

JUNE 2014

MARIN COUNTY
STORMWATER POLLUTION PREVENTION PROGRAM

Illicit Discharge and Spill Response Plan



MCSTOPPP Illicit Discharge and Spill Response Plan



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1.0 PURPOSE

The purpose of the *MCSTOPPP Illicit Discharge and Spill Response Plan* (Plan) is to detail the procedural framework for an agency's response to a public complaint or notification of an illicit discharge or spill into a street, storm drain, or surface waterway. The Plan fulfills the requirements of provision E.9.e of the 2013 Phase II Permit¹. The intent of this Plan is to provide direction for agency stormwater staff on:

1. Responding to illicit discharge complaints, including initiating investigations and abating confirmed illicit discharges.
2. Interacting with emergency responders on spills of sewage, hazardous materials, and unplanned discharges from water supply systems.
3. Documenting investigations, abatement, and responses.

Given that a network of spill response and clean-up programs already exists (e.g., sanitary sewer overflows response plans, hazardous materials response plans), this Plan does not recreate those programs but supplements those services for illicit discharges not already under the purview of an existing clean-up program or response system.

2.0 ILLICIT DISCHARGES

Illicit discharges are any discharge into a storm drain system that are not composed of stormwater, and are prohibited by local ordinances, or by state or federal laws. The scope of an illicit discharge may range from excess irrigation runoff to major spills of hazardous materials. Common sources of illicit discharges include:

- Sanitary wastewater
- Effluent from septic tanks
- Car wash wastewaters
- Improper oil disposal
- Excess irrigation runoff
- Laundry wastewaters
- Spills from roadway accidents
- Improper disposal of auto and household chemicals

Illicit discharges are problematic. Unlike wastewater, which flows to a wastewater treatment plant, stormwater flows to waterways without additional treatment, illicit discharges can contribute high levels of pollutants (e.g., heavy metals, toxic pollutants, oil and grease, solvents, nutrients, or pathogens) to the storm drainage system, local creeks, and the Bay. Illicit discharges and the pollutants they carry can harm water quality and can threaten aquatic life, wildlife, and human health.

¹ State Water Resources Control Board Water Quality Order No. 2013-0001-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004 Waste Discharge Requirements (WDRS) for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems (MS4s) (General Permit)

Some non-stormwater discharges are considered acceptable, and are not classified as illicit discharges. Table 1 lists the types of non-stormwater discharges that are not prohibited by the 2013 Phase II Permit, provided the identification of any pollutant discharges and the development and implementation of appropriate control measures designed to minimize the impacts of such discharges. Further information on these discharges is provided in the 2013 Phase II Permit and the municipal code.

Table 1 Authorized Non-Stormwater Discharges

Water line flushing ¹	Individual residential car washing
Diverted stream flows	Rising groundwaters
Uncontaminated groundwater infiltration to separate storm sewers	Uncontaminated pumped groundwater
Discharges from potable water sources	Foundation drains
Air conditioning condensation	Springs
Water from crawl space pumps	Footing drains
Flows from riparian habitats and wetlands	Dechlorinated swimming pool discharges
Incidental irrigation runoff from landscaped areas under the conditions specified in the municipal code and 2013 Phase II Permit	Flows from fire-fighting activities ²
<p>¹ Flushing hydrants (and underground fire service connections) falls under the potable water discharges and the water line flushing categories. Discharges from fire sprinkler testing, however, are <u>prohibited</u> due to contaminants such as rust and oil that may be present in the pipes and the discharged water. Fire sprinkler water also may be anoxic, may contain living and dead bacteria, and may accumulate iron, manganese, lead, copper, nickel, and zinc.</p> <p>² Note that while flows from fire-fighting activities are not specifically regulated by the 2013 Phase II Permit, emergency responders should take appropriate action to control the discharge once the emergency has been mitigated.</p>	

3.0 ROLES AND RESPONSIBILITIES

The nature and size of a particular illicit discharge will determine agency responsibilities and involvement. Some of the key responders include:

- The Marin County Department of Public Works, Waste Management Division, Certified Unified Program Agency (CUPA) administers the *Hazardous Materials Area Plan*.² The Marin County HazMat Response Team is composed of the various city and county fire departments within Marin County who provide on-scene response for hazardous materials spills.

“The Marin County Hazardous Materials Area Plan ... establishes the policies, responsibilities, and procedures required to protect the health and safety of Marin County's citizens, the environment, and public and private property from the effects of hazardous materials emergency incidents.”

