

CDOT MS4 Permit

Illicit Discharge Program



February 2009



submitted to:
Colorado Department of Public Health and Environment

Introduction

The Colorado Department of Public Health and Environment (CDPHE) Water Quality Control Commission's (WQCC) Regulation #61 established the Colorado Discharge Permit System (CDPS). This regulation provides the regulatory requirements for the State's Stormwater permitting program. The Colorado Department of Transportation (CDOT) was issued a renewed Municipal Separate Storm Sewer System (MS4) Discharge Permit which became effective on February 1, 2007. Since December 2000, CDOT has been developing the components of its Illicit Discharges Program to meet the Phase I and II requirements of the permit as identified in this document.

Permit Requirements

Part I.B.1(c) & (e) of CDOT's Phase I MS4 Permit states:

"Illicit Discharges Program

CDOT shall develop and implement an Illicit Discharges Management Program as previously approved and expand the program into the Phase II permit coverage areas. This program shall include the following program areas.

1) *Prevention of Illicit Discharges and Improper Disposal.* CDOT shall continue to implement an ongoing program to detect and remove (or advise the discharger to the MS4 to obtain a separate CDPS permit for) illicit discharges and improperly disposed materials into the MS4 in accordance with this program area. The permittee shall notify the Division of dischargers to the MS4 that need a separate CDPS permit. The program shall include the following elements:

- a) CDOT shall continue to implement its current procedures for issuing CDOT Utility Permits to ensure that proper procedures are in place to prevent the illegal connection to CDOT's MS4 of any non-stormwater discharges.
- b) CDOT shall continue to notify individuals applying for Utility Permits of the prohibition of discharging any non-stormwater discharges (except those identified in c) below), and refer them to the Division if a separate CDPS permit is needed. Prohibited pollutants include, but are not limited to, used motor vehicle fluids and household wastes.
- c) Unless identified by either the permittee or the Division as significant sources of pollutants to the waters of the state, the following non-stormwater discharges need not be prohibited from entering the MS4: landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation

water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, individual residential swimming pool and hot tub discharges, individual residential street washing, water-line flushing, flows from riparian habitats and wetlands, flows from emergency fire fighting activities, and water incidental to street sweeping (including associated side walks and medians) and that is not associated with construction. Discharges from these sources may still require separate CDPS permit coverage to be obtained by the discharger.

2) *Ongoing Field Screening*. CDOT shall continue to implement a program to screen the MS4 for illicit discharges, illegal dumping, and illicit connections in response to citizen (members of the general public) complaints and CDOT staff observations. Program elements should include the following:

- a) The permittee shall identify the location of new and not previously identified existing storm sewer outfalls discharging into any state waters that are within the permit coverage areas and are CDOT's jurisdiction. It is not necessary for CDOT to repeat surveys of areas that have already been investigated if it is reasonably believed that all MS4 outfalls (both minor and major) have already been mapped. CDOT will perform the outfall mapping per the schedule outlined below and will include submittals to the Division as indicated. Occurrences of significant levels of pollutants observed during the inventory shall be investigated promptly.
- b) Within **12 months** of the permit effective date, CDOT will coordinate internally and with outside entities to determine the efforts already performed to map outfalls along CDOT right-of-ways, gather the existing data of relevant mapping efforts, and formulate a systematic method and procedures to perform the mapping and tracking of outfalls.
- c) As part of the mapping methodology, CDOT will address outfalls that will not be mapped. This will be due to unique conditions that exist for CDOT's MS4 and result in the mapping of certain outfalls not being practicable or of benefit to CDOT's program (e.g., locations where the outfall is from a CDOT gutter directly to a stormwater inlet or gutter owned by a separate MS4). CDOT will submit its evaluation and determination of whether there is a need to improve the existing mechanisms to the Division no later than **12 months** after the permit effective date.
- d) Outfalls shall be mapped for 25 percent of the permit coverage areas (total of 25 percent). This will be completed within **24 months** of the permit effective date.
- e) Outfalls shall be mapped for an additional 25 percent of the permit coverage areas (total of 50 percent). This will be completed within **36 months** of the permit effective date.

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- f) Outfalls shall be mapped for an additional 25 percent of the permit coverage areas (total of 75 percent). This will be completed within **48 months** of the permit effective date.
 - g) Outfalls shall be mapped for the remaining 25 percent of the permit coverage areas (total of 100 percent). This will be completed within **60 months** of the permit effective date.
 - h) The permittee shall continue to respond appropriately to citizen complaints and CDOT staff observations of illicit discharges, illegal dumping and illicit connections. The permittee shall use CDOT maintenance staff to observe and scrutinize CDOT's MS4 and outfalls for illicit discharges, illegal dumping and illicit connections, during their routine duties. Such employees will receive adequate training as needed. CDOT shall include a summary of such training in the Annual Reports.

3) *Investigation of Suspected Illicit Discharges.* CDOT shall continue to implement a program to investigate and identify suspected sources of illicit connections and improper disposal. Program elements shall include the following:

- a) CDOT shall continue to implement the program to investigate and identify suspected sources of illicit connections and improper disposal in the Phase I permit coverage areas.
- b) CDOT shall re-evaluate and modify, as appropriate, the existing procedures for tracing and removing the source of an illicit discharge within the entire permit coverage area. This will be completed within **12 months** of the permit effective date.
- c) CDOT shall develop and implement a program to train identified personnel who can respond to reports of illicit discharges in permit coverage areas and are qualified to perform field screening and on the procedures for tracing and removing illicit discharges. CDOT shall review and revise the Illicit Discharge Program Manual and Dry Weather Observation/Procedures Manual as appropriate to include any modifications to the program, and submit such revisions to the Division for comment within **24 months** of the permit effective date.

4) *Procedures to Prevent, Contain and Respond to Spills.* CDOT shall continue to implement its current program to prevent, contain and respond to spills caused by CDOT that may discharge into the MS4, in accordance with this program area. Spills caused by other parties are the responsibility of the other party; however, if no responsible party has been identified, CDOT will immediately notify the Division.

5) *Public Education*

- a) CDOT shall continue to implement its existing educational activities to promote and facilitate reporting by the CDOT employees (first level public) and the

general public (second level public) of the presence of illicit connections, illicit discharges, or illegal dumping of materials into the CDOT MS4. CDOT will update its website to promote the Hotline spill reporting number.

- b) CDOT shall re-evaluate and revise as necessary, then implement its program to promote and communicate to the first level public about the proper use, collection, recycle, reuse, and proper disposal of used motor vehicle fluids (at a minimum, oil and antifreeze) and toxic materials (including paint, solvents, pesticides, herbicides and other hazardous materials) used in CDOT operations.
 - c) CDOT shall provide relevant information on the CDOT water quality web site to inform businesses and the general public of the impacts of illegal discharges and improper disposal of waste. Within **12 months** of the permit effective date, CDOT shall update its water quality web site to include the new illicit discharge brochure, updated brochure for utility permittees, and any other materials that are developed by CDOT that concern illicit discharges.
 - d) CDOT shall develop and implement training sessions for CDOT staff on the requirements of the MS4 permit and associated CDOT programs at the annual Winter Conferences, in the region offices or other venues, as deemed the most effective. CDOT shall report to the Division within **12 months** after the permit effective date on the new 8-hour erosion control supervisor training that is now required for engineers, new environmental trainings to meet the new CDOT 10-hour training requirement, general MS4 awareness classes in each Phase II region, and the updated illicit discharge detection and elimination training for the regions.
 - e) CDOT shall identify potential internal and external groups, such as businesses, state agencies, watershed groups, trade associations and others, to develop partnerships as a means to disseminate stormwater quality information. Within **36 months** of the permit effective date, CDOT will complete evaluation of partnering with these groups, and if appropriate, approach organizations with a state-wide presence to form a partnership for the dissemination of educational material.
 - f) Within **48 months** of the permit effective date, CDOT shall develop and begin disseminating educational materials through any partnerships that were established with businesses, watershed groups, state agencies, trade associations, or others.
- 6) *Public Involvement.*
- CDOT shall implement a program to receive feedback from the general (second level) public. The program shall include the following:
- a) CDOT shall continue to comply with applicable State and local public notice requirements.
 - b) Within **12 months** of the permit effective date, CDOT shall identify key stakeholder groups that would have an interest in CDOT's Stormwater Management Programs and evaluate mechanisms for public and stakeholder involvement.

