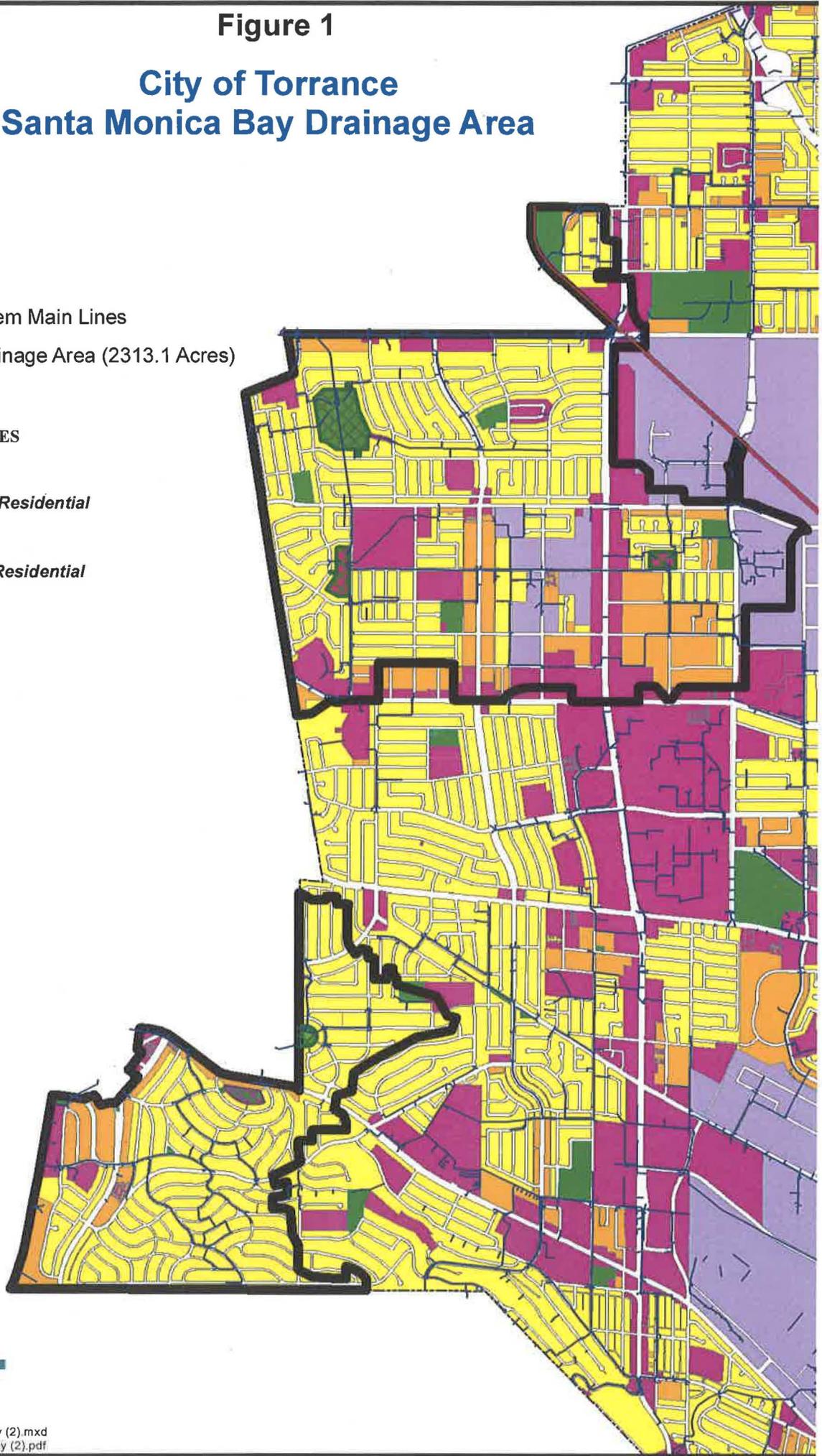


## Legend

- Storm Water System Main Lines
-  Santa Monica Drainage Area (2313.1 Acres)
- - - - City Boundary
- ZONING CATEGORIES**
-  *Commercial*
-  *High Density Residential*
-  *Industrial*
-  *Low Density Residential*
-  *Park*



Not To Scale



Jeffery W. Gibson, Director





# City of Torrance Storm Water Basin Enhancement Project

Figure 2

City of Redondo Beach

Legend

● Storm Water Catch Basins

Storm Water System Main Lines

Owner

— City of Torrance SD

— County of Los Angeles

--- City Boundary

Storm Water Tributary Area

Amie (399.1 Acres)

Entradero (466.2 Acres)

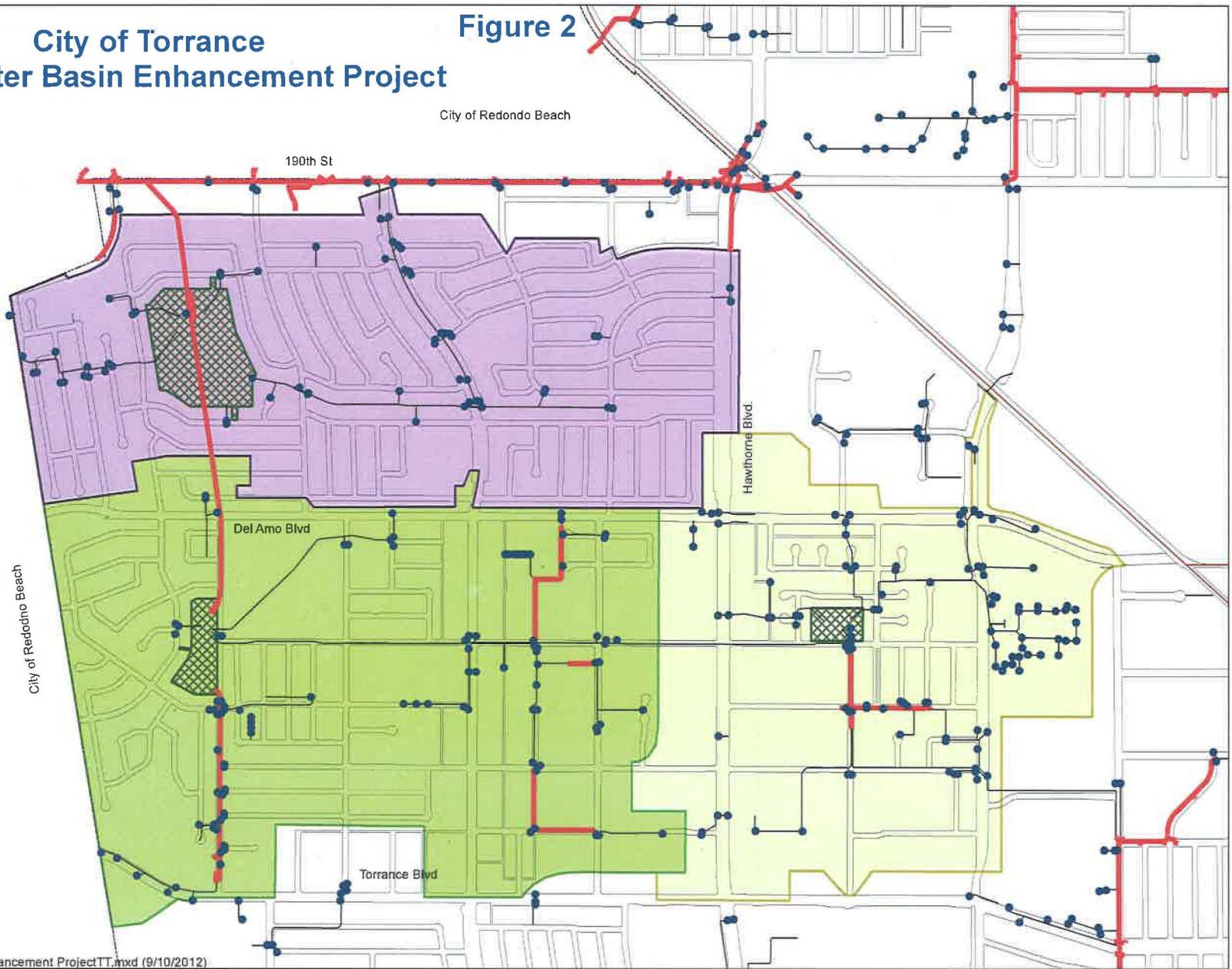
Henrietta (562.1 Acres)

Number of County Inlets: 37

Number of City Inlets: 236



Not to scale







# City of Torrance Torrance Beach Watershed

### Legend

- Storm Water Catch Basins
- \* CDS Units

### Storm Water System Main Lines

- Owner**
- City of Torrance SD
  - County of Los Angeles SD
  - City Boundary

### Tributary Area

- Avenue I Sub Watershed (238 Acres)
- Torrance Beach Sub Watershed (331.7 Acres)

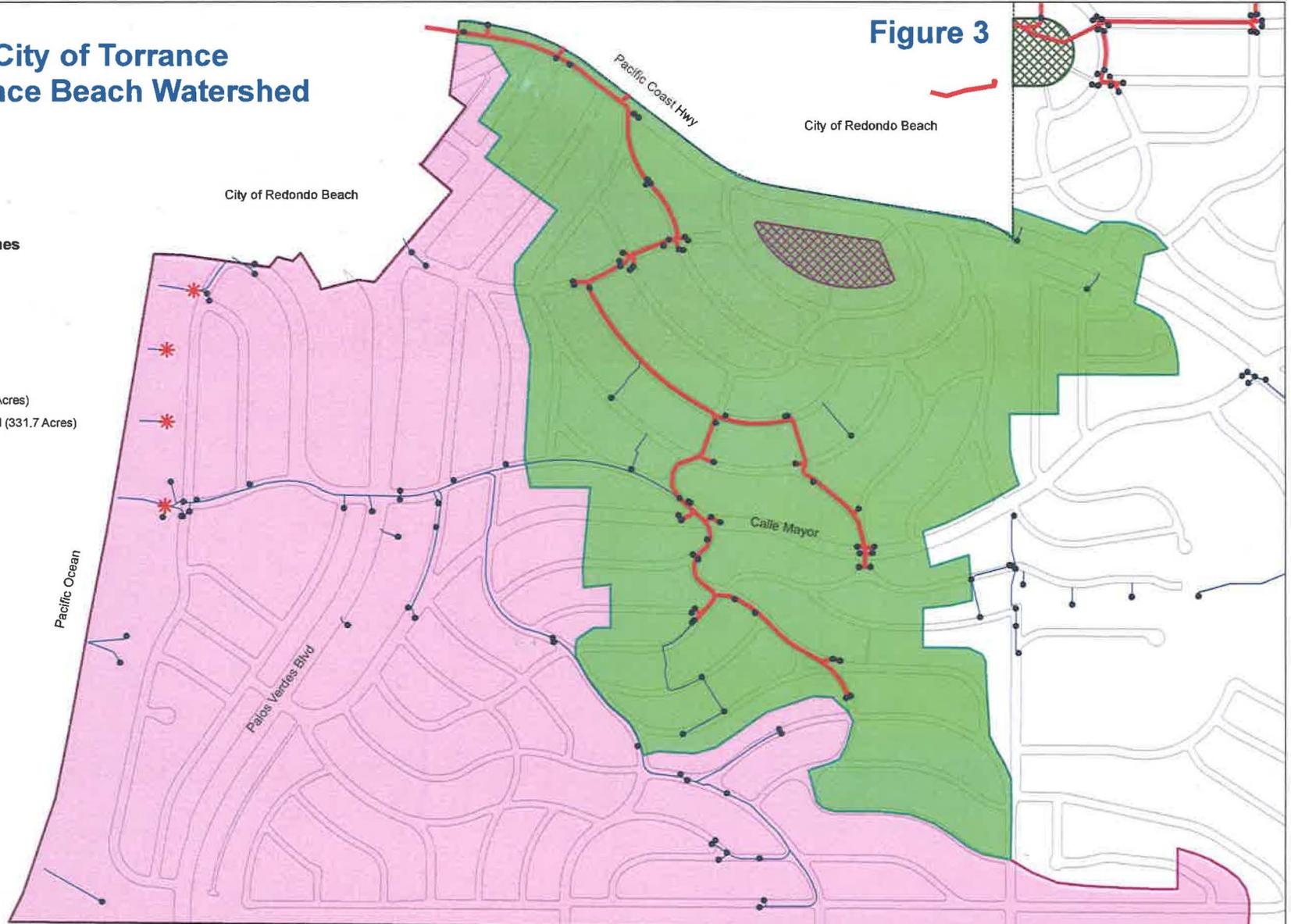
Number of County Inlets: 56  
Number of City Inlets: 55



Not to scale



## Figure 3





# City of Torrance 190th Street Watershed



## Legend

- Storm Water Catch Basins

## Storm Water System Main Lines

### Owner

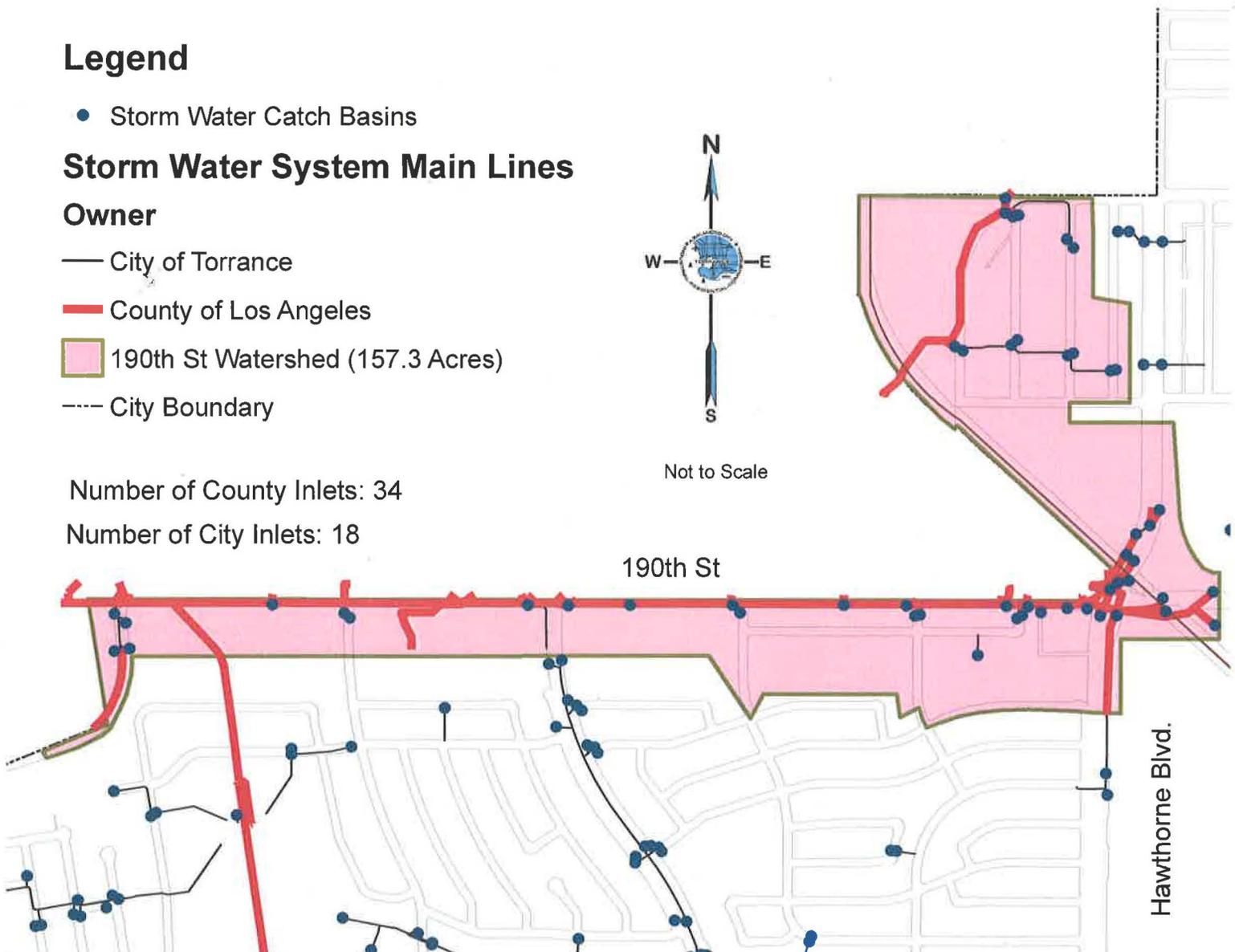
- City of Torrance
- County of Los Angeles
- 190th St Watershed (157.3 Acres)
- - - City Boundary

Number of County Inlets: 34

Number of City Inlets: 18

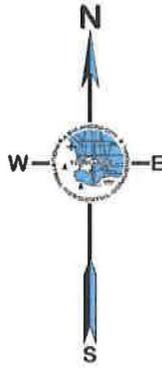


Not to Scale





# City of Torrance Doris Sump Watershed



Not to Scale



## Legend

- Storm Water Catch Basins

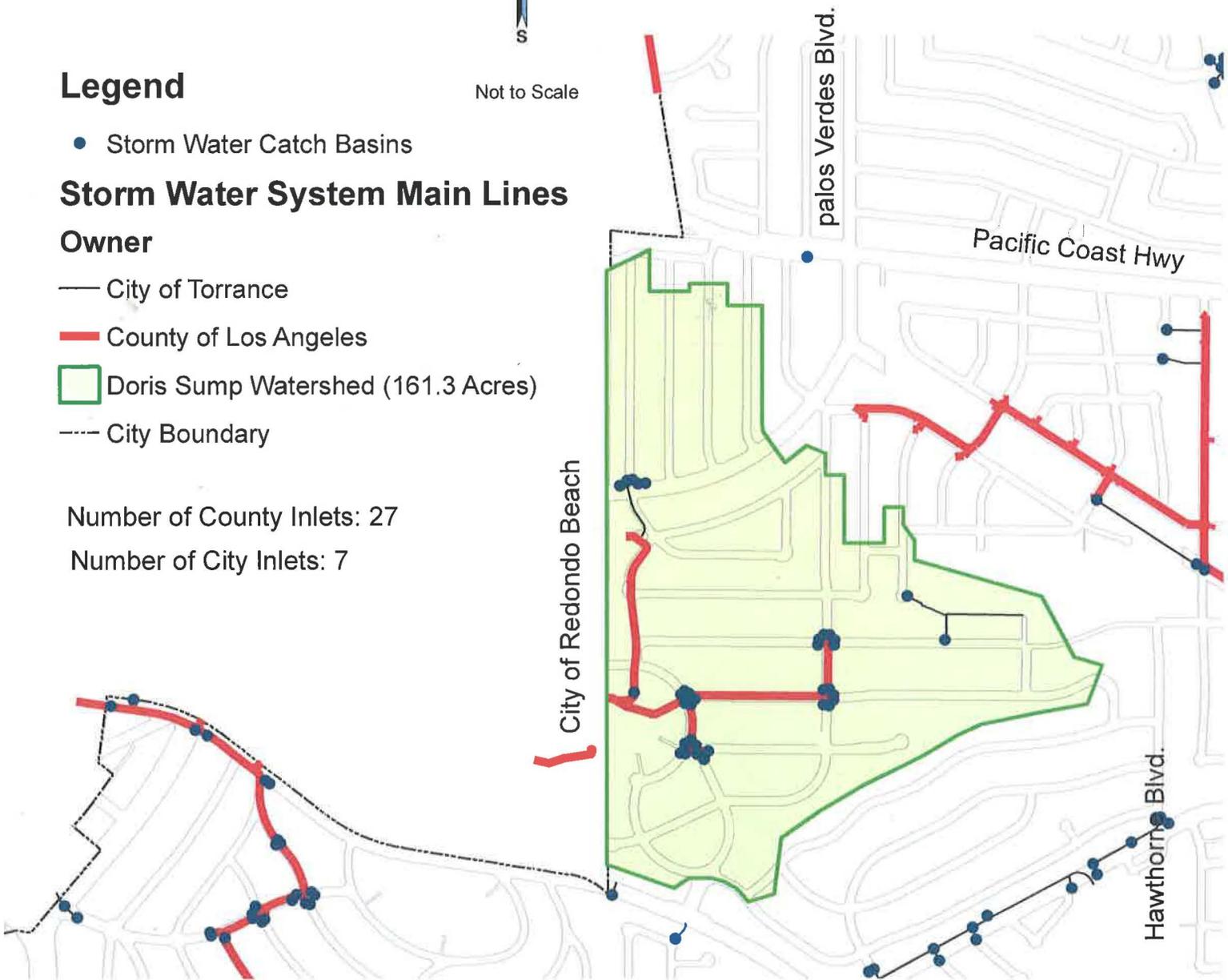
## Storm Water System Main Lines

### Owner

- City of Torrance
- County of Los Angeles
- Doris Sump Watershed (161.3 Acres)
- - - City Boundary

Number of County Inlets: 27

Number of City Inlets: 7





**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

**Appendix A**

**Resolution No. R10-010**

**Santa Monica Bay Nearshore  
And Offshore Debris TMDL**





**Attachment A to Resolution No. R10-010**

**Proposed Amendments**  
**to the**  
**Water Quality Control Plan – Los Angeles Region**  
**for the**  
**Santa Monica Bay Nearshore and Offshore**  
**Debris TMDL**

**Amendments:**

**Table of Contents**

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)

7-34 Santa Monica Bay Nearshore and Offshore Debris TMDL

**List of Figures, Tables and Inserts**

Add:

Chapter 7. Total Maximum Daily Loads (TMDLs)

Tables

7-34 Santa Monica Bay Nearshore and Offshore Debris TMDL

7-34.1. Santa Monica Bay Nearshore and Offshore Debris TMDL,  
Elements

7-34.2. Santa Monica Bay Nearshore and Offshore Debris TMDL,  
Implementation Schedule – Trash and Plastic Pellets from Point  
Sources

7-34.3. Santa Monica Bay Nearshore and Offshore Debris TMDL,  
Implementation Schedule – Minimum Frequency of Assessment and  
Collection Program for Trash from Nonpoint Sources

**Chapter 7. Total Maximum Daily Loads (TMDLs)  
Santa Monica Bay Nearshore and Offshore Debris TMDL**

This TMDL was adopted by:

The Regional Water Quality Control Board on November 4, 2010.

This TMDL was approved by:

The State Water Resources Control Board on [Insert Date].

The Office of Administrative Law on [Insert Date].

The U.S. Environmental Protection Agency on [Insert Date].

The elements of the TMDL are presented in Table 7-34.1 and the

Implementation Plan in Tables 7-34.2 and 7-34.3.

**Table 7-34.1 Santa Monica Bay Nearshore and Offshore Debris TMDL:**

**Elements**

<b>Elements</b>	<b>Santa Monica Bay Nearshore and Offshore Debris TMDL</b>
<b>Problem Statement</b>	Discharges of debris <sup>1</sup> , including trash and plastic pellets, into Santa Monica Bay violate water quality objectives, impair beneficial uses, and cause pollution and nuisance. Nearshore and offshore areas of the Santa Monica Bay were listed on the 1998, 2002, and 2006 Federal Clean Water Act Section 303(d) lists of impaired waterbodies for debris. The water quality objectives applicable to debris include “Floating Material” and “Solid, Suspended, or Settleable Materials” in Chapter 3, and “Floating Particulates” in the California Ocean Plan (2005). The following designated beneficial uses of Santa Monica Bay are impaired by debris: industrial service supply (IND), navigation (NAV), water contact recreation (REC-1), non-contact water recreation (REC-2), commercial and sport fishing (COMM), estuarine habitat (EST), marine habitat (MAR), preservation of biological habitats (BIOL), migration of aquatic organisms (MIGR), wildlife habitat (WILD), rare, threatened, or endangered species (RARE), spawning, reproduction, and or early development (SPWN), shellfish harvesting (SHELL), and wetland habitat (WET).
<b>Numeric Target</b> <i>(interpretation of the narrative water quality objectives for floating materials/particulates, and solid, suspended, or settleable materials<sup>2</sup>, used to calculate the load allocations)</i>	<p><u>Trash</u> Zero trash in Santa Monica Bay.</p> <p><u>Plastic Pellets</u> Zero plastic pellets in Santa Monica Bay.</p>
<b>Source Analysis</b>	Along the West Coast, land-based debris comprises more than half of the debris observed in the marine environment, undetermined sources of debris comprise less than half of the debris observed in the marine environment, and ocean-based debris comprises only

<sup>1</sup> According to the National Oceanic and Atmospheric Administration (NOAA) Marine Debris Program, debris is defined as “any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment” (NOAA 2010). In this TMDL, trash does not include naturally occurring vegetation waste. Plastic pellets, also known as plastic resin pellets, are small, round pellets that are the raw form of plastic. These pellets are melted down to form plastic products.