² Marin Hazardous Materials Area Plan

http://www.marincounty.org/depts/pw/divisions/~media/Files/Departments/PW/cupa/hazmat_plan.pdf

- Marin County Environmental Health Services implements the *Response Guidelines for Unauthorized Discharges into Water Bodies*.³

“It is the policy of the Marin County Environmental Health Division to protect the public health by implementing clear procedures and guidelines to: effectively investigate and provide a coordinated response to unauthorized discharges of sewage or other waste; educate agency staff regarding investigation and response procedures; ...”

- Individual sewage collection system operators within Marin County implement *Sanitary Sewer Overflow Response Plans* to address overflows from collection systems.
- Local stormwater agencies hold the primary responsibility for implementing the *Illicit Discharge Detection and Elimination* requirements of the 2013 Phase II General Permit. The purview of stormwater agencies typically extends to the non-hazardous nuisance types of discharges.

Table 2 provides a quick summary of the agencies that would be involved in responding to illicit discharges and spills. A more detailed list of additional agencies involved with responsibilities for on-scene response to hazardous materials and sewage spills can be found in Section 4, Table 3. Contact information for the agencies is provided in [Appendix 1](#).

Table 2 Summary of Discharge Types and Primary Responsible Responding Agencies

Type of Discharge	Primary Agency to Notify
Hazardous materials or unknown	<ul style="list-style-type: none"> • Marin County CUPA • Local Fire Departments
Sewage spills into water bodies	<ul style="list-style-type: none"> • Marin County Environmental Health Services
Sanitary sewer overflows	<ul style="list-style-type: none"> • Local Collection Systems
Potable water from water supply systems	<ul style="list-style-type: none"> • Local Water District
Non-hazardous nuisance discharges	<ul style="list-style-type: none"> • Local Stormwater Agencies

4.0 RESPONSIBILITIES FOR RESPONDING TO ILLICIT DISCHARGE COMPLAINTS

The local stormwater agency’s response to an illicit discharge complaint consists of three key steps:

- **Investigate** the complaint,
- **Abate** the discharge, and
- **Document** the response activities.

For discharges not under the purview of an existing clean-up program or response service, the stormwater agency staff may be responsible for conducting all three steps. In cases where existing clean-up program or response service is involved, the stormwater agency staff may only be responsible for notifying the appropriate agency of the incident and obtaining post-

³ Marin County Environmental Health Division Policy and Procedure Number 2-01, Effective March 31, 2009.

incident reports of the response and clean-up actions to document the response for purposes of the 2013 Phase II Permit.

4.1 Sewage, Hazardous Materials, or Unknown Materials

In any case when a spill of sewage or hazardous materials is reported to the stormwater agency, the staff person receiving the complaint should notify the appropriate response agency. Table 3 provides a summary of the agencies the local program should notify or coordinate with depending on the type or location of the spill. Phone numbers for the agencies listed in Table 3 are provided in [Appendix 1](#). [Appendix 2](#) provides the detailed Responsibility Matrix from the Marin County Hazardous Materials Areas plan if more information is needed to determine the appropriate response agency.

However, contact 911 and Cal OES at (800) 852-7550 for any emergency situation where there is an imminent threat to people, property, or the environment. Emergency dispatchers will activate the emergency response protocols and provide immediate access to trained responders who are directly integrated into the Marin County CUPA and HazMat Teams.

Table 3 Simplified Table of Agencies with Primary Responsibility for On-Scene Response to Hazardous Materials and Sewage Spills⁴

Type of HazMat Incident	Local Law Enforcement	Local Fire Department	HazMat Team	Waste Management /CUPA	Public Works Roads Dept.	Environmental Health Services	Sanitary Agency	Ag Commissioner	CA Highway Patrol	Caltrans	CA Fish and Wildlife	Regional Water Board	Department of Toxic Substances Control	National Response Center	USEPA
Small amounts on Local Streets	X	X		X	X										
State Highways	X	X							X	X					
Soil, Ground or Water	X	X	X								X	X	X	X	X
Sanitary Sewage	X	X	X			X	X				X			X	X
Oil Spill in Coastal Zone	X	X	X								X	X		X	
Pesticide Application	X	X	X			X		X			X	X			
Storm Drain or Creek	X	X	X		X						X	X			

⁴ See [Appendix 2](#) for the Responsibility Matrix from the Marin County Hazardous Materials Area Plan.