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- c) Within **12 months** of the permit effective date, CDOT will develop an electronic feedback form on (or linked to) the CDOT water quality web site, and also evaluate such mechanisms as direct communication with identified stakeholders, informational presentations to the Transportation Commission and other feasible mechanisms.
- d) Within **24 months** of the permit effective date, CDOT shall implement the chosen mechanism(s) for public involvement.”

This document contains five sections. Each of the sections details one of CDOT’s Illicit Discharge Program as described above:

- Prevention of Illicit Discharges and Improper Disposal
- Ongoing Field Screening
- Investigation of Suspected Illicit Discharges
- Procedures to Prevent, Contain and Respond to Spills
- Public Education

The program sections were written to follow the permit language cited above. This document also has Appendices, which contain relevant supporting documents for each of the program components.

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Section I - Prevention of Illicit Discharges and Improper Disposal (Part I.B.1(c)(1))

The purpose of the Illicit Discharge Program required under Part I.B.1(c)1 of permit COS-000005, "Prevention of Illicit Discharges and Improper Disposal," is to identify and eliminate any discharge to a municipal separate storm sewer (MS4) that is not composed entirely of stormwater except the following: discharges specifically authorized by a Colorado Discharge Permit System (CDPS) permit and allowable non-stormwater discharges. Sources of illicit discharges include improper cross connections between sanitary or industrial sewers and storm sewers, or spills that flow into the storm drainage system.

As a requirement of the permit, Colorado Department of Transportation (CDOT) "shall continue to implement an ongoing program to detect and remove (or advise the discharger to the MS4 to obtain a separate CDPS permit for) illicit discharges and improperly disposed materials into the MS4, in accordance with this program area." CDOT shall "notify the Division of discharges to the MS4 that need a separate CDPS permit." This program is required to include several elements such as:

- a) Part I.B.1(c)(1)(a) "CDOT shall continue to implement its current procedures for issuing CDOT Utility Permits to ensure that proper procedures are in place to prevent the illegal connection to CDOT's MS4 of any non-stormwater discharges."
- b) Part I.B.1(c)(1)(b) "CDOT shall continue to notify individuals applying for Utility Permits of the prohibition of discharging any non-stormwater discharges (except those identified in c) below), and refer them to the Division if a separate CDPS permit is needed. Prohibited pollutants include, but are not limited to, used motor vehicle fluids and household wastes."
- c) Part I.B.1(c)(1)(c) "Unless identified by either the permittee or the Division as significant sources of pollutants to the waters of the state, the following non-stormwater discharges need not be prohibited from entering the MS4: landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, individual residential swimming pool and hot tub discharges, individual residential street washing, water-line flushing, flows from riparian habitats and wetlands, flows from emergency fire fighting activities, and water incidental to street sweeping (including associated side walks and medians)and that is not associated with construction. Discharges from these sources may still require separate CDPS permit coverage to be obtained by the discharger."

CDOT has developed their Illicit Discharge Program to facilitate the prevention of illicit discharges. The CDOT Utility and Access permit program includes notification to potential discharges of prohibited discharges into CDOT's MS4 and measures to prevent improper connections into CDOT's MS4. The program elements under the Illicit Discharge Program also include the general prohibitions of non-stormwater discharges and control measures for street wash water associated with construction activities. CDOT will report, on an annual basis in the Annual Report, the number of inspections performed by CDOT for possible illicit discharges.

Prevention of Illicit Discharges

- CDOT 's Utility Program provides for an approval of an MS4 connection through a permit process. This program (<http://www.dot.state.co.us/UtilityProgram/>) is primarily responsible for providing services in the following areas:
 - **Utility/Highway Project Coordination**–Region Utilities Engineers work with other CDOT employees and utility companies to identify the utilities that are located within highway project boundaries and coordinate any necessary relocation of these facilities in order to facilitate highway construction activities.
 - **Utility and Special Use Permitting**–Utility and Special Use Permits are issued to entities external to CDOT in order to manage the installation of utilities, or the performance of other types of work, within the State highway right-of-way.
 - **Access Permits** are required by any entity when a vehicle access needs to be constructed, modified, or relocated within the highway right-of-way (ROW).

Notification of Prohibited Non-Stormwater Discharges

CDOT has several programs that have been modified to include advising and requiring a potential connector to the CDOT MS4 system of prohibited non-stormwater discharges. This includes the requirement to obtain a CDPS Permit for such discharges. CDOT currently notifies individuals applying for Utility Permits of the prohibition of discharging any non-stormwater discharges (except those identified in c, above) into their MS4, and to the CDPHE. These are described below.

Environmental Clearance Summary

There are instances when a utility company or other entity doing work in the State highway right-of-way will require some type of environmental permit or clearance for that work. CDOT has put together an Environmental Clearances Information Summary for those applying for a CDOT Utility Permit, Special Use Permit, or Access Permit to obtain all required clearances. This fact sheet is given to each permittee and is available at:

<http://www.dot.state.co.us/UtilityProgram/Announcements/Announcements.cfm#enviro> and <http://www.dot.state.co.us/AccessPermits/index.htm>.

CDOT is continually revising this fact sheet to expand the areas included in Environmental Clearance Information Summary

Permit Application

As part of the CDOT permit application for Utility, Access, and Special Use permits, CDOT provides language to the applicant to ensure that applicants are aware and in compliance with applicable state and federal laws, which includes the provisions of the Colorado Water Quality Control Act such as the CDPS Permit requirements. These reference materials can be found in Appendix A. CDOT Utility and Special Use permit applications contain a requirement that the permittee must satisfactorily address environmental, ecological, archaeological, and historical clearances. The following is an excerpt from the CDOT required application documentation section for wetlands, archaeological, and historical clearances:

“Utility owner/contractor must satisfactorily address these items, in accordance with applicable law, as a condition to issuance of a permit. The letter of request for permit may include a discussion of the status of any required environmental clearances”.

Access permit applications includes similar language to ensure that all clearances are addressed. This requirement will serve to re-enforce CDOT’s required clearances/permits that are provided in the Environmental Clearance Information Summary.

Permit Conditions and Standard Provisions

CDOT Permits include general conditions that require compliance with local, state, and federal regulations. As required in Part I.B.1(c)(1)(b), CDOT will incorporate additional language into the standard provisions that apply to Utility, Special Use, and Access Permits to inform permittees what discharges are allowable. The proposed language will require that all discharges must comply with provisions of the Colorado Water Quality Control Act and the Colorado Discharge Permit System Permit requirements.

Modifications to the State Highway Utility Accommodation Code (Part I.B.1(f)(4))

CDOT is proposing to incorporate the following changes or additions to the indicated sections of the State Highway Utility Accommodation Code:

Section 102.01, Abbreviations.

- a) **CDPS** – Colorado Discharge Permit System
- b) **WQCD** – Water Quality Control Division
- c) **CDPHE** – Colorado Department of Public Health and Environment
- d) **EMP**- Emergency Management Program

Section 102.02, Definitions.

Illicit discharge: any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except the following: discharges specifically authorized by a CDPS permit and allowable non-stormwater discharges.

MS4: means municipal separate storm sewer system.

State Waters: any and all surface and subsurface waters which are contained in or flow in or through this State, but does not include waters in sewage systems, waters in treatment works of disposal systems, waters in potable water distribution

systems, and all water withdrawn for use until use and treatment have been completed.

Allowable non-stormwater discharges: unless otherwise identified by CDOT or the WQCD as significant sources of pollutants to the waters of the state, the following discharges to stormwater systems are allowed: landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration to separate storm sewers, uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, individual residential swimming pool and hot tub discharges, individual residential street washing, water-line flushing, flows from riparian habitats and wetlands, and flow from emergency fire fighting activities.

CDPHE-EMP: The CDPHE Emergency Management Program (EMP) is a 24 hour spill reporting hotline for the State. The hotline number is: 1-877-518-5608. The EMP can notify downstream entities in case of a spill or a discharge into a waterway. Written notification of a spill or discharge needs to be submitted by CDOT to the EMP within 30 days: EMP, CDPHE, 4300 Cherry Creek Drive South, Denver, CO 80220. Phone: 303-692-3020, Fax: 303-691-7811. Send correspondence information to John Stasinis, Spill Coordinator. The EMP staff will forward a copy of the report to the County District Engineer in the WQCD.

CDPHE-WQCD: The CDPHE Water Quality Control Division has the capabilities to take enforcement actions against illicit discharges and the EMP section of the CDPHE notifies the WQCD of a reported illicit discharge.