<sup>2</sup> Narrative objectives are specified in the 1994 Los Angeles Regional Board Basin Plan, and in the 2005 California Ocean Plan.

<b>Elements</b>	<b>Santa Monica Bay Nearshore and Offshore Debris TMDL</b>
	<p>approximately one-tenth of the debris observed in the marine environment.<sup>3</sup></p> <p>Most of the land-based debris is discharged to the marine environment through storm drains. The primary sources of debris discharged from storm drains include litter, debris from commercial establishments and public venues, industrial discharges, garbage transportation, landfills, and construction debris.</p> <p>The principal source of plastic pellets is point source discharges through storm drains from industry that imports, manufactures, processes, transports, stores, recycles or otherwise handles plastic pellets. Accidental spills during transfer and transportation also contribute to plastic pellets entering storm drains and, ultimately, the Santa Monica Bay.</p> <p>Land-based nonpoint sources of debris include inappropriate disposal of debris at land areas such as beaches and marinas adjacent to Santa Monica Bay or waterbodies within the Santa Monica Bay WMA. Other nonpoint sources of debris include direct deposition and dumping.</p> <p>Marine-based sources of trash include boats and vessels.</p>
<b>Loading Capacity</b>	Zero for both trash and plastic pellets, as defined in the Numeric Target.
<b>Margin of Safety</b>	Zero is a conservative numeric target for both trash and plastic pellets, which contains an implicit margin of safety.
<b>Seasonal Variations and Critical Conditions</b>	<p>Discharge of trash and plastic pellets from storm drains and open channels occurs primarily during or shortly after a major rain event. Discharge of trash from nonpoint sources occurs during all seasons, but can increase during high wind events, which are defined as periods of wind advisories issued by the National Weather Service. Additionally weekends and holidays, particularly those between April 15 through October 15, result in a substantial increase of trash littered on beaches, open space and parks.</p>

<sup>3</sup> S.B. Sheavly. 2007. "National Marine Debris Monitoring Program: Final Program Report, Data Analysis and Summary." Prepared for U.S. Environmental Protection Agency by Ocean Conservancy, Grant Number X83053401-02. 76 pp.

<b>Elements</b>	<b>Santa Monica Bay Nearshore and Offshore Debris TMDL</b>
<b><i>Waste Load Allocations (for point sources)</i></b>	<p data-bbox="649 273 730 304"><u>Trash</u></p> <p data-bbox="649 325 1429 451">The WLA is zero trash. Zero trash is defined as no trash discharged into waterbodies within the Santa Monica Bay Watershed Management Area (WMA) and then into Santa Monica Bay or on the shoreline of Santa Monica Bay.</p> <p data-bbox="649 472 1445 955">Waste Load Allocations for trash (WLAs) are assigned to the California Department of Transportation (Caltrans, permittee for Statewide National Pollutant Discharge Elimination System (NPDES) Storm Water Permit, No. 99-06-DWQ); Los Angeles County and the Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, Torrance, and Westlake Village (co-permittees within the Santa Monica Bay WMA under the Los Angeles County MS4 NPDES Permit, No. CAS004001); and County of Ventura, and City of Thousand Oaks (co-permittees within the Santa Monica Bay WMA under the Ventura County MS4 NPDES Permit, No. CAS 004002).</p> <p data-bbox="649 976 1453 1596">Responsible agencies and jurisdictions covered by the Ballona Creek Watershed Trash TMDL including Caltrans, County of Los Angeles, and the Cities of Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, and West Hollywood, and responsible agencies and jurisdictions identified in the Malibu Creek Trash TMDL including Caltrans, Los Angeles County, Ventura County, Ventura County Watershed Protection District, and the Cities of Agoura Hills, Calabasas, Hidden Hills, Malibu, Thousand Oaks, and Westlake Village are also responsible for point source discharges of trash into the Santa Monica Bay via open channels and storm drains. The WLA applicable to MS4 Permittees that is established herein, and the associated requirements for these responsible agencies and jurisdictions shall be complied with through the Ballona Creek Trash TMDL (Regional Board Resolution No. R01-014 and any amendments thereto) and the Malibu Creek Trash TMDL (Regional Board Resolution No. R08-007 and any amendments thereto).</p> <p data-bbox="649 1627 1445 1879">Each responsible jurisdiction and agency, identified above, shall comply with the interim or final Waste Load Allocations for trash assigned to it and, therefore, should utilize all compliance strategies within its authority to achieve these allocations. If these strategies include installation of full or partial capture systems in the infrastructure of a flood control district, the jurisdiction is responsible for obtaining all necessary permits to do so.</p>

Elements	Santa Monica Bay Nearshore and Offshore Debris TMDL
	<p>Flood control districts, such as the Los Angeles County Flood Control District or Ventura County Watershed Protection District, are not assigned Waste Load Allocations, based on jurisdictional area, if channel maintenance is performed in compliance with the municipal stormwater permit. However, they may be held responsible with a jurisdiction and/or agency for non-compliance where the flood control district has either:</p> <ul style="list-style-type: none"> <li>(i) without good cause denied necessary authority to a responsible jurisdiction or agency for the timely installation and/or maintenance of full and/or partial capture trash control devices for purposes of TMDL compliance in parts of the MS4 physical infrastructure that are under its authority, or</li> <li>(ii) not fulfilled its obligations under its MS4 permit regarding proper BMP installation, operation and maintenance for purposes of TMDL compliance within the MS4 physical infrastructure under its authority,</li> </ul> <p>thereby causing or contributing to a responsible jurisdiction and/or agency to be out of compliance with its interim or final Waste Load Allocations.</p> <p>Under these circumstances, the flood control district's responsibility shall be limited to non-compliance related to the drainage area(s) within the jurisdiction where the flood control district has authority over the relevant portions of the MS4 physical infrastructure.</p> <p>The WLA may be assigned to additional responsible jurisdictions or agencies discharging urban runoff and stormwater in the future.</p> <p><u>Plastic Pellets</u></p> <p>The WLA for plastic pellets is zero. Zero plastic pellets is defined as no discharge of plastic pellets from the premises of industrial facilities that import, manufacture, process, transport, store, recycle or otherwise handle plastic pellets. The WLA is consistent with Cal. Water Code § 13367 and 40 CFR 122.26(b)(12).</p> <p>WLAs for plastic pellets are assigned to permittees of the Industrial Storm Water General Permit (Order No. 97-03-DWQ, and NPDES Permit No. CAS 000001) within the Santa Monica Bay WMA. The Standard Industry Classification (SIC) codes associated with industrial</p>

<b>Elements</b>	<b>Santa Monica Bay Nearshore and Offshore Debris TMDL</b>
	<p>activities involving plastic pellets may include, but are not limited to, 282X, 305X, 308X, 39XX, 25XX, 3261, 3357, 373X, and 2893. Additionally, industrial facilities with the term “plastic” in the facility or operator name, regardless of the SIC code, may be subject to the WLA for plastic pellets. Other industrial permittees within the Santa Monica Bay WMA that fall within the above categories, but are regulated through other general permits and/or individual industrial storm water permits are also required to comply with the WLA for plastic pellets.</p>
<b>Load Allocations (for nonpoint sources)</b>	<p>The Load Allocation (LA) is zero trash. Zero trash is defined for nonpoint sources as no trash on the shoreline or beaches, or in harbors adjacent to Santa Monica Bay, immediately following each assessment and collection event consistent with an established Minimum Frequency of Assessment and Collection Program (MFAC Program). The MFAC Program is established at an interval that prevents trash from accumulating in deleterious amounts that cause nuisance or adversely affect beneficial uses between collections.</p> <p>LAs are assigned to jurisdictions that own and/or manage beaches and harbors along Santa Monica Bay, which include California Department of Parks and Recreation, County of Los Angeles Department of Beaches and Harbors, and Cities of Hermosa Beach, Los Angeles, Santa Monica, and Redondo Beach.</p> <p>The National Park Service, California Department of Parks and Recreation, County of Los Angeles, County of Ventura, and State Lands Commission, which have jurisdiction over non-beach open space and/or parks are assigned LAs. The LA may be assigned to additional responsible jurisdictions and/or agencies in the future under appropriate regulatory programs.</p>
<b>Implementation</b>	<p><b>Point Sources</b></p> <p><u>Trash</u>  WLA for trash shall be implemented through municipal separate storm sewer system (MS4) permits and via the authority vested in the Executive Officer by California Water Code sections 13267 and/or 13383. Dischargers may comply with the WLA in any lawful manner, including the use of full capture systems; partial capture systems; and/or institutional controls.</p> <p>(1) Compliance with the final WLA may be achieved through an adequately sized and maintained full capture</p>

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	<p>system, once the Executive Officer has certified that the system meets the following minimum criteria. A full capture system, at a minimum, consists of any device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate (Q) resulting from a one-year, one-hour, storm in the subdrainage area. The rational equation is used to compute the peak flow rate:</p> <p><math>Q = C \times I \times A</math>, where</p> <p>Q = design flow rate (cubic feet per second, cfs);  C = runoff coefficient (dimensionless);  I = design rainfall intensity (inches per hour); and  A = subdrainage area (acres).</p> <p>Point source discharges that choose to comply using full capture systems must demonstrate a phased implementation of full capture devices over an 8-year period until the final WLA of zero is attained. Zero will be deemed to have been met if full capture systems have been installed on all conveyances discharging to the waterbodies within the Santa Monica Bay WMA and the Santa Monica Bay.</p> <p>(2) Responsible agencies and jurisdictions may achieve compliance by using partial capture systems and/or institutional controls. Point source dischargers that elect to use partial capture systems or institutional controls shall use a mass balance approach based on the trash daily generation rate (DGR)<sup>4</sup>, to demonstrate compliance.</p> <p><u>Plastic Pellets</u></p> <p>The WLA of no discharge of plastic pellets shall be implemented through the statewide Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activity (NPDES Permit No. CAS00001) (IGP), other general permits, individual industrial stormwater permits, or other Regional Board orders, consistent with California Water Code § 13367 and 40 CFR 122.26(b)(12).</p> <p>Jurisdictions and agencies identified as responsible jurisdictions for point sources of trash in this Santa Monica Bay Debris TMDL and in the existing Malibu Creek and Ballona Creek Trash TMDLs, including the Los Angeles County Flood Control District and the Ventura County Watershed Protection District, shall either prepare a Plastic Pellet Monitoring and Reporting Plan (PMRP), or</p>

<sup>4</sup> The DGR is the average amount of trash deposited during a 24-hour period, as measured in a specified drainage area.

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	<p>demonstrate that a PMRP is not required under certain circumstances, as follows:</p> <ol style="list-style-type: none"> <li data-bbox="695 359 1455 680">(1) Responsible jurisdictions that have industrial facilities or activities related to the manufacturing, handling, or transportation of plastic pellets within their jurisdiction shall prepare a PMRP to (i) monitor the amount of plastic pellets being discharged from the MS4; (ii) establish triggers for increased industrial facility inspections and enforcement of SWPPP requirements for industrial facilities identified as responsible for the plastic pellet WLA herein; and (iii) address possible plastic pellet spills.</li> <li data-bbox="695 716 1455 1094">(2) Responsible jurisdictions that have no industrial facilities or activities related to the manufacturing, handling, or transportation of plastic pellets, may not be required to conduct monitoring at MS4 outfalls, but shall be required to include a response plan in the PMRP. In order to be absolved of the requirement to conduct monitoring at MS4 outfalls, documentation of the absence of industrial facilities and activities within the jurisdiction that are related to the manufacturing, handling and transportation of plastic pellets must be provided in the proposed PMRP.</li> <li data-bbox="695 1129 1455 1549">(3) A MS4 Permittee may demonstrate to the Regional Board that it has only residential areas within its jurisdiction, and that it has limited commercial or industrial transportation corridors (rail and roadway), such that it is not considered a potential source of plastic pellets to Santa Monica Bay. Such demonstration may be submitted in lieu of a PMRP and must include the municipal zoning plan and other appropriate documentation. The Executive Officer may approve an exemption from the requirement to prepare a PMRP for the MS4 Permittee on the basis of this demonstration, if appropriate.</li> </ol> <p>If a jurisdiction changes its zoning and land use plans, or issues operating licenses to industries that import, manufacture, process, transport, store, recycle or otherwise handle plastic pellets within its jurisdiction, then it shall be subject to the requirement to submit a PMRP, if it has not already done so, within 90 days of any one of those actions.</p> <p>The Regional Board shall be notified by the agency or jurisdiction within 24 hours of the responsible agency or</p>

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	<p>jurisdiction becoming aware of a spill. The PMRP shall include protocols for a timely and appropriate response to possible plastic pellets spills within their jurisdictional area, and a comprehensive plan to ensure that plastic pellets are contained.</p> <p>The Regional Board may reconsider the TMDL to assign the WLA for plastic pellets to additional jurisdictions and agencies including, but not limited to, industrial permittees, MS4 permittees, and any agencies or jurisdictions which are responsible for discharging plastic pellets to the Santa Monica Bay.</p> <p><b>Nonpoint Sources</b></p> <p>LAs shall be implemented consistent with the Statewide Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program through a general waiver of waste discharge requirements (WDR), individual waivers, a general WDR, an individual WDR, a memorandum of understanding (MOU), a cleanup and abatement order, or any other appropriate order or orders, provided the program is consistent with the assumptions and requirements of the reductions described in Table 7-34.3, below.</p> <p>Nonpoint source dischargers may achieve the LAs by implementing an MFAC/BMP program approved by the Executive Officer. Responsible jurisdictions will be deemed in compliance with the LAs if an MFAC/BMP program, approved by the Executive Officer, demonstrates that there is no accumulation of trash, as defined in "Numeric Targets".</p> <p>An MFAC/BMP Program must, to the satisfaction of the Executive Officer, meet the following criteria:</p> <ol style="list-style-type: none"> <li>a) The MFAC/BMP Program includes an initial minimum frequency of trash assessment and collection and suite of structural and/or nonstructural BMPs. The MFAC/BMP program shall include collection and disposal of all trash found in the source areas and along the shoreline. Responsible jurisdictions shall implement an initial suite of BMPs based on current trash management practices in land areas that are found to be sources of trash to waterbodies within the Santa Monica Bay WMA and to Santa Monica Bay.</li> </ol> <p><u>Beaches and Harbors along Santa Monica Bay</u> For beaches and harbors along Santa Monica Bay,</p>

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	<p>the initial minimum frequency shall be set as follows:</p> <ol style="list-style-type: none"> <li>1. The trash source areas of beaches and harbors shall be cleaned on a daily basis year round.</li> <li>2. Trash on Santa Monica Bay shorelines shall be collected daily. An assessment shall immediately follow at the frequency specified in the TMRP.</li> <li>3. The assessment performed immediately after the collection events shall focus on the shorelines or interface along Santa Monica Bay.</li> <li>4. The protocol for conducting the assessment immediately after the collection event shall include methods and frequencies of assessment, specific locations on the beaches and harbors, in the TMRP.</li> <li>5. Responsible jurisdictions for beaches and harbors shall conduct routine trash generation rate evaluation on the nonpoint source areas at selected beaches or harbors under their management. Protocols, as specified in the TMRP, for this evaluation include: <ol style="list-style-type: none"> <li>i) The evaluation shall be performed in the late afternoon before dusk. Data collected may represent the daily trash quantity littered or deposited on the nonpoint source areas.</li> <li>ii) Methods, locations and frequencies of evaluation on the beaches and harbors shall be included in the TMRP.</li> </ol> </li> <li>6. Water in harbors shall be inspected and all trash found on the water shall be removed at a frequency and during critical conditions as defined in the approved TMRP.</li> <li>7. Compliance for jurisdictions responsible for nonpoint source trash at areas where daily cleanup is implemented, is determined by the following conditions: <ol style="list-style-type: none"> <li>i) The assessment conducted immediately after cleanup shall demonstrate that all trash on the shoreline or harbor is 100% removed and no trash remains.</li> <li>ii) Responsible jurisdictions for beaches and</li> </ol> </li> </ol>

Elements	Santa Monica Bay Nearshore and Offshore Debris TMDL
	<p>harbors where daily cleanup is performed, shall demonstrate that the trash generation rate of the source areas does not show an increasing trend and does not exceed the benchmark of 310 pounds (lbs) per mile of beach/harbor per day, or 113,150 lbs/mile/year.</p> <p>8. Responsible jurisdictions shall initiate additional BMPs as specified in the TMRP, should trash amounts collected during evaluation at the source areas exceed 113,150 lbs/mile/year, or not indicate a decreasing trend.</p> <p><u>Non-Beach Open Space and Parks</u>  For open space and parks within the Santa Monica Bay WMA other than beaches and harbors, the initial minimum frequency shall be as follows:</p> <ol style="list-style-type: none"> <li>1. Trash in open space and parks managed by responsible jurisdictions and agencies identified in the LA section of this table shall be 100% removed at each assessment and collection event as specified in the TMRP, within 72 hours after critical conditions, and immediately after special events when no safety hazards exist.</li> <li>2. The TMRP shall include protocols for trash assessment immediately after each cleanup event, assessment locations and frequencies.</li> <li>3. Compliance for jurisdictions responsible for open space and parks is determined by the following criteria: <ol style="list-style-type: none"> <li>i) The assessment performed immediately after each cleanup event shall demonstrate that no trash remains.</li> <li>ii) The trash amount accumulated between cleanup events in open space and parks shall not exceed the LAs of 640 gallons per square mile per year (gal/mi<sup>2</sup>/yr), or 162,468 lbs/ mi<sup>2</sup>/yr, and shall show a decreasing trend.</li> <li>iii) Responsible jurisdictions shall increase the frequency of collection and/or implement additional BMPs, should trash amounts collected at cleanup events not indicate a decreasing trend.</li> </ol> </li> </ol>

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	<p>b) The MFAC/BMP Program includes assurances that it will be implemented by the responsible jurisdictions.</p> <p>c) The TMRP includes a MFAC/BMP Program, as described below, and a requirement that the responsible jurisdictions will self-report any non-compliance with its provisions. The results and report of the TMRP must be submitted to Regional Board on an annual basis.</p> <p>d) MFAC protocols may be based on SWAMP protocols for rapid trash assessment, or alternative protocols proposed by dischargers and approved by the Executive Officer of the Regional Board.</p> <p>e) Implementation of the MFAC/BMP program should include a Health and Safety Plan to protect personnel. The MFAC/BMP shall not require responsible jurisdictions to access and collect trash from areas where access by personnel is prohibited.</p> <p>The Executive Officer may approve or require a revised assessment and collection frequency and definition of the critical conditions:</p> <p>(a) To prevent trash from accumulating in deleterious amounts that cause nuisance or adversely affect beneficial uses between collections;</p> <p>(b) To reflect the results of trash assessment and collection;</p> <p>(c) If the amount of trash collected does not show a decreasing trend, where necessary to prevent nuisance or adverse effects on beneficial uses, such that a shorter interval between collections is warranted; or</p> <p>(d) If the amount of trash collected is decreasing such that a longer interval between collections is warranted.</p> <p>At the end of the implementation period, a revised MFAC/BMP program may be required if the Executive Officer determines that the amount of trash accumulating between collections is causing pollution or nuisance or otherwise adversely affecting beneficial uses.</p> <p>With regard to (a), (b) or (c), above, the Executive Officer is authorized to allow responsible jurisdictions to implement additional structural or non-structural BMPs in lieu of modifying the monitoring frequency.</p>

<b>Elements</b>	<b>Santa Monica Bay Nearshore and Offshore Debris TMDL</b>
<b><i>Monitoring and Reporting Plan</i></b>	<p data-bbox="651 281 732 310"><u>Trash</u></p> <p data-bbox="651 327 1437 516">Responsible agencies and jurisdictions shall develop a Trash Monitoring and Reporting Plan (TMRP) for Executive Officer approval that describes the methodologies that will be used to assess and monitor trash in their responsible areas within the Santa Monica Bay WMA or along Santa Monica Bay.</p> <p data-bbox="651 554 1446 869">For purposes of compliance determination, the default Baseline WLA for County of Ventura, Cities of Agoura Hills, Calabasas, Malibu, Thousand Oaks, and Westlake Village is 640 gal/mi<sup>2</sup>/yr, which is the same Baseline WLA set forth in the Malibu Creek Trash TMDL (Regional Board Resolution No. R08-007) for responsible jurisdictions of Los Angeles County, Ventura County, Ventura County Watershed Protection District, the Cities of Agoura Hills, Calabasas, Hidden Hills, Malibu, Thousand Oaks, and Westlake Village.</p> <p data-bbox="651 907 1442 1062">The default Baseline WLA for Los Angeles County, Cities of Los Angeles, Culver City, Santa Monica, El Segundo, Manhattan Beach, Hermosa Beach, Redondo Beach, Torrance, Palos Verdes Estates, Rancho Palos Verdes, Rolling Hills, and Rolling Hills Estates is 807 gal/mi<sup>2</sup>/ yr.</p> <p data-bbox="651 1100 1403 1192">The default Baseline WLA for Caltrans is 33,452.8 gal/mi<sup>2</sup>/yr excluding Caltrans' jurisdictional area in the Ballona Creek Watershed.</p> <p data-bbox="651 1230 1442 1482">The existing Ballona Creek Trash TMDL assigned a Baseline WLA of 86 cubic feet per square mile per year (ft<sup>3</sup>/mi<sup>2</sup>/yr) (equivalent to 643.3 gal/mi<sup>2</sup>/yr) to jurisdictions including the County of Los Angeles, the Cities of Beverly Hills, Culver City, Inglewood, Los Angeles, Santa Monica, and West Hollywood, and 893 ft<sup>3</sup>/mi<sup>2</sup>/yr (or 6,679.6 gal/mi<sup>2</sup>/yr) to Caltrans for their jurisdictional areas within the Ballona Creek Watershed.</p> <p data-bbox="651 1520 1414 1646">The TMRP shall include a plan to establish a site specific trash Baseline WLA if responsible agencies and jurisdictions elect to not use the default Baseline WLAs assigned above.</p> <p data-bbox="651 1684 1446 1869">Requirements for the TMRP shall include, but are not limited to, assessment and quantification of trash collected from source areas in the Santa Monica Bay WMA, and shoreline of the Santa Monica Bay. The monitoring plan shall provide details on the frequency, location, and reporting format. Responsible jurisdictions shall propose</p>

<b>Elements</b>	<b>Santa Monica Bay Nearshore and Offshore Debris TMDL</b>
	<p>a metric (e.g., weight, volume, pieces of trash) to measure the amount of trash discharged from their jurisdictional areas.</p> <p>The TMRP shall include a prioritization of areas that have the highest trash generation rates. The TMRP shall give preference to this prioritization when scheduling the installation of full capture devices, BMPs, or trash assessment and collection (MFAC) programs. The TMRP shall also evaluate and identify the most appropriate BMPs to implement given the nature of the trash impairment.</p> <p>The TMRP shall also include an evaluation of effectiveness of the MFAC/BMP program to prevent trash from accumulating in deleterious amounts that cause pollution or nuisance or adversely affect beneficial uses between collections, proposals to enhance BMPs, and a revised MFAC for Executive Officer review.</p> <p>Responsible agencies and jurisdictions in Tables 7-34.2 and 7-34.3 may cooperate and coordinate their TMRP activities to fulfill requirements in this Santa Monica Bay Debris TMDL.</p> <p>Consistent with the requirements of their respective MS4 permits, the flood control districts, including the Los Angeles County Flood Control District and the Ventura County Watershed Protection District, and other MS4 Permittees are responsible for visually monitoring and removing trash and debris from all open channels and other MS4 drainage structures under their ownership. These requirements are intended to address fugitive trash and debris that has been deposited either illegally or through wind transport into the open channels. The flood control districts and other MS4 Permittees shall also identify and prioritize problem areas of illicit discharge. For these problem areas, the flood control districts and other MS4 Permittees shall propose a more frequent schedule of inspection and removal beyond the standard requirements of their MS4 permits. Alternatively, the flood control districts and other MS4 Permittees shall demonstrate that fugitive trash and debris is captured or removed prior to its discharge from the MS4 to Santa Monica Bay.</p> <p><u>Plastic Pellets</u></p> <p>Industries responsible for discharge of plastic pellets shall enroll with the California State Water Resources Control Board (State Board) as a permittee of the statewide Waste Discharge Requirements for Discharges of Storm Water</p>