4.2 Potable Water Discharges from Water Supply Systems

The Phase II Permit authorizes potable water discharges provided that pollutants are identified and controlled to minimize impacts to the storm drainage system and receiving waters.

Unplanned potable water discharges, which include leaks, breaks, emergency flushing and overflows from the water supply system, can have a significant impact on the receiving waters due to the presence of chlorine, sediment, and other pollutants mobilized by the unplanned flow. The rate and volume of unplanned flows can erode the bed and banks of creeks and may damage infrastructure and property.

If the local stormwater agency becomes aware of a large unexpected water flow in the storm drainage system or the creeks, contact the local water district to determine if the flow is planned⁵ and under control or unplanned and requires response by the water district. The agency contact list in [Appendix 1](#) provides a list of water supply districts in Marin.

Potable water releases that pose an imminent threat to people, property, or the environment should be considered an emergency situation, and the stormwater agency should contact 911 and Cal OES at (800) 852-7550.

5.0 ILLICIT DISCHARGE RESPONSE STEPS

Suspected illicit discharges may be reported to the local stormwater program by the public, other agencies, or the agencies' own staff, e.g. field maintenance crews. Agencies may also be alerted to suspected illicit discharges based on outfall sampling.

Upon receiving a report of or directly observing an illicit discharge or spill, or upon obtaining results from outfall sampling that indicates a suspected illicit discharge, the local stormwater agency is required (1) to commence an investigation of the suspected illicit discharge. When a suspected discharge is confirmed as illicit, the agency works (2) to abate the illicit discharge and mitigate any environmental impacts. Finally, the local stormwater agency (3) documents their response to the illicit discharge and the steps taken to abate it.

- Each of these steps, Investigate, Abate, and Document are described in this section.
- [Appendix 3](#) provides a sample illicit discharge report form to document the actions taken to respond to illicit discharges.
- [Appendix 4](#) provides a summary of the illicit discharge response process.
- [Appendix 5](#) provides the action levels for outfall sampling that would trigger an illicit discharge investigation.

5.1 Investigating Illicit Discharges

Upon receiving a report of or directly observing a suspected illicit discharge, or identifying a suspected illicit discharge through outfall sampling, the local stormwater agency is required to

⁵ Planned discharges include but are not limited to disinfection of mains, cleaning of tanks, distribution system flushing, reservoir dewatering, and well maintenance including blow offs but not development. Water districts employ various practices to minimize pollutants in planned discharges.

commence an investigation of the suspected illicit discharge. The 2013 Phase II Permit specifies that the investigation must be conducted within 72 hours of becoming aware of the suspected illicit discharge. In cases where the investigation takes more than 72 hours the local stormwater agency must document the actions taken to investigate and identify the source.

In cases where the illicit discharge is suspected of being sanitary sewage, or being significantly contaminated, the 2013 Phase II Permit specifies that the investigation must be conducted within 24 hours. However, immediate notification to the appropriate response agency should be considered.

If the investigation confirms the suspected illicit discharge, the stormwater agency must take steps to eliminate the illicit discharge. If the investigation does not confirm the suspected illicit discharge, the investigation and its results are documented.

Additional information on conducting investigations is provided in [Appendix 4](#). A useful reference for conducting illicit discharge source tracking is the *Illicit Discharge Detection and Elimination* guidance manual produced by the Center for Watershed Protection.⁶ Information from this guidance manual was incorporated into the Illicit Discharge Response Process summary in [Appendix 4](#).

5.2 Abating Illicit Discharges

The main goal following the investigation is to stop the illicit discharge as soon as possible, and mitigate any environmental impacts. When the responsible party is identified, the local stormwater agency should immediately notify the responsible party and require the responsible party to eliminate the illicit discharge within 72 hours of notification and take appropriate clean-up actions.

The stormwater agency can also provide the responsible party with the following information and/or implement progressive enforcement per the municipal code and the Enforcement Response Plan.⁷

- Educational information about the impacts of illicit discharges.
- Requirements of the local stormwater ordinance.
- Options for proper discharge or disposal.
- Educational materials describing BMPs.

If the responsible party is not identified, stormwater program staff can distribute educational outreach materials to residents and/or businesses located in the immediate vicinity of the suspected illicit discharge.

⁶ *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, Center for Watershed Protection and Robert Pitt, October 2004. <http://www.cwp.org/online-watershed-library>.

⁷ Provision E.6 in the 2013 Phase II Permit requires each stormwater agency to develop and implement an Enforcement Response Plan no later than June 30, 2016.the Enforcement Response Plan.