CDOT Water Quality Program Manager: The CDOT Water Quality Program Manager is responsible for managing the Illicit Discharge Program for CDOT. This person would have the primary role of submitting illicit discharges to the CDPHE.

Section 203.01 (k).

If utility operations cause or observe illicit discharges, the permittee shall immediately contact CDOT Water Quality Program Manager and CDPHE-EMP. If the utility construction causes an illicit discharge that may potentially enter into the MS4, operations must cease until the discharge has been properly contained and the appropriate corrective measures have been implemented under the direction of CDPHE-WQCD.

Section 203.03(h).

The permittee shall contact CDOT Water Quality Program Manager and CDPHE-EMP immediately if during operation and maintenance procedures an illicit discharge or improper connection to MS4 is observed.

Section 301.06

The utility shall comply with the Colorado Department of Public Health and Environment, Water Quality Control Commission Regulation No. 61, "Colorado Discharge Permit System Regulations."

The CDPHE shall be contacted about the need for a CDPS permit of any type of discharge, including but not limited to the following:

- Construction Site Stormwater Runoff
- Stormwater from Industrial Sites
- Municipal Stormwater
- Drainage from Utility Line Secondary Casings
- Construction Dewatering
- Hydrostatic Testing
- Equipment Wash or Rinse Operations
- Waters Associated With Trenchless Construction Operations
- Wastewater From Off-Site Industrial Operations or Municipal Sewage Treatment Plants

Leaks from utility lines (e.g. water lines, sanitary sewer lines) must be reported to the CDPHE-EMP and CDOT Water Quality Program Manager immediately upon discovery and repaired as soon as possible.

Concrete washout must be done in accordance with CDOT Environmental Program Guidelines, and in no case shall there be a discharge of concrete wash water to the CDOT MS4 or the Waters of the State.

Prohibited discharges include substances such as paint, automotive fluids, solvents, oils or soaps.

Section 303.07

Sanitary sewers will be constructed of materials and installed in a manner that will minimize the potential for any leakage. Additionally, sanitary sewer lines will be located below or far enough away from water lines or storm sewer lines to prevent any leakage that might occur from coming into contact with water lines or storm sewer lines. Where sanitary sewers are located such that any leakage that might occur could reach surface waters, the utility will establish a schedule for routine inspection of the sewer line. Any observed leaks from sanitary sewers within the state highway right-of-way must be reported to the CDPHE-EMP and the CDOT Water Quality Program Manager immediately upon discovery and repaired as soon as possible.

Section 304.06

The utility shall notify the CDOT Water Quality Program Manager and the CDPHE-EMP of breaks or damage to any pipes owned either by the utility or by other entities, arising from the utility's permitted operations, which may lead to contaminated materials entering CDOT's MS4 and eventually discharging into State Waters. The utility shall be responsible for the prompt reconstruction and repair of damaged pipe and environmental cleanup as required by CDOT and CDPHE-WQCD.

Measures to Prevent Improper Connections

CDOT has developed an illicit discharge prevention program that includes, plan review, inspection procedures, including documentation and tracking. The tracking and inspection requirements are the same as in the Industrial Facility Program. This program supports the Illicit Discharge Program in preventing and detecting illicit discharges. Improper connections to CDOT's MS4 can be prevented early during the CDOT Utility, Special Use, and Access Permitting process through the established tracking procedures. During the permitting process, CDOT will examine plan sets to ensure improper connections are not being proposed, identify the proposed connecting discharge, and create a record of new approved connections. The Industrial Facility Program submittal should be referred to for an explanation of the tracking and inspection program.

General Prohibitions of Non-Stormwater Discharges (Part I.B.1(c)(1)(c))

General prohibitions for non-stormwater discharges include non-stormwater flows that are not permitted by a CDPS Permit, and are incorporated in the Illicit Discharges Program through the CDOT permitting process for Utility, Special Use, and Access Permits, ongoing field screening activities, investigation of illicit discharges, spill response, and educational activities. The prohibition of non-stormwater discharges is also incorporated in other CDOT MS4 program such as the Industrial Facility Program, Construction Sites Program, and the New Development and Redevelopment Program. CDOT has developed an education program for the prevention of illicit discharges to educate and train internal staff. The educational activities are summarized in Section V.

The following discharges to the CDOT stormwater system are allowed:

- Landscape irrigation,
- Air conditioning condensation
- Uncontaminated groundwater infiltration to separate storm sewers
- Discharges from potable water sources
- Irrigation water
- Water from crawl space pumps
- Lawn watering
- Individual residential swimming pool and hot tub discharges
- Flows from riparian habitats and wetlands
- Flow from emergency fire fighting activities
- Diverted stream flows
- Rising ground water
- Uncontaminated pumped ground water
- Foundation Drains
- Springs
- Footing drains
- Individual residential car washing
- Individual residential street washing
- Waterline flushing

Annual Reporting

Specifically, CDOT will report, on an annual basis in the Annual Report, the number of inspections performed by CDOT for possible illicit discharges. A table will be included in the appendix to the Annual Report, listing the date the suspected discharge was reported, who reported it, the date it was inspected, whether an illicit discharge was confirmed, what follow-up actions were taken, and when the suspected illicit discharge was referred to CDPHE, if applicable.

Section II - Ongoing Field Screening (Part I.B.1(c)(2))

This section describes CDOT's Ongoing Field Screening Program, which was developed in order to satisfy Part I.B.1(c)(2) of CDOT's Phase II MS4 Permit. More specifically, the permit states:

Ongoing Field Screening. CDOT shall continue to implement a program to screen the MS4 for illicit discharges, illegal dumping, and illicit connections in response to citizen (members of the general public) complaints and CDOT staff observations.

- a) The permittee shall identify the location of new and not previously identified existing storm sewer outfalls discharging into any state waters that are within the permit coverage areas and are CDOT's jurisdiction. It is not necessary for CDOT to repeat surveys of areas that have already been investigated if it is reasonably believed that all MS4 outfalls (both minor and major) have already been mapped. CDOT will perform the outfall mapping per the schedule outlined below and will include submittals to the Division as indicated. Occurrences of significant levels of pollutants observed during the inventory shall be investigated promptly.
- b) Within **12 months** of the permit effective date, CDOT will coordinate internally and with outside entities to determine the efforts already performed to map outfalls along CDOT right-of-ways, gather the existing data of relevant mapping efforts, and formulate a systematic method and procedures to perform the mapping and tracking of outfalls.
- c) As part of the mapping methodology, CDOT will address outfalls that will not be mapped. This will be due to unique conditions that exist for CDOT's MS4 and result in the mapping of certain outfalls not being practicable or of benefit to CDOT's program (e.g., locations where the outfall is from a CDOT gutter directly to a stormwater inlet or gutter owned by a separate MS4). CDOT will submit its evaluation and determination of whether there is a need to improve the existing mechanisms to the Division no later than **12 months** after the permit effective date.
- d) Outfalls shall be mapped for 25 percent of the permit coverage areas (total of 25 percent). This will be completed within **24 months** of the permit effective date.
- e) Outfalls shall be mapped for an additional 25 percent of the permit coverage areas (total of 50 percent). This will be completed within **36 months** of the permit effective date.

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- f) Outfalls shall be mapped for an additional 25 percent of the permit coverage areas (total of 75 percent). This will be completed within **48 months** of the permit effective date.
 - g) Outfalls shall be mapped for the remaining 25 percent of the permit coverage areas (total of 100 percent). This will be completed within **60 months** of the permit effective date.
 - h) The permittee shall continue to respond appropriately to citizen complaints and CDOT staff observations of illicit discharges, illegal dumping and illicit connections. The permittee shall use the CDOT Region Water Pollution Control Manager and CDOT maintenance staff to observe and scrutinize CDOT's MS4 and outfalls for illicit discharges, illegal dumping and illicit connections, during their routine duties. Such employees will receive adequate training as needed. CDOT shall include a summary of such training in the Annual Reports.

Prior to and since CDOT's MS4 Permit effective date, CDOT has been developing the components of its Outfall Inventory and Field Screening Program to meet the requirements of the permit as stated above.

Efforts continue to coordinate with external and internal entities to track and record outfall locations.

CDOT has developed an Outfall Reconnaissance Inventory (ORI) procedure to identify the location of new and not previously identified existing storm sewer outfalls discharging into any state waters that are within the permit coverage areas and are CDOT's jurisdiction. A mapping methodology has been established and includes outfalls that will not be mapped.

