

Jurisdictional Urban Runoff Management Plan

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9.0 ILLICIT DISCHARGE DETECTION AND ELIMINATION COMPONENT

9.1 Introduction

The overall goal of this JURMP component is to establish a programmatic framework for the implementation of activities to minimize the impact of discharges from illicit discharges and connections on receiving waters and other environmental resources in the County.

By eliminating these discharges the County is better able to protect and enhance the quality of these resources. The County has implemented a comprehensive program to effectively address these discharges and will address a number of its program activities in this section.

Underlying requirements are set out in the County's WPO section 67.801 et seq.

9.2 Public Reporting of Illicit Discharges and Connections

In accordance with Permit section D.4.h, the County will continue to operate a public hotline to facilitate public reporting of illicit discharges or water quality impacts associated with discharges from residences, businesses, and other sources. This hotline is capable of receiving reports in both English and Spanish 24 hours a day seven days per week. The hotline receives calls from two regional stormwater hotline numbers within San Diego County, a toll-free Regional Stormwater Hotline (1-888-846-0800) and the Think Blue Hotline (1-888-THINK BLUE or 1-888-844-6525). All calls are answered by the Department of Public Works, Watershed Protection Program, Monday through Friday, 8:00 a.m. - 5:00 p.m. A voice mail message is also provided for 24-hour public access in both English and Spanish. Complaint information received through this hotline is forwarded to appropriate departments or agencies for follow up and/or investigation.

These hotline numbers are distributed to the public via brochures, advertisements, and various other outreach methods to encourage them to phone in complaints. Through its education and outreach program, the County will continue to aggressively market this number to all target audiences. See Section 10 for a detailed description of the County's Education Program.

9.3 Spill Reporting, Response and Prevention

The County has established spill prevention and response procedures and requirements that are applicable both to its own staff and to private residences in the County urban area.

9.3.1 Spill Prevention

9.3.1.1 DPW Wastewater Management Section (WWM)

As described in Section 6.5, the Wastewater Management Section is responsible for maintaining sewer lines, pump stations, force mains, and several treatment plants for the unincorporated areas of Alpine, Julian, Lakeside, Spring Valley, Pine Valley and the Winter Gardens area. The department delivers millions of gallons of wastewater from homes and businesses everyday. Within these six sanitation districts, the department maintains a collection system of more than

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450 miles of pipeline, with 10 pumping stations augmenting the system. An aggressive preventive maintenance program is followed by the department's Field Operations Section. Two-person crews are assigned to perform regular cleaning and inspection of lines by using high pressure water cleaners, sewer rodding vehicles, vacuum trucks, and pipeline video equipment.

Pumping stations are also aggressively maintained by WWM personnel. Daily, weekly, and monthly checks, tasks and alarm testing increase the service life and reliability of all equipment. Stations are linked to the main office via radio telemetry, enabling staff to obtain real-time status from miles away. In the event of a problem, personnel are notified via the computer alarm system. All stations are equipped with redundant control systems, pumps, and overflow storage basins to increase spill aversion abilities. Critical stations are also equipped with emergency generators to supply power.

9.3.1.2 Private Laterals and On-site Wastewater Systems

Per WPO section 67.807(g), private sewer laterals at residences in the County Urban Area must be cleaned, maintained and when necessary replaced to prevent seepage and spills. Additionally, on-site wastewater systems must be pumped, maintained, and, when necessary, modified or replaced to prevent spills.

9.3.2 Spill Response, Containment, and Cleanup

Depending on the particular situation, a number of parties may become involved in spill response activities. County spill response personnel are trained to prevent the entry of sewage and other contaminants into the MS4, surface waters, ground water, and soil.

9.3.2.1 Spills from Private Laterals and On-site Wastewater Systems

Per WPO section 67.807(g), the following apply to private sewer laterals and on-site wastewater systems at residences in the County Urban Area:

1. Spills from private sewer laterals and on-site wastewater systems must be contained and cleaned-up in a manner that minimizes any release of pollutants to the stormwater conveyance system or receiving waters;
2. Any release from a private sewer lateral that enters the stormwater conveyance system or receiving waters must be immediately reported to the County; and
3. Failed on-site wastewater systems must be repaired or replaced, after issuance of all required permits and approvals.

9.3.2.2 Sanitary Sewer Overflows

The Wastewater Management Section is responsible for responding to overflows from the sewer lines, pump stations, force mains, and treatment plants it operates and maintains. Calls from the public during normal hours are responded to by the closest available crew. After-hour calls are routed via the County's Communication Center to on-call personnel. Procedure requires controlled response; the person dispatched will call the customer and respond to the address given

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dependent on the nature of problem. Other personnel and equipment will follow again dependent on the situation.

