

SECTION C-10

ILLEGAL DISCHARGES/ILLICIT CONNECTIONS

PROGRAM EFFECTIVENESS ASSESSMENT





C-10.0 ILLEGAL DISCHARGES/ILLICIT CONNECTIONS (ID/IC)

C-10.1 Introduction (LIP Section A-10.1)

Since illegal discharges and illicit connections can be a significant source of pollutants from the municipal storm drain system, the County’s LIP includes a comprehensive program for detecting, responding to, investigating and eliminating these types of discharges/connections in an efficient and timely manner. In order to ensure that the program is efficient and effective, the County has instituted regular documentation procedures for its water pollution complaint and spill response activities.

C-10.2 Illegal Discharges

C-10.2.1 Organization Chart

The County has identified which Departments are responsible for the implementation of this stormwater program element through the submittal of an organization chart (**Figure A-10.1** of the LIP). The organization chart is unchanged from the version submitted to the San Diego Regional Board on February 13, 2003.

C-10.2.2 Authorized Inspector Designations

The County’s LIP and Water Quality Ordinance identify many of the duties of the Authorized Inspector as the responsibility of the Director of Public Facilities and Resources Department, and those persons directed by her and under her instruction and supervision who are assigned to investigate compliance with, detect violations of, and take actions pursuant to the Ordinance.

A list of the County Authorized Inspectors and the relevant contact information is provided in the following table:

2002/03 Summary of County Authorized Inspectors

Primary Authorized Inspectors

Name	Title	Department	E-mail Address	Phone Number
Duc Nguyen	Environmental Resource Specialist III	PFRD, Watershed & Coastal Resources	Duc.Nguyen@pfrd.ocgov.com	(714)973-6690
Matt Tucker			Matt.Tucker@pfrd.ocgov.com	(714)973-6692
Zoila Verdaguer-Finch			Zoila.Verdaguer-Finch@pfrd.ocgov.com	(714)973-6694



Alternate Authorized Inspectors

Name	Title	Department	E-mail Address	Phone Number
Grant Sharp	Supervising Environmental Resource Specialist	PFRD, Watershed & Coastal Resources	Grant.Sharp@pfrd.ocgov.com	(714)973-6690
Bruce Moore			Bruce.Moore@pfrd.ocgov.com	(714)973-6692
Lane Waldner			Lane.Waldner@pfrd.ocgov.com	(714)973-6694

C-10.2.3 Detection of Illegal Discharges and Illicit Connections

The County has a number of programs that proactively facilitate the detection of current and/or potential sources of illegal discharges and illicit connections including the following:

- Municipal Activities (Section A-5) – field inspectors and facility managers assist in the identification of illegal discharges and illicit connections during their daily activities in County facilities countywide (see also **Section C-10.2.2**).
- Public Education (Section A-6) – various inspectors assist with the distribution of public education materials that provide phone numbers and encourage the reporting of spills.
- New Development/Significant Re-Development Program (Section A-7) – The inspection of projects with approved final WQMPs will assist with the identification of new development significant development post construction controls that are either not functioning adequately or are not being maintained, resulting in an on going or threatened discharge to the storm drain system.
- Construction Activities (Section A-8) – Various building, grading and public works inspectors assist with the identification of illegal discharges from construction sites.
- Existing Development Programs (Section A-9) – County Authorized Inspectors identify actual or threatened illegal discharges from industrial and commercial areas. All County inspectors refer problems in residential areas to the County's Authorized Inspectors.
- Water Quality Monitoring Program (Section A-11) – assists with the identification of problem areas through the collection of water quality data.

A summary of the water pollution complaints that were forwarded internally by the County inspectors is included in the table below in **Section C-10.2.4**. In response to commitments in its July 13, 2003 response to comments by the San Diego Regional Board on the February 2003 LIP, the County has updated **Section A-10** of its LIP to clarify the County's specific activities to



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actively seek, eliminate, and respond to illicit discharges, connections and dumping. The updated LIP pages are located in **Section C-10.6**

C-10.2.4 Water Pollution Complaint Hotline

In order to have a successful ID/IC program, the County tries to obtain information about potential or existing complaints and spills as soon as possible so that the problem can be mitigated as quickly as possible. The County has established a Countywide 24 hour bilingual water pollution complaint hotline phone number (714) 567-6363 to receive water pollution complaints and incident information. The County also advertises the water pollution complaint hotline and website complaint form (www.ocwatersheds.com) through the distribution of the countywide public education materials and coordinates with the County when complaints are received.