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	<p>Associated with Industrial Activity (IGP) or apply for a general permit or an individual industrial stormwater permit from the Regional Board. Permittees of the IGP shall prepare a SWPPP and keep it onsite for inspection. Permittees for other general permits or individual industrial stormwater permits shall submit a Best Management Practices Plan and/or SWPPP to the Regional Board. All responsible permittees as defined under the Waste Load Allocation section are required to prepare and submit annual monitoring reports with monitoring designed to ensure compliance with the assigned WLAs, to the Regional Board. The requirements for the monitoring report preparation shall be consistent with provisions specified in the IGP, any appropriate general permit, or individual industrial permit.</p> <p>MS4 permittees identified as responsible jurisdictions and agencies for point sources of trash in this Santa Monica Bay Debris TMDL and in the existing Malibu Creek and Ballona Creek Trash TMDLs, including the Los Angeles County Flood Control District and the Ventura County Watershed Protection District, shall either prepare a Plastic Pellet Monitoring and Reporting Plan (PMRP) , or demonstrate that a PMRP is not required under certain circumstances, as follows:</p> <ol style="list-style-type: none"> <li data-bbox="699 1094 1446 1507">(1) Responsible jurisdictions that have industrial facilities or activities related to the manufacturing, handling, or transportation of plastic pellets within their jurisdiction shall prepare a PMRP to (i) monitor the amount of plastic pellets being discharged from the MS4 at critical locations and times (including, at a minimum, once during the dry season and once during the wet season); (ii) establish triggers for increased industrial facility inspections and enforcement of SWPPP requirements for industrial facilities identified as responsible for the plastic pellet WLA herein; and (iii) address possible plastic pellet spills.</li> <li data-bbox="699 1545 1446 1890">(2) Responsible jurisdictions that have no industrial facilities or activities related to the manufacturing, handling, or transportation of plastic pellets, may not be required to conduct monitoring at MS4 outfalls, but shall be required to include a response plan in the PMRP. In order to be absolved of the requirement to conduct monitoring at MS4 out falls, documentation of the absence of industrial facilities and activities within the jurisdiction that are related to the manufacturing, handling and transportation of plastic pellets must be provided in the proposed</li> </ol>

Elements	Santa Monica Bay Nearshore and Offshore Debris TMDL
	<p data-bbox="737 260 829 289">PMRP.</p> <p data-bbox="695 323 1438 743">(3) A MS4 Permittee may demonstrate to the Regional Board that it has only residential areas within its jurisdiction, and that it has limited commercial or industrial transportation corridors (rail and roadway), such that it is not considered a potential source of plastic pellets to Santa Monica Bay. Such demonstration may be submitted in lieu of a PMRP and must include the municipal zoning plan and other appropriate documentation. The Executive Officer may approve an exemption from the requirement to prepare a PMRP for the MS4 Permittee on the basis of this demonstration, if appropriate.</p> <p data-bbox="647 772 1360 932">The PMRP shall include protocols for a timely and appropriate response to possible plastic pellets spills within a Permittee's jurisdictional area, and a comprehensive plan to ensure that plastic pellets are contained.</p>

**Table 7-34.2 Santa Monica Bay Nearshore and Offshore Debris TMDL:  
Implementation Schedule - Trash and Plastic Pellets from Point Sources**

<b>Task No.</b>	<b>Task</b>	<b>Responsible Jurisdiction</b>	<b>Date</b>
1a	Submit Trash Monitoring and Reporting Plan (TMRP), including a plan for defining the trash baseline WLA, a proposed definition of "major rain event" and "proper operation and maintenance".	California Department of Transportation, Los Angeles County Flood Control District, Los Angeles County, Ventura County Watershed Protection District, County of Ventura, and Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, and Torrance.	6 months from effective date of TMDL. If a plan is not approved by the Executive Officer within 9 months, the Executive Officer will establish appropriate monitoring plans.
1b	Submit a Plastic Pellet Monitoring and Reporting Plan (PMRP) for monitoring plastic pellet discharges from the MS4, increased industrial facility inspections and enforcement, and response to possible plastic pellet spills, or a demonstration that a PMRP is not required <sup>5</sup> .	California Department of Transportation, Los Angeles County Flood Control District, Los Angeles County, Ventura County Watershed Protection District, County of Ventura, and Cities of Agoura Hills, Beverly Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Hidden Hills, Inglewood, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, Thousand Oaks, Torrance, West Hollywood, and Westlake Village.	18 months from effective date of this TMDL.
2a	Implement TMRP.	California Department of Transportation, Los Angeles County Flood Control District, Los Angeles County, Ventura County Watershed Protection District, County of Ventura, and Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, and Torrance.	6 months from receipt of letter of approval from Regional Board Executive Officer, or the date a plan is established by the Executive Officer.
2b	Implement PMRP.	California Department of	4 years from

<sup>5</sup> The responsible jurisdictions and agencies shall provide documentation as specified in Table 7-34.1.

Task No.	Task	Responsible Jurisdiction	Date
		Transportation, Los Angeles County Flood Control District, Los Angeles County, Ventura County Watershed Protection District, County of Ventura, and Cities of Agoura Hills, Beverly Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Hidden Hills, Inglewood, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, Thousand Oaks, Torrance, West Hollywood, and Westlake Village.	Effective Date of TMDL.
3	Submit results of implementing TMRP and PMRP, recommend trash baseline WLA, and propose prioritization of Full Capture System installation or implementation of other measures to attain the required trash and plastic pellet reduction.	California Department of Transportation, Los Angeles County Flood Control District, Los Angeles County, Ventura County Watershed Protection District, County of Ventura, and Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, , and Torrance. For PMRP ONLY <sup>6</sup> The Cities of Beverly Hills, Inglewood, West Hollywood, Hidden Hills, Thousand Oaks, and Westlake Village.	Twenty (20) months from receipt of letter of approval for the Trash Monitoring and Reporting Plan and PMRP from Regional Board Executive Officer, and annually thereafter.
4	Installation of Full Capture Systems or other measures to achieve 20% reduction of trash from Baseline WLA <sup>6,7</sup> .	California Department of Transportation, Los Angeles County, County of Ventura, and Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, Thousand Oaks, Torrance, and Westlake Village. <sup>7,8</sup>	Four years from effective date of TMDL.

<sup>6</sup> The monitoring and reporting requirements under the Ballona Creek Trash TMDL and Malibu Creek Trash TMDL for areas within those subwatersheds fulfill the requirement herein to prepare and implement a TMRP. Therefore, only a PMRP is required from these jurisdictions.

<sup>7</sup> Compliance with percent reductions from the Baseline WLA will be assumed wherever properly-sized full capture systems are installed and properly operated and maintained in corresponding percentages of the conveyance discharging to waterbodies within the Santa Monica Bay Watershed or directly to Santa Monica Bay.

<sup>8</sup> Each responsible jurisdiction and agency, identified above, shall comply with the interim or final Waste Load Allocations for trash assigned to it and, therefore, should utilize all compliance strategies within its authority to achieve these allocations.

<b>Task No.</b>	<b>Task</b>	<b>Responsible Jurisdiction</b>	<b>Date</b>
5	Installation of Full Capture Systems or other measures to achieve 40% reduction of trash from Baseline WLA <sup>7</sup> .	California Department of Transportation, Los Angeles County, County of Ventura, and Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, Thousand Oaks, Torrance, and Westlake Village. <sup>8</sup>	Five years from effective date of TMDL.
6	Compliance with General or Individual Industrial NPDES permit requirements to achieve the plastic pellet WLA.	Permittees of the Industrial Storm Water General Permit (NPDES Permit No. CAS 000001), other general permits, or individual industrial storm water permits for industrial activities with SIC codes that may include, but are not limited to, 282X, 305X, 308X, 39XX, 25XX, 3261, 3357, 373X, 2893, or with the term "plastic" in the facility or operator name, regardless of SIC code.	Five years from the effective date of TMDL.
7	1. Evaluate the effectiveness of Full Capture Systems or other measures to achieve trash WLA, 2. Evaluate BMPs implemented at	Regional Board.	Five years from effective date of TMDL.

Flood control districts, such as the Los Angeles County Flood Control District or Ventura County Watershed Protection District, may be held responsible with a jurisdiction and/or agency for non-compliance where the flood control district has either:

- (i) without good cause denied necessary authority to a responsible jurisdiction or agency for the timely installation and/or maintenance of full and/or partial capture trash control devices for purposes of TMDL compliance in parts of the MS4 physical infrastructure that are under its authority, or
- (ii) not fulfilled its obligations under its MS4 permit regarding proper BMP installation, operation and maintenance for purposes of TMDL compliance within the MS4 physical infrastructure under its authority,

thereby causing or contributing to a responsible jurisdiction and/or agency to be out of compliance with its interim or final Waste Load Allocations.

Under these circumstances, the flood control district's responsibility shall be limited to non-compliance related to the drainage area(s) within the jurisdiction where the flood control district has authority over the relevant portions of the MS4 physical infrastructure.

<b>Task No.</b>	<b>Task</b>	<b>Responsible Jurisdiction</b>	<b>Date</b>
	industrial facilities for effectiveness in achieving plastic pellet WLA, 3. Reconsider the trash and plastic pellet WLAs, if warranted.		
8	Installation of Full Capture Systems or other measures to achieve 60% reduction of trash from Baseline WLA <sup>7</sup> .	California Department of Transportation, Los Angeles County, County of Ventura, and Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, Thousand Oaks, Torrance, and Westlake Village. <sup>8</sup>	Six years from effective date of TMDL.
9	Installation of Full Capture Systems or other measures to achieve 80% reduction of trash from Baseline WLA <sup>7</sup> .	California Department of Transportation, Los Angeles County, County of Ventura, and Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, Thousand Oaks, Torrance, and Westlake Village. <sup>8</sup>	Seven years from effective date of TMDL.
10	Installation of Full Capture Systems or other measures to achieve 100% reduction of trash from Baseline WLA <sup>7</sup> .	California Department of Transportation, Los Angeles County, County of Ventura, and Cities of Agoura Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills Estates, Santa Monica, Thousand Oaks, Torrance, and Westlake Village. <sup>8</sup>	Eight years from effective date of TMDL.
11	If within three (3) years of Regional Board adoption date of this TMDL, a city or county voluntarily adopts local ordinances to ban plastic bags, smoking in public places and single use expanded polystyrene food	California Department of Transportation, Los Angeles County Flood Control District, Los Angeles County, Ventura County Watershed Protection District, County of Ventura, and Cities of Agoura Hills, Beverly Hills, Calabasas, Culver City, El Segundo, Hermosa Beach, Hidden Hills, Inglewood, Los Angeles, Malibu, Manhattan Beach, Palos Verdes Estates, Rancho Palos Verdes, Redondo Beach, Rolling Hills, Rolling Hills	11 years from effective date of TMDL.

<b>Task No.</b>	<b>Task</b>	<b>Responsible Jurisdiction</b>	<b>Date</b>
	packaging, it shall receive a three-year extension of the final compliance date.	Estates, Santa Monica, Thousand Oaks, Torrance, West Hollywood, and Westlake Village.	

**Table 7-34.3 Santa Monica Bay Nearshore and Offshore Debris TMDL: Implementation Schedule**  
**Minimum Frequency of Assessment and Collection Program<sup>99</sup> - Trash from Nonpoint Sources**

<b>Task No.</b>	<b>Task</b>	<b>Responsible Jurisdiction</b>	<b>Date</b>
1	Submit a TMRP including an MFAC/BMP Program.	National Park Service, California Department of Parks and Recreation, County of Los Angeles, County of Ventura, State Lands Commission for open space and parks, and California Department of Parks and Recreation, Los Angeles County Department of Beaches and Harbors, Cities of Hermosa Beach, Los Angeles, Santa Monica and Redondo Beach for beaches and harbors.	Six months from TMDL effective date. If a plan is not approved by the Executive Officer within 9 months, the Executive Officer will establish an appropriate monitoring plan.
2	Implement the TMRP and the MFAC/BMP Program.	National Park Service, California Department of Parks and Recreation, County of Los Angeles, County of Ventura, State Lands Commission for open space and parks, and California Department of Parks and Recreation, Los Angeles County Department of Beaches and Harbors, Cities of Hermosa Beach, Los Angeles, Santa Monica and Redondo Beach for beaches and harbors.	6 months from receipt of letter of approval from Regional Board Executive Officer, or the date a plan is established by the Executive Officer.
3	Achieve LA immediately after each collection and assessment event.	National Park Service, California Department of Parks and Recreation, County of Los Angeles, County of Ventura, State Lands Commission for open space and parks, and California Department of Parks and Recreation, Los Angeles County Department of Beaches and Harbors, Cities of Hermosa Beach, Los Angeles, Santa Monica and Redondo Beach for beaches and harbors.	6 months from receipt of letter of approval from Regional Board Executive Officer, or the date a plan is established by the Executive Officer.
4	Submit annual TMRP reports including	National Park Service, California Department of Parks and	Twenty (20) months from

<sup>99</sup> Based on annual reports, the Executive Officer may adjust the minimum frequency of assessment and collection as necessary to ensure compliance between the required trash assessment and collection events.

<b>Task No.</b>	<b>Task</b>	<b>Responsible Jurisdiction</b>	<b>Date</b>
	proposal for revising MFAC/BMP for Executive Officer approval.	Recreation, County of Los Angeles, County of Ventura, State Lands Commission for open space and parks, and California Department of Parks and Recreation, Los Angeles County Department of Beaches and Harbors, Cities of Hermosa Beach, Los Angeles, Santa Monica and Redondo Beach for beaches and harbors.	receipt of letter of approval for the Trash Monitoring and Reporting Plan from Regional Board Executive Officer, and annually thereafter.
5	Demonstrate full compliance by achieving LA between required trash collection and assessment events.	National Park Service, California Department of Parks and Recreation, County of Los Angeles, County of Ventura, State Lands Commission for open space and parks, and California Department of Parks and Recreation, Los Angeles County Department of Beaches and Harbors, Cities of Hermosa Beach, Los Angeles, Santa Monica and Redondo Beach for beaches and harbors.	Five years from effective date of TMDL.
6	Reconsider the TMDL based on evaluation of effectiveness of MFAC/BMP program, if warranted.	Regional Board.	Five years from effective date of TMDL.
7	If within three (3) years of Regional Board adoption date of this TMDL, a city or county voluntarily adopts local ordinances to ban plastic bags, smoking in public places and single use expanded polystyrene food packaging, it shall receive a three-year extension of the final compliance date.	National Park Service, California Department of Parks and Recreation, County of Los Angeles, County of Ventura, State Lands Commission for open space and parks, and California Department of Parks and Recreation, Los Angeles County Department of Beaches and Harbors, Cities of Hermosa Beach, Los Angeles, Santa Monica and Redondo Beach for beaches and harbors.	Eight (8) years from effective date of TMDL.

**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

**Appendix B**

**Tabular Results of Catch Basin  
Screen Pilot Study**





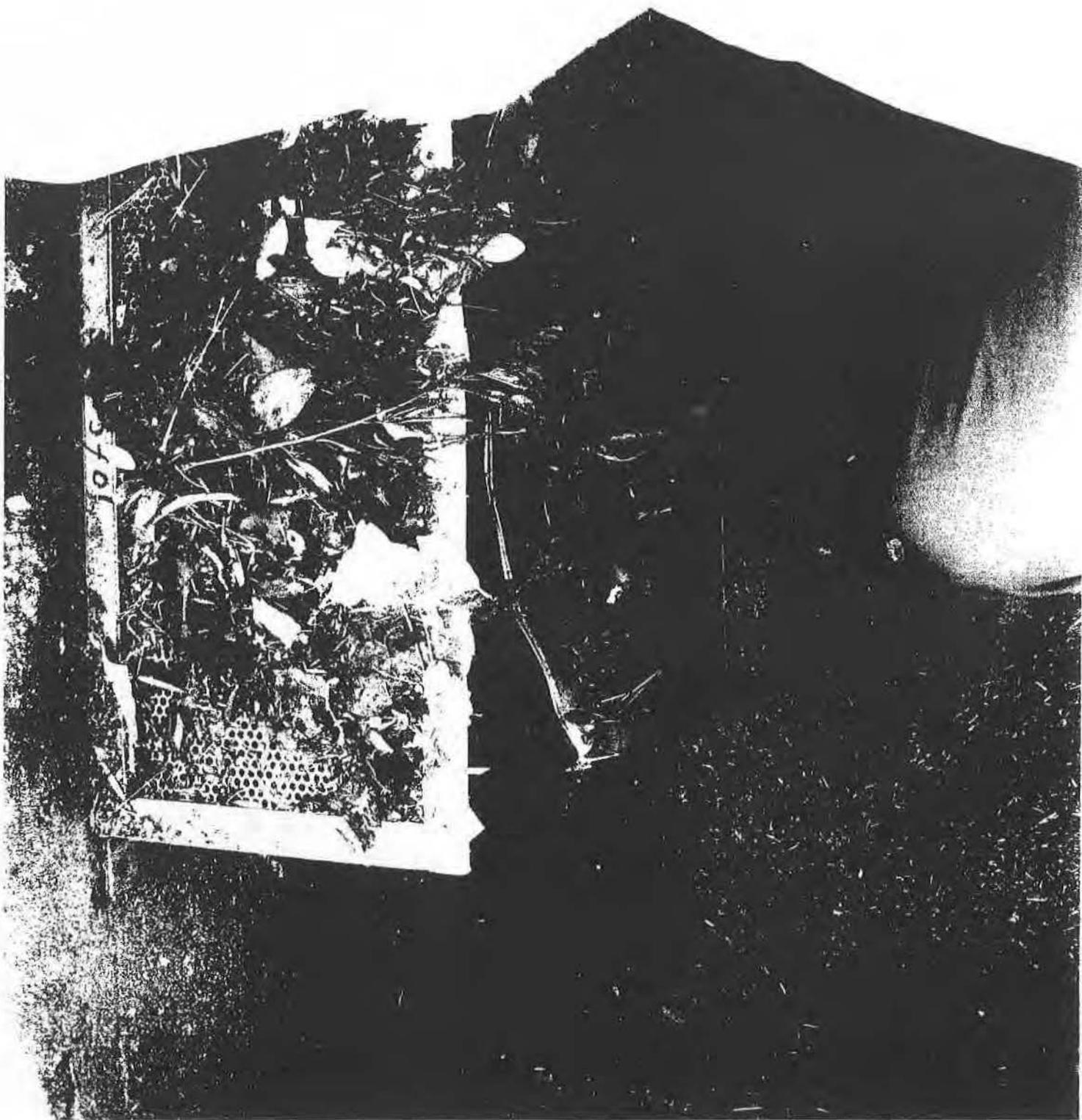
### Storm Drain Inlet Grate Efficiency Pilot - 1st Quarter

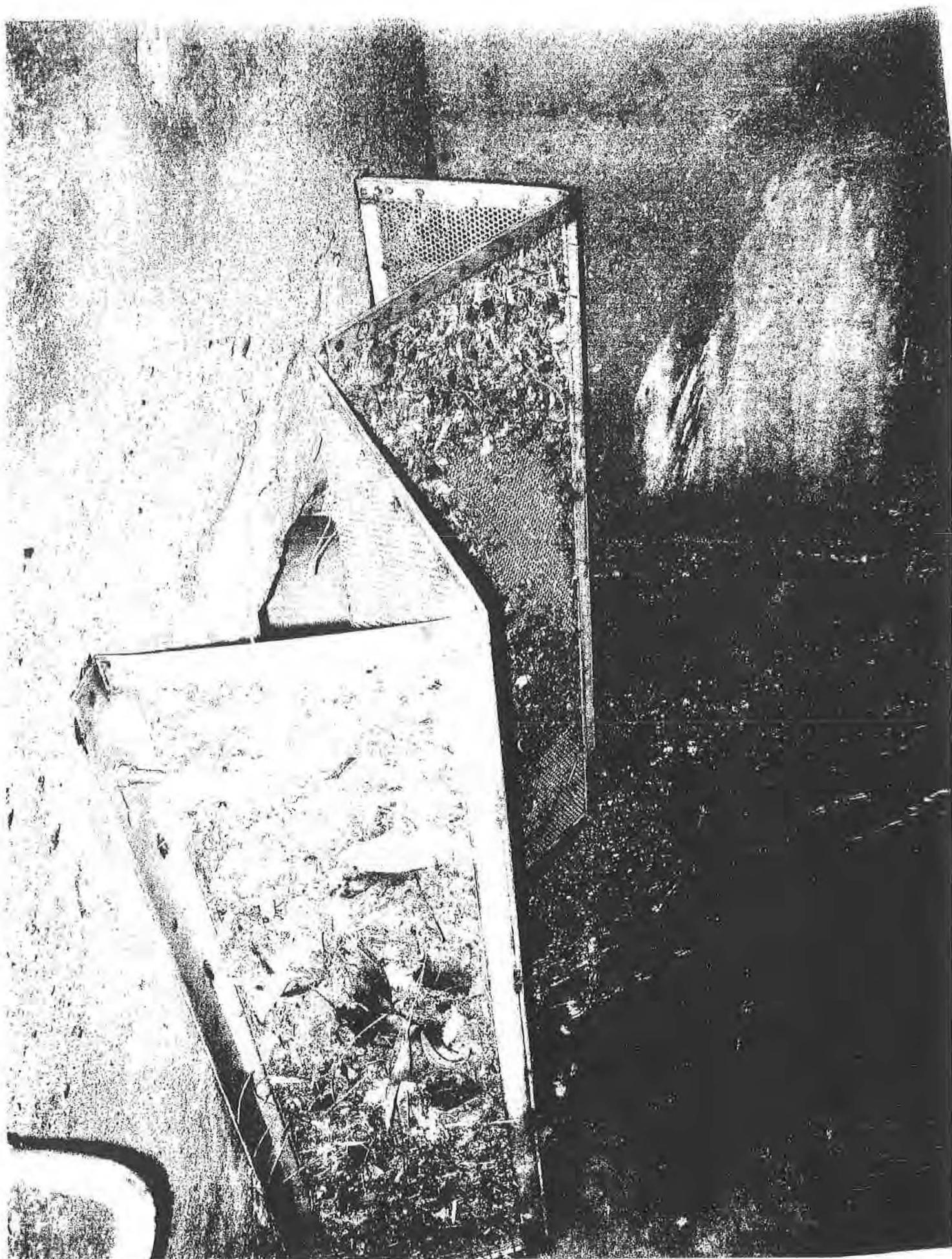
Catchbasin #	Trash Screen? Y/N	Catchbasin Type	Dimension (ft)	Trash Depth (in.)	Est. Tot. Vol. (cu ft)	Date	Type of Debris Found	Time spent (min.)	Comments
079-2-04	Y	A							
079-2-03	Y	C							
079-3-07	Y	A	14' x 4'						
079-3-02	Y	C	W= 14'			1-28-10	REMOVED		COLLAPSED
079-3-01	Y	C	14' x 4'						
079-3-03	N	C	14' x 3' 3"			1-27-10	REMOVED		FLOODING
079-3-04	N	C	7' x 3' 5"			1-27-10	REMOVED		FLOODING
079-3-11	Y	A	7' x 4' 2"						
079-3-13	N	A	10' x 4' 1"			1-28-10	REMOVED		COLLAPSED IN CENTER
079-3-15	N	C							
079-3-16	N	A	14' x 4'						
080-1-05	N	A	7' x 4.8'			1-28-10	REMOVED		PIPE BLOCKING THE
080-1-03	N	A	3.5' x 3.5'			1-28-10	REMOVED		BENT - BLOCKING PIPE
080-1-01	N	A	10' x 3.5'						
080-1-02	N	A	7' x 3.5'						
080-1-07	N	B	3' 6" x 3'						
080-1-15	N	B							
080-1-16	N	B							
080-1-10	N	B							
080-4-01	N	B							
080-4-02	N	B							
089-2-01	N	B	V= 3.60'						
089-2-02	N	B	V= 4'						
089-2-03	Y	A	V= 3.50'			1-19-10	REMOVED		FLOODING
089-2-07	Y	A	V= 3.00'			1-19-10	REMOVED		FLOODING
089-3-08	Y	C							
089-5-01	Y	C				1-28-10	REMOVED		COLLAPSED IN CENTER
089-5-02	Y	C				1-28-10	REMOVED		BENT, FRAME ALIKE
089-5-03	N	C							
089-5-06	N	C	B=18" C=1' D=30"						
089-5-07	N	C							
089-5-05	Y	C							
089-6-02	Y	A							
056-1-05	N	B							
056-1-07	N	B							
056-2-15	N	B							