9.3.2.3 Sewage / Septic Complaints

Upon receipt of a sewage complaint (effluent on the ground, or EOG) a specialist investigates the site within 24 hours of the complaint. Usually in the same day the complaint was received. If there is a septic system failure the occupant and or owner of the property is issued a notice to “At Once” contain the spill, sanitize the area with “quick lime” or liquid chlorine, and to have a permitted sewage pumping service pump the septic tank and keep it pumped until the system is repaired under permit and inspection by the Department of Environmental Health (DEH) or the system is hooked to an approved sewage disposal system. The property owner is given three weeks to obtain the proper repair permits and repair the system. Staff conducts follow-up inspections to the initial complaint response to verify compliance, until the system is repaired. Failure to comply can result in condemnation of the residence or closure of the business in order to stop the flow of sewage.

Note: Most septic failures do not result in discharges leaving the property, and are usually repaired quickly, often before the DEH is notified of the failure.

9.3.2.4 Non-Sewage Spills

DEH staff also responds to a variety of other types of spills. For those involving hazardous materials, the Hazardous Incident Response Team (HIRT) will respond to ensure proper mitigation and referrals to other agencies if needed. During normal work hours, Water Quality Program staff will normally respond to spills which may enter the MS4.

9.4 Urban Runoff Monitoring

9.4.1 MS4 Outfall Monitoring

The Permit requires the development and implementation of a new MS4 Outfall Monitoring Program. The goal of the MS4 Outfall Monitoring Program will be to assess the quality of MS4 discharges countywide. Analysis of discharges from MS4 outfalls to receiving waters will address the management question: “What is the relative urban runoff contribution to the receiving water problem(s)?” The MS4 outfall monitoring design is based on a combination of both random and targeted sampling, during both dry weather and wet weather conditions. This is a regional program overseen by the Regional Monitoring Workgroup and the results of the RWQCB-approved Work Plan

(http://www.projectcleanwater.org/pdf/science_mon/ms4_outfall_monitoring_program_workplan.pdf and http://www.projectcleanwater.org/pdf/science_mon/2008-2009_targeted_wet_weather_ms4_workplan.pdf) are presented in the Annual San Diego County Municipal Copermittees Runoff Monitoring Reports due to the SDRWQCB on January 30th of each year (http://www.projectcleanwater.org/pdf/science_mon/08-09monitoring/section_12_regional_assessment.pdf).

9.4.2 Source Identification Monitoring

The Permit requires the development and implementation of a new Source Identification Monitoring Program. The goal of the Source Identification Monitoring Program is to identify and assess pollutant sources that may be impacting receiving water conditions. It will address the management question: “What are the sources of urban runoff that contribute to receiving water problems?” This is a regional program overseen by the Regional Monitoring Workgroup and the results of the RWQCB-approved Annual Work Plan

(http://www.projectcleanwater.org/pdf/science_mon/source_id_monitoring_design_framework.pdf and [http://www.projectcleanwater.org/pdf/science_mon/2009-](http://www.projectcleanwater.org/pdf/science_mon/2009-2010_source_id_%20workplan.pdf)

2010_source_id_%20workplan.pdf) are presented in the Annual San Diego County Municipal Copermittees Runoff Monitoring Reports due to the SDRWQCB on January 30th of each year

(http://www.projectcleanwater.org/pdf/science_mon/08-09monitoring/section_12_regional_assessment.pdf). These special studies will be used by Copermittees to effectively target their management actions.

9.4.3 Dry Weather Field Screening and Analytical Monitoring

This section provides a general description of procedures to be used by County staff in conducting investigations based on information that indicates a potential for an illegal connection or illicit discharge. The need to conduct source investigations may arise in a number of circumstances including the following:

- Dry weather analytical and field screening monitoring;
- Complaints;
- Business inspections;
- MS4 inspections; and
- County staff referrals.

The County will conduct an extensive Dry Weather Analytical and Field Screening Monitoring Program as described in the Permit. This program consists of two distinct but interrelated objectives (1) to detect and eliminate illegal discharges and connections to the County’s MS4, and (2) to characterize discharges from the County’s MS4 during the dry weather season (May 1 – September 30). Follow-up investigations (see section 9.5) will be conducted as necessary to identify and eliminate sources of contamination.

The remainder of this section provides a description of the sites at which the County intends to conduct field screening and analytical monitoring, the methodology used to select these locations, the procedures that will be used by County staff to conduct monitoring, and procedures for conducting source identification investigations.