Data sharing relationships with adjacent MS4s have been developed to strengthen the mapping efforts.

In addition to the ORI, CDOT has developed procedures for performing field screening of complaint-reported potential for illicit discharges. The purpose of ongoing field screening is to detect and eliminate ongoing non-storm water discharges in the storm sewer systems. CDOT has created a manual for the ongoing field screening program. The manual includes procedures for sampling, tracking, reporting, and follow-up on activities on suspected illicit discharges. Sampling protocols, established "trigger levels", and field inspection documentation procedures were developed for the ongoing field screening program. The Manual is included in this submittal as Appendix B-1.

Identification of Additional Storm Sewer Outfalls (Part I.B.1(c)(2)(a))

CDOT has defined mechanisms for identifying additional CDOT-owned storm sewer outfalls. These mechanisms are also intertwined with the various CDOT MS4 Permit programs and include the CDOT Industrial Facility Program, and the CDOT New Development and Redevelopment Program. Following is a description of each of the mechanisms defined for identifying new or additional CDOT-owned outfalls.

External and Internal Coordination

External

CDOT continues its coordination efforts to share mapping information begun under the previous permit term. CDOT is also an active participant in the Colorado Stormwater Council (CSC). At the November 28, 2007, CSC Committee meeting, CDOT distributed a data sharing request to the Phase II communities. As data is received it is being incorporated into a GIS based map and is compared with field-recorded outfalls to help establish ownership and jurisdiction.

Internal

CDOT is required to track all new connections into its MS4 as part of its Industrial Facility Program. New connections into CDOT's MS4 may result in a modification to the CDOT MS4, which may or may not result in a new CDOT outfall, depending on the design situation.

Additional outfalls may be identified as part of CDOT's New Development Program procedures. As part of the New Development Program, CDOT will identify, categorize, and inventory any newly-constructed CDOT-owned storm sewer outfalls discharging to state waters on an annual basis. Any newly-constructed outfalls will then be added to CDOT's existing outfall inventory. CDOT is exploring options including collecting data on newly constructed outfalls via one of the following methods:

- The Contractor to forward survey data about all outfalls located within project boundaries to CDOT
- CDOT staff to obtain GPS data of new outfalls during the project's final walk through inspection, and complete an Outfall Visit Data Sheet.

Outfall Reconnaissance Inventory (ORI)

The primary field tool is the Outfall Reconnaissance Inventory (ORI), which is used by CDOT to develop a systematic outfall inventory and map of its MS4. Field personnel will record the location of any outfall that they suspect may be CDOT-owned. If the outfall is determined to be CDOT-owned, it will be added to the inventory of outfalls.

CDOT's procedures for ORI and ongoing field screening of suspected illicit discharges during dry weather conditions are documented in detail in the *CDOT Outfall Field Screening Program Manual*, attached to this document as Appendix B-1. In general, CDOT will field-screen outfalls for physical and visual observations such as deposits, staining, and presence of trash. If a dry weather flow is present, the flow rate will be estimated, and the flow will be sampled and observed for visual and physical characteristics such as odor, color, clarity, and presence of floatables. The sample will then be analyzed for pH, conductivity, temperature, chlorine, copper and phenol using field tests. If necessary for safety, and occasionally for verification of field analysis, a sample of the dry weather flow will be sent to a third-party analytical laboratory for similar analyses. The Manual also includes the outfall data sheet that CDOT will use to record information gathered at each outfall during ongoing field screening visits.

Mapping Methodology

Mapping all storm outfalls will likely be a resource intensive effort. In order to utilize CDOT resources effectively and target high-potential areas for illicit discharge, a list of conditions was established to identify areas of priority for mapping. CDOT's mapping methodology for priority areas was developed in conjunction with the EPA webcast "Developing your IDDE program" and the EPA document "Illicit Discharge Detection and Elimination: A Guidance Manual for Program Development and Technical Assessments." The following list was used to develop priority areas:

1. Waters of the State - State Highway that crosses over waters of the state
2. Impaired stream segments (303d)- stream can parallel or intersect. Only streams with highway constituent impairments will be mapped. (refer to AASHTO's list of highway constituents)
3. Major CDOT highways and roads- 0.5 Miles of centerline
4. Industrial or Commercial Zoning

Phase II areas where the local agency has begun mapping will be given priority over areas where no mapping has been done in order to build on what has already been created on a local level. Phase I areas have had some mapping done previously so these areas have lower priority. In order to maximize efficiency, mapping of the CDOT system in a community should be finished before moving to the next community. When starting the mapping in a community, areas with a high potential for illicit discharge, due to elements listed above should be mapped first.

Based on continued fieldwork, observations from CDOT employees, and complaints from the public regarding illicit discharges, the priority of some areas may need to be adjusted and, at times, areas of lower priority may need to be investigated earlier.

After determining priority mapping areas, the following procedures were developed for field surveys:

Frequency of Screening

Outfalls will be inspected and sampled in response to complaints received by the CDOT Hotline (303-512-4426). As stated in the Manual, any complaint-reported outfall will be screened following CDOT's receipt of the complaint.

Annual Reporting

Specifically, CDOT will provide, in the Annual Report a narrative status of the mapping effort and the number of outfalls mapped. CDOT will also report amount of coverage area inventoried, as well as any changes to the protocols for ongoing field screening, and the reason for the changes.

Section III - Investigation of Suspected Illicit Discharges (Part I.B.1(c)(3))

Investigating suspected illicit discharges is the third step towards eliminating illicit discharges from the MS4 system. Section III includes procedures and methods used to report, investigate, track, and eliminate the discharge.

The following program elements are required under (Part I.B1(c)(3)) of the permit, which requires CDOT to develop a program to investigate suspected illicit discharges. Specifically;

- a) “CDOT shall continue to implement a program to investigate and identify suspected sources of illicit connections and improper disposal in the Phase I permit coverage areas.
- b) CDOT shall re-evaluate and modify, as appropriate, the existing procedures for tracing and removing the source of an illicit discharge within the entire permit coverage area. This will be completed within **12 months** of the permit effective date.
- c) CDOT shall develop and implement a program to train identified personnel who can respond to reports of illicit discharges in permit coverage areas. These personnel will be qualified in performing field screening and in the procedures for tracing and removing illicit discharges. CDOT shall review and revise the Illicit Discharge Program Manual and Dry Weather Observation/Procedures Manual as appropriate to include any modifications to the program and submit such revisions to the Division for comment within **24 months** of the permit effective date.
- d) CDOT will report the number of illicit discharges investigated and the follow-up action taken as part of the Annual Report.

In order to effectively respond to all illicit discharge incidents, a comprehensive program was developed by CDOT to work in conjunction with the Colorado Department of Public Health and Environment (CDPHE). Unlike CDOT, CDPHE has the enforcement capabilities to fine or prosecute the violating entities, depending on the severity and regularity of illicit discharges from their facilities. The program incorporates the following components in accordance with the requirements of the permit.

1. Appropriate corrective actions including:
 - A trained water pollution response team (to respond and investigate reported non-hazardous discharges into CDOT storm drains)
 - Identify the source of the illicit discharge, such as by tracing the discharge upstream
 - Sampling of suspected illicit discharges if thought to be the responsibility of CDOT
2. Follow-up procedures by CDOT where violating entities are first notified by CDOT of the illicit discharge and further coordination as required with the CDPHE.
3. Maintain a database that will aid CDOT in reporting the number of illicit discharges investigated and the follow-up action taken in the Annual Report.

Reporting Illicit Discharges

This section of the program addresses procedures to be followed when reporting an illicit discharge, investigating a discharge, and following through on corrective actions. A summary of the general procedures is provided in the following sections and additional procedures and forms are included in Appendix B and C.

A comprehensive outline of the illicit discharge reporting process entails more than providing a phone number for CDOT staff or for members of the public to call. For instance, CDOT staff and the public need to know what constitutes an illicit discharge prior to being able to report it, as well as what number to call. Educating the public on the identification of an illicit discharge, and the existence of a hotline is addressed in Section V Educational Activities.

Whether an illicit discharge is reported by a CDOT employee or through public reporting (via hotline number, web site, or other public reports), it is the responsibility of CDOT to follow through with an investigation. Once CDOT staff receives a report of a possible illicit discharge, the appropriate action level will be determined. CDOT will either mobilize their water pollution response team or directly call CDPHE for immediate action in the case of a hazardous material or unidentified material spill.