P. 89 SEC. 5 #2 / 2316 233 ST,  
REMOVED SCREEN 1-28-10, BEAUT, PARTIAL PIPE  
BLOCKAGE, FRAME FAILURE,

P. 89 SEC. 5 #1 / 2319 233 ST.

REMOVED SCREEN 1-28-10 COLLAPSED IN CENTER





P. 79 SEC. 3 # 13 /E/S CRENSHAW  
S/O SEPULVEDA

REMOVED 1-28-10, BROKEN IN CENTER BLOCKING  
PIPE

P. 79 SEC. 3 # 13 / E/S CRENSHAW S/O SEPUL.

REMOVED 1-28-10 REMOVED, BROKEN IN

CENTER BLOCKING PIPE

P. 80 SEC. 1 # 3 / 2405 SANTA ANITA CT.

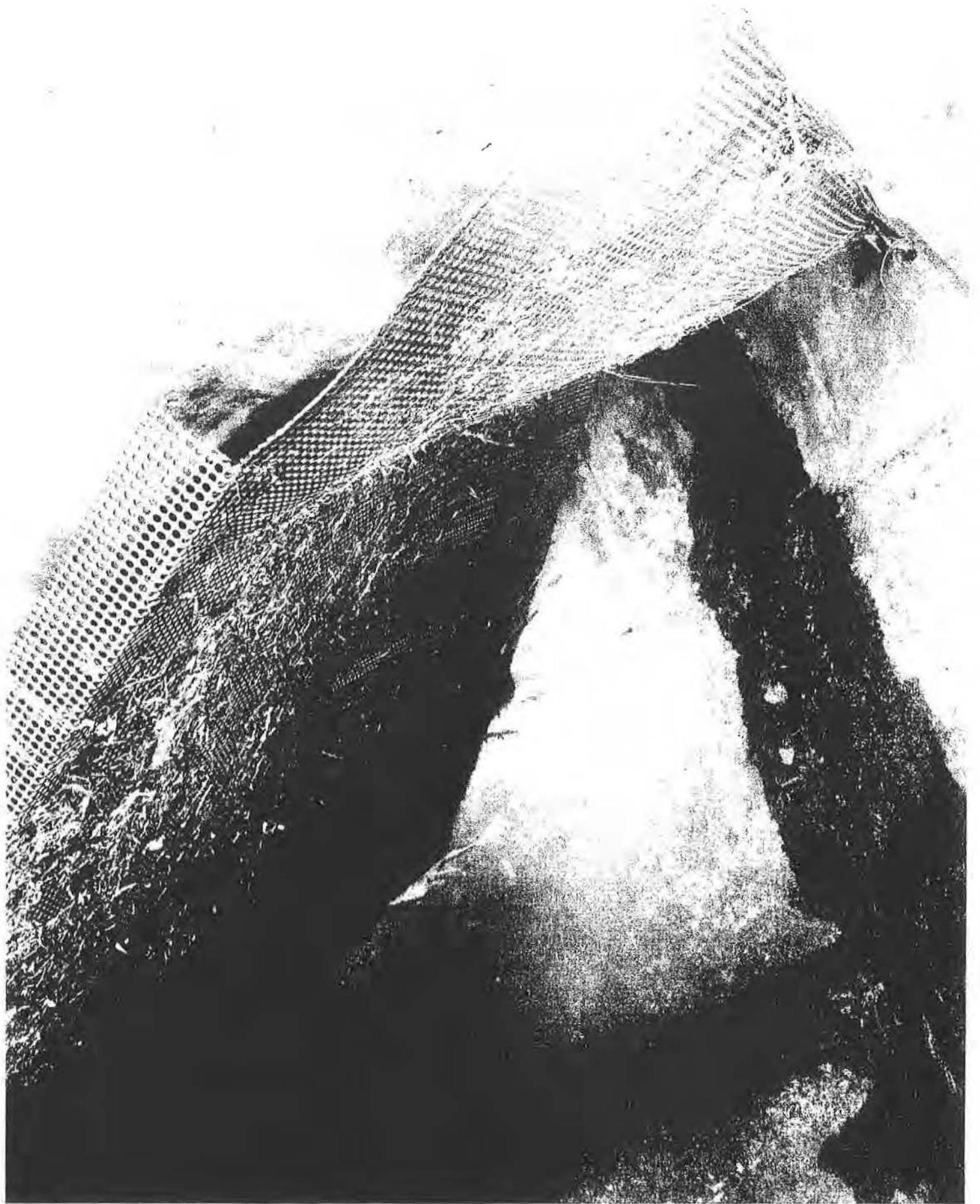
1-23-10 REMOVED SCREWS - BEAM BLOCKING  
PIPE DETAILS.

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P. 20 SEC. 1 # 5 / 2408 SANTA ANITA CT.

1-28-10 REMOVED SCREWS - BEAM BLOCKING  
PIPE





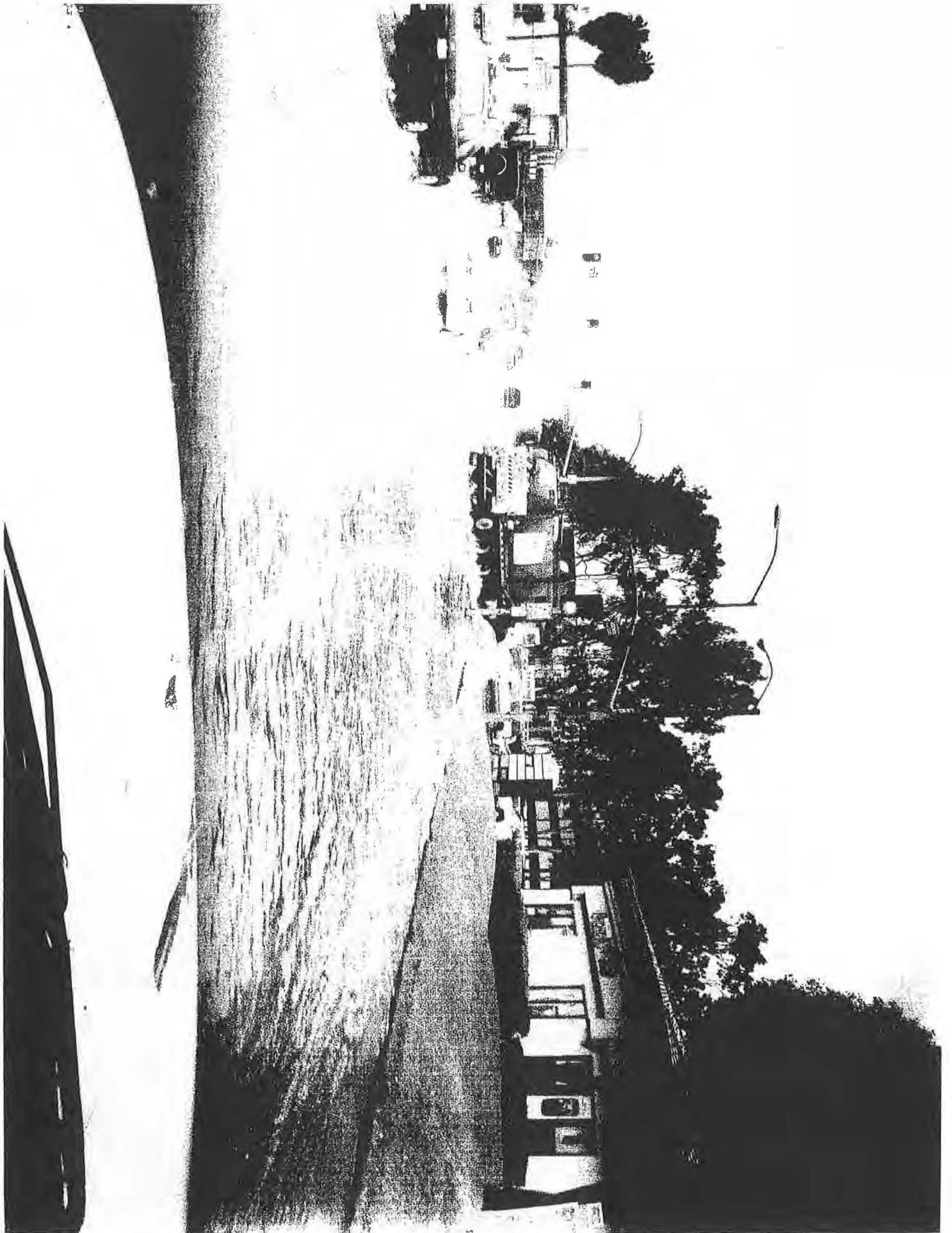
P. 79 SEC. 13 #12 / REMOVED W/O CRENSHAW  
N/W CORNER

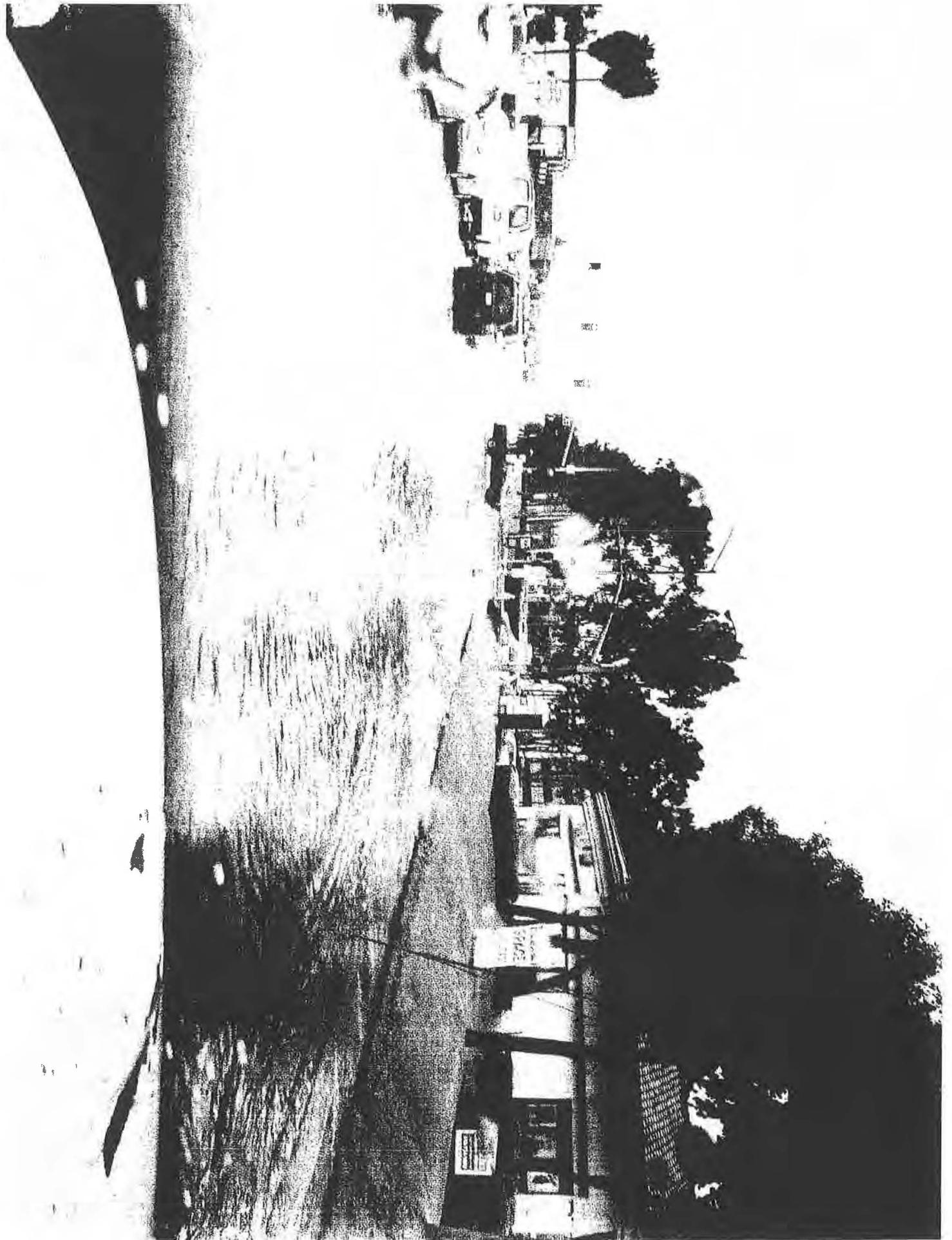
REMOVED 1-28-10 COLLAPSED

P. 79 SEC 3 # 2  
REMOVED 1-28-10  
COMPLETE COLLAPSE

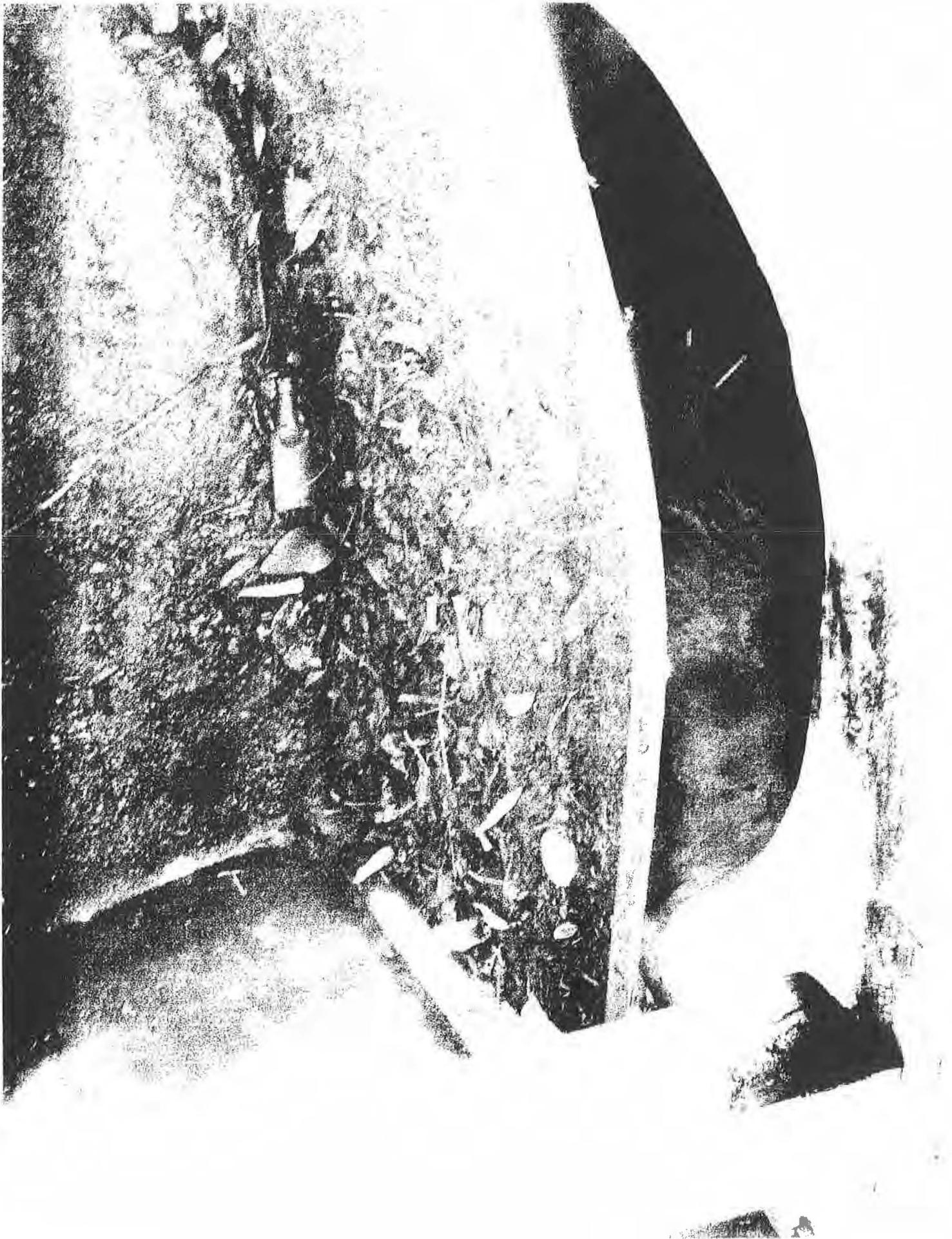
SEPULVEDA W/O CRENSHAW  
N/W CORNER

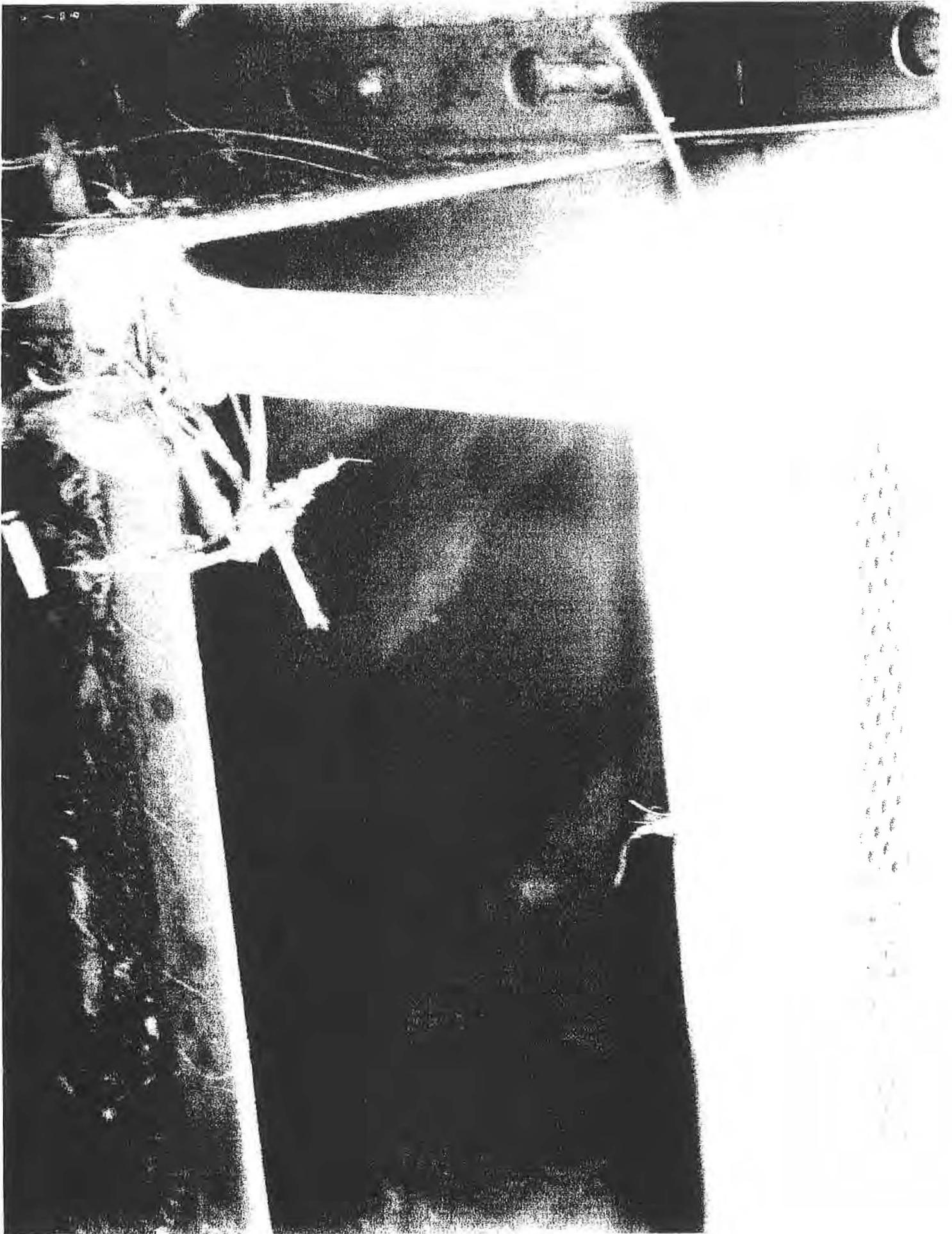








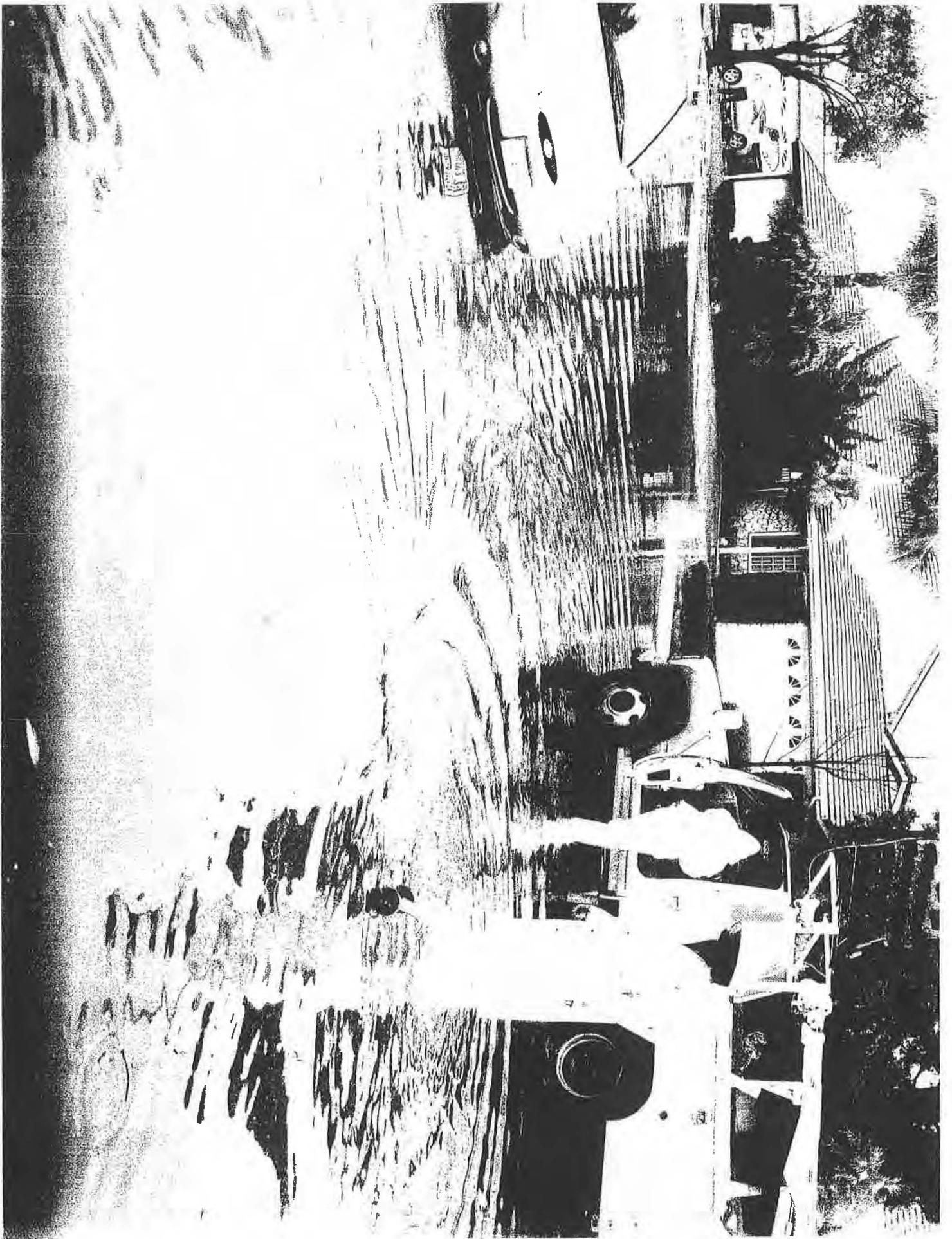




REPORTED 1-19-10 11:00 AM

1-19-10 DURING MODERATE rain street flooding at 2277 230 Pl., water continued to rise despite efforts to clear screens inside C/S's. When water started to enter garage crevice located and opened manhole in the street thus allowing water to drain. The manhole and pipe were not over sized. It was obvious the screens were causing the flooding so after the water drained we removed the inside screens. Three photos attached. Also screens were cleaned 1-18-10. No catch basins.