9.4.3.1 Sample Site Selection Methodology

Site selection criteria were developed based on the guidance outlined in the Permit. The Permit outlines two site selection approaches; (1) the use of a ¼ mile grid system superimposed on the

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MS4 or (2) a non-random approach that employs a specified set of site selection guidelines. The County's monitoring locations were selected using the non-random approach. DPW personnel with detailed knowledge of the MS4 selected suitable field screening locations according to several primary and secondary criteria. Primary criteria included surrounding land use, the presence of significant flow in the conveyance, safety, accessibility, and whether a site could be located at the farthest downstream accessible point within a particular drainage area. Secondary criteria included historical water quality problems, and location relative to environmentally sensitive areas.

Alternate dry weather sampling locations were not selected because the majority of the stations have summertime flow and can be sampled and field analyzed during the period of May 1 – September 30. Sampling stations may be added or deleted during or after any dry weather season based on field observations, sampling results, complaints received, new development, changes in land use, or other pertinent or previously unidentified factors.

9.4.3.2 Site Locations

There are eight major watersheds in the unincorporated portions of San Diego County (Santa Margarita, San Luis Rey, Carlsbad, San Dieguito, San Diego, Sweetwater, Otay, and Tijuana). This program element will focus on those watersheds in western San Diego County where developed areas exist and urban runoff is likely to be generated. The County has conducted a thorough evaluation of its MS4 and selected approximately 88 monitoring locations which will be evaluated in the dry weather program. A comprehensive list of dry weather sampling locations with information on site location, watershed, and conveyance type is provided in Attachment 9.1.

9.4.3.3 Field Screening and Analytical Sampling Procedures

Dry Weather Analytical and Field Screening Monitoring will be conducted in accordance with the guidelines in the County of San Diego's Dry Weather Analytical and Field Screening Monitoring Procedures Manual. The County updates the Manual yearly to reflect the most current field screening and monitoring procedures, equipment, maps and contact information. All County staff conducting dry weather field operations will be trained to ensure that consistent and accurate results are obtained from the observational, flow estimation, and field analytical monitoring components of the program. County field personnel will have a copy of the Dry Weather Analytical and Field Screening Monitoring Procedures Manual for reference during all field operations. In addition, field reference materials will include maps, contact numbers, and field equipment operating manuals and procedures.

9.4.3.4 Sampling Frequency

Dry weather monitoring will be conducted a least once at each site during the period of May 1 - September 30. Monitoring will not be conducted within 72 hours of the end of any rain event (≥ 0.10 inches of rain) or if local hydrologic conditions indicate that site flow is due to a rain event. Grab samples will be collected for field analysis at each station where there is ponded or flowing

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water. An additional grab sample will be collected for laboratory analysis at a minimum of 25% of the sites where ponded or flowing water is observed.

9.4.3.5 Dry Weather Field Screening

Field screening will consist of qualitative field observations, flow measurements, and field analyses of selected water quality parameters. Field observations will be recorded on a standard field data sheets during each site visit whether or not ponded or flowing water is observed. Each field screening location will be photographed once per season to provide additional information and documentation of site conditions.

At least one flow measurement will be made during each site visit where flowing water is observed. Field personnel will determine the cross sectional area of the conveyance with a measuring stick and use a hand-held meter to measure flow velocity. The flow measurements may be used to estimate pollutant mass loading, prioritize storm drains for future investigation, or to identify significant changes in discharge that may be indicative of an illegal release upstream.

At each site where ponded or flowing water is observed, a grab sample will be collected and screened for the constituents listed in the Permit. These parameters and their methods of field analysis are summarized in the following Table 9.1.

Table 9.1: Required Field Screening Parameters and Methods of Analysis

Field Parameter	Method of Analysis
<ul style="list-style-type: none">Specific conductanceTurbiditypH	Horiba U-10 multi-parameter field meter
<ul style="list-style-type: none">Nitrate NitrogenAmmonia NitrogenReactive PhosphorousSurfactants (MBAS)	CHEMetrix field test kit

Flow measurement(s) and resulting field water quality analyses will be recorded on the standard field data sheet. The completed data sheets will be organized in a notebook and the water chemistry information for each station entered into the Dry Weather Program database. Laboratory analytical results will be entered into the Dry Weather Program database when they are received from the contract laboratory. This database will include field and analytical results, flow, sample date and time, and important notes/ observations.

The new Permit requires a trash assessment. The trash assessment will be conducted in accordance with the RWQCB - approved Copermittees Monitoring Work Plan for the Assessment of Trash in San Diego County (Trash Monitoring Plan). The Trash Monitoring Plan is Attachment A of the August 30, 2007 County of San Diego Copermittees Regional Receiving

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Waters and Urban Runoff Monitoring and Reporting Program 2007-2008 Monitoring Season Activities. All dry weather monitoring locations will be assessed for trash once between May 1st and September 30th of each year. The Trash Monitoring Plan field procedures will be followed. A standardized Trash Assessment Form will be filled out for each dry weather sampling site. The trash assessment program is designed to provide information on the spatial extent and relative amount of trash present, as well as the nature of the trash present.