All reports of illicit discharges will be directed to the CDPHE Emergency Management Program (EMP) within 24 hours and a written notification will be sent within 30 days to the CDPHE-EMP. CDPHE-EMP hotline number is 1-877-518-5608. Correspondence information will be sent to the Spill Coordinator, and the Colorado Spill Report Form (CDPHE-EMP) will be filled out. The CDPHE-EMP has indicated that filling out their Colorado Spill Report Form is very helpful. This form is included in Appendix C. The EMP staff will then forward a copy of the report to the county District Engineer in the Water Quality Control Division (WQCD).

Further actions and notifications can include:

- Contact State Patrol dispatch if the material is a known hazard
- Contact the road or site supervisor where the discharge occurred
- For hazardous discharges, contact the Country District Engineer where the discharge occurred
- Issue a letter of violation to the upstream offender
- Remove illegal sanitary sewer connections, if present
- Complete incident tracking forms, from which CDOT compiles a database

Phone Hotlines

A phone hotline has been developed by CDOT in order to provide a way for the public and field staff to easily report an illicit discharge. The hotline number is 303-512-4H20 (4426). Appropriate CDOT staff will be properly trained to effectively respond to hotline calls. The CDOT staff member that receives a call from the public will record all information relevant to the report (Form-A, Appendix C), including location, description of the suspected illicit discharge, and any other site-specific relevant information. The CDOT staff member receiving the call will be equipped with a list of options so that they mobilize an appropriate response team, redirect the call to a more appropriate agency, or in the event the reported information is inconclusive, dispatch an inspector to the site.

Illicit Discharge Identification

The vast majority of illicit discharges can be detected visually. Indicators include discoloration of the storm water, presence of surface scum, oil sheen, turbidity, and sanitary sewer evidence. Other visual clues include the presence of stains, oils, residues, or debris adjacent to CDOT roads and inlets. A pungent odor emanating from any part of the storm drain system is also evidence of an illicit discharge. CDOT staff and the public will be educated to identify illicit discharges based on the visual and odor clues identified above. Tracking forms for CDOT staff will be available for reporting suspected discharges in the field (Form-B, Appendix C). Field screening and educational activities are discussed in detail under Section II, Ongoing Field Screening and Section V, Educational Activities, respectively (see Appendix C for more information on field investigation procedures).

Identifying an Appropriate Response Team

All illicit discharges, hazardous or non-hazardous, should be managed to protect water quality as well as worker and public safety. CDOT will have the response communication capabilities to coordinate with CDPHE, local municipalities, counties, and state or federal agencies, as appropriate, to best determine the cleanup approach and level of action required. CDOT's primary response will be from the Water Quality Program Manager. Additional response will be provided by the CDOT regional environmental representatives when necessary. The Water Quality Program Manager and regional environmental representative or their designee will compose the CDOT water pollution response team, which will be trained in sampling and identification of illicit discharges.

For non-hazardous discharges, the CDOT water pollution response team will make an effort to identify the discharge and provide remedial support. CDOT will work with municipalities, industries, or businesses that discharge to resolve the illegal discharge. If no illicit discharger is identified by CDOT, then CDOT will contact the CDPHE for assistance. CDOT will notify the CDPHE Water Quality Control Division (WQCD) at 303-692-3500 and report the illegal discharge to the District Engineer in whatever county the spill is located.

When a hazardous material illicit discharge is suspected or known, the CDPHE-EMP shall be contacted immediately. The CDPHE-EMP will coordinate further action levels with other entities such as local HAZMAT team and the National Response Center. Another alternative, when reporting hazardous discharges, would be to call 911, who would contact the appropriate response personnel.

The Property Management Group at the CDOT headquarters office in Denver, should be contacted to cleanup orphan spills in the CDOT right-of-way if the Colorado State Patrol cannot identify the source. These spills can also be illicit discharges, which originated as spills on the highway and spread into the nearby storm drain. The Property Management Group can hire contractors to help CDOT clean-up orphan spills on CDOT highways and facilities.

Corrective Actions

CDOT has the responsibility for determining the best course of action to protect their storm sewer system in the event that an illicit discharge occurs in one of their outfall systems. Following a report of an illicit discharge, the appropriate CDOT water pollution response team is immediately dispatched by the Water Quality Manager or regional representative to the reported location to attempt to contain and track the source of the illicit discharge. In the event that the illicit discharge is considered to be a spill on a state highway, procedures from CDOT's *Guide to Hazardous Materials Response on State Highways* should be followed in conjunction with the developed illicit discharge protocol (see Appendix C). The Water Quality Program Manager is responsible for completing a detailed tracking form documenting the illicit discharge (Form-C, Appendix C) and submitting it to the CDPHE-EMP.

Sampling of Suspected Illicit Discharges

Investigation of the suspected illicit discharge will focus on finding the source of the suspected illicit discharge. The investigation of the source should commence immediately upon the discovery of possible illicit discharge. The Inspector will trace the discharge upstream using the appropriate methods and resources. Methods to track down illicit discharges include:

- Visual inspection within the drainage area. The first step in the investigation is to determine if there is/are any obvious source(s). For example, if foaming is noted, looking for someone washing a vehicle may be the first step.
- Inspect or sample manholes from downstream to upstream. If an obvious source is not noted, then it may be necessary to pop manholes and perform additional monitoring.

Sources of illicit discharges can be potentially identified by analyzing discharge for specific chemical constituents which may be further associated with specific industries. For example, the presence of high levels of total coliform, in the 1-10 million range, could be an indicator of an illegal sanitary sewer connection. Samples should be taken upstream at strategic locations in the watershed to identify these connections. A list of recommended testing procedures is included in the *CDOT Outfall Field Screening Program Manual*, attached to this document as Appendix B-1.

Sampling will be performed by trained CDOT environmental representatives. The parameters that will be analyzed include: temperature, pH, phenol, total chlorine, copper, and surfactants. In addition, parameters like odor, color, or clarity can be used to quickly identify which sewer lines contain the illicit discharge. Specific procedures for field sampling are documented in detail in the *CDOT Outfall Field Screening Program Manual*, attached to this document as Appendix B-1.

Removal of Illegal Connections

Improper connections can be detected by utilizing a combination of methods for investigation of non-stormwater discharges, such as sampling, visual/TV inspection, and using dye tests. Observations can be made during dry weather at all discharge points for abnormal conditions. Sampling of key parameters can be performed to further identify the source of the illicit discharge. Furthermore, a dye test can be performed by releasing a dye into a suspected sanitary or other connection. A color change in the discharge from a storm water system would indicate that these suspected sources are illegally discharging to the storm drain system. Such illegal connections may be physically sealed with concrete if the offending party fails to prevent further illicit discharges. Illegal connections may best be prevented by implementing a comprehensive construction inspection plan.

Follow-up

Once the source of an illicit discharge has been identified, steps should be taken to fix or eliminate the discharge. Four questions should be answered for each individual suspected illicit discharge to determine how to best proceed. Answers will usually vary depending upon the source of the discharge.

- Who is responsible?
- What methods will be used to repair?
- How long will the repair take?
- How will removal be confirmed?

Financial responsibility for source removal will typically fall on property owners, adjacent MS4 municipalities, or a combination of the two. Methods for removing illicit discharges usually involve a combination of education and enforcement. CDOT's procedures for fix eliminating illicit discharges and connections rely on an escalating enforcement approach.

If a determination is made on the source of the discharge, CDOT will issue a letter stating the violation to the discharger. The letter should state what parameters were detected as well as the location and date detected. If conditions required that corrective actions be taken by CDOT, CDOT should state the costs for the clean-up. However, if CDOT cannot resolve the matter, CDPHE-WQCD, who has the enforcement capabilities of issuing a summons, fines, and prosecuting the offending discharger(s) shall be notified. An example letter is presented in Appendix C. Table 1 lists some common methods to fix illicit discharges.

