

## **9.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT**

This section describes the responsibilities of staff with respect to implementation of the Illicit Discharge Detection and Elimination Component of the JURMP. This program section is intended to provide direction to actively seek and eliminate illicit discharges and connections.

### **9.1 Introduction**

The following is a description of the program to actively seek and eliminate illicit discharges and illicit connections as required by Section J.1.a(3)(h).

The Illicit Discharge Detection & Elimination (IDD&E) Program for the City encompasses all sources of solids and liquids containing pollutants and sanitary sewer system wastewater that may enter the municipal separate storm sewer system (MS4). The Program focuses on prevention while actively pursuing, investigating, and eliminating illicit discharges. The City strongly encourages voluntary elimination and cleanup of illicit discharges to decrease enforcement efforts (Section 9.5).

Illicit discharges are a point source discharge of pollutants to the MS4, which are not comprised entirely of storm water (i.e. rainwater), not authorized by a National Pollutant Discharge Elimination System (NPDES) Permit, and/or not exempt per the Carlsbad Municipal Code. An illicit discharge may be the result of pollutants entering the MS4 from:

- Spills,
- Illegal and illicit connections to the MS4,
- Illegal dumping (direct and indirect) to the MS4, and
- Prohibited discharges.

Examples of identified sources of pollutants are:

- Industrial Facilities
- Commercial Businesses
- Municipal Facilities
- Residential Areas
- Construction Sites
- Mobile Businesses
- Any type of wash water discharged to the MS4
- Any water/liquid containing pollutants discharged to the MS4
- Sanitary sewer wastewater discharging to or infiltrating into the MS4

The City's active pursuit and elimination of illicit discharges includes:

1. Adequate enforcement and inspection authority
  - Revise ordinance as necessary
  - Ensure staff are trained as appropriate
  - Define Illegal Discharge

- List types of Exempted Discharges
2. Continued implementation of current procedures including:
    - Information receipt,
    - Verification
    - Investigation
    - Corrective action and verification
    - Maintenance
    - Documentation
    - Information retrieval and archive
  3. Implementation of a Coastal Outfall Monitoring Program, Dry Weather Analytical Monitoring Program, MS4 Monitoring Program, and Source Identification Program which are designed to detect potential chemical, physical, and biological pollutants in urban runoff.
    - Conduct Monitoring
    - Investigate potential illicit discharges or illegal connections observed in field at time of initial sample
    - Eliminate sources where possible
    - Investigate exceedances based on lab analysis
    - Eliminate sources where possible

## **PREVENTION**

Prevention of illicit discharges and connections will be accomplished through the use of education and training of the general public, businesses, and City staff to the Maximum Extent Practicable. All prohibited discharges and non-storm water discharges will be targeted for prevention (See Non-Stormwater Discharge Evaluation Worksheet after this Section). The City's Pollution Prevention Program is described below:

- Conduct routine maintenance on the sanitary sewer system to prevent spills and discharges to the MS4
- Implement controls to prevent or limit infiltration of seepage from sanitary sewer system to the MS4
- Respond, contain and remediate spills including sanitary sewer system spills or discharges and privately owned systems.
- Implement BMPs as appropriate for the potential type of spill or illicit discharge to prevent spills from entering the MS4

## **REDUCTION**

The City of Carlsbad outlines in the Municipal Code (Chapter 15.12) the specific activities where Best Management Practices may be required by an enforcement official to reduce illicit discharges and connections to the MS4. Implementation is to the maximum extent practicable for the following activities:

1. Automobile, airplane, boat, and/or vehicle, repair, service, fueling, maintenance, washing, storage, and/or parking;

2. Landscape and garden care activities including application of related products, such as pesticides, herbicides, and fertilizers;
3. Building repair and maintenance, including but not limited to cement mixing, repair or cutting, masonry, painting and/or coating;
4. Impervious surface or building washing or cleaning, including power washing or steam cleaning;
5. Storage and disposal of household hazardous waste (e.g. paints, cleaning products, pesticides, herbicides);
6. Disposal of pet waste;
7. Storage and disposal of green waste;
8. Mobile carpet, drape or furniture cleaning;
9. Pool, spa, Jacuzzi, or fountain cleaning, servicing, or repair;
10. Pest control; and
11. Plant growing including: farm land, fields, nurseries, greenhouses, and/or botanical gardens.

## **ELIMINATION**

Elimination of illicit discharges and connections to the MS4 will be accomplished by terminating active discharges and working with responsible parties on appropriate corrective action plans. The specific prohibited discharges listed below and non-storm water discharges will be the targets for IDD&E Program. Once a discharge or connection has been verified, the appropriate agency will be notified of the incident, the type of material discharged, and amount discharged. Elimination of illicit discharges that have been detected will be to the maximum extent practicable.