9.4.3.6 Analytical Monitoring

A minimum of 25% of grab samples collected at sites where ponded or flowing water is observed will be submitted to a California Department of Health Services ELAP (Environmental Laboratory Accreditation Program) – certified laboratory for analysis of the following constituents:

- Total Hardness;
- Oil and Grease;
- Diazinon and Chlorpyrifos;
- Dissolved Metals (Cadmium, Lead, Zinc, and Copper); and
- Indicator Bacteria (Enterococcus, Fecal Coliform, and Total Coliform).

Only methods approved by the Environmental Protection Agency (EPA) will be used for these analyses. To maintain consistency and to facilitate data analysis efforts with other Copermittee monitoring programs, all bacteriological samples will be prepared by the analytical laboratory to allow the enumeration of bacterial densities from 10 – 160,000 MPN/100mL for Enterococcus and 20 – 1,600,000 MPN/100mL for Fecal Coliform and Total Coliform. A summary of laboratory sampling and analytical requirements for a range of water quality parameters including those listed above is provided in Attachment 9.2. Field personnel will follow strict sampling and chain-of-custody protocols when conducting dry weather analytical monitoring.

9.4.3.7 Quality Assurance/ Quality Control

All data collection, data entry and record maintenance procedures follow quality assurance and quality control protocols outlined in the Dry Weather Monitoring Quality Assurance Project Plan (QAPP). The QAPP also outlines data quality objectives for field measurements and laboratory analysis, any specialized training and certifications for the staff, sampling and analytical methods, handling and custody procedures, data quality control requirements, instrument and equipment testing, inspection, maintenance and calibration procedures, data management procedures, corrective action procedures, and data validation and verification methods. The QAPP is maintained and updated yearly by the County of San Diego Watershed Protection Program Science and Monitoring Group.

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9.4.3.8 Source Identification Investigations

The primary objective of this program element is to detect and eliminate illicit connections and illegal discharges (IC/IDs) to the MS4. Once detected, elimination of IC/IDs is a complex process that may include data collection and interpretation, source identification, and follow-up investigations. The relationship between these steps is illustrated in the flow chart presented in Figure 9.1.