TABLE 1

Methods to Fix Illicit Discharges

Sewage	Break in right-of-way	Repair by CDOT or municipality
	Commercial or industrial direct connection	Enforcement
	Residential direct connection	Enforcement; incentive or aid
	Infrequent discharge (e.g., RV dumping)	Enforcement; Spill response
	Straight pipes/septic	Enforcement; incentive or aid
Wash water	Commercial or industrial direct connection	Enforcement; Incentive or aid
	Residential direct connection	Enforcement; Incentive or aid
	Power wash/car wash (commercial)	Enforcement
	Commercial wash down	Enforcement
	Residential car wash or household maintenance- related activities	Education
Liquid wastes	Professional oil change/car maintenance	Enforcement; Spill response
	Heating oil/solvent dumping	Enforcement; Spill response
	Homeowner oil change and other liquid waste disposal (e.g., paint)	Warning; Education; Fines
	Spill (trucking)	Spill response
	Other industrial wastes	Enforcement; Spill response

Follow up inspections are necessary to insure the offending party has discontinued discharging illegally into the storm drain system. Periodic inspections should be conducted during both wet and dry weather for at least a year after the initial spill. If further contamination is detected from a previously identified source, CDOT can again issue another notice stating the violations. If the matter is not resolved, the CDPHE-WQCD should be contacted immediately in order to take legal actions against the offending party. All CDOT complaints originating from follow-up inspection, notification, and/or enforcement action, should be forwarded to the CDPHE-WQCD.

Illicit Discharge Reporting Procedures for CDOT Staff

(Part I.B.1(c)(3)(c))

The following procedures identify actions and internal reporting responsibilities to be taken by CDOT employees in the event of an illicit discharge into CDOT's storm sewer system.

Reporting

When a CDOT employee encounters an illicit discharge:

Step 1. They should be prepared to observe and report the following information:

- Location of incident.
- Observe and size-up incident from safe distance
- Try to recognize suspicious activities in area.
- Possibly note names and contact information for people involved in incident.
- Type of material. If the material cannot be safely identified, keep a safe distance from suspected illicit discharge and avoid contact.

When a citizen reports a suspected illicit discharge, general questions should be asked about the illicit discharge such as the location and visual characteristics of the incident. CDOT will further investigate the incident to determine what, or if, additional actions are necessary.

Step 2. Call the CDOT Illicit Discharge hotline to report incident. The number is: 303-512-4H20 (4426).

The hotline person will fill out an initial tracking form with basic information provided by the reporting person. This information will include observational data from Step 1 above.

Incident Routing and Response

After the incident is reported to the hotline, the call will be routed to the appropriate CDOT personnel for further action based on questions addressed to the person reporting the incident.

The first set of questions to ask:

1. Is the material in the storm drain or waterway?
2. Is it just on the highway?
3. Or is the material both on the highway and in the storm drain?

If the material is contained within the storm drain or waterway, it is categorized as an illicit discharge. Similarly, if material spilled on the highway is spreading from the highway surface into the storm drain, then it is an illicit discharge. Further questions need to be asked to assess the type of illicit discharge and identify appropriate actions that need to be taken.

1. Is the illicit discharge a known hazardous material?
2. Is the illicit discharge a known non-hazardous material?
3. Or is the illicit discharge unknown and cannot be safely identified?

Material in the Storm Drain

If the material is in the storm drain and a **known hazardous material**, then:

- Step 1. The incident will be reported immediately to the CDOT Water Quality Program Manager, if unavailable then the CDOT regional representative should be contacted. If both, the Water Quality Program Manger and CDOT regional representative are unavailable to respond, call 911 or the CDPHE immediately (CDPHE 24-hour Environmental Emergency Spill Reporting Line 1-877-518-5608). The CDOT Water Quality Program Manager or regional representative will notify the Colorado State Patrol Dispatch (24-hour hotline: 1-303-239-4501) to address the problem until higher authority such as the CDPHE or a remediation contractor are at the scene of the incident.
- Step 2. The CDOT Water Quality Program Manager will fully document the illicit discharge with the tracking form and send a copy to the CDPHE Emergency Management Program (EMP). The CDOT Water Quality Program Manager will report incident to the CDPHE-EMP within 24 hours and submit a written notification to the CDPHE-EMP within 30 days. The CDOT Water Quality Program Manager will notify the site or road supervisor where the illicit discharge occurred.

The CDPHE-EMP will report releases of petroleum products and certain hazardous substances listed under the Federal Clean Water Act (40 CFR 116) to the National Response Center immediately (24-hour hotline: 1-800-424-8802).
- Step 3. The CDPHE-EMP will notify downstream entities of the illicit discharge and the CDPHE Water Quality Control Division (WQCD) will take further follow-up action and, if necessary, enforcement action against offending parties.

If the material is in the storm drain and a **known non-hazardous material**, then:

- Step 1. The incident will be reported immediately to the CDOT Water Quality Manager , and if unavailable then the CDOT regional representative should be contacted.
- Step 2. The CDOT Water Quality Program Manager will fully document the illicit discharge with the tracking form and send a copy to the CDPHE-EMP. The CDOT Water Quality Program Manager will report incident to the CDPHE-EMP within 24 hours and submit a written notification to the CDPHE-EMP within 30 days. The CDOT Water Quality Program Manager will notify the site or road supervisor where the illicit discharge occurred.
- Step 3. The CDPHE-EMP will notify downstream entities of the illicit discharge.
- Step 4. The CDOT Water Quality Program Manager will dispatch the CDOT water pollution response team to determine the nature of the illicit discharge.
- Step 5. The CDOT Water Quality Program Manager will issue a letter of violation to the upstream offender. If the offender cannot be identified by CDOT, then CDOT shall contact the CDPHE-WQCD for further assistance.
- Step 6. Follow-up inspections will be performed by the CDOT Water Quality Program Manager to determine if the offending party has cleaned up the illicit discharge and discontinued discharging into CDOT's storm sewer system. If no action or response has been taken by the offending party, then CDOT will contact the CDPHE-WQCD.
- Step 7. The CDPHE-WCQD will take further enforcement action, if necessary.

If the material is in the storm drain and is **unknown or cannot be safely identified**, then:

- Step 1. The incident will be reported immediately to the CDOT Water Quality Program Manager and if unavailable then the CDOT regional representative should be contacted. If both, the Water Quality Program Manger and CDOT regional representative, are unavailable to respond, call 911 or the CDPHE immediately (CDPHE 24-hour Environmental Emergency Spill Reporting Line 1-877-518-5608).
- Step 2. The CDOT Water Quality Program Manager will dispatch the CDOT water pollution response team to determine if the illicit discharge is a hazardous or non-hazardous material. Additional assistance from trained personnel may be necessary for this step. If the material is identified as hazardous, then follow procedures for hazardous materials in storm drains. If it is a non-hazardous material, then follow procedures for non-hazardous material in storm drains.

Materials on the Highways

If the reported material is located on the highway, can be clearly seen as solely being on the highway, and not spreading into the drainage pathways where it possibly may enter the waterway or storm drain, then the incident is classified as a spill on the highway. Appropriate existing CDOT guidelines will be followed to take action for spills on highways. These guidelines are outline in the Colorado Department of Transportation *Guide to Hazardous Materials SPILL RESPONSE on State Highways* (August 2000) and are located in Appendix D. CDOT should take no further action beyond emergency response assistance and notification. However, if CDOT finds an orphan spill for which a responsible party cannot be found, then the CDOT Property Management Group should be contacted.

Non-hazardous spills on highways should be reported to the regional Maintenance Supervisor and/or the Colorado State Patrol. Hazardous spills will be directed to the Colorado State Patrol (24-hour hotline: 1-303-239-4501). All spills will be reported to the CDPHE-EMP. In addition, written notification documenting the spill incident will be provided to the CDOT Water Quality Program Manager.

The role of CDOT employees in a hazardous materials incident is one of support only. CDOT can block access to roads when instructed by state patrol and CDOT must be ready to block drainage of the hazardous material into a waterway. In incidents where the material that has spilled on the road is spreading into the drainage waterway, CDOT personnel shall be prepared to block the spill according to the CDOT hazardous material spill guidelines.

Materials on the Highway and in the Storm Drain

If the material is both present on the roadway and can be clearly seen in the storm drain/waterway, then:

- Step 1. The incident will be reported immediately to the CDOT Water Quality Program Manager and if unavailable then the CDOT regional representative should be contacted. If both, the Water Quality Program Manager and CDOT regional representative, are unavailable to respond, call 911 or the CDPHE immediately (CDPHE 24-hour Environmental Emergency Spill Reporting Line 1-877-518-5608). The CDOT Water Quality Program Manager or regional representative will notify the Colorado State Patrol Dispatch (24-hour hotline: 1-303-239-4501), to address the problem until higher authority such as the CDPHE, or remediation contractor, are at the scene of the incident.
- Step 2. The CDOT Water Quality Program Manager will dispatch the CDOT water pollution response team. The team will perform sampling to determine the nature of the illicit discharge.
- Step 3. Follow procedures for hazardous or non-hazardous materials in storm drains as well as procedures for materials on highways.