A summary of the sources of the water pollution complaints that the County received during this reporting period and the previous is provided below.

2002/03 Summary of Complaints Received

Source of Water Pollution Complaints/Incidents	Number of Complaints/Incidents Reported		Incidents Reported to Regional Board as Presenting a Threat to Human or Environmental Health	
	2002/03	2001/02	2002/03	2001/02
County and City Staff (Municipal, Construction, etc.)	344	302	0	1
Other Agencies (Regional Boards, Etc...)	31	166		
Water Pollution Hotline	15	N/A		
Public (calls, e-mail)	39	33		
Businesses	19	56		
Website	13	N/A		
Total Number of Reports	461	557	0	1

The decrease in the total number of complaints/incidents reported for this reporting period from the previous period can be attributed to the shift in responsibilities for handling complaint and incident response from the County to the cities.



C-10.2.5 Spill Response Procedures

The County's Authorized Inspectors follow developed spill response procedures which assist them when responding to and investigating water pollution complaints. The response procedures generally include record keeping, notifications and response requests, response activities, investigations, clean-up activities, reporting and education/enforcement. To assist them in implementing the procedures, a series of forms and guidance materials were developed and are included in **Section A-10 Exhibits A-10.I and A-10.II**. During the reporting period, no changes were made to the forms or guidance materials.

C-10.2.6 Water Pollution Incident Summary

As a part of the County of Orange's ID/IC Program, the County's Authorized Inspectors receive notifications and respond to a variety of water pollution complaints and incidents. The tables below provide information regarding the water pollution incidents that have been reported and responded to within the County of Orange's jurisdiction.

Reporting Summary

In order to avoid duplication of reporting figures, only one category was used per incident (i.e.: if a complaint was received by County staff but referred to the appropriate city, agency or department for inspection and follow up, the incident was reported in the Referral category only). For reporting purposes, the following definitions were used:

- **Notification** – An incident that is reported to the County that does not require any follow up such as an investigation or an enforcement letter. This would include any incidents where the material did not enter the storm drain system and was in the process of being cleaned up.
- **Complaint** - A minor incident that is reported to the County that requires an investigation as soon as possible. This would include complaints where the discharge is alleged to have already occurred but is not posing an immediate threat to human health or the environment. Examples of this may include: oil that has leaked from a vehicle parked on the street and has soaked into the asphalt or a past discharge from a residence or facility.
- **Response Request** – An incident that is reported to the County that requires an immediate investigation/response due to the threatened release/impact to human health or the environment.
- **Referral to another agency** – The County has referred the complaint to another agency such as a city Authorized Inspector for investigation and follow up because it is outside County jurisdiction.



2002/03 Summary of Water Pollution Incidents

Type of Incident	Number of Incidents Reported	
	2002/03	2001/02
Notification	65	127
Complaint	36	58
Response Request	45	66
Referral to Cities or other agency	315	302
Total Number of Incidents	461	557

The decrease in the total number of complaints/incidents reported for this reporting period from the previous period is attributed to the shift in responsibilities for complaint and incident response from the County to the cities. The number of notifications was significantly decreased due to cities receiving complaint/incident notifications directly instead of through the County.