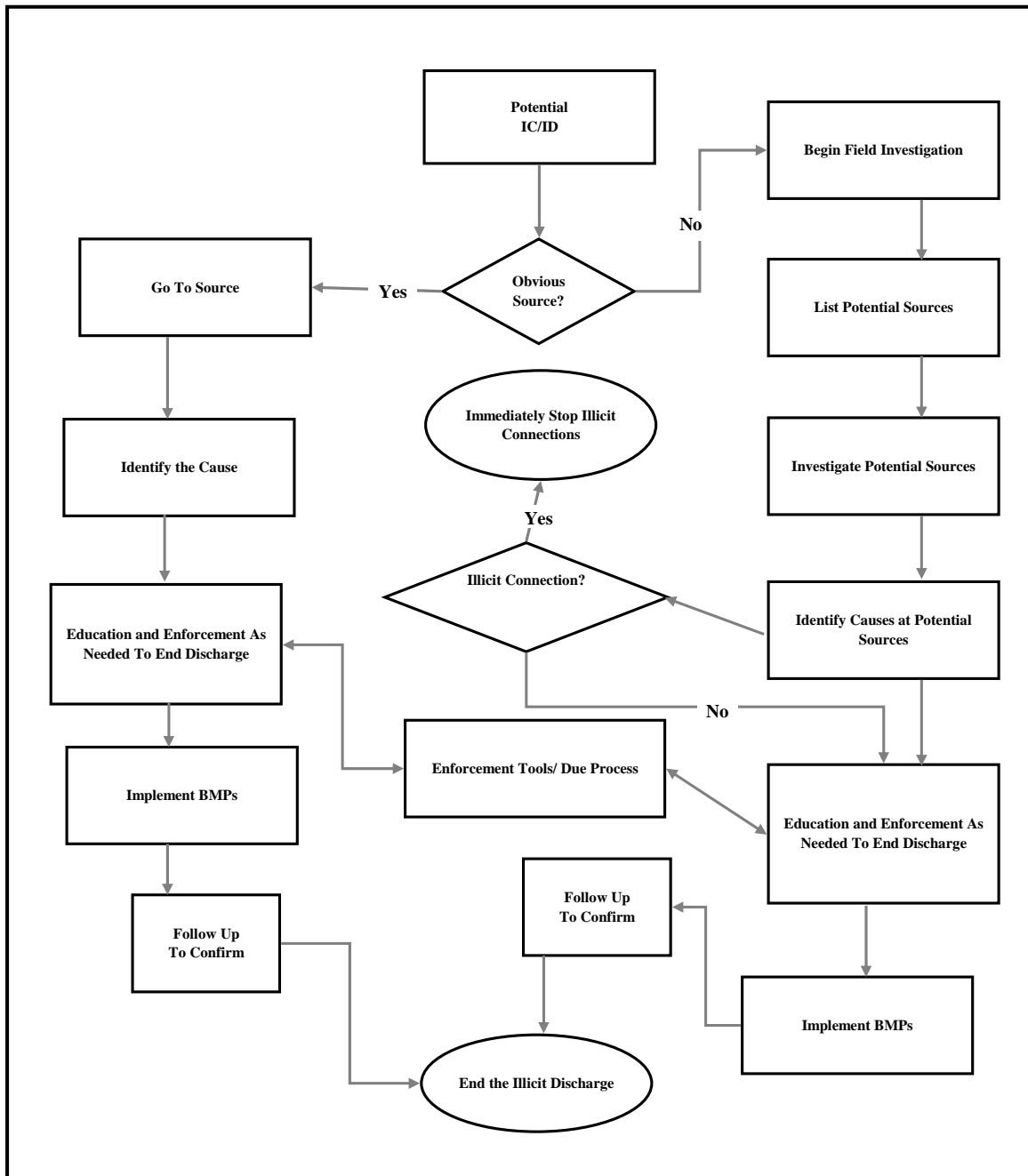


Figure 9.1: IC/ID Process Flow Chart

9.4.3.9 Data Interpretation

The initial step in eliminating IC/IDs involves data collection and interpretation. The County of San Diego procedures for dry weather data collection are described above in Section 9.4.

The interpretation of dry weather data is a relatively complex process that will be accomplished using a combination of techniques. Staff will incorporate both quantitative and qualitative methods to assess whether source identification is appropriate. The Copermittee Monitoring Workgroup and the SDRWQCB participated in developing this approach during the course of numerous discussions from August to October 2001.

The quantitative interpretation of dry weather data will involve, (1) the comparison of results to established action levels. County staff will also use best professional judgment as a qualitative means of assessing results and the need for source identification.

Each of the three dry weather data interpretation techniques is discussed in more detail below. No single technique or combination of techniques will always be adequate for interpreting each of the field screening and analytical parameters that will be measured. For this reason, the Copermittee Monitoring Workgroup recommended that, depending on the parameter involved, staff may use various combinations of these techniques to interpret the data results.

9.4.3.9.1 *Numeric Action Levels*

A numeric action level is a specific pollutant concentration that may trigger a source identification study when it is exceeded during dry weather monitoring. The development of effective action levels requires knowledge of background pollutant levels and relevant water quality criteria. Background levels for many of the field screening and laboratory parameters in San Diego County are not known at the present time.

County staff will use numeric action levels as the primary technique for interpreting pH, orthophosphate, nitrate, ammonia, conductivity, MBAS, pesticides, dissolved metals, and oil and grease data results (Attachment 9.3). If these action levels are exceeded, then a source identification investigation to determine the cause of the elevated levels is necessary unless best professional judgment indicates otherwise.

9.4.3.9.2 *Statistical Confidence Interval*

The use of confidence intervals to identify highly elevated concentrations will be the primary approach for interpreting indicator bacteria. The Copermittee Dry Weather workgroup has set standard action levels for indicator bacteria using the statistical 80th percentile confidence level of Copermittees 2002-2007 dry weather analytical monitoring data. If a reading exceeds the pre-established numeric action levels (Attachment 9.3) then the result will be considered an exceedance. The sampling site is then a candidate for a source identification investigation unless best professional judgment indicates otherwise.

9.4.3.9.3 *Best Professional Judgment*

Best professional judgment must be used to interpret all dry weather water quality data and/or field observations. The use of best professional judgment is the primary technique for interpreting conductivity, turbidity, and pH data, and will be used in conjunction with numeric action levels when interpreting the results.

The use of best professional judgment may indicate that results, which exceed numeric action levels, may be the result of natural or background factors. For example, conditions like highly elevated summertime water temperatures in exposed concrete conveyances, high ambient pH (>9.0) levels due to photosynthesis and CO₂ depletion, elevated NO₃ due to groundwater discharge, NO₃ reduction in ponded water which may result in elevated ammonia concentrations, or electrical conductivity readings in channels with high groundwater input are unrelated to illicit connections and illegal discharges.