### **9.2 Public Reporting of Illicit Discharges and Connections**

The City continues to operate a Hotline used by the public to report potential illicit discharges and connections. The Hotline number is posted on the City's Website, is provided in informational mailers to residents and businesses, and is advertised in the phone book. The Hotline is capable of receiving reports in English and Spanish 24 hours per day, seven days per week.

Public participation is an essential part of an illicit discharge elimination program. Many illicit discharges are one-time occurrences that may not be observed by City staff. Concerned citizens can help stop illicit discharges by reporting them to the City. Citizens of Carlsbad can file complaints by phone or e-mail using the two public complaint hotlines and e-mail address listed below, which are currently operated by the City of Carlsbad and the County of San Diego Department of Environmental Health:

- City of Carlsbad Storm Water Hotline, (760) 602-2799  
e-mail: [stormwater@ci.carlsbad.ca.us](mailto:stormwater@ci.carlsbad.ca.us)
- County Storm Water Hotline, 1-888-846-0800

The County storm water hotline is answered Monday through Friday, 8:00 a.m. – 5:00 p.m., provides services in both English and Spanish and provides a voice mail message for 24-hour public access. Relevant complaints received through the County hotline will be forwarded to the City Storm Water Protection Program.

In addition to public complaints, the City will continue to train full-time maintenance and operations staff to immediately refer all storm water violations observed while working in the field to the Storm Water Protection Program.

Upon receiving a storm water pollution complaint, the City will implement the following complaint receipt procedures:

- **Complaint Information**

Collect essential information from the reporting party including:

- Complainant information,
- Potential Responsible party information,
- Location and description of the discharge, and
- Materials and waste involved, etc.
- Enter information into a database.

- **Prioritization**

Complaints will be prioritized according to relative urgency using the following criteria:

- Is a hazardous or unknown material involved?
- Is the spill currently occurring?
- Is there an immediate threat to health or the environment?

If the discharge involves a hazardous or unknown material, the Carlsbad Fire Department (CFD) will be contacted to investigate. CFD will contact the San Diego Hazardous Incident Response Team (HIRT) if needed. For discharges that are currently occurring, an immediate referral to the appropriate agency, whether storm water, wastewater, or other group will be made. Discharges that have ended may not need immediate investigation. Investigations will follow procedures outlined in Section 9.5 of this document.

- **Routing / Referral**

Based on the prioritization, complaints will be routed to the appropriate City staff or department, or other appropriate agency for further investigation and the City will confirm receipt.

### **9.3 Spill Reporting, Response, and Prevention**

The City's Spill Prevention Plan covers spills to the storm water conveyance system. The intent of the Spill Prevention Plan is to prevent or minimize the impact of spills by developing and implementing a procedural program. Additionally, the City has a Sanitary Sewer Overflow Response Plan (SSORP) as described in Section 6.8 of this JURMP.

Spills that require an emergency response by the Fire Department and the San Diego County Department of Environmental Health Hazardous Incident Response Team (HIRT) for management or mitigation will be reported to the Governors Office of Emergency Services and any other appropriate agencies, including the San Diego Regional Water Quality Control Board, by the HIRT in accordance with State requirements and within the required timeframes.

## **9.4 Urban Runoff Monitoring**

The City conducts urban runoff monitoring under four programs: MS4 Outfall Monitoring; Source Identification Monitoring; Dry Weather Field Screening and Analysis; and, Coastal Outfall Monitoring. These programs are described below.

### **9.4.1 MS4 Outfall Monitoring**

The MS4 Outfall Monitoring Program is part of the Regional Monitoring required in the permit. This program is currently being designed by the Regional Copermittees and will be implemented within the City of Carlsbad during FY 07-08 as required.

The objective of this monitoring program is to assess MS4 discharge water quality throughout the county and assess the relative contributions to receiving waters within each defined watershed management area.

The monitoring design is based on a combination of random and targeted sampling of MS4 outfalls in each watershed. Random sampling will be conducted to assess countywide conditions of MS4 outfall water quality. Targeted sampling will be conducted to assess the relative contribution of particular MS4 outfalls to receiving waters.

Details of the MS4 Outfall Monitoring Program will be finalized and submitted to the Regional Board by July 1, 2008 as required by the Order. These details shall include monitoring locations, frequencies, analytes, sampling and analysis methods, procedures, and reporting strategies.

### **9.4.2 Source Identification Monitoring**

The Source Identification Monitoring Program is part of the Regional Monitoring required in the permit. This program is currently being designed by the Copermittees and will be implemented within the City of Carlsbad during FY 08-09 as required.

The objective of this monitoring program is to identify and assess the pollutant sources within the MS4 conveyances that may be impacting the water quality conditions of receiving waters.

The Pollutant Source Identification Monitoring Program will focus on targeting drainage areas where monitoring information suggests contributing problems and the assessment of specific activities that may be expected to contribute pollution to receiving waters.

The program objective will be addressed by the collection and analysis of urban runoff within MS4 conveyances during both dry and wet weather periods. The desired outcome of the program is to find the pollutant sources so that appropriate management action can be applied to eliminate the source from entering receiving waters.