Documentation

It is important for all the different components of the Illicit Discharge Program to be well documented. This information should be kept on file for 7 years as part of the CDOT compliance record as well as providing historical information that allows CDOT to identify reoccurring areas that have illicit discharge problems.

Annual Reporting

The number of illicit discharges reported, the follow-up procedures taken, and current status of the illicit discharge will be included in the Annual Report. Specifically, CDOT will report the number of instances when possible illicit discharges were found to be actual illicit discharges. . The non-illicit discharges will be characterized (i.e. permitted discharge, irrigation return flow, stormwater). Finally, the number of possible illicit discharges which were forwarded to CDPHE will be reported.

Section IV - Spill Response on State Highways

(Part I.B.1(c)(4))

CDOT prevents, contains, and responds to spills through coordination various departments, including the Colorado State Patrol (CSP) and the CDPHE, and occasionally from other City departments. The existing spill program assists personnel in a hazardous material spill on State Highway system. The program identifies the actions to be taken in the event of a hazardous material spill or dumping on the state highway system.

CDOT employees who may be involved with spills are encouraged to become familiar with the contents of the spill program. Each CDOT vehicle carries a copy of the spill program and the *U.S. Department of Transportation Emergency Response Guidebook*. In additional, CDOT provides proper training in hazardous material spill response through the Safety Coordinator and/or Department Hazardous Material Coordinator.

The CSP has been trained to handle hazardous materials spills and will be in charge of the area until relieved by a higher authority (CDPHE). Otherwise, in cases where spills may occur and CDOT staff needs to respond, the spill program guidelines will be followed and as well as guidelines in the *U.S. DOT Emergency Response Guidebook*. Generally, the role of CDOT employees in a hazardous materials incident is of support only. CDOT does not have the equipment or training to take part in such incidents. The department will be ready to block drainage of the hazardous material into a drainage way or receiving water body adjacent to the State Highway system.

Actions to be Taken

The following is a summary of the guidance procedures provided by CDOT staff.

1. Avoid contact with spilled material and avoid breathing vapors, smoke or dust originating from the material.
 - Observe and size-up the incident from a safe distance. Providing rescue and first aid shall be at the employee's discretion. Providing for the safety of the public and activation of other emergency services is first priority.
 - Stay upwind of fires and spills; keep out of low areas.
 - Take necessary actions to control traffic and protect motorists. Keep all persons as far away from the incident as is practical.
 - **Do not** clean up any unfamiliar, unknown or suspected hazardous material. Avoid spreading contamination (i.e., liquids, solids, or gases). Refer to the U.S. DOT Emergency Response Guidebook.
 - Obtain names and detain all persons involved with the incident.

-
- Notify nearest emergency response authority (i.e., police, fire, medical, patrol, etc.).
 - Remain calm and wait for arrival of emergency response personnel.

2. Obtain facts and information - this information will be helpful to the Emergency Responders and the Maintenance Supervisor.

- What hazardous material is involved? Obtain chemical name(s), trade names(s), manufacturer's name(s) and ID number(s).

Material ID problems - if the material cannot be safely identified, the carrier's business office may be able to provide some information about the content of the load. If they cannot, then a properly equipped Hazardous Material Response Team should be called in to identify the material.

- Examine bill of lading, shipping papers, placards, and labels if safe to do so.
- Interview the driver for additional information.
- What is the total amount of material and estimated spilled amount?
- Observe physical state and appearance of material. Is it a solid, liquid, or vapor? Is it just sitting there or reacting? Color? Smell? On fire? Wind direction and speed?
- Has the material been contained or is it still spreading? Contained how? Spreading where?
- How close is the spilled material to traffic, adjacent property, and waterways?
- How is traffic being handled?
- Has the spiller contacted a response or clean-up crew? Who are they? When will they arrive?
- What other agencies are on-scene or have been notified?

3. Call For Help.

- Notify the Maintenance Supervisor and/or the Colorado State Patrol by radio, telephone, or messenger. The order of notification may vary depending on the time of day, day of the week, and other factors. Use the reporting method that works best.
- Provide this person or agency with your name, incident location, method by which you can be contacted, and the information.
- Ask the person to notify the local emergency response agency 911 if available, or local police and fire.
- The employee should make sure that the Maintenance Superintendent has been notified or have the notification done by the individual or agency contacted.
- Colorado Department Of Transportation Responsibilities - The Maintenance Superintendent should call the Regional Engineer to report the details of the

incident. If necessary, the Regional Engineer should notify appropriate personnel at headquarters.

4. Coordinate Actions With the Emergency Response Personnel.

- Each incident should have a person designated as the “Incident Commander” who will be in charge of operations at the scene.
- The employee should report to this person upon arrival and coordinate his/her activities with that person.
- If there is no Incident Commander, then one should be selected from the officials on-scene. The Incident Commander will usually be an official of the local responding agency. During clean-up and restoration, the Incident Commander will normally be an official from the proper state and/or federal agency. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators (agency representatives).
- The Incident Commander should contact a public or private response team if the responsible spiller fails to do so within a reasonable amount of time. This has to be a judgment call based on the circumstances. On a high volume highway where adequate detours are not available, a “reasonable amount of time” may be measured in minutes.

5. Isolate Spill Area.

- The U.S. DOT Emergency Response Guidebook should be referenced to determine basic emergency actions and isolation distances. Additional emergency actions may be needed as determined by the Incident Commander.
- Traffic Control - temporary closure of the highway may be required if the safety of the traveling public or emergency response personnel is threatened.
- The CDOT is responsible for closures of highways, but should comply with the Incident Commander’s decisions.
- If traffic is affected by the incident, the maintenance supervisor or his designee will assist in routing traffic and determine detour routes if necessary.

6. Wait for additional instructions. As previously noted, do not clean up any unfamiliar, unknown, or suspected hazardous material.

- Notify the Maintenance Supervisor before taking any further action.

Material Containment/Clean-Up

- Containing the Material - sand or absorbent material may be needed to contain the hazardous material and prevent further contamination. Adjacent property or waterways should be protected when it can be done safely. Highway personnel may take this action but should first consult with the Maintenance Supervisor and/or Incident Commander, or reliable source for recommended safety precautions. Such

actions should be avoided when special protective equipment or clothing is recommended.

- Clean Up Response - the clean up of hazardous materials is the carrier's responsibility. When the material has been properly identified, a hazardous material clean-up team should be contracted and mobilized immediately. Spills caused by other parties are the responsibility of the other party; however, if no responsible party has been identified, CDOT will respond as described in their program.

Telephone Numbers

For Notification, Response and Information

*Emergency Notification	911
*Chemtrec	1-800-424-9300
*National Response Center	1-800-424-8802

Local

*Fire Department	(consult local phone directory or dial 911)
*Police.....	(consult local phone directory or dial 911)
*Public Works.....	(consult local phone directory or dial 911)
*Sheriff.....	(consult local phone directory or dial 911)

State Of Colorado

Department Of Health (Receipt Toll Free)	888-227-7914
*For Reporting Spills To CDPHE & CEPC (24-Hour)	877-518-5608
Colorado Department Of Transportation Regional Safety Officer.....	303-273-1849
Hazmat Coordinator	303-512-5521
*State Patrol - Dispatcher.....	303-239-4501
State Patrol Hazmat Office	303-273-1900
*Poison Prevention Center - Denver	1-800-222-1222
*Outside Denver - Toll Free	1-800-332-3073

*24-Hour Number

Annual Reporting

CDOT will report the number of spills which occurred within the CDOT MS4 as well as the follow up action taken in the Annual Report,. In addition, the number of these spills which resulted in enforcement action by CDOT will also be reported.

Section V - Education Activities

(Part I.B.1(e)(1))

CDOT has developed an Educational Program as a component of its MS4 Permit. CDOT's communications and education efforts have sought to create awareness of the various MS4 program measures which include the Illicit Discharge program. The educational program outreach effort targets appropriate opportunities, such as CDOT sponsored training, workshops, meetings, or other various means.

CDOT's Illicit Discharge educational program is targeted primarily toward CDOT employees. As the program develops further, it will be broadened to include other audiences such as contractors who do business with CDOT, professional contractor associations, and to a very limited extent, the general public. The general public can be reached through distribution of educational material at CDOT rest stops and other state offices. The extent of the program will depend upon available funding.