If the source of the illicit discharge is found to be a spill, the local stormwater agency should require the responsible party to contain the spill and if sewage or hazardous materials are involved contact the appropriate response agency (see Section 4.1 and [Appendix 1](#))

If in the opinion of the investigator the discharge is an immediate threat to human health or the environment, the local stormwater agency should activate the emergency response system by calling 911.

5.3 Documenting Illicit Discharges

Local stormwater agencies must document the responses to illicit discharges and steps taken to abate illicit discharges. A sample report form is provided in [Appendix 3](#). In addition to tracking the actions taken to demonstrate compliance with the 2013 Phase II Permit, the stormwater agency must document:

- The time and date the agency received the initial report or became aware of the suspected illicit discharge.
- The time and date the agency initiated and completed the investigation.
- The time and date the illicit discharge (if confirmed) was eliminated.

If an investigation requires more than 72 hours, the agency must additionally document the actions taken to identify and locate the source.

In cases where the spill response was handled by other agencies, such as when the emergency response system is activated, the local stormwater agency can fulfill its documentation requirements under the Phase II Permit by requesting and obtaining the reports filed by the responding agencies, such as the report filed with the Office of Emergency Services, the Regional Water Quality Control Board, or the Department of Toxic Substances Control.

Illicit discharge investigations will be reported in the Annual Stormwater Report. Records will be used to document compliance, track effectiveness of the program, and will provide information to focus program implementation in the future and assist the local program to identify any high priority areas.

6.0 REFERENCES

Center for Watershed Protection and Robert Pitt *Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments*, October 2004.

Marin County Department of Public Works, Waste Management Division, *Hazardous Materials Area Plan*, August 2011.

Marin County Environmental Health Services, *Response Guidelines for Unauthorized Discharges into Water Bodies, Policy and Procedure Number 2-01*, March 2009.

Marin County Stormwater Pollution Prevention Program, *Action Plan 2010 Stormwater Management Plan*, May 2005.

State Water Resources Control Board, *Water Quality Order No. 2013-0001-DWQ, National Pollutant Discharge Elimination System General Permit No. CAS000004 Waste Discharge Requirements for Storm Water Discharges From Small Municipal Separate Storm Sewer Systems*, February 2013.

APPENDIX 1

Agency Phone Numbers

Key Agency Contact List

Agency	Office Phone	24-Hour Contact
FIRE DISPATCH	911	(415) 473-7243
SHERIFF DISPATCH	911	(415) 473-7243
County Agencies		
Agricultural Commissioner	(415) 473-6700	(415) 473-7243
CUPA (Public Works, Waste Management)	(415) 473-6647	
Environmental Health	(415) 473-6907	(415) 473-7243 Contact Sheriff office for on-call personnel
Public Works Department		
Waste Management Division	(415) 473-6647	(415) 473-7243
Roads Department	(415) 473-6570	(415) 473-7243
Law Enforcement		
Belvedere	(415) 435-3266	(415) 472--0911
California Highway Patrol	(415) 924-1100	(707) 551-4100
County	(415) 473-7246	(415) 473-7243
Fairfax	(415) 453-5330	(415) 453-5330
Mill Valley	(415) 389-4100	(415) 389-4170
Novato	(415) 897-4361	(415) 897-1122
Ross	(415) 453-1453	(415) 472-0911
San Anselmo	(415) 258-4610	(415) 258-4610
San Rafael	(415) 485-3000	(415) 485-3000
Sausalito	(415) 289-4170	(415) 473-7243
Tiburon	(415) 789-2800	(415) 789-2800
Twin Cities	(415) 927-5150	(415) 927-5150
State Agencies		
Office of Emergency Services (OES)	--	1-800-852-7550 (916) 845-8911
Department of Toxic Substances Control (DTSC)	(510) 540-2122	(916) 255-3545
Department of Fish and Wildlife	(707) 944-5500	(916) 358-1300
Regional Water Quality Control Board (RWQCB)	(510) 622-2300	(510) 622-2369
Caltrans	(415) 286-0315	
Federal Agencies		
National Response Center (NRC)	(510) 749-1390	1-800-337-7455
Environmental Protection Agency (EPA)	(415) 744-2000	1-800-424-8802
Sanitary Districts and Wastewater Treatment Plants		
Almonte Sanitary District	(415) 388-8775	(415) 232-0662
Alto Sanitary District	(415) 388-3696	(415) 388-2740
City of Belvedere	(415) 435-3838	