14575

Storm Drain Inlet Grate Efficiency Pilot - 1st Quarter

NOT DONE

Catchbasin #	Trash Screen? Y/N	Catchbasin Type	Dimension (ft)	Trash Depth (in.)	Est. Tot. Vol. (cu ft)	Date	Type of Debris Found	Time spent (min.)	Comments
079-2-04	Y	A							<del>NO SCREENS</del>
079-2-03	Y	C		2"		12-3	MUD LEAVES INSIDE TRASH	30	2" MUD + GRASS OUTSIDE GATE
079-3-07	Y	A	14' x 4'	2"		12-3	PAPER LEAVES	30	2" OUTSIDE
079-3-02	Y	C	W=14'	1" MS 2" OS		12-3	LEAVES + MUD	30	2" MUD, LEAVES, GRASS OUT SIDE GATE
079-3-01	Y	C	14' x 4'	4"		12-3	LEAVES - GRASS	25	MUD LEAVES GRASS ON GRATE
079-3-03	N	C	14' x 3' 3"	12"		12-8	Leaves - WATER	30	LOTS of water & TRASH
079-3-04	N	C	7' x 3' 5"	4"		12-3	LEAVES TRASH	15	TRASH, LEAVES
079-3-11	Y	A	7' x 4' 2"	4" ON 2" IN		12-3	Leaves TRASH	20	4" on Gate
079-3-13	N	A	10' x 4' 1"	8"		12-8	Leaves - TRASH	25	<del>PRIVATE PROPERTY</del>
079-3-15	N	C				TAKE OFF LIST			GRATE (SUBINAW)
079-3-16	N	A	14' x 4'	2"		12-3	TRASH MUD	20	
080-1-05	N	A	7' x 4.8'			12-3	MUD TRASH	15	
080-1-03	N	A	3.5' x 3.5'	1"		12-3	MUD GRASS	15	
080-1-01	N	A	10' x 3.5'	1/4"		12-3	MUD GRASS	15	
080-1-02	N	A	7' x 3.5'	1/4"		12-3	TRASH	15	
080-1-07	N	B	3' 6" x 3'	2-3"		12-3	TRASH LEAVES	20 MIN	
080-1-15	N	B		3"		12-3	MUD + GRASS	20	MUD + GRASS FROM GUTTERS
080-1-16	N	B		2"		12-3	MUD GRASS PAPER	20	"
080-1-10	N	B		3-4"		12-3	LEAVES MUD	25	
080-4-01	N	B		3-4"		12-3	LEAVES MUD MAGGOTS	10	
080-4-02	N	B		4"		12-3	WATER MUD LEAVES	10	
089-2-01	N	B	V=3.60'	5"		12-8	Leaves	15	
089-2-02	N	B	V=4'	4"		12-8	Leaves	15	
089-2-03	Y	A	V=3.50'	4"		12-8	Water - Leaves	10	
089-2-07	Y	A	V=3.00'	3"		12-8	Leaves - Dirt	10	
089-3-08	Y	C		6"		12-8	Leaves - Dirt	15	
089-5-01	Y	C		5"		12-8	Leaves water	10	
089-5-02	Y	C		4"		12-8	SAND - Leaves	15	
089-5-03	N	C		3"		12-8	Leaves	10	
089-5-06	N	C	B=18" C=1" D=30"	8"		12-8	Leaves	20	
089-5-07	N	C		5"		12-8	Leaves	15	
089-6-06	Y	C		5"		12-8	Leaves	15	
089-6-02	Y	A		4"		12-8	Leaves	15	
056-1-05	N	B		3' 5"		12-8	NOT in ATLAS		
056-1-07	N	B		4' 1"		12-8	Mud, Leaves, Trash	25	Plastic coving Screen - NO Flow
056-2-15	N	B		4' 5"		12-8	"	"	"

HAD PUMP DELETED

FROM CATCHBASIN

PRIVATE PROPERTY (SUBINAW)

EL PASO CATCHBASIN

ON BACK

079.3.14

4" 20ft 12-3 TRASH - LEAVES 15 THIS DRAIN WAS ADDED

1-19-2010

Storm Drain Inlet Grate Efficiency Pilot - 1st Quarter

DOES NOT OPEN

Catchbasin #	Trash Screen? Y/N	Catchbasin Type	Dimension (ft)	Trash Depth (in.)	Est. Tot. Vol. (cu ft)	Date	Type of Debris Found	Time spent (min.)	Pics Comments
079-2-04	N	A						353	313
079-2-03	N	C				<del>3/11</del>		352	310, 311, 312
079-3-07	Y	A	14' x 4'					348,	314
079-3-02	Y	C	W= 14'						318, 319, 320
079-3-01	Y	C	14' x 4'					346,	315, 316, 317
079-3-03	N	C	14' x 3' 3"						332, 333
079-3-04	N	C	7' x 3' 5"						Grate
079-3-11	Y	A	7' x 4' 2"					349,	321, 322
079-3-13	N	A	10' x 4' 1"						350
079-3-15	N	C							330, 331
079-3-16	N	A	14' x 4'						351
080-1-05	N	A	7' x 4.8'						355, 356
080-1-03	N	A	3.5' x 3.5'						354
080-1-01	N	A	10' x 3.5'						357
080-1-02	N	A	7' x 3.5'						358
080-1-07	N	B	3' 6" x 3'						364
080-1-15	N	B							359
080-1-16	N	B							360
080-1-10	N	B							361, 362, 363
080-4-01	N	B							367
080-4-02	N	B							365, 366
089-2-01	N	B	V= 3.60'						
089-2-02	N	B	V= 4'						
089-2-03	Y	A	V= 3.50'				resident says they cleaned 4 times	4 times	323 Floor 20 334-342
089-2-07	Y	A	V= 3.00'						324
089-3-08	Y	C							325
089-5-01	N	C							326
089-5-02	Y	C							327
089-5-03	N	C							
089-5-06	N	C	B=18" C=1' D=30"						
089-5-07	N	C							
089-6-06	N	C							328
089-6-02	Y	A							329
056-1-05	N	B							
056-1-07	N	B							
056-2-15	N	B							

-vector  
GRATE NOT WORKING  
-vector  
needs vector  
-vector  
vector  
vector

vector  
vector  
vector

• 343-345? 347?

1-20-10

Storm Drain Inlet Grate Efficiency Pilot - 1st Quarter

Catchbasin #	Trash Screen? Y/N	Catchbasin Type	Dimension (ft)	Trash Depth (in.)	Est. Tot. Vol. (cu ft)	Date	PICS Type of Debris Found	PICS Time spent (min.)	Comments
079-2-04	Y	A							NO DEBRIS
079-2-03	Y	C				1/20			VACUATED
079-3-07	Y	A	14' x 4'						vactored
079-3-02	Y	C	W= 14'				372, 375, 374		vactored
079-3-01	Y	C	14' x 4'				376-379		vactored
079-3-03	N	C	14' x 3' 3"				368-371		vactored
079-3-04	N	C	7' x 3' 5"						Vactored
079-3-11	Y	A	7' x 4' 2"						Vactored
079-3-13	N	A	10' x 4' 1"				382-385		vactored
079-3-15	N	C							
079-3-16	N	A	14' x 4'						Vactored
080-1-05	N	A	7' x 4.8'						Vactored
080-1-03	N	A	3.5' x 3.5'						Vactored
080-1-01	N	A	10' x 3.5'						Vactored
080-1-02	N	A	7' x 3.5'						Vactored
080-1-07	N	B	3' 6" x 3'			1/20			Vactored
080-1-15	N	B							Vactored
080-1-16	N	B							Vactored
080-1-10	N	B							Vactored
080-4-01	N	B				1/20			Vactored
080-4-02	N	B				1/20			Vactored
089-2-01	N	B	V= 3.60'						vactored
089-2-02	N	B	V= 4'						vactored
089-2-03	Y	A	V= 3.50'						Vactored
089-2-07	Y	A	V= 3.00'						Vactored
089-3-08	Y	C							Vactored
089-5-01	Y	C							Vactored
089-5-02	Y	C							Vactored
089-5-03	N	C							Vactored
089-5-06	N	C	B=18" C=1" D=30"						Vactored
089-5-07	N	C							Vactored
089-6-06	Y	C							Vactored
089-6-02	Y	A							Vactored
056-1-05	N	B							Vactored
056-1-07	N	B							Vactored
056-2-15	N	B							Vactored

SW  
NW  
NW  
NE  
NE  
SW  
SE  
NE  
SE

SEP 7  
Crispin

B

2270 230 TIE 230 P/K (233 S) C.H.

### Storm Drain Inlet Grate Efficiency Pilot - 1st Quarter

Catchbasin #	Trash Screen? Y/N	Catchbasin Type	Dimension (ft)	Trash Depth (in.)	Est. Tot. Vol. (cu ft)	Date	Type of Debris Found	Time spent (min.)	Comments
079-2-04	Y	A		36"		2-8-11	Water/mud	20	lots of water
079-2-03	Y	C		12"		2-9-11	Trash	20	Screen ok
079-3-07	Y	A	14' x 4'	12"		2-9-11	Trash & Dirt	20	Screen ok
079-3-02	Y	C	W= 14'			2-9-11	Trash & Dirt	20	screen ok
079-3-01	Y	C	14' x 4'	3"		2-9-11	Trash & leaves	20	Screen ok
079-3-03	N	C	14' x 3' 3"	3"		2-9-11	Trash	15	Removed
079-3-04	N	C	7' x 3' 5"	6"		2-9-11	Trash	15	Screen ok
079-3-11	Y	A	7' x 4' 2"	12"		2-9-11	Trash	15	Screen ok
079-3-13	N	A	10' x 4' 1"	12"		2-8-11	Trash & Dirt	15	Screen ok
079-3-15	N	C							REMOVED
N/A 079-3-16	N	A	14' x 4'						REMOVED
080-1-05	N	A	7' x 4.8'	6"		2-8-11	Dirt	10	weeds
080-1-03	N	A	3.5' x 3.5'	6"		2-9-11	Trash - dirt	10	weeds stuck
080-1-01	N	A	10' x 3.5'	12"		2-9-11	Trash - dirt	10	SCREEN OK
080-1-02	N	A	7' x 3.5'	12"		2-9-11	Trash - dirt	10	SCREEN OK
080-1-07	N	B	3' 6" x 3'	12"		2-15	Trash	15	ok screen
080-1-15	N	B				2-14-11	Trash - leaves	10	Screen ok
080-1-16	N	B				2-14-11	Trash - leaves	10	Screen ok
080-1-10	N	B				2-14-11	Trash - leaves	20	Screen ok
080-4-01	N	B		12"				5	SCREEN OK
080-4-02	N	B		36"			Trash & dirt	10	OK
089-2-01	N	B	V= 3.60'	36"			Trash	10	Screen ok
089-2-02	N	B	V= 4'	12"			Trash	10	Screen ok
089-2-03	Y	A	V= 3.50'	12"		2-8-11	Trash - dirt	15	Screen ok
089-2-07	Y	A	V= 3.00'	12"		2-8-11	Leaves - dirt	10	Screen ok
089-3-08	Y	C				2-9-11	Trash	5	Screen ok
089-5-01	Y	C		3"		2-9-11	Trash - leaves	10	screen ok
089-5-02	Y	C		3"		2-9-11	Trash	5	Removal
089-5-03	N	C							Screen ok
089-5-06	N	C	B=18" C=1' D=30"						Screen ok
089-5-07	N	C							Screen ok
089-6-08	Y	C							Screen ok
089-6-02	Y	A				2-9-11	Trash & leaves	15	SCREEN OK
056-1-05	N	B							
056-1-07	N	B							
056-2-15	N	B							

V. [Signature]



**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

**Appendix C**

**Map of Catch Basin Locations  
For  
Catch Basin Screen Pilot Study**



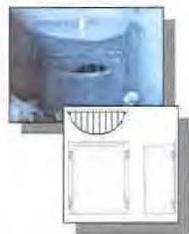


# CITY OF TORRANCE

## Trash Screen Basins Pilot Project

### Catch Basin Location Map

All catchbasins in pilot area to be fitted with various trash screens. Refer to labels below. Additionally, catchbasins indicated with a "G" will be fitted with an additional surface grate by the respective manufacturer.

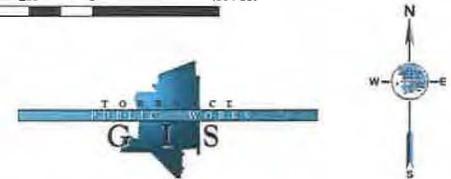
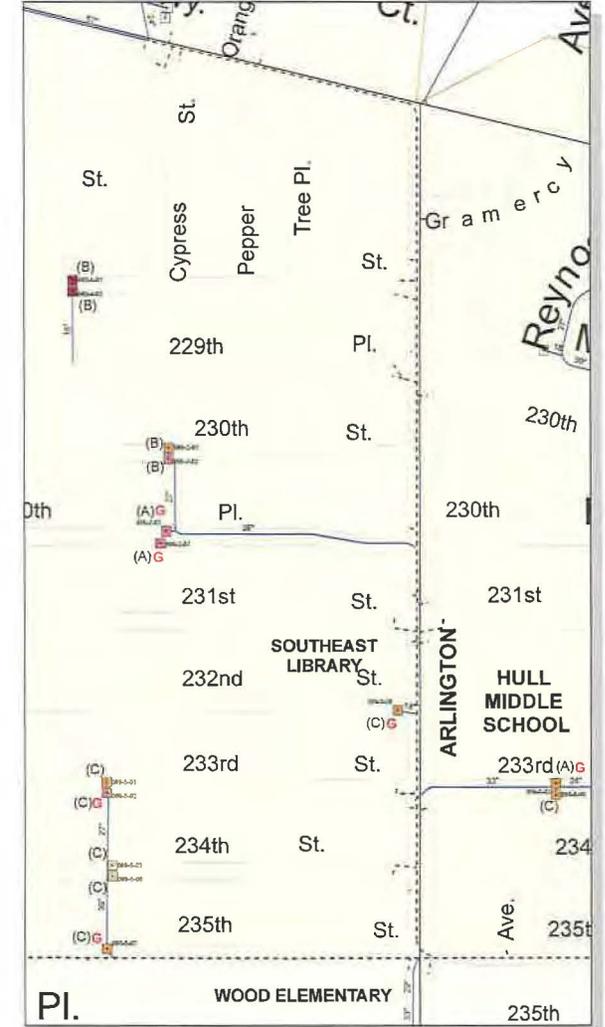
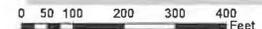
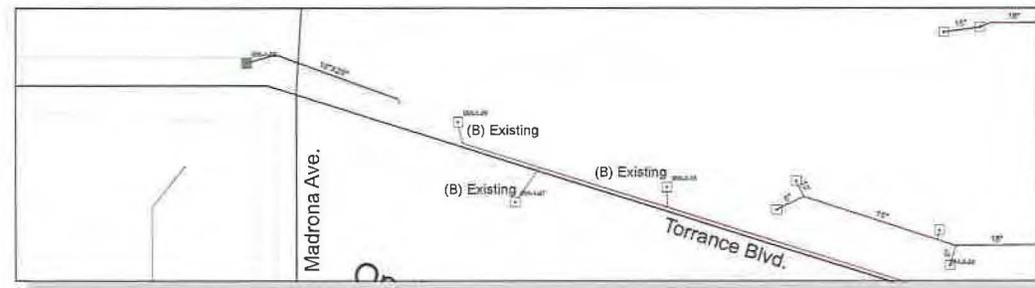
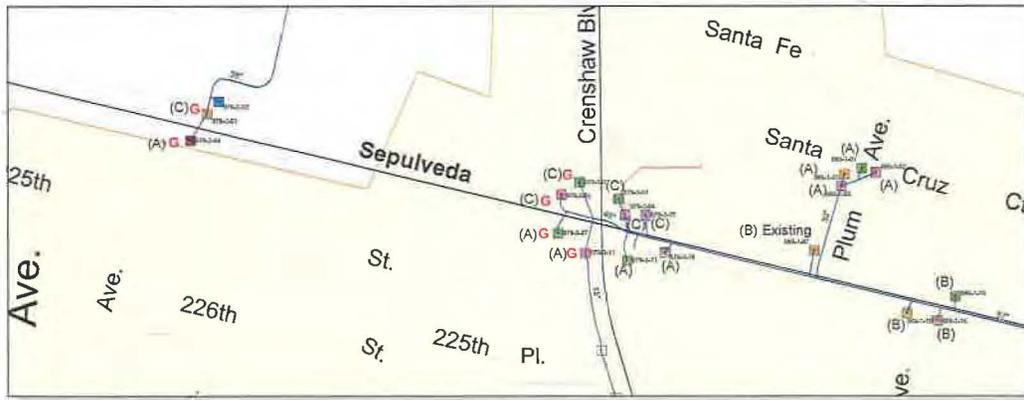


American Stormwater Systems (A)

Advanced Solutions (B)

West Coast Storm (C)

Legend	
Catchbasin Size see: STD NO	
	1. STD 2-D160 W=3.5'
	2. STD 2-D162 W=7'
	3. STD 2-D163 W=14'
	4. PRIVATE
	5. APWA 313-D
	6. LASTD B-3654
	7. SPPWC 300-Z
	Storm Drain Inlets
	City Storm Drains
	Major Streets
	ST_ROW Arc
	County Storm Drains
	Private Storm Drains
	City Boundary
	Surface Drainage Area A





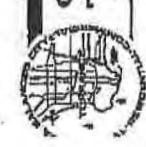
**Trash Monitoring & Reporting Plan:  
Santa Monica Bay Near Shore and Offshore Debris TMDL**

**Appendix D**

**Precipitation Data During  
Catch Basin Screen Pilot Study**



Jeff Kidd



TMA 227 1006

City of Torrance, Airport Operations

Transient Tie-down Card

Rainfall 7-1-10 to 6-30-11  
Torrance Airport

DATE	AMT	Total	Date	AMT	Total
10-7-10	1.10	1.10	12-16-10	2.91	3.91
10-16-10	.01	1.11	12-16-10	3.95	7.86
10-18-10	.07	1.18	12-17-10	3.51	11.37
10-19-10	.30	1.48	12-18-10	3.83	15.20
10-20-10	.40	1.88	12-19-10	5.88	21.08
10-22-10	.01	1.89	12-20-10	7.58	28.66
10-25-10	.20	2.09	12-21-10	8.53	37.19
11-2-10	.03	2.12	12-22-10	9.68	46.87
11-2-10	.14	2.26	12-22-10	9.78	56.65
11-21-10	.11	2.37	12-26-10	4.83	61.48
11-28-10	.24	2.61	12-29-10	10.59	72.07



TMA 227 10

City of Torrance, Airport Operations

Transient Tie-down Card

Rainfall 7-1-09 to 6-30-1  
Torrance Airport

DATE	AMT	Total	Date	AMT	Total
10-13-09	.05	.05	1-18-10	1.33	1.38
10-14-09	.75	.80	1-19-10	1.23	2.61
10-15-09	.06	.86	1-20-10	1.80	4.41
12-7-09	.90	1.76	1-21-10	1.10	5.51
12-11-09	.20	1.96	1-22-10	.62	6.13
12-12-09	.63	2.59	1-23-10	.09	6.22
12-13-09	.25	2.84	1-26-10	.20	6.42
12-30-09	.06	2.90	1-27-10	.08	6.50
12-31-09	.03	2.93	2-5-10	.69	7.19
1-13-10	.12	3.05	2-6-10	4.11	11.30
1-17-10	.05	3.10	2-9-10	0.74	12.04



2010

2011

DATE	AMT	Total	Date	AMT	Total
2-10-10	0.04	14.71			
2-20-10	0.19	14.90			
2-25-10	0.06	14.96			
2-27-10	0.56	15.52			
2-28-10	0.08	15.60			
3-9-10	0.10	15.70			
3-7-10	0.25	15.95			
4-1-10	0.09	16.04			
4-5-10	0.22	16.26			
4-12-10	0.69	16.95			
4-22-10	0.08	17.03			
4-28-10	0.08	17.11			
5-18-10	0.02	17.13			

DATE	AMT	Total	Date	AMT	Total
1-2-10	0.00	10.81	6-17-11	0.02	17.15
1-2-11	0.02	10.83			
1-3-11	0.51	11.34			
1-30-11	0.03	11.37			
2-15-11	0.75	12.12			
2-19-11	0.01	12.13			
2-18-11	0.03	12.16			
2-19-11	0.72	12.88			
2-25-11	0.24	13.12			
3-26-11	0.01	13.13			
3-27-11	0.05	13.18			
3-3-11	0.20	13.38			
3-25-11	0.93	14.31			
3-24-11	0.50	14.81			
3-25-11	0.00	14.81			
3-27-11	0.05	14.86			
5-15-11	0.08	14.94			
5-17-11	0.22	15.16			
5-18-11	0.22	15.38			
6-16-11	0.01	15.39			



















Attachment 4: PMRP Exemption Request for the City of  
Redondo Beach



Public Works Department  
Engineering Services  
Division

415 Diamond Street, P.O. Box 270  
Redondo Beach, California 90277-0270  
www.redondo.org

Engineering 310 318-0661  
fax 310 374-4828

September 10, 2015

Samuel Unger, Executive Officer  
Los Angeles Regional Water Quality Control Board  
320 West Fourth Street, Suite 200  
Los Angeles, California 90013

Submitted with revised Beach Cities Watershed Management Group CIMP Revision #2  
Submittal

Attention: Stefani Hada, Environmental Scientist, TMDL Unit 2  
Renee Purdy, Manager, Regional Programs

**Subject: Demonstration that a Plastic Pellet Monitoring and Reporting Plan (PMRP) is not required for the City of Redondo Beach – Revised Exemption Request**

Dear Mr. Unger;

On August 25, 2015, the Beach Cities Watershed Group received an approval letter for the group's Coordinated Integrated Monitoring Program (CIMP) subject to conditions outlined within the letter, as well as comments on the City of Redondo Beach's (City) PMRP. The letter requested the City revise the PMRP Exemption Request to include all the information in the Clarification Letter the City submitted to the Board on July 13, 2015. In addition, the Board requested justification that King Harbor Marine Center with an SIC Code of 3732 does not manufacture, handle, or transport plastic pellets. This revised PMRP Exemption Request has been modified to include these items.

On May 22, 2015 the Beach Cities Watershed Group received a letter with comments on the group's CIMP, as well as comments on the individual PMRPs. The Board requested additional information on the City's submitted request for an exemption to developing and implementing a PMRP. On March 13, 2104, the City of Redondo Beach submitted a letter to the Board demonstrating that a PMRP is not required for the City since there are no industrial facilities or activities related to the manufacturing, handling or transportation of plastic pellets within the City limits. The Board requested a list of businesses/industries in the City with corresponding SIC codes, therefore an updated list of facilities with SIC codes is attached as Attachment B. King Harbor Marine Center located at 831 North Harbor Drive has been inspected seven times by

the City's Industrial Inspection Consultant, Charles Abbot Associates, Inc. since July 2014, and several times within the past year by City staff. During these inspections, no evidence was observed that this facility manufactures, handles, or transports plastic pellets. A letter dated September 10, 2015 prepared by Charles Abbot Associates, Inc. verifying this statement is attached to this letter as Attachment D.