Educational Activities for Illicit Discharges & Reporting Procedures (Part I.B.1(c)(3)(c))

CDOT's Illicit Discharge Program addresses the requirements of Part I.B(a)(3) of the MS4 Permit. The program includes:

- Guidance to be used by CDOT staff when, in the course of their normal duties, they identify illicit discharges originating from CDOT owned facilities (these guidelines are outlined in Section III of this submittal),
- Procedures to be followed to respond to and report such discharges; and
- The illicit discharge phone hotline, a means of reporting illicit discharges.

Section 3 of this document provides details of the procedures used in reporting Illicit Discharges. These procedures have been communicated to CDOT staff through a technical bulletin on this topic dated March, 2002. Additionally, the hotline for reporting illicit discharges is promoted through a distribution of a poster, wallet and visor cards, and a brochure.

These program communications cover information about:

- Defining what an illicit discharge consists of,
- What distinguishes an illicit discharges from a roadway spill,
- Identifying the telltale signs of an illicit discharge,
- Warning against dumping motor vehicle fluids and toxic materials into stormdrains,
- Encouraging reporting of potential illicit discharges via the hotline, and

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- Explaining what should be noted when reporting a potential discharge, including:
 - Location where potential discharge is observed,
 - Description of the suspected illicit discharge, and
 - Any other site-specific relevant information.

Various communications tools have been, and will continue to be, used to increase awareness and understanding of the need for reporting potential illicit discharges. These tools are described later in this section. As necessary, these tools will be updated and new communication techniques will be implemented.

Educational Activities to Promote Proper Management and Disposal of Toxic Materials

CDOT's program to promote proper management and disposal of toxic materials addresses the requirement of the MS4 Permit. This requires CDOT to develop and implement a program, including standard operating procedures, for the collection, recycle, reuse or proper disposal of used motor vehicle fluids (at a minimum, oil, and antifreeze) and toxic materials (including paint, solvents, pesticides, herbicides and other hazardous materials) used in CDOT operations.

To address these items/actions, the Program consists of:

- Communications – The initial promotional effort includes: the development and distribution of educational materials, including posters and bulletins, the web site, and educational events such as an annual Winter Conference, with messages on proper disposal of toxic materials. A description of these program tools is given below.
- Facility Runoff Control Plans – Development and dissemination of plans, training and information relating to proper disposal of toxic materials or motor vehicle fluids at CDOT maintenance facilities as specified in each Facility Runoff Control Plans.
- “Adopt a-Highway” - CDOT's existing Adopt a-Highway Program is a measure for ensuring that not only trash but also other materials that could potentially pollute stormwater is removed from roadside areas. The program involves volunteers who select an approximately 2-mile stretch of highway, and who provide clean-up of that roadside area about four times a year. Adopt a highway coordinators are designated for various areas around the state. The Adopt a Highway program is promoted through CDOT roadside signs, the CDOT Web site, a newsletter and various other means at CDOT.

Promotion of Pollution Runoff Control Procedures at Maintenance Facilities

CDOT's education program to promote proper management and disposal of toxic materials is also accomplished in tandem with the development of Facility Runoff Control Plans (FRCP). These plans are developed with the facility manager of each CDOT site. The plans describe procedures used to prevent and reduce pollutants in stormwater runoff through assorted measures, including properly disposing of toxic materials and motor vehicle fluids.

The plans call attention to the need to manage, properly store and dispose of materials such as magnesium chloride, motor oil, hydraulic and transmission fluids, paints, herbicides, degreasing solvents and antifreeze, trash and debris collected from roadways, known or unknown hazardous wastes and materials collected from street sweeping operations.

The plans are site-specific, identifying potential pollutants, current site practices, and if required, recommended control measures. Where applicable, the frequency of control measures are specified, along with a schedule of implementation for best management practices. The FRCP plan is, in itself, a communication tool to guide CDOT activities.

In the future, program communications will incorporate information highlighting the role, existence and contact information for the CDOT hazardous materials response team. Typical actions, which are incorporated into several CDOT FRCPs will be summarized in a technical bulletin, included on the CDOT web site and provided at CDOT training events.

Communication Tools

CDOT's program includes, but is not limited, to the development and dissemination of the following tools.

Posters

CDOT's educational program includes the development and distribution of a poster promoting reporting illicit discharges by CDOT employees and to advertise the CDOT Illicit Discharge Hotline. A copy of the first poster is included in this submittal (Appendix E) The poster headline reads; "Prevent Pollution to Colorado Waterways, Don't Dump Down Road Drains." The poster warns against dumping certain materials into road drains and indicates that pollution impacts aquatic life, wild life and people who recreate and fish. CDOT's hotline number is printed prominently on the poster. Posters are distributed to CDOT maintenance facilities across the CDOT regions, as well as at CDOT headquarters offices. In the future, CDOT will approach other governmental offices as a means of expanding its distribution of posters to others outside of the CDOT arena.

Bulletins

CDOT's educational program includes broad-based outreach to its employees. Various bulletins for stormwater topics have been developed and distributed. A bulletin highlighting Illicit Discharge issues was been distributed to approximately 3,000 CDOT employees, and is available on CDOT's website, along with other information regarding stormwater quality. The bulletin covers information about CDOT's role in helping to control pollutants from being dumped into storm drains. It alerts readers to the telltale signs of an illicit discharge so they are more knowledgeable about what might be a problem. It also outlines items that a CDOT employee should take note of and report to the illicit discharge Hotline. Finally, the bulletin addresses "spills" and distinguished these from illicit discharges. Communications includes a listing of the Colorado State Patrol 24-hour Dispatch number. The Illicit Discharge Bulletin may be updated, reprinted and distributed, as appropriate in the future.

Wallet and Visor Cards

Wallet and visor cards serve as a supplemental educational tool used to reinforce best management practices by CDOT maintenance personnel. These cards are distributed at all CDOT maintenance sites and in conjunction with CDOT-sponsored training or conferences.

Website

CDOT's web site presents information related to the MS4 Permit and water quality. Information is included under the "Environmental" section of the CDOT web site, and more

specifically, under the “Water Quality” pages of the Environmental section. The web site address is: <http://www.dot.state.co.us/Environmental/>

The site includes general information about water quality, as well as specific information relevant to illicit discharges. Technical bulletins are also posted in the web site. In the future, the “Frequently Asked Questions” section will be expanded to include information relevant to reporting illicit discharges as well as tips and guidelines for the proper disposal of toxic materials and motor vehicle fluids.

Winter Conference

The “Winter Conference” is an ongoing element of CDOT’s educational program. The conference is held each January or February when on-site project work is minimal due to winter conditions. Each year at the Winter Conference, opportunities are taken to promote awareness of CDOT’s Illicit Discharge program.

Messages and materials at the conference encourage reporting of illicit discharges and promote proper disposal of motor vehicle fluids and/or toxic materials as well as addressing other CDOT storm water programs. For example, at the 2008 conference there was a session entitled: “Illicit Discharges – Your Role and Responsibility”. This session covered topics about CDOT legal responsibility to control pollutants from entering stormdrains, defining what an illicit discharge is, and outlining CDOT’s program to detect and respond to discharges. Conference attendees receive written copies of conference presentation materials as a supplemental education tool. A copy of the 2008 Winter Conference agenda is included at the end of Appendix E.

Future Communication Tools

As the Illicit Discharge/Toxic Materials program develops, additional educational materials or educational efforts may include:

- Flyer/Bulletin - develop a flyer or bulletin highlighting typical materials and control measures that must be implemented at CDOT maintenance facilities. This concisely written educational tool would serve as a supplement to reinforce good housekeeping activities at CDOT maintenance facilities. These flyers would be distributed at all CDOT shop sites, as well as in conjunction with any CDOT-sponsored training or conferences.
- Web site - Expanding CDOT’s web site to include a page and links to the various facility runoff control plans as they are developed.
- Training - providing presentation materials, handouts to be distributed in tandem with existing or scheduled training exercises, such as those conducted at Camp George West. Other ways that may be cost-effectively employed is to “piggy-back” these topics into weekly or regularly scheduled safety meetings or hazardous materials training, which CDOT conducts.

Annual Reporting

The number of educational activities undertaken to promote public reporting of illicit discharges and improper disposal and to promote proper management and disposal of toxic materials will be included in the Annual Report. In addition, CDOT will provide a narrative characterizing each of the educational activities, and goals for the following year.