Details of the Source Identification Monitoring Program will be finalized and submitted to the Regional Board by July 1, 2008 as required by the permit. These details shall

include monitoring locations, frequencies, analytes, sampling and analysis methods, procedures, and reporting strategies.

#### 9.4.3 Dry Weather Field Screening and Analytical Monitoring

The City of Carlsbad has an on-going Dry Weather Analytical Monitoring Program. The program outlined below is the result of years of experience conducting this program. The program has been modified to meet the requirements of the Order while taking into account what has been learned about the system.

Order R9-2007-0001 requires a detailed trash assessment component as a part of the Dry Weather Monitoring. A copy of the August 30, 2007 trash assessment program titled “Monitoring Workplan for the Assessment of Trash in San Diego Watersheds” is included in Appendix 9-B. This will be incorporated into the City’s Program.

The objective of this program is to detect and eliminate illicit connections and illegal discharges (IC/IDs) in order to minimize the negative impacts on receiving water bodies. Illicit connections and illegal discharges have the potential to transport large amounts of various pollutants to MS4s through storm water runoff and non-storm water discharges.

The City will use dry weather field and analytical monitoring information to characterize dry weather discharges in the MS4 and identify conveyances that are discharging elevated levels of pollutants. Follow-up studies and source investigations will be conducted as required, to detect and eliminate the sources of these pollutants.

There are three components to the dry weather-monitoring program:

1. Field observations
2. Field screening
3. Laboratory analyses.

Field observations include various site descriptions and a series of qualitative (mainly visual) observations of physical and biological conditions at the site. Field screening includes determinations of several water quality parameters and flow in the field. The laboratory analysis component involves the collection of samples for a more extensive laboratory analysis of pollutants that can cause water quality degradation. The presence of abnormal conditions in any of the three dry weather-monitoring components is justification for initiating a pollutant source identification investigation.

The Order requires that follow-up investigations be conducted within two business days of receiving adverse results. This follow up timeframe has been incorporated into the program procedures.

The Dry Weather Monitoring Program is included in Appendix 9-A of this JURMP.

#### 9.4.4 Coastal Outfall Monitoring

As required in Order R9-2007-0001, the City has a Coastal Outfall Monitoring Program. In addition to meeting the Order requirements, the City uses the program to identify illicit discharges and illegal connections similarly to the Dry Weather Monitoring Program.

## **9.5 Complaint Response and Investigation**

Complaints or referrals are received via phone calls, emails, the storm water hotline or other mechanisms. In most cases, investigators will need to conduct a field investigation to confirm that a discharge is occurring or has occurred.

The following is a summary of the investigation process the City uses:

1. Before leaving for an investigation, staff will assemble needed information and equipment.
2. If the complaint is determined to be unfounded, it will be documented as such.
3. If an IC/ID is suspected, the City will trace flows or discharges upstream using MS4 maps, above ground and underground surveillance, video monitoring, water discharges, or dye/smoke testing as appropriate.
4. Samples may be collected using EPA protocol, following appropriate Chain of Custody procedures, and tested by a State ELAP certified lab.
5. If the flow under investigation is suspected to be sewage-related, this may be confirmed through the presence of odor and visible solids. If not readily evident, field testing for ammonia using test strips, or ELAP certified lab testing for bacteria may be used as appropriate.
6. If an IC/ID is confirmed it will be photographed, documented, the discharger will be contacted and appropriate actions will be taken to eliminate the discharge. If the investigator determines that the discharge is exempt, the Responsible Party will be contacted to discuss any applicable restrictions or BMP requirements. All violations will be documented in writing. If a Responsible Party is available, a written warning or Notice of Violation may be issued from the field during the investigation. If the Responsible Party is unavailable, they will be contacted as expeditiously as possible (eg. via phone, email, or mail). All contact with Responsible Parties, including meetings, in person discussions, and phone calls, will be documented with a narrative describing the topics that were discussed.
7. Information about the Responsible Party and their activities may be available through previous storm water program records or City business license records. If possible, the address will be located on a map, and nearby receiving waters identified. The City inspector may review previous investigation records to identify other incidents that have occurred near the area of concern in the past. These records may help identify potential sources of the discharge.
8. The City will require Responsible Parties to implement corrective actions to discontinue discharges which are found to carry pollutants to the MS4. Corrective actions may include disconnecting, blocking, stopping or diverting drainage facilities and pipe connections which are determined to discharge pollutants to the MS4, eliminating the source of the discharge, removing pollutants from the site, keeping pollutants from coming in contact with the discharge, and/or containing potential illegal discharges on site for treatment or proper disposal.
9. Illicit connections and illegal discharges which are not removed, eliminated or otherwise continue to discharge to the MS4 will be cause for escalating

enforcement actions by the City. The City's available enforcement actions are identified in Section 2 of this JURMP.