Other relevant factors that should be considered include the type of MS4 conveyance (i.e. storm drain, open concrete channel, natural channel, receiving water, etc.), the status of downstream receiving waters, and weather conditions when the samples/measurements are collected. Conversely, qualitative observations (dead animals, strong odors, the presence of an oily sheen on the water surface, excessive floatable material or trash, etc.) may indicate that serious water quality problems are present at a location when field and analytical sampling results are within numeric action levels. The County Dry Weather Analytical and Field Screening Monitoring Program is intended to be sufficiently flexible to respond decisively to water quality problems as indicated by all of the available qualitative and quantitative information.

Within two business days of receiving dry weather field screening results that exceed action levels (Attachment 9.3), the County will either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Within two business days, where applicable, of receiving analytical laboratory results that exceed action levels, the County will either conduct an investigation to identify the source of the discharge or provide the rationale for why the discharge does not pose a threat to water quality and does not need further investigation. Obvious illicit discharges (i.e. color, odor, or significant exceedances of action levels) will be investigated immediately.

9.4.3.10 Source Identification Investigation Procedures

Depending on the particular situation, source investigations may include any or all of the steps described in section 9.5 below. Figure 9.2 summarizes decision matrix for field screening analysis.

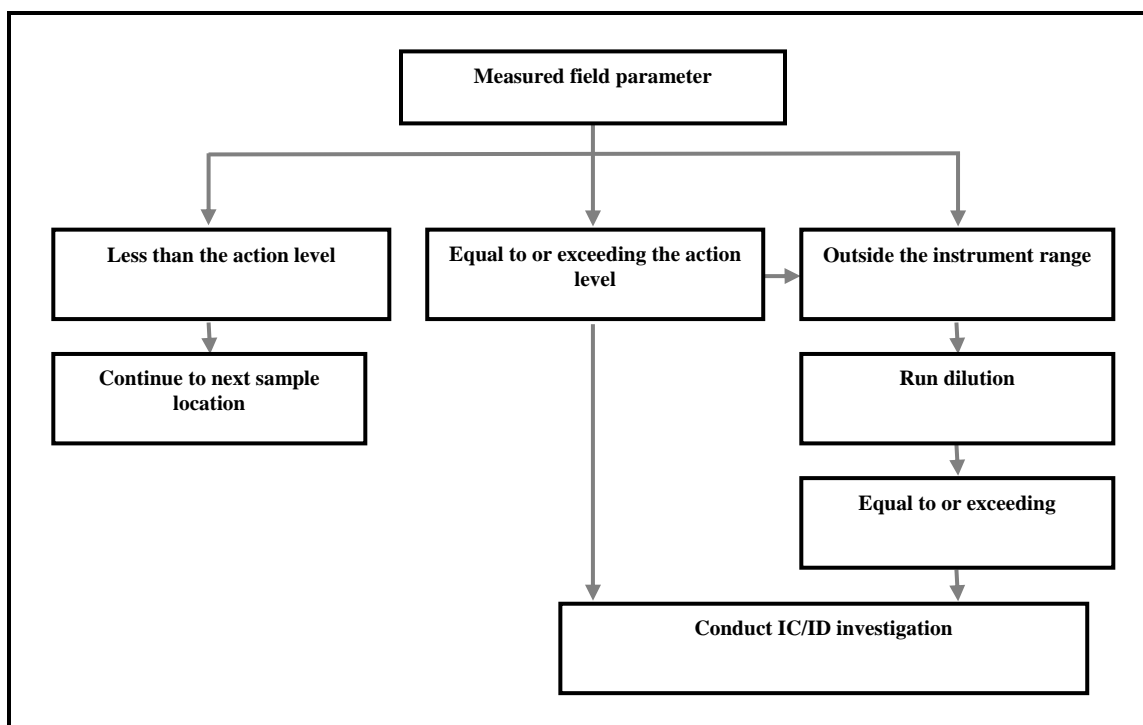


Figure 9.2: Decision Matrix for Field Screening Analysis

9.5 Follow-up and Enforcement

9.5.1 Follow-up Investigations

This section provides a general description of procedures to be used by County staff in conducting investigations based on information that indicates a potential for an illegal connection or illicit discharge. The need to conduct source investigations may arise in a number of circumstances including the following:

- Dry weather analytical and field screening monitoring;
- Complaints / referrals;
- Business inspections; and
- MS4 inspections.

Depending on the particular situation, source investigations may include any or all of the following steps, each of which is described further below:

- Following Flows or Discharges Upstream;
- Conducting Field Screening Sampling;
- Sampling for Laboratory Analysis; and
- Documenting Source Investigations.