The water pollution complaints and response requests involve a wide variety of materials including the following general categories:

General Categories Materials Involved in Water Pollution Complaints/Incidents					
Inorganic	Paint	Petroleum Products	Sewage	Misc.	Unidentified
Acids	Scrapings	Auto Fluids	Gray Water	Animal Waste/Remains	Liquid
Bases	Residues	Degreasers	Odor	Soap/Detergent	Solid
Chemicals	Latex	Gasoline		Chemicals	Residue
Metals	Oil Based	Diesel		Dirt/Silt/Mud	Did Not Observe
Process Wastewater	Mixtures	Hydraulic Fluid		Dye	
	Wastewater	Crude Oil		Ethylene Glycol	
		Jet Fuel		Fire Suppression Runoff	
		Odor		Food Waste	
		Sheen		Grease	
		Other		Green Waste	
				Odor	
				Pool Water	
				Trash Debris	
				Groundwater	

During the reporting period, the breakdown of the types of materials that were involved in the water pollution complaints/incidents within the County's jurisdiction were as follows:



2002/03 Summary of Materials Released in Water Pollution Incidents

Type of Materials	Number of Complaints/Incidents	
	2002/03	2001/02
Reporting Period		
Inorganic	3	10
Paint	9	14
Petroleum Products	33	57
Sewage	31	36
Miscellaneous	60	142
Unidentified	10	13
Total Number of Incidents	146	272

The decrease in the reported types of materials involved in water pollution incidents for this reporting period from the previous period may be attributed to the County's public education effort.

All water pollution complaints are investigated and, when necessary, reported to the Santa Ana or San Diego Regional Boards. The reports consist of a verbal notification followed by a written report. During the reporting period one incident was reported to the Santa Ana Regional Board. The incident occurred when a printing company discharged 45 gallons of acrylic polymer coating to the street. The material entered a catchbasin and resulted in a milky white discharge into Canada Creek. The County's Operations and Maintenance crew set up a sandbag dikes to contain the material. The responsible party contracted a cleanup company to remove approximately 30000 gallons contaminated water from the creek. A notice of non-compliance was issued to the responsible party.

C-10.2.7 Enforcement Summary

The County's Authorized Inspectors undertake enforcement activities according to the County's adopted Water Quality Ordinance and the countywide accompanying Enforcement Consistency Guide **Exhibit 4.I** of the DAMP.

Water pollution enforcement may be handled administratively or in more serious instances, be prepared for prosecution. As provided for in the Enforcement Consistency Guide, when selecting enforcement options, the County's Authorized Inspectors ensure that violations of a similar nature receive the appropriate similar type of enforcement remedy. More severe enforcement options may be selected when a violator has either a history of noncompliance or has failed to take good faith actions to eliminate continuing violations or to meet a previously imposed compliance schedule.



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2002/03 Summary of Enforcement Action

Enforcement Type	Total	
	2002/03	2001/02
Educational Letter (EL)	5	14
Administrative Enforcement		
• Notice of Noncompliance (NON)	20	39
• Administrative Compliance Order (ACO)	2	9
• Cease and Desist Order (CDO)	0	2
Criminal Enforcement		
• Misdemeanor (Mis)	0	0
• Infraction (Inf)	0	0
• Issuance of Citation (IOC)	0	0
Other: (Criminal prosecution cases)	3	8

The decrease in the reported types of enforcement for this reporting period from the previous period may be attributed to the County's public education efforts.

C-10.2.8 Enforcement Case Summary

Information regarding any civil or criminal cases submitted by the County of Orange that are either pending, underway or that have been settled during the reporting period is provided in the following table:

2002/03 Summary of Active/Settled Enforcement Cases

Resident or Business	Watershed	Pollutant of Concern	Nature of Violation	Status of Judgment / Settlement	Nature of Judgment / Settlement
Business	San Gabriel River/Coyote Creek	Heavy metals	Discharge to stormdrain	Pending	Pending
Business	San Gabriel River/Coyote Creek	Surfactants and dyes	Discharge to stormdrain	Pending	Pending



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Resident or Business	Watershed	Pollutant of Concern	Nature of Violation	Status of Judgment / Settlement	Nature of Judgment / Settlement
Business	Santa Ana River	Plating waste	Discharge to stormdrain	Settled	3 felony convictions, \$70,000 in restitution, and 30 day jail sentence for one employee

The decrease in the reported number of cases for this reporting period from the previous period can be attributed to the County’s public education efforts.

10.2.9 Tustin Area Spill Control Demonstration (TASC) Project

During the reporting period, the Principal Permittee and Orange County Sanitation District continued coordinating a sewage spill prevention and response demonstration project. The project is called the “Tustin Area Spill Control Demonstration Project” (TASC). The first phase of the project was completed and a project report was prepared and is included as Exhibit 10.I of the DAMP.