Key Agency Contact List

Agency	Office Phone	24-Hour Contact
Bolinas Community Public Utility District	(415) 868-1224	(415) 868-1224
Homestead Valley Sanitary District	(415) 388-4796	(415) 388-4796
Las Gallinas Valley Sanitary District: Lucas Valley, Marinwood; Northgate; Portola Gardens; San Rafael Meadows; Santa Venetia; Terra Linda	(415) 472-1734	(415) 472-1734
Central Marin Sanitation Agency	(415) 459-1455	(415) 459-1455 (select option 2)
Marin County Sewer Maintenance Districts: - Murray Park-Kentfield - San Quentin Village	(415) 473-6530	(415) 507-2754
North Marin Water District: - Oceana Marin; Tomales Stafford Lake Water Treatment Plant	(415) 897-4133	(415) 897-4613 (Chris DeGabriele) (415) 898-7662 (Drew McIntyre) (415) 898-1576 (Brad Stompe)
Sewerage Agency of Southern Marin - Mark Grushayev, Wastewater Treatment Manager - Chris Monti, Chief Plant Operator	(415) 388-2402	(415) 320-5159 (415) 729-6068
City of Mill Valley	(415) 384-4033	Automatically routed to County of Marin dispatch
Novato Sanitary District - Tim O'Conner, Collections System Superintendent - Steve Krautheim, Field Services Superintendent	(415) 892-1694	(415) 892-1694 (415) 798-4061 (415) 798-4053
Richardson Bay Sanitary District: Del Mar Estates; Hawthorn Terrace; Strawberry	(415) 388-1345	(415) 261-8810
Sanitary District No. 1: Fairfax; Greenbrae; Kentfield; Kentfield Woodlands; Larkspur; Ross; San Anselmo; Sleepy Hollow	(415) 259-2949	(415) 259-2949
Sanitary District No. 2: Corte Madera	(415) 927-5057	(415) 613-5437
Sanitary District No. 5 (Tiburon)	(415) 435-1501	(415) 945-4080
Sausalito-Marin City Sanitary District	(415) 332-0244	(415) 331-4711
Central San Rafael Sanitation District	(415) 454-4001	(415) 451-0388 (pager)
City of Sausalito	(415) 289-4192 (Pat Guasco)	(415) 289-4170 POLICE DISPATCH (415) 850-0200 Kent Basso, Public Works Supervisor (415) 726-1653 Pat Guasco, Sewer Coordinator
Seafirth, Tiburon (Mary Kay wcb)	(415) 454-8084	
Tamalpais Community- Services District: Kay Park; Tam Valley; Tam Woods	(415) 388-6393	
Water Districts		
Bolinas Community Public Utility District	(415) 868-1224	(415) 868-1224
Inverness Public Utility District	(415) 669-1414	(415) 669-1414
Marin Municipal Water District	(415) 945-1455	(415) 945-1500

Key Agency Contact List

Agency	Office Phone	24-Hour Contact
Muir Beach Community Services District	(415) 388-7804	(415) 388-7804
North Marin Water District	(415) 897-4133	(415) 897-4133
Stinson Beach County Water District	(415) 868-9417	(415) 868-1333

Additional Agencies Contact List

Agency	Office Phone	24-Hour Contact
County Agencies		
District Attorney	(415) 473-6450	(415) 473-7243
Emergency Medical Services	(415) 473-6871	(415) 473-7243
Public Health Department	(415) 473-3707	(415) 473-7243
Superintendent of Schools	(415) 472-4110	(415) 473-7243
24-Hour HAZMAT Clean Contractors		
PSE Industrial Services (Benicia)	(800) 800-7472	(800) 800-7472
Decon Environmental (Hayward)	(510) 732-6444	(510) 475-2901
Morgan Environmental (Oakland)	(510) 267-0134	(510) 267-0134
Clean Harbors (San Jose)	(408) 451-5000	(800) 645-8265
NRC Environmental (Alameda)	(510) 749-1390	(800) 337-7455
Bay View Environmental	(510) 562-6181	(510) 562-6181
Evergreen Oil	(510) 795-4400	(510) 795-4400 x 128
Hospitals		
Marin General	(415) 925-7000	(415) 925-7000
Novato Community	(415) 209-1300	(415) 209-1300
Kaiser Permanente (San Rafael)	(415) 444-2000	(800) 451-8346
State/Federal Emergency Funding/Response		
Dept. of Toxic Substances Control - Emergency Reserve Account	(800) 852-7550 (OES) Ask For Duty Officer	(916) 845-5811
Dept. of Toxic Substances Control - Clandestine Drug Lab Account	(800) 852-7550 (OES) Ask For Duty Officer	(916) 255-6504
Dept. of Fish and Game – Fish & Wildlife Pollution Account	(800) 852-7550 (OES)Ask for Duty Officer	(916) 358-1300
Office of Spill Prevention & Response – Oil Spill Response Trust Fund	(800) 852-7550	(916) 358-1300
State Water Resources Control Board Water Pollution Cleanup & Abatement Account	(800) 852-7550	(800) 852-7550
EPA Superfund Emergency Response	(800) 300-2193	(800) 300-2193 x 3
95th Civil Support Team (Weapons of Mass Destruction)	(510) 780-1395	Website indicates Hayward (Calif. National Guard)