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Depending on the particular situation, a number of County staff may become involved in a particular investigation. Generally DPW will take the lead unless the discharge falls under an existing regulatory program (e.g., the discharge is a hazardous substance, etc.). In this case, the responsible program would investigate.

9.5.1.1 Following Flows and Discharges Upstream

Dry weather flows will generally be followed from the location where they are first observed in an upstream direction along the conveyance system. Prior to the source investigation, field staff will compile and review available resources, data, and information. Examples of materials which are useful in the field include the Thomas Brothers Guide, MS4, drainage, and land use maps, ownership, and any available aerial photographs of the area.

For below ground systems, it may be necessary to follow flows from the outfall or manhole to the next manhole with a junction. Manholes will not always need to be checked if there are no junctions between them. Field staff will record information on the surrounding areas and look for water flowing in gutters and streets. Areas where illegal dumping may typically occur include parking lots and garages behind buildings and warehouses.

When investigating a location with multiple inlets, if flow is observed coming from only one, tracking will continue from that inlet. If flow is observed coming from more than one inlet, each will be tracked one at a time, using visual observations, odors, and/or field screening sampling to determine the order of investigation. The largest flow is generally easiest to track first, but if the flows are about the same size, the one that is easiest, shortest, or has the least number of junctions will be tracked first. If the areas with the greatest potential for illegal discharges can be identified, these will be tracked first.

If the source of flow is found, the site visit will be documented and appropriate actions taken to ensure that the IC/ID is eliminated. If the flow originates in another jurisdiction, investigators will immediately inform that jurisdiction of the situation and document the interaction. County staff will not track flows into other jurisdictions.

If initially unable to locate the source of flow (e.g. it disappears between manholes; the pipe, network, or channel terminates, etc.), field staff will consider the following possibilities. First, the flow may originate from a storm gutter. In this situation, catch basins and gutters between manholes will be checked for evidence of flows such as runoff from steam-cleaning operations, car washing, irrigation runoff, etc. There may also be a new or illicit connection to the system, possibly between manholes. If this occurs, field staff will look for areas in the road that have been dug up and re-paved. Staff may also check with the appropriate wastewater management / operations agency or department for any recent work that may have been done in the area. Finally, staff will look for evidence of recent or past dumping such as wet or stained pavement or gutters.

In most cases, it should be possible to determine the source of the flow using the methods described above. These are preferred whenever possible since they are quick, safe, and

inexpensive. If the source is still not found, the field investigation will be documented and the location of the last place that flow was observed marked on a map so that the area can be investigated again at a later date. The following additional source investigation techniques may be considered at a later time:

- **Water Discharges.** This involves discharging water from a potential source and noting the location of the downstream discharge to establish a hydraulic connection between the source and the discharge connection. Water discharges are preferred to dye testing and smoke testing, described below, and can be utilized under most conditions.
- **Dye Testing.** Dye testing can also be conducted to confirm hydraulic connections. This involves discharging fluorescent dye at the source of a potential IC/ID. This procedure should be performed sparingly because of the need to inform the surrounding public and appropriate regulatory agencies of the cause of downstream discoloration in the storm drain system.
- **Smoke Testing.** Smoke tests may also be used to confirm the hydraulic connection between a potential source and a downstream location. Smoke tests are used only on underground stormwater conveyance facilities, and should also be performed sparingly because of the need to inform the surrounding public and agencies of the cause for smoke coming from the storm drain system.
- **Video Monitoring.** Video inspections involve the deployment of a mobile video camera into an underground stormwater conveyance facility. The mobile video camera will “walk” the drain and record observations on a videocassette. Public notifications are not necessary with this method. This can be time-consuming and expensive.

If the flow under investigation is suspected to be sewage-related, it may often be confirmed through the presence of odor and visible solids. When these signs are not evident, field screening tests for ammonia and/or laboratory analytical sampling for bacteriological parameters may be employed in determining whether flows are sewage-related.

9.5.1.2 Conducting Field Screening Sampling

During a source identification investigation, the collection of samples for field screening analysis will be helpful for comparison with downstream samples already collected. This may include any of the analyses conducted during routine field screening, or other field tests that are deemed necessary for which equipment and reagents are available. It is usually not necessary to conduct all of the different routine field screening tests during a source investigation. Field staff will base this decision on the results obtained at the downstream site. All sampling and analysis conducted during source investigations will be carefully documented. Field data sheets will be filled out for each site sampled during a source investigation. The following Figure 9.2 summarizes decision matrix for field screening analysis:

9.5.1.2.1 *Contacting Dischargers*

If a specific discharger is identified as the source of a flow, they will be contacted by County of San Diego stormwater compliance staff and informed of the discharge prohibitions specified in the WPO. Investigators will work with the responsible party to find out what they are discharging and, if possible, whether or not the discharge is permitted. If the source is determined to be exempt or permitted, this information will be recorded. If a flow is determined to be illegal, or its status cannot be determined, compliance staff will document the violation and require the responsible party to discontinue the IC/ID.