Based on information outlined in the TMDL and the industrial facilities within the City limits, the City is not required to conduct monitoring for plastic pellets at MS4 outfalls. The City of Redondo Beach is primarily a residential community with limited commercial or industrial transportation corridors such that it is not considered a source of plastic pellets to Santa Monica Bay. Therefore, the City is requesting an exemption from the requirement to prepare and implement a PMRP.

#### PMRP Exemption Requirements/Request

On November 4, 2010 the Los Angeles Regional Water Quality Control Board adopted Resolution R10-010 amending the Water Quality Control Plan for the Los Angeles Region to incorporate a Total Maximum Daily Load (TMDL) for Debris for Nearshore and Offshore Santa Monica Bay. The TMDL identifies the City as a responsible jurisdiction.

Attachment A to Resolution No. R10-010 indicates the numeric target for plastic pellets in the Santa Monica Bay is zero. Table 7-34.2 of Attachment A states that responsible jurisdictions are required to do the following:

Submit a PMRP for monitoring plastic pellet discharges from the MS4, increased industrial facilities inspections and enforcement, and response to possible plastic pellet spills, or a demonstration that a PMRP is not required<sup>5</sup>.

<sup>5</sup>The responsible jurisdictions and agencies shall provide documentation as specified in Table 7-34.1.

The 2012 Los Angeles MS4 Permit<sup>1</sup> further provides the permittees electing to prepare an Enhanced Watershed Management Plan the option to submit the information concurrently with the CIMP.

Responsible jurisdictions can demonstrate under certain circumstances that a PMRP is not required. As explained in Table 7-34.1 of the TMDL, a demonstration of such circumstances may be submitted in lieu of a PMRP as follows:

- In order to be exempt from the requirement to monitor for plastic pellets at MS4 outfalls, a jurisdiction must demonstrate the absence of industrial facilities or

---

<sup>1</sup> Order No. R4-2012-0175 Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, except those Discharges Originating from the City of Long Beach MS4

activities related to the manufacturing, handling, or transportation of plastic pellets.

- In order to be exempt from preparing a PMRP, the jurisdiction must also demonstrate that it has only residential areas within its jurisdiction, and that it has limited commercial or industrial transportation corridors (rail and roadway), such that it is not considered a potential source of plastic pellets to Santa Monica Bay.

This letter is intended to provide such demonstration.

### Redondo Beach Zoning

The City's zoning map provided as Attachment A demonstrates that land use within the City tributary to the Santa Monica Bay watershed is predominantly residential. There are commercial land uses along Pacific Coast Highway, Aviation Boulevard, Torrance Boulevard, and Artesia Boulevard. There are very limited zoning areas for industrial activities that are defined as "Industrial" and shown on the zoning map in the grey color. Under industrial uses, there is one industrial category within the Santa Monica Bay watershed as follows:

I-2 Uses permitted in I1.

- I-1 Light industrial, research and development, "office park" facilities, manufacturer of spacecraft and associated aerospace systems, supporting commercial uses (e.g., restaurants, banks, copiers, and similar uses), educational and governmental facilities, and day care center.

As shown in the zoning map, within the City there are only three parcels zoned I-2 for industrial tributary to the Santa Monica Bay watershed. Cross referencing with the City's Business License Division, none of the permitted uses in the industrial zones include facilities or activities relating to the manufacturing, handling or transportation of plastic pellets. A list of businesses in the City with corresponding SIC codes is included with this letter as Attachment B. This list contains no businesses with the term "plastic" in the facility or operator name and based on inspections, no business that manufactures, handles, or transports plastic pellets.

Based on the documentation presented, it can be concluded that there are no industrial facilities or activities within the jurisdiction that are related to manufacturing, handling and transportation of plastic pellets absolving the City from the requirement to conduct monitoring for plastic pellets at MS4 outfalls.

### Redondo Beach Transportation Corridors

There are no freeways or railways that pass through the City of Redondo Beach within the Santa Monica Bay watershed. The major north/south arterial is Route 1, Pacific Coast Highway. The major east/west arterials are Artesia Boulevard and 190<sup>th</sup> Street. Absent an industrial facility destination within the City within the tributary area to Santa Monica Bay, commercial truck drivers are unlikely to elect a route through South Redondo Beach and be subject to the traffic congestion and narrow roadways of a beach community.

### Redondo Beach Spill Response Plan

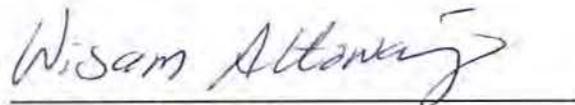
The City of Redondo Beach has in place a spill response plan as a part of the Redondo Beach Fire Department Operations Manual Area "G" Policy, Section 4.04 Hazardous Materials First Responder. A copy of the response plan is included as Attachment C. In the unlikely case of a spill of plastic pellets, the spill will be responded to using the protocols identified in the plan.

### Conclusion

The City of Redondo Beach has no industrial facilities or activities related to the manufacturing, handling or transportation of plastic pellets. Based on Table 7-34.1 of the TMDL, the City is not required to conduct monitoring for plastic pellets at MS4 outfalls. The City of Redondo Beach is primarily a residential community with limited commercial or industrial transportation corridors such that it is not considered a source of plastic pellets to Santa Monica Bay. Based on Table 7-34.1, the City is exempt from the requirement to prepare a PMRP. In the unlikely event of a plastic pellet spill, the City of Redondo Beach will execute the established spill response plan as previously discussed.

Should you have any questions, please contact me via email at [wisam.altowaiji@redondo.org](mailto:wisam.altowaiji@redondo.org) or via telephone at (310) 318-0661, extension 2431 or Geraldine Trivedi at [Geraldine.trivedi@redondo.org](mailto:Geraldine.trivedi@redondo.org) or by phone at (310) 318-0661, extension 2036.

Sincerely,



Wisam Altowaiji, P.E.  
City Engineer

Attachments:

- Attachment A – City of Redondo Beach Zoning Map
- Attachment B – City of Redondo Beach Industrial Facilities Database
- Attachment C – Redondo Beach Fire Department Operations Manual Hazardous Materials First Responder
- Attachment D – Letter dated September 10, 2015 from Charles Abbott Associates addressing Business King Harbor Marine Center – SIC Code 3732

cc:

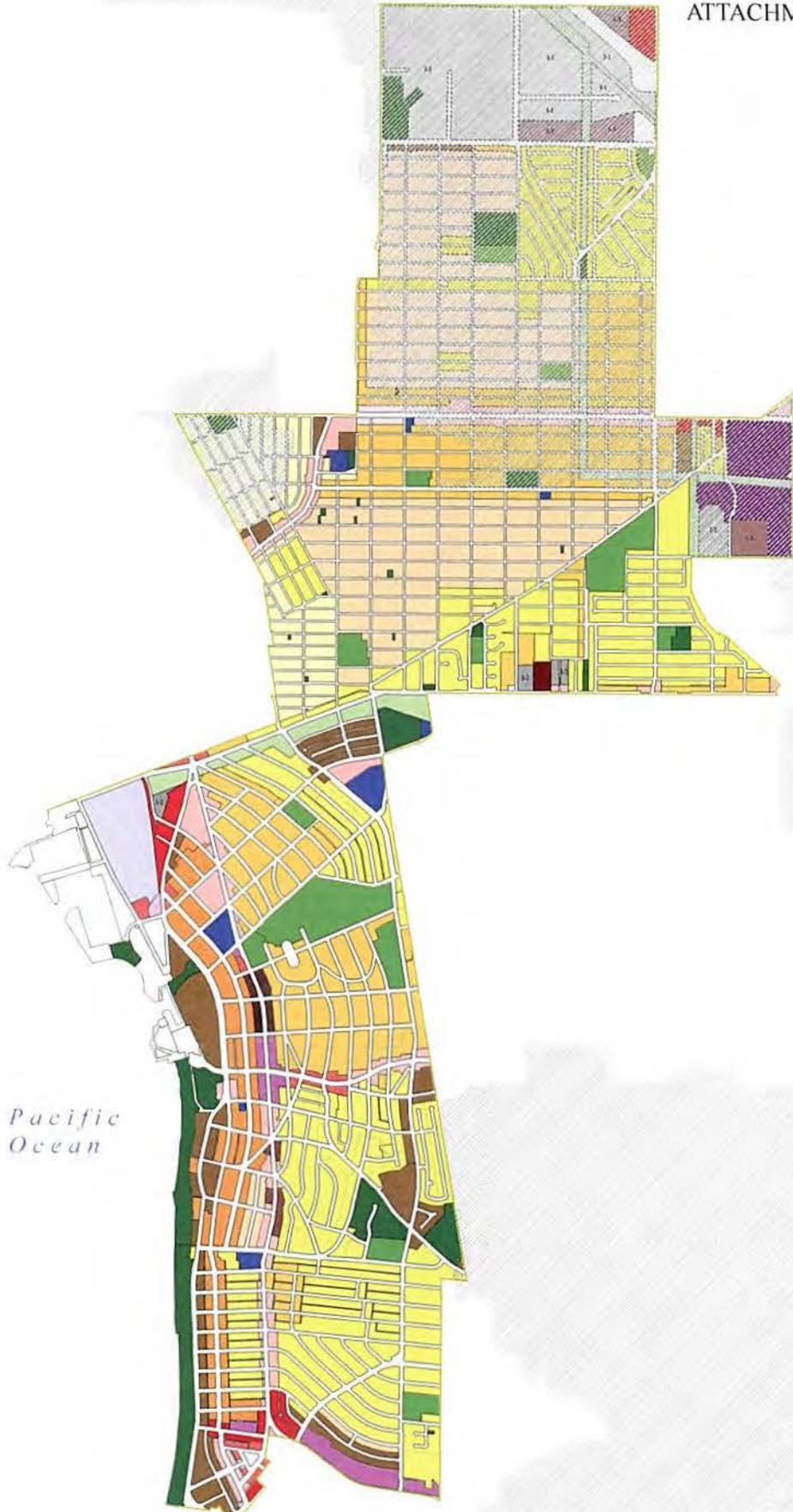
Tim Shea, Redondo Beach Public Works Director

Attachment A

City of Redondo Beach Zoning Map

# Redondo Beach Land Use Santa Monica Bay Watersheds

ATTACHMENT A



### Legend

- Redondo Beach City Limit
- Other Watershed
- SMB Watershed

### Redondo Beach Zoning

- R-1
- R-1A
- R-2
- R-3
- R-3A
- RMD
- RH-1
- RH-2
- RH-3
- R-MHP
- C-1
- C-2
- C-2A
- C-2B
- C-2-PD
- C-3
- C-3A
- C-3B
- C-3-PD
- C-4
- C-4A
- C-4B
- C-4-PD
- CC
- W/C/C
- W
- W-V/C/N
- W-V/C/S
- W-W-V/C/S
- CC-5
- CC-6
- CC-7
- MU-1
- MU-2
- MU-3
- MU-3A
- MU-3B
- MU-3C
- CR
- I-1
- I-1A
- I-1B
- I-2
- I-2A
- IC-1
- P-CIV
- P-RVP
- P-GP
- P-ROW
- P-CF
- P-PRO
- P-SF

Pacific Ocean



Attachment B

City of Redondo Beach Industrial Database

City of Redondo Beach  
Industrial Business Database  
July 2015

	Business Name	Business phone	Business SIC Code	Business SIC Description	Business StAddress_complete	Business CityStateZip	Business status	Business WDID	Note
1	King Harbor Marine Center	(310) 374-8923	3732	Boat Building and Repairing	831 N Harbor Dr	Redondo Beach, CA 90277	Open	4 191011387	
2	Northrop Grumman Aerospace Systems	(310) 812-4321	3364	Die Casting, Aluminum	1 Space Park Dr	Redondo Beach, CA 90278	Open	4 191017862	
3	AES Redondo Beach LLC	(310) 318-7512	4911	Electric Services	1100 N Harbor Blvd	Redondo Beach, CA 90277	Open	4 191019143	
4	Alcast Foundry Inc	(310) 542-3581	3355	Aluminum Fabrication	2910 Fisk Ln	Redondo Beach, CA 90278	Open	4 191012806	
5	Wedges Ledges of California Inc	(310) 374-9982	3599	Machine Shop	531 Francisca Ave	Redondo Beach, CA 90277	Open	--	
6	Sunset Island Wear	(310) 372-7960	2759	Silk Screen Apparel	601 Mary Ann Dr	Redondo Beach, CA 90278	Open	--	
7	Huron Tool & Machine Co	(310) 798-0196	3599	Machine Shop	572 Meyer Ln	Redondo Beach, CA 90278	Open	--	
8	Lloyd's Welding	(310) 374-5944	7692	Welding Shop	570 Meyer Ln	Redondo Beach, CA 90278	Open	--	
9	Gelati Celesti INC	(310) 372-2593	2024	Ice Cream and Frozen Dessert	612 Meyer Lane #2	Redondo Beach, CA 90277	Open	--	
10	CK Optical Co Inc	(310) 372-7966	3599	Machine Shop	635 Mary Ann Drive	Redondo Beach, CA 90278	Open	--	No Exposure
11	LA Cienega Manufacturing	(310) 542-6754	3599	Machine Shop	1304 Kingsdale Ave	Redondo Beach, CA 90278	Open	--	No Exposure
12	Mary Jo Bruno Inc	(310) 406-2108	2254	Knit Underwear and Nightwear Mills	550 Meyer Lane	Redondo Beach, CA 90278	Open	--	
13	Pathways Microtechnology Inc	(310) 536-9900	7378	Computer Maintenance and Repair	2615 Manhattan Beach Blvd #110	Redondo Beach, CA 90277	Open	--	
14	Quantimetrix Corporation	(310) 536-0006	2835	In Vitro and In Vivo Diagnostic Substances	2005 Manhattan Beach Blvd	Redondo Beach, CA 90277	Open	--	
15	Scat Enterprises	(310) 370-5501	5013	Motor Vehicle Supplies and New Parts	1400 Kingsdale Ave	Redondo Beach, CA 90278	Open	--	
16	The Sea Lab	(310) 318-7438	--	---	1021 N Harbor Dr	Redondo Beach, CA 90277	Open	--	Inspection is not required
17	The Art Department.com Inc.	(310) 542-8766	2396	Screen Printing	2919 182nd St	Redondo Beach, CA 90278	Open	--	No Exposure

Attachment C

City of Redondo Beach Fire Department Operations Manual Hazardous  
Materials First Responder Plan

**Redondo Beach Fire Department**

**Operations Manual  
Area "G" Policy**

**Pages: 42**

**Article IV-Area "G" Policies**

**Section 4.04  
Hazardous Materials First Responder**

**Revised: 6-10-2006**

---

**Purpose:**

To enhance efforts in regards to personnel safety during emergency incidents.

**Responsibility:**

It is the responsibility of all Fire Department supervisors to review this policy and train all personnel responsible for emergency operations.

**Guideline:**

*Area G Fire Departments*

***Hazardous Materials***

***First Responder  
Operational (F.R.O.)***

# ***STANDARD OPERATING GUIDELINES***

Adopted September 1997

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CHAPTER 1.....	RESPONSIBILITIES
CHAPTER 2.....	STRATEGY
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CHAPTER 4.....	SAFETY
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CHAPTER 6.....	DECONTAMINATION
CHAPTER 7.....	TERMS AND DEFINITIONS
CHAPTER 8.....	CONTROL
CHAPTER 9.....	AUTHORITY
APPENDIX I.....	AGENCY NOTIFICATION LIST
APPENDIX II.....	HAZARDOUS MATERIALS PHONE LIST
APPENDIX III.....	HAZ MAT ACTION PLAN
APPENDIX IV.....	HAZARDOUS MATERIALS WORKSHEET
APPENDIX V.....	HAZARDOUS MATERIALS SITE SAFETY PLAN

# **Chapter 1**

## **RESPONSIBILITIES**

### **INTRODUCTION**

The management of a Hazardous Materials Incident is legally a Federal, State, County, City and private industry partnership. Each partner is specifically designated by statute to be responsible for certain prescribed actions at a hazardous materials incident. The Fire Department's main responsibility centers on scene management, assessing the hazard, notification of the proper agencies, and providing the necessary interim measures to minimize the effect of a hazardous condition on people, the environment and property.

#### **1.1 FIRST ARRIVING COMPANY**

The first arriving company is responsible for providing initial size-up, initiating the Incident Command System, initiating strategic priorities (see Chapter 2) and requesting additional resources if needed. The first arriving company must have the proper protective equipment, training, and sufficient staffing to provide one-2 person entry team; one-2 person backup team; and an Incident Commander who is qualified to serve as a Hazardous Materials Safety Officer.

#### **1.2 INCIDENT COMMANDER**

The Incident Commander is responsible for: formulating an action plan (Appendix H1) based upon the Fire Department's strategic priorities (2.1) and strategic approach (2.2), establishing a command post location, acquiring the necessary resources, declaring a local emergency and coordinating with command representatives from other agencies until the emergency has ended and order has been restored.

#### **1.3 HAZARDOUS MATERIALS TEAM**

The Hazardous Materials Team is responsible for assessment of the immediate hazard(s), providing the Incident Commander with technical assistance, and conducting and/or coordinating measures to minimize the effect of the hazard on people, the environment and property.

#### **1.4 DECONTAMINATION TEAM**

Decontamination consists of physically removing contaminants or changing their chemical nature to innocuous substances. How extensive decontamination must be depends on a number of factors, the most important being the type of contaminants involved. The more harmful the contaminant, the more extensive and thorough decontamination must be. Less harmful contaminants may require less decontamination. However FRO's shall concern themselves with emergency decontamination only.

#### **1.5 MEDICAL TEAM**

The Medical Team is responsible for assessment and treatment of sick, injured and/or exposed persons, and medical monitoring of personnel who enter the Exclusion Zone.

#### **1.6 SAFETY OFFICER**

The Safety Officer is responsible for identifying and evaluating hazards, providing direction with respect to the safety of operations and notifying the Incident Commander of any actions taken to correct hazards at an emergency scene. The Safety Officer has the authority to alter, suspend or terminate any activity which he/she may judge to be unsafe. The Safety Officer must be knowledgeable in the operations being implemented.

#### **1.7 INFORMATION OFFICER**

The Information Officer is responsible for handling all releases of public information. The IO should closely coordinate the information distributed by local, regional and state centers for consistency and clarity. Public information materials including press release information forms, emergency broadcast system messages and news releases should be retained for documentation and evaluation.

## **Chapter 2**

### **STRATEGY**

#### **2.1 STRATEGIC PRIORITIES**

When dealing with hazardous materials incidents the priorities of the Fire Department are listed below in order of importance.

- (1) Protection of life.
- (2) Protection of the environment.
- (3) Protection of property.

#### **2.2 STRATEGIC APPROACH**

**INTRODUCTION:** In order to meet the strategic priorities adopted by the Fire Department, all hazardous materials incidents will be managed using a standardized tactical approach.

- 2.2.1 APPROACH WITH CAUTION:** Uphill and upwind when possible or use discretion based on facts if not possible.

Check wind direction on the way and at the scene, continually. Avoid committing equipment until initial size-up is complete.

- 2.2.2 IDENTIFY/ASSESS (Size-Up):** Spill, leak, vapor cloud, illegal dumping, etc.

The following are some of the resources you can use to assist you in identification and assessment: (see Appendix IV)

- (1) By using the Emergency Response Guide Book.
- (2) By using the NIOSH pocket guide
- (3) By identifying the "Proper Shipping Name", the U.N./N.A. Number or the Hazard Class designation recorded on the Shipping Papers.
- (4) By observing placards and labels.
- (5) By requesting Material Safety Data Sheets.

- (6) By observing the types of containers.
- (7) By observing the physical state and behavior of the material.
- (8) By consulting with the person responsible or witness to the fact.
- (9) By consulting with Chemtrec.

Note: Assume that all unknown materials are highly flammable and a lethal poison until proven otherwise.

2.2.3 RESCUE: Take immediate action to rescue persons providing for safety of rescuers.

Note: When determining the rescue needs at a hazardous materials incident, it is important to consider the possibility that the rescuers, without proper protective equipment and training, may become victims who will also need rescuing.

2.2.3.1 If the decision to effect a rescue is made by the first arriving company(s), command of the incident will be passed to a specific officer on an assisting company or transferred to a higher ranking officer. Incoming units shall be notified that rescue is being attempted. However no rescue attempt should be made without a risk analysis.

2.2.3.2 Whenever practical, a Rescue Plan will be formulated and the Rescue Team(s) will be briefed on the plan prior to entry. The minimum Rescue Plan should identify:

- (1) The boundaries of the Exclusion Zone.
- (2) The location of Safe Refuge Areas within the Exclusion Zone.
- (3) The location of the Contamination Reduction Zone outside of the Exclusion Zone.
- (4) The location of Access Control Points into and out of these zones.

2.2.3.3 Rescue Teams should approach the spill from upwind/uphill whenever possible.

2.2.3.4 Rescue Team Leaders will be responsible for providing the Incident Commander (through the chain of command) with on-going Status Reports.

2.2.3.5 Egress from the Exclusion Zone for all people and equipment will be through Access Control Points into a Contamination Reduction Zone.

2.2.3.6 If victims must be moved prior to the establishment of a Contamination Reduction Zone, they should be moved to a pre-determined location of Safe Refuge within the Exclusion Zone where they can remain until the Contamination Reduction Zone can be established.

2.2.4 ISOLATE AREA: This means no more people going into the area.

The first arriving company(s) shall be responsible for controlling activities at the scene to ensure proper management of the incident and to prevent any contamination. Isolation of the material must continue throughout the entire operation. The Incident Commander should:

2.2.4.1 Establish a basic Operational Area which includes an "Exclusion Zone", a "Contamination Reduction Zone", and a "Support Zone" with designated "Access Control Points" between each zone.

(1) The size of the Exclusion Zone should be based on an estimate of the hazard involved. The "Hot Line" should be far enough from the material that no special clothing or respiratory protection are needed to establish the Exclusion Zone.

(2) The Support Zone should be large enough to accommodate the resources necessary to handle the incident.

(3) Whenever practical, zones should be delineated using fire line and/or haz mat tape.

2.2.4.2 Order all non-essential personnel out of the Operational Area.

2.2.4.3 Request Police Department or the California Highway Patrol to establish traffic and crowd control lines that will effectively deny entry of unauthorized personnel into the Operational Area.

2.2.4.4 In the event that notification was given to the school district Superintendent regarding a hazardous materials incident, the Hazardous Materials Group Supervisor shall cause notification to be given to the school district Superintendent's Office that the hazardous materials emergency has been abated, and normal activities may be resumed.

2.2.5 CONTROL/CONTAIN: Control is stopping the leak. Contain is diking, damming, ect..

You must have the proper protective equipment and training to take an offensive action on these objectives.

2.2.6 EVACUATE/IN PLACE PROTECTION: Evacuation and/or in place protection should be carried out in a safe and systematic order.

Evacuation is an appropriate protective action for: (1) An incident involving a release or potential release in which the lead time between recognition of the emergency and population relocation is compatible with the dynamics of the emergency; (2) Situations which do not provide adequate lead time or advance warning but a substantial reduction of the impact on the population can be made by avoiding exposure.

The responsibility for evacuation outside the "Exclusion Zone" usually rest with the Police Department; however, the Fire Department Incident Commander is almost always consulted before an evacuation is initiated. The Incident Commander should:

2.2.6.1 Make a decision to evacuate early in the incident.

2.2.6.2 Meet with a representative from the Police Department to plan:

- (1) The areas to be evacuated.
- (2) The priorities of the evacuation.
- (3) The access and egress routes.
- (4) The location of Evacuation Shelters.

2.2.6.3 Request the representative from the Police Department to take responsibility for implementation of the evacuation once plans are completed.

2.2.6.4 Periodically monitor the evacuation/in place protection process. It is the responsibility of the I/C to monitor these processes to determine their effectiveness.