Additional Agencies Contact List

Agency	Office Phone	24-Hour Contact
<i>State Agencies</i>		
All Incident Reporting System	(916) 324-8922	(800) 852-7550 (OES)
Air Resources Board (ARB)	(800) 242-4450	-
Cal OSHA	(800) 963-9424	
California Fire - Pipeline Safety/ Failure Investigation	(916) 445-8477	(800) 852-7550
Dept. of Pesticide Regulation	(916) 445-4300	(800) 852-7550
Dept. of Public Health (Communicable Diseases, Berkeley)	(510) 981-5300	(510) 981-5911 After hours rolls over to PD
Dept. of Public Health (Radiology Health) (Berkeley)	(510) 981-5300	(510) 981-5911 After hours rolls over to PD
Office of Environmental Health Hazard Assessment	(510) 622-3200	(916) 324-7572
Office of Spill Prevention and Response	(916) 445-0045 Press #5 oil spill	(888) 334-2258
State Fire Marshal (Sacramento)	(916) 324-8922	(800) 852-7550 (OES)
<i>Federal Agencies</i>		
Center for Communicable Diseases	(404) 498-1515	(800) 232-4636
FBI Emergency Operations	(916) 481-9110	(916) 481-9110
Homeland Security	(202) 282-8000	(202) 282-8000
American Waterway Watch	(800) 424-8802	(800) 424-8802
OSHA (Federal)	(800) 475-4020	(800) 321-6742
OSHA (Federal)	(800) 321-6742	(800) 321-6742
<i>Non-Governmental Agencies</i>		
American Red Cross	(415) 427-8000	(800) 660-4272
AT&T Language Translation Line	(888) 855-0811	(888) 855-0811
Marine Spill Response Corporation (merged w/Clean Bay)	(925) 645-7745	(800) 645-7745
ChemTrec	(800) 424-9300	(800) 424-9300
Pesticide Safety Team Network	(800) 424-9300	(800) 424-9300
Poison Control Center	(800) 222-1222	(800) 222-1222
Salvation Army	(415) 454-7201	
<i>Industrial Hygienists/Laboratories</i>		
DTSC (Berkeley)	(510) 540-2122	(510) 540-3742
Cal OSHA Consultation	(800) 963-9924	
Office of Environmental Health Hazard Assessment	(510) 622-3200	(800) 852-7550
Ecology CI	(510) 638-1684	(800) 236-7324
Eurosins Scientific (Petaluma)	(707) 792-7300	No 24 hour phone number
DTSC HazMat Laboratory	(510) 540-3622	(510) 540-3622

APPENDIX 2

Responsibility Matrix from Appendix R-1, Marin County Hazardous Materials Area Plan

Responsibility Matrix from Appendix R-1, Marin County Hazardous Materials Area Plan