The main objectives of the TASC project are to:

- Create broader awareness on causes SSOs and measures to prevent them;
- Improve the interagency coordination when responding to SSOs;
- Understand the resource needs in responding and mitigating impacts;
- Develop predictive tools for identifying impacts; and
- Protect the beneficial uses of local water bodies.

During 2002/03 the project team met and completed the development of the main objectives and initiated work on the short and long term work plan elements in order to improve coordination between the two agencies. Following are updates on items that were completed during the reporting period on the major work plan tasks:

- Preparation of a GIS maps consisted of the following layers:
 - Direction of stormwater drainage;
 - Street and aerial map;
 - Watershed boundaries;
 - Land uses;
 - Flood control channels; and
 - Sewer trunk lines and manholes.
- Upper Newport Bay Time of Travel Studies – SCCWRP

The time of travel studies for the Upper Newport Bay Watershed were completed and the results were mapped on a GIS layer. The goal of this study was to investigate



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hydrodynamic transport through storm drain channels in the upper Newport Bay watershed. The studies used a fluorescent tracer to simulate the transport and mixing of a sewage spill through the system at low (dry) and high (shortly after a storm) flow conditions.

- Pre-staging materials at key containment areas

The two areas that were identified as candidates for the sewage spill demonstration project were the Santa Ana-Santa Fe and the El Modena Irvine sub-watersheds. Within the watersheds, containment areas were identified and materials pre-staged at the confluence of F10/F10P01 and F07/F13P05, respectively.

- Spill response training and coordinated responses

Cooperative training was conducted between the two agencies. OCSD attended an Authorized Inspectors Committee meeting and provided a presentation entitled "All A Stormwater Inspector Would Want to Know About Sanitary Sewer Overflows (SSOs)" and the County provided the annual existing facility inspector training to OCSD source control inspectors.

- Development of integrated sewage spill response procedures

In response to the new municipal stormwater permit and the new sewage collection system permit that was issued in the Santa Ana Region, the two agencies coordinated closely on the development of the sewage spill response guidelines.

The TASC report summarizes the project's accomplishments and also provides a roadmap for additional tasks to be undertaken in Phase II of the project.

C-10.3 Illicit Connections (LIP Section A-10.5)

The County has developed a drainage facility inspection and documentation program to identify and eliminate illicit connections to the storm drain system. Illicit connections to the storm drain system are prohibited.

During the reporting period illicit connections to the County's storm drain system were found. The following table provides a summary of the illicit connections that were identified.

2002/03 Summary of Illicit Connections Identified

Watershed	Type of Connection	Resulting Action(s)
San Gabriel River/Coyote Creek	Residential	2 - capped off
San Gabriel River/Coyote Creek	Residential	1 - rerouted
Huntington Harbor	Residential	5 - capped off



Watershed	Type of Connection	Resulting Action(s)
Huntington Harbor	Residential	3 – obtained permit
Santa Ana River	Residential	1 – removed
Santa Ana River	Business	1 – obtained permit
Newport Bay	Residential	3 – capped off
San Clemente Coastal Streams	Business	1 – rerouted to sewer
Totals		17
2001/02		
N/A	Business	2 - rerouted
N/A	Residential	1 - capped off
N/A	Residential	7 - removed
Totals		10

The increase in the reported number of illicit connections for this reporting period from the previous period may be attributed to the County's illicit connections detection efforts.

C-10.4 Source Investigations (LIP Section A-10.5.1)

No source investigations were conducted during this reporting period.

C-10.5 Training and Outreach (LIP Section A-10.7)

The education and training of the County of Orange's Authorized Inspectors is key in the successful implementation of the program especially since they are in the public eye when conducting extensive investigation efforts and proceeding with enforcement actions.

C-10.5.1 Training

One of the primary ways that the County keeps its Authorized Inspectors informed and trained is by having them attend the Authorized Inspectors Committee. During the reporting period the County's Authorized Inspectors attended all of the committee meetings that were held.