- (1) In place protection is an appropriate protective action for: (a) severe incidents in which an evacuation cannot be implemented because of inadequate lead time; (b) when local conditions such as inclement weather dictate that directing the public to seek shelter is a more feasible and effective measure than evacuation; and (c) as a precautionary measure, while determination of the

need to evacuate is made, particularly in the case of an unidentified material.

- (2) The decision to conduct in-place protection should be based upon existing known conditions during an emergency. Consideration should be given to facility conditions, nature of the incident, and offsite response considerations.
- (3) Overall strategy of in-place protection is to shut off the air handling system and seal yourself in the building

2.2.6.5 The Incident Commander is responsible for warning the population of the impacted area. This is normally accomplished by mobile public address system, the Emergency Broadcast System (EBS) in cooperation with local radio and television stations and/or the Community Alert Network (C.A.N.).

2.2.7 AGENCIES: The Incident Commander shall request assistance from the Los Angeles County Fire Dept. Health/Haz. Mat. Division on all hazardous materials incidents (except spills of motor vehicle fluids less than 30 gallons). Other outside agencies and resources should be requested early in the incident according to needs, (see Appendix I and II).

2.2.8 DECONTAMINATION: A separate and distinct "Contamination Reduction Zone" should be established between the Exclusion Zone and the Support Zone whenever decontamination procedures are anticipated.)

2.2.9 DOCUMENTATION: Write down observations and facts. Use Police Department personnel if on scene; treat the scene as a crime scene; look for evidence or suspicious acts; sketch out the scene. Recommendation: use Appendix III and IV.

A post incident report shall be submitted to the Office of Emergency Services through CHMIRS (California Hazardous Material Incident Reporting System).

2.2.10 RESPONSIBLE PARTY: The Incident Commander should make every effort to identify the party responsible for the release or threatened release of hazardous materials and keep him/her at the scene.

The person responsible should be asked to remain at the scene voluntarily. However, if necessary, the Incident Commander can instruct the Police Department or Highway Patrol to detain him/her until released by the appropriate authority (usually the Health Department).

## **Chapter 3**

### **COMMAND**

#### **3.1 HAZARDOUS MATERIALS INCIDENT COMMAND SYSTEM**

The organizational structure for hazardous materials incidents shall be consistent with standardized I.C.S. procedures, (see Appendix V).

#### **3.2 COMMAND POST LOCATION**

The Command Post for a hazardous materials incident should be at a location which is uphill/upwind from the incident and which is large enough to accommodate the resources necessary for command of the incident.

#### **3.3 STAGING UPHILL/UPWIND**

All companies not immediately assigned to duty at the scene of a suspected hazardous materials incident should be staged at a remote location uphill and upwind from the incident. The location of the staging area shall be made known to all responding units.

#### **3.4 SCENE MANAGEMENT**

The Fire Department will assume scene management responsibilities at all hazardous materials incidents except those occurring on highways where the California Highway Patrol has primary traffic investigative authority.

The Incident Commander is responsible for notifying the appropriate agencies, acquiring the necessary resources and coordinating all of the activities at the scene to properly handle an incident. Scene management responsibilities continue until the emergency has ended and order has been restored. (see Appendix I, II, and V).

#### **3.5 CLEAN-UP**

The County of Los Angeles Fire Department, Health Haz Mat Division will supervise the clean-up of all hazardous materials incidents. The clean-up of a hazardous materials incident is the responsibility of the Health Department, a private clean-up company and the person responsible.

### **3.6 ENFORCEMENT**

The responsibility for enforcement of hazardous waste laws falls on the Health Department, the local law enforcement agency, and the City Attorney or District Attorney's Office.

An incident scene may be a crime scene since the illegal disposal of hazardous materials is a misdemeanor or felony. Fire Department personnel should take precautions to protect evidence at the scene and keep in mind that statements made by individuals may be admissible in court.

### **3.7 FINAL CLEARANCE**

All personnel and equipment involved in a hazardous materials incident will be checked for contamination by the Health Officer or his designee before being released from the scene.

The only agency with the authority to declare a hazardous materials incident over and the incident area clean is the jurisdictional health agency or their representative. Reentry by civilians into a hazardous materials spill area can only be authorized by the appropriate health agency.

## **Chapter 4**

### **SAFETY**

#### **4.1 UPHILL/UPWIND APPROACH**

All companies responding to a suspected hazardous materials incident will approach from uphill and upwind, whenever possible.

#### **4.2 PREPARE FOR IMMEDIATE EGRESS**

All apparatus at the scene of a suspected hazardous materials incident will be positioned for immediate egress and maximum personnel safety.

4.2.1 All units not immediately assigned to duty shall be staged at a remote location uphill, upwind, and away from the incident area.

#### **4.3 PROTECTIVE CLOTHING**

All personnel operating at a suspected hazardous materials incident will wear full Personal Protective Equipment (PPE). Minimum: full protective clothing (includes helmet, hood, self contained breathing apparatus, turnout coat and pants, rubber boots and gloves customarily worn by fire fighters).

#### **4.4 HAZARDOUS SUBSTANCE CONTROL**

Control is primarily the responsibility of the Hazardous Materials Team. However, first responders have the option to intervene if the hazardous material(s) is moving and threatening public safety and/or the environment.

4.4.1 Attempts by first responders to control moving hazardous materials should be made at remote locations away from the leading edge of the material(s).

4.4.2 The distance between the control area and the leading edge of the material will be determined by estimating the time it would take to construct the control area safely without any need for personal protective equipment.

4.4.3 The first responder should plan to construct the entire control area prior to the arrival of the spreading hazardous material(s).

#### 4.5 **CONSIDER WORST CASE**

All unknown substances will be considered flammable and lethal poisons until proven otherwise.

#### 4.6 **ENTRY INTO THE EXCLUSION ZONE**

According to OSHA regulations no entry shall be made in the exclusion zone until the following are in place:

- 4.6.1 2 person entry team, 2 person backup team and an Incident Commander who is a qualified safety officer
- 4.7.2 A Contamination Reduction Zone has been established, staffed, and is equipped at a level sufficient to deal with the decontamination requirements of the incident.
- 4.6.3 An action plan has been developed. (Appendix III).
- 4.6.4 A site safety plan has been developed. (Appendix V).
- 4.6.5 A paramedic unit is on scene to act as the Medical Unit.
- 4.6.6 You have transportation capabilities on scene.

#### 4.7 **COMMUNICATIONS**

Entry Team members shall maintain constant communication with the Entry Leader while in the Exclusion Zone.

- 4.7.1 A radio frequency separate from all other on scene communications is desirable.
- 4.7.2 Entry Team members should immediately leave the Exclusion Zone if communications fail.
- 4.7.3 All communications to the Entry Team should pass through "the Entry Leader.

#### 4.8 CONTAMINATION REDUCTION

In no instance shall anyone travel from the Exclusion Zone to the Support Zone of a hazardous materials incident unless they have first passed through, been evaluated, and then decontaminated if necessary, within a separate and distinct Contamination Reduction Zone

## Chapter 5

### DISPATCH

#### 5.1 DISPATCH INFORMATION

The Communication Operator should attempt to identify, document and relay to the responding Incident Commander.

- (1) Specific location of the incident;
- (2) Owner/occupant's name;
- (3) Chemical name(s);
- (4) Quantity of material involved;
- (5) Incident type (spill, leak, dumping, vapor release);
- (6) Physical state (gas, liquid, solid, unknown);
- (7) Contact person (request they meet the responding engine or truck company and provide them with Material Safety Data Sheet(s), or shipping papers, if possible).

## Chapter 6

# DECONTAMINATION

### INTRODUCTION

Personnel at hazardous materials incidents may become contaminated in a number of ways including:

- (1) Contacting vapors, gases, mists, or particulates in the air;
- (2) Splashed by materials while sampling or opening containers;
- (3) Walking through puddles of liquids or on contaminated soil;
- (4) Using contaminated instruments or equipment;
- (5) Improper decontamination.

Protective clothing and breathing apparatus help prevent the wearer from becoming contaminated or inhaling contaminants; while good work practices help reduce contamination on protective clothing, instruments, and equipment.

Even with these safeguards, contamination may occur. Harmful materials can be transferred into clean areas, exposing unprotected personnel. In removing contaminated clothing, personnel may contact contaminants on the clothing or inhale them. To prevent such occurrences, methods to reduce contamination and proper decontamination procedures must be developed and established before anyone enters a site and must continue (modified when necessary) throughout scene operations.

Decontamination consists of physically removing contaminants or changing their chemical nature to innocuous substances. How extensive decontamination must be depends on a number of factors, the most important being the type of contaminants involved. The more harmful the contaminant, the more extensive and thorough decontamination must be. Less harmful contaminants may require less decontamination. First Responders shall concern themselves with emergency decontamination only.

Combining decontamination procedures, the correct method of doffing personnel protective equipment, and the use of scene work zones, minimizes cross-contamination from protective clothing to wearer, equipment to personnel, and from one area to another. Only general guidance can be given on methods and techniques for decontamination. The exact procedure to use must be determined after evaluating a number of factors specific to the incident.

Fire Department Hazardous Materials Response Teams require support from a Decontamination Team. This support may be provided by a designated engine/truck company or by a back-up Haz Mat Team.

The Decontamination Team shall have the responsibility of activating the Contamination Reduction Zone (CRZ) and performing primary decontamination of persons and equipment leaving the Exclusion Zone at a hazardous materials incident.

## **6.1 EMERGENCY DECONTAMINATION**

In the event that time does not allow establishing a decontamination plan as previously outlined, emergency decontamination for all personnel leaving the Exclusion Zone should be a sixty second flush using a 1 1/2" or 1 3/4" hose stream on fog.

- 6.1.1 The apparatus supplying the hand line should be in the Support Zone, uphill, and upwind from the Contamination Reduction Zone.
- 6.1.2 Run-off from decontamination operations should be contained whenever possible. However, do not delay the decontamination of victims at the expense of containing the run-off.
- 6.1.3 Personnel performing emergency decontamination should be in full turnouts and self contained breathing apparatus.
- 6.1.4 Personnel performing emergency decontamination should avoid contact with contaminated victims and clothing if at all possible.
- 6.1.5 Victims should be decontaminated before treatment by rescue personnel. Exception: Victims with life threatening injuries should receive immediate treatment in the Exclusion Zone if possible, and then be taken to the Contamination Reduction Zone where they will be decontaminated and turned over to awaiting medical personnel.
- 6.1.6 After decontamination, victims should be provided with disposable blankets or garments to cover themselves and protect them from the elements.
- 6.1.7 All contaminated clothing and equipment should remain in the Contamination Reduction Zone until it has been assessed by the Decon Leader.

## **6.2 DECONTAMINATION DURING MEDICAL EMERGENCIES**

- 6.2.1 A plan for decontaminating personnel with medical problems and/or injuries should be established.
  - (1) Tox Center(s) and/or base station should be contacted for directions regarding proper decontamination methods.

- 6.2.2 Whenever possible victims should be decontaminated prior to medical treatment.
- (1) Grossly contaminated victims and clothing should be washed off as rapidly as possible to minimize the transfer of contaminants to treatment personnel or the victim.
- 6.2.3 Treatment of life threatening medical emergencies may take place in the Exclusion Zone prior to decontamination. If at all possible, treatment should take place in a location remote from the hazardous material(s).
- 6.2.4 If the contaminant is on the skin or in the eyes, immediate measures must be taken to counteract the substance's effect. First aid treatment is usually flooding the affected area with water for a minimum of 15 minutes. However, for a few chemicals, water may cause more severe problems. (Contact base station and/or tox center(s)).
- 6.2.5 Contaminated clothing should be removed if it does not cause unnecessary delay, interfere with treatment or aggravate the problem.
- (1) If contaminated clothing can not be safely removed, the victim should be wrapped in plastic, or disposable blankets to prevent contaminating the inside of the ambulance.
- 6.2.6 Whenever possible, response personnel should accompany contaminated victims to the medical facility to advise on matters involving decontamination.
- 6.2.7 Receiving medical facilities should be notified in advance of nature of contamination.
- 6.2.8 Exposed surfaces of ambulances used for transporting contaminated victims should be:
- (1) draped with sheets or polyethylene covers;
  - (2) brought to the Contamination Control Line for loading;
  - (3) considered contaminated and will have to be decontaminated before being used to transport any non-contaminated persons.

## 6.3 RADIOLOGICAL DECONTAMINATION

Personnel may be contaminated with radioactive emitting material at any radiological incident. In order to prevent any health risk to personnel and to control the spread of contamination, the following steps should be taken:

- 6.3.1 All personnel (both fire and civilian) that are within the Exclusion Zone should not be released from the zone until they have been surveyed with radiation detection instruments and decontaminated if necessary.
- 6.3.2 Contaminated personnel leaving the Exclusion Zone should pass through the Contamination Reduction Corridor.
- 6.3.3 All personnel reporting to the Contamination Reduction Zone should remain fully dressed in protective gear, including gloves and self contained breathing apparatus (face piece in place) until fully decontaminated.
- 6.3.4 All contaminated clothing and equipment should be removed and held in the Contamination Reduction Corridor.
  - (1) Plastic bags or plastic trash containers must be utilized to contain contaminated clothing and equipment.
- 6.3.5 No smoking, drinking, or food consumption should be permitted until all exposed personnel are determined decontaminated.
- 6.3.6 Decontamination runoff water should be contained and collected for proper disposal.
- 6.3.7 All personnel released from the Contamination Reduction Zone should be directed to shower and shampoo and put on clean clothes as soon as possible after the incident.
- 6.3.8 Medical evaluations should be arranged for all exposed personnel as quickly as is feasible.

## 6.4 EQUIPMENT DECONTAMINATION

### 6.4.1 TOOLS:

Wooden tools are difficult to decontaminate because they absorb chemicals. They should be kept on scene and handled only by protected workers. At the end of the incident, wooden tools should be discarded. For decontaminating other tools, outside resources should be consulted.

6.4.2 BREATHING APPARATUS:

If they can be safely decontaminated, SCBAs should be sent to a qualified representative for evaluation. If they are grossly contaminated, they may have to be discarded.

6.4.3 HEAVY EQUIPMENT:

Fire engines, bulldozers, trucks, back-hoes, and other heavy equipment, are difficult to decontaminate. The method generally used is to wash them with water under high pressure and/or scrub accessible parts with detergent/water solution under pressure, if possible. In some cases, shovels, scoops, and lifts have been sand blasted or steam cleaned. Particular care must be given to those components in direct contact with contaminants such as tires and scoops.

**6.5 EFFECTIVENESS OF DECONTAMINATION**

6.5.1 DETERMINING EFFECTIVENESS

6.5.1.1 A Health Officer, if on scene, should be consulted to determine effectiveness of decontamination operation.

**6.6 RELEASE OF PROTECTIVE EQUIPMENT AND PERSONAL EFFECTS**

6.6.1 When feasible, protective clothing and personal effects should be decontaminated and released from the Exclusion and Contamination Reduction Zones with the individual

6.6.2 Emergency personnel entering the Contamination Reduction Zone should remove personal effects and store them in a safe place prior to entry into the Exclusion Zone.

## Chapter 7

### TERMS AND DEFINITIONS

- 7.1 The following terms and abbreviations are commonly found in hazardous materials, and be useful to First Responders:
- (1) **BOILING POINT:** The temperature at which the vapor pressure of a liquid equals the atmospheric pressure. The boiling point is an important indicator of the substance's vapor pressure. Flammable materials with low boiling points generally present special fire hazards.
  - (2) **C.A.S. #:** Chemical Abstracts Service; a Columbus, Ohio organization which indexes information published in "Chemical Abstracts" by the American Chemical Society. Information about particular substances may be located in the "Abstracts" using index guides provided by C.A.S. "C.A.S. Numbers" identify specific chemicals.
  - (3) **CHEMICAL FORMULA:** The chemical formula shows the number of atoms of the various elements in the molecule, and gives an indication of their arrangement.
  - (4) **CLASSIFICATION:** The United Nations Hazard Classification System. Nine hazard classes exist, along with divisions within the classes. U.N. Class Numbers may be displayed at the bottom of placards or in the hazardous materials description on shipping papers.
  - (5) **D.O.T. #:** Also referred to as UN# or NA# The four-digit Department of Transportation Identification Number. The D.O.T.# identifies the hazardous material being transported and may be displayed on placards, orange panels, or in the hazardous materials description on shipping papers.
  - (6) **EXPLOSIVE LIMITS:** The percentage of a substance "in air that will burn once it is ignited. Most substances have an upper explosive limit (UEL) which is too rich a mixture and a lower explosive limit (LEL) which is too lean a mixture.
  - (7) **FLASH POINT:** The minimum temperature at which a liquid fuel gives off sufficient vapors to form an ignitable mixture with the air near its surface. At this temperature, the ignited vapors will flash, but will not continue to burn.

- (8) **IGNITION TEMPERATURE:** The minimum temperature to which a fuel in air must be heated in order to start self-sustained combustion independent of the heating source.
- (9) **NA#:** See D.O.T. #.
- (10) **ODOR THRESHOLD:** The lowest concentration of a substance in air at which most people can detect and/or recognize the odor of the material. Odor Threshold is usually measured in parts per million (ppm).
- (11) **pH:** This is an abbreviation for percent hydrogen. It represents the negative logarithm of the hydrogen ion concentration of a solution. pH is expressed on a scale whose values run from 0 to 14 with 7 representing neutrality. Numbers less than 7 increase in acidity (an excess of hydrogen ions: H<sup>+</sup>), while numbers greater than 7 increase in alkalinity (an excess of hydroxide ions: OH<sup>-</sup>).
- (12) **PPM:** This is an abbreviation for parts per million; ppm is a unit for measuring the concentration of a gas, vapor, or dust in air. 10,000 ppm = 1 % by volume.
- (13) **REACTIVITY:** A description of the tendency of a substance to undergo chemical reaction with the release of energy. Undesirable effects such as pressure build up, temperature increase, formation of noxious, toxic or corrosive by-products may occur because of the reactivity of a substance to heating, burning, direct contact with other materials or other conditions in use or storage.
- (14) **SPECIFIC GRAVITY:** The density of liquids in relation to water. Water is designated a value of one. Liquids with a specific gravity less than one are lighter than water, while those with a specific gravity greater than one are heavier than water.
- (15) **TLV:** Threshold Limit Value. TLVs are usually measured in ppm or mg/m<sup>3</sup> and are specified as follows: (TLV-TWA) Threshold Limit Value - Time Weighted Average. The time weighted average concentration for a normal 8 hour work day and a 40 hour work week to which nearly all workers may be repeatedly exposed, day after day, without adverse effect. (TLV-STEL) Threshold Limit Value - Short Term Exposure Limit. The concentration to which workers can be exposed continuously for a short period of time (usually 15 minutes) without suffering from irritation, chronic or irreversible tissue damage, or narcosis of sufficient degree to increase the likelihood of accidental injury, impair self rescue, or materially reduce work efficiency, provided that the daily TLV-TWA is not exceeded. STEL is not a separate independent exposure limit, rather it supplements the TWA limit.

- (16) **TRADE NAMES:** An arbitrarily adopted name that is given by a manufacturer to his product to distinguish it as produced or sold by him. Note: do not confuse Trade Names with Chemical Names or Synonyms.
- (17) **UN#: SecD.O.T. #.**
- (18) **VAPOR DENSITY:** The density of gases in relation to air. Air is designated a value of one. Gases with a vapor density less than one are lighter than air while those with a vapor density greater than one are heavier than air.
- (19) **WATER SOLUBILITY:** A term expressing the percentage of a material (by weight) that will dissolve in water at ambient temperature. Solubility information may be useful in determining spill clean-up methods or fire extinguishing agents and methods for a material. Various terms are used to describe the degree of solubility of a material.

## Chapter 8

### CONTROL

#### 8.1 CONTROL PROCEDURES

- 8.1.1 Controlling spilled hazardous materials can be a major problem. No specific "hard and fast" rules can be presented because there are too many factors to consider. Immediate advice from experts in specialized fields is important.
- 8.1.2 Covering dry material and providing a dike for liquids will usually be the first step. Unless immediate hazards to life and/or property are involved, any efforts to remove the spill by flushing into a drainage system should be restricted. Immediate support from the entire response organization may be necessary and expected to minimize the time any spilled material must lay in the open. Any determination as to the degree of hazard of any spilled material is best done on-site, and is the responsibility of the Incident Commander.
- 8.1.3 Proper respiratory and skin protection shall be used when the possibility of contact with a hazardous or unknown material exist.
- 8.1.4 Personnel assigned to containment/control of hazardous materials should attempt to stay as clean as possible.
- 8.1.5 The Incident Commander should request assistance from the Haz Mat Team, to control a substance, whenever the Incident Commander determines:
- (1) They do not have the proper protective equipment
  - (2) They do not have the proper training

## Chapter 9

### AUTHORITY

#### INTRODUCTION:

The Fire Department must continue to be apprised of the laws governing and authorizing the Fire Department's authority in respect to hazardous material operations. The Fire Department's authority is regulated by federal, state, and local regulations. Although the Fire Department may not be the administering agency in compliance of the various forms of legislation's, they will have a coordinating function in complying with the laws as scene manager of hazardous materials incidents within the boundaries of the affected jurisdiction.

#### 9.1 DEFINITIONS

- A. Law - rules of conduct
  - 1. Private law - Civil Laws
  - 2. Public Law - Governmental Laws (Four Branches)
    - a. International
    - b. Constitutional
    - c. Criminal
    - d. Administrative - operation of government agencies.
- B. Statute Law - a law passed by a legislative body or an interested group of citizens (Initiatives), and set forth in a formal document.
  - 1. A specific statement of what is to be done, not necessarily how it will be accomplished.
- C. Regulation - a document detailing procedures for implementing, complying with, and enforcing law.
  - 1. Generally written by the agency charged in the law with implementing and/or enforcing the law.
- D. Ordinance - a term used for a governmental (especially municipal) law or regulation.

- E. Code - a systematic statement of a body of law or regulations. For example: U.S. Codes, California Codes, and Municipal Codes.
- F. Standard - a rule established as a basis of comparison for professional competency. For example: NFPA standards.

#### H. FEDERAL LAWS/STATUTES

(U.S. Codes) - Laws/Statutes enacted by the Federal Legislature, i.e. "Acts of Congress". The U.S. Senate and House of Representatives have established the following statutes:

- A. The Natural Environmental Protection Act (NEP)
  - 1. Established federal environmental protection standards and Environmental Protection Agency (EPA).
- B. The 1976 Resource Conservation and Recovery Act (RCRA)
  - 1. Established federal regulations assigning "cradle to grave" hazardous waste responsibilities to hazardous waste generators.
- C. The 1980 Comprehensive Environmental Recovery Compensation and Liability Act (CERCLA)
  - 1. Established the first federal "Superfund " and provided for cleanup cost recovery.
- D. The 1986 Superfund Amendment and Reauthorization Act, Title III (SARA, Title III)
  - 1. Federal legislation to re-authorize Superfund money for hazardous waste cleanup (amended CERCLA).
  - 2. Two main features - mandates the EPA and OSHA to take some prescribed actions.
    - a. Community planning and right-to-know: established new EPA environmental protection standards related to hazardous materials business, area, chemical inventories, and emergency response plans.
    - b. Hazardous waste operations and emergency response: directed OSHA to develop occupational safety and health standards for hazardous waste workers and emergency responders (29 CFR 1910.120 - HAZWOPER).

### III. Federal Regulations

The code of Federal Regulations is a codification of the general and permanent rules published in the Federal Registrar by the executive departments and agencies of the Federal Government. The Code is divided into 50 Titles which represent broad areas subject to Federal regulation. Each Title is divided into chapters which usually bear the name of the issuing agency. Each chapter is further subdivided into parts covering specific regulatory areas, for example: Title 29 - Labor, 9 volumes; executive agency - U.S. Dept. of Labor.

#### A. Title 29 Code of Federal Regulations 1910.120 (29 CFR 1910.120)

1. Falls under the jurisdiction of the U.S. Department of Labor; however the designated administrating agency is the Federal Occupational Safety and Health Administration.
2. Establishes occupational safety and health standards for hazardous waste operations and emergency response.
3. Few hours are required for training levels due to the potential costs incurred by those it would affect.
  - a. Two OSHA representatives wrote the regulation.
  - b. They were aware that Congress would not allow strict requirements due to potential costs.
4. Same as Title 8 CCR Section 5192, but less restrictive. B.