9.5.1.3 Sampling for Laboratory Analysis

In some situations samples may be collected for laboratory analysis (for enforcement, etc.). In these cases, sample collection will always be conducted according to applicable evidence sampling collection protocols. Samples will be documented on the field data sheet and on a laboratory chain-of-custody record. Samples will be taken to a California Department of Health Services Environmental Laboratory Accreditation Program (ELAP)–certified laboratory and analyzed for identified analytes. Splits will be provided to the responsible party upon request.

9.5.1.4 Documenting Source Investigations

Proper documentation of all IC/ID investigations is critical. During an investigation, photographs will be taken to verify all suspected IC/IDs, whether or not they are confirmed. Sample results and other associated documents will be collected and filed. The results will be stored electronically in a database.

9.5.2 Enforcement

The primary objectives of the County’s enforcement program are to educate, promote compliance with applicable ordinances, and return violators to compliance. Although education is emphasized as the primary means of achieving compliance, the County has established the necessary authority and programs to investigate and enforce all potential stormwater violations. The County Administrative Code, Title 1 establishes authority by which the County may pursue enforcement. Enforcement mechanisms used to achieve compliance for residential complaints include:

- Verbal Warnings;
- Notice of Violations (NOV);
- Citation Warnings;
- Administrative Citations;
- Criminal Citations; and
- Stop Work / Cease and Desist.

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Regardless of the specific enforcement actions pursued, all responsible parties are required to implement corrective actions to address their violations. Verbal warnings are the first and most commonly used enforcement action taken. Enforcement is limited to a verbal warning when a discharge or potential discharge can be easily corrected at the time of investigation or soon after, e.g., by covering stockpiles or diverting runoff to flat, grassy areas. A follow-up visit is usually completed, but may not always be necessary. A Notice of Violation (NOV) is issued under two circumstances: (1) in cases of non-compliance despite a previous warning, and (2) for immediate cease and desist situations without prior warning or notification. Follow-up visits are mandatory under either scenario. An Administrative Citation Warning can also be issued in complaint cases following non-compliance with an NOV.

9.6 Illicit Discharge Detection and Elimination Component Effectiveness Assessment

The County's effectiveness assessment approach utilizes a variety of outcomes and measures to determine the success of implementation of each JURMP element or component. As appropriate for each, a suite of measures are tracked across the following outcome levels:

Level 1: Compliance with Activity-based Permit Requirements

Level 2: Changes in Attitudes, Knowledge, & Awareness

Level 3: Behavioral Change & BMP Implementation

Level 4: Source Load Reductions

Table 9.2 below summarizes the Level 1 outcomes and measures provisionally established for the IDDE Component. Additional detail on the County's approach, including the assessment of Level 2 and 3 measures, is provided in section 13.0.

Table 9.2: Targeted, Measurable Level 1 Outcomes for the IDDE Component

Program Activity	Measures of Success	
	Targeted, Measurable Outcome	Measure of Success
Program Administration		
Annual program review	Task completion	Completion (Y/N)
Program Facilitation		
Dry Weather Site Sampling	Conduct 87 site visits	% success
Spill Response	Resolve all justified reported spills	% success
Complaint Resolution	Resolve all justified complaints	% success

Jurisdictional Urban Runoff Management Plan

9.7 Program Review and Modification

Table 9.3 identifies modifications made to the IDDE Component since its March 24, 2008 submittal.

Table 9.3: Modifications to the IDDE Component

Date	Section(s)	Modification(s)
05-20-08	9.6	Insertion of introductory text for consistency with other elements.
05-20-08	9.7	Addition of section 9.7 and Table 9.3 for tracking JURMP modifications.
05-20-08	Multiple	Various non-substantive corrections including: formatting, punctuation, and grammar; insertion of textual references to tables and figures; re-titling of figures and tables for consistency; insertion and re-titling of headings for consistency; and corrections to figures and organizational charts.
06-25-10	9.4	Update discussion of the MS4 Outfall Monitoring and Source Identification Monitoring directing reader to the Regional Monitoring Report for program description and results.
06-25-10	9.4.3	Updated discussion of Dry Weather Field Screening and Analytical Monitoring to reference the Monitoring Procedures Manual and the Quality Assurance Project Plan (QAPP). Removed text that is redundant with the QAPP.
06-25-10	Attachments	Updated all Attachments to reflect program updates to Dry Weather Monitoring Sites, Sampling and Analysis Requirements, and Numeric Action Levels.