The County also trained its inspectors by having them attend both Permittee sponsored training as well as other regional training and workshop opportunities. The Permittee sponsored training include training sessions that are conducted in order to present the various training modules that have been developed by the Permittees (see **DAMP Appendix B**) and training sessions provided during the Authorized Inspector Sub-committee meetings.

The workshops, training and/or other educational activities that have been attended by the County's Authorized Inspectors are listed in the following table:



2002/03 Summary of Permittee Sponsored Training attended by County Personnel

Department	Department Subcategory	Training Module	Training Dates	Names of Attendees
County of Orange Sponsored Training Attended by County Personnel				
PFRD	Watershed & Coastal Resources	Water Quality Ord. Implementation Agreement, Update on Cities Roles and Responsibilities	August 8, 2002	Duc Nguyen
		ID/IC Model Program Manual	January 9, 2003	Duc Nguyen
		HCA\Environmental Health Programs	March 20, 2003	Duc Nguyen
		DAMP Appendix B, Exhibit B-10.I , ID/IC Program Management Training Module	April 23, 2003	Duc Nguyen
				Grant Sharp
				Dr. Theodore Von Bitner, PhD
				Matt Tucker
		DAMP Appendix B, Exhibit B-10.II , ID/IC Program Authorized Inspector Training Module	May 8, 2003	Duc Nguyen
				Grant Sharp
				Dr. Theodore Von Bitner, PhD
Daniel Chua				
DAMP Appendix B, Exhibit B-10.III , ID/IC Program Sewage Spill Response Training Module	June 17, 2003	Duc Nguyen		
		Grant Sharp		

Other Training Attended by County Personnel				
PFRD	Watershed & Coastal Resources	Environmental Crime Scene Investigation: Tools and Techniques	September 19-20, 2002	Grant Sharp Matt Tucker

The County conducted/participated in 7 training sessions during the current reporting year. These training sessions reached a total of 14 County staff.



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C-10.5.2 Outreach

As a part of the response activities, the Authorized Inspectors provide outreach materials to businesses and residents who may have been identified as a responsible party for an illegal discharge or illicit connection. This outreach is conducted while the inspector is on site during an inspection or with a follow up letter after an inspection has been completed.

The outreach materials also encourage the proper management and disposal of used oil, toxic materials and other household wastes. The materials that specifically address these issues include:

- *“The Ocean Begins at Your Front Door”*
- *“Do You Know Where The Water in Your Storm Drain Goes?”*
- *“Keeping Pest Control Products Out of Creeks, Rivers and the Ocean”*
- *“Water Quality Guidelines for Pet Care Activities”*
- *“Water Quality Guidelines for Horse & Livestock Activities”*
- *“Water Quality Guidelines for Car Wash Fundraisers”*
- *“Water Quality Guidelines for Landscaping and Gardening”*
- *“Waste Oil Collection Centers – North, Central and South Orange County”*
- *“Water Quality Guidelines for Exterior Restaurant Cleaning Operations”*
- *“Pool Maintenance and the Water Quality Act”*

Data on the specific outreach materials was not collected for this reporting period. However, at a minimum, the general brochure, *“The Ocean Begins at Your Front Door”*, is distributed to responsible parties of all incidences of non-compliance and additional outreach material depends on the activity. For example, a person receiving a notice of non-compliance for pool water discharge will receive education material for pool maintenance.

C-10.6 ID/IC Program Modifications

As the last step in the PEA, the County has evaluated the results of the assessment to determine if any program modifications are necessary in order to comply with the Third Term Permits.

The following modifications have been made to the County’s ID/IC program since the submittal of the LIP to the San Diego Regional Board on February 13, 2003 and are included in the submittal to the Santa Ana Regional Board:

- **Section 10.2.9.1** Trauma Scene Cleanup has been added to **Section 10** of the 2003 DAMP
- Information on the ID/IC program training modules in DAMP Appendix B, **Section B-10**, has been updated in **Section 10.6.1** of DAMP
- The ID/IC program training modules in DAMP appendix B, **Section B-10, Exhibits B-10I-B-10.IV** have been updated
- The Tustin Area Spill Control (TASC) Demonstration Project report has been completed and can now be referenced in DAMP **Appendix E**.