#### Title 14 Code of Federal Regulations 91.137 (14 CFR 91.137)

1. Falls under the jurisdiction of the U.S. Department of Transportation; however, the designated administrating agency is the Federal Aviation Administration.
2. Enables emergency responders to invoke an air space restriction above, and in proximity to, a hazardous materials scene through the FAA (except for the media).
3. AKA - Federal Aviation Regulations 91.137 (FAR 91.137)

### IV. State Laws/Statutes

(California Codes) - The 28 Official Codes incorporate all the general and permanent legislative law of the State of California. General and permanent laws enacted currently in California as additions to or amendments of the Codes. The code section numbers, as well as Title, Division, Part, Chapter, and Article headings, where appropriate, are included in the laws enacted. The

California Senate and Assembly, and the citizens of the State have established the following State Laws:

- A. California Health and Safety Code (Division 20)
1. Chapter 6.5 "Hazardous Waste Control Law"
    - a. Section 25180.7 - Knowing and intentional failure of designated government employee to disclose to the County Board of supervisors and the Local health officer the release or threatened release of hazardous wastes likely to cause substantial injury to public health or safety (within 72 hours).
      - (1.) Felony
      - (2.) Prison - up to 3 years
      - (3.) Fine - \$5,000.00 - \$25,000.00
      - (4.) Loss of job - mandatory
      - (5.) Exceptions - information already general knowledge or adversely affect an ongoing criminal investigation.
    - b. Section 25189(d) - Negligent disposal or causing disposal of hazardous or extremely hazardous waste at an unauthorized point.
      - (1.) Civil penalty
      - (2.) Fine - up to \$25,000.00
    - c. Section 25189.6 (a) - Knowing with reckless disregard for the risks: treats, handles, transports, disposes, or stores hazardous waste in a manner which causes an unreasonable risk of fire, explosion, serious injury, or death.
      - (1.) Felony
      - (2.) Prison - 16, 24, or 36 months
      - (3.) Fine-\$5,000.00-250,000.00
    - d. Section 25191(a)(4) - Knowing or withholding information after request by agency of Real & Substantial Danger".
      - (1.) Misdemeanor
        - (a.) Jail - 1 year
        - (b.) Fine-\$2,000.00-\$25,000.00

- (2.) Felony - Second or subsequent violation
  - (a.) Prison - 16, 20, or 24 months
  - (b.) Fine - \$2,000.00 - \$50,000.00
- 2. Chapter 6.8 "Safe Drinking Water & Toxic Enforcement Act"
  - a. AKA "Proposition 65"
  - b. A California citizen Initiative - voted into law to:
    - (1.) Protect selves and water from carcinogens.
    - (2.) Be informed of carcinogens in the environment.
    - (3.) Strictly enforce laws controlling hazardous substances.
    - (4.) Shift cleanup costs to offenders.
- 3. Chapter 6.8 "State Superfund"
  - a. AKA "Senate Bill 618"
  - b. Hazardous waste cleanup funds to be administered and dispersed by California EPA.
- 4. Chapter 6.95 "Hazardous Materials Disclosure Act"
  - a. AKA "Waters Bill" or "Assembly Bill 2185, 2187, & 2189"
  - b. Requires a business to:
    - (1.) Disclose to "Administering Agency" if inventory of hazardous materials exceeds:
      - (a.) 55 gallons
      - (b.) 500 pounds
      - (c.) 200 cubic feet
      - (d.) Reproductive or carcinogenic toxins in any amount.
    - (2.) Immediately notify QES, administering agency, and local fire department of significant release of hazardous materials.
  - c. Requires administering agency to:

- (1.) Develop a data management system to deliver business plan information to first responders.
- (2.) Develop an "Area Plan" and submit it to OES.
  - d. Requires responding agency to notify any school superintendent within 1/2 mile of a release that poses a health risk.

B. California Vehicle Code

1. Division 2, chapter 2, Section 2454 and Senate Bill 921

- a. Designates the law enforcement agency having primary traffic investigative authority in a given jurisdiction as the "scene manager" for on-highway/road hazardous materials incidents.
- b. Senate Bill 921, which became effective Jan. 1, 1990, authorizes "the local governing body of a city having jurisdiction where the spill or disaster occurs to assign the authority for management of the scene on local streets and roads, other than freeways, to either the local law enforcement agency or fire protection agency."

2. Division 11, Chapter 3, Section 21707 - "Fire Areas"

No motor vehicle, except an authorized emergency vehicle or a vehicle duly authorized member of a fire or police department, shall be operated within the block wherein an emergency situation responded to any fire department vehicles exists, except that in the event the nearest intersection to the emergency is more than 300 feet there-from, this section shall prohibit operation of vehicles only within 300 feet of the emergency, unless directed to do so by a member of the fire department or police department, sheriff, deputy sheriff, or member of the California Highway Patrol. The emergency shall be deemed to have ceased to exist when the official of the fire department in charge of the scene of the emergency shall so indicate. Officials of the fire department or police department of the California Highway Patrol who are present shall make every effort to prevent the closing off entirely of congested highway traffic passing the scene of any such emergency.

3. Division 11, chapter 12, Section 23112.5 - "Notification of Hazardous Materials Spill"

- a. Strict Liability - failing to notify the CHP after dumping, spilling, or causing the release of hazardous material or waste upon the highway.
  - (1.) Misdemeanor
  - (2.) Jail - 6 months
  - (3.) Fine - mandatory, not less than \$2,000.00

C. California Penal Code

- 1. Title 11 Section 409.5 - has been reviewed by the L.A. County District Attorney's Office and by the L.A. County Counsel's Office, and has been deemed to be the proper section to provide law enforcement and health officers the legal authority to "close and evacuate" an area.
  - a. "Any unauthorized person who willfully and knowingly enters an area closed pursuant to subdivision (a) or (b) and who willfully remains within the area after receiving notice to evacuate or leave shall be guilty of a misdemeanor".
  - b. "Nothing in this section shall prevent a duly authorized representative of any news service, newspaper, or radio or television station or network from entering the areas closed pursuant to this section".
  - c. Simply stated, whenever law enforcement or health officials deem that an area must be closed and/or evacuated to protect the public, California Penal Code Section 409.5 provides the authority to do so. This includes ordering residents out of their homes.

D. California Government Code

- 1. Division 1 Section 8574.17(b) - California Hazardous Materials Incident Reporting System (CHIMRS)
  - a. Program collects and analyzes statistical data.
  - b. Report shall be completed by the Incident Commander on all hazardous materials incidents, except:
    - 1. Petroleum spills of less than 42 gallons from vehicle fuel tanks.

2. Sewage overflows.
3. Leaks in low pressure fuel lines to residential properties.

V. State Regulations

The California Code of Regulations has been established to detail procedures for implementing, complying with, and enforcing California law.

A. Title 8 California Code of Regulations Chapter 4 Section 5192 paragraphs (f) & (g)

1. California Regulations must meet or exceed Federal Regulations,
  - a. Title 8 CCR exceeds 29 CFR 1910.120 requirements.
  - b. Emergency responders in California should no longer use 29 CFR 1910.120 - Title 8 CCR is more strict, and therefore state regulations would not be met.
2. Paragraph (f) - Medical Surveillance
3. Paragraph (q)(3)(A) - Incident Command System
  - a. Mandatory for hazardous materials emergency response.
  - b. Differences between 29 CFR and Title 8 CCR:
    1. 29 CFR - requires a site specific ICS (any ICS).
    2. Title 8 CCR - Cal OSHA requires and CSTI teaches FIRESCOPE ICS only.
      - (a.) In California, FIRESCOPE ICS must be used for hazardous materials emergencies.
      - (b.) This will enable government and private agencies to work better as a team.
4. Paragraph (q)(3)(D) - SCBA's and air Monitoring
5. Paragraph (q)(3)(E) - Buddy System
6. Paragraph (q)(3)(F) - Back-up Personnel & Advanced First Aid Personnel
  - a. 29 CFR Appendix C-6 & Title 8 CCR Appendix C-6

7. Paragraph (q)(3)(G) - Safety Officer
  - a. Incident Commander shall designate.
  - b. Shall be trained to same level as responders, ie. FRO's, Technicians, Specialists
  - c. Title 8 CCR Appendix C-6
8. Paragraph (q)(3)(I) - Decontamination
  - a. Incident Commander shall implement
9. Paragraph (q)(4) - Skilled Support Personnel
10. Paragraph (q)(6)(A) - First Responder Awareness
11. Paragraph (q)(6)(B) - First Responder Operational
  - a. May respond in a defensive mode.
  - b. Cannot take offensive action on skin-absorbing or unknown products.
12. Paragraph (q)(6)(C) - Technicians
13. Paragraph (q)(6)(D) - Specialists
14. Paragraph (q)(6)(E) - Incident Commander/On-Scene Manager
15. Paragraph (q)(8)(A) - Refresher Training

#### VI. Local Laws/Ordinances

Local laws/ordinances either enacted or adopted by a county or municipal governmental body and citizens.

#### VII. Standards

- A. NFPA 472
  - I. Title 8 CCR is the regulation, and NFPA 472 the standard, which specifies how emergency responders must operate when dealing with hazardous materials.

2. Title 8 CCR specifies certain competency levels for hazardous materials responders, while NFPA 472 spells out how to meet those levels.
3. There are differences in the two documents concerning the specialist level. CSTI basis its training format on Title 8 CCR.
4. Title 8 CCR specifies minimum training hours. NFPA 472 specifies minimum levels of competency for the various levels of response, rather than minimum hours.

B. NFPA 473

1. Specifies how EMS personnel are to respond to hazardous materials incidents.

C. NFPA 1991, 1992, 1993

1. Standards for Chemical Protective Clothing
  - a. NFPA 1991 - "Vapor Protective Suits for Hazardous Chemical Emergencies"
  - b. NFPA 1992 - "Liquid Splash Protective Suits for Hazardous Chemical Emergencies"
  - c. NFPA 1993 - "Protective Garments for Support Functions at Hazardous Chemical Operations"

## VIII. Basic Legal Concepts

A. Tort Law - (in general terms)

1. A tort is a wrong or injury that a person suffers because of someone else's action. The action may cause bodily harm; damage a person's property, business, or reputation; or make unauthorized use of a person's property. Tort law deals with the rights and obligations of the persons involved in such cases.
2. Many torts are unintentional, for example traffic accidents. If a tort is deliberate and involves serious harm, it may be treated as a crime.
3. The victim in a tort case may sue the person or person's responsible.

4. Any individual and/or level of government can be held civilly and/or criminally liable for errors, omissions, or commissions that result in a tort.
  5. It is no longer true that "The King Cannot Be Sued ". Government bodies are often named in lawsuits because they have "Deep Pockets", i.e. money.
  6. There has been a dramatic increase in the number and variety of lawsuits filed, the probability of plaintiffs winning, and the amount of money awarded to the victim.
- B. Vicarious Liability - (in general terms)
1. Failure to plan, train, or take accepted response actions could result in civil liability actions against an individual, usually the Chief Executive Officer, the Incident Commander, etc.
- C. Joint and Several Liability - (in general terms)
1. Responsible parties found liable in a lawsuit must pay their established percent of the settlement, plus the balance of other non-paying parties, until such time that the injured party is made whole.

# AGENCY NOTIFICATION FOR HAZARDOUS MATERIALS RELEASES

FOR ALL INCIDENTS INVOLVING HAZARDOUS SUBSTANCES NOTIFY:  
(SEE PHONE LIST FOR PHONE NUMBERS)

County of Los Angeles Fire Department, Health/Haz Mat Division

State of California Office of Emergency Services.

IN ADDITION, IF THE RELEASE OR THREATENED RELEASE OF A HAZARDOUS SUBSTANCE EFFECTS ANY OF THE FOLLOWING: NOTIFY OR REQUEST A RESPONSE FROM THE APPROPRIATE AGENCY.

## AREA AFFECTED

## AGENCY

Airborne Release

Air Quality Management District (AQMD)

Fish & Wildlife Habitat Threatened

California State Department of Fish and Game, after hours call State Police,

Illegal Dumping

Police Department

Sewer

Street Department.

County of Los Angeles Sanitation District.

Storm Drains, Flood Control Channel,  
Navigable Waterway, or Potential Exposure

Street Department.

County of Los Angeles Public Works, Flood Control Division.

California State Department of Fish and Game, after hours call State Police

United States Coast Guard.

State Highway	California Highway Patrol. California Department of Transportation (Cal Trans)
Pipeline Leaks	Pipeline Leaks Hotline State Fire Marshal's Office
Underground Tank	Fire Prevention Division
Bio-Medical Material	County of Los Angeles Fire Department Health/Haz Mat Division
Clandestine Laboratory	Police Department
Explosives – Ammunition, Ether, Picric Acid	Police Department County of Los Angeles Sheriff's Arson and Explosive Detail
Industrial Waste	Cities Responsibility
Pesticide	County of Los Angeles Agricultural Commissioner, after hours call L. A. Co. operator.
Radioactive Material	County of Los Angeles Department of Health Services Radiation Management Division, after hours call L.A. Co. operator.

## HAZ MAT PHONE LIST

AQMD	800-572-6306
SDR (FED. PUBLIC HEALTH)	404-639-0615
FAX	404-639-6363
CAL.EPA	800-852-7550
CAL.OSHA	310-516-3734
CAL.OSHA CONSULTATION	310-944-9366
CAL TRANS	213-897-0383
CALIFORNIA FISH & GAME	310-590-5179
After hours	916-445-0045
C.H.P. (24 Hr. number)	213-953-7378
CHEMTREC	800-424-9300
CHEVRON PIPELINE CO.	310-694-2818
COAST GUARD	310-980-4450
After hours	310-980-4444
CROSBY OVERTON (Waste Treatment)	310-432-5445
0600 -1800 Monday - Friday	
DOW.CHEMICAL (Chlor. Rep)	310-533-5200
EDELMAN, Dr. (UC. Irvine)	714-639-5006
EDISON	800-962-6269
	310-324-2332
EDISON PIPELINES	310-430-7935
GATX TERMINAL CORP	310-834-2730
I.T. (Clean up.)	800-262-1900
<b>L.A. COUNTY HEALTH HAZMAT DIVISION</b>	
Emergency Response Coordinator	213-890-4317
After hours	213-881-2455
Household Haz-Waste Hotline	800-552-5218
L.A. COUNTY HEALTH	213-738-4059
RADIATION DIV. After hours	213-974-1234
L.A. COUNTY HEALTH	310-222-6584
After hours	213-974-1234
L.A. COUNTY ENVIRONMENTAL	310-519-6060
After hours contact L.A.CO. Operator	
L.A. COUNTY OPERATOR	213-974-1234
L.A. COUNTY FIRE DISPATCH	310-638-6121
Station #43	818-968-1978
Station #76	805-257-4144
Station #105	310-632-1634
L.A.CO.PUBLIC WORKS FLOOD	818-458-4146
After hours	800-675-4357
L.A.CO. SANITATION	310-699-7411/ 310-437-6520
L.A. COUNTY AGRICULTURAL	818-575-5465
COMMISSIONER After hours	213-974-1234
NATIONAL RESPONSE CENTER	800-424-8802
U.S COAST GUARD	
NORTHRIDGE TOX CENTER	800-682-9000
O.E.S.	800-852-7550

PESTICIDE HOTLINE(M-F0630-1630)	800-858-7378
POISON CONTROL CENTER	800-404-4646
L.A. COUNTY	213-222-3212
STATE FIRE MARSHALL, (after hours call O.E.S)	
PIPELINE SAFETY DIVISION	818-337-9999
SANTA FE RAILROAD	800-285-2164
Police Communications Center	800-333-2383
SHELL OIL R.A.T. TEAM	714-520-3523
SHELL OIL PIPELINE CORP.	800-367-7752
SO. CAL GAS. CO.	800-325-4070
	213-881-8111
<b>UNION PACIFIC RAILROAD</b>	
Haz Mat Desk	
<b>FIRE PREVENTION DIV.</b>	
<b>POLICE DISPATCH</b>	
<b>SCHOOL DISTRICT</b>	
<b>STREET DEPT.</b>	
UNION CARBIDE "HELP" TEAM	800-822-4357
U.S. WEATHER SERVICE	310-215-2338
UNOCAL 310-903-8302	800-448-7676
VOSS ENVIRONMENTAL (Booms)	310-432-1304
<b>CELLULAR PHONE NUMBERS</b>	
L.A. CO. SQUAD #43	213-500-1572
L.A. CO. RESERVE SQUAD #43	213-819-7782
L.A. CO. SQUAD #76	213-500-3998
L.A. CO. SQUAD #105	213-500-1587



# Hazardous Materials Worksheet

Date: / / Incident #: Dispatched: :  
 Location: Phone:  
 Owner/Occupant:  
 Chemical (s)/Product Name(s):

Synonym(s)/Trade Name(s):

DOT #: CAS #: Quantity:  
 Additional Chemical Involved?  
 TLV Flash Vapor Pressure UEL LEL Specific Vapor STEL IDLH Odor Ignition Boiling Water  
 ppm Point Pressure Gravity Density ppm ppm Thres. Temp. Point Soluble  
 ppm

- Heat
- Reactivity
- Pressure

Chemical Formula: Incident:  Spill  Leak  Vapor  Odor  Illegal Dumping  Other  
 Physical State:  Gas  Liquid  Solid  
 Classification:  
 Reactivity:

**Evacuation Distances and Control Zones**

Shelter-in-Place:  Yes  No Evacuate:  Yes  No

**EVACUATION DISTANCES to INCIDENT COMMANDER**

Initial Evacuation: \_\_\_\_\_ Feet in All Directions  
 Follow-Up Evacuation: \_\_\_\_\_ Feet / Mile(s) Wide  
 \_\_\_\_\_ Feet / Mile(s) Downwind

**Action Objectives:**

- Approach with Caution
- I.D. & Assess
- Rescue
- Isolate
- Control/Contain
- Evacuate/In Place Protection
- Agencies
- Decon
- Documentation
- Responsible Party

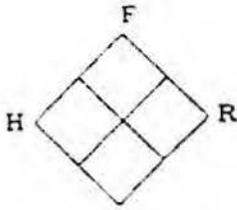
**Recommended Protective Equipment:**

Extinguishing Agents:  Water  AFFF  AFFF/ATC  Dry Chemical  Dry Powder  Halon  CO<sub>2</sub>  
 Recommended Action:

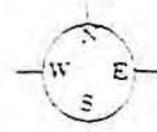
Decon Solutions:  Water  "A" 5% Sodium Bicarbonate & 5% TSP  "C" 5% Trisodium Phosphate (TSP)  
 "E" Soap & Water  "B" 10% Calcium Hypochlorite  "D" 3.2 oz. Hydrochloric Acid (HCl)

First Aid:

Manufacturer:  
 Shipper:  
 Additional Information:



# SITE SAFETY PLAN



Weather \_\_\_\_\_  
 Wind Speed \_\_\_\_\_  
 Temperature \_\_\_\_\_

Date: / / Incident # \_\_\_\_\_  
 Owner/Occupant: \_\_\_\_\_  
 Address: \_\_\_\_\_ Phone \_\_\_\_\_  
 Chemical (s) / Product Name (s): \_\_\_\_\_  
 DOT # \_\_\_\_\_ CAS# \_\_\_\_\_ Quantity \_\_\_\_\_  
 Type of Problem? \_\_\_\_\_

Entry Objectives (actions, tasks, tools) :

Monitors Used: GX4000 ( ) GX1314 ( ) TLV ( ) Sensidyne ( ) Other \_\_\_\_\_

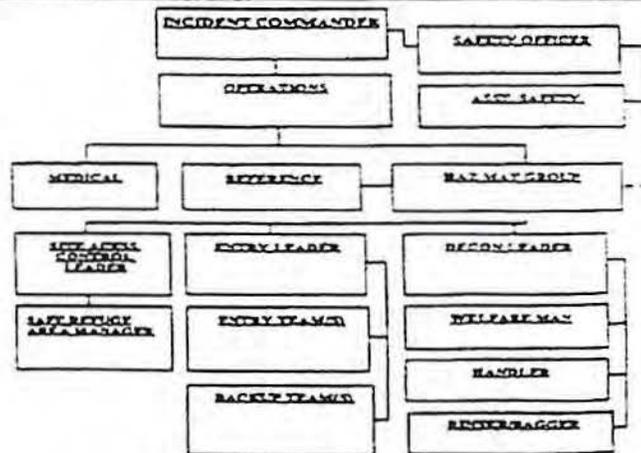
Protective Clothing: Level A viton ( ) Level B ( ) Gloves \_\_\_\_\_  
 bury! ( )

DeCon Solution: Pool 2 \_\_\_\_\_ Pool 3 \_\_\_\_\_ (normally 'E')

Additional Information:

## ACTION OBJECTIVES :

- ( ) APPROACH WITH CAUTION
- ( ) LD. & ASSESS
- ( ) RESCUE
- ( ) ISOLATE
- ( ) CONTROL/CONTAIN
- ( ) EVACUATE/IN PLACE PROTECTION
- ( ) AGENCIES
- ( ) DECON
- ( ) DOCUMENTATION
- ( ) RESPONSIBLE PARTY



Attachment D

Letter dated September 10, 2015 from Charles Abbott Associates

September 10, 2015

Ms. Geraldine Trivedi  
City of Redondo Beach  
Department of Public Works, Engineering Division  
415 Diamond Street, Door "E"  
Redondo Beach, CA 90277

Subject: King Harbor Marine Center

Dear Ms. Trivedi:

Charles Abbott Associates, Inc. has inspected the King Harbor Marine Center located at 831 N Harbor Drive in the City of Redondo Beach numerous times. The following dates include both initial and follow-up inspections on 7/9/2014, 7/14/2014, 7/21/2014, 6/4/2015, 6/8/2015, 6/18/2015, and 6/22/2015. The facility has an SIC code of 3732 and is primarily engaged in boat building and boat repairing. Additionally, the facility has obtained coverage under the Industrial General Permit and is assigned WDID 4 191011387. During the inspections listed above, there was no evidence of any activities that involve the manufacturing, handling, transport, or any other activities associated with plastic pellets at King Harbor Marine Center.

Should the City have any questions, please feel free to contact me directly. Thank you.

Sincerely,



Mike Smith, Environmental Associate

Attachment 5: Documentation of Acknowledgement to Share  
Monitoring Data

## Christopher Wessel

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**From:** Alfredo Magallanes <alfredo.magallanes@lacity.org>  
**Sent:** Friday, June 19, 2015 3:51 PM  
**To:** Jolene Guerrero  
**Cc:** Vivian Marquez; Bruce Hamamoto; TJ Moon; William Johnson; Genevieve Osmena  
**Subject:** Re: FW: Dominguez Channel CIMP Data

Jolene,  
Discussed it with Vivian and we find the proposal acceptable. Please have the Beach Cities lead contact Vivian to see how our DC CIMP can benefit from their group as well.

Thanks,  
Alfredo Magallanes, PE  
Watershed Protection Division  
Bureau of Sanitation  
City of Los Angeles  
P (213) 485-3958  
F (213) 485-3939

On Thu, Jun 18, 2015 at 7:30 AM, Jolene Guerrero <[JGUERRER@dpw.lacounty.gov](mailto:JGUERRER@dpw.lacounty.gov)> wrote:

*Hi Vivian & Alfredo,*

*As you are aware, the Beach Cities Group drains into the Dominguez Channel watershed (i.e. Torrance Lateral, Dominguez Estuary, and Machado Lake). In an effort to eliminate duplicate receiving water sampling, the Beach Cities is requesting that the Dominguez Channel EWMP group make their CIMP data available to the Beach Cities. In exchange, the Beach Cities will make all their CIMP data available to the Dominguez Channel Group, to characterize the upstream flow. (See the attached map for the monitoring locations.)*

*Let me know by replying to this email if this is acceptable by Monday, June 22nd. Beach Cities revised CIMP is due to the Regional Board by July 6<sup>th</sup>.*

*Thanks and let me know if you have any questions.*

*Thanks,*

*Jolene*