P= Primary Responsibility X = Have Responsibility

	Local												State										Federal					
	MHOAC	Law Enforcement	Fire Department	HazMat Team	Waste Mgmt/CUPA	Roads Dept. (PW)	County Health Officer	Env. Health	School Superintendent	Sanitary Districts	Ag Commissioner	District Attorney	CHIP	Fish and Game	State OES	CalTrans	BAAQMD	CAL EPA- DPR	RWOCB	CAL OSHA	OEHHA	CAL EPA -DTSC	DHS-RHS	State Fire Marshal	NRC/ Coast Guard	US EPA	DOE	
PRE-EMERGENCY PLANNING																												
Review Business Plans					X																							
Coordinate Exercises			X	X	X																							
Training			X	X	X																							
NOTIFICATION																												
Threatens Health/Environment			X		X			X							X													
Acute incident within ½ mile of a school or school affected		X	X		X			X	X																			
Exceeds Reportable Quantity		X	X		X										X											X		
INCIDENT COMMAND																												
State Highways		X	X										P															
Unincorporated area State Highway and all Freeways		X	X			X							P															
Off highway unincorporated area, county roads		P	X																									
Incorporated City (includes State Highways – not freeways)		P	X										X															
EMERGENCY RESPONSE																												
Approach & Recognition		X	X	X									X															
Scene Isolation		X	X	X									X	X												X		
Rescue			X	X																								
Traffic/Crowd Control		X											X															
Fire Control/ Suppression			X																									
Public Health Assessment	X		X	X	X		X	X								X					X	X						
Environmental Assessment				X	X			X					X			X	X				X	X	X				X	

	Local											State											Federal				
	MHOAC	Law Enforcement	Fire Department	HazMat Team	Waste Mgmt/CUPA	Roads Dept. (PW)	County Health Officer	Env. Health	School Superintendent	Sanitary Districts	Ag Commissioner	District Attorney	CHP	Fish and Game	State OES	CalTrans	BAAQMD	CAL EPA- DPR	RWQCB	CAL OSHA	OEHHA	CAL EPA -DTSC	DHS-RHS	State Fire Marshal	NRC/ Coast Guard	US EPA	DOE
Evacuation/Shelter-In-Place		X	X	X	X																						
Disseminate Medical Information	X		X				X	X																			
Welfare/Shelter			X						X																		
Proclaim Local Emergency		X	X										X	X													
Proclaim Health Emergency							X																				
Public Information/Media Control		X	X										X	X													
Mitigate & Containment			X	X	X								X		X												
TECHNICAL INFORMATION																											
Product Identification			X	X	X											X											
Personal Protective Equipment			X	X									X						X		X						
Industrial Hygiene issues													X						X		X						
Monitor & Decontamination			X	X									X								X					X	
Health Effects			X	X									X						X	X	X					X	
Facility (Site Map, Inventory)			X		X											X					X	X				X	
Chemical Information			X	X	X								X				X			X	X				X	X	
Air Monitoring/Meteorological			X		X											X										X	
ON SCENE RESPONSE TO:																											
Small amounts on City Streets		X	X		X	X																					
Air		X	X	X												X					X					X	
Soil/Ground		X	X	X									X					X			X				X	X	
Water		X	X	X									X					X			X				X	X	
Petroleum Pipeline		X	X	X									X										X		X	X	
Sewage (Sanitary Sewer)		X	X	X				X	X				X												X	X	
Biological/Medical Waste		X	X	X				X					X								X				X	X	
Radioactive Material		X	X	X									X									X			X	X	X

	Local											State										Federal					
	MHOAC	Law Enforcement	Fire Department	HazMat Team	Waste Mgmt/CUPA	Roads Dept. (PW)	County Health Officer	Env. Health	School Superintendent	Sanitary Districts	Ag Commissioner	District Attorney	CHP	Fish and Game	State OES	CalTrans	BAAQMD	CAL EPA- DPR	RWQCB	CAL OSHA	OEHHA	CAL EPA -DTSC	DHS-RHS	State Fire Marshal	NRC/ Coast Guard	US EPA	DOE
Oil Spill in Coastal Zone		X	X	X									X					X							X		
Employee Injuries		X	X																X								
Pesticide application		X	X	X			X			X			X					X									
Storm drain/creek		X	X	X		X							X					X									
CLEAN-UP																											
Emergency Funding Access			X											X	X							X			X	X	
Oversee and Approve		X	X				X						X		X						X	X			X	X	X
Waste Disposal			X		X				X				X		X						X						
ENFORCEMENT																											
Sample Collection				X			X		X				X		X	X		X			X				X	X	
Civil/Criminal Investigation		X	X		X		X						X			X	X	X	X		X		X		X	X	X
Cease & Desist Orders		X	X		X		X		X				X			X	X	X	X		X					X	
POST INCIDENT																											
After Action Review (small)		X	X	X																							
After Action Review (large)		X	X	X	X		X		X			X	X	X		X	X	X	X	X	X	X	X	X	X	X	X
Incident Reports/Records Maintenance		X	X		X							X		X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cost Recovery				X	X																						

APPENDIX 3

Example Illicit Discharge Report

APPENDIX 4

Illicit Discharge Response Process

Illicit Discharge Response Process	
Phase	Action/Response
1. Investigate	<p>1. Local stormwater program coordinator <u>initiates investigation</u>.</p> <p>a. Immediately call 911 for any discharges suspected to be hazardous materials or that pose an immediate threat to human health or the environment.</p> <p>b. Immediately report to the Marin County Environmental Health Services or the local sanitary agency discharges suspected to be sewage.</p> <p>c. Determine type of investigation needed.</p> <p style="padding-left: 20px;">i. If discharge has an obvious source, address source of discharge directly.</p> <p style="padding-left: 20px;">ii. If source is not obvious, but the quality of the discharge indicates a likely business or operation type (e.g., soapy washwater), conduct a drainage area investigation through one of two methods:</p> <p style="padding-left: 40px;">1. “Windshield” survey (drive-by survey) works best for small drainage areas.</p> <p style="padding-left: 40px;">2. Map or GIS targeted survey works best for larger or more complex areas.</p> <p style="padding-left: 20px;">iii. If the discharge does not indicate a likely source type, and the drainage area is complex, the local agency could recommend a storm drain network investigation (See detailed guidance provided in Chapter 13: Tracking Discharges to a Source, of the CWP IDDE Guidance Manual).</p> <p>d. Conduct Survey to determine the source:</p> <p style="padding-left: 20px;">i. Windshield survey:</p> <p style="padding-left: 40px;">1. Match the characteristics of the discharge to a type of business or operation.</p> <p style="padding-left: 40px;">2. Inspect (drive by) all business sites of that type within the outfall drainage area to locate the discharge.</p> <p style="padding-left: 20px;">ii. Map or GIS survey:</p> <p style="padding-left: 40px;">1. Analyze map or GIS data to locate areas where the suspected source may be located (e.g., locate industrial areas within the drainage area).</p> <p style="padding-left: 40px;">2. Inspect the areas that were located using map or GIS data to locate the discharge.</p>
2. Abate	<p>2. Take action to <u>abate</u> the discharge.</p> <p>a. If the source is determined:</p> <p style="padding-left: 20px;">i. Notify the responsible party and require them to eliminate the discharge within 72 hours of notification.</p> <p style="padding-left: 20px;">ii. After being notified that the discharge has been eliminated, conduct a follow-up inspection investigation to verify that the discharge was eliminated.</p> <p>b. If the source is not determined provide educational materials, e.g., door hangers, in the vicinity where the discharge occurred.</p>
3. Document	<p>3. <u>Document</u> findings and actions taken.</p> <p>a. Document results of investigation and abatement.</p> <p>b. If investigation requires more than 72 hours, program coordinator should identify the actions being taken to identify and locate the source.</p> <p>c. Results of the investigation and follow up are reported in the Stormwater Program Annual Report.</p>

APPENDIX 5

Outfall Sampling Action Levels

Outfall Sampling Action Levels

If the action level of an indicator parameter is exceeded, it is an indication that there has been an illicit discharge and a follow-up investigation is required. When action levels are exceeded, the field screening crew notifies local stormwater agency. The local stormwater agency initiates the illicit discharge response process described in Section 5 of the *MCSTOPPP Illicit Discharge and Spill Response Plan*.

Indicator Parameter Action Levels and Potential Sources					
Indicator Parameters	Action Levels	Discharge Types it Can Detect			
		Sewage	Wash-water	Tap water	Industrial or Commercial Liquid Wastes
Ammonia	≥50 mg/L	●	○	○	○
Color	≥500 units	○	○	○	○
Electrical Conductivity ¹	≥2,000 μS/cm	○	○	○	○
Detergents – Surfactants	None	●	●	○	○
Fluoride ²	None	○	○	●	○
Hardness	≤10 or ≥2,000 mg/L as CaCO ₃	○	○	○	○
pH	≤5 or ≥9	○	○	●	○
Potassium	≥20 mg/L	○	○	○	●
Turbidity	≥1,000 NTU	○	○	○	○

● Can almost always (>80% of samples) distinguish this type of discharge from clean flow types (tap water or natural water).
 ○ Can sometimes (>50% of samples) distinguish this type of discharge from clean flow types, or can be helpful in combination with another parameter.
 ○ Poor indicator for this type of discharge.

¹ Ineffective in saline water

² Fluoride is a poor indicator when used as a single parameter, but when combined with additional parameters (such as detergents, ammonia and potassium), it can almost always distinguish between sewage and wash water.

Data source: 2013 Phase II Permit, Pitt